KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

QUARTERLY MONITORING REPORT – APRIL-JUNE 2019 BULK FUELS FACILITY SOLID WASTE MANAGEMENT UNIT ST-106/SS-111 KIRTLAND AIR FORCE BASE, NEW MEXICO

SEPTEMBER 2019

377 MSG/CEI
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KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

Quarterly Monitoring Report – April–June 2019
Bulk Fuels Facility
Solid Waste Management Unit ST-106/SS-111
Kirtland Air Force Base, New Mexico

September 2019

Prepared for

U.S. Army Corps of Engineers
Albuquerque District
4101 Jefferson Plaza Northeast
Albuquerque, New Mexico 87109-3435

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Contract No. W912DR-12-D-0006
Delivery Order DM01

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REPORT DOCUMENTATION PAGE		*Form Approved OMB No. 0704-0188*

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1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED *(From - To)***
30-09-2019	Revision 0	01-04-2019 – 30-06-2019

4. TITLE AND SUBTITLE	**5a. CONTRACT NUMBER**
Quarterly Monitoring Report – April–June 2019 Bulk Fuels Facility Solid Waste Management Unit ST-106/SS-111 Kirtland Air Force Base, New Mexico	W912DR-12-D-0006-DM01
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) EA Engineering, Science, and Technology, Inc., PBC	**5d. PROJECT NUMBER** 62599DM01
	5e. TASK NUMBER 1025
	5f. WORK UNIT NUMBER Not applicable
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) AND ADDRESS(ES) EA Engineering, Science, and Technology, Inc., PBC 320 Gold Avenue Southwest, Suite 1300 Albuquerque, New Mexico 87102	**8. PERFORMING ORGANIZATION REPORT NUMBER** Not assigned
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Corps of Engineers–Albuquerque District 4101 Jefferson Plaza Northeast Albuquerque, New Mexico 87109-3435	**10.SPONSOR/MONITOR'S ACRONYM(S)**
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)
12. DISTRIBUTION/AVAILABILITY STATEMENT	
13. SUPPLEMENTARY NOTES	

14. ABSTRACT

This Quarterly Report describes activities performed from April 1 through June 30, 2019 and the progress of the Resource Conservation and Recovery Act interim measures for soil and groundwater remediation at Solid Waste Management Unit ST-106/SS-111, the Bulk Fuels Facility site, at Kirtland Air Force Base, New Mexico. During the quarter, soil vapor, groundwater, drinking water from supply wells, and the groundwater treatment system (GWTS) samples were collected and analyzed for contaminants of concern (notably ethylene dibromide [EDB]) and other relevant field and laboratory parameters. The GWTS extracted and treated 61,440,700 gallons of groundwater through a granular activated carbon filtration system and discharged the treated effluent to the Tijeras Arroyo Golf Course main pond and injection well KAFB-7 in the second quarter (Q2) 2019. The GWTS was operational 98 percent of the time and removed approximately 4,895 milligrams of EDB in Q2 2019. Additionally, a performance assessment was performed this quarter and included the results from the numerical flow model simulation using FEFLOW, which provides a three-dimensional assessment of flow and capture.

15. SUBJECT TERMS

Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111, ethylene dibromide, EDB, interim measures, RCRA, groundwater sampling, groundwater treatment system operation, granular activated carbon, ethylene dibromide

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
					Bernard Bockisch
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**	ABSTRACT	43,752	**19b. TELEPHONE NUMBER** *(include area code)*
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED			505-234-1105

Standard Form 298
(Rev. 8-98) **Prescribed by ANSI Std. Z39.18**

40 CFR 270.11
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9 Sept 2019
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PREFACE

This Quarterly Monitoring Report – April–June 2019 has been prepared by EA Engineering, Science, and Technology, Inc., PBC (EA) for the U.S. Army Corps of Engineers, under Contract Number W912DR-12-D-0006, Delivery Order DM01 and pertains to the Base Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS 111, located in Albuquerque, New Mexico.

This report contains data collected by EA itself as well as from other entities/sources that are not under EA's direct control (collectively "non-EA Data"). All non-EA data reported herein are displayed in the form they were received from their source entity, and EA assumes no liability for the accuracy of any non-EA data in this report.

This report was prepared in accordance with applicable federal, state, and local laws and regulations, including the New Mexico Hazardous Waste Act, New Mexico Statutes Annotated 1978, New Mexico Hazardous Waste Management Regulations, Resource Conservation and Recovery Act, and regulatory correspondence between the New Mexico Environment Department Hazardous Waste Bureau and the U.S. Air Force, dated March 25 and May 20, 2016.

Monitoring of soil vapor, groundwater, drinking water, and operation of the groundwater treatment system were conducted from April 1 through June 30, 2019. Mr. Behnaum Moayyad, CPG, is the U.S. Army Corps of Engineers–Albuquerque District Project Manager. The Environmental Restoration Section Chief for this program is Mr. Scott Clark of Kirtland Air Force Base. Mr. Bernard Bockisch is the EA Project Manager.



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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	microgram(s) per liter
µg/m^3	microgram(s) per cubic meter
µS/cm	microSiemens per centimeter
%	percent
AFB	Air Force Base
AOI	area of interest
BFF	Bulk Fuels Facility
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CFR	Code of Federal Regulations
CO_2	carbon dioxide
DO	dissolved oxygen
DoD	Department of Defense
DP	discharge permit
EDB	ethylene dibromide
EFF	effluent
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ft	foot (feet)
GAC	granular activated carbon
GCMP	Golf Course main pond
gpm	gallon(s) per minute
GRO	gasoline range organics
GWM	groundwater monitoring
GWTS	groundwater treatment system
HC	hydrocarbon
Horiba	Horiba MEXA-584L auto emissions analyzer
ID	identification
IDW	investigation-derived waste
INF	influent
KAFB	Kirtland Air Force Base
LNAPL	light non-aqueous phase liquid
MCL	maximum contaminant level
mg	milligram(s)
mg/L	milligram(s) per liter

LIST OF ACRONYMS AND ABBREVIATIONS (CONCLUDED)

NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
No.	number
NRMSD	Normalized Root Mean Squared Deviation
O_2	oxygen
O&M	operation and maintenance
ORP	oxidation-reduction potential
ppmv	part(s) per million by volume
psi	pound(s) per square inch
PSL	project screening level
Q1	first quarter of the year, January 1 through March 31
Q2	second quarter of the year, April 1 through June 30
Q3	third quarter of the year, July 1 through September 30
Q4	fourth quarter of the year, October 1 through December 31
QAPjP	Quality Assurance Project Plan
QSM	Quality Systems Manual
RCRA	Resource Conservation and Recovery Act
REI	reference elevation interval
SE	Southeast
SM	Standard Method
SMTP	simple mail transfer protocol
SVM	soil vapor monitoring
SVMP	soil vapor monitoring point
SWMU	Solid Waste Management Unit
TCZ	Target Capture Zone
TPH	total petroleum hydrocarbons
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
VA	Veteran's Affairs
VANI	vertical anisotropy
VOC	volatile organic compound

EXECUTIVE SUMMARY

The investigation and remediation of the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) leak (Solid Waste Management Unit [SWMU] ST-106/SS 111) are being implemented pursuant to the Resource Conservation and Recovery Act (RCRA) corrective action provisions in Part 6 of Kirtland AFB's Hazardous Waste Treatment Facility Operating Permit (Permit Number NM9570024423 [RCRA Permit]) (New Mexico Environment Department [NMED], 2010). This report for the second quarter (Q2) of calendar year 2019 summarizes the activities performed from April 1 through June 30, 2019. These activities are part of ongoing monitoring for the Phase 2 RCRA Facility Investigation and to support the evaluation of the dissolved-phase ethylene dibromide (EDB) groundwater pump and treat interim measure and the EDB *in situ* biodegradation pilot study.

This Executive Summary describes the following Q2 2019 soil vapor monitoring (SVM), groundwater monitoring (GWM), interim measure, and pilot activities performed at the BFF between April and June 2019:

- Continuation of the bioventing pilot test for dry and moist respirometry evaluation
- Sampling of the soil vapor monitoring points (SVMPs).
- Sampling of the GWM network.
- Monthly sampling of the drinking water supply wells located in the vicinity of the plume containing dissolved-phase benzene (south of Ridgecrest Drive Southeast [SE]) and dissolved-phase EDB.
- Operation and maintenance of the groundwater treatment system (GWTS) to remove EDB from groundwater extracted from the dissolved-phase distal portion of the plume, which is the Target Capture Zone (TCZ) for the groundwater interim measure.
- Plume capture numerical modeling using FEFLOW for second line of evidence in Step 4 of the U.S. Environmental Protection Agency (EPA) Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems (EPA, 2008). FEFLOW software use for the numerical modeling of the plume capture was approved by NMED on April 23, 2018 (NMED, 2018b) in resolution of the modeling component of the Notice of Deficiency issued to Kirtland AFB on November 16, 2017 (NMED, 2017c).
- Continuation of Phase 4 of the EDB *in situ* biodegradation pilot study.
- Projected activities in the third quarter (Q3) 2019.

ES-1 Vadose Zone Monitoring

ES-1.1 Bioventing Pilot Test

The bioventing pilot testing includes short-duration "dry" and "moist" respiration tests (approximately 3 weeks), followed by two longer-term (2 years in duration) bioventing pilot tests conducted simultaneously. Data collected from the short-duration respiration test will be used to refine the design and details of the long-term test. Results of the bioventing test will be used to evaluate the feasibility of

this technology in the upcoming Corrective Measures Evaluation.

During Q2 2019, baseline analytical samples and respirometry readings were collected, after which the dry respiration field test was performed. Upon completion of the dry respiration field test, post-respiration testing analytical vapor sampling was conducted. Preparation for the wet respiration field test was then completed, including water injection, a 4-week acclimation period, baseline respirometry readings, and air injection. Wet respirometry began on June 26, 2019 and is expected to conclude in July 2019.

ES-1.2 Vadose Zone Monitoring

Soil vapor samples were collected from 51 SVM locations (comprised of 271 individual SVMPs) for field parameter measurements and laboratory analyses in Q2 2019 (Figure 2-2). 13 individual SVMPs were in use to perform a bioventing pilot test and were not sampled during this effort; these SVMPs were sampled as part of the bioventing pilot test as described in the Work Plan for Bioventing and Air-Lift Enhanced Bioremediation Pilot Tests (U.S. Army Corps of Engineers [USACE], 2018d) and will be discussed in a subsequent report.

Comparison concentrations are used in this report to illustrate the SVMPs with relatively high or low concentrations. These comparison concentrations were determined using historical maximum and minimum soil vapor concentrations and are 3,800, 3,200 micrograms per cubic meter ($\mu g/m^3$), and 1,000 parts per million by volume (ppmv) for EDB, benzene, and hydrocarbons (HC), respectively. Results from the Q2 2019 soil vapor monitoring event indicate the following (Figure 2-3 through Figure 2-9):

- Off-Base soil vapor concentrations are very low in comparison to the on-Base areas of interest (AOIs). The low contaminant concentrations offer limited opportunity for aerobic biodegradation.

- Results in the on-Base SVM AOI located outside of the source area are consistent with previous sample events. The highest soil vapor concentrations in this AOI are located adjacent to the source area and above the groundwater benzene plume. Measured oxygen (O_2) and carbon dioxide (CO_2) levels suggest aerobic microbial activity is occurring in this AOI.

- Consistent with previous quarters, the SVMPs within the source area AOI had the highest EDB, benzene, and HC concentrations compared to the other AOIs. Measured O_2 levels indicate that active aerobic biodegradation has depleted O_2 at approximately 75 percent (%) of SVMP locations in this AOI.

ES-2 Groundwater Monitoring Network Gauging and Sampling

In Q2 2019, 154 Kirtland BFF GWM wells (Figure 3-1) were sampled. Depths to groundwater were measured in 162 GWM wells. Findings from the Q2 2019 sampling and gauging event include:

- Groundwater levels showed an overall average increase across the GWM network of 2.69 ft since quarter 4 (Q4) 2018.

- Light non-aqueous phase liquid (LNAPL) was detected and measured in four wells (KAFB-106014, KAFB-106059, KAFB-106076, and KAFB-106079) during gauging (Figure 3-4).

- Fifteen recently installed wells were sampled in Q2 2019 (Figure 3-1).

The U.S. Geological Survey (USGS) monitors 14 sentinel wells between the Kirtland AFB BFF EDB plume and the Albuquerque Bernalillo County Water Utility Authority and Veterans Affairs Medical Center water supply wells as a means of providing independent observation of water quality in the vicinity of these water supply wells. Samples are collected from these sentinel wells quarterly. Due to the government shutdown that occurred during December 2018 through January 2019, passive diffusion bag samplers were not installed in the wells in January, as planned. Therefore, sampling of the sentinel wells for the first quarter (Q1) 2019 event was delayed and the results are provided with this Q2 2019 report. Q1 2019 samples were collected during the time period of February 25-29, 2019 and Q2 2019 samples were collected during the time period of April 2 – 17, 2019. The USGS transmittal letters, including the Q1 and Q2 2019 data results, are provided in Appendix E-5.

ES-3 Drinking Water Supply Well Monitoring

Four drinking water supply wells (KAFB-003, KAFB-015, KAFB-016, and ST106-VA-2) are located in the vicinity of the dissolved-phase EDB plume. These wells were sampled monthly from April to June in Q2 2019 and analyzed for EDB and benzene, toluene, ethylbenzene, and total xylenes (BTEX). No EDB or BTEX were detected in groundwater samples collected from these four drinking water supply wells (Figure 4-1).

ES-4 Groundwater Treatment System Operation

The GWTS consists of two treatment trains. Each treatment train is comprised of a lead granular activated carbon (GAC) vessel followed by a polishing GAC vessel. The GWTS ran for 98% of the time from April 1 to June 30, 2019, and 61,440,700 gallons of groundwater was treated during this period. Of the treated water, 46,977,500 gallons was discharged to the Tijeras Arroyo Golf Course main pond, and 14,463,200 gallons was discharged to gravity-fed injection well KAFB-7. Concentrations of BTEX, dissolved iron, and manganese were non-detect in all mid-GAC and effluent monthly samples collected from either train during Q2 2019. Concentrations of EDB were detected in the mid-GAC samples of Train 1 and Train 2 in April, May, and June 2019, and in the effluent sample of Train 1 in April 2019. All of the detections were below the maximum contaminant level (MCL). Although the EDB detections were at estimated concentrations (J-flag by the laboratory) and well below actionable levels (defined as 90% of the MCL), the detected concentrations of EDB prompted a GAC changeout in both Trains in order to continue conservative operations of the GWTS. The GAC was changed out in Train 1 on June 11, 2019. The GAC changeout for Train 2 was performed on July 9, 2019. Information for the Train 2 changeout will be provided in the next quarterly GWM Report. Effluent concentrations have been below the detection limit since the GAC changeout in Train 1. During Q2 2019, a calculated 4,895 milligrams (mg) of EDB was captured in the lead GAC vessels. Of this total, 2,161 mg was removed by Train 1, and 2,734 mg was removed by Train 2.

During Q2 2019, some short-term, unscheduled shutdowns occurred due to maintenance activities, electrical fluctuations, and vault leak detections from rainwater intrusion. None of these events resulted in long-term shutdowns and involved only one or two of the extraction wells, not the full extraction well system. On June 11, 2019, there was a 36-hour shutdown of Train 1 when the carbon in the Train 1 GAC Tank B was changed-out. However, Train 2 was kept running during this period so that the system was never fully shut down.

Performance assessment of the GWTS and plume capture numerical modeling using FEFLOW are performed in Q2 and Q4 of each year using the EPA Systematic Approach for Evaluation of Capture Zones and Pump and Treat Systems (EPA, 2008). A comparison of all lines of evidence suggests that

100% of the dissolved-phase EDB volume and mass, within the Target Capture Zone (TCZ), is captured by interim measure extraction under Q2 2019 conditions. The potentiometric surface analysis resulted in 100% capture of the volume and mass in the TCZ. The numerical flow model calculated 100% of the dissolved-phase EDB volume captured and 100% of the dissolved-phase EDB mass captured in the TCZ. The concentration trends in the designated performance monitoring wells show static or decreasing trends indicating decreasing dissolved-phase EDB volume and mass reduction and there are no dissolved-phase EDB concentrations exceeding the EPA maximum contaminant level north of Gibson Boulevard.

ES-5 Ethylene Dibromide *In Situ* Biodegradation Pilot Study

The main objective for conducting the *in situ* biodegradation pilot test is to investigate anaerobic bioremediation of EDB in groundwater. Phase 4 of the pilot test began on November 19, 2018, upon completion of the final Phase 3 sampling event and continues into 2019. Phase 4 consists of long-term monitoring to evaluate performance of the technology and attempts to quantify rebound of EDB concentrations. An independent report summarizing all activities associated with the pilot test through the first Phase 4 sampling event (conducted in January 2019) was submitted on April 18, 2019 in accordance with the NMED letter dated February 25, 2019 (NMED, 2019).

ES-6 Projected Activities

Planned activities for Q3 2019 include:

- Complete the wet respiration field test and begin the long-term bioventing pilot test. A report summarizing the available results of the bioventing pilot tests will be submitted to NMED by January 31, 2020.
- Sample the Q3 2019 designated wells in the GWM network beginning in July 2019.
- Measure depth to water in designated wells in the GWM network.
- Sample drinking water supply wells for organic compounds on a monthly basis.
- Operate the GWTS and extraction wells KAFB-106228, KAFB-106233, KAFB-106234, and KAFB-106239 with discharge to the Golf Course main pond and injection well KAFB-7. Changeout the carbon in the Train 2 lead GAC vessel.

1. INTRODUCTION

The investigation and remediation of the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) leak (Solid Waste Management Unit [SWMU] ST-106/SS 111) are being implemented pursuant to the Resource Conservation and Recovery Act (RCRA) corrective action provisions in Part 6 of Kirtland AFB's Hazardous Waste Treatment Facility Operating Permit (Permit Number [No.] NM9570024423 [RCRA Permit]) (New Mexico Environment Department [NMED], 2010). This Quarterly Report for the second quarter (Q2) of calendar year 2019 summarizes the activities performed from April 1, 2019 through June 30, 2019. The reporting schedule is provided in the Work Plan for Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design (U.S. Army Corp of Engineers [USACE], 2017a). This Q2 2019 Quarterly Report presents non-cumulative data for Q2 2019. There was no key regulatory correspondence for Q2 2019 (Appendix A).

The BFF site is located within the northwestern portion of Kirtland AFB, on the southern end of the city of Albuquerque, as shown on the site location map (Figure 1-1). The Phase I RCRA Facility Investigation (USACE, 2018a) provides a detailed site description, history, and conceptual site model. Vadose zone and groundwater investigation and remediation activities are required to address the potential impact of fuels that were released from leaking pipelines at the former fuel off-loading rack.

Soil vapor monitoring (SVM), groundwater monitoring (GWM), and interim measures for SWMU ST-106/SS-111 were conducted concurrently. The Q2 2019 monitoring program was performed in accordance with multiple work plans: (1) soil vapor (NMED, 2018a; NMED, 2017a; USACE, 2017b), (2) GWM (NMED, 2017b; USACE, 2017a), and (3) drinking water supply wells (NMED, 2018a; USACE, 2017b). Groundwater treatment system (GWTS) operations, sampling, and treated effluent discharge were performed under the Operations and Maintenance (O&M) Plan (USACE, 2016a; USACE, 2017c, USACE, 2018b). GWTS performance assessment followed the U.S. Environmental Protection Agency (EPA) Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems (EPA, 2008). Plume capture numerical modeling using FEFLOW is performed in Q2 and the fourth quarter (Q4) of each year. The numerical modeling was approved by NMED on April 23, 2018 (NMED, 2018b) in resolution of the modeling component of the Notice of Deficiency issued to Kirtland AFB on November 16, 2017 (NMED, 2017c).

2. VADOSE ZONE MONITORING

This section describes the vadose zone monitoring activities conducted during Q2 2019. Section 2.1 provides a brief summary of the coring project and the field activities that were completed in Q2 2019. Section 2.2 provides a brief overview of the bioventing pilot project activities completed in Q2 2019. Section 2.3 discusses SVM activities performed during Q2 2019.

2.1 Vadose Zone Coring Project

Implementation of the vadose zone coring and well installation project was initiated in October 2018 in accordance with the Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling Work Plan (USACE, 2017b). During Q2 2019, the remaining IDW was disposed of, and the final four wells were added to the GWM program; the well completion reports for these wells are provided as Appendices B-1 and B-2.

Data collected from the project will support vadose zone treatability studies and address data gaps in the horizontal and vertical extent of light non-aqueous phase liquid (LNAPL) in the vadose and saturated zones. The objectives of the continuous coring are to provide supplemental data on the nature and extent of the residual fuels and to characterize the subsurface biogeochemical conditions relative to residual hydrocarbons (HC), including benzene and ethylene dibromide (EDB). A detailed discussion of the drilling and sampling program that includes the results of the assessment will be provided by November 1, 2019 as requested by NMED in a letter dated February 25, 2019 (NMED, 2019).

2.2 Bioventing Pilot Test

The bioventing pilot test is being performed in accordance with the Bioventing Respiration Test Procedure (USACE, 2018c) and the approval conditions requested by NMED in a letter dated February 25, 2019 (NMED, 2019). The bioventing pilot testing includes short-duration "dry" and "moist" respiration tests (approximately 3 weeks), followed by two longer-term (2 years in duration) bioventing pilot tests conducted simultaneously. Data collected from the short-duration respiration test will be used to refine the design and details of the long-term test. Results of the bioventing test will be used to evaluate the feasibility of this technology in the upcoming Corrective Measures Evaluation.

The bioventing pilot test design utilizes existing soil vapor extraction wells and existing SVM wells for air injection and two new SVM well clusters at KAFB-106V1 and KAFB-106V2 (completed under a separate work plan [USACE, 2017b]) for observation. Well locations are shown on Figure 2-1. Pilot testing will use a rotary vane pump for the respiration testing and a regenerative blower for the longer-term bioventing test.

Baseline analytical samples and respirometry readings were collected between April 10 and April 13, 2019. Samples were analyzed by Eurofins Air Toxics for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons (TPH) gasoline-range organics (GRO) by EPA Method TO-3, volatile organic compounds (VOCs) by EPA Method TO-15 LL-SIM, and fixed gases and C1 through C5 HC by ASTM International D-1945. EDB and benzene are indicator compounds for the Kirtland AFB BFF leak, and HC is a field indicator for the total fuel mass. Baseline respirometry parameters collected during monitoring include oxygen (O_2), carbon dioxide (CO_2), VOCs, methane, and relative humidity.

Air injection for the dry respiration field test began on April 22, 2019 and was concluded on April 28, 2019. Dry respirometry monitoring began immediately after the conclusion of the air injection on April

28, 2019. Respirometry parameter collection was concluded on May 9, 2019, at which point the post-respiration testing analytical vapor sampling was conducted. Samples were analyzed by Eurofins Air Toxics for BTEX and TPH GRO by EPA Method TO-3, VOCs by EPA Method TO-15 LL-SIM, and fixed gases and C1 through C5 HC by ASTM International D-1945.

Water injection for the wet respiration field test was performed on May 23 and 24, 2019, in accordance with the approved Respiration Pilot Testing Procedures (USACE, 2018c). After the water injection was completed, the wells were allowed to acclimate for approximately 4 weeks prior to the start of the baseline respirometry and air injection for the wet respirometry field test.

Baseline respirometry readings for the wet respiration field test were collected on June 20, 2019. Respirometry parameters collected during monitoring include O_2, CO_2, VOCs, methane, and relative humidity. Air injection began after the collection of the baseline readings on June 20, 2019 and concluded on June 26, 2019. Wet respirometry began on June 26, 2019 and is expected to conclude in July 2019. Post-respiration analytical vapor sampling will be conducted upon the completion of the wet respiration field test. Samples will be analyzed by Eurofins Air Toxics for BTEX/TPH GRO by EPA Method TO-3, VOCs by EPA Method TO-15 LL-SIM, and fixed gases and C1 through C5 HC by ASTM International D-1945. A bioventing report will be submitted on January 31, 2020 as requested by NMED in a letter dated February 25, 2019 (NMED, 2019). This report will include data collected up to Q4 2019. Data collected after Q4 2019 will be provided in the relevant quarterly monitoring reports. The Q4 2020 Quarterly and Annual Monitoring Report will include results to date, and the final results of the bioventing pilot test will be provided in the Q4 2021 Quarterly and Annual Monitoring Report.

2.3 Vadose Zone Soil Vapor Data Collection

Each SVM location is comprised of up to six soil vapor monitoring points (SVMPs), each screened at discrete intervals ranging from approximately 25 to 450 feet (ft) below ground surface (bgs). Each SVMP has a unique database identification (ID), which includes the SVM location followed by a number identifying the approximate depth of the screened interval associated with an individual SVMP (e.g., SVMW-04-250 describes an SVMP located at SVMW-04 that is screened at approximately 250 ft bgs). Table 2-1 lists each SVM location sampled during semi-annual monitoring, its associated SVMPs, the screen intervals, and the pre-calculated purge volume. SVM locations are shown on Figure 2-2.

To the extent possible, samples collected in Q2 2019 represent the vadose zone conditions without the influence of induced air flow. All SVMP sample ports are sealed to atmospheric air, which minimizes exchanges with atmospheric "inhalation" and "exhalation" cycles that are driven by barometric pressure fluctuations.

Soil vapor samples were collected from 271 of 284 SVMPs and submitted for laboratory analysis. The remaining 13 SVMPs are currently utilized or could provide data affected by the bioventing pilot test and were not sampled. Field parameters were measured and recorded during the Q2 2019 sampling event (Table 2-2). Soil vapor analytical results are provided in Tables 2-3 through 2-5. The condition of the vault and the pneumatic quick-connect fittings at each SVMP were documented on a purge log to ensure sample representativeness.

2.3.1 Field Soil Vapor Data

Field parameters including total HC concentration, O_2, and CO_2 were measured and recorded at each SVMP using a Horiba MEXA-584L auto emissions analyzer (Horiba). Differential air pressure (inches of water column) readings were measured using an electric manometer and recorded for pre-purging and

post-purging conditions of each well. SVMPs were purged of their respective casing volume before field measurements were recorded and before samples were collected. Purge data were recorded on purge logs (Appendix C-1); field data are listed in Table 2-2. Horiba calibration and sample system leak tests were performed and documented on calibration logs (Appendix C-2); daily quality control reports are provided in Appendix C-2.

2.3.2 Laboratory Soil Vapor Analytical Data

In Q2 2019, soil vapor samples were collected between April 22 and May 7. Two hundred seventy-one SVMP field samples and 28 field duplicates were collected using certified pre-evacuated Summa® canisters fitted with a specialized pneumatic connector to allow only the vapor from the SVMP to enter the canister. Sample information was recorded on sample collection logs (Appendix C-1). Chain-of-custody records are provided in Appendix C-3. After collecting each SVMP sample, the canister was immediately placed into protective packaging and shipped to ALS Environmental in Simi Valley, California, for VOC analysis by U.S. Environmental Protection Agency (EPA) Method TO-15.

The Data Quality Evaluation Report is provided in Appendix D-1. Analytical results are reported in the ALS Environmental laboratory report (Appendix D-2). Soil vapor analytical data were validated by Environmental Data Services, Ltd., Newport News, Virginia. Data validation reports are provided in Appendix D-2 and soil vapor analytical results are provided in Table 2-3, Table 2-4, and Table 2-5.

2.4 Data Review and Usability

An independent third-party data validation subcontractor, Environmental Data Services, Inc., Virginia Beach, Virginia, performed a 23 percent (%) Level III data validation of Q2 2019 soil vapor analytical data following data verification in accordance with the approved work plan (USACE, 2017b). Data verification is performed on a data set to ensure method, procedural and contractual compliance with project-specific requirements and is typically performed by the contractor responsible for the data collection. Data Validation is an analyte- and sample-specific process that extends the evaluation of analytical data beyond the data verification process to determine the analytical quality of a specific data set.

Data verification and data validation are sequential steps in a data review process that can be performed by either the contractor collecting the data or an independent third-party subcontractor. For this project, verification is performed by the contractor to ensure compliance with the project Quality Assurance Project Plan (QAPjP) (USACE, 2017d) and is performed during or at the completion of field or laboratory data collection activities. EPA Stage 3 data validation is conducted by Environmental Data Services, Inc. and incorporates the data verification process and further evaluates data quality based on analytical method-specific quality control criteria and Department of Defense (DoD) Quality Systems Manual (QSM) requirements as documented in the project QAPjP. Further detail regarding EPA data verification and validation processes is documented in Figures 2 and 4 of the Guidance on Environmental Data Verification and Data Validation (EPA 2002); these figures are provided in Appendix D-3.

All data were validated as usable; no data were qualified as rejected. The technical data completeness was 100%. The data met data quality objectives and were deemed appropriate for use in project decision making. Some analytical results were flagged as estimated (J-flagged), which occurred when an analyte was positively identified in the sample; however, the associated numerical value was determined to be estimated. The results of the quality control parameter and data quality indicator evaluation (precision, bias [accuracy], representativeness, completeness, comparability, and sensitivity) are provided in the Data

Quality Evaluation Report (Appendix D-1). Validated soil vapor data are provided in Table 2-3, Table 2-4, and Table 2-5.

2.5 Q2 2019 Soil Vapor Data

The Q2 2019 analytical results and field data from the 271 SVMPs were used to generate two-dimensional plan-view maps (Figure 2-3 through Figure 2-9) that depict benzene, EDB, and HC concentrations at depths of 25, 50, 100, 150, 250, 350, and 450 ft bgs, respectively. Field parameters collected during the SVM event are listed in Table 2-2. Soil vapor analytical results are provided in Table 2-3, Table 2-4, and Table 2-5.

The SVM locations have been categorized into three areas of interest (AOIs), which are all located south of Ridgecrest Drive SE: (1) off-Base SVM locations, (2) on-Base SVM locations outside the source area, and (3) on-Base SVM locations inside the source area. Soil vapor analytical data are discussed in relation to each AOI. The source area (Figures 2-2 through 2-9), established in the *Phase I RCRA Facility Investigation Report Bulk Fuels Facility Release Solid Waste Management Unit ST-106/SS-111* (USACE, 2018a), is defined as a 100-ft buffer zone around the original jet fuel underground pipelines that was the source of the BFF releases. These pipelines were removed in 2010.

The RCRA permit does not specify cleanup levels for soil vapor. The quarterly reports are not intended to assess risk; the vapor data are used to assess concentration trends. The risk assessment (USACE, 2017e) compares vapor concentrations to the vapor intrusion screening levels in the NMED Risk Assessment Guidance for Site Investigations and Remediation.

All EDB and benzene concentrations are compared against 3,800 and 3,200 micrograms per cubic meter ($\mu g/m^3$), respectively. HC concentrations are compared against 1,000 parts per million by volume (ppmv). The comparison concentrations used in this report were determined by historical maximum and minimum soil vapor results to show which SVMPs had relatively high or low concentrations.

At fuel release sites, microorganisms biodegrade fuel-related constituents under aerobic conditions, which consumes O_2 and produces CO_2. Depleted O_2 and elevated CO_2 levels within each AOI indicate that microbial degradation is ongoing at the BFF site, primarily in and around the source area. O_2 levels lower than 5% represent suboptimal conditions for aerobic degradation.

Sections 2.5.1 through 2.5.3 discuss the soil vapor concentrations of EDB, Benzene, HC, CO_2 and O_2 in relation to each AOI. Refer to Figures 2-3 through 2-9 for the data presented in Sections 2.5.1 through 2.5.3.

2.5.1 Off-Base Soil Vapor Monitoring Points

- There are five off-Base SVM locations consisting of 28 SVMPs, which are screened at intervals from approximately 25 to 450 ft bgs.

- The low contaminant concentrations in the off-Base SVMPs offer limited opportunity for aerobic biodegradation. Concentrations of specific contaminants are discussed below.

- EDB was detected in two of the 28 off-Base SVMPs, at concentrations below the comparison level of 3,800 $\mu g/m^3$. EDB was detected at a concentration of 2.6 $\mu g/m^3$ at KAFB-106028-450 and an estimated concentration (J-flag value) of 1.4 $\mu g/m^3$ at KAFB-106142-450.

- Benzene was detected in 18 of the 28 SVMPs. Sixteen of the 18 benzene detections were estimated concentrations (J-flag values) of 1.6 µg/m^3 or less. The two non-qualified detections had concentrations of 2.7 µg/m^3 at KAFB-106138-450 and 19 µg/m^3 at KAFB-106142-450, with both below the comparison level of 3,200 µg/m^3.

- HC concentrations in the 28 off-Base SVMPs ranged between 0 and 4 ppmv, which is less than 1% of the 1,000 ppmv comparison level. The highest HC concentration (4 ppmv) was detected at KAFB-106141-350 and KAFB-106141-450.

- O_2 concentrations at off-Base SVMPs averaged 20.48%, or near atmospheric levels (approximately 21%) (Berner et al., 2007). However, CO_2 was measured at levels of up to 3.28% (KAFB-106138-050) in this AOI (although most were less than 1%).

2.5.2 On-Base Soil Vapor Monitoring Points Outside of Source Area

- There are 40 on-Base SVM locations outside of the source area, consisting of 224 SVMPs that are screened at intervals from approximately 25 to 450 ft bgs.

- Results in the on-Base SVM AOI located outside of the source area are consistent with previous sampling events. The highest soil vapor concentrations in this AOI are located adjacent to the source area and above the groundwater benzene plume.

- At SVMPs located on base outside the source area, samples with detectable EDB did not exceed the comparison concentration (3,800 µg/m^3; Table 2-4) except for a concentration of 3,900 µg/m^3 at KAFB-106128-450.

- Benzene was detected in 174 of the 224 on-Base SVMPs and 99 of these 174 SVMPs with benzene detections were at estimated concentrations (J-flag values). Benzene concentrations met or exceeded the comparison value of 3,200 µg/m^3 at 27 SVMPs. The highest benzene concentration of 300,000 µg/m^3 was detected at SVMW-06-252, located approximately 200 ft east of the source area.

- HC was detected at concentrations below 1,000 ppmv in 209 of the 224 SVMPs. The 15 SVMPs with concentrations greater than 1,000 ppmv were screened from approximately 100 to 450 ft bgs. The highest HC concentration (13,780 ppmv) was detected at SVMW-02-100, located approximately 25 ft north of the source area.

- Thirty-two SVMPs had relatively low O_2 levels—below 15% with correspondingly higher CO_2 levels—ranging between 1.52 and 13.80%. For example, KAFB-106117-350 and KAFB-106117-450 had high CO_2 levels of 13.80 and 13.02%, respectively, with corresponding low O_2 levels below 5%. This suggests that at these SVMPs, there are rate-limiting conditions for aerobic microbial activity and that aerobic biodegradation may be occurring at less than optimal conditions.

2.5.3 On-Base Soil Vapor Monitoring Points Inside the Source Area

- There are 11 on-Base SVM locations inside the source area, consisting of 32 SVMPs that are screened at intervals from approximately 25 to 450 ft bgs. These SVMPs are within 100 ft of the original location of the underground jet fuel pipeline. SVMW-08-266 is plugged and could not be monitored (Table 2-2). SVM locations SVEW-01, SVEW-02/03, SVEW-04/05, SVMW-10,

and SVMW-11 (consisting of 13 SVMPs) were in use to perform a bioventing pilot test (USACE, 2018d) and were not sampled for soil vapor. The remaining 19 SVMPs were sampled in Q2 2019.

- Consistent with previous quarters, the highest EDB, benzene, and HC concentrations obtained from soil vapor for Q2 2019 were from SVMPs within the source area AOI. In addition, this AOI had the highest percentage of EDB and benzene detections (Table 2-5). Concentrations of specific contaminants are discussed below.

- EDB was detected in three of the 19 sampled SVMPs inside the source area, of which one exceeded the comparison concentration of 3,800 µg/m^3. EDB was detected at SVMW-09-266, which is screened from 266 to 268.5 ft bgs, at 5,200 µg/m^3.

- Benzene was detected in 18 of the 19 sampled SVMPs inside the source area. Benzene concentrations greater than 3,200 µg/m^3 were detected at screened interval depths ranging between 50 and 300 ft bgs.

- HC was detected at concentrations below 1,000 ppmv in four of 19 sampled SVMPs. HC concentrations above 1,000 ppmv were detected at screened intervals ranging from approximately 50 to 300 ft bgs.

- The O_2 levels at the on-Base inside the source area SVMPs ranged from 0.06 to 16.95%. Fifteen SVMPs had O_2 levels below 5% at depths ranging from approximately 50 to 300 ft bgs. CO_2 levels ranged from 0.78 to 14.24%. The maximum CO_2 level (14.24%) was detected at SVEW-06-060, which is screened from 45 to 60 ft bgs. Measured O_2 indicates that active aerobic biodegradation has depleted O_2 at most SVMP locations in this AOI.

2.5.4 Maintenance and Repairs

Maintenance and/or repairs were performed at 51 of 56 SVM locations following completion of the Q2 2019 sampling event. SVM locations SVEW-01, SVEW-02/03, SVEW-04/05, SVMW-10, and SVMW-11 were in use to perform a bioventing pilot test (USACE, 2018d). Routine maintenance will be performed at these five SVM locations after bioventing activities are completed. Any maintenance needs, which included corroded quick-connects, worn or damaged gaskets, overgrown vegetation, and overall cleanliness of locations, were noted during the sampling event and addressed during the subsequent weeks.

Rusty pneumatic quick-connects were observed at 30 SVMPs during the Q2 2019 sampling event, and were replaced from May 17 through May 22, 2019, as part of periodic maintenance of the SVM network. In addition to the pneumatic quick-connect maintenance, SVM locations were also swept and cleared of vegetation and miscellaneous debris, as necessary. Damaged or missing parts, typically gaskets and pneumatic quick-connects, were repaired or replaced. Upon inspection, SVMW-04-050 vault lid had one hasp that did not allow the bolt to thread properly. This was repaired on May 17, 2019. These maintenance activities were performed after Q2 2019 samples were collected and had no effect on the results.

3. GROUNDWATER MONITORING NETWORK GAUGING AND SAMPLING

At the end of Q2 2019, the BFF GWM well network was comprised of 167 GWM wells (Figure 3-1, Table 3-1) and 154 of these wells were sampled in Q2 (Table 3-2).

Throughout this report, GWM wells, and their associated groundwater data, are described based on reference elevation intervals (REIs). REIs are below ground surface elevations that divide the GWM network into datasets comprised of wells that are screened across their respective elevations, allowing for a vertical evaluation of groundwater parameters and contaminant locations (Figure 3-2). Currently, wells are assigned to three REIs (4857, 4838, and 4814). A detailed explanation of how the REIs are defined is presented in the Q4 2016 Quarterly and Annual Report (USACE, 2017f).

In previous reports, GWM wells were assigned designations based either on their location related to the groundwater gradient and their spatial relationship to the dissolved-phase EDB plume or simply on their location (i.e., source area, etc.). In response to the changing regional groundwater gradient (Q2 2018 Quarterly Monitoring Report [USACE, 2018e]), well designations are no longer used in figures and analytical results tables. The former well designations and current monitoring well objectives are provided in Table 3-1 along with the current sampling regime by quarter. A detailed description of the former well designations and the frequency of samples collected by designation is provided in the 2018 Q4 Quarterly and Annual Report (USACE, 2019a).

In this report, sample results from GWM wells are discussed based on their location (north or south) in relation to Ridgecrest Drive SE. The plume containing dissolved-phase benzene is located south of Ridgecrest Drive SE, while the distal section of the EDB plume (Target Capture Zone [TCZ] for the groundwater interim measure) is primarily located north of Ridgecrest Drive SE.

GWM activities included measuring the depths to groundwater and LNAPL (Tables 3-3 and 3-4 and Figures 3-3 and 3-4) and measuring field parameters in wells sampled with low-flow sampling pumps (Table 3-5). Field parameter measurements are not part of the passive sampling methodology, as discussed in more detail in the Q4 2017 Quarterly and Annual Report (USACE, 2018f). Groundwater samples were collected and submitted for laboratory analysis from 154 wells in Q2 2019 (Tables 3-6 through 3-8 and Figures 3-5 through 3-19).

Appendices pertinent to GWM are listed below:

- E-1 – Daily Quality Control Reports – Groundwater Sampling
- E-2 – Groundwater and LNAPL Measurements
- E-3 – Groundwater Purge Logs and Sample Collection Logs
- E-4 – Groundwater Sample Chain-of-Custody Forms
- E-5 – U.S. Geological Survey (USGS) Sentinel Well Data
- F-1 – Data Quality Evaluation Report – Groundwater Samples
- F-2 – Data Packages – Groundwater Samples.

3.1 New Groundwater Monitoring Activities

Four additional newly installed nested GWM wells were sampled in Q2 2019 (KAFB-106S1, KAFB-106S7, KAFB-106S8, and KAFB-106247). The nested wells consisted of one GWM well screened across (partially above and below) the groundwater table and a second well (contingency well) constructed with the well screen above the current water table elevation. The contingency well will be

available to monitor the upper zone of the plume in the future as the water table continues to rise. Appendix B-1 contains the well completion report for KAFB-106S3 and KAFB-106S7. Appendix B-2 contains the well completion report for KAFB-106S1 and KAFB-106247. Well completion reports for the remaining newly installed wells were submitted in the Q1 2019 Monitoring Report (USACE, 2019b)

After four quarters of baseline sampling, newly added wells will be assigned an objective and moved into their relevant sampling regime in the following quarter (Table 3-9), in accordance with the Work Plan for Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling (USACE, 2017b). For wells KAFB-106S2, KAFB-106S3, KAFB-106S4, KAFB-106S5, and KAFB-106S9, baseline sampling will be completed in Q4 2019. For wells KAFB-106S1, KAFB-106S7, KAFB-106S8, and KAFB-106247, baseline sampling will be completed in the first quarter (Q1) 2020.

Six data gap wells were installed in Q2 and quarter 3 (Q3) 2018. For wells KAFB-106240-499, KAFB-106241-428, KAFB-106242-418, and KAFB-106243-425, baseline sampling will be completed in Q3 2019. For wells KAFB-106244-445 and KAFB-106245-460, baseline sampling will be completed in Q4 2019.

3.2 Groundwater and Light Non-Aqueous Phase Liquid Gauging

Depth to water was measured in 162 of the 167 GWM wells between April 17 through 19, 2019 (Figure 3-1; Table 3-3), using a Solinst Model 122 oil-water interface probe, in accordance with the approved work plan (USACE, 2017a). Each well was also checked for the presence of LNAPL. Of the 88 GWM wells in REI 4857 gauged in Q2 2019, 33 had screens that intersected the current water table while the remaining wells had submerged well screens (Figure 3-4). Screen submergence in REI 4857 wells that were gauged in Q2 2019 ranged from 0.28 to 22.81 ft (KAFB-106025) (Table 3-2).

The interface probe was checked for proper operation and cable integrity prior to each use and was decontaminated after gauging each well. If LNAPL was detected using the interface probe, a plastic bailer was used to confirm the presence and thickness of the LNAPL. Additionally, during Bennett pump sampling, every well was checked for the presence of LNAPL. Depths to LNAPL and groundwater were recorded in the field on well gauging forms (Appendix E-2).

Depth to water in the GWM wells was gauged by two field teams each using dedicated Solinst Model 122 oil-water interface probes (Serial Nos. 253053 and 253056). Depth to water measurement differences between the two interface probes were identified by measuring depth to water with each interface probe in three GWM wells near the source area (Appendix E-2). The measurement differences between the two probes ranged from 0.01 to 0.02 ft. During the 3-day gauging period, barometric pressure changes can cause water levels measured at the same time of day, thus excluding diurnal fluctuations, to vary by up to 0.15 ft in a given well (USACE, 2016b). The difference of 0.01 and 0.02 ft is minimal as compared to the naturally occurring changes that could exist between measurements taken over the 3-day gauging period. Based on this, corrections were not made to water level measurements taken in Q2 2019.

Groundwater elevations in wells with screens that intersected the current water table were used to create a potentiometric surface map (Figure 3-3). Horizontal groundwater gradients within the monitoring network are dominated by a radial flow pattern towards depressions in the water table which are primarily attributable to groundwater extraction.

LNAPL was measured in KAFB-106014, KAFB-106059, KAFB-106076, and KAFB-106079 in Q2 2019 at thicknesses of 0.10, 0.21, 0.01, and 0.14 ft, respectively (Table 3-3 and Figure 3-4). All 4 wells with LNAPL are located south of Ridgecrest Drive SE on-Base. These same wells had measurable LNAPL sheens present in Q1 2019.

3.3 Groundwater Sampling

Quarterly groundwater samples were collected from 154 wells in the GWM network between April 1 and May 20, 2019 using dedicated and portable low-flow pump systems or passive sampling methods (Table 3-2). Well locations are shown on Figure 3-1. Groundwater samples collected for the Q2 2019 monitoring event were analyzed for EDB, metals, anions, and alkalinity, select wells south of Ridgecrest Drive SE were additionally analyzed for BTEX and three wells for naphthalene, and one well, KAFB-106229, was sampled for EDB only (Table 3-2). All groundwater samples were analyzed by Eurofins Lancaster Laboratories Environmental, LLC located in Lancaster, Pennsylvania, which maintains current Department of Defense Environmental Laboratory Accreditation Program certification. The groundwater purge and sampling forms are provided in Appendix E-3 and the chain-of-custody forms are provided in Appendix E-4.

For low-flow sampling, well water was purged continuously at a flow rate between 0.5 and 1 liter per minute, while field parameters (turbidity, temperature, dissolved oxygen [DO], specific conductivity, pH, and oxidation reduction potential [ORP]) were measured and recorded every 5 minutes. Samples were collected after parameters stabilized for three consecutive readings within 10% of one another, or after 1 hour of purging. Field parameters were recorded on the field forms (Appendix E-3) and are summarized in Table 3-5. Wells without a dedicated low-flow pump sampling system were designated, based on historical analytical data, as either clean, intermediate, or hazardous. Decontaminated non-dedicated tubing and portable low-flow pumps were used to sample wells designated as clean. The entire sampling assembly was decontaminated following use at each well. Dedicated tubing specific to a given well was used for wells designated as intermediate or hazardous.

Field parameters are not part of the passive sampling methodology, as discussed in more detail in the Q4 2017 Quarterly and Annual Report (USACE, 2018f). Field parameters were measured only from wells that were sampled using the low-flow methodology.

3.3.1 Sampling Deviations

Groundwater samples were not obtained from seven wells in Q2 2019. Three wells (KAFB-106001, KAFB-106008, and KABF-106079) could not be sampled due to suspected biofouling. These wells will be sampled using passive sampling techniques in the future after well rehabilitation is evaluated. Monitoring wells KAFB-106063 and KAFB-106064 were not sampled due to the presence of dedicated downhole equipment related to the Environmental Security Technology Certification Program pilot test project for EDB *in situ* biodegradation. Monitoring wells KAFB-106026 and KAFB-106230 were not sampled due to a nearby home-owner who has made threats to field staff in the past. These wells will be sampled in the future with an off-duty Albuquerque Police Department officer present. It is anticipated that these measures will be in place for the Fourth Quarter GWM event. Wells KAFB-106148-484, KAFB-106150-484, KAFB-106154-484, KAFB-106155-484, and KAFB-106156-484 are gauged, but not a part of the sampling program. Well KAFB-106211 will be added to the GWM network once the water level rises enough to allow for passive sampling.

A full suite of analytes was collected over two sample dates for wells KAFB-106244-445, KAFB-106245-460, KAFB-106S1-447, KAFB-106S2-451, KAFB-106S3-449, KAFB-106S4-446, KAFB-106S5-446, KAFB-106S7-491, KAFB-106S8-491, KAFB-106S9-447, and KAFB-106247-490. These are newly installed wells and not all sampling requirements were updated correctly in the database. The database error was identified and corrected and the additional sample aliquots were collected at each well on the second sample date to complete the full suite.

3.4 Data Review and Usability Results

The Q2 2019 groundwater analytical data underwent EPA 100% Level 3 data validation by an independent third-party subcontractor, Environmental Data Services, Inc., Virginia Beach, Virginia, following data verification. Data verification is performed on a data set to ensure method, procedural, and contractual compliance with project-specific requirements and is typically performed by the contractor responsible for data collection. Data Validation is an analyte- and sample-specific process that extends the evaluation of analytical data beyond the data verification process to determine the analytical quality of a specific data set.

Data verification and data validation are sequential steps in a data review process that can be performed by either the contractor collecting the data or an independent third-party subcontractor. For this project, verification is performed by the contractor to ensure compliance with the project Quality Assurance Project Plan (QAPjP) (USACE, 2017d) and is performed during or at the completion of field or laboratory data collection activities. EPA Stage 3 data validation is conducted by Environmental Data Services, Inc. and incorporates the data verification process and further evaluates data quality based on analytical method-specific quality control criteria and DoD QSM requirements as documented in the project QAPjP. Further detail regarding EPA data verification and validation processes is documented in Figures 2 and 4 of the Guidance on Environmental Data Verification and Data Validation (EPA 2002) these figures are provided in Appendix D-3.

Subsequent to performing data validation, the data qualifiers were uploaded to the EQuIS® project database. Data were further assessed for accuracy, precision, representativeness, comparability, completeness, and sensitivity and determined to achieve the project data quality objectives in Q2 2019. All groundwater data presented and discussed in this report are final validated data. The Environmental Resources Program Information Management System data deliverable was submitted on July 26, 2019. The Data Quality Evaluation Report for groundwater samples collected in Q2 2019 is provided in Appendix F-1, and the final laboratory data reports are included in Appendix F-2.

3.5 Project Screening Levels

The project screening levels (PSLs) were selected to satisfy the requirements of the Kirtland AFB RCRA Permit (NMED, 2010) as the lower of:

- New Mexico Water Quality Control Commission (NMWQCC) standards per the New Mexico Administrative Code, Title 20.6.2.3103, Standards for Groundwater of 10,000 milligrams per liter (mg/L) Total Dissolved Solids Concentration or Less (New Mexico Administrative Code, 2018). For metals, the NMWQCC standard applies to dissolved metals and total mercury.

- EPA National Primary Drinking Water Regulations, maximum contaminant levels (MCLs) and secondary MCLs, and Title 40 Code of Federal Regulations (CFR) Part 141, 143 (EPA, 2019).

If no MCL or NMWQCC standard existed for an analyte, the PSL used was the EPA Tapwater Regional Screening Level (EPA, 2019).

The analytical method utilized to analyze for total nitrate/nitrite nitrogen concentrations (Method 353.2) cannot identify individual nitrate and nitrite concentrations without modification. Typically, in highly oxidizing and near neutral aquifers, nitrate is the primary nitrogen species found in groundwater (Langmuir, 1997). Previous studies in the Albuquerque Basin have used total nitrate/nitrite nitrogen

concentrations as equivalent to nitrate nitrogen concentrations (Longmire, 2016; Anderholm et al., 1995). Therefore, total nitrate/nitrite nitrogen concentrations were compared to the 10 mg/L MCL for nitrate in this report.

Groundwater MCLs or PSLs for all analytes are provided in the groundwater analytical data tables included in this report.

3.6 Groundwater Quality Data

Groundwater samples collected for the Q2 2019 monitoring event were analyzed for EDB, total metals (arsenic, lead, calcium, magnesium, potassium, and sodium), dissolved metals (iron and manganese), anions (bromide, chloride, sulfate, and nitrate/nitrite nitrogen), and alkalinity, while samples from select wells south of Ridgecrest Drive SE were also analyzed for BTEX and three wells for naphthalene, and one well (KAFB-106229) was sampled for EDB only (Table 3-2). Alkalinity, sulfate, dissolved iron, and dissolved manganese concentrations provide direct and indirect evidence of anaerobic conditions and thus are important indicators of bioremediation (Section 3.6.5). Contaminant concentrations were compared to their respective MCLs or PSLs and are discussed in the following sections. The analytical results for field duplicate samples are presented in the tables and were used to assess field and laboratory analytical precision. However, field duplicate results are not discussed in this text for comparison purposes unless otherwise noted and duplicate data are not provided on figures. The results for the duplicate sample analyses are included in the Data Quality Evaluation Report (Appendix F-1).

The status of baseline sampling of newly added wells is provided in Table 3-9. Analytical data for both organic and inorganic compounds for the newly added wells are provided in Table 3-6. Data for organic compounds for GWM wells are provided in Table 3-7 and inorganic compounds in Table 3-8. Concentrations for various compounds and field parameters are depicted on figures as listed below:

- EDB on Figures 3-5 to 3-7
- Benzene on Figures 3-8 to 3-10
- Toluene on Figure 3-11
- Ethylbenzene on Figure 3-12
- Total xylenes on Figure 3-13
- Total alkalinity on Figure 3-14
- Nitrate/nitrite nitrogen on Figure 3-15
- Sulfate on Figure 3-16
- Bromide on Figure 3-17
- Dissolved iron on Figure 3-18
- Dissolved manganese on Figure 3-19
- Dissolved oxygen on Figure 3-20
- Oxidation reduction potential on Figure 3-21.

3.6.1 Organic Compounds Analytical Results

3.6.1.1 EDB Analytical Results

Groundwater samples from 154 wells were analyzed for EDB in Q2 2019. This includes 80 wells located north of Ridgecrest Drive SE and 74 wells located south of Ridgecrest Drive SE. EDB analytical results are presented in Tables 3-6 and 3-7, and on Figures 3-5 to 3-7.

- Five EDB exceedances were from wells north of Ridgecrest Drive SE but none were north of Gibson Boulevard SE. The highest EDB concentrations north of Ridgecrest Drive SE were detected in groundwater samples collected from KAFB-106036 and KAFB-106037 at a concentration of 0.13 µg/L. Both of these wells are in REI 4838 and are located near extraction well KAFB-106228.

- Sixteen EDB exceedances were from wells that are south of Ridgecrest Drive SE, nine of which were on-Base in the immediate vicinity of or within the BFF. The highest EDB concentrations south of Ridgecrest Drive SE were detected in the groundwater samples collected from well KAFB-106153-484 and newly added wells KAFB-106S2-451 and KAFB-106S1-447 (350, 260 and 250 µg/L, respectively [on-Base, in the BFF, in REI 4857]).

3.6.1.2 BTEX Analytical Results

A total of 50 wells were sampled for BTEX in Q2 2019; all 50 wells are located south of Ridgecrest Drive SE. BTEX analytical results are presented in Tables 3-6 and 3-7, and on Figures 3-8 through 3-13; concentrations of BTEX components are contoured in the Q2 and Q4 reports.

- Benzene was detected in groundwater samples collected from 23 of the 50 GWM wells (Figures 3-8 through 3-10); 18 exceeded the 5.0 µg/L MCL. Seventeen exceedances were in REI 4857 and one was in REI 4838. The highest benzene concentration was detected in KAFB-106149-484 (26,000 µg/L) in the source area. Seven of the exceedances were in newly added wells, and five of the newly added wells were non-detect for benzene (Table 3-6).

- Toluene was detected in groundwater samples collected from 33 of the 50 GWM wells (Figure 3-11); 10 exceeded the 1000 µg/L PSL. All 10 of the toluene exceedances were in REI 4857. The highest toluene concentration was detected in KAFB-106149-484 (33,000 µg/L) in the source area. Seven of the exceedances were in newly added wells, and five of the newly added wells were non-detect for toluene (Table 3-6). Toluene was detected or estimated at low concentrations in Veteran's Affairs (VA) proximal wells, KAFB-106003, KAFB-106004, KAFB-106013, KAFB-106097, KAFB-106098, KAFB-106099, KAFB-106100, KAFB-106101, and KAFB-106102. VA proximal wells are located between the historical EDB plume south of Ridgecrest Drive SE and the VA Medical Center as a means to observe for potential contaminant migration towards the VA Medical Center; these wells provide an early indication if contaminants are migrating towards the VA production well. There is no definitive trend in toluene concentrations at these wells; detections have been sporadic and low, with concentrations less than 1% of the 1000 µg/L PSL. It should also be noted that the groundwater gradient trends away from the VA Medical Center general area, making toluene concentrations unlikely to impact the production well (Figure 3-3). A history of toluene detections in VA proximal wells is provided below.

    - Toluene was detected in the groundwater sample collected from KAFB-106003 (REI 4857) at a concentration of 3 µg/L. The last toluene detection was 0.29 µg/L in Q4 2009.

    - Toluene was detected in the groundwater sample collected from KAFB-106004 (REI 4857) at a concentration of 2 µg/L. The last toluene detection was 1 µg/L in Q3 2017.

    - Toluene was detected in the groundwater sample collected from KAFB-106013 (REI 4857) at a concentration of 4 µg/L. The last toluene detection was estimated at 0.6 J µg/L in Q4 2017.

- Toluene was detected in the groundwater sample collected from KAFB-106097 (REI 4838) at a concentration of 3 µg/L. The last toluene detection was 0.6 µg/L in Q3 2017.

- Toluene was detected in the groundwater sample collected from KAFB-106098 (REI 4814) at a concentration of 1 µg/L. The last toluene detection was 2 µg/L in Q3 2017.

- Toluene was detected in the groundwater sample collected from KAFB-106099 (REI 4838) at an estimated concentration of 0.7 J µg/L. The last toluene detection was estimated at 0.7 J µg/L in Q1 2018.

- Toluene was detected in the groundwater sample collected from KAFB-106100 (REI 4814) at a concentration of 4 µg/L. The last toluene detection was 2 µg/L in Q1 2018.

- Toluene was detected in the groundwater sample collected from KAFB-106101 (REI 4838) at a concentration of 1 µg/L. This is the first toluene detection in this well since installation in 2011.

- Toluene was detected in the groundwater sample collected from KAFB-106102 (REI 4814) at a concentration of 1 µg/L. This is the first toluene detection in this well since installation in 2011.

- Toluene was qualified as non-detect in samples collected from KAFB-106244-455 and KAFB-106240-449 (REI 4857). Toluene has not been detected in these wells since installation in Q3 2018.

- Ethylbenzene was detected in groundwater samples collected from 20 of the 50 GWM wells (Figure 3-12); six exceeded the 700 µg/L PSL. All six of the ethylbenzene exceedances were in REI 4857. The highest ethylbenzene concentration was detected in KAFB-106149-484 (1,600 µg/L). Four of the exceedances were in newly added wells, and eight of the newly added wells were non-detect for ethylbenzene (Table 3-6).

- Xylenes (total) were detected in groundwater samples collected from 18 of the 50 GWM wells (Figure 3-13); 10 exceeded the 620 µg/L PSL. All 10 of the total xylene exceedances were in REI 4857. The highest total xylene concentration was detected in KAFB-106149-484 (6,000 µg/L). Seven of the exceedances were in newly added wells, and five of the newly added wells were non-detect for total xylene (Table 3-6).

It should be noted that the EDB and benzene plumes represented in Figures 3-5 and 3-8 are presented at two different extents. The plume extent shown in the inset box on both figures is the full plume extent at the water-table as interpolated through 3D kriging from all Q2 2019 concentration measurements. The plume extent shown in the relation to measurement values in each figure represents the interpolated plume extent at an elevation of 4,863 ft amsl. The two plume extents are shown because newly installed monitoring wells located within the plume boundary south of Ridgecrest Drive SE are presenting concentrations that were likely present historically, and are now being observed due to the new data points (recently installed vadose zone wells). These new data locations, coupled with a limited number of water table wells on the plume boundary, results in a radial expansion of the plume volume over monitoring wells submerged by 12 ft or more of water. This radial expansion causes the EDB plume in the upper 15 feet of the water table to appear noticeably wider than it does at lower elevations, an effect that may be overrepresented due to the relatively few control wells at the boundaries. For this reason, the plume area south of Ridgecrest Drive SE is depicted below the elevation of 4,863 ft above mean sea level. This elevation represents the highest elevation where submerged monitoring wells south of

Ridgecrest Drive SE offer lateral control on the plume extent. This issue does not affect TCZ plume depictions or analyses as the plume is adequately controlled in this area and is shown in its full extent in all figures.

3.6.2 Inorganic Compounds Analytical Results

Inorganic compounds include total alkalinity, nitrate/nitrite nitrogen, sulfate, bromide, and dissolved iron and manganese. A total of 153 wells were sampled for inorganic compounds in Q2 2019; 79 of these wells are located north of Ridgecrest Drive SE, and 74 are located south of Ridgecrest Drive SE. Inorganic analytical results are presented in Tables 3-6 and 3-8, and on Figures 3-14 through 3-19.

- Total alkalinity was detected in groundwater samples collected from 152 GWM wells; however, there is no established PSL. Alkalinity concentrations are presented on Figure 3-14.

- Nitrate/nitrite nitrogen was detected in groundwater samples collected from 65 of the 79 wells north of Ridgecrest Drive SE. None of these sample results exceeded the 10 mg/L PSL. One of the three newly added wells north of Ridgecrest Drive SE was non-detect for nitrate/nitrite nitrogen. Nitrate/nitrite nitrogen concentrations are presented on Figure 3-15.

- Nitrate/nitrite nitrogen was detected in groundwater samples from 43 of the 74 wells south of Ridgecrest Drive SE. None of these sample results exceeded the 10 mg/L PSL. Five of the detections were in newly added wells. Seven of the newly added wells south of Ridgecrest Drive SE were non-detect for nitrate/nitrite nitrogen. Concentrations of nitrate/nitrite nitrogen are presented on Figure 3-15.

- Sulfate was detected in groundwater samples collected from all 79 of the GWM wells north of Ridgecrest Drive SE. None of these sample results exceeded the 250 mg/L PSL. Sulfate concentrations are presented on Figure 3-16.

- Sulfate was detected in groundwater samples from 68 of the 74 GWM wells south of Ridgecrest Drive SE; 5 exceeded the 250 mg/L PSL. The highest sulfate concentration was detected in KAFB-106019 (772 mg/L). Sulfate concentrations above the PSL have not been detected in this well historically. Based on its location, the sulfate does not appear to be associated with the BFF site or the previously identified sewer manhole leak on base. It is possible that an off-base sewer line source exists. Two of the five sulfate exceedances were in newly added wells. Two newly added wells south of Ridgecrest Drive SE were non-detect for sulfate. Sulfate concentrations are presented on Figure 3-16.

- Bromide was detected in groundwater samples collected from two of the 79 GWM wells north of Ridgecrest Drive SE. There is no PSL for bromide. The three newly added wells north of Ridgecrest Drive SE were non-detect for bromide. Bromide concentrations are presented on Figure 3-17.

- Bromide was detected in groundwater samples collected from 13 of the 74 GWM wells south of Ridgecrest Drive SE. There is no PSL for bromide. Six of the detections were in newly added wells. Six newly added wells south of Ridgecrest Drive SE were non-detect for bromide. Bromide concentrations are presented on Figure 3-17.

- Dissolved iron was detected in groundwater samples collected from 14 of the 79 GWM wells north of Ridgecrest Drive SE; none exceeded the 1 mg/L PSL. Dissolved iron concentrations are presented on Figure 3-18.

- Dissolved iron was detected in groundwater samples from 26 of the 74 wells south of Ridgecrest Drive SE; seven exceeded the 1 mg/L PSL. The highest iron concentration was detected in KAFB-106S3-449 at an estimated value of 13.1 J mg/L. Five of the exceedances were in newly added wells. Three of the newly added wells south of Ridgecrest Drive SE were non-detect for dissolved iron. Dissolved iron concentrations are presented on Figure 3-18.

- Dissolved manganese was detected in groundwater samples collected from 12 of 79 of the GWM wells north of Ridgecrest Drive SE; three exceeded the 0.2 mg/L PSL. The highest manganese concentration was detected in well KAFB-106072 at 0.371 mg/L. One of the exceedances was in a newly added well. One newly added well north of Ridgecrest Drive SE was non-detect for dissolved manganese. Dissolved manganese concentrations are presented on Figure 3-19.

- Dissolved manganese was detected in groundwater samples collected from 47 of the 74 wells south of Ridgecrest Drive SE; 27 exceeded the 0.2 mg/L PSL. The highest manganese concentration was detected in KAFB-106S2-451 at 6.17 mg/L. Eight of the exceedances were in newly added wells. Three newly added well south of Ridgecrest Drive SE were non-detect for dissolved manganese. Dissolved manganese concentrations are presented on Figure 3-19.

- Chloride was detected in groundwater samples collected from all 79 of the GWM wells north of Ridgecrest Drive SE. None of these sample results exceeded the 250 mg/L PSL.

- Chloride was detected in groundwater samples collected from 72 of the 74 GWM wells south of Ridgecrest Drive SE. One sample exceeded the 250 mg/L PSL; chloride was detected in KAFB-106019 at a concentration of 861 mg/L. Chloride was detected in all 12 of the newly added wells south of Ridgecrest Drive SE.

An investigation by Kirtland AFB found a junction manhole may have been a source of sanitary waste release to the subsurface and nearby sewer lines are intact. A replacement manhole was installed in Q4 2017. Wells KAFB-106005, KAFB-106009, and KAFB-106012R are in the vicinity of this release and have historically had higher concentrations of analytes that indicated the presence of a sewer leak (Table 3-10). Chloride and nitrogen levels in the area have been decreasing significantly since the manhole repair in Q4 2017 and are now detected below the MCL. Sulfate levels in the impacted area have remained fairly consistent to concentrations measured prior to the manhole replacement in Q4 2017. This previously documented sulfate area is southwest of the new high sulfate area near KAFB-106019.

3.6.3 Sampling Results for U.S. Geological Survey Sentinel Wells

USGS monitors 14 sentinel wells between the Kirtland AFB BFF EDB plume and the Albuquerque Bernalillo County Water Utility Authority water supply wells as a means of providing independent observation of water quality in the vicinity of the Albuquerque Bernalillo County Water Utility Authority water supply wells. Samples are collected from these sentinel wells quarterly. Due to the government shutdown that occurred during December 2018 through January 2019, deployment of the passive samplers was delayed for Q1 2019 and the analytical results were not available to present in the Q1 2019 report; and are therefore presented in this Q2 2019 report. For Q1 2019, these samples were collected using dual membrane samplers during the time period of February 25-29, 2019. For Q2 2019, these samples were collected by the same method during the time period of April 2-17, 2019. The samples were analyzed for VOCs and EDB by the USGS National Water Quality Laboratory using method O-4127-96 (Connor et al., 1998). The USGS transmittal letters, including the Q1 and Q2 2019 data results, are provided in Appendix E-5. Samples from some wells had a few trace detections reported and were J flagged below the method report limit (MRL). Results below the MRL, are estimated and have

unknown bias and unverified confirmation. The Q1 Quality Control blanks (field blanks, equipment blanks) had multiple detections consistent with cross contamination. The USGS Level IV data packet for Q2 Method Blanks (instrument blank) noted a few analytes below the MRL. The USGS confirms in their NWQL Tech Memo 15.02 that at very low detection levels, there is a higher probability of false positive detections.

The USGS does not use a method that is validated by outside labs, as the USEPA requires for a promulgated method. The USGS lab does not verify their method capability at the Limit of Detection (LOD) as is required for DoD ELAP labs every quarter. This lack of a validated method and verified data allows for a greater risk of false positives to be recorded. The Air Force is working with the USGS to interpret the potential false positive detections at levels at or below the MRL.

3.6.4 Field Parameters

Field parameters were collected from 61 wells located south of Ridgecrest Drive SE that were sampled using the low-flow sampling method. Field parameter data are presented in Table 3-5.

- Groundwater temperatures ranged from 16.1 degrees Celsius in KAFB-106066 to 22.6 degrees Celsius in KAFB-106045.
- Sample pH ranged from 6.76 in KAFB-106080 to 8.22 in KAFB-106077.
- Specific conductivity ranged from 222.4 microSiemens per centimeter (µS/cm) in KAFB-106068 to 2,317.0 µS/cm in KAFB-106019.
- DO ranged from an anaerobic value of 0.13 mg/L in KAFB-106028 to 7.69 mg/L in KAFB-106066.
- ORP ranged from -242.5 millivolts in KAFB-106028 to 399.2 millivolts in KAFB-106084.
- Turbidity ranged from 0.02 nephelometric turbidity units in KAFB-106045 to 578.0 nephelometric turbidity units in KAFB-106020.

3.6.5 Bioremediation Indicators

Alkalinity, sulfate, dissolved iron, and dissolved manganese concentrations provide direct and indirect evidence of subsurface conditions impacted by microbial activities.

Changed alkalinity and dissolved metals concentrations relative to “background” are often associated with biological activity, as carbon dioxide respiration is a common component of many microbiological systems. The associated carbonate system is complex and can respond differently to dissolved carbon dioxide depending on initial pH. The dissolution of minerals would be associated with dissolved carbon dioxide reacting with water to express the activity of the hydronium ion (pH) as carbonic acid. The highest total alkalinity measurements are observed within the benzene plume. Wells situated outside of the benzene plume had total alkalinity concentrations more similar to one another as compared to those within the plume (Figure 3-14).

Decreased concentrations of nitrate/nitrite nitrogen and sulfate are often associated with microbial activity. Nitrogen is incorporated into microbial biomass and sulfate/sulfite transitions can be used as an energy bank by some microorganisms. Generally, lower concentrations of nitrate/nitrite nitrogen and

sulfate were observed near the source area and the benzene plume with the notable exceptions of KAFB-106005, KAFB-106009, KAFB-106012R, and KAFB-106S4-446, which had sulfate levels ranging from 325 to 440 mg/L. An investigation by Kirtland AFB found that nearby sewer lines are intact, while a junction manhole may have been a source of sanitary waste release to the subsurface. A replacement manhole was installed in Q4 2017. Nitrogen levels in the area have been decreasing significantly since Q4 2017 and are now detected only in KAFB-106009 below the PSL, while sulfate levels in KAFB-106005 and KAFB-106012R remain above the PSL.

In REI 4857, the PSL exceedances for dissolved iron and manganese were clustered in the vicinity of the benzene plume (Figures 3-18 and 3-19, respectively). The combination of elevated alkalinity and dissolved metals concentrations is likely associated with increased microbial degradation of organics in the benzene plume, resulting in the creation of anaerobic conditions. Aerobic microorganisms require the presence of DO to effectively break down organic compounds found in the environment. Decreased DO and ORP can be indicators of microbial degradation of HC in the subsurface. The lowest DO and ORP values are located in the vicinity of the benzene plume (Figures 3-20 and 3-21, respectively)

3.7 Groundwater Monitoring Well Network Operation and Maintenance

The GWM well network was inspected to ensure that the condition of all protective covers and wellheads met the intended requirements for performance and security. During the inspection period, cleaning and maintenance were performed and all GWM wells were determined to be fully serviceable.

As of the end of Q2 2019, EA Engineering, Science, and Technology, Inc., PBC had removed 88 dedicated Bennett pumps from the GWM well network as part of a transition to passive sampling for the monitoring program. One dedicated Bennett pump was removed from well KAFB-106081 during Q2 2019. Although several wells are sampled using portable Bennett pumps, ongoing issues with this sampling system continue to arise due to corrosion of components and mechanical failure due to aging parts.

4. DRINKING WATER SUPPLY WELL MONITORING

Three drinking water supply wells (KAFB-003, KAFB-015, and KAFB-016) provide drinking water to on-Base employees and tenants of Maxwell Housing, which is located off-Base. One drinking water supply well (ST106-VA-2) provides drinking water to VA Medical Center patients, employees, and visitors. These drinking water wells are community water systems that are regulated by the NMED Drinking Water Bureau in accordance with the Safe Drinking Water Act.

As part of the monitoring associated with the BFF site, these wells are sampled monthly and analyzed for EDB and BTEX due to their proximity to the BFF plume containing dissolved-phase EDB and benzene.

4.1 Drinking Water Supply Well Sampling and Analysis Procedures

Drinking water supply wells KAFB-003, KAFB-015, KAFB-016, and ST106-VA-2 were sampled in April, May, and June 2019. Field measurements, sample collection, packaging, shipping, and analyses were performed in accordance with the Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling Work Plan and associated Quality Assurance Project Plan (USACE, 2017b). Field DO, pH, ORP, conductivity, and temperature measurements were measured using an YSI Professional Plus multiparameter water quality probe; turbidity was measured using a Hach 2100Q or Geotech Portable Turbidity Meter. Instrument calibrations were performed at the start of each day of the sampling event to ensure accurate readings.

The sample port at each drinking water well head was opened for 60 seconds prior to sampling to purge any entrained sediment. Following filling, the sample containers were immediately sealed, checked for headspace bubbles, labeled, and put into an iced cooler. Daily quality control reports are presented in Appendix G-1. Completed sample collection logs and chain-of-custody forms are presented in Appendix G-2. Drinking water supply samples were collected and submitted for the following analyses:

- EDB using EPA Method 504.1
- BTEX using EPA Method 524.2.

Samples were submitted to TestAmerica Laboratories in Savannah, Georgia, for analytical testing. Analytical results were validated by Environmental Data Services, Ltd. The Data Quality Evaluation Reports are included in Appendix H-1. The TestAmerica Laboratories Analytical Reports for April, May, and June 2019 are included in Appendix H-2.

In addition, semi-annual water samples were collected in April 2019, and analyzed for the following inorganic parameters:

- Total metals (calcium, magnesium, potassium, and sodium) using EPA Method 6010C
- Dissolved metals (iron and manganese) using EPA Method 6010C
- Total metals (arsenic and lead) using EPA Method 6020A
- Anions (bromide, chloride, and sulfate) using EPA Method 300.0A
- Anions (nitrate/nitrite nitrogen) using EPA Method 353.2
- Ammonia nitrogen using Standard Method (SM) 4500NH3B/C
- Sulfide using SM4500S2CF
- Alkalinity-bicarbonate/carbonate using SM2320B.

4.2 Data Review and Usability

The Q2 2019 drinking water analytical data underwent a 100% Level 3 data validation performed by Environmental Data Services, Inc., Virginia Beach, Virginia, following data verification. Data verification is performed on a data set to ensure method, procedural, and contractual compliance with project-specific requirements and is typically performed by the contractor responsible for data collection. Data Validation is an analyte- and sample-specific process that extends the evaluation of analytical data beyond the data verification process to determine the analytical quality of a specific data set.

Data verification and data validation are sequential steps in a data review process that can be performed by either the contractor collecting the data or an independent third-party subcontractor. For this project, verification is performed by the contractor to ensure compliance with the project Quality Assurance Project Plan (QAPjP) (USACE, 2017d) and is performed during or at the completion of field or laboratory data collection activities. EPA Stage 3 data validation is conducted by Environmental Data Services, Inc. and incorporates the data verification process and further evaluates data quality based on analytical method-specific quality control criteria and DoD QSM requirements as documented in the project QAPjP. Further detail regarding EPA data verification and validation processes is documented in Figures 2 and 4 of the Guidance on Environmental Data Verification and Data Validation (EPA 2002); these figures are provided in Appendix D-3.

All data were valid based on necessary criteria, and no data were qualified as rejected. The technical data completeness was 100%. The data met data quality objectives and were deemed to be appropriate for use in project decision-making. The quality control parameter and data quality indicator (precision, bias [accuracy], representativeness, comparability, completeness, and sensitivity) evaluation results are provided in the Data Quality Evaluation Report and Data Validation Report presented in Appendix H-1 for organic and inorganic compounds. Final validated data are presented in Table 4-1.

4.3 Drinking Water Supply Well Water Quality for Q2 2019

All four wells continue to show no detectable concentrations of EDB or BTEX in the drinking water that is supplied to Kirtland AFB employees and tenants and VA Medical Center patients, employees, and visitors. Analytical results for April, May, and June 2019 are presented in Table 4-1, Figure 4-1, and Appendix H-2. Analytical data were compared to drinking water MCLs and Secondary MCLs. The MCLs for drinking water supply wells are established in the EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40 CFR Parts 141 and 143 (EPA, 2019).

All inorganic compounds detected in the samples collected from drinking water supply wells KAFB-003 and ST106-VA-2 were below their respective EPA MCL. The arsenic concentrations detected in the samples collected from KAFB-015 and KAFB-016 in April 2019 were 0.0161 and 0.0238 mg/L, respectively, which both exceeded the MCL of 0.01 mg/L. These arsenic concentrations are consistent with naturally occurring arsenic observed in the Albuquerque Basin (Bexfield and Plummer, 2003). Consequently, Kirtland AFB operates an arsenic compliance system as part of the water treatment system, and as a result, arsenic concentrations in the Kirtland AFB drinking water supply do not exceed drinking water criteria (Kirtland AFB, 2003). All other inorganic compounds detected in KAFB-015 and KAFB-016 were below their respective MCLs.

5. GROUNDWATER TREATMENT SYSTEM OPERATION AND PERFORMANCE

This section presents Q2 2019 operations, performance metrics, system expansion activities, maintenance activities of the GWTS, and plume capture evaluation.

5.1 Groundwater Treatment System Operation

The GWTS is part of the interim measure performed pursuant to the corrective action provisions in Kirtland AFB's RCRA Permit. The purpose of the interim measure is to collapse and treat the dissolved-phase EDB plume that currently extends 1,750 ft to the northeast of Ridgecrest Drive SE (TCZ). Prior to interim measure groundwater extraction, the EDB plume extended 4,000 ft northeast of Ridgecrest Drive, SE (USACE, 2015), indicating a significant reduction in the extent of the plume. The GWTS was operated during Q2 2019 to treat groundwater extracted from the distal portion of the plume north of Ridgecrest Drive SE, and is comprised of:

- Four extraction wells (KAFB-106228, KAFB-106233, KAFB-106234, and KAFB-106239),
- Conveyance piping,
- A dual train 800-gallon per minute (gpm) maximum capacity carbon treatment system located within the GWTS building, and
- Effluent conveyance lines discharging to either the Tijeras Arroyo Golf Course main pond (GCMP) or gravity-fed injection well KAFB-7 (Figure 5-1).

In addition to the operational procedures outlined in the O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b), the GWTS is also subject to the terms of Class V Underground Injection Well Discharge Permit (DP) No. 1839 (NMED, 2017d) for injecting treated groundwater to KAFB-7. The DP became effective on April 28, 2017. The requirements associated with the conditions of the DP and the location of reporting requirements in this report are summarized in Table 5-1.

5.1.1 Groundwater Treatment System Treatment Volumes and Percentage Run Time

During Q2 2019, the GWTS treated 61,440,700 gallons of groundwater; 46,977,500 gallons was discharged to GCMP, and 14,463,200 gallons was discharged to injection well KAFB-7. During Q2 2019, Trains 1 and 2 treated 35,088,400 and 26,352,300 gallons, respectively. Table 5-2 provides a cumulative summary of groundwater quantities extracted, treated, and discharged.

For the purpose of run time evaluation, GWTS operation is defined as the time when groundwater was being pumped from at least one extraction well and was subsequently treated and discharged. Table 5-3 provides a monthly and quarterly summary of the extraction well performance, including individual extraction well run times.

From April 1 through June 30, 2019, the GWTS was operational 98% of the time (Table 5-3), which is similar to Q1 2019. Planned and unplanned system shutdowns affecting GWTS overall run time during Q2 2019 are described in Sections 5.3.1 and 5.3.3.

5.1.2 Extraction Well Performance Metrics

The following subsection provides a summary of the performance metrics for the four extraction wells. Quarterly injection well performance data required for DP reporting compliance are provided in Table 5-4. Average operational extraction flow rates do not include flow rates during downtime. Well performance figures are provided in Appendix I-1.

5.1.2.1 Quarterly Extraction Rates

During Q2 2019, all four extraction wells were operated based on GCMP capacity with the following priority: KAFB-106234 is the highest priority because it is the closest to Albuquerque Bernalillo County Water Utility Authority water supply wells and therefore provides hydraulic control for protection of the water supply, followed by KAFB-106228 and KAFB-106239 which effectively capture EDB from the TCZ, with KAFB-106233 as the lowest priority since it is currently capturing little to no EDB concentrations due to a reduction in the size of the plume (Figure 3-5).

Water was extracted from KAFB-106228 during Q2 2019 at an average operational flow rate of 140.0 gpm with a run time of 90% (Table 5-3).

Water was extracted from KAFB-106233 during Q2 2019 at an average operational flow rate of 163.0 gpm with a run time of 85% (Table 5-3).

Water was extracted from KAFB-106234 during Q2 2019 at an average operational flow rate of 155.9 gpm with a run time of 91% (Table 5-3).

Water was extracted from KAFB-106239 during Q2 2019 at an average operational flow rate of 73.5 gpm with a run time of 86% (Table 5-3).

5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal

GWTS performance monitoring is performed in conformance with the most recently approved Work Plan (USACE, 2017a) as well as Appendix L of the O&M Plan, Sampling and Analysis Plan, and any subsequent revisions. DP-1839 provides additional sampling criteria. Table 2 of DP-1839 provides a list of the constituents of concern that are most frequently monitored at the GWTS (NMED, 2017d). Q2 2019 GWTS analytical performance metrics and EDB mass removal are discussed in the following sections.

5.2.1 Quarterly Sampling and Analysis

Water samples from Train 1 and Train 2 were collected monthly from the untreated influent (GWTS-BFF-INF1 and GWTS-BFF-INF2), from a port located after the lead granular activated carbon (GAC) vessel (GWTS-BFF-GAC1 and GWTS-BFF-GAC2) but before the final GAC vessel, and from the treated effluent (GWTS-BFF-EFF1 and GWTS-BFF-EFF2) in Q2 2019. These samples were analyzed for EDB, BTEX, and dissolved metals (iron and manganese). In previous reports, the samples collected between the two GAC vessels were referred to as post-GAC samples, but will hereafter be referred to as mid-GAC samples to clarify that they are not effluent samples. EDB concentrations and mass removal for Q2 2019 are summarized in Table 5-5. Sample results and effluent discharge limits are provided in Table 5-6 for Train 1, Table 5-7 for Train 2, and Table 5-8 for the Train 1 GAC Tank B changeout. GWTS performance sample collection logs are provided in Appendix I-3.

In Q2 2019, an estimated 4,895 milligrams (mg) of EDB was captured in the lead GAC vessels. Of this total, 2,161 mg was removed by Train 1 and 2,734 mg was removed by Train 2. Quantities of mass were calculated by taking the sum of each monthly influent concentration multiplied by the respective total weekly treated volume (Table 5-5).

Concentrations of EDB in the influent sample of Train 1 were detected below the 0.05 µg/L MCL at estimated concentrations of 0.022 J, 0.016 J, and 0.015 J µg/L in April, May, and June 2019, respectively (Table 5-6). The J-qualifier denotes that the analyte was positively identified, but at a low enough concentration that the associated numerical value is estimated. Concentrations of EDB in the influent samples of Train 2 were not detected in April 2019 and were detected at concentrations of estimated values of 0.028 J µg/L in May 2019 and 0.029 J µg/L in June 2019, respectively (Table 5-7). BTEX was not detected in any influent samples collected from either train during Q2 2019. Dissolved manganese was detected below the PSL in monthly influent samples collected from Train 2, and from April and May monthly influent samples collected from Train 1 (Tables 5-6 and 5-7). Dissolved iron was detected below the PSL in the May monthly influent sample collected from Train 1 (Table 5-6).

Concentrations of BTEX, dissolved iron, and manganese were non-detect in all mid-GAC and effluent monthly samples collected from either train during Q2 2019. Concentrations of EDB were detected in the mid-GAC samples of Train 1 below the 0.05 µg/L MCL at estimated values of 0.026 J, 0.02 J, and 0.02 J µg/L in April, May, and June 2019, respectively (Table 5-6). EDB was detected in the mid-GAC samples of Train 2 below the 0.05 µg/L MCL at estimated values of 0.018 J, 0.014 J, and 0.011 J µg/L in April, May, and June 2019, respectively (Table 5-7). EDB was detected in the effluent sample of Train 1 below the 0.05 µg/L MCL at estimated values of 0.015 J µg/L in April 2019 (Table 5-6). EDB was not detected in the Train 2 effluent samples in April, May, and June (Table 5-7). Additional sampling of treated water throughout the vessels in addition to GAC media indicated desorption relating to water abrasion on the media, not mass loading breakthrough. Although the EDB detections were at estimated concentrations well below actionable levels (defined as 90% of the MCL), the detected concentrations of EDB prompted a GAC changeout in both Trains in order to continue conservative operations of the GWTS (Section 5.3.3). The changeout of the Train 1 GAC Tank B on June 11, 2019 resolved the EDB detection. The changeout of the Train 2 GAC Tank A is scheduled for the month of July and will be discussed in the Q3 2019 report.

5.2.2 Data Validation

The GWTS analytical data from Q2 2019 GWTS underwent EPA Stage 3 data validation by Environmental Data Services, Inc., Virginia Beach, Virginia, following data verification. Data verification is performed on a data set to ensure method, procedural, and contractual compliance with project-specific requirements and is typically performed by the contractor responsible for data collection. Data Validation is an analyte- and sample-specific process that extends the evaluation of analytical data beyond the data verification process to determine the analytical quality of a specific data set.

Data verification and data validation are sequential steps in a data review process that can be performed by either the contractor collecting the data or an independent third-party subcontractor. For this project, verification is performed by the contractor to ensure compliance with the project Quality Assurance Project Plan (QAPjP) (USACE, 2017d) and is performed during or at the completion of field or laboratory data collection activities. EPA Stage 3 data validation is conducted by Environmental Data Services, Inc. and incorporates the data verification process and further evaluates data quality based on analytical method-specific quality control criteria and DoD QSM requirements as documented in the project QAPjP. Further detail regarding EPA data verification and validation processes is documented in

Figures 2 and 4 of the Guidance on Environmental Data Verification and Data Validation (EPA 2002); these figures are provided in Appendix D-3.

Upon completion of the verification and validation process, the data were assessed for accuracy, precision, representativeness, comparability, completeness, and sensitivity to determine if the project data quality objectives were achieved and deemed usable for their intended purpose. The data validation results are included in the Data Quality Evaluation Report provided in Appendix I-4 and the final laboratory data reports included in Appendix I-5.

5.3 Groundwater Treatment System Maintenance and Expansion Activities

Maintenance activities at the GWTS were performed in accordance with the O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b). Maintenance activities performed at the GWTS in Q2 2019 are provided in the following sections.

5.3.1 Routine Maintenance Activities

Routine maintenance is any activity described as such in the GWTS O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b). A summary of routine maintenance activities is provided below.

During Q2 2019, the Train 2 effluent bag filters were changed on February 28, 2019. The Train 2 influent bag filters were not changed, and neither influent nor effluent bag filters were changed out for Train 1. The differential pressure along the lead GAC vessel on Train 1 was 7.2 pounds per square inch (psi) on April 1, 2019; and, on June 28, 2019, the differential pressure was 2.9 psi (Appendix I-1) showing a decrease in lead GAC vessel differential pressure throughout the quarter after a backwashing event performed on June 11, 2019. On April 1, 2019, the differential pressure along the lead GAC vessel of Train 2 was 6.0 psi. The differential pressure in the lead GAC of Train 2 was 9.0 psi as of June 28, 2019.

The influent Wye-strainers were cleaned 12 times for both Train 1 and Train 2 throughout Q2 2019. Wye-strainers were cleaned to maintain equalization of the influent tanks and prevent cavitation at the influent pump intakes. The Wye-strainers accumulate biologic materials coming in with the influent.

The GWTS routine maintenance schedule is provided in Table 5-9 and non-routine maintenance activities that were performed during Q2 2019 are discussed in Section 5.3.3 and in Table 5-10.

The GWTS was shut down at various times throughout Q2 2019 for routine maintenance and equipment repairs including GCMP maintenance activities, rain events, and electrical disruptions. The GWTS was not shut down for longer than a 24-hr period even during the GAC changeout (Appendix I-1).

5.3.2 Conveyance Line Security and Administrative Controls

Kirtland AFB is registered as a line-owner with New Mexico 811 for the off-Base portion of the conveyance lines. U.S. Air Force permits are required for all on-Base excavation projects. During Q2 2019, Kirtland AFB responded to nine off-Base tickets requested through New Mexico 811 (Appendix I-2). There were no conveyance line breaches and all off-Base conveyance lines remained intact.

5.3.3 Non-Routine Maintenance Activities

Non-routine maintenance activities are defined as maintenance items that fall outside of the scope of the GWTS O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b) but need to be addressed in order to

maintain consistent GWTS operation. A summary of shutdowns associated with non-routine maintenance activities occurring during Q2 2019 is provided on Table 5-10. Major non-routine maintenance performed in Q2 2019 is listed below.

On May 2, 2019, the Train 1 GAC Tank A slurry line was removed after a leak was detected. On May 15, 2019, the slurry line was reinstalled after the line was welded and fixed. On May 16, 2019, a leak that was detected in the new weld was rewelded. Water that leaked from the slurry line was captured in 5-gallon buckets and transferred to the internal sump of the GWTS, and therefore did not result in a release to the environment.

Due to concerns about the effect of sodium hypochlorite on the GAC media prior to changeout, namely the possibility that it was oxidizing the GAC and reducing adsorption onto the media, sodium hypochlorite injections were temporarily ceased, and a temporary shutdown of the Miox sodium hypochlorite generator began on May 6, 2019. On May 9, 2019, a drain was installed on the outlet pipe of the generator's brine tank to facilitate the temporary shutdown. On May 14, 2019, the sodium hypochlorite generator temporary shutdown was completed, which included removal of all brine-generating salt from the brine tank, and the rinsing of the brine tank, piping, sodium hypochlorite generating cell, and brine pump. All rinsate solution was stored in 55-gallon plastic (poly) drums which were labeled and stored in the non-hazardous IDW yard pending analysis. The sodium hypochlorite generator will be brought back into services following the Train 2 GAC vessel changeout in July.

On May 23, 2019, the simple mail transfer protocol (SMTP) of the GWTS control system began failing to send emails to GWTS personnel in response to system alarms. Various attempts were made to fix this issue, including several visits by a controls subcontractor. As of the date of this report, the SMTP is not providing alarm notifications. Until the system is repaired, GWTS personnel remotely access the human machine interface and monitor the alarms page regularly. Troubleshooting of the human machine interface indicates an issue preventing emails from being sent out through the SMTP service. The human machine interface is scheduled to be replaced in early July 2019.

KAFB-106239 was disinfected on May 24, 2019; KAFB-106233 and KAFB-106234 were disinfected on May 30, 2019; and KAFB-106228 was disinfected on June 4, 2019. Extraction well disinfection was performed in accordance with the Standard Operating Procedure (USACE, 2018g) approved by NMED on August 6, 2018 (NMED, 2018c) and the analytical sampling suites for pre-treatment and post-treatment groundwater samples approved on November 16, 2018 (NMED, 2018d).

Pre- and post-treatment samples were analyzed for bromate and chlorite using Method E300.1. Perchlorate was analyzed using Method E331.0. Chlorite was detected at 6.1 µg/L (Table I-1-5) in the pre-disinfection sample of KAFB-106233 taken on May 30, 2019; however, no chlorite was detected in the post-disinfection sample of KAFB-106233 taken on June 4, 2019. Bromate and chlorite were not detected in the remaining samples. Perchlorate was detected at concentrations ranging from 0.11 to 1.2 µg/L, below the PSL of 14 µg/L, in all samples (Table I-1-5). Groundwater from the Middle Rio Grande Basin has naturally-occurring perchlorate concentrations ranging from 0.12 to 1.8 µg/L (Plummer et al., 2006).

The GWTS O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b) requires GAC change out when the effluent concentration of EDB reaches 90% of the 0.05 µg/L MCL to ensure that effluent from the GWTS continues to meet the MCL. On April 4, 2019, EDB was detected in the Train 1 effluent at an estimated concentration of 0.015 J µg/L (Table 5-6). Although this is well below the actionable level provided in the GWTS O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b), on June 11, 2019, the carbon media in the Train 1 GAC Tank B was removed and replaced (changed out) with fresh media to continue conservative operation of the GWTS. This is considered non-routine maintenance because the

change out was conducted well before the effluent met actionable levels. During this time, discharge from the GWTS was directed to the lined GCMP. Prior analytical data had consistently indicated the Train 1 effluent EDB concentrations as non-detect.

The carbon media used in the GAC vessels is virgin coconut carbon as it is the most efficient at capturing EDB. Virgin coconut carbon is made from converting coconuts into carbon, where the carbon is activated, trucked to the GWTS, and slurried into the GAC vessel undergoing a change out. The spent carbon removed during the change out is trucked to a carbon reactivation facility where it undergoes a thermal process to remove the EDB, whereby the reactivated carbon is restored to 95% and can be reused. Transportation manifests and reactivation documentation for the spent carbon is provided in Appendix I-1.

Following carbon change out, it was allowed to soak up clean water for a period of 24 hours as is required in the O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b). On June 13, 2019, the Train 1 GAC Tank B was backwashed to remove carbon fines leftover from the changeout. Train 1 GAC Tank B was changed from lead tank to lag in order to capture EDB from the Train 1 influent. Following changeover, the Train 1 influent, between the GAC vessels, and effluent ports were sampled. Samples were collected for EDB, BTEX, and dissolved iron and manganese as required by the GWTS O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b) whenever significant process changes occur.

Train 1 daily sampling occurred from June 13 to June 19, 2019 in accordance with the O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b). Weekly Train 1 sampling occurred on June 20 and 26, 2019, and will continue into the month of July until Train 1 has been sampled weekly a total of four times. The train will continue to be sampled monthly (Appendix I-3, Table 5-8). Concentrations of EDB, BTEX and dissolved iron were not detected in the Train 1 GAC or effluent samples, except on June 20, 2019, when EDB was detected in the Train 1 GAC sample at an estimated value of 0.012 J µg/L, but was not detected in the subsequent Train 1 GAC sample on June 26, 2019. Dissolved manganese was detected in all Train 1 effluent samples at estimated concentrations between 0.0017 J and 0.0154 J mg/L, below the PSL of 0.2 mg/L. Dissolved manganese was not detected in the Train 1 GAC samples. Manganese concentrations are anticipated to decrease when the sodium hypochlorite generator is returned to service in July 2019 following the Train 2 GAC changeout.

On June 25, 2019, KAFB-106234 was taken offline for replacement of the motor and pump and a change in the set depth in accordance with the O&M Plan (NMED, 2016; USACE, 2016a, 2017c, 2018b). This was performed because the flow rate from this well decreased over a period of approximately 2 months from 170 to 143 gpm. An assessment of the pump indicated faulty thrust bearings and worn impellers. In addition, two holes that developed in the wall of the pipe located just above the pump were observed following pump removal. A replacement pump of similar make and model was installed at a depth of 493.6 ft bgs (depth to the top of the pump). This pump has been operating at a flow rate of 174 gpm, and a drawdown of 5.34 ft without issue. The well resumed full operation on June 28, 2019.

5.3.4 Effluent Conveyance Line Integrity

Effluent line testing was not performed during Q2 2019. Final retesting of the segment between the changeover valve and KAFB-7 will be performed after final valves are installed at KAFB-7.

5.4 Groundwater Treatment System Performance Assessment

The pump and treat interim measure to contain the dissolved-phase EDB groundwater plume is being implemented pursuant to the corrective action provisions in Part 6 of Kirtland AFB's RCRA Permit.

As discussed above, this interim measure focuses on the collapse and treatment of the dissolved-phase EDB concentrations in groundwater that extends north of Ridgecrest Drive SE. It does not address dissolved-phase EDB or other fuel-related constituent concentrations present in the source area located south of Ridgecrest Drive SE. The fuel-leak related contamination south of Ridgecrest Drive SE will be comprehensively addressed in the Corrective Measures Implementation phase once the final remedy for the source area has been selected by NMED. At a minimum, the pump and treat system will continue to operate until the corrective measures evaluation is completed, NMED has selected the final remedy or remedies, and the corrective measures implementation plan is approved.

The principal goals of the groundwater interim measure are to: (1) halt plume expansion and provide protection to water supply wells by hydraulic capture of the dissolved-phase EDB utilizing well pumping; and (2) collapse the dissolved-phase EDB plume north of Ridgecrest Drive SE, which includes reducing the volume and EDB mass over time. The first goal, referred to as plume capture by the EPA (EPA, 2008) and in this report, provides short-term protectiveness. The second goal, plume collapse, works toward the longer-term cleanup goal (permanent protectiveness), which will be dictated by the final remedy approved by NMED in the future. Measuring the attainment of these goals during implementation of both the interim measure and the final remedy is referred to as performance assessment. Performance assessment of the GWTS and plume capture numerical modeling using FEFLOW are performed in Q2 and Q4 of each year using the EPA Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems (EPA, 2008). Performance assessment and modeling were approved by NMED on April 23, 2018 (NMED, 2018b) in resolution of the modeling component of the Notice of Deficiency issued to Kirtland AFB on November 16, 2017 (NMED, 2017c). This performance assessment is a snapshot of the system's performance and is not intended to be a final remedy evaluation.

The subsections below describe the methods of performance assessment being utilized to measure the progress of the interim measure.

EPA defines capture zone evaluation as a six-step process (EPA, 2008):

- Step 1: Review site data, site conceptual model, and remedy objectives
- Step 2: Define site-specific TCZ
- Step 3: Interpret water levels
  - Potentiometric surface maps (horizontal capture)
  - Water level difference maps (vertical capture)
  - Water level pairs (gradient control points)
- Step 4: Perform calculations
  - Estimate flow rate calculation
  - Capture zone width calculation
  - Modeling (analytical or numerical) to simulate water levels, in conjunction with particle tracking and/or transport modeling

- Step 5: Evaluate concentration trends

- Step 6: Interpret actual capture based on Steps 3 through 5, compare to TCZ, and assess uncertainties and data gaps.

As defined by EPA, a "Capture Zone" refers to the three-dimensional region in an aquifer system that contributes the groundwater extracted by one or more wells (EPA, 2008). The purpose of the performance assessment is to delineate hydraulic containment produced by each interim measure extraction well at a single point in time (period of gauging) and compare it to the TCZ (dissolved EDB concentrations above the MCL). The percentage of the plume contained will be identified as captured, meaning that if conditions do not change, the contained portion of the plume will eventually flow to the extraction well and be removed from the aquifer. The terms "capture" and "contained" are used interchangeably representing the above definition.

Steps 3 through 5 represent techniques for systematically evaluating capture, and each has limitations, meaning that no single line of evidence will conclusively differentiate between successful and failed capture. Therefore, in order to increase the confidence in the conclusions of a capture zone analysis, multiple techniques are applied so that converging lines of evidence can be developed. This section describes the methods and results for each line of evidence used to evaluate dissolved-phase EDB capture at Kirtland AFB BFF. Detailed descriptions of the methodologies utilized can be found in the Q4 2016 Quarterly and Annual Report (USACE, 2017f), in Appendix I-6 of the Q2 2018 Report (USACE, 2018e), and in Appendix I-6 of the Q4 2018 Report (USACE, 2019a).

5.4.1 Step 1: Review Site Data, Site Conceptual Model, and Remedy Objectives

EPA (2008) identifies four prerequisites for establishing meaningful TCZs. These prerequisites are cited below, followed by responses to the posed questions.

1. *Is the plume adequately delineated in three dimensions?*

    - Plume delineation is accomplished through the GWM network gauging and sampling activities described in Section 3, along with the gauging of six wells that are not in the GWM network (Appendix E-2). The groundwater level and water chemistry monitoring network includes up to 168 monitoring wells, 127 of which are part of 41 two-, three-, or four-well nested sites designed to monitor vertical gradients and three-dimensional water chemistry. The plume is well defined in three dimensions.

2. *Is there adequate hydrogeologic information for performing capture zone evaluations?*

    Quarterly analyses are used to identify data gaps and define locations for additional monitoring wells, continually improving the performance of the monitoring well network. A summary of hydrogeologic information used for the capture zone evaluations follows:

    - Groundwater levels across the site are measured during 3- to 5-day synoptic periods every quarter. (Note that "groundwater level" and "head" are used interchangeably throughout Section 5.4). Based on screen interval elevations, the monitoring well network has been grouped into three REIs that allow for a systematic way to analyze the horizontal flow and vertical gradients at depth in the aquifer.
    - Water chemistry data are collected from the entire monitoring well network every Q2 and Q4 in order to define and monitor the extent and character of contaminant concentrations,

including dissolved-phase EDB addressed in this section.

- Quarterly water level measurements have shown that the groundwater levels in the project area have been increasing at an average rate of approximately 3.3 ft per year since 2013. As of Q2 2019, well screens of 33 monitoring wells remained unsubmerged by the rising water table, including the nine newly installed water table wells.

3. *Is there a site conceptual model (not a numerical model)?*

   - The plume exists in an unconfined aquifer characterized by coarse-grained, braided river deposits with a northeast-southwest-oriented channel axis (AECOM, 2016). Silt and clay units representing overbank, backwater, and/or floodplain deposits are interbedded with the coarser grained channel deposits. Due to relatively high evapotranspiration rates, recharge from the ground surface is usually negative. The primary source of recharge to the aquifer is from mountain front runoff and from seepage from the Rio Grande and its tributary streams and arroyos (AECOM, 2016).

   - In a study of the hydrologic system of the Middle Rio Grande Basin (Bartolino and Cole, 2002), USGS states: "Though the aquifer is under confined conditions locally, it is considered to be an unconfined aquifer as a whole. (For groundwater flow modeling, the upper part of the aquifer system is treated as unconfined and the lower part as confined.)"

   - The network currently incorporates 41 nested groundwater level monitoring locations (Figures 5-2 and 5-3), which measure pressure at two or three vertically distinct horizons in the aquifer at relatively the same horizontal location (for this discussion, wells are considered nested if the wells being compared are located less than 180 ft apart). Well pairs are evaluated across the entire plume in conjunction of the Step 3 potentiometric surface analysis. Aquifer confinement would be indicated by differences in pressure between vertical nested wells. In Q2 2019, vertical head differences could not be determined at one of the well nests as head measurements were not possible in KAFB-106063 and KAFB-106064 due to downhole equipment associated with the *in situ* biodegradation pilot study (Section 5.5) and measurements could only be obtained for the REI 4814 well (KAFB-106062).

   - A comparison of the head difference between the shallow (REI 4857) and intermediate (REI 4838) monitoring location for each of the 40 well pairs shows that 55% (22 well pairs) represent unconfined conditions, having vertical pressure differences of between -0.1 and 0.1 ft (head difference rounded to the nearest tenth of a foot). The remaining 18 well pairs are scattered throughout the monitored groundwater network for the BFF EDB plume representing localized aquifer separation due to discontinuous interbedded fine grain lenses between the nested well screens. A comparison of the head difference between the intermediate (REI 4838) and deep (REI 4814) monitoring location for each of the 39 well pairs shows that 72% (28 well pairs) represents unconfined conditions, having vertical pressure differences of between -0.1 and 0.1 ft. Similar to the upper comparison, the remaining 11 well pairs are scattered around the project area representing localized aquifer separation due to discontinuous interbedded fine grain lenses between the nested well screens.

   - The section of aquifer upon which the hydraulic containment analyses presented in this section are performed includes the upper part of the Santa Fe Group (Middle Rio Grande Basin), above the uppermost confining unit referred to as A2 (AECOM, 2015).

4. *Is the objective of the remedy clearly stated?*

    - The objective of the groundwater interim measure is hydraulic containment (capture) and collapse of the dissolved-phase EDB >0.05 µg/L north of Ridgecrest Drive SE.

5.4.2 Step 2: Define Site-Specific Target Capture Zone

According to EPA (2008), the *TCZ is defined herein as the three-dimensional zone of ground water that must be captured by the remedy extraction wells for the hydraulic containment portion of the remedy to be considered successful. This will depend on the site-specific remedy objectives (Step 1)."*

- The groundwater interim measure goal is to reduce the mobility and volume of contaminated media by containing, capturing, and treating contaminated groundwater in the plume north of Ridgecrest Drive SE. The three-dimensional zone of groundwater that must be captured by the interim measure extraction wells (i.e., the TCZ) is defined as the MCL for dissolved EDB, 0.05 µg/L. The iso-shell delineating the cleanup standard is defined as the three-dimensional polygon with a periphery concentration of 0.05 µg/L. Water chemistry samples collected from vertically nested wells have shown that EDB in concentrations above the detection limit do not extend throughout the entire thickness of the impacted portion of the aquifer; therefore, a three-dimensional delineation of the TCZ is required. The method for delineating the TCZ is described in the Q4 2016 Quarterly and Annual Report (USACE, 2017f).

EPA (2008) also states that *the TCZ should be defined in terms of specific criteria, such as a specific concentration contour or a geographical boundary along which an inward hydraulic gradient is to be established.*

- The effectiveness of the interim measure is evaluated by comparing the most recent dissolved-phase EDB delineation with past delineations. EDB concentration data are collected and analyzed from the full GWM network during Q2 and Q4 of each year. Therefore, dissolved-phase EDB delineations are updated on this schedule and plume comparisons are presented in the reports associated with these quarters. All delineation updates are performed using the same methodology with the only variations being the insertion of the current EDB concentration data, addition of any new monitoring wells since the last assessment, and allowance of volume increase due by resetting the plume upper surface to the current water table surface.

Figure 5-4 shows the modeled EDB delineations for the last seven synoptic measuring periods. The plume volume defined by the 0.05 µg/L iso-shell changes between measuring periods as a result of the rising regional water table and interim measure extraction activity. The actual volumetric change is not presented or evaluated in Figure 5-4, but only provided for graphical visualization.

5.4.3 Step 3: Interpret Water Levels

EPA (2008) states that *for most sites, it is appropriate to analyze groundwater flow patterns in three dimensions (i.e., both horizontal and vertical). The potential for vertical transport of contaminants to underlying or overlying aquifers should be considered. Three-dimensionality of groundwater flow patterns in the vicinity of pumping wells should also be considered.*

Hydraulic capture analyses, both in the horizontal and vertical directions, are based on defining the direction of groundwater flow through mapping pressure in the aquifer from discrete measuring points (monitoring wells). The purpose of the performance assessment is to delineate the zone of hydraulic

containment produced by each interim measure extraction well at a single point in time (period of gauging) and compare the zone to the TCZ (dissolved-phase EDB north of Ridgecrest Drive SE). The percentage of the plume within the containment zone will be identified as contained; meaning that, if conditions do not change, the contained portion of the dissolved-phase EDB will eventually flow to the extraction well and be removed from the aquifer. The current capture zone analyses were conducted using groundwater head and EDB concentration data sets collected in Q2 2019. The synoptic groundwater head measuring event was from April 17 to 19, 2019, and included 162 monitoring wells. In addition to the wells gauged as part of the synoptic event, six wells were gauged for use in the performance assessment on April 24, 2019. The synoptic water chemistry sampling event was from April 1 to May 20, 2019 and included 154 monitoring wells. A full description of how REIs are defined and of the method used to perform horizontal capture are included in the Q4 2016 Quarterly and Annual Report (USACE, 2017f).

The well network was resurveyed in 2017 by USGS, and all measuring point elevations were officially updated in October 2017. As such, the measuring point elevations and, therefore, groundwater elevations for most of the GWM wells changed from historical values. Most of the changes were insignificant (less than 0.1 ft); however, several wells had elevation updates ranging from 0.3 to 0.6 ft. The capture analysis presented in this report (and future monitoring reports) uses the latest survey data and compares capture statistics to previous quarters by also using the same updated survey data. Tables containing results from previous performance assessments have been updated to represent the 2017 survey. However, quarterly reports published prior to this survey used historic survey data.

It should be noted that Steps 3a and 3b, which are discussed in Sections 5.4.3.1 and 5.4.3.2 below, are capture analyses that do not rely on the delineation or interpretation of drawdown. Drawdown is the change of water level due to groundwater extraction. It is calculated by subtracting the water level measured under pumping conditions from the water level measured without pumping. The "cone of depression" (i.e., drawdown) caused by extraction from one or more locations does not represent the capture zone associated with that extraction. If a regional hydraulic gradient exists (which it does across the project area), there are locations outside the capture zone where drawdown due to pumping is observed. These analyses define capture by delineating the flow field under pumping conditions only.

5.4.3.1 Step 3a: Potentiometric Surface Maps (Horizontal Capture Analysis)

EPA (2008) states that *horizontal capture is defined by a bounding flow line, within which all other flow lines reach an extraction location. The delineation of the capture zone in this manner is a derived interpretation, since water level contours must first be interpreted from water level values.*

Horizontal water level maps indicate contours of water levels within the aquifer from which the extent of horizontal capture can be interpreted. Flow lines are interpreted as perpendicular lines to water level contours. The method used in this analysis uses Environmental Systems Research Institute Spatial Analyst to develop potentiometric surface grids (analogous to groundwater level contours) from measured groundwater levels, then converts the potentiometric surface grid into a flow direction grids (analogues to flow lines). From the flow direction grids, still using Spatial Analyst, the hydraulic divide defining capture by each interim measure extraction well is defined.

Capture analyses are performed in Q2 and Q4 of each year when dissolved-phase EDB delineations are updated. The horizontal capture analysis for the TCZ north of Ridgecrest Drive SE for the current EDB delineation (Q2 2019) and the previous five delineations (Q4 2016, Q2 2017, Q4 2017, Q2 2018, and Q4 2018) is summarized in Table 5-11.

Figure 5-5 shows the horizontal capture of the portion of the dissolved-phase EDB within REI 4857

during Q2 2019. Plume capture is divided among the four extraction wells, which were active during the synoptic gauging period (KAFB-106228, KAFB-106233, KAFB-106234, and KAFB-106239). With respect to the TCZ north of Ridgecrest Drive SE, the interim measure resulted in the horizontal capture of 100% of the dissolved-phase EDB volume and mass (Table 5-11). Within REI 4857 north of Ridgecrest Drive SE, extraction well KAFB-106228 was the most effective with capturing 51.4% of the dissolved-phase EDB volume and 50.4% of the mass, followed by KAFB-106239 capturing 48.5% of the dissolved-phase EDB volume and 49.6% of the mass, and KAFB-106233 capturing 0.1% of the dissolved-phase EDB volume and 0.0% of the mass (Table 5-12). KAFB-106234 does not have capture statistics because dissolved EBD concentrations above the MCL were not detected in REI 4857 from the water chemistry samples within the capture zone of the well.

Figure 5-6 shows the horizontal capture of the TCZ within REI 4838 during Q2 2019. With respect to capture in the TCZ, the interim measure resulted in the horizontal capture of 100% of the dissolved-phase EDB volume and mass (Table 5-11). Within REI 4838 north of Ridgecrest Drive SE, extraction well KAFB-106228 is the most effective, capturing 68.9% of the dissolved-phase EDB volume and 68.9% of the mass; followed by KAFB-106239, capturing 29.7% of the dissolved-phase EDB volume and 30.1% of the mass; and KAFB-106233, capturing 1.4% of the dissolved-phase EDB volume and 1.0% of the mass (Table 5-12). Extraction well KAFB-106234 does not have capture statistics because dissolved EBD concentrations above the MCL were not detected in REI 4838 from the water chemistry samples within the capture zone of the well. Horizontal capture for REI 4814, which does not contain any dissolved-phase EDB volume, is shown in Figure 5-7.

Combining dissolved-phase EDB volume and mass capture analyses for both REIs 4857 and 4838 discussed above, the interim measure resulted in the horizontal capture within the TCZ of 100% of both the dissolved-phase EDB volume and mass in Q2 2019.

With the addition of the 15 water table wells in 2018 and nine in 2019 (both newly installed and existing), the flow directions and hydraulic containment along the saturated/unsaturated interface can start to be analyzed. There are not enough new wells dispersed across the plume area to create a distinctly different REI; however, combining data from the added wells and from the existing unsubmerged and slightly submerged wells (less than 3.5 ft of submergence) in REI 4857, a reasonably well-defined water table surface can be interpolated. Figure 5-8 shows the interpolated water table surface based on these wells for Q2 2019. Since this analysis merges with the REI 4857 at locations throughout the domain, a unique plume split cannot be developed; however, hydraulic containment can be represented graphically by placing delineated water table containment basins over the REI 4857 plume outline as defined by dissolved-phase EDB. The data presented in Figure 5-8 show that the distal end of the dissolved-phase EDB (TCZ) is contained at the water table by KAFB-106228 extraction, as it is in REI 4857, and that the rising water table is not causing EDB to migrate away from the extraction well. Water table capture near Ridgecrest Drive SE cannot be delineated because drawdown associated with KAFB-106239 extraction cannot be defined at the water table. KAFB-106239 is not screened across the water table and all nearby monitoring wells are submerged. Placement of a monitoring well near KAFB-106239 that is screened across the water-table would allow for the measurement of the associated drawdown and the delineation of capture associated with this well.

Interpreting horizontal capture from water level maps is subject to significant uncertainty. Below is a list of the potential issues cited by EPA (EPA, 2008) to be considered and how this assessment addresses them.

- Are the number and distribution of measurement locations adequate?

    — There is no rule regarding the “correct” amount of groundwater level data (EPA, 2008).

Contouring accuracy will increase as the number of data points increase. Currently, each of the four interim extraction wells is surrounded by from five to eight nested monitoring wells indicating the direction of flow radially around the extraction well and at depth. Groundwater level monitoring is conducted within, at the perimeter, and downgradient of the TCZ to interpret groundwater flow patterns and the associated capture zone.

- Measurement locations have improved with the installation of 15 new Data Gap wells in Q4 2018 and Q1 2019. Locations are shown on Figure 3-1.

- Are water levels included in the vicinity of extraction wells (and have well inefficiency and losses been considered at extraction well locations)?

  - The water level measured in an extraction well is typically lower than the level in the adjacent aquifer due to well inefficiency and well losses (EPA, 2008). Therefore, groundwater levels at extraction wells are estimated through linear interpolation using the measured head in the closest monitoring well to the extraction well and all other neighboring monitoring wells.

  - Extraction wells KAFB-106228 and KAFB-106233 have nested monitoring wells located less than 55 ft away resulting in interpolated extraction well heads 0.1 ft lower than the closest monitoring wells.

  - The closest monitoring well to extraction well KAFB-106234 is 223 ft away. Linear interpolation yields an extraction well head 0.7 ft lower than in the closest monitoring well.

  - The closest monitoring well to extraction well KAFB-106239 is 150 ft away. Linear interpolation yields an extraction well head 0.3 ft lower than in the closest monitoring well.

- Has the horizontal capture evaluation been performed individually for all pertinent horizontal units?

  - The horizontal capture is performed in three REIs covering the extraction screen interval and is reported for each REI containing a portion of the TCZ.

- Is there bias based on contouring algorithm?

  - The potentiometric surface for each REI is interpolated using a natural neighbor algorithm that honors all measured values, places contours based on the distance between any one well and all of its neighboring wells and eliminates over- and under-run estimates related to the gradient between neighboring wells.

  - Uncertainty still exists as the method assumes that all ridges and valleys (divides) in the potentiometric surface are represented by the monitoring well network.

- Is representation of transient influences adequate?
  - It is recognized that extraction within and surrounding the project area is transient and, therefore, the regional gradient across the site is transient requiring continual updating of the capture assessment currently scheduled at twice a year. As discussed in Section 5.4 above, this performance assessment is a snapshot of the systems performance and is not intended to be a final remedy evaluation. The EPA guidance emphasizes that while the modeling used

for this biannual performance assessment is a tool for evaluating and improving the site conceptual model, predicting capture zones, and evaluating alternative remediation scenarios, capture zone effectiveness is "ultimately determined by field monitoring."

- Has potential for vertical transport been neglected when evaluating horizontal capture?

  — Vertical transport potential is assessed separately from, but in conjunction with, horizontal capture (see next section).

5.4.3.2 Step 3b: Water Level Difference Maps (Vertical Capture Analysis)

EPA (2008) states that *water levels between adjacent hydrogeologic units are evaluated to indicate zones of upward versus downward flow. The analysis can be based on vertical head differences or vertical gradients (the head difference divided by the vertical distance between measurements).*

The vertical capture analysis for the interim measure TCZ north of Ridgecrest Drive SE for Q2 2019 is summarized in Table 5-13. A vertical capture analysis defines hydraulic containment by evaluating groundwater levels between adjacent hydrologic units to determine zones of upward versus downward flow. Containment is defined by zones with upward flow that prevents dissolved contaminants from being transported by advection deeper into the aquifer. Vertical flow direction can be evaluated by subtracting the groundwater head measured in an adjacent lower hydrologic unit from the groundwater head measured in the overlying unit. A head difference of less than zero indicates that the head in the lower unit is greater than the head in the upper unit and, therefore, water will flow vertically upward.

Vertical hydraulic gradient is the head difference divided by the vertical distance between measuring points. While vertical gradients can provide more information than head differences because they account for the distance between measurements, significant error exists in calculating vertical gradients from groundwater levels measured from long screen intervals. Also, vertical gradient values are typically very small reducing their ability to represent the magnitude of the vertical difference. Because of this and because interim measure monitoring well screen intervals range from 10 to 30 ft in length, this analysis uses vertical head differences to illustrate vertical capture as described in the EPA guidance above.

The well network was resurveyed in 2017 by USGS, and all measuring point elevations were officially updated in October 2017. As such, the measuring point elevations and, therefore, groundwater elevations for most of the GWM wells changed from historical values, as discussed in more detail in Section 5.4.3.

The method for delineating vertical containment was changed in the Q4 2018 analysis. Previously, the vertical head difference between REIs was calculated by subtracting the potentiometric surfaces developed for each REI. However, significant uncertainty was introduced using this method as the data resolution was different within each REI because the number of head measurements decreased with depth.

Starting in Q4 2018, vertical head differences were calculated only at each nested well location. Those difference values were then used to interpolate the vertical head differences across the plume area using a linear interpolation method assigning head differences between data points based on the distance from and magnitude of all neighboring data points. While the new method removed the data resolution issues going forward, the change limits the usefulness of comparison of vertical containment with past analyses.

The entire dissolved-phase EDB volume delineated for Q2 2019 was sliced along the elevation surface dividing REI 4857 and REI 4838 and along the elevation surface dividing REI 4838 and REI 4814. The

upper dissolved-phase EDB volume has two opportunities to be contained vertically. Initially, this plume volume can be contained by upward flow between REI 4838 and REI 4857. Portions of the plume not contained in this interval have the potential to move downward into the lower unit. Once in the lower unit, these portions can be contained by vertical upward flow between REI 4814 and REI 4838. The lower plume volume can only be contained by vertical upward flow between REI 4814 and REI 4838. No non-pumping potentiometric surface grids are developed and no pumping versus non-pumping difference maps are calculated.

Figure 5-2 shows the results of the vertical containment analysis for the upper unit plume volume (above the 4838 REI midpoint) in Q2 2019. All "green" areas are vertically captured and "tan" areas do not have vertical capture. With respect to the dissolved-phase EDB within the interim measure TCZ north of Ridgecrest Drive SE, 100% of the dissolved-phase EDB volume and 100% of the mass were vertically contained in this unit (Table 5-13). Figure 5-3 shows the results of the vertical containment analysis for the lower plume volume (below the 4838 REI midpoint) in Q2 2019. Similar to Figure 5-2, the "green" areas are vertically captured and "tan" areas do not have vertical capture. With respect to the interim measure TCZ, 100% of the dissolved-phase EDB volume and 100% of the mass were vertically contained (Table 5-13). In total (above and below the 4838 REI mid-point), 100% of the dissolved-phase EDB volume and 100% of the mass in the interim measure TCZ were vertically contained in Q2 2019.

Vertical capture based on vertical head differences or vertical hydraulic gradients is subject to a similar set of uncertainties as described for horizontal capture. With respect to having an adequate vertical distribution of monitoring wells, 11 of the REI 4814 monitoring wells within the TCZ north of Ridgecrest Drive SE are screened above an elevation of 4,790 ft. Downward vertical flow at these well nests may be in response to the three-dimensional capture zone of an extraction well not loss of capture. The addition of deeper screened intervals within the gauging network could reduce the uncertainty.

This uncertainty in the vertical containment analysis has been addressed by comparing multiple lines of evidence (i.e., modeling). Section 5.4.4 describes the results of a numerical model designed for use in Step 4 of the EPA capture evaluation guidelines (EPA, 2008). The numerical model provides for a method to three-dimensionally estimate the containment produced by the interim measure extraction. In the Q2 2019 performance assessment, the model estimated containment supports the interpretation of 100% of vertical containment from this analysis.

5.4.3.3 Step 3c: Water Level Pairs (Gradient Control)

To support the previously presented horizontal and vertical containment analyses, a water level pairs analysis was performed. Water level pairs analysis defines gradient control points and demonstrates the direction of flow relative to the plume boundary, thus providing an initial assessment of measure effectiveness and a supporting line of evidence for assumptions made during horizontal and vertical containment analyses. Two types of water level pairs analysis were performed, as described below.

To support the horizontal containment analyses, a horizontal water level pairs analysis was performed for REI 4857 and REI 4838. Thiessen polygons, which define the area that is closest to each point relative to all other points within a spatial dataset, were developed for each of the interval group wells. Water levels were then compared among a well in the center of a polygon and all of the wells with neighboring polygons. The graphical representation of the Q2 2019 horizontal water levels pairs analysis is shown on Figure 5-9. The arrows on these figures show the potential directions of flow from each well based off of the head comparison. Polygon colors delineate the plume area as: captured (by one or more extraction wells), possibly captured (flow could go to an extraction well or to an unidentified sink), or not captured (flow cannot go to an extraction well). The horizontal water level pairs analyses show that all well pair gradients within or surrounding the plume boundary in REI 4857 and REI 4838 flow toward one or more

interim measure extraction wells, verifying the reasonableness of the capture zones defined in the horizontal capture analyses discussed in Section 5.4.3.1.

To support the vertical containment analysis, heads in vertically nested well sets were compared in order to verify the vertical flow direction. The locations of the centroid for each nested well pair are shown on Figures 5-2 and 5-3. The values associated with these wells represent the head difference when the lower unit's head is subtracted from the upper unit's head. A head difference of less than zero represents upward flow (wells shown as "green") and, therefore, vertical containment is achieved. A head difference greater than zero presents downward flow (wells shown as orange) and, therefore, vertical containment is not achieved. Results from this well pair analysis are shown on the figures to identify the location and magnitude of gradient control points for the vertical containment analysis.

5.4.4 Step 4: Perform Calculations

Step 4 of the EPA Systematic Approach for Evaluation of Capture Zones (EPA, 2008) states that *specific calculations can be performed to add additional lines of evidence regarding the extent of capture, including the following:*

- *Simple horizontal analyses related to capture, such as estimated flow rate calculations and capture zone width calculations* (EPA, 2008).

- *Modeling (analytical or numerical) to simulate heads, in conjunction with particle tracking and/or contaminant transport modeling* (EPA, 2008).

Determining the appropriate types of calculations to perform should be based on site complexity. For instance, numerical simulation of heads for evaluating capture may not be necessary for sites with very simple hydrogeology and only minor heterogeneity of aquifer parameters (EPA, 2008).

Calculations performed in Step 4 can range from simple two-dimensional analyses estimating capture zone width based on extraction rates and aquifer properties to complex three-dimensional analytical or numerical simulations of head, producing particle track delineations of capture. EPA encourages the use of groundwater modeling at more complex sites as a tool for evaluating and improving the site conceptual model and predicting capture zones. Complexity can be defined as aquifer heterogeneity and anisotropy, non-uniform aquifer thickness, non-uniform hydraulic gradient, transient conditions, offsite aquifer stresses, and/or the presence of many partially penetrating extraction and/or injection wells.

If one or more of these complexities is present, the assumptions associated with simple two-dimensional methods are violated and a more complex form of additional lines of evidence should be examined. Heterogeneity and non-uniform hydraulic gradient have been identified as complexities that may need to be addressed with future use of the numerical model.

Performance assessment of the interim measure initially used a simple two-dimensional capture zone width calculation (Bullet 1) to provide a supporting line of evidence to the measured data-based analyses described in Step 3 (presented in the Q4 2016 Quarterly and Annual Report [USACE, 2017f]). This calculation has the following simplifying assumptions:

- The aquifer is homogeneous and isotropic.

- The aquifer is confined and has uniform thickness.

- The aquifer contains fully penetrating wells.
- The aquifer has a uniform regional horizontal hydraulic gradient and steady-state flow.
- There is no net recharge to the aquifer.

However, the upper aquifer at the BFF site is not confined, does not have a uniform thickness, and none of the interim measure or supply wells are fully penetrating. In addition, the simple horizontal capture zone calculations do not pertain to vertical capture, which is an important aspect to assessing performance of the interim measure due to the abundance of supply wells screened below the interim measure extraction wells in the aquifer. Therefore, the three-dimensional numerical model was added (Bullet 2), to simulate heads resulting from interim measure extraction and define the three-dimensional hydraulic containment produced by interim measure extraction at the point in time when groundwater heads are measured and compare these containment zones to the TCZ developed for the same time period.

5.4.4.1 Step 4a: Groundwater Flow Model Design

EPA guidelines do not dictate specific model types for use in Step 4 stating that different types of simulation models, ranging from analytical to numerical, can be applied to calculate hydraulic heads and produce particle tracks upon which capture can be evaluated (EPA, 2008). NMED deferred to Kirtland AFB for selection of an appropriate modeling approach and approved the proposed modeling approach on April 23, 2018 (NMED, 2018b). The numerical model used for the purpose of adding a supporting line of evidence to this capture zone evaluation was developed using the finite element software FEFLOW (DHI Group). FEFLOW was chosen primarily because of the superior mesh design capabilities of the finite-element method. The finite-element mesh allows for the articulation of each monitoring well and extraction well no matter how irregular or close the spacing, and it allows for localized refinement around each extraction well increasing the accuracy of simulated drawdown due to extraction at the well while minimizing the number of nodes and elements required, thus minimizing computation time.

The numerical flow model used in this quarter's analysis is a revised version (Version 2) of the model originally used in the Q2 2018 assessment (the Version 1 model is described in Appendix I-7 of the Q2 2018 Report [USACE, 2018e]). The Version 2 model revisions are based on how the hydrologic conditions and aquifer stresses outside of the model domain are interpolated and applied to the model boundaries. The model's domain, mesh, and layering were not modified; however, the model design no longer assumes a uniform gradient across the domain and this change necessitated a recalibration. The Version 2 design and assumptions are given below, and a description of the revisions made to the Version 2 model are located in Appendix I-6 of the Q4 2018 Report (USACE, 2019a). This model revision is consistent with the iterative capture zone analysis process outlined in the EPA guidance. Section 5.4.6.1 discusses planned revisions for Q4 2019.

The Version 2 model is a three-dimensional model containing four layers, three representing each of the REIs described above and one representing the remaining aquifer below REI 4814 and above the A2 confining layer. The bottom elevation of the model follows the surface of the A2 unit allowing the aquifer thickness to increase moving from west to east. Model design has the following assumptions:

- The aquifer has a homogeneous horizontal Kh set at 150 ft/day.
- The aquifer has a uniform vertical anisotropy (VANI) set at 0.005.
- There is no recharge to the aquifer except for the recharge accounted for in the regional hydraulic

gradient.

Figure 5-10 shows the groundwater flow model domain and key assigned features. A rigorous analysis of borehole lithology logs and electronic logs was performed, using both site-scale and regional monitoring and water supply wells, in order to define the region of aquifer around the dissolved-phase EDB that fit the homogeneous Kh assumption (described in Appendix I-6 of the Q2 2018 Report [USACE, 2018e]). The model domain was constrained by this analysis.

The Kh and VANI values were derived from the model calibration process described in Appendix I-6 of the Q2 2018 and Q4 2018 Reports (USACE, 2018e and 2019a). The Q2 2019 synoptic gauging event provided a third dataset upon which to perform an evaluation of the model's ability to simulate observed conditions. A model simulation is considered acceptable if: (1) the simulation errors at observation locations produce a Normalized Root Mean Squared Deviation (NRMSD) of 10% or less, and (2) the simulation matches the observed head at the extraction monitoring wells (KAFB-106037, KAFB-106092, and KAFB-106203) within 10% of the total observed head difference in the model domain. While the model was able to produce simulations with acceptable error for both the Q4 2017 and Q4 2018 groundwater elevation datasets, the model was not able to produce an acceptable simulation when compared to Q2 2019 observed data. A total of 36 different Kh/VANI combinations were run with Kh ranging from 80 to 300 ft/day and VANI ranging from 0.001 to 0.05 with none producing an NRMSD within the acceptable criteria.

The model was able to produce acceptable simulations of both Q4 2017 and Q4 2018 observed conditions using a Kh value of 120 ft/day (NRMSD of 9.4 and 9.4%, respectively). Using this Kh value, the model produced an NRMSD of 16.4% for Q2 2019 observed conditions. The best simulation fit to observed Q2 2019 conditions was produced using a Kh value of 150 ft/day, yielding an NRMSD of 14.5% and matching extraction monitoring well heads to within 0.1-0.3 ft. A Kh value of 150 ft/day has also been suggested in Hydrologic Working Group meetings as a scenario value to address the uncertainty in the model assigned Kh value. Therefore, the model derived capture analysis this quarter was performed using an assigned Kh value of 150 ft/day to prevent overestimating interim extraction capture.

An analysis of the simulated versus observed head errors showed that the model's inability to produce a calibrated flow-field resulted from a simulated overestimation of the drawdown associated with KAFB-106234 and KAFB-3 extraction. This has been observed and documented in both the Q4 2017 and Q2 2018 model results (Appendix I-6 of the Q2 2018 Report [USACE, 2018e]); however, the errors increased under Q2 2019 conditions. As described in detail in the Q2 2018 Report (USACE, 2018e), the reason for this overestimation seems to be due to the large permeability contrast between layers intercepting the extraction wells in this area, meaning that the assumption of homogeneity is inadequate to accurately simulate the observed flow-field. To address this issue and develop a more accurate flow model, the model will be updated in the future to include heterogeneity with respect to Kh based on plume area lithology logs and electrical resistivity logs.

The regional hydrologic conditions assigned to the model boundaries are developed every Q2 and Q4 from groundwater measurements taken from six monitoring wells located outside of the predicted drawdown produced by interim measure extraction. All gradient wells are screened within the saturated zone above the A2 confining unit. The role of each of these wells is described below:

- KAFB-3392 is a monitoring well located on the model boundary approximately 6,700 ft east of the dissolved-phase EDB boundary and it represents aquifer stresses produced by Kirtland supply well KAFB-20.

- KAFB-0118 is a monitoring well located on the model boundary approximately 2,900 ft south of

the dissolved-phase EDB boundary.

- Trumbull 1A is a USGS-installed sentinel well located on the model boundary approximately 2,600 ft northeast of the dissolved-phase EDB boundary and it represents aquifer stresses produced by the Albuquerque Bernalillo County Water Utility Authority wellfields located north of the model domain.

- Jerry Cline C and Del Sol Divider 3 are USGS-installed monitoring wells located 1.8 miles north and 1.8 miles northwest of the model domain, respectively.

- Montessa Park B is a USGS-installed monitoring well located 2.3 miles southwest of the model domain.

Figure 5-10 shows the model simulated non-extraction flow-field, with particle tracks, for Q2 2019. As a starting condition for the simulation, the head values defining the regional flow-field assigned to the model boundary represent an estimate of the flow-field across the model domain with no operating extraction wells. Once interim measure extraction is activated in the model, the assigned regional flow-field only controls simulated heads along the model boundary while the flow-field varies within the model domain in response to the assigned extraction rates.

The model layer elevations are assigned such that the top and bottom elevation of all model domain extraction wells can be precisely articulated in the model. The node spacing of the model mesh averages approximately 33 ft (10 meters) but is adapted to include the exact location of all extraction and monitoring wells within the model domain and is refined down to a spacing of approximately 1 ft around all extraction wells. This allows for an accurate representation of spatial distances between wells and of the drawdown produced by the extraction wells.

Extraction rates assigned to the interim measure wells are defined by the extraction rate measured from each well prior to gauging. Results from the 2015 constant rate aquifer test, performed using interim measure extraction well KAFB-106228, showed that the head in observation wells observed to have any related drawdown reach steady-state with respect to extraction within 5 days (USACE, 2016b).

Therefore, extraction rates assigned to simulated interim measure wells are based on the extraction record for the well for the 5 days prior to gauging. Analysis of the interim measure extraction record showed that, for the 5 days prior to Q2 2019 gauging, KAFB-106228, KAFB-106233, KAFB-106234, and KAFB-106239 were operational at 92, 91, 89, and 99% of capacity, respectively. Therefore, the operational rate, listed in Table 5-14, was assigned to each extraction well in the model.

The assigned extraction rate for KAFB-003 is the reported pump capacity for this well as it was running for the day before and during gauging. Beginning in Q2 2019, in order to more accurately represent quarterly flow conditions, the assigned extraction rates for KAFB-20 and ST106-VA-2 are based on the average daily extraction rate and the portion of the screen interval above the A2 confining unit for each well. The use of an average daily extraction rate replaces the use of the reported pump capacity for these wells in previous model designs. The average daily extraction rate for KAFB-20 is based on reported total monthly extraction volumes and for ST106-VA-2 is based on reported annual production volumes for 2008-2017. The percentage of the average daily extraction rate assigned in the model is equal to the percentage of the well's total screen interval that extended above the A2 confining unit with the simplifying assumption that the aquifer material above and below A2 has the same permeability and, therefore, could deliver an equal volume of water under identical stress per unit volume. Figure 5-10 shows the location of all model assigned extraction wells and the assigned extraction rates for Q2 2019. Table 5-14 lists the details of the flow model assigned extraction and injection wells for the Q2 2019

simulation.

The model is intended to be used as a supporting line of evidence as part of performance assessment every Q2 and Q4. For each assessment period, the model will be updated with the current extraction and injection rates for all interim measure and water supply wells and updated with the most recent regional flow-field estimate. This biannual update is consistent with the iterative capture zone analysis process outlined in the EPA guidance.

5.4.4.2 Step 4b: Groundwater Flow Model Results

Step 4b (Bullet 3) of the EPA guidelines (EPA, 2008) suggests:

- *Modeling (analytical or numerical) to simulate heads, in conjunction with particle tracking and/or contaminant transport modeling.*

Numerical modeling was utilized to delineate the capture zones for all model domain extraction wells and was performed using two sets of three-dimensional particle track exports. The first set was designed to visualize the capture produced by each simulated extraction well across the model domain. Three-dimensional location points were assigned at the top and bottom elevation of each simulated extraction well. Additional location points were assigned at 10-ft intervals along the length of each screen interval. The 10-ft interval was chosen because 10 ft is the shortest screen interval in the monitoring well network and, therefore, represents the default resolution to vertical data. A ring of 72 "seed" points is assigned around each extraction well at a radius of 16.4 ft (5 meters). This ring of seed points is duplicated at each 10-ft interval. For example, the screen interval of KAFB-106228 is 100 ft long; therefore, it has 11 seed point rings (792 points) assigned along this depth. Particle tracks were run backwards from each seed point to define the volume of capture for the well. These particle tracks are fully three-dimensional and cross all layers until terminating at the recharge point. Therefore, when viewed in two-dimensions (Figure 5-11), there appears to be overlap along the capture boundaries. However, these lines are not crossing each other; instead, they pass above or under each other at depth in the aquifer.

The objective of Step 4a is to quantify capture. While the above analysis allows for a visual analysis of model scale capture, it does not allow for quantifying capture produced by each extraction well specific to the entire dissolved-phase EDB volume. Particle tracks run backwards from the wells do not completely represent flow from the water table in the plume area, resulting in volumes of dissolved-phase EDB without particle track penetration and, therefore, without capture indication. Beginning in Q2 2019, EDB plume-specific capture delineation was focused to just the plume volume within the TCZ. Plume-specific capture is delineated using forward run particle tracks from the centroids of each model cell in the quarter's plume model, over 5,400 seed points in Q2 2019, which completely represent the three-dimensional volume of the dissolved-phase EDB in the TCZ. A two-dimensional rendering of the results of the forward particle tracks defined capture of the Q2 2019 dissolved-phase EDB are shown in Figure 5-12. The method used to process these particle tracks into capture volumes and intersect these volumes with the dissolved-phase EDB volume is described in detail in Appendix I-7 of the Q2 2018 report (USACE, 2018e).

With respect to capture in the TCZ, the interim measure resulted in the capture of 100% of the dissolved-phase EDB volume and 100% of the mass (Table 5-15). North of Ridgecrest Drive SE, extraction well KAFB-106228 is the most effective with capturing 96.5% of the dissolved-phase EDB volume and 96.5% of the mass, followed by KAFB-106239 capturing 3.5% of the dissolved-phase EDB volume and 3.5% of the mass. Interim measure extraction wells KAFB-106233 and KAFB-106233, while active, do not capture any of the dissolved EDB plume in the TCZ in Q2 2019 (Table 5-15).

Capture zone effectiveness is ultimately determined by field monitoring that includes hydraulic head measurement and groundwater sampling and analysis, in conjunction with field confirmation of pumping rates. Actual field monitoring must be carried out in order to provide information necessary to evaluate model predictions (EPA, 2008). Appendix I-6 from the Q4 2018 report (USACE, 2019a) contains a full description of model calibration to Q4 2017 and Q4 2018 groundwater head measurements. A calibrated numerical model adds an additional line of evidence regarding the extent of capture defined in Step 3 of the performance assessment.

5.4.5 Step 5: Evaluate Concentration Trends

Step 5 of the EPA Systematic Approach for Evaluation of Capture Zones (EPA, 2008) states that *Contaminant concentrations can be monitored at two types of locations downgradient of the TCZ in an attempt to interpret capture…:*

- *Sentinel wells are located downgradient of the TCZ and are not currently impacted above background concentrations*

- *Downgradient performance monitoring wells are located downgradient of the TCZ and are currently impacted above background concentrations.*

Monitoring concentration trends downgradient of the dissolved-phase EDB provide supporting evidence to the primary capture analyses. Concentration trend monitoring is being conducted at two location types at Kirtland AFB: sentinel wells and downgradient performance monitoring wells. For sentinel wells, contaminant concentrations should remain at background levels over time if capture is successful. For downgradient performance monitoring wells, contaminant concentrations should decline to background levels (or below cleanup levels) over time if capture is successful. Figure 5-13 shows the location of the nine monitored sentinel wells and the location and concentration trends in the five distal performance monitoring wells. EDB concentrations in the sentinel wells have remained below detection since monitoring began. Furthermore, the shallow (i.e., REI 4857) well within each of the sentinel well clusters remains screened across the water table (non-submerged) as of Q2 2019.

Distal performance monitoring well concentration trends are shown from the beginning of 2015 to the present. Within this time period, water chemistry samples from KAFB-106205, located northeast of the distal end of the dissolved-phase EDB, have mostly been non-detect for EDB and have always been below the TCZ concentration of 0.05 µg/L. The increase of EDB to 0.041 µg/L in Q2 2017 is thought to be the result of system shutdown between January 19 and February 17, 2017. During this 30-day period, the system was offline for a total of 18 days and was running only during daytime hours for the remaining 12 days. Capture at this well has been reestablished with the interim measure extraction returning to full capacity and the concentration in KAFB-106205 is below the detection limit in Q2 2019. Groundwater samples collected from KAFB-106106, located on the western edge of the dissolved-phase EDB boundary, have historically had detectable EDB concentrations. Before interim measure extraction began in June 2015, EDB concentrations in this well were above the EDB MCL concentration (0.05 µg/L) and the well was within the dissolved-phase EDB boundary. Since interim measure wells KAFB-106233 and KAFB-106234 came on-line in 2016, the EDB concentrations in KAFB-106106 have declined to at or below detection for the last five assessment periods. EDB was reported at below detection in the groundwater sample collected from KAFB-106106 in Q2 2019.

At the beginning of 2015, EDB was detected in groundwater samples collected from the three nested wells (KAFB-106055, KAFB-106057, and KAFB-106058). EDB concentrations decreased with depth, with concentrations above the MCL observed in the REI 4857 well KAFB-106055 and the REI 4838 well

KAFB-106057. Since interim measure extraction began at KAFB-106234 in December 2015, the EDB concentrations in KAFB-106057 and KAFB-106058 have decreased and currently have estimated values at or below the detection limit (Figures 3-6 and 3-7, respectively). The increase in EDB concentrations observed in KAFB-106055 (0.082 µg/L) in Q4 2017 was thought to be indicative of preferential flow paths near the water table surface. It was anticipated that with continued interim measure extraction, the EDB concentrations at this well would decrease when sampled in Q2 2018. This was observed when the EDB concentrations in the groundwater samples collected from KAFB-106055 in Q2 2018 and Q4 2018 were estimated values, at the detection limit of 0.019 and 0.02 µg/L, respectively. In Q4 2018, the data gap associated with submergence at this well nest was eliminated by the installation of monitoring well KAFB-106241-428 with a screen interval across the water table. The EDB concentration measured in this new well in Q4 2018 was an estimated value of 0.022 µg/L and remains below the MCL with a measured value of 0.033 µg/L in Q2 2019.

It should be noted that the performance monitoring wells have submerged well screens, including the two REI 4857 wells which were originally screened across the water table (KAFB-106055 and KAFB-106106). The submerged REI 4857 wells represent a data gap, and the observed EDB concentrations may not be reflective of the dissolved-phase EDB concentrations at the water table. Decreasing EDB concentration trends in these wells may be a function of mass rising above the screen interval with the water table rather than removal by interim measure extraction. Therefore, this supporting line of evidence is not as robust as desired. Monitoring wells with unsubmerged screens were installed and added to the groundwater monitoring network to address this data gap and are used to observe EDB concentrations at the water table. In addition to the installation of new monitoring wells with unsubmerged screens, the groundwater model as discussed in this section provides another supporting line of evidence to demonstrate plume capture.

5.4.6 Step 6: Interpret Actual Capture and Compare to Target Capture Zone

Step 6 of the EPA Systematic Approach for Evaluation of Capture Zones (EPA, 2008) states that *Once multiple lines of evidence regarding capture have been evaluated, actual capture achieved by the extraction wells should be interpreted… To avoid bias, the actual capture should be interpreted independent of the TCZ (i.e., they should be compared after the actual capture zone is interpreted).*

Based on evaluations of multiple lines of evidence discussed in Step 3 through Step 5 described above, the actual capture achieved by the interim measure extraction wells is interpreted in Step 6, and the following items are addressed:

- Compare the interpreted capture zone to the TCZ
- Assess uncertainties in the interpretation of the actual capture zone
- Assess the need for additional characterization and/or monitoring.

In Step 3, the potentiometric surface analysis resulted in 100% capture of the volume and mass in the TCZ. In Step 4, the numerical flow model calculated 100% of the dissolved-phase EDB volume captured and 100% of the dissolved-phase EDB mass captured in the TCZ. In Step 5, the concentration trends in the designated performance monitoring wells show static or decreasing trends indicating decreasing dissolved-phase EDB volume and mass reduction.

Table 5-16 presents the summary of the TCZ evaluation for this site. The TCZ analysis indicates that 100% of the dissolved-phase EDB volume is captured in Q2 2019 north of Ridgecrest Drive SE. The

water level assessment of horizontal capture for Q2 2019 shows the extraction system producing a steady state condition capturing (horizontally) 100% of the plume volume and mass within the interim measure TCZ north of Ridgecrest Drive SE. The water level assessment of vertical capture within the TCZ shows that there was no potential for downward vertical migration of contaminant in Q2 2019. In total, the vertical gradient analysis showed that 100% of the dissolved-phase EDB volume and mass in the interim measure TCZ were vertically contained in Q2 2019.

Results from the numerical flow model simulation, which provides a three-dimensional assessment of flow and capture, showed that 100% of the dissolved-phase EDB volume and mass, within the TCZ, was produced by interim measure extraction. A comparison of all lines of evidence suggests that 100% of the dissolved-phase EDB volume and mass, within the TCZ, is captured by interim measure extraction under Q2 2019 conditions.

5.4.6.1 Uncertainty and Data Gaps

There is uncertainty in the analysis of water levels due to a linear estimate of the water levels at the extraction wells. However, the results from the numerical model suggest that, based on extraction rates and aquifer conductivity, the extraction well water levels used in the water level analysis were under-estimated and, therefore, do not overestimate the capture prediction.

There is uncertainty in the numerical modeling with respect to the assigned regional flow-field. The method used to define the gradient is described in detail in Appendix I-6 of the Q4 2018 Report (USACE, 2019a). Uncertainty exists in that the method relies on interpolations from data measurements taken approximately 2 miles away from the model domain and on estimated groundwater levels associated with external extractions. An additional uncertainty component is the length of time the estimated regional flow-field persists over the model domain. The flow-field is sensitive to both on-Base and nearby public supply extractions and these stresses change seasonally and with local domestic demand allowing for the possibility that the simulated capture zones may change between each analysis period.

There is uncertainty in the numerical modeling associated with the assumption of homogeneous conductivity and the values assigned for Kh and VANI. An analysis of the simulation errors for Q4 2017, Q4 2018, and Q2 2019 conditions shows a spatial bias around interim measure extraction well KAFB-106234 and Base water production well KAFB-3. This grouping of errors shows that the model consistently overestimates the drawdown associated with these wells and, with the continued rise in groundwater elevations, these errors have prevented the development of an acceptably calibrated flow-field for Q2 2019 conditions. An analysis of the spatial distribution of the simulation errors and their effect on simulated flow directions in the TCZ was performed by reproducing the water level pairs analysis (Section 5.4.3.3) for the simulated heads (Figure 5-14). This analysis shows that the model simulation does not increase the flow potential towards interim measure extraction at KAFB-106234 (increased capture) but increases the flow potential away from KAFB-106234 thus reducing the total capture for the interim measure extraction system. The analysis also shows that the model does not simulate the inferred closed depressions around KAFB-106235 and KAFB-106216. The permeability analysis performed in Q4 2018 (Appendix I-6 in USACE, 2019a) identified both of these wells as intercepting high permeability coarse sands and gravels lens within an otherwise silty sand matrix, suggesting that these closed depressions are a function of aquifer heterogeneity. Of most importance is, with the exception of monitoring well KAFB-106089 in REI 4838, the analysis shows that the simulated flow directions between wells within and on the perimeter of the plume remain consistent with observed data.

Capture zone analysis is an iterative process, as shown on Figure 5-15, and includes the following:

- Evaluate capture based on existing data

- Identify any data gaps that create uncertainty in the conclusions of the capture zone analysis
- Fill any data gaps that are identified (e.g., add new monitoring wells), and re-evaluate capture
- Continue monitoring capture over time
- If capture is ever determined to not be sufficient, optimize the extraction system until capture is sufficient
- If capture is determined to be sufficient, continue routine monitoring and consider the potential to optimize extraction locations and/or rates to be reduce cost.

A performance assessment of the interim measure is performed every Q2 and Q4 and capture is evaluated on current groundwater level measurements and groundwater chemistry sample results. The numerical model is updated with the current measured interim measure extraction rates and regional gradient estimate. Data gaps and uncertainties are defined, and new monitoring and extraction wells are proposed to address these issues. In addition, a well log permeability analysis will be performed and the model will be updated in Q4 2019 to reflect new boundary conditions and the observed heterogeneity. Additional modeling updates will include a sensitivity analysis and additional model calibrations. A full description of the modeling revisions will be included in the Q3 2019 report.

As discussed in Section 5.4 above, this performance assessment is a snapshot of the systems performance and is not intended to be a final remedy evaluation. The EPA guidance emphasizes that capture zone effectiveness is "ultimately determined by field monitoring."

5.4.7 Dissolved-Phase EDB Volume and Mass Analysis

The goal of the interim measure is not only to contain the migration of the dissolved-phase EDB, but also to reduce the volume and mass. This section describes the analyses designed to quantify the distribution of dissolved-phase EDB mass and volume within the aquifer over the course of the interim measure. Plume collapse in the TCZ is the long-term goal; therefore, establishing a consistent method of measurement that allows comparison of plume mass and volume trends over the duration of cleanup activities is essential.

Results

Figure 5-16 shows a cross-section comparison of the dissolved-phase EDB extent in Q4 2018 and Q2 2019. The plume has been cut along the AECOM T1A transect that, in general, runs along the longitudinal axis of the plume from southwest to northeast. The plume is shown transparent against the stratigraphic layers of the saturated portion of the aquifer along this transect developed by AECOM (2016) so that the shape and movement of the plume can be compared to the location and extent of coarse-grained (white) and fine-grained (gray) lithology as coarse-grained sediments are generally more permeable and conductive and may provide pathways for plume movement.

Beginning in Q2 2019, this analysis was modified to focus on dissolved-phase EDB mass and volume changes solely within TCZ, the objective area for the interim measure. East-west transect intervals were started at and oriented parallel to Ridgecrest Drive SE. The total number of analysis intervals was reduced from 11 to 6 (A through F) (Figure 5-16). Both Figure 5-16 and Table 5-17 list the volume and mass of each interval and summarize these for total TCZ plume characterization. In order to retain mass

and volume change comparisons, the modified analysis was repeated on dissolved-phase EDB plumes derived for Q4 2016 through Q2 2018 performance assessments. Figure 5-16 shows a graphic comparison of the Q4 2018 and Q2 2019 analyses, while Table 5-17 summarizes the analysis comparisons from Q4 2016 to Q2 2019. The dissolved-phase EDB mass values (in grams) assume a uniform total porosity of 25% for the contaminated thickness of the aquifer.

As shown in Table 5-17, dissolved-phase EDB mass in the interim measure TCZ (intervals A through F) was 104 grams in Q4 2016, 82 grams in Q2 2017, 80 grams in Q4 2017, 19 grams in Q2 2018, 16 grams in Q4 2018, and 11 grams in Q2 2019. Dissolved-phase EDB mass has consistently decreased in the TCZ over this time with the largest percent change (-77%) occurring between Q4 2017 and Q2 2018.

Approximately 5.1 and 5.7 grams of EDB was removed by the GWTS in Q4 2018 and Q1 2019, respectively (Table 5-8 of the Q4 2018 report [USACE, 2019a] and Table 5-5 of the Q1 2019 report [USACE, 2019b]). This is in reasonable agreement with the mass reduction estimated by comparing the modeled TCZ EDB plume mass for Q4 2018 and Q2 2019 (Table 5-17 and Figure 5-16). In addition to mass removal by the interim measure, EDB concentrations are also reduced by dispersion and diffusion processes.

Overall, the plume analysis reveals the general pattern of dissolved-phase EDB volume and mass response expected due to interim measure system extraction. Dissolved-phase EDB mass and volume movement are not uniform, and no region of mass increase or reduction is outside of expectation when allowing for the error incurred by estimating concentration gradients between water chemistry data points.

Challenges

The following discussion relates to the data provided in Figure 5-16 and Table 5-17. The interim measure extraction network, number and location of extraction wells, and assigned extraction rates have been designed to produce groundwater contaminant flow paths within the plume area that lead to an extraction well whereby contaminants are removed and treated. Over time, changes in dissolved-phase EDB volume and mass are expected to occur in response to this action. However, as contaminants are moving along new flow paths, shifted from the natural gradient toward the extraction wells, concentration changes at individual wells are expected to change with some concentrations increasing and some decreasing. Nonetheless, over a longer timeframe (i.e., multiple quarters), this process is anticipated to reduce contaminant concentrations in the TCZ as contaminant mass is extracted and treated.

In the aquifer between the source area and the extraction wells, the expected initial response is an increase in dissolved-phase EDB mass and volume as groundwater extraction increases the groundwater flow rate toward the extraction wells. The extraction wells closest to the source area, previously KAFB-106228 but currently KAFB-106239, will become cut-off wells that may intermittently pull dissolved mass from the source area depending on local and regional gradient fluctuations. If the source area mass remains stationary, plume segmentation may occur in the vicinity of the southernmost hydraulic divide of the cut-off well. Near the extraction wells, the expected initial response is an increase in dissolved-phase EDB mass and volume. If the extraction well is properly positioned and performing as designed, radial migration of mass will increase the mass around the well and potentially increase the volume of the plume vertically along the screened interval of the well. On the distal edge of the plume, mass and volume are also expected to decrease as migration of mass to this region has stopped and extraction continues.

While this is the general plume response expected, the migration of the dissolved-phase EDB toward the extraction wells will not be uniform. Coarse sand and gravel channels will have greater flow velocities and transfer mass more quickly. Fine-grained deposits (i.e., clays and silts) will retard flow and slowly leak dissolved-phase EDB into the flow system. Pre-existing high concentration spots may move as

pulses toward the extraction wells. Changes in the extraction network, such as loss of well function due to biofouling or pump failure, or the addition of new wells, will change the flow field and may cause temporary flow stagnation areas or intermediate high concentration zones. In addition, seasonal fluctuations, including regional gradient shifts as a result of external pumping stresses (e.g., production wells), could cause shifts in the migration and magnitude of dissolved-phase EDB.

There has been some concern that the rising groundwater levels have diminished the ability to accurately model the dissolved-phase EDB volume and mass using data from the existing monitoring network. In some areas, this may be true as model confidence is highest where volume and mass are interpolated between locations with concentration measurements. If the water table continues to rise above the network's highest elevation screens, the model uncertainty increases in this region. This uncertainty was greatest in the source area where a majority of the monitoring wells were submerged. However, as of Q2 2019, 16 new water table wells have been activated south of Ridgecrest Drive SE giving a total of 17 unsubmerged wells in this area (Figure 3-4), and additional wells were installed in conjunction with the Q4 2018/Q1 2019 Vadose Zone Coring program.

In Q2 2019, uncertainty related to well submergence is controlled around the distal edge of the plume as nine REI 4857 wells surrounding the edge of the plume are screened across the water table. Newly installed monitoring wells have closed the data gap and now include screen intervals above the water table to address future rising water table issues. Only well KAFB-106204 presents any additional uncertainty in the distal region having become submerged in 2017, with approximately 5.8 ft of water above the top of the screen as of Q2 2019. EDB was nondetect in KAFB-106204 in Q2 2019. With both the horizontal capture analysis and the numerical model showing flow toward extraction wells from KAFB-106204, it should not be expected that mass has moved into the region near KAFB-106204, or that the EDB concentration in the 5.8 ft of water above the well screen should be above the detection limit.

In spite of the rising groundwater levels, there are multiple lines of evidence to support the effectiveness of the interim measure extraction system, including the new water table hydraulic containment analysis. As there has been no documented LNAPL in the interim measure TCZ, no re-wetting of source material is expected and, therefore, no reason to suspect an increase in EDB concentrations related to groundwater elevation rise (i.e., all EDB in the interim measure TCZ is dissolved-phase that has migrated from the source area). This is supported by the decreasing mass and volume of EDB within the interim measure TCZ. It should be noted that multiple factors will affect the modeled mass within the plume, including the induced migration of EDB from the source area (from extraction wells), dispersion, and error incurred by interpolating concentration gradients. Therefore, the calculated (modeled) mass removal may not always be synchronized with the calculated (measured) mass removal at the GWTS during shorter reporting periods.

5.5 Ethylene Dibromide *In Situ* Biodegradation Pilot Test Q2 Summary

The EDB *in situ* biodegradation pilot test has been ongoing on Kirtland AFB. It is being performed directly south of Randolph Avenue, near the BFF groundwater source area. The main objective of the pilot test is to investigate *in situ* anaerobic bioremediation of EDB in groundwater. This pilot test is being completed under an NMED approved work plan titled EDB In Situ Biodegradation Pilot Test Work Plan (USACE, 2016c).

Several new wells and existing monitoring wells (KAFB-106064 and KAFB-106063) are being utilized for this pilot test. The new wells include extraction wells KAFB-106EX1 and KAFB-106EX2; injection well KAFB-106IN1; and nested monitoring wells KAFB-106MW1-S, KAFB-106MW1-I, KAFB-106MW2-S, and KAFB-106MW2-I. Underground conveyance piping was also constructed to carry groundwater between the extraction and injection wells, directing the flow through an aboveground

installation where amendments and/or tracers are introduced to the recirculated groundwater.

The pilot test was to be implemented in four phases, each briefly described below:

- ***Phase 1***—Evaluate baseline conditions and the distribution of recirculated water using tracer amendments.

- ***Phase 2***—Evaluate biostimulation in the subsurface after distribution of treatment amendments in recirculated groundwater.

- ***Phase 3***—Evaluate bioaugmentation in the subsurface after distribution of treatment amendments and dehalogenating bacteria in recirculated groundwater.

- ***Phase 4***—Continue monitoring with no active extraction/injection.

Per the Work Plan (USACE, 2016c), Phase 3 was to consist of both biostimulation and bioaugmentation; however, after review of field results from both Phase 1 and Phase 2, it was determined that bioaugmentation was not warranted. Due to the success of biostimulation during Phase 2, Phase 3 was modified to further evaluate biostimulation. The modified Phase 3 was approved by NMED in a letter dated August 7, 2018 (NMED, 2018e).

Phase 4 of the pilot test, long-term rebound monitoring, began on November 19, 2018 and continues into 2019. No sampling events were conducted during Q2 2019. An independent report summarizing all activities associated with the pilot test through the first Phase 4 sampling event was submitted on April 18, 2019 in accordance with the NMED letter dated February 25, 2019 (NMED, 2019).

6. INVESTIGATION-DERIVED WASTE

During Q2 2019, non-hazardous IDW was generated. Non-hazardous IDW consisted of both liquid and solids that were sourced from GWM and drilling operations. No hazardous waste was generated during Q2 2019.

In addition to the IDW generated specifically during Q2 2019, additional hazardous and non-hazardous IDW generated during Q1 2019 and Q4 2018 was managed during Q2 2019. This section discusses the details of waste generated and managed during the quarter.

6.1 Non-Hazardous Investigation-Derived Waste

Non-hazardous IDW liquids and solids comprised the majority of waste volume generated during the quarter. This waste was generated from both the quarterly GWM sampling event and drilling of monitoring wells in previous quarters. Appendices J-1 and J-2 provide specific information regarding the non-hazardous liquid and solid IDW waste generated and disposed of during Q2 2019.

6.1.1 Groundwater Monitoring Liquid Investigation-Derived Waste

Non-hazardous IDW purge water collected during sampling of the GWM wells was placed in 55-gallon plastic (poly) drums. The drums were sealed with matching plastic lids with steel, locking-ring collars, labeled with vinyl non-hazardous waste labels, and transferred to the designated non-hazardous IDW yard located on Kirtland AFB. Small volumes of IDW water, typically generated from the sampling of drinking water wells, were placed in labeled, 5-gallon plastic buckets (pails) with sealing lids.

Eligibility for discharge of non-hazardous liquid IDW to the GWTS was determined by comparing historical, well-specific data from the previous two quarters to the acceptance criteria of the GWTS. Liquid IDW from monitoring wells that had historically met the GWTS acceptance criteria was discharged to the facility without further review. Liquid IDW sourced from wells with historical data from the previous two quarters that exceeded the GWTS acceptance criteria was held for further evaluation.

For Q2 2019, a total of 526.5 gallons of non-hazardous GWM purge water met the GWTS acceptance criteria and was processed through the GWTS. All IDW water processed through the GWTS was discharged to the Tijeras Arroyo GCMP (Table J-1-1).

Any liquid IDW that is collected, but not yet processed through the GWTS, is temporarily accumulated in the "Pending Disposal" area of the IDW yard. Typically, this category includes non-hazardous purge water collected during the quarter that meets GWTS acceptance criteria, but was held due to GWTS discharge limitations, O&M activities, or disposal approvals. By the end of Q2 2019, a total of 544 gallons of GWM water was being held in the "Pending Disposal" category (Table J-1-2).

Any liquid IDW that is collected, but held pending receipt and evaluation of analytical data, is placed in the "Pending Analysis" area of the IDW yard. The total volume of waste in this area at the end of Q2 2019 was 178 gallons consisting of meter calibration fluid and GWM purge water (Table J-1-3).

6.1.2 Non-Hazardous Drilling Liquid Investigation-Derived Waste

Approximately 8,610 gallons of liquid IDW which was processed through the GWTS for disposal during Q2 2019 was generated during well construction, development, and equipment decontamination activities in Q1 and Q2 2019 (Section 2.1). The bulk of this volume was sourced from equipment decontamination water and collected in a 20,000-gallon capacity storage tank that was approved for discharge to the GWTS. Additional water volume was sourced from well development liquids, cleanout of the storage tank, and the drilling equipment decontamination pad (Table J-1-4).

6.1.3 Non-Hazardous Well Drilling Liquid Investigation-Derived Waste Pending Disposal

There was no well drilling liquid IDW held as "Pending Disposal" at the end of Q2 2019.

6.1.4 Non-Hazardous Solid Waste

This section discusses treatment plant waste, which is not considered IDW. However, it is provided here to consolidate the discussion of waste generation and disposal.

During Q2 2019 maintenance operations at the GWTS generated non-hazardous solid waste that was disposed during the quarter. Approximately 0.38 cubic yards of sodium chloride (salt) was collected in poly drums associated with the sodium hypochlorite generator. The solid salt was properly manifested and disposed of offsite by Advanced Chemical Transport in Albuquerque, New Mexico (Table J-2-1).

Additional non-hazardous, routine, and disposable solid wastes were generated during GWM activities. These included single-use dual membrane samplers, disposable in-line filters, nitrile gloves, and paper trash. These items were disposed of as municipal solid waste and volumes were not tracked.

6.1.5 Non-Hazardous Well Drilling Solid Investigation-Derived Waste

Approximately 22 cubic yards of non-hazardous, non-liquid IDW was managed and disposed of during Q2 2019. This IDW included soil waste (drill cuttings and mud) associated with drilling, coring, and well installation (Section 2.1). All 22 cubic yards of mud/sand in this waste category was transported to the Twin Enviro landfill in Penrose, Colorado as this waste was too high in water content for the Kirtland construction and demolition landfill. Table J-2-2a (Appendix J-2) provides a list of all solid, non-hazardous IDW disposed of in Q2 2019.

There was no soil or mud waste generated from well drilling activities held as "Pending Disposal" at the end of Q2 2019.

6.1.6 Special Waste Well Drilling Solid Investigation-Derived Waste

Special waste is defined as petroleum contaminated soil that has TPH concentration greater than 100 mg/kg (Subparagraph [i] of Paragraph [13] of Subsection S of 20.9.2.7 New Mexico Administrative Code [2011]). Approximately 1.2 cubic yards of Special Waste contained in five, 55-gallon, steel drums was managed and disposed of during Q2 2019. This IDW included soil waste (decontamination pad sand and mud) associated with drilling well installation in Q1 2019 (Section 2.1). Special wastes cannot be disposed of in the Kirtland AFB landfill and must be disposed of at a facility permitted to handle special wastes (Subsection A of 20.9.8.9 New Mexico Administrative Code [2007]). The special waste soil/mud was disposed of by Advanced Chemical Treatment in Albuquerque, New Mexico. Table J-2-2b provides details on the Special Waste IDW disposed of in Q2 2019.

No special waste was held in "Pending Disposal" areas of the IDW yard at the end of Q2 2019.

6.2 Hazardous Investigation-Derived Waste

Hazardous or suspected hazardous IDW is accumulated in one of two RCRA less than 90-day accumulation areas associated with the Kirtland BFF Project. Hazardous waste generated from routine GWM sampling activities (purge water) is placed in the Kirtland AFB BFF RCRA less than 90-day accumulation area. Hazardous or suspected hazardous waste generated during the Vadose Zone Source Area drilling project was exclusively held in the Kirtland AFB Zia Park temporary RCRA less than 90-day accumulation area. The Zia Park area held both liquids (borehole liquids and development water) and solids (drill cuttings) generated during coring and well construction activities.

Prior to the start of each quarterly GWM sampling event, a preliminary evaluation is made to identify monitoring wells that are anticipated to generate characteristically hazardous liquid IDW for initial waste segregation purposes. Based on historical analytical data available for each well, the water is suspected to be characteristically hazardous if the concentration of benzene exceeded 500 µg/L (per 40 CFR Part 261.24) in either of the previous two sampling events. Liquid IDW from these wells is managed as a potentially characteristically hazardous waste pending confirmation from laboratory analytical results. The hazardous waste classification code for benzene is D018.

All liquid hazardous waste (purge or well development water) is placed in 55-gallon steel drums with steel tops and locking rings (UN designation 1A2/Y1.2/100/**). All waste containers are properly labeled, sealed, and placed on secondary containment pallets located within the BFF less than 90-day accumulation area. The accumulation area and waste containers are inspected on a weekly basis by trained personnel as required under 40 CFR 262.34.

Solid hazardous wastes are held in either 55-gallon, steel drums with steel tops and locking rings or, if volume requires, 20-yard capacity roll-off bins. Bin doors are sealed with an expanding foam to minimize the potential of leaks and the bins are double lined with 10-millimeter plastic liners. Bins have either integrated hard cover tops with ratcheting straps or have removable, heavy-duty vinyl covers that are secured to the bin using heavy-duty rubber straps to protect the contents from weather or access by local fauna. All drums are placed on secondary containment pallets. Roll-off bins are placed on secondary containment composed of plastic sheeting with rolled edges.

Upon receipt of analytical data, the IDW remains in the less than 90-day accumulation area if confirmed to be a hazardous waste. If the IDW is determined to not meet hazardous criteria based on analytical data, the non-hazardous waste is transferred to the "Pending Disposal" area of the non-hazardous IDW yard.

All hazardous waste must be removed from Kirtland AFB and properly disposed of off-Base within the required 90-day accumulation time limit. Hazardous waste is transported off Kirtland AFB after it is properly profiled, manifested, and approved for transport by the Kirtland AFB Hazardous Waste Management Group. Waste is transported by a licensed hazardous waste hauler to a permitted treatment, storage, and disposal facility.

When possible, liquid hazardous waste may be consolidated after analytical data have been received. This is typically done to combine small volumes of waste generated when using passive sampling methodologies as well as to reduce the total number of drums that require offsite disposal. Appendix J-3 provides specific information regarding the hazardous liquid waste disposed of during Q2 2019

6.2.1 Hazardous Investigation-Derived Waste Volume Q2 2019

During Q2 2019, no hazardous purge water was generated from GWM activities. Suspected hazardous waste from GWM activities was held in the BFF less than 90-day area until the completion of sampling activities. All suspected waste was consolidated into two, 55-gallon steel drums and sampled for hazardous waste determination. Analytical results from the consolidated drums indicated that the waste did not meet hazardous waste criteria. The waste was subsequently classified as non-hazardous and moved to the non-hazardous waste IDW yard. After technical review, the waste was allowed to be discharged to the GWTS (discharge reported in Table J-1-1). There was no GWM hazardous waste in the BFF less than 90-day accumulation yard at the end of Q2 2019.

At the beginning of Q2 2019, a total of 288 gallons of confirmed liquid hazardous waste generated from well drilling activities during the previous quarter was held in the Zia Park less than 90-day accumulation area. This waste was transported off Kirtland AFB for disposal by Advanced Chemical Treatment on April 24, 2019 (Table J-3-1).

No drilling hazardous waste was held in the area at the end of Q2 2019 quarter.

No solid hazardous waste was generated, accumulated, or disposed of during Q2 2019 from any BFF site activities.

7. PROJECTED ACTIVITIES

Q3 2019 will comprise the period between July 1 and September 30, 2019. Planned Q3 2019 activities are summarized below.

Vadose Zone Characterization and Monitoring

- Complete wet respirometry testing; begin bioventing pilot study.

Groundwater Monitoring

- Perform and report on quarterly GWM in Q3 2019
- Report quarterly monitoring of USGS sentinel wells (by USGS).

Drinking Water Supply Well Monitoring

- Perform drinking water supply well monitoring monthly for organic compound analysis for the four wells sampled.

Groundwater Treatment System Operation

- Continue operating the GWTS and extraction wells KAFB-106228, KAFB-106233, KAFB-106234, and KAFB-106239
- Complete GAC changeout in the Train 2 lead vessel
- Perform GWTS well disinfection as required.

Reporting

- Continue Phase 4 monitoring for the *in situ* EDB biodegradation pilot study.
- Prepare a quarterly report to detail the activities conducted during the quarter and to summarize the activities and GWM data in Q3 2019.

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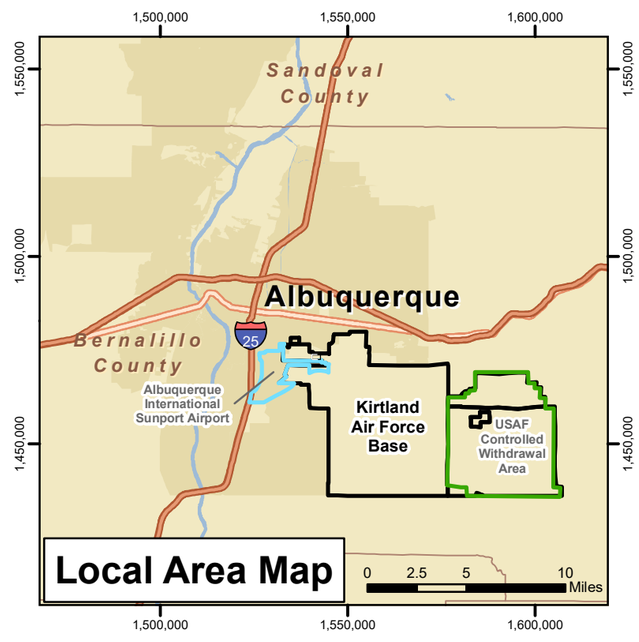
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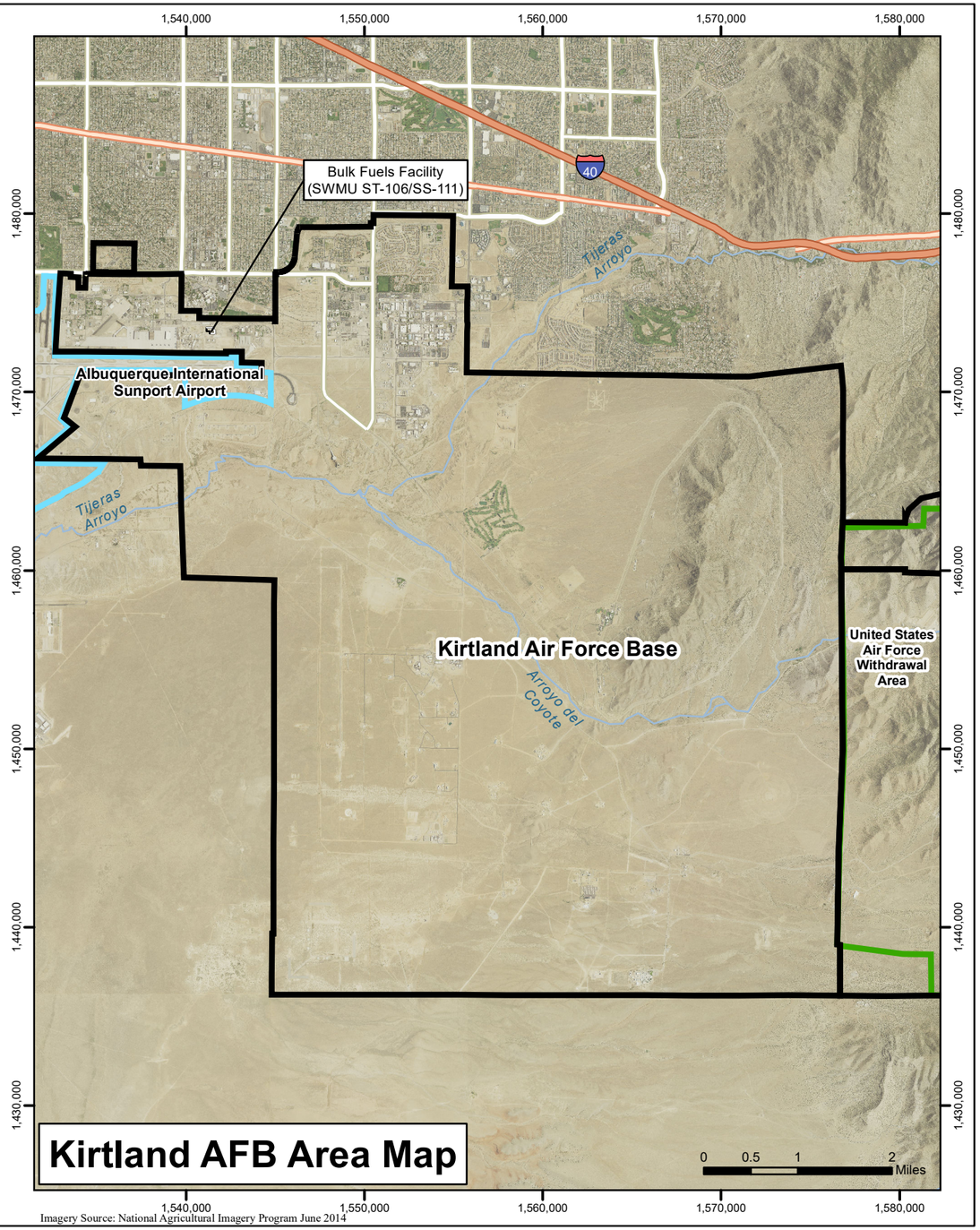
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FIGURES







Imagery Source: National Agricultural Imagery Program June 2014

Legend

- Kirtland Air Force Base Installation Boundary
- Albuquerque International Sunport Airport
- United States Air Force Withdrawal Area
- Major Highways
- Highways
- Major Roads
- Rivers
- Source Area

N

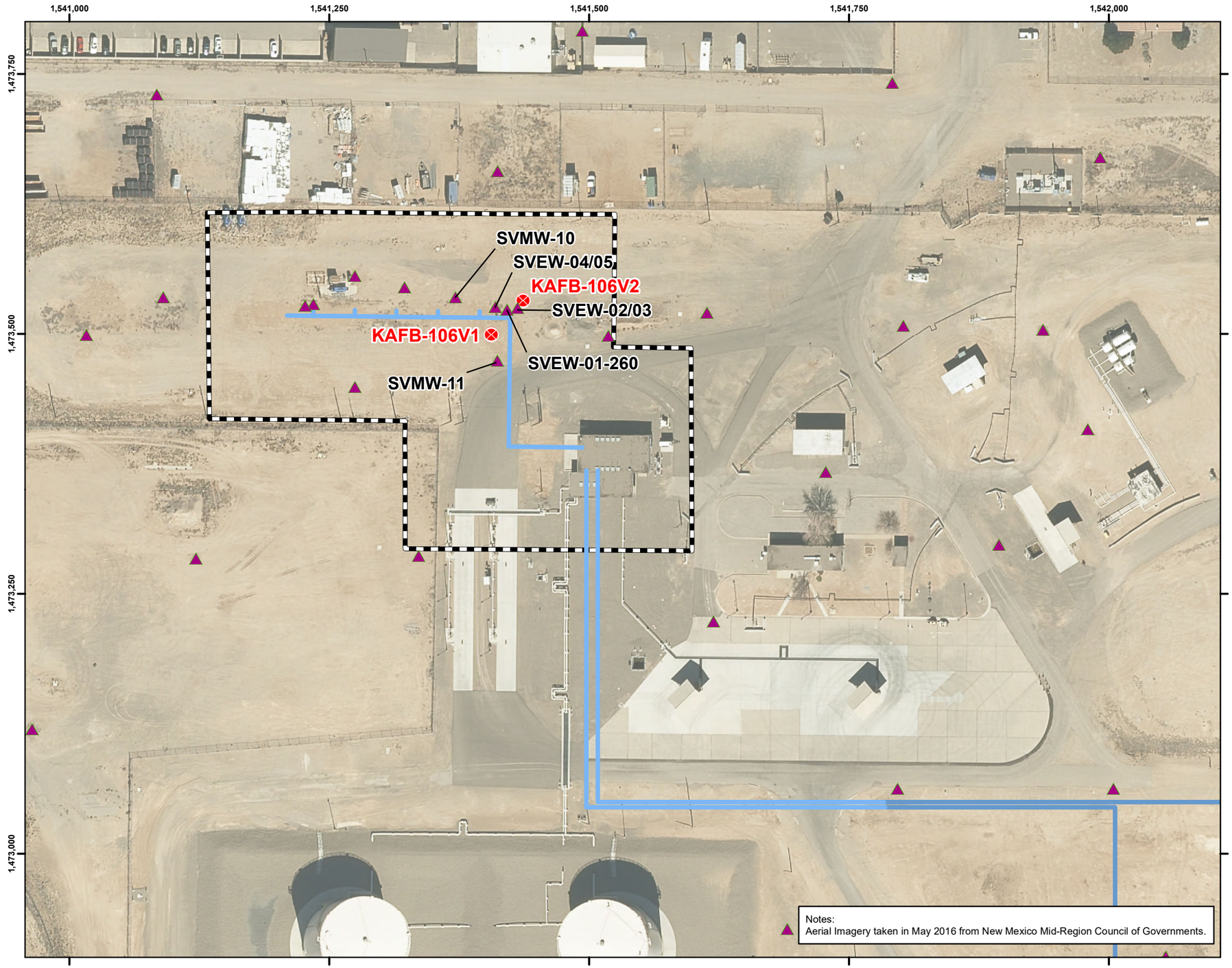
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 1-1

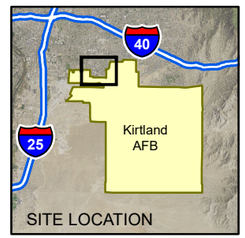
SITE LOCATION MAP

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Legend

- Existing Soil Vapor Well
- Proposed Biovent Observation Well
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Bulk Fuels Facility (SWMU ST-106/SS-111)



N

0 50 100 200

Feet

1 inch = 100 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-1

BIOVENTING PILOT TEST AREA

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-1 Bioventing Pilot Test Area.mxd 6/28/2019 EA ecarpio

1,540,000 1,541,000 1,542,000 1,543,000

1,475,000 1,474,000 1,473,000

San Pedro Dr

Ridgecrest Dr

Randolph Ave

KAFB-106141
KAFB-106138
KAFB-106142
KAFB-106136
KAFB-106028
SVMW-10
KAFB-106139
SVMW-09
SVMW-02
SVMW-08
SVMW-07
KAFB-106137
KAFB-106135
SVEW-06/07
SVEW-04/05
SVEW-08/09
SVEW-02/03
KAFB-106108
SVEW-01
KAFB-106134
SVEW-10/SVMW-12
KAFB-106118
SVEW-11/SVMW-13
SVMW-03
SVMW-01
SVMW-06
KAFB-106130
KAFB-106132
KAFB-106109
KAFB-106112
KAFB-106133
KAFB-106119
SVEW-13/SVMW-15
SVMW-05
SVMW-04
SVMW-11
KAFB-106116
KAFB-106110
KAFB-106129
KAFB-106111
KAFB-106117
SVEW-12/SVMW-14
KAFB-106128
KAFB-106114
KAFB-106113
KAFB-106115
KAFB-106120
KAFB-106131
KAFB-106125
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KAFB-106124
KAFB-106140

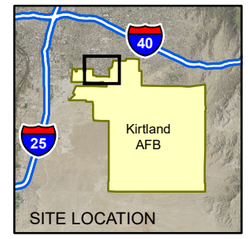
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
SVEW - soil vapor extraction well
SVMW - soil vapor monitoring well

Legend

- Soil Vapor Monitoring Point
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary

Area of Interest

- Off-Base
- On-Base Outside of Source Area
- Source Area



N

0 200 400 800

Feet

1 inch = 350 feet

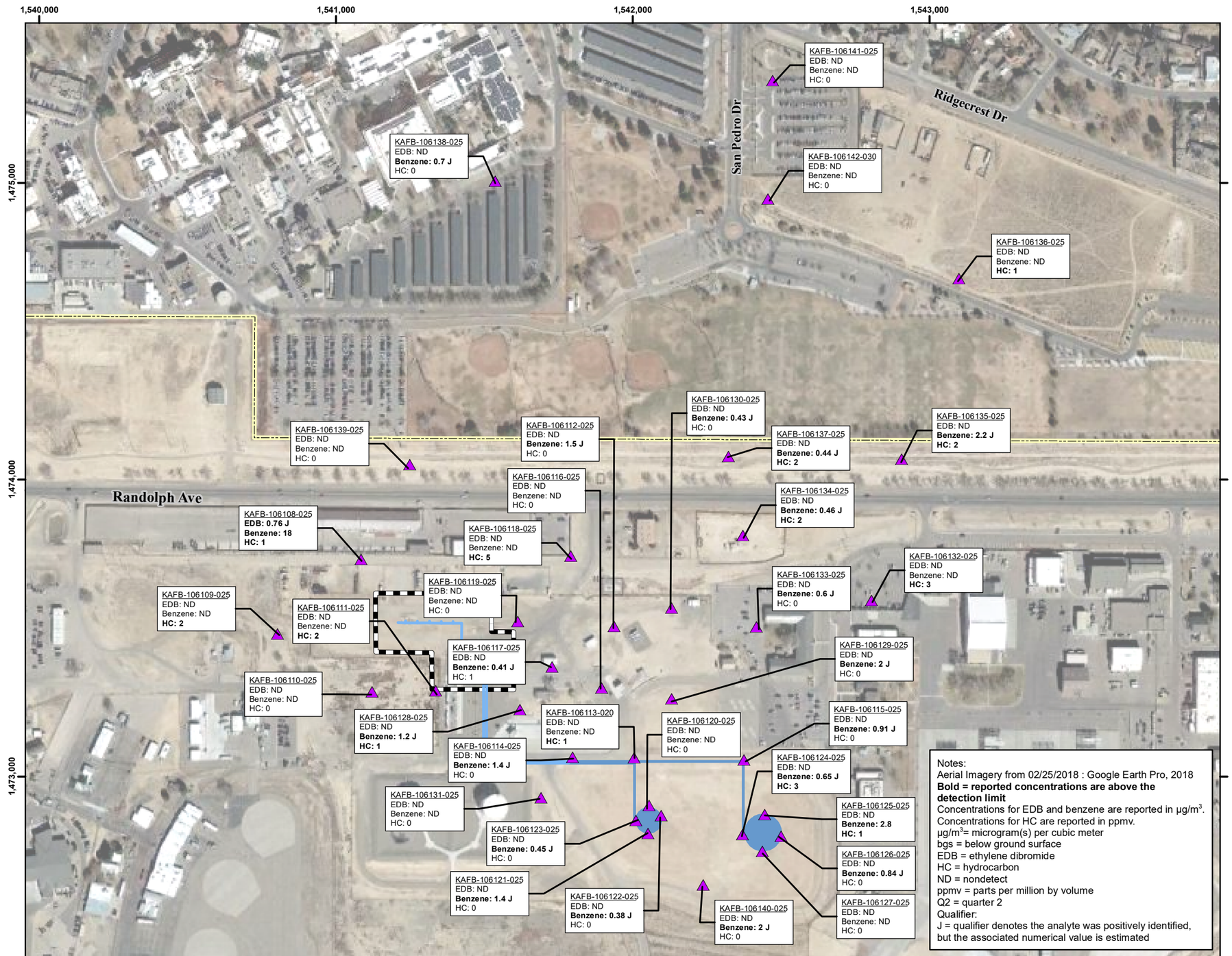
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-2

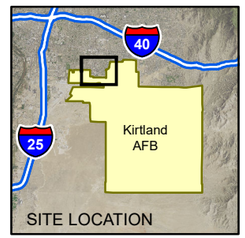
SOIL VAPOR MONITORING LOCATIONS

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-2 Soil Vapor Monitoring Locations.mxd 7/22/2019 EA ecarpio



Legend

- Soil Vapor Monitoring Point
- Former Aboveground Storage
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area



N

0 175 350 700

Feet

1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 2-3

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 25 FT BGS, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-3 Benzene_EDB_HC_Conc_25ftQ22019.mxd 7/11/2019 EA ecarpio

1,540,000 1,541,000 1,542,000 1,543,000

1,475,000 1,474,000 1,473,000

San Pedro Dr

Ridgecrest Dr

Randolph Ave

KAFB-106141-050
EDB: ND
Benzene: ND
HC: 3

KAFB-106138-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106142-050
EDB: ND
Benzene: 0.4 J
HC: 0

KAFB-106136-050
EDB: ND
Benzene: ND
HC: 0

SVMW-02-050
EDB: ND
Benzene: ND
HC: 0

SVEW-02-060
NA

SVMW-09-050
EDB: ND
Benzene: 12,000
HC: 1,434

SVMW-10-050
NA

SVMW-07-050
EDB: ND
Benzene: 3.3
HC: 0

SVMW-08-050
EDB: ND
Benzene: 340,000
HC: 11,370

KAFB-106139-050
EDB: ND
Benzene: 12
HC: 0

SVMW-03-050
EDB: ND
Benzene: 91,000
HC: 6,090

KAFB-106119-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106137-050
EDB: ND
Benzene: 1.4 J
HC: 2

KAFB-106135-050
EDB: ND
Benzene: 1.2 J
HC: 2

KAFB-106108-050
EDB: ND
Benzene: ND
HC: 1

SVEW-06-060
EDB: ND
Benzene: 140,000
HC: 4,800

KAFB-106118-050
EDB: ND
Benzene: 1.5 J
HC: 6

KAFB-106134-050
EDB: ND
Benzene: 0.69 J
HC: 2

SVMW-04-050
EDB: ND
Benzene: ND
HC: 295

SVMW-06-050
EDB: ND
Benzene: 0.71 J
HC: 0

SVMW-01-050
EDB: ND
Benzene: 0.65 J
HC: 0

KAFB-106112-050
EDB: ND
Benzene: 0.72 J
HC: 0

KAFB-106130-050
EDB: ND
Benzene: 0.42 J
HC: 0

KAFB-106132-050
EDB: ND
Benzene: ND
HC: 3

SVMW-05-050
EDB: ND
Benzene: 1.3 J
HC: 0

KAFB-106133-050
EDB: ND
Benzene: 0.54 J
HC: 0

KAFB-106109-050
EDB: ND
Benzene: ND
HC: 2

KAFB-106117-050
EDB: 0.32 J
Benzene: 0.7 J
HC: 1

SVMW-11-050
NA

KAFB-106116-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106110-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106115-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106111-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106128-050
EDB: ND
Benzene: ND
HC: 2

KAFB-106113-050
EDB: ND
Benzene: ND
HC: 2

KAFB-106124-050
EDB: ND
Benzene: ND
HC: 4

KAFB-106114-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106120-050
EDB: ND
Benzene: ND
HC: 2

KAFB-106129-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106125-050
EDB: ND
Benzene: 1.5 J
HC: 3

KAFB-106131-055
EDB: ND
Benzene: ND
HC: 0

KAFB-106123-050
EDB: ND
Benzene: 0.38 J
HC: 0

KAFB-106126-050
EDB: ND
Benzene: 0.8 J
HC: 0

KAFB-106121-050
EDB: ND
Benzene: ND
HC: 0

KAFB-106122-050
EDB: ND
Benzene: ND
HC: 0

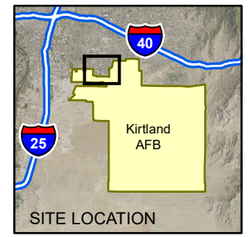
KAFB-106140-050
EDB: ND
Benzene: 0.43 J
HC: 0

KAFB-106127-050
EDB: ND
Benzene: 0.5 J
HC: 1

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m^3
Benzene ≥ 3,200 µg/m^3
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m^3.
Concentrations for HC are reported in ppmv.
µg/m^3= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
SVMW-10-050, SVMW-11-050, and SVEW-02-060 were not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source



N

0 175 350 700

Feet

1 inch = 350 feet

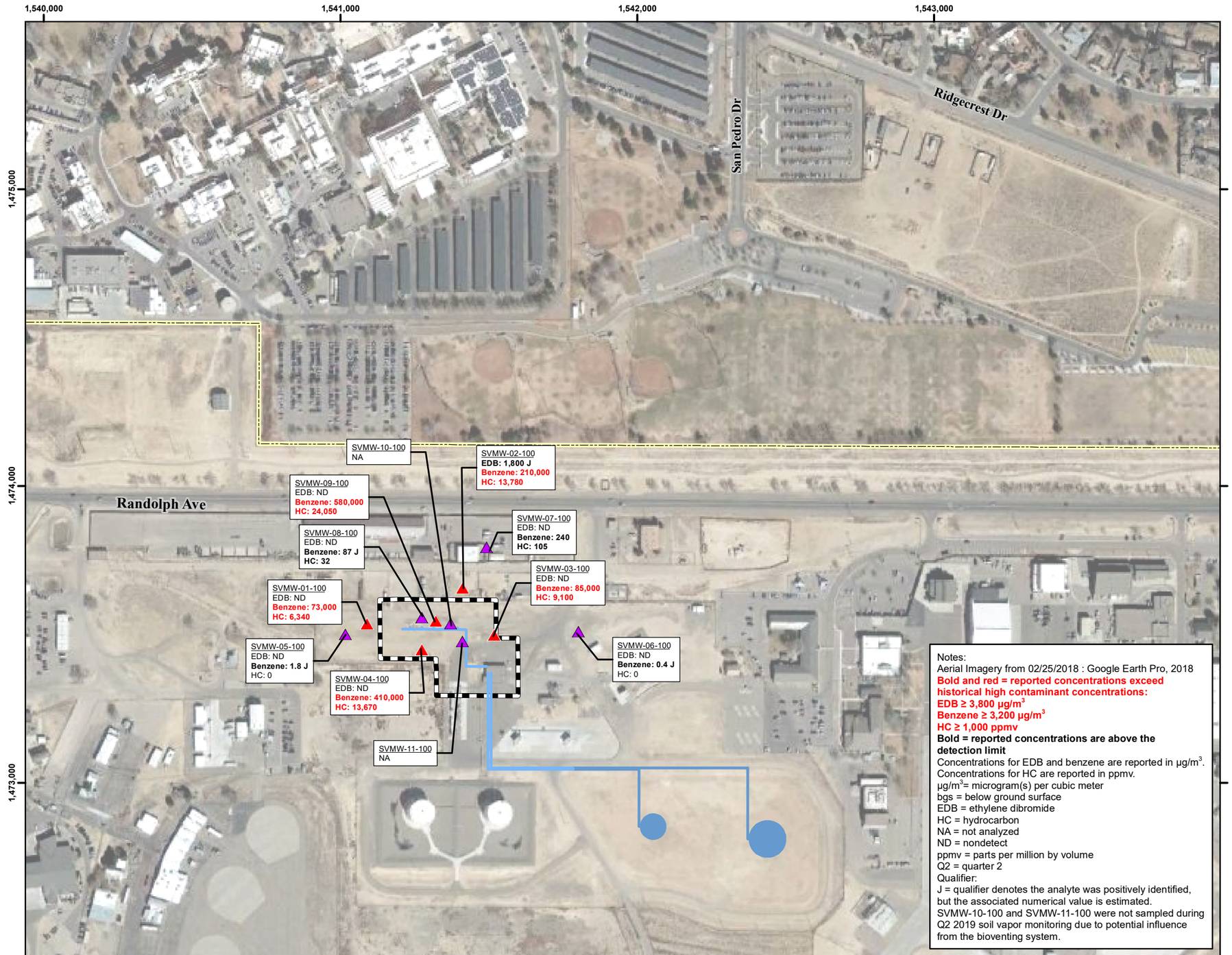
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 2-4

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 50 FT BGS, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-4 Benzene_EDB_HC_Conc_50ftQ22019.mxd 7/22/2019 EA ecarpio



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m^3
Benzene ≥ 3,200 µg/m^3
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m^3.
Concentrations for HC are reported in ppmv.
µg/m^3= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
SVMW-10-100 and SVMW-11-100 were not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area

N

0 175 350 700
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 2-5

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 100 FT BGS, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-5 Benzene_EDB_HC_Conc_100ftQ22019.mxd 7/22/2019 EA ecarpio

1,540,000 1,541,000 1,542,000 1,543,000

1,475,000 1,474,000 1,473,000

Ridgecrest Dr

San Pedro Dr

Randolph Ave

KAFB-106141-170
EDB: ND
Benzene: 0.38 J
HC: 1

KAFB-106138-150
EDB: ND
Benzene: 0.43 J
HC: 0

KAFB-106142-170
EDB: ND
Benzene: 0.78 J
HC: 0

KAFB-106136-150
EDB: ND
Benzene: ND
HC: 0

KAFB-106028-150
EDB: ND
Benzene: 1.1 J
HC: 0

SVMW-02-150
EDB: ND
Benzene: 16,000
HC: 939

SVEW-03-160
NA

KAFB-106139-150
EDB: ND
Benzene: ND
HC: 0

SVMW-07-150
EDB: ND
Benzene: 1 J
HC: 0

KAFB-106137-150
EDB: ND
Benzene: ND
HC: 2

KAFB-106135-150
EDB: ND
Benzene: 1 J
HC: 1

KAFB-106119-150
EDB: ND
Benzene: 1.9 J
HC: 0

SVMW-10-150
NA

KAFB-106118-160
EDB: ND
Benzene: ND
HC: 5

KAFB-106134-170
EDB: ND
Benzene: 1.4 J
HC: 2

KAFB-106108-150
EDB: ND
Benzene: 1.5 J
HC: 3

SVMW-12-150
EDB: ND
Benzene: 1.8 J
HC: 5

SVMW-13-150
EDB: ND
Benzene: 5,100
HC: 1,185

KAFB-106130-150
EDB: ND
Benzene: 0.72 J
HC: 0

KAFB-106133-170
EDB: ND
Benzene: 0.57 J
HC: 0

SVEW-07-160
EDB: ND
Benzene: 950,000 J
HC: 24,960

KAFB-106112-150
EDB: ND
Benzene: 1.3 J
HC: 0

KAFB-106132-175
EDB: ND
Benzene: ND
HC: 5

KAFB-106109-150
EDB: ND
Benzene: 0.91 J
HC: 2

SVMW-15-150
EDB: ND
Benzene: 4
HC: 5

KAFB-106117-150
EDB: ND
Benzene: 1.3 J
HC: 1

KAFB-106116-150
EDB: ND
Benzene: 0.99 J
HC: 0

KAFB-106110-150
EDB: ND
Benzene: 160
HC: 47

KAFB-106111-150
EDB: ND
Benzene: 0.75 J
HC: 0

KAFB-106128-150
EDB: ND
Benzene: 0.5 J
HC: 4

KAFB-106113-150
EDB: ND
Benzene: 0.89 J
HC: 0

KAFB-106129-150
EDB: ND
Benzene: ND
HC: 0

KAFB-106115-150
EDB: ND
Benzene: 0.4 J
HC: 0

KAFB-106120-150
EDB: ND
Benzene: ND
HC: 2

KAFB-106124-150
EDB: 0.62 J
Benzene: 1.3 J
HC: 0

SVMW-14-150
EDB: ND
Benzene: 0.99 J
HC: 0

KAFB-106114-150
EDB: ND
Benzene: 2.1 J
HC: 0

KAFB-106125-150
EDB: ND
Benzene: 0.8 J
HC: 3

KAFB-106131-150
EDB: ND
Benzene: ND
HC: 0

KAFB-106123-150
EDB: ND
Benzene: ND
HC: 0

KAFB-106126-150
EDB: ND
Benzene: ND
HC: 0

KAFB-106121-145
EDB: ND
Benzene: ND
HC: 0

KAFB-106122-150
EDB: ND
Benzene: 0.43 J
HC: 0

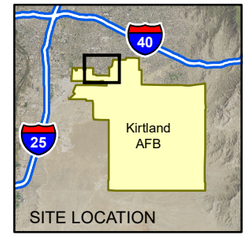
KAFB-106140-150
EDB: ND
Benzene: 0.44 J
HC: 0

KAFB-106127-150
EDB: ND
Benzene: ND
HC: 1

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m³
Benzene ≥ 3,200 µg/m³
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m³.
Concentrations for HC are reported in ppmv.
µg/m³= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
SVMW-10-150 and SVEW-03-160 were not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area



N

0 175 350 700

Feet

1 inch = 347 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-6

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 150 FT BGS, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-6 Benzene_EDB_HC_Conc_150ftQ22019.mxd 7/22/2019 EA ecarpio

1,540,000 1,541,000 1,542,000 1,543,000

1,475,000 1,474,000 1,473,000

San Pedro Dr

Ridgecrest Dr

Randolph Ave

KAFB-106141-250
EDB: ND
Benzene: 0.4 J
HC: 2

KAFB-106138-250
EDB: ND
Benzene: 0.36 J
HC: 0

SVMW-09-250
EDB: ND
Benzene: 410,000
HC: 14,600

KAFB-106142-250
EDB: ND
Benzene: ND
HC: 0

SVMW-09-266
EDB: 5,200 J
Benzene: 950,000
HC: 24,790

KAFB-106139-250
EDB: ND
Benzene: 62
HC: 0

KAFB-106136-250
EDB: ND
Benzene: ND
HC: 1

SVMW-10-250
NA

SVMW-08-250
EDB: ND
Benzene: 510,000
HC: 11,600

SVEW-01-260
NA

KAFB-106028-250
EDB: ND
Benzene: 0.98 J
HC: 0

SVEW-08-260
EDB: ND
Benzene: 24
HC: 9

SVMW-03-250
EDB: 3,500 J
Benzene: 220,000
HC: 14,290

KAFB-106137-250
EDB: ND
Benzene: 0.75 J
HC: 2

KAFB-106135-250
EDB: ND
Benzene: 1 J
HC: 2

KAFB-106108-250
EDB: ND
Benzene: 0.47 J
HC: 0

KAFB-106119-250
EDB: ND
Benzene: 5,600
HC: 674

SVMW-01-250
EDB: ND
Benzene: 5,700
HC: 2,740

KAFB-106118-265
EDB: 0.71 J
Benzene: 3.1
HC: 2

SVMW-06-252
EDB: ND
Benzene: 300,000
HC: 339

KAFB-106134-250
EDB: ND
Benzene: 1.7 J
HC: 2

KAFB-106130-250
EDB: ND
Benzene: 0.52 J
HC: 0

SVMW-05-290
EDB: ND
Benzene: 0.97 J
HC: 0

KAFB-106112-250
EDB: ND
Benzene: 18,000
HC: 11

SVMW-12-250
EDB: ND
Benzene: 280
HC: 3

SVMW-13-250
EDB: ND
Benzene: 2.3 J
HC: 4

SVMW-05-230
EDB: ND
Benzene: 150
HC: 183

KAFB-106132-250
EDB: ND
Benzene: 1.4 J
HC: 5

KAFB-106109-250
EDB: ND
Benzene: 11
HC: 2

KAFB-106133-250
EDB: ND
Benzene: 1.6 J
HC: 0

SVMW-15-250
EDB: ND
Benzene: 2,900
HC: 13

SVMW-04-250
EDB: ND
Benzene: 250,000
HC: 16,780

KAFB-106116-250
EDB: ND
Benzene: 26
HC: 0

KAFB-106129-250
EDB: ND
Benzene: 2.1
HC: 1

SVMW-11-250
NA

KAFB-106117-250
EDB: ND
Benzene: 30 J
HC: 86

KAFB-106115-250
EDB: ND
Benzene: 0.61 J
HC: 0

SVMW-11-260
NA

KAFB-106128-250
EDB: ND
Benzene: 2 J
HC: 16

KAFB-106120-250
EDB: ND
Benzene: ND
HC: 2

KAFB-106110-250
EDB: ND
Benzene: 3,500
HC: 1,128

KAFB-106124-250
EDB: ND
Benzene: ND
HC: 0

KAFB-106114-250
EDB: ND
Benzene: 0.63 J
HC: 0

KAFB-106113-250
EDB: ND
Benzene: 0.82 J
HC: 1

SVMW-14-250
EDB: ND
Benzene: 1.2 J
HC: 0

KAFB-106125-250
EDB: ND
Benzene: 0.84 J
HC: 6

KAFB-106131-245
EDB: ND
Benzene: 0.32 J
HC: 0

KAFB-106126-250
EDB: ND
Benzene: 0.6 J
HC: 1

KAFB-106123-250
EDB: ND
Benzene: ND
HC: 0

KAFB-106111-250
EDB: ND
Benzene: 2,900
HC: 278

KAFB-106121-250
EDB: ND
Benzene: ND
HC: 0

KAFB-106122-250
EDB: ND
Benzene: ND
HC: 0

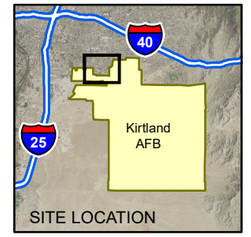
KAFB-106140-250
EDB: ND
Benzene: 0.97 J
HC: 0

KAFB-106127-250
EDB: ND
Benzene: ND
HC: 2

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m^3
Benzene ≥ 3,200 µg/m^3
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m^3.
Concentrations for HC are reported in ppmv.
µg/m^3= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
SVMW-10-250, SVMW-11-250, SVMW-11-260, and SVEW-01-260 were not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area



N

0 175 350 700
Feet
1 inch = 350 feet

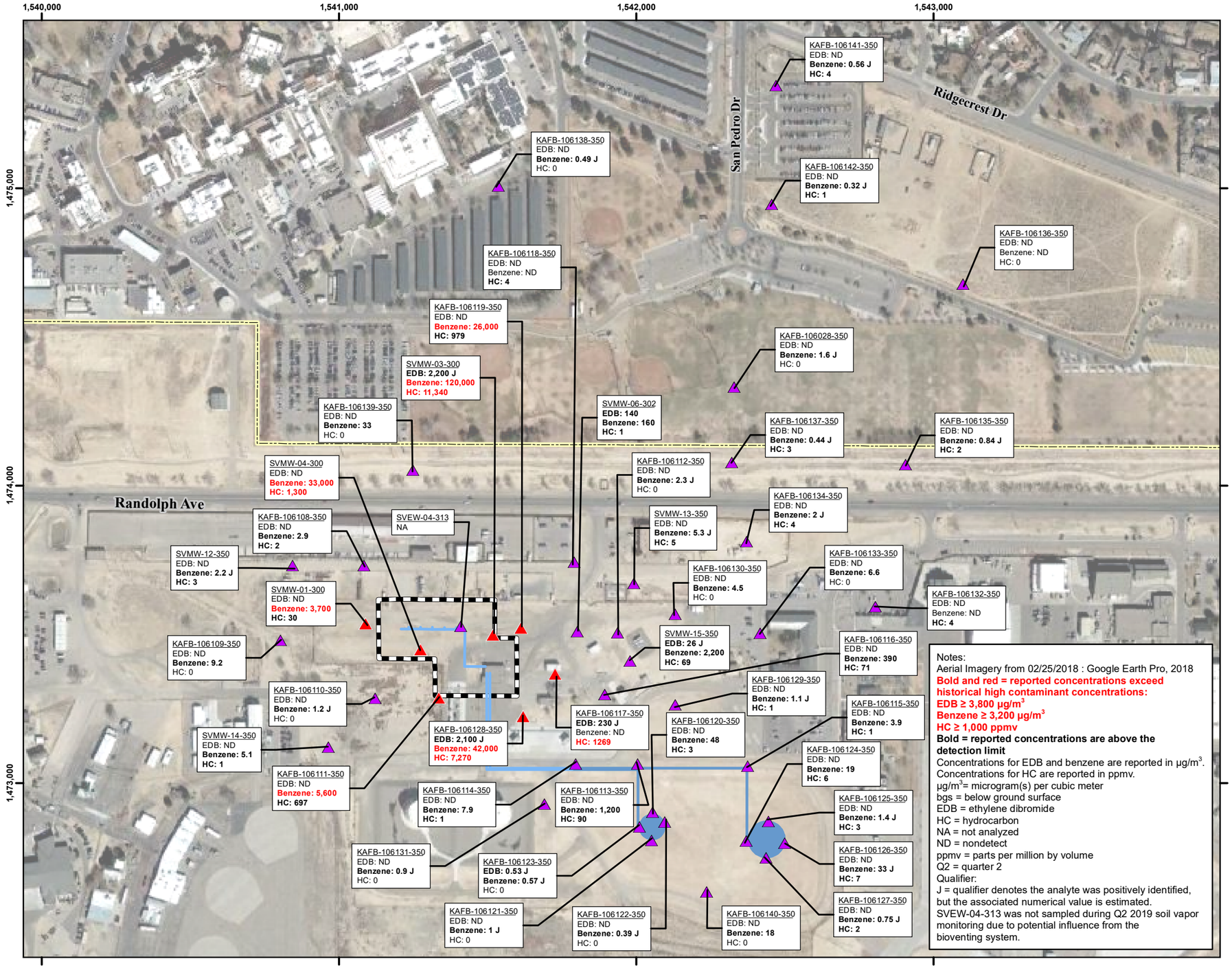
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 2-7

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 250 FT BGS, Q2 2019

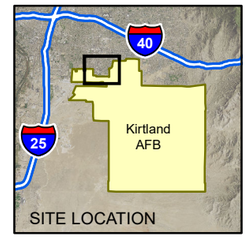
\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-7 Benzene_EDB_HC_Conc_250ftQ22019.mxd 7/22/2019 EA ecarpio



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m^3
Benzene ≥ 3,200 µg/m^3
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m^3.
Concentrations for HC are reported in ppmv.
µg/m^3= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
SVEW-04-313 was not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source



N

0 175 350 700

Feet

1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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BULK FUELS FACILITY
SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 2-8

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 350 FT BGS, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-8 Benzene_EDB_HC_Conc_350ftQ22019.mxd 7/22/2019 EA ecarpio

1,540,000 1,541,000 1,542,000 1,543,000

1,475,000 1,474,000 1,473,000

San Pedro Dr

Ridgecrest Dr

Randolph Ave

KAFB-106141-450
EDB: ND
Benzene: 0.99 J
HC: 4

KAFB-106138-450
EDB: ND
Benzene: 2.7
HC: 0

KAFB-106142-450
EDB: 1.4 J
Benzene: 19
HC: 0

KAFB-106136-450
EDB: ND
Benzene: 1.3 J
HC: 0

KAFB-106028-450
EDB: 2.6
Benzene: 0.63 J
HC: 0

KAFB-106119-450
EDB: 12 J
Benzene: 330
HC: 157

SVEW-05-460
NA

KAFB-106139-450
EDB: ND
Benzene: 4.1 J
HC: 0

KAFB-106118-450
EDB: ND
Benzene: 46
HC: 7

KAFB-106137-450
EDB: ND
Benzene: 33,000
HC: 1,067

KAFB-106135-450
EDB: ND
Benzene: 1.6 J
HC: 1

SVEW-11-410
EDB: ND
Benzene: 7,300
HC: 263

SVEW-09-460
EDB: ND
Benzene: 11
HC: 10

KAFB-106108-450
EDB: ND
Benzene: 11
HC: 2

SVMW-13-450
EDB: ND
Benzene: 540
HC: 11

KAFB-106134-450
EDB: ND
Benzene: 2,200
HC: 170

KAFB-106130-450
EDB: ND
Benzene: 3,400
HC: 50

SVMW-12-450
EDB: ND
Benzene: 10
HC: 5

SVEW-10-410
EDB: ND
Benzene: 410
HC: 7

KAFB-106112-450
EDB: ND
Benzene: 37,000
HC: 1,984

SVEW-13-410
EDB: ND
Benzene: 14,000
HC: 636

KAFB-106132-450
EDB: ND
Benzene: 3.1
HC: 2

KAFB-106109-450
EDB: ND
Benzene: 10
HC: 0

KAFB-106111-450
EDB: ND
Benzene: 1,100
HC: 16

KAFB-106117-450
EDB: ND
Benzene: 12,000
HC: 6760

SVMW-15-450
EDB: 320 J
Benzene: 59,000
HC: 2240

KAFB-106133-450
EDB: ND
Benzene: 800
HC: 40

KAFB-106129-450
EDB: ND
Benzene: 6,300
HC: 383

SVEW-12-410
EDB: ND
Benzene: 1.5 J
HC: 3

KAFB-106128-450
EDB: 3,900
Benzene: 43,000
HC: 10,490

KAFB-106116-450
EDB: 930 J
Benzene: 61,000
HC: 5,420

KAFB-106120-450
EDB: ND
Benzene: 280
HC: 13

KAFB-106115-450
EDB: ND
Benzene: 3,600
HC: 534

SVMW-14-450
EDB: ND
Benzene: 0.77 J
HC: 0

KAFB-106114-450
EDB: ND
Benzene: 20,000
HC: 3,430

KAFB-106113-450
EDB: 110 J
Benzene: 23,000
HC: 1,065

KAFB-106124-450
EDB: ND
Benzene: 94
HC: 207

KAFB-106110-450
EDB: ND
Benzene: 270
HC: 4

KAFB-106125-450
EDB: ND
Benzene: 330
HC: 102

KAFB-106126-450
EDB: ND
Benzene: 500 J
HC: 442

KAFB-106131-450
EDB: ND
Benzene: 4,200
HC: 148

KAFB-106123-450
EDB: ND
Benzene: 2.2 J
HC: 1

KAFB-106121-450
EDB: ND
Benzene: 190
HC: 2

KAFB-106122-450
EDB: ND
Benzene: 220
HC: 8

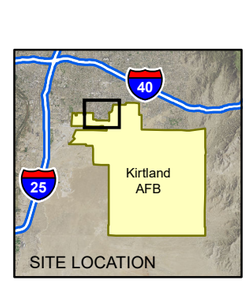
KAFB-106140-450
EDB: ND
Benzene: 26
HC: 0

KAFB-106127-450
EDB: ND
Benzene: 48 J
HC: 111

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Bold and red = reported concentrations exceed historical high contaminant concentrations:
EDB ≥ 3,800 µg/m^3
Benzene ≥ 3,200 µg/m^3
HC ≥ 1,000 ppmv
Bold = reported concentrations are above the detection limit
Concentrations for EDB and benzene are reported in µg/m^3.
Concentrations for HC are reported in ppmv.
µg/m^3= microgram(s) per cubic meter
bgs = below ground surface
EDB = ethylene dibromide
HC = hydrocarbon
NA = not analyzed
ND = nondetect
ppmv = parts per million by volume
Q2 = quarter 2
Qualifier:
J = qualifier denotes the analyte was positively identified but the associated numerical value is estimated.
SVEW-05-460 was not sampled during Q2 2019 soil vapor monitoring due to potential influence from the bioventing system.

Legend

- Soil Vapor Monitoring Point - No Contaminant Exceedances
- Soil Vapor Monitoring Point - At Least One Contaminant Exceedance
- Former Aboveground Storage
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source



N

0 175 350 700

Feet

1 inch = 350 feet

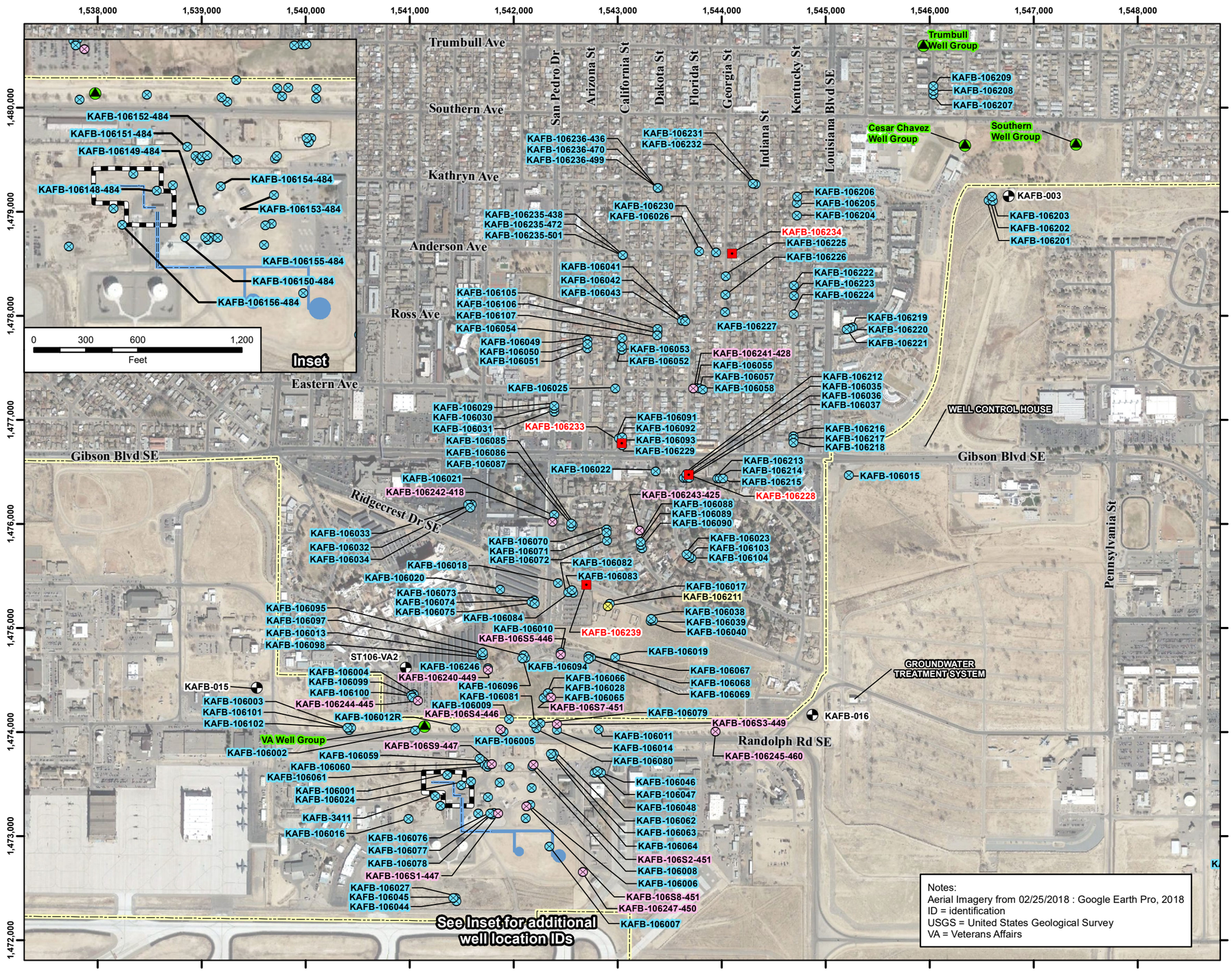
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-9

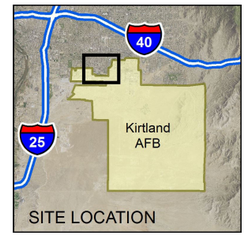
BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 450 FT BGS, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 2\2-9 Benzene_EDB_HC_Conc_450ftQ22019.mxd 7/22/2019 EA ecarpio



Legend

- Groundwater Monitoring Well
- Extraction Well
- USGS Monitored Sentinel Well
- Drinking Water Supply Well
- Newly Added Monitoring Well
- Monitoring Well (pending water table rise)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

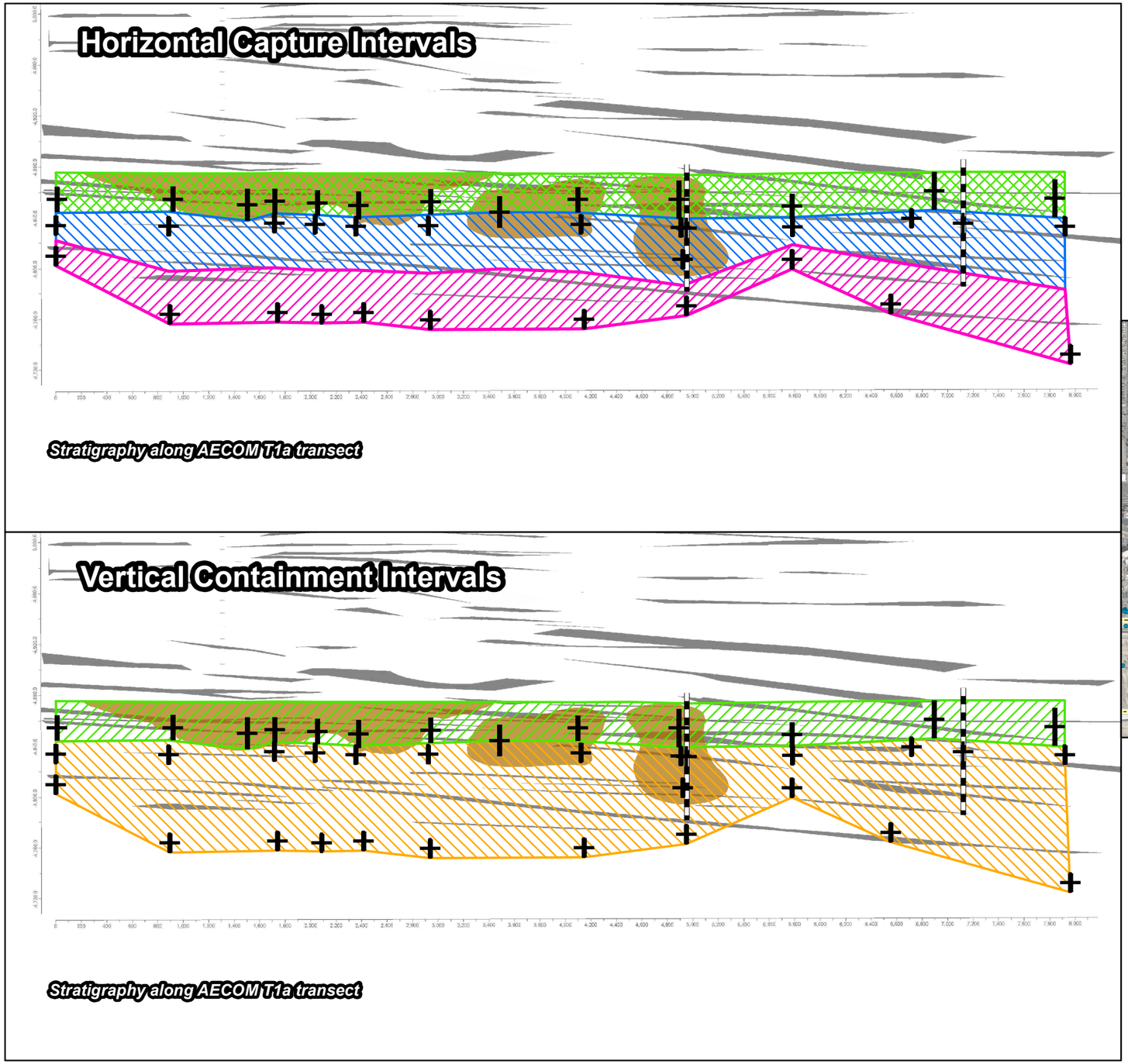
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

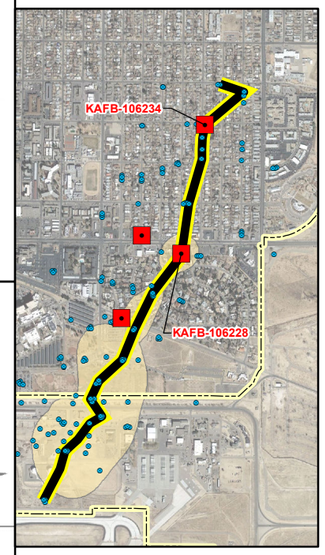
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FIGURE 3-1

GROUNDWATER MONITORING NETWORK, DRINKING WATER SUPPLY WELL, AND EXTRACTION WELL LOCATIONS

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-1 Well Map.mxd 8/5/2019 EA ecarpio





Legend

- Groundwater Monitoring Well Screen (With Midpoint)
- Extraction Well Screen
- Extraction Well
- Groundwater Monitoring Well
- T1a Transect
- AECOM Defined Fine Grained Lithology

Reference Elevation Interval For Horizontal Capture

- 4857 (ft AMSL)
- 4838 (ft AMSL)
- 4814 (ft AMSL)
- Q2 2019 EDB Plume with Concentration > 0.05 µg/L (EPA MCL)

Reference Elevation Interval For Vertical Containment

- Above 4838 Midpoint (ft AMSL)
- Below 4838 Midpoint (ft AMSL)

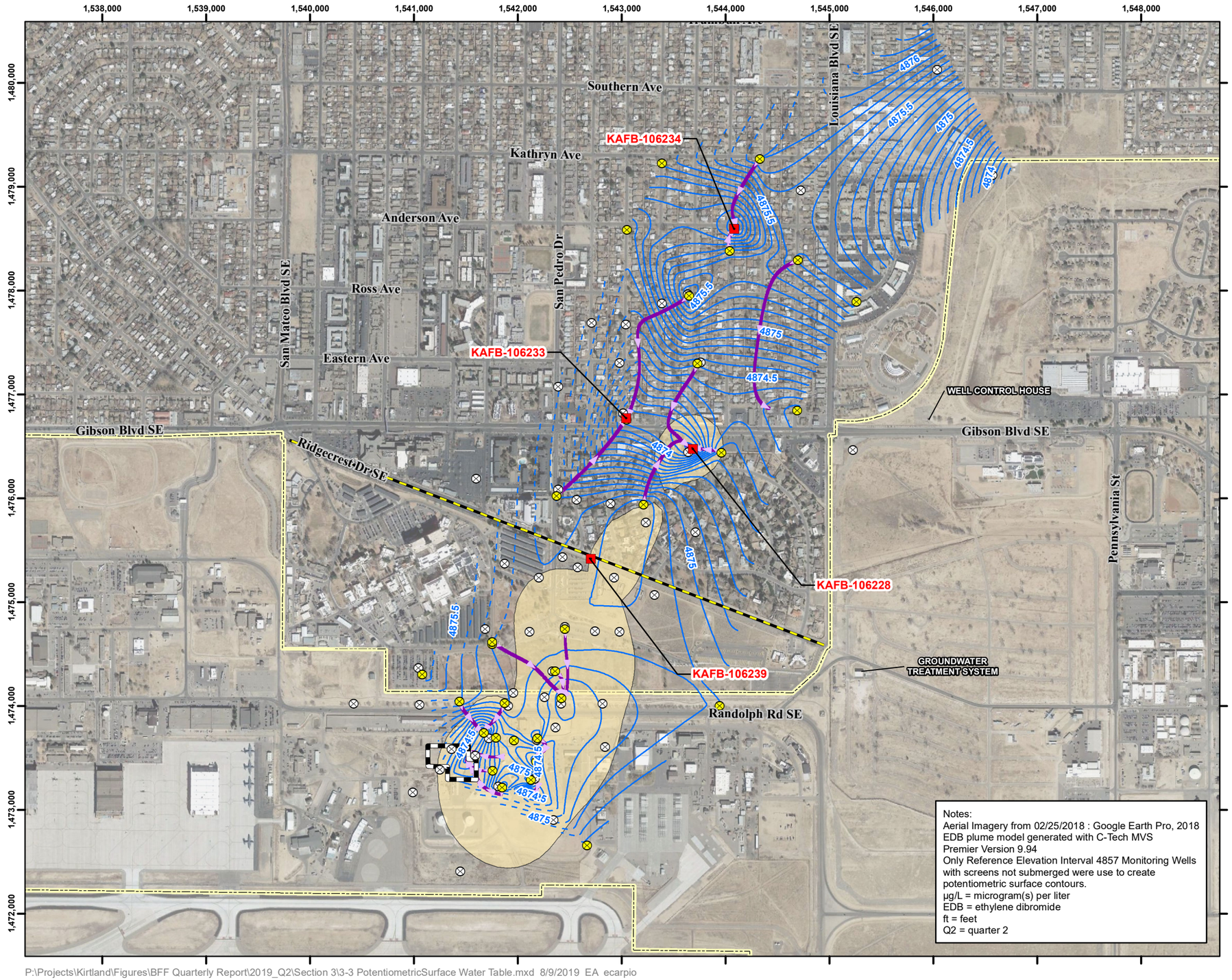
Notes:
EDB plume model generated with C-Tech MVS Premier Version 9.94
ft AMSL = feet above mean sea level
µg/L = micrograms per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency Maximum Contaminant Level
AECOM = Architecture, Engineering, Consulting, Operations, and Maintenance
Q2 = quarter 2

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FIGURE 3-2

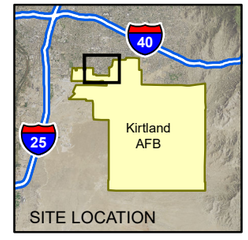
REFERENCE ELEVATION CAPTURE AND CONTAINMENT INTERVALS, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-2 Reference Elevation Intervals.mxd 8/6/2019 EA ecarpio



Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Groundwater Level Contour (0.1ft interval)
- Inferred Groundwater Level Contour (0.1ft)
- Particle Flow Lines (Direction of Flow)
- Installation Fence Boundary
- Target Capture Zone Boundary
- EDB Plume Q2 2019 (> 0.05 µg/L)
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

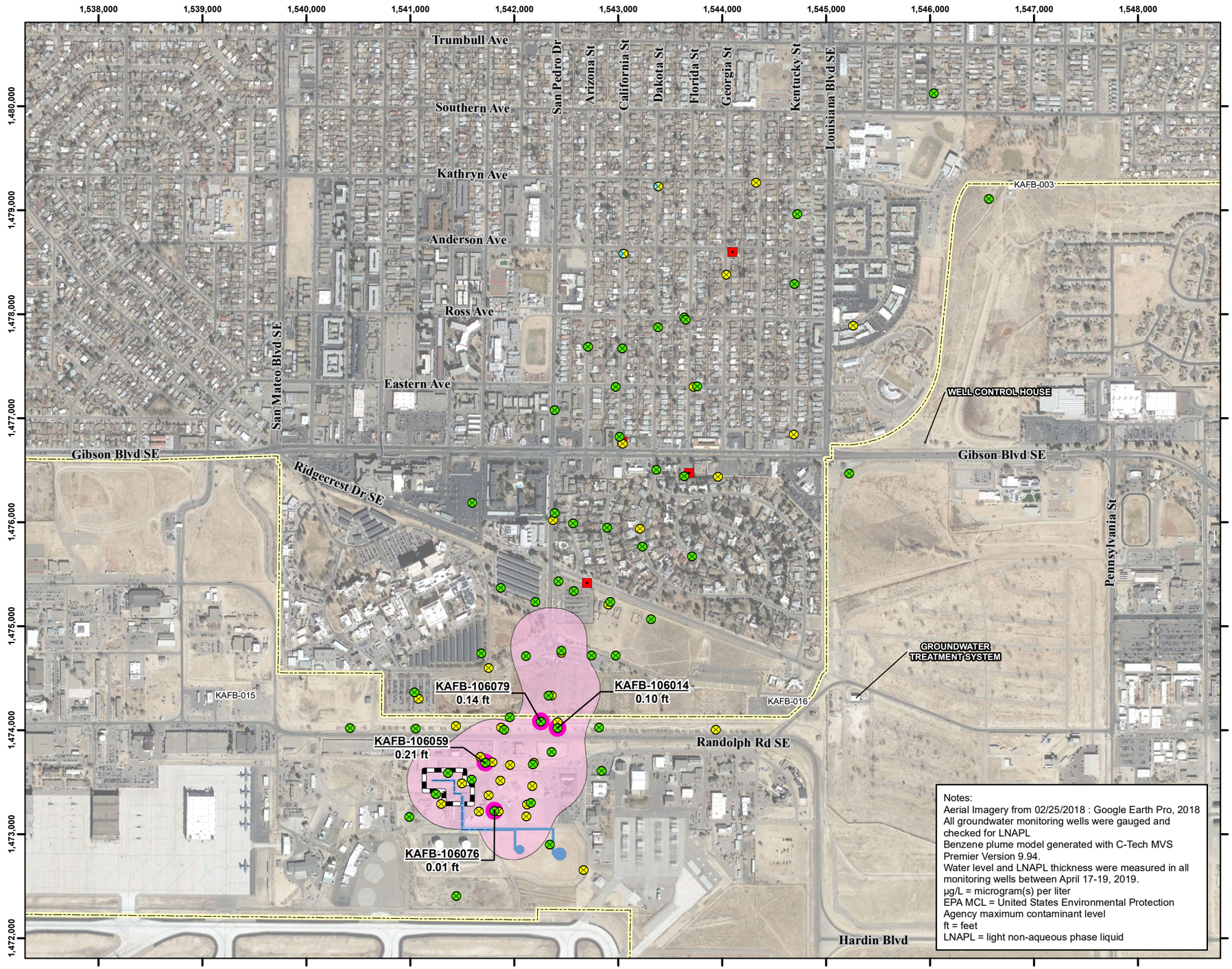
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-3

POTENTIOMETRIC SURFACE OF WATER TABLE, Q2 2019

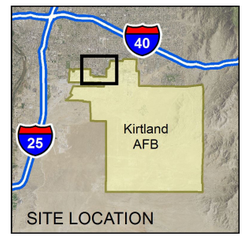
P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-3 PotentiometricSurface Water Table.mxd 8/9/2019 EA ecarpio



Legend

- Monitoring Well with Confirmed LNAPL
- REI 4857 Groundwater Monitoring Wells with top of screen unsubmerged
- REI 4857 and REI 4857/4838 Groundwater Monitoring Wells with fully submerged screens
- Nested Groundwater Monitoring Well
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer
- Installation Fence Boundary
- Benzene Plume, Q2 2019 ≥5 µg/L (EPA MCL)
- Source Area

Well Location ID
LNAPL Thickness (ft)



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

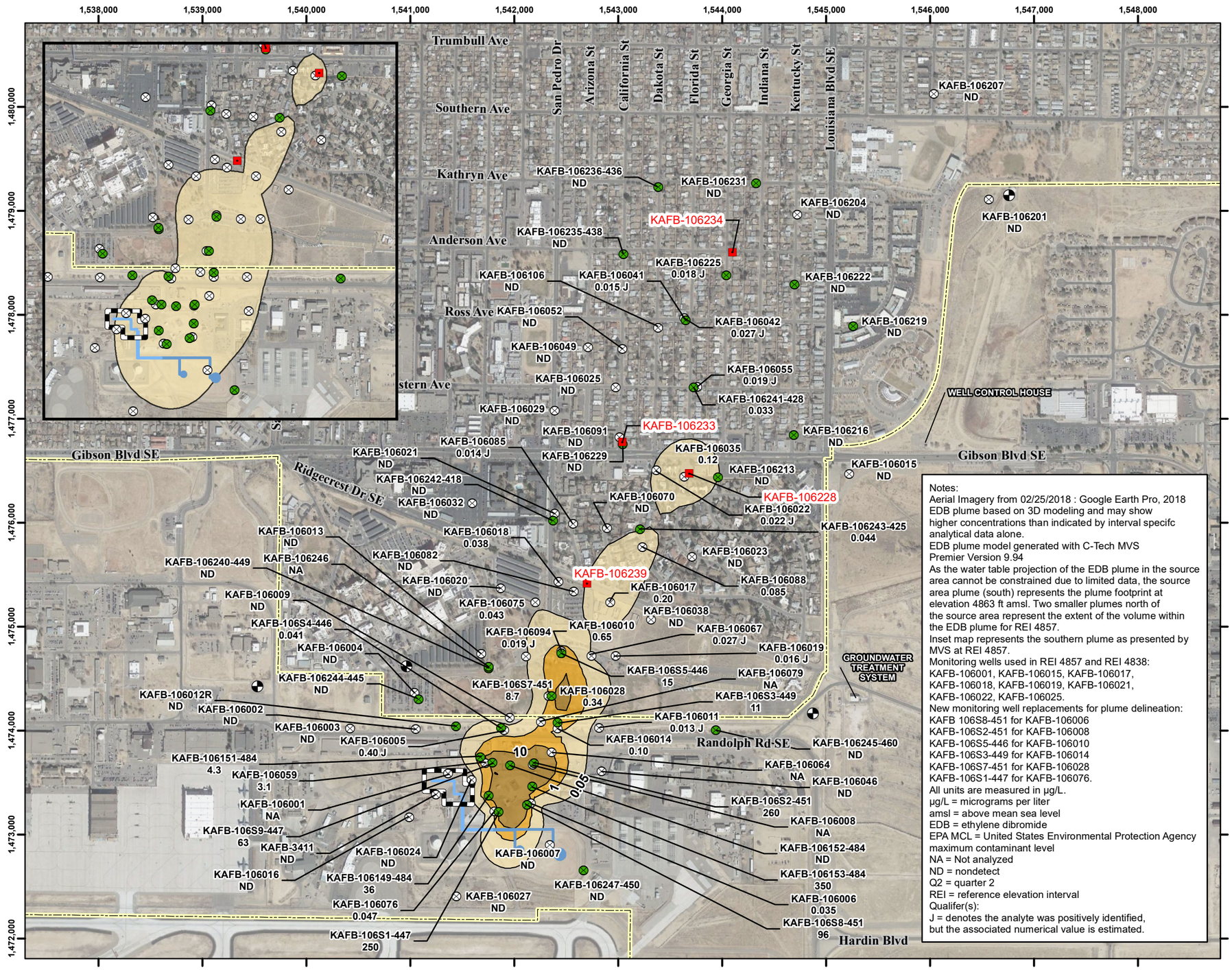
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
All groundwater monitoring wells were gauged and checked for LNAPL
Benzene plume model generated with C-Tech MVS Premier Version 9.94.
Water level and LNAPL thickness were measured in all monitoring wells between April 17-19, 2019.
µg/L = microgram(s) per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
ft = feet
LNAPL = light non-aqueous phase liquid

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FIGURE 3-4

GROUNDWATER MONITORING WELLS WITH MEASURABLE LNAPL APRIL 17-19, 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-4 GWM with Measurable LNAPL.mxd 8/5/2019 EA ecarpio

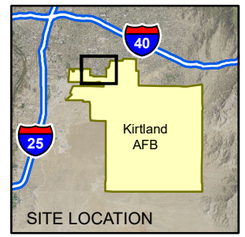


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- EDB Concentration Isocontour (µg/L)
- Source Area

EDB Concentration Range

- 0.05 (EPA MCL) - 1.0 µg/L
- 1.0 - 10 µg/L
- 10 - 500 µg/L



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analytical data alone.
EDB plume model generated with C-Tech MVS Premier Version 9.94
As the water table projection of the EDB plume in the source area cannot be constrained due to limited data, the source area plume (south) represents the plume footprint at elevation 4863 ft amsl. Two smaller plumes north of the source area represent the extent of the volume within the EDB plume for REI 4857.
Inset map represents the southern plume as presented by MVS at REI 4857.
Monitoring wells used in REI 4857 and REI 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025.
New monitoring well replacements for plume delineation:
KAFB 106S8-451 for KAFB-106006
KAFB-106S2-451 for KAFB-106008
KAFB-106S5-446 for KAFB-106010
KAFB-106S3-449 for KAFB-106014
KAFB-106S7-451 for KAFB-106028
KAFB-106S1-447 for KAFB-106076.
All units are measured in µg/L.
µg/L = micrograms per liter
amsl = above mean sea level
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = Not analyzed
ND = nondetect
Q2 = quarter 2
REI = reference elevation interval
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

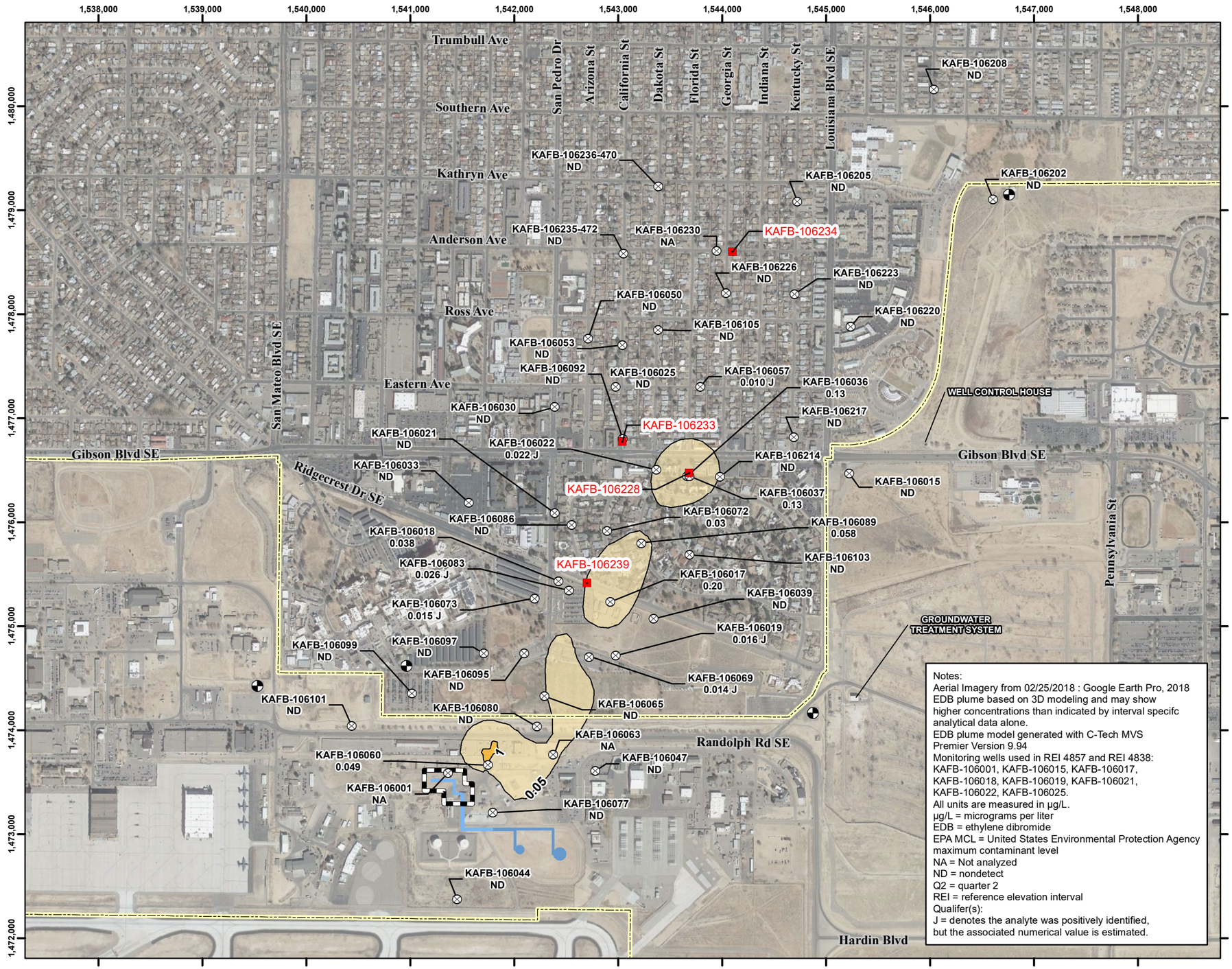
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-5

EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4857,
Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-5 Interval 4857 EDB_R1.mxd 8/5/2019 EA ecarpio

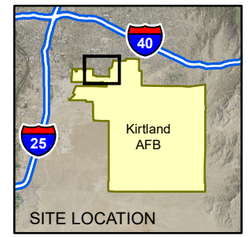


Legend

- Reference Elevation Interval 4838 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- EDB Concentration Isocontour (µg/L)
- Source Area

EDB Concentration Range

- 0.05 (EPA MCL) - 1.0 µg/L
- 1.0 - 10 µg/L
- 10 - 500 µg/L



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analytical data alone.
EDB plume model generated with C-Tech MVS Premier Version 9.94
Monitoring wells used in REI 4857 and REI 4838: KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025.
All units are measured in µg/L.
µg/L = micrograms per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = Not analyzed
ND = nondetect
Q2 = quarter 2
REI = reference elevation interval
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

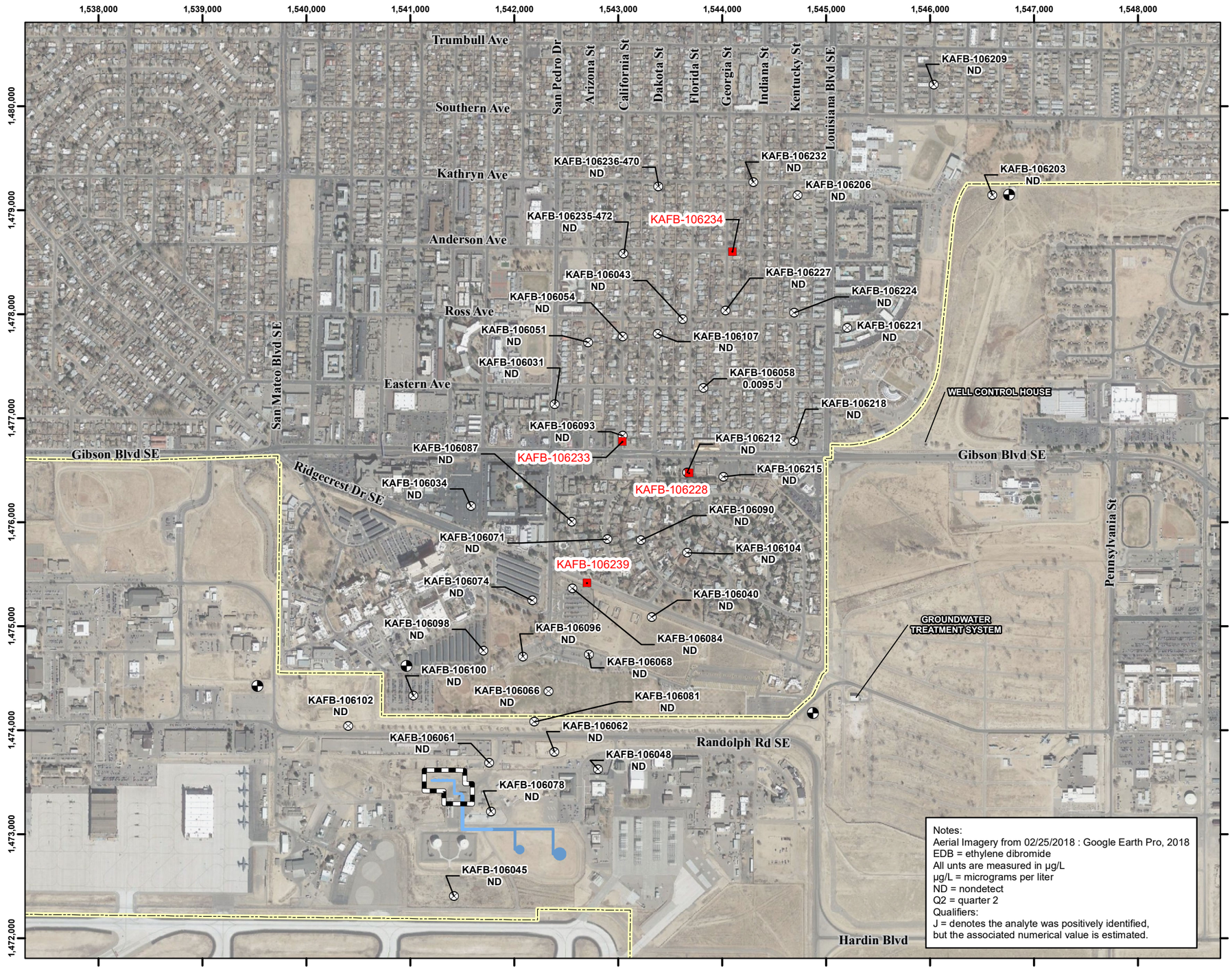
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-6

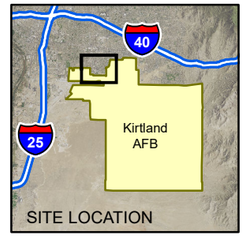
EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4838,
Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-6 Interval 4838 EDB.mxd 8/5/2019 EA ecarpio



Legend

- Reference Elevation Interval 4814 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- EDB Concentration Isocontour (µg/L)
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

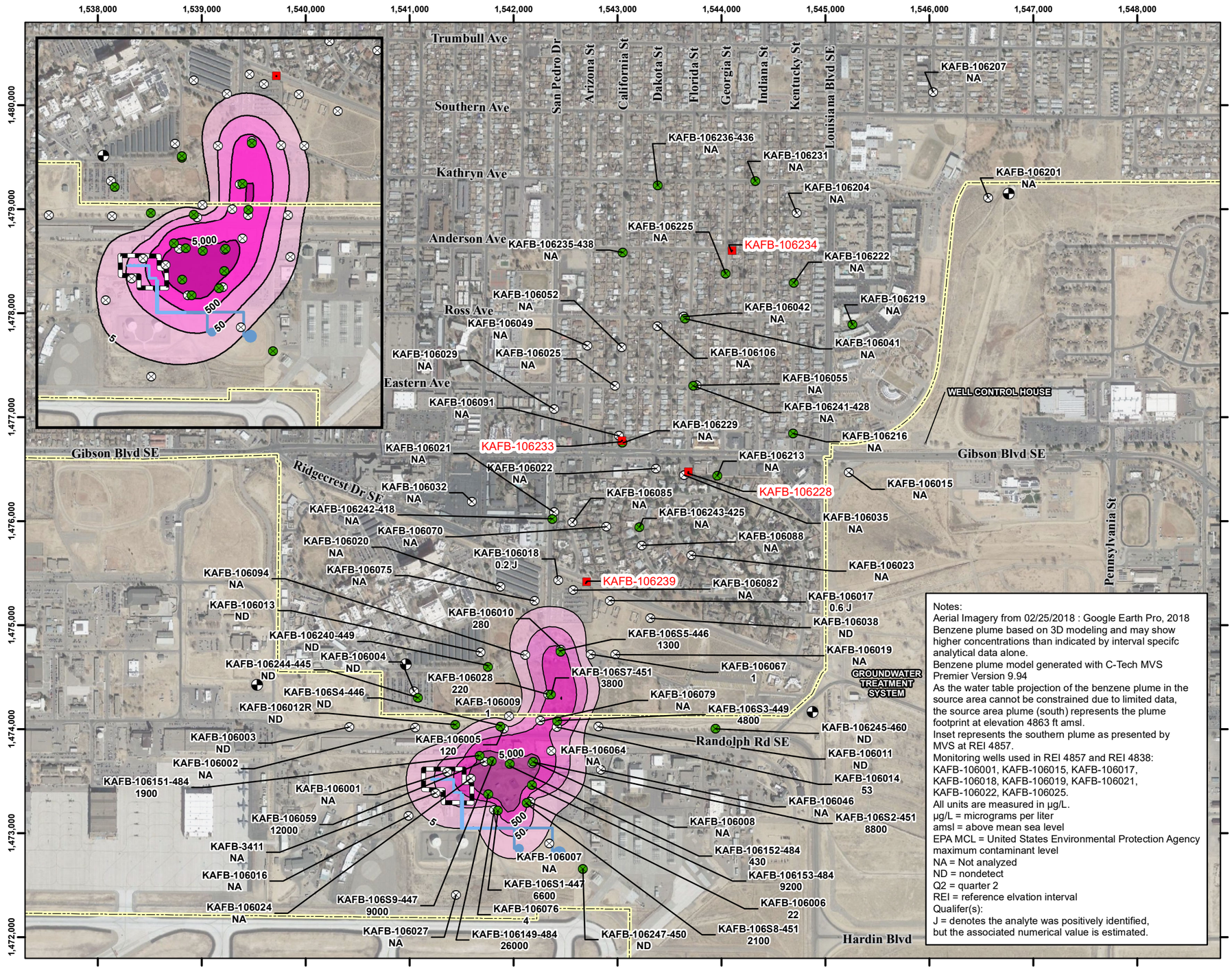
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB = ethylene dibromide
All unts are measured in µg/L
µg/L = micrograms per liter
ND = nondetect
Q2 = quarter 2
Qualifiers:
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-7

EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4814,
Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-7 Interval 4814 EDB.mxd 7/11/2019 EA ecarpio

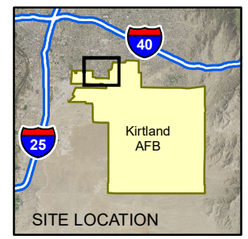


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Benzene Concentration Isocontour
- Source Area

Benzene Concentration Range

- 5.0 (EPA MCL) - 50 µg/L
- 50 - 500 µg/L
- 500 - 5,000 µg/L
- >5,000 µg/L



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Benzene plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analytical data alone.
Benzene plume model generated with C-Tech MVS Premier Version 9.94
As the water table projection of the benzene plume in the source area cannot be constrained due to limited data, the source area plume (south) represents the plume footprint at elevation 4863 ft amsl.
Inset represents the southern plume as presented by MVS at REI 4857.
Monitoring wells used in REI 4857 and REI 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025.
All units are measured in µg/L.
µg/L = micrograms per liter
amsl = above mean sea level
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = Not analyzed
ND = nondetect
Q2 = quarter 2
REI = reference elvation interval
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

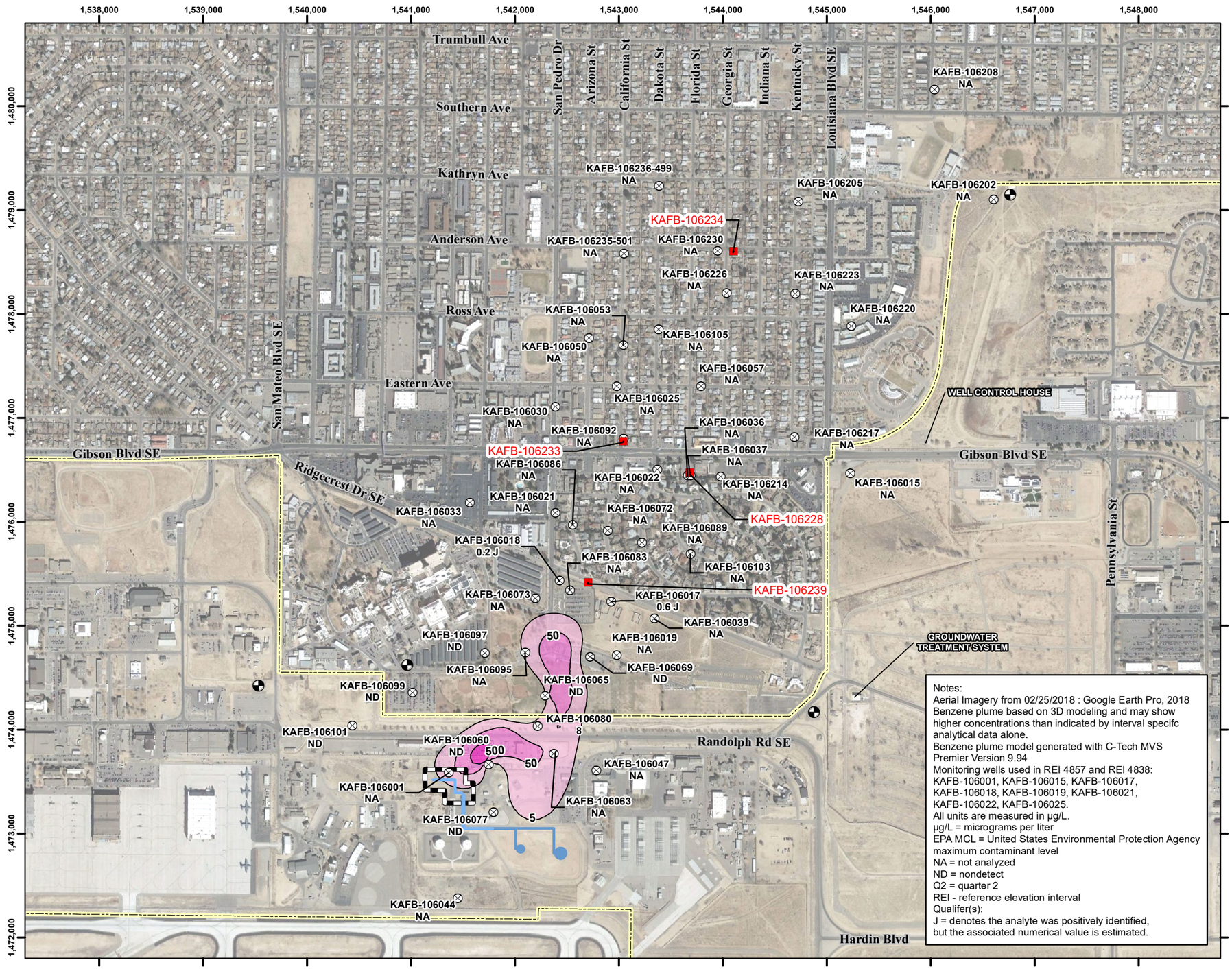
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-8

BENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-8 Interval 4857 Benzene_R1.mxd 7/23/2019 EA ecarpio

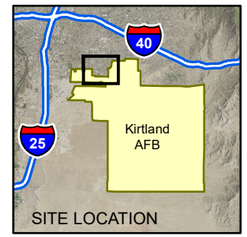


Legend

- Reference Elevation Interval 4838 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Benzene Concentration Isocontour
- Source Area

Benzene Concentration Range

- 5.0 (EPA MCL) - 50 µg/L
- 50 - 500 µg/L
- 500 - 5,000 µg/L
- >5,000 µg/L



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Benzene plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analytical data alone.
Benzene plume model generated with C-Tech MVS Premier Version 9.94
Monitoring wells used in REI 4857 and REI 4838: KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025.
All units are measured in µg/L.
µg/L = micrograms per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = nondetect
Q2 = quarter 2
REI - reference elevation interval
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

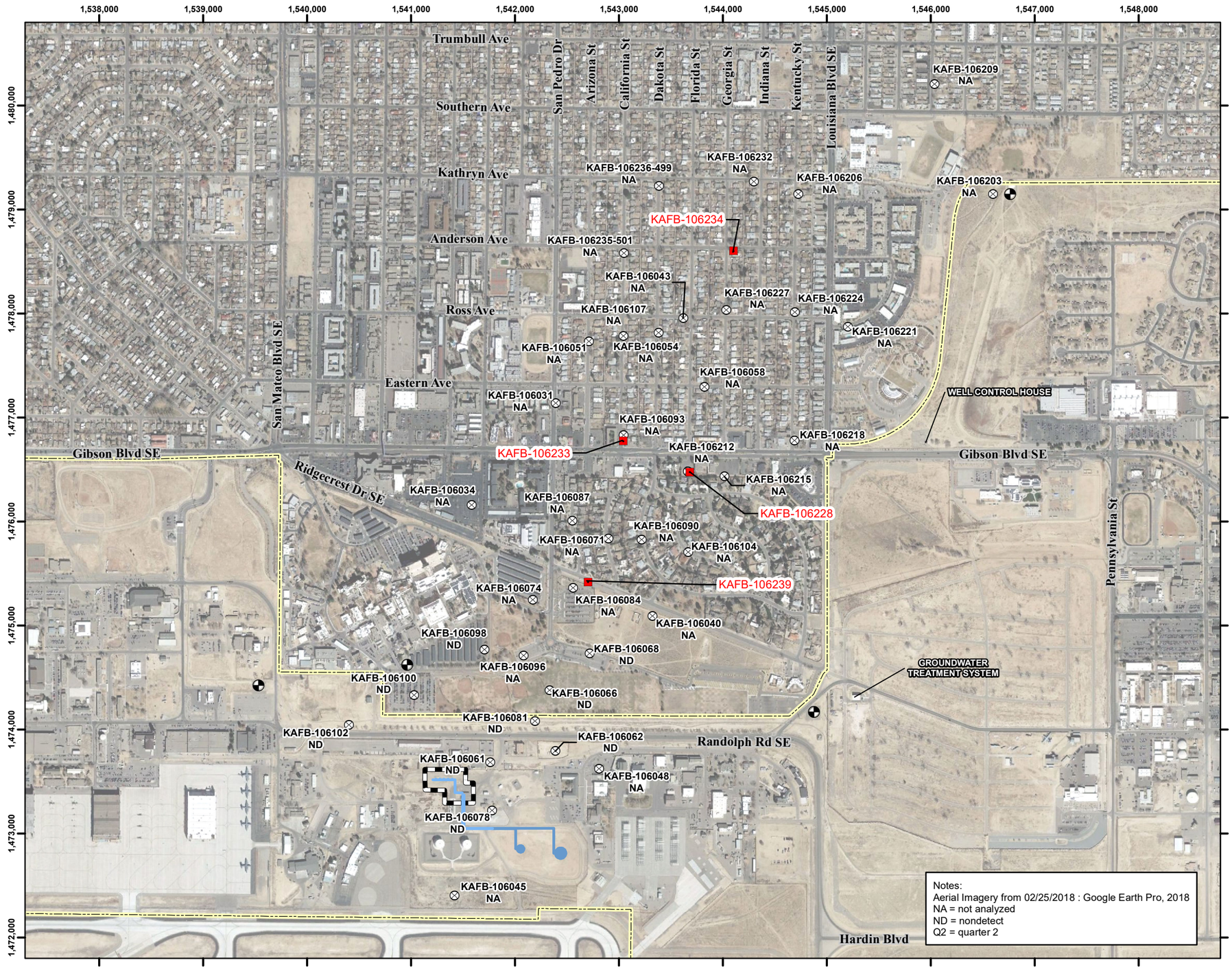
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-9

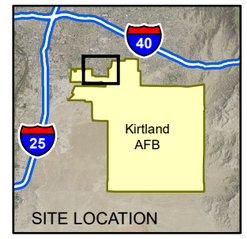
BENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4838, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-9 Interval 4838 Benzene.mxd 7/11/2019 EA ecarpio



Legend

- Reference Elevation Interval 4814 Monitoring Well (Screen Submerged)
- Extraction Wells
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

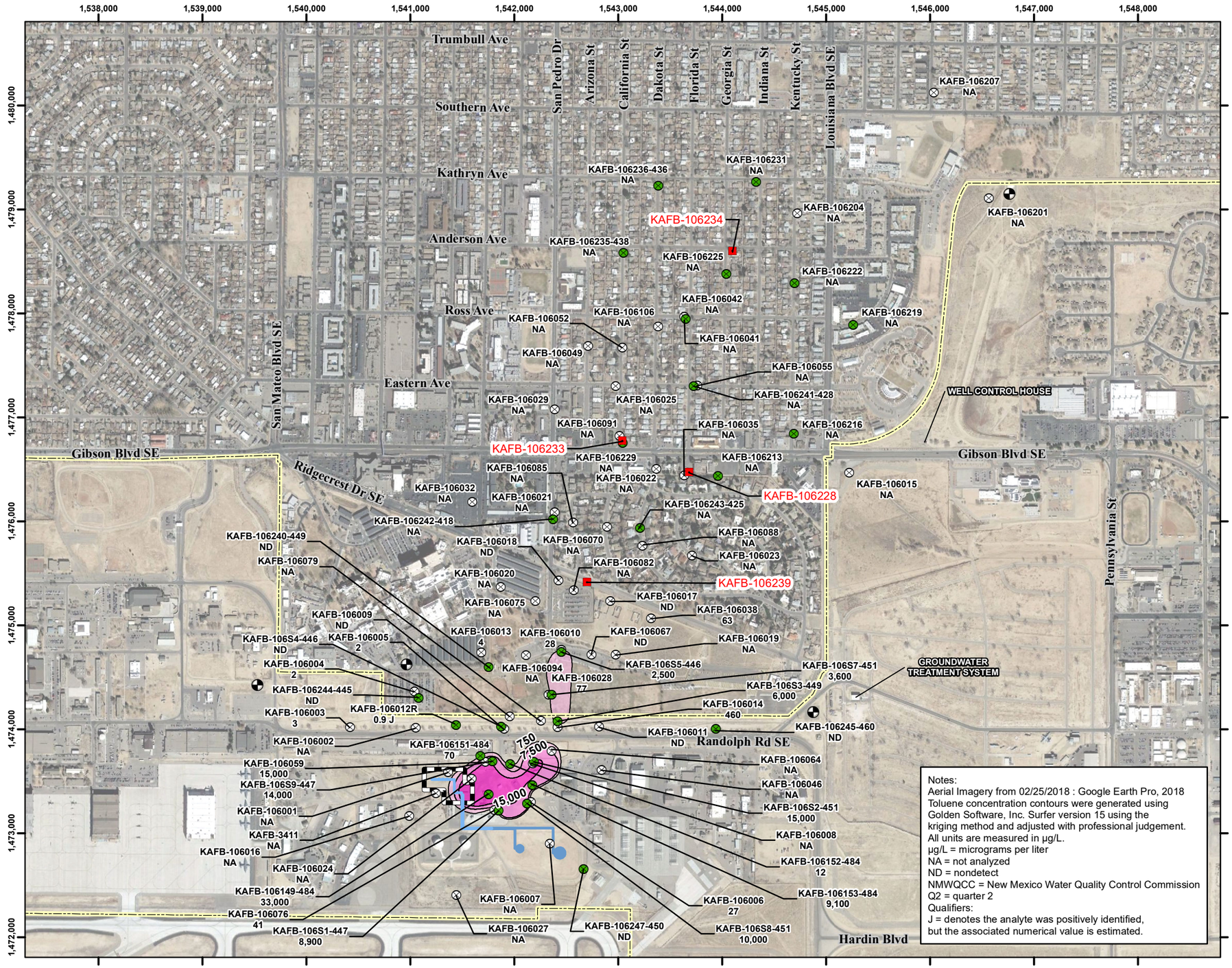
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-10

BENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4814, Q2 2019

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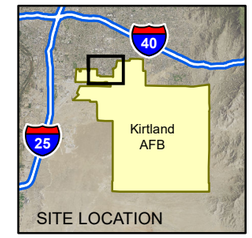


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Toluene Concentration Isocontour
- Source Area

Toluene Concentration Range

- 750 (NMWQCC standard) - 7,500 µg/L
- 7,500 - 15,000 µg/L
- 15,000 - 30,000 µg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

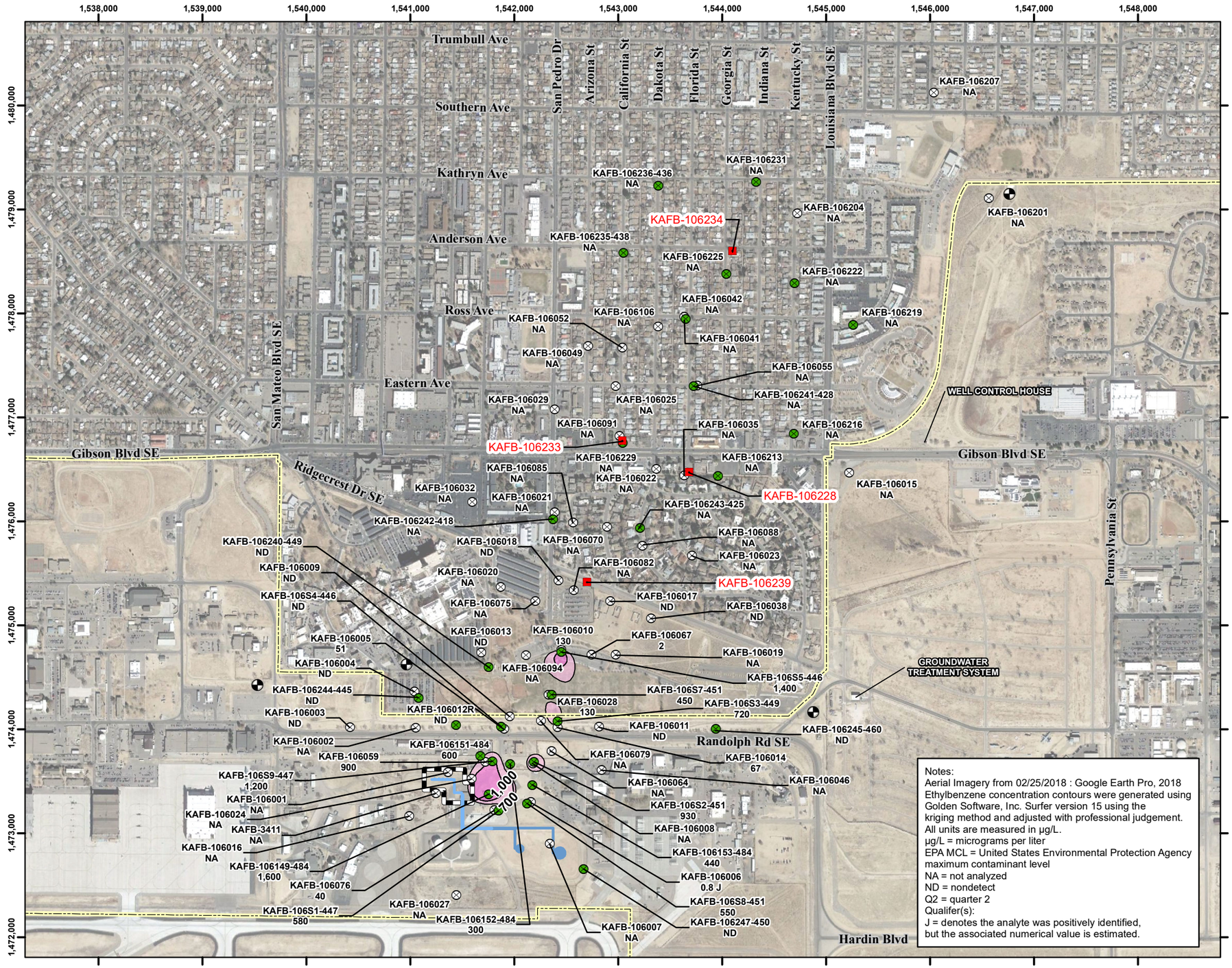
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Toluene concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in µg/L.
µg/L = micrograms per liter
NA = not analyzed
ND = nondetect
NMWQCC = New Mexico Water Quality Control Commission
Q2 = quarter 2
Qualifiers:
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-11

TOLUENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-11 Interval 4857 Toluene_R1.mxd 7/15/2019 EA ecarpio

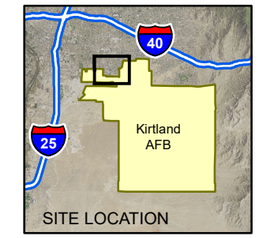


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Ethylbenzene Concentration Isocontour
- Source Area

Ethylbenzene Concentration Range

- 700 (EPA MCL) - 1,000 µg/L
- 1,000 - 2,000 µg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

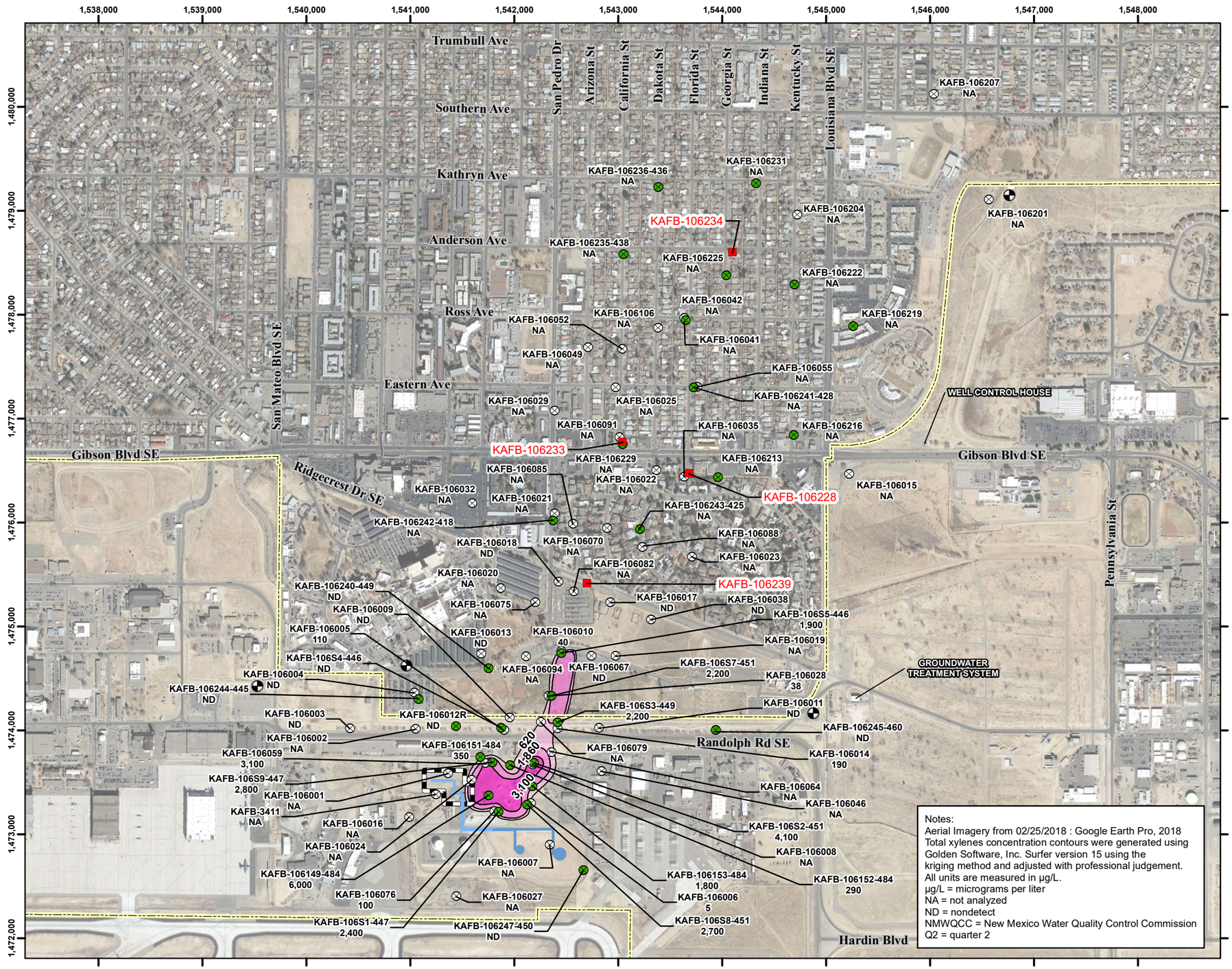
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Ethylbenzene concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in µg/L.
µg/L = micrograms per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = nondetect
Q2 = quarter 2
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-12

ETHYLBENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-12 Interval 4857 Ethylbenzene.mxd 7/17/2019 EA ecarpio



Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Total Xylene Concentration Isocontour
- Source Area

Total Xylenes Concentration Range

- 620 (NMWQCC standard) - 1,860 (µg/L)
- 1,860 - 3,100 (µg/L)
- 3,100 - 6,200 (µg/L)

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

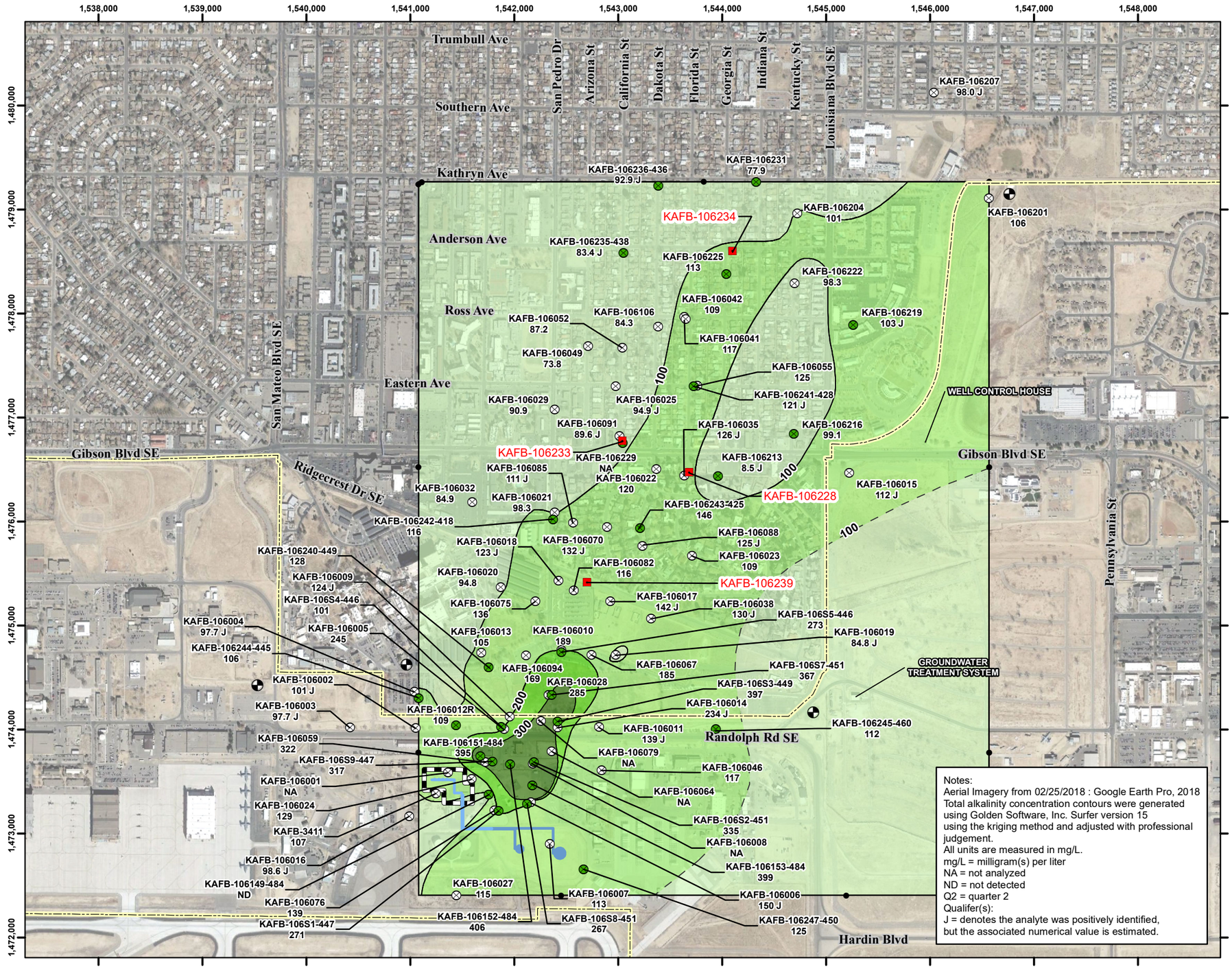
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Total xylenes concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in µg/L.
µg/L = micrograms per liter
NA = not analyzed
ND = nondetect
NMWQCC = New Mexico Water Quality Control Commission
Q2 = quarter 2

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FIGURE 3-13

TOTAL XYLENES CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-13 Interval 4857 Xylene.mxd 7/15/2019 EA ecarpio

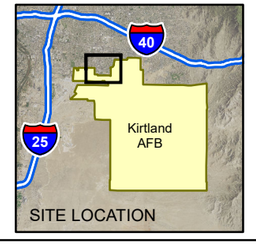


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Total Alkalinity Concentration Isocontour
- Inferred Total Alkalinity Concentration Isocontour
- Model Extent
- Source Area

Total Alkalinity Concentration Range

- 0 - 100 mg/L
- 100 - 200 mg/L
- 200 - 300 mg/L
- 300 - 500 mg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

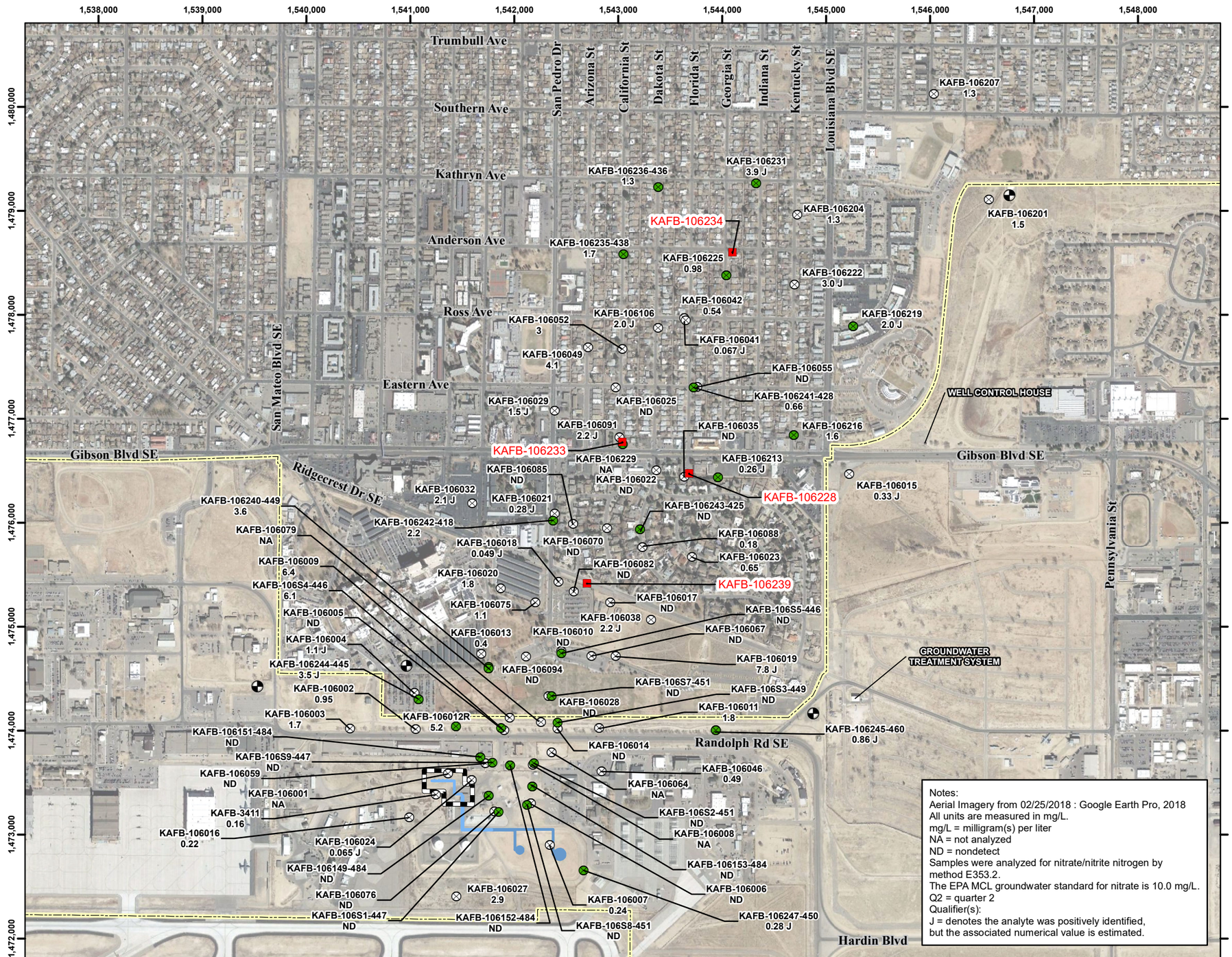
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Total alkalinity concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in mg/L.
mg/L = milligram(s) per liter
NA = not analyzed
ND = not detected
Q2 = quarter 2
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-14

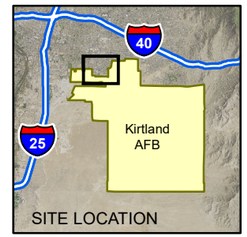
TOTAL ALKALINITY CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-14 Interval 4857 Alkalinity.mxd 7/22/2019 EA ecarpio



Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

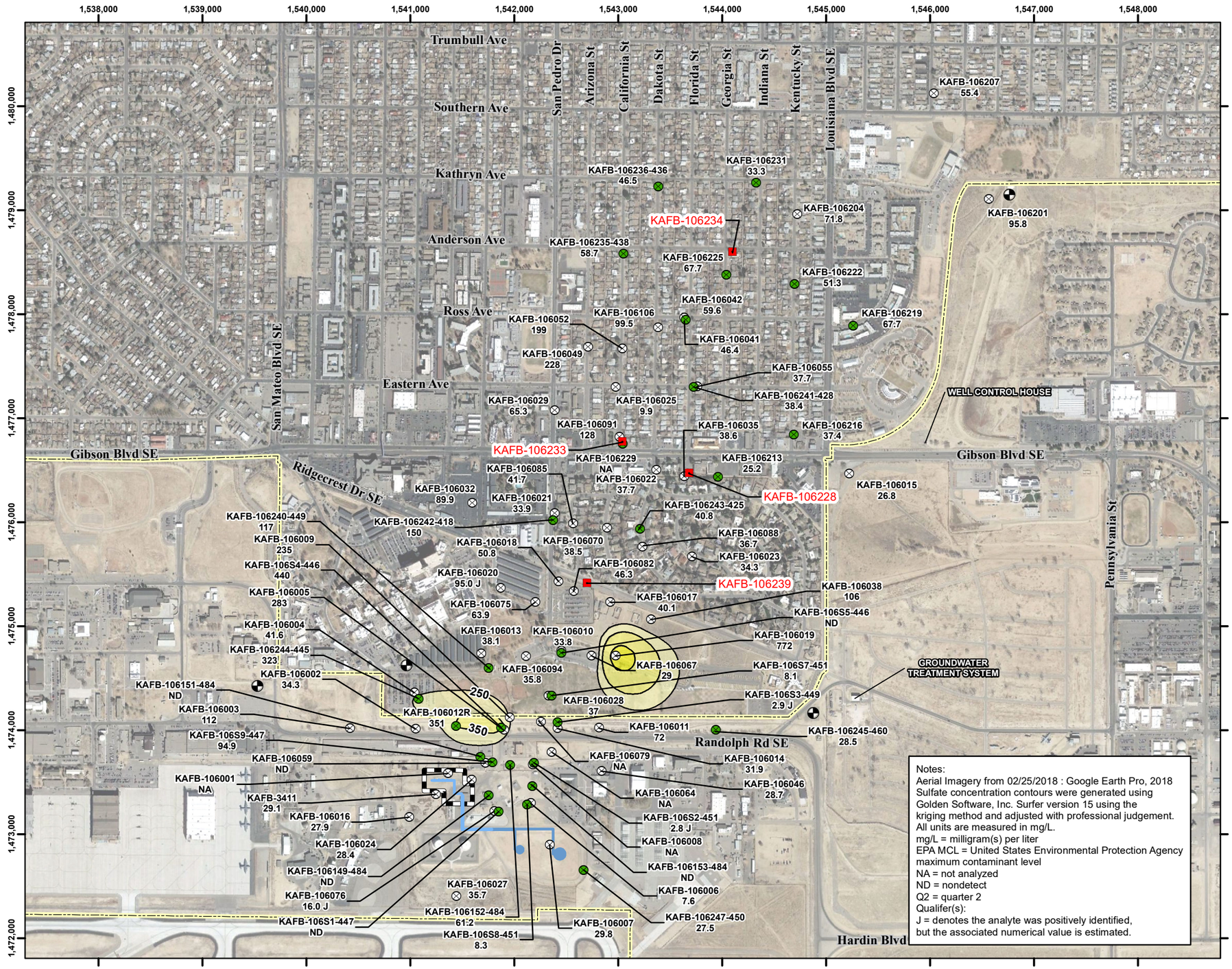
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
All units are measured in mg/L.
mg/L = milligram(s) per liter
NA = not analyzed
ND = nondetect
Samples were analyzed for nitrate/nitrite nitrogen by method E353.2.
The EPA MCL groundwater standard for nitrate is 10.0 mg/L.
Q2 = quarter 2
Qualifier(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-15

NITRATE/NITRITE NITROGEN CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

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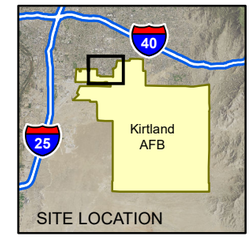


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Sulfate Concentration Isocontour (mg/L)
- Source Area

Sulfate Concentration Range

- 250 (EPA MCL) - 350 mg/L
- 350 mg/L - 550 mg/L
- > 550 mg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Sulfate concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in mg/L.
mg/L = milligram(s) per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = nondetect
Q2 = quarter 2
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-16

SULFATE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

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1,538,000 1,539,000 1,540,000 1,541,000 1,542,000 1,543,000 1,544,000 1,545,000 1,546,000 1,547,000 1,548,000

1,480,000 1,479,000 1,478,000 1,477,000 1,476,000 1,475,000 1,474,000 1,473,000 1,472,000

Trumbull Ave
Southern Ave
Kathryn Ave
Anderson Ave
Ross Ave
Eastern Ave
Gibson Blvd SE
Ridgecrest Dr SE
Randolph Rd SE
Hardin Blvd
San Pedro Dr
Arizona St
California St
Dakota St
Florida St
Georgia St
Indiana St
Kentucky St
Louisiana Blvd SE
San Mateo Blvd SE
Pennsylvania St

KAFB-106207 ND
KAFB-106231 1.8 J
KAFB-106236-436 ND
KAFB-106204 1.3 J
KAFB-106234
KAFB-106201 ND
KAFB-106235-438 ND
KAFB-106225 ND
KAFB-106222 ND
KAFB-106042 ND
KAFB-106106 ND
KAFB-106052 ND
KAFB-106219 ND
KAFB-106041 ND
KAFB-106049 ND
KAFB-106055 ND
KAFB-106241-428 ND
KAFB-106029 ND
KAFB-106025 ND
KAFB-106091 ND
KAFB-106035 ND
KAFB-106216 ND
KAFB-106233
KAFB-106229 NA
KAFB-106213 ND
KAFB-106085 ND
KAFB-106022 ND
KAFB-106228
KAFB-106015 ND
KAFB-106032 ND
KAFB-106021 ND
KAFB-106243-425 ND
KAFB-106240-449 2.1 J
KAFB-106242-418 ND
KAFB-106088 ND
KAFB-106009 2.2 J
KAFB-106018 ND
KAFB-106070 ND
KAFB-106023 ND
KAFB-106S4-446 3.1
KAFB-106082 ND
KAFB-106038 ND
KAFB-106020 1.7 J
KAFB-106239
KAFB-106005 2.7
KAFB-106017 ND
KAFB-106S5-446 ND
KAFB-106075 1.3 J
KAFB-106067 ND
KAFB-106004 ND
KAFB-106010 ND
KAFB-106013 ND
KAFB-106019 3.5
KAFB-106244-445 ND
KAFB-106094 ND
KAFB-106028 ND
KAFB-106S7-451 ND
KAFB-106012R 2.2 J
KAFB-106S3-449 2.0 J
KAFB-106002 ND
KAFB-106014 1.9 J
KAFB-106003 ND
KAFB-106245-460 ND
KAFB-106059 ND
KAFB-106151-484 ND
KAFB-106079 NA
KAFB-106S9-447 1.8 J
KAFB-106011 ND
KAFB-106001 NA
KAFB-106064 NA
KAFB-106046 ND
KAFB-3411 ND
KAFB-106S2-451 2.2 J
KAFB-106016 ND
KAFB-106024 ND
KAFB-106008 NA
KAFB-106076 ND
KAFB-106149-484 ND
KAFB-106006 ND
KAFB-106153-484 ND
KAFB-106027 ND
KAFB-106007 ND
KAFB-106S8-451 1.8 J
KAFB-106S1-447 ND
KAFB-106152-484 ND
KAFB-106247-450 ND

WELL CONTROL HOUSE
GROUNDWATER TREATMENT SYSTEM

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Isocontours are not provided for bromide concentrations due to a large percentage of data values being estimated.
All units are measured in mg/L.
mg/L = milligram(s) per liter
NA = not analyzed
ND = nondetect
Q2 = quarter 2
Qualifier(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area

Bromide Concentration Range

- Not analyzed
- Not detected
- 1.0 - 2.0 mg/L
- 2.1 - 3.0 mg/L
- 3.1 - 4.0 mg/L

N

0 500 1,000 2,000
Feet
1 inch = 1,000 feet

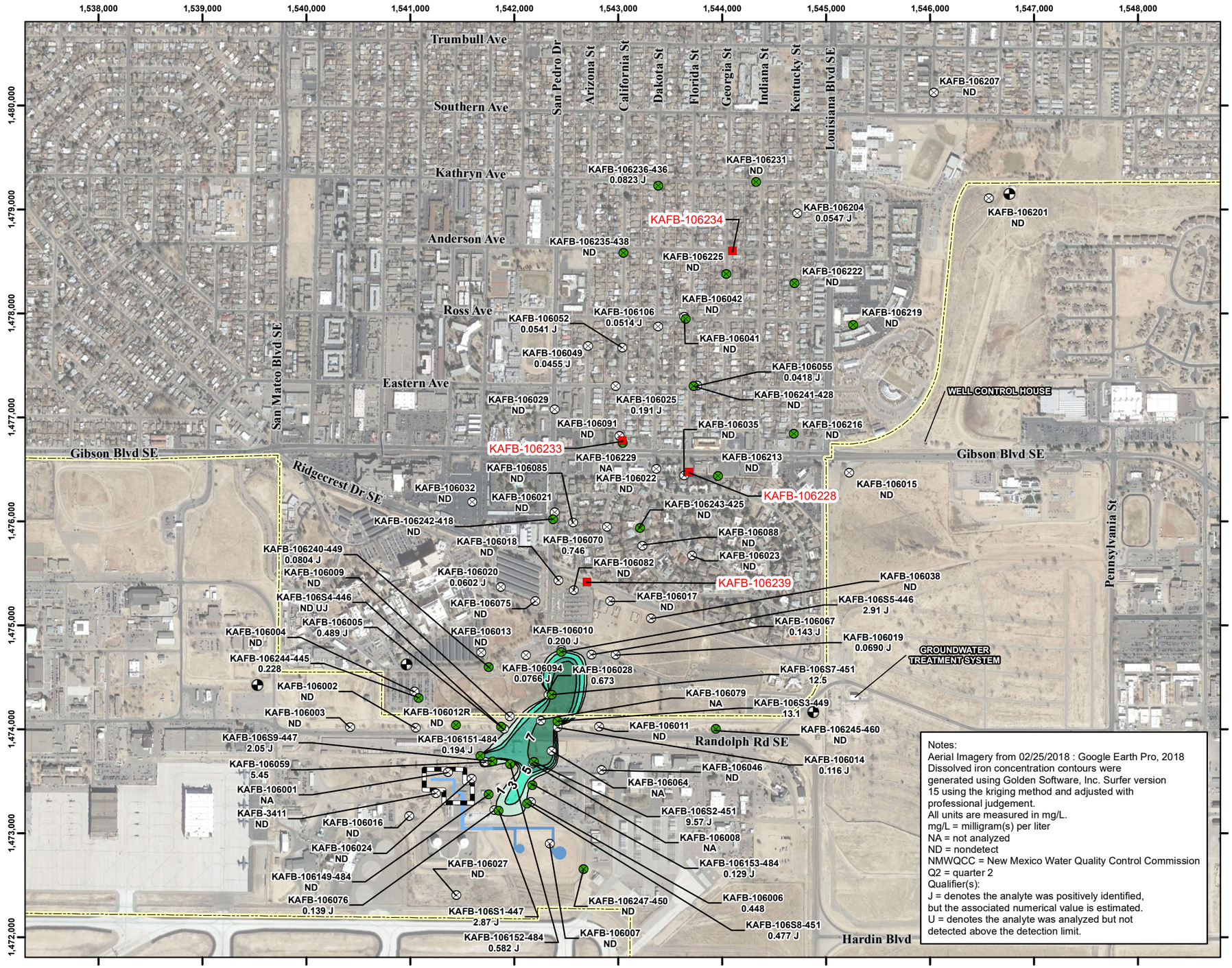
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-17

BROMIDE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

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Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Dissolved Iron Isocontour (mg/L)
- Source Area

Dissolved Iron Concentration Range

- 1.0 (NMWQCC standard) - 3.0 mg/L
- 3.0 - 5.0 mg/L
- 5.0 - 7.0 mg/L
- > 7 mg/L

N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

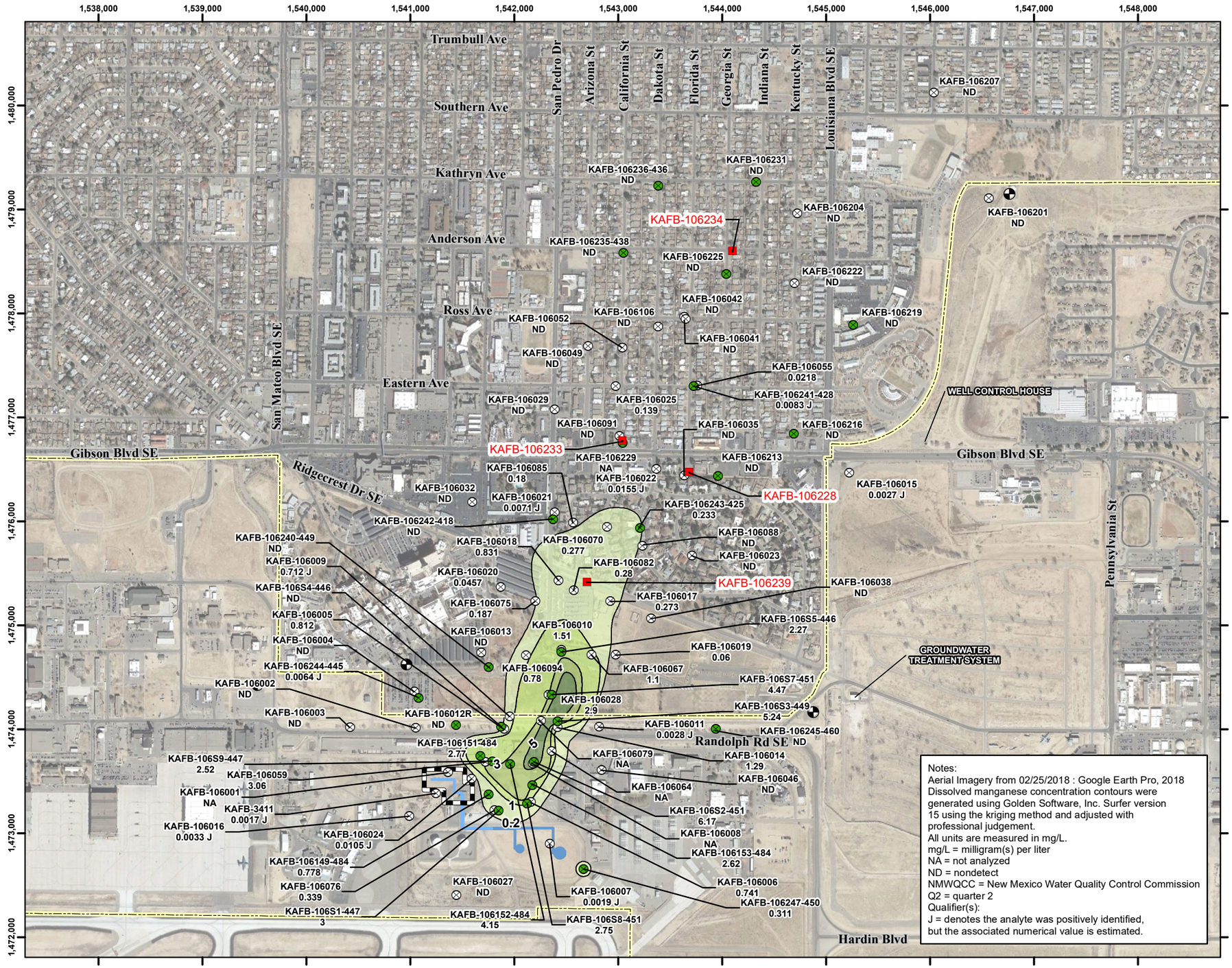
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Dissolved iron concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in mg/L.
mg/L = milligram(s) per liter
NA = not analyzed
ND = nondetect
NMWQCC = New Mexico Water Quality Control Commission
Q2 = quarter 2
Qualifier(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.
U = denotes the analyte was analyzed but not detected above the detection limit.

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FIGURE 3-18

DISSOLVED IRON CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

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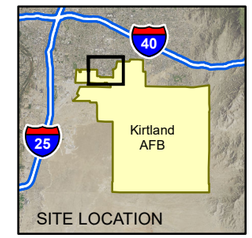


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area

Dissolved Manganese Concentration Range

- 0.2 (NMWQCC standard) - 1.0 mg/L
- 1.0 - 3.0 mg/L
- 3.0 - 5.0 mg/L
- 5.0 - 7.0 mg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

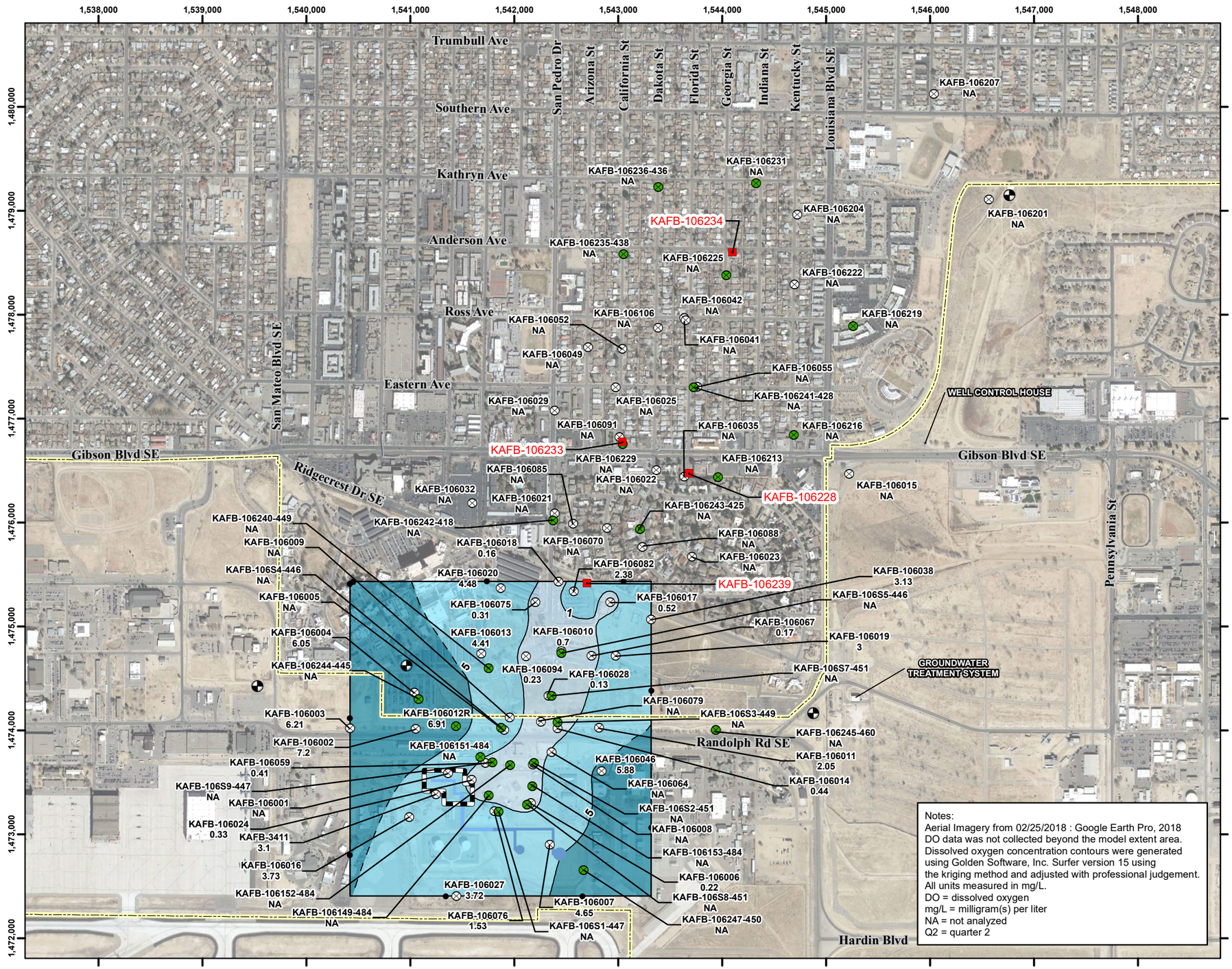
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Dissolved manganese concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units are measured in mg/L.
mg/L = milligram(s) per liter
NA = not analyzed
ND = nondetect
NMWQCC = New Mexico Water Quality Control Commission
Q2 = quarter 2
Qualifier(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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FIGURE 3-19

DISSOLVED MANGANESE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

\\ABQ\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-19 Interval 4857 Dissolved Manganese.mxd 7/22/2019 EA ecarpio

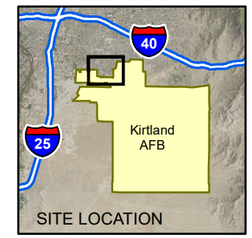


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- DO Concentration Isocontour (mg/L)
- Inferred DO Isocontour (mg/L)
- Model Extent
- Installation Fence Boundary
- Source Area

Dissolved Oxygen Concentration Range

- 0 - 1 mg/L
- 1 - 5 mg/L
- 5 - 10 mg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

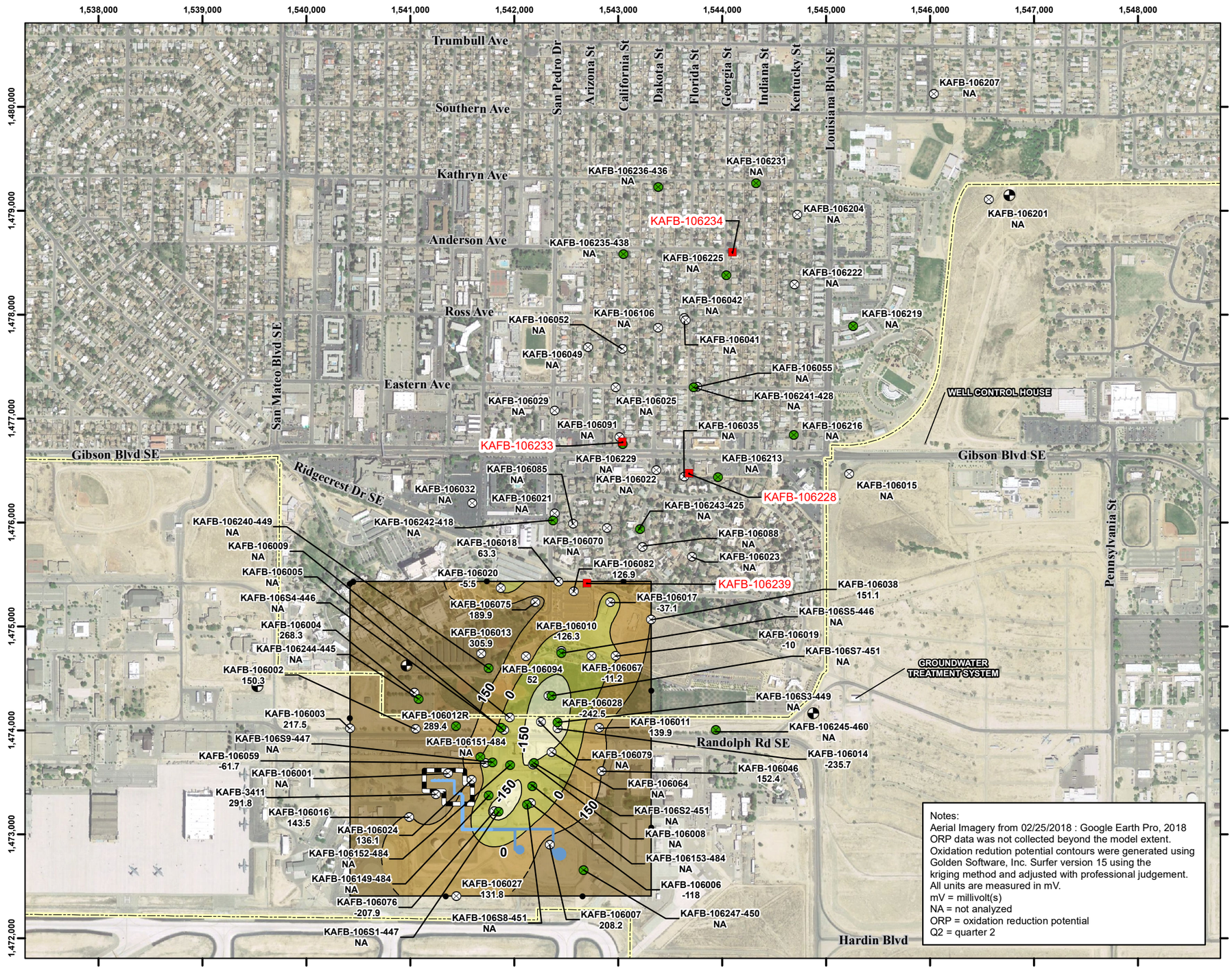
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
DO data was not collected beyond the model extent area.
Dissolved oxygen concentration contours were generated using Golden Software, Inc. Surfer version 15 using the kriging method and adjusted with professional judgement.
All units measured in mg/L.
DO = dissolved oxygen
mg/L = milligram(s) per liter
NA = not analyzed
Q2 = quarter 2

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FIGURE 3-20

DISSOLVED OXYGEN CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-20 Interval 4857 DO.mxd 8/5/2019 EA ecarpio

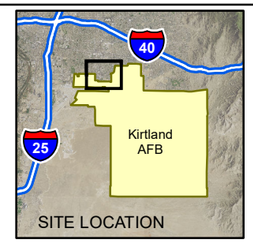


Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- ORP Isocontour (mV)
- Inferred ORP Isocontour (mV)
- Model Extent
- Installation Fence Boundary
- Source Area

Oxidation-Reduction Potential Range

- < -150 mV
- -150 - 0 mV
- 0 - 150 mV
- > 150 mV



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

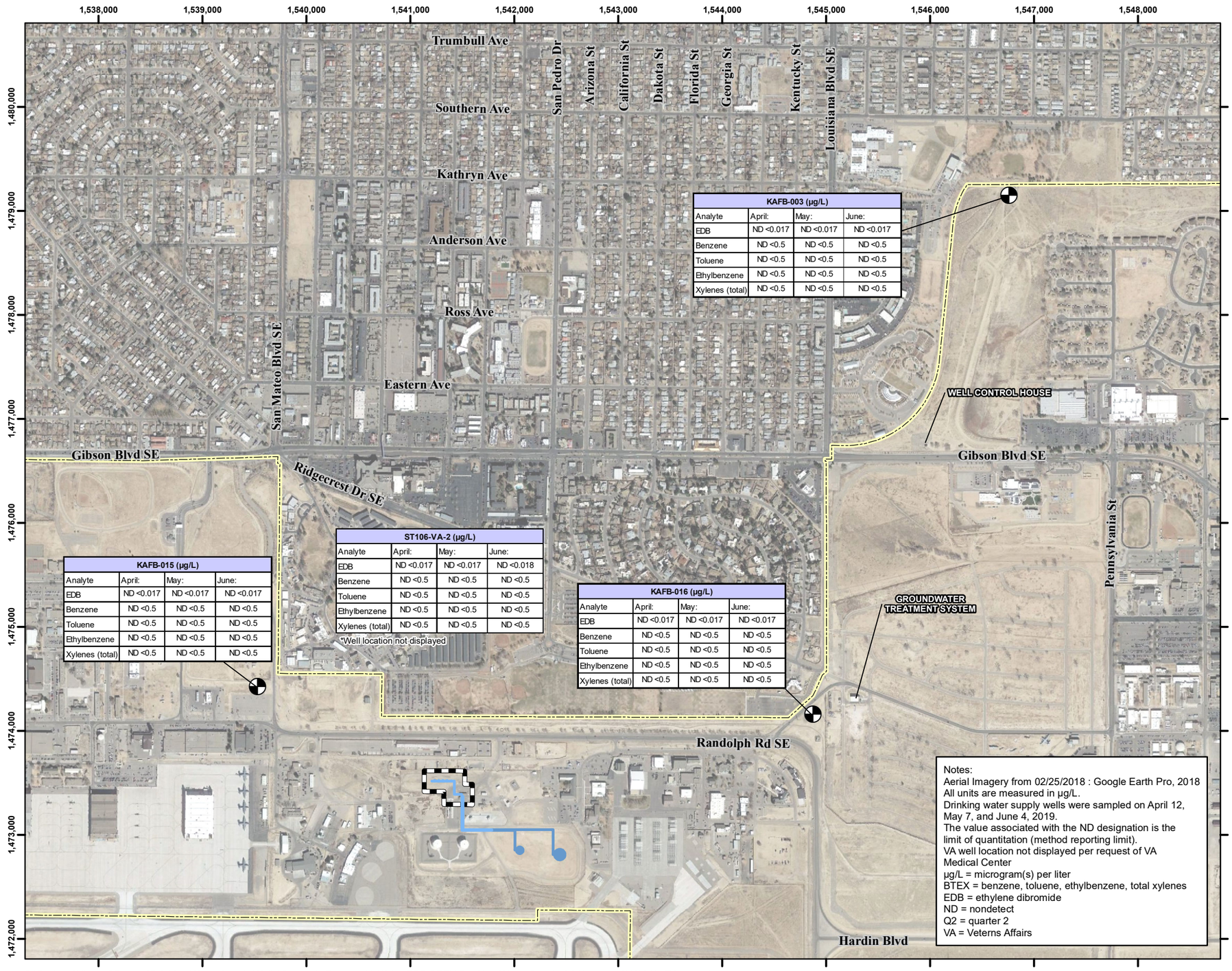
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 3-21

OXIDATION REDUCTION POTENTIAL IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q2 2019

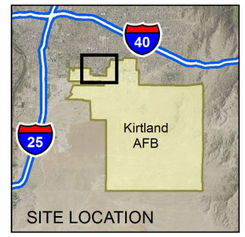
P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 3\3-21 Interval 4857 ORP.mxd 7/22/2019 EA ecarpio



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
All units are measured in µg/L.
Drinking water supply wells were sampled on April 12, May 7, and June 4, 2019.
The value associated with the ND designation is the limit of quantitation (method reporting limit).
VA well location not displayed per request of VA Medical Center
µg/L = microgram(s) per liter
BTEX = benzene, toluene, ethylbenzene, total xylenes
EDB = ethylene dibromide
ND = nondetect
Q2 = quarter 2
VA = Veterns Affairs

Legend

- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Fence Boundary
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

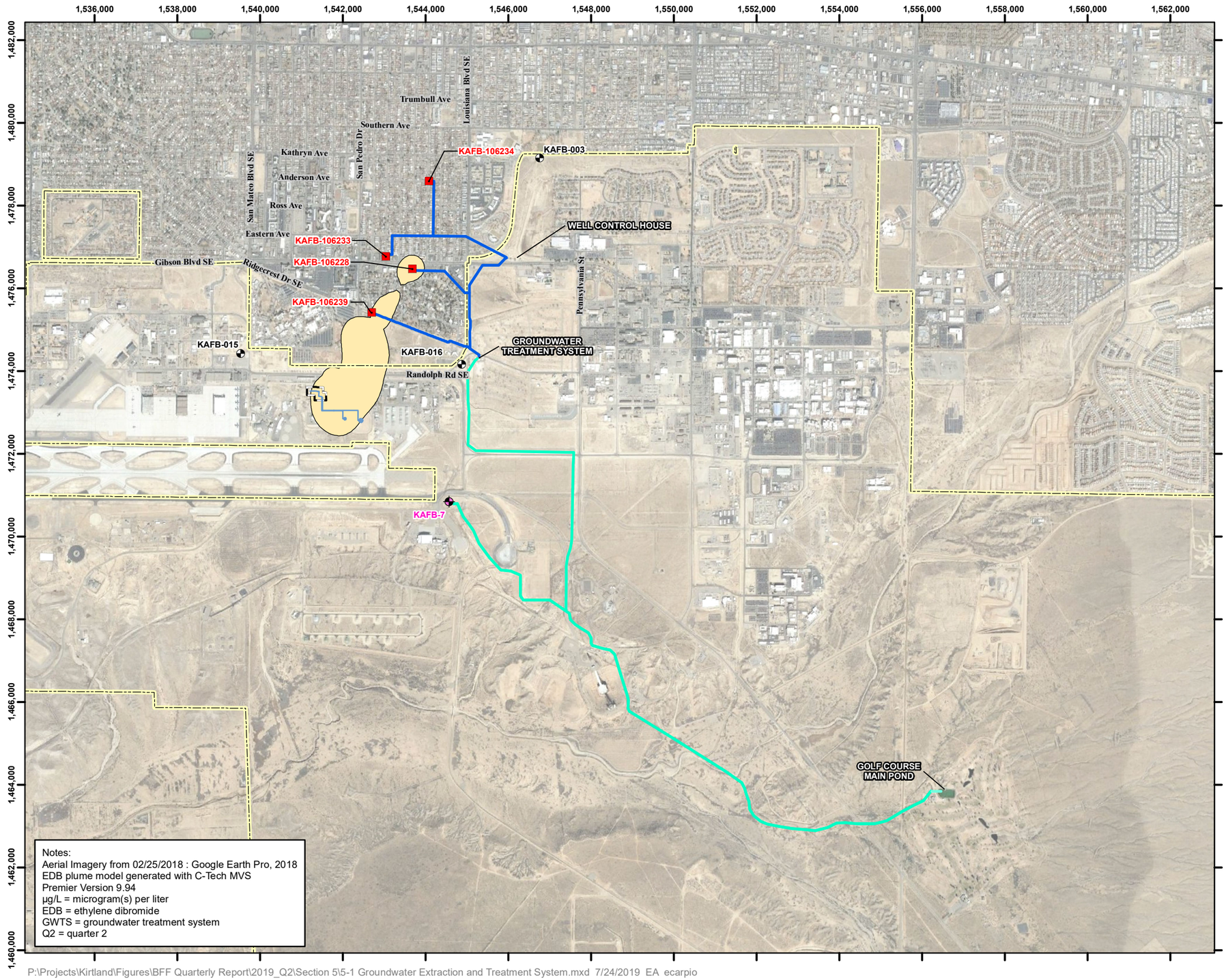
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 4-1

EDB AND BTEX RESULTS IN DRINKING WATER SUPPLY WELLS, Q2 2019

P:\Projects\Kirtland\Figures\Drinking Water Supply Wells\Quarterly Reports 2019\4-1 EDB BTEX Drinking Water Supply Q219.mxd 7/11/2019 EA ecarpio

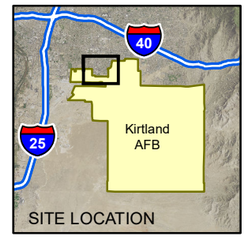


Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume model generated with C-Tech MVS Premier Version 9.94
µg/L = microgram(s) per liter
EDB = ethylene dibromide
GWTS = groundwater treatment system
Q2 = quarter 2

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-1 Groundwater Extraction and Treatment System.mxd 7/24/2019 EA ecarpio

Legend

- Extraction Well
- Injection Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Fuel Transfer Line
- GWTS Influent Piping
- GWTS Effluent Piping
- Installation Fence Boundary
- EDB Plume Q2 2019 (> 0.05 µg/L)
- Source Area



N

0 1,250 2,500 5,000

Feet

1 inch = 2,500 feet

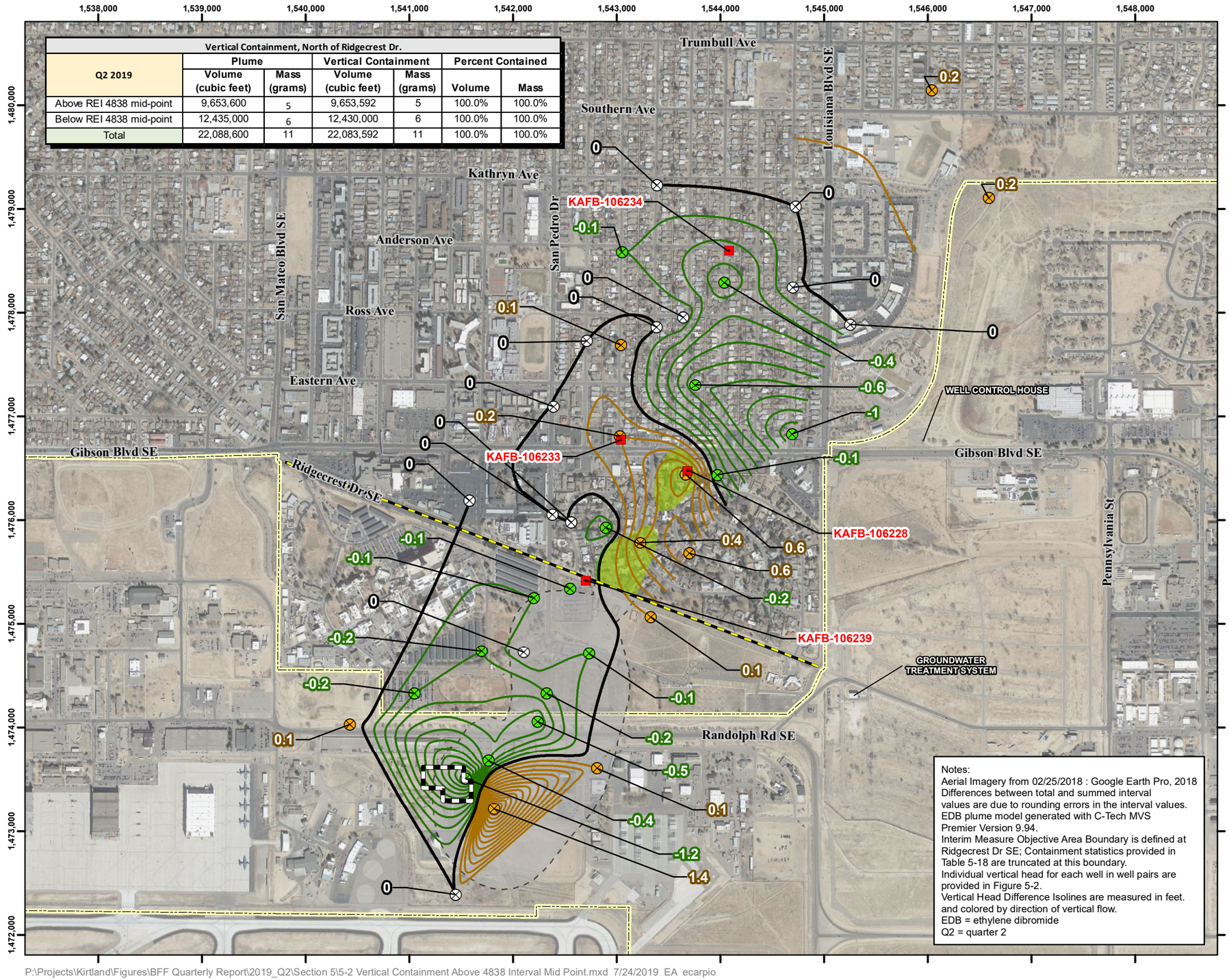
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-1

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM LOCATION

Vertical Containment, North of Ridgecrest Dr.						
Q2 2019	Plume		Vertical Containment		Percent Contained	
	Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)	Volume	Mass
Above REI 4838 mid-point	9,653,600	5	9,653,592	5	100.0%	100.0%
Below REI 4838 mid-point	12,435,000	6	12,430,000	6	100.0%	100.0%
Total	22,088,600	11	22,083,592	11	100.0%	100.0%



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Differences between total and summed interval values are due to rounding errors in the interval values.
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Interim Measure Objective Area Boundary is defined at Ridgecrest Dr SE; Containment statistics provided in Table 5-18 are truncated at this boundary.
Individual vertical head for each well in well pairs are provided in Figure 5-2.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q2 = quarter 2

Legend

- Extraction Well

Centroid of Nested Monitoring Well Pair

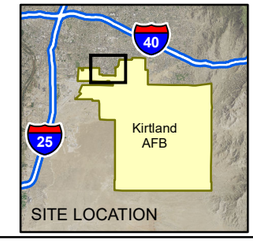
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Fence Boundary
- Target Capture Zone Boundary

Vertical Head Difference Isolines (ft)

- Upward Vertical Flow
- Downward Vertical Flow
- No Flow

Plume Area Vertical Containment Analysis

- Contained Above And Below Mid-point
- Contained Below Mid-point
- Contained Above Mid-point
- Not Contained
- Outside Target Capture Zone
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

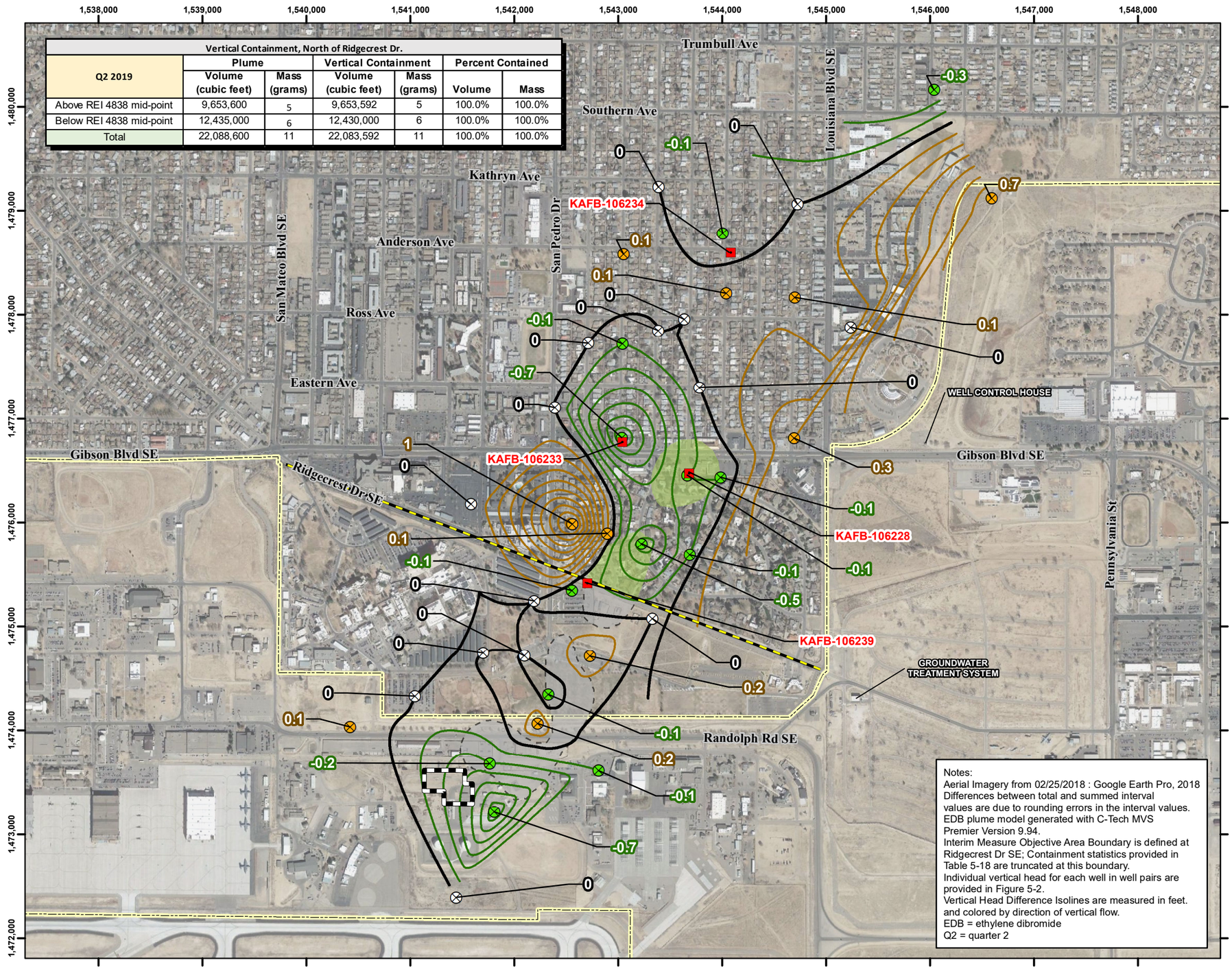
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FIGURE 5-2

VERTICAL CONTAINMENT ABOVE REFERENCE ELEVATION INTERVAL 4838 MID-POINT, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-2 Vertical Containment Above 4838 Interval Mid Point.mxd 7/24/2019 EA ecarpio

Vertical Containment, North of Ridgecrest Dr.						
Q2 2019	Plume		Vertical Containment		Percent Contained	
	Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)	Volume	Mass
Above REI 4838 mid-point	9,653,600	5	9,653,592	5	100.0%	100.0%
Below REI 4838 mid-point	12,435,000	6	12,430,000	6	100.0%	100.0%
Total	22,088,600	11	22,083,592	11	100.0%	100.0%



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Differences between total and summed interval values are due to rounding errors in the interval values.
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Interim Measure Objective Area Boundary is defined at Ridgecrest Dr SE; Containment statistics provided in Table 5-18 are truncated at this boundary.
Individual vertical head for each well in well pairs are provided in Figure 5-2.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q2 = quarter 2

Legend

- Extraction Well

Centroid of Nested Monitoring Well Pair

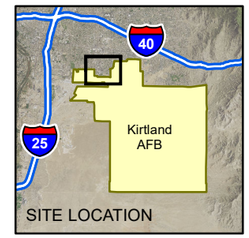
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Fence Boundary
- Target Capture Zone Boundary

Vertical Head Difference Isolines (ft)

- Upward Vertical Flow
- Downward Vertical Flow
- No Flow

Plume Area Vertical Containment Analysis

- Contained Above And Below Mid-point
- Contained Below Mid-point
- Contained Above Mid-point
- Not Contained
- Outside Target Capture Zone
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

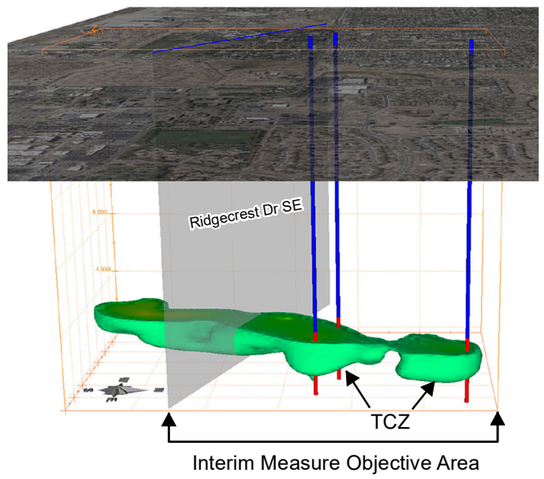
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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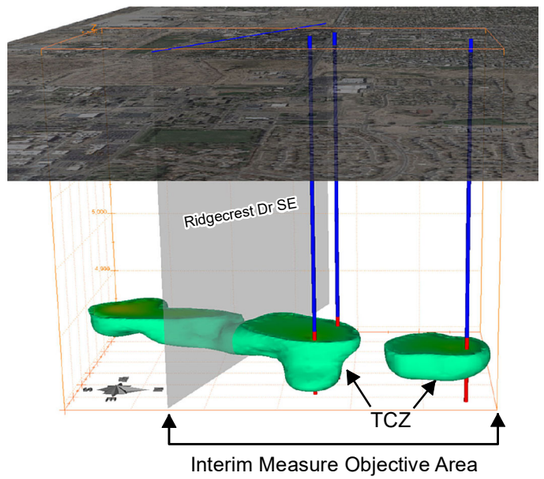
FIGURE 5-3

VERTICAL CONTAINMENT BELOW REFERENCE ELEVATION INTERVAL 4838 MID-POINT, Q2 2019

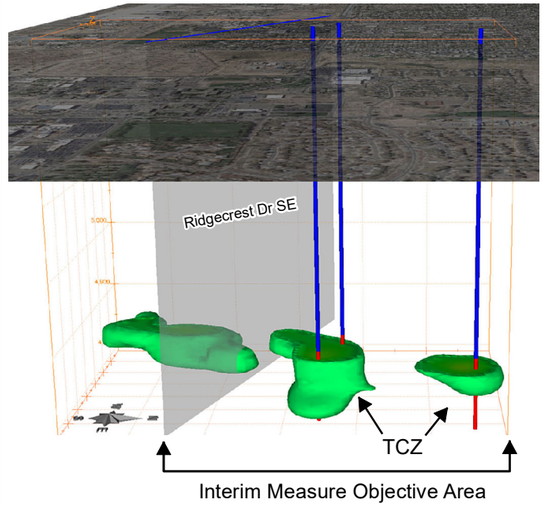
P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-3 Vertical Containment Below 4838 Interval Mid Point.mxd 7/15/2019 EA ecarpio



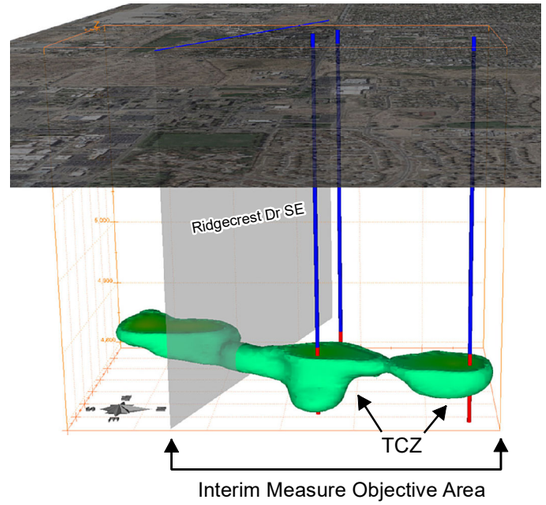
3D Modeled EDB Plume
Q2 2016



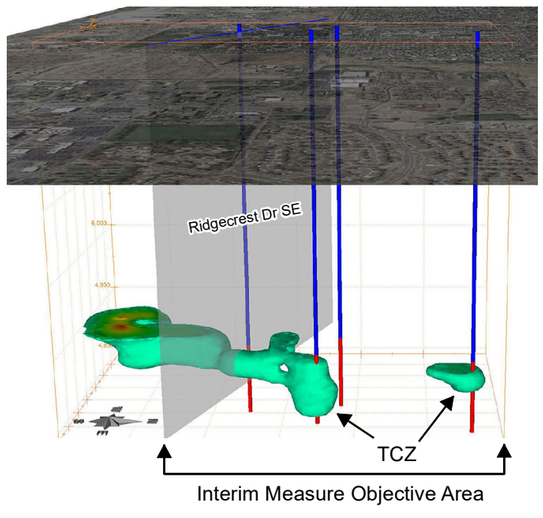
3D Modeled EDB Plume
Q4 2016



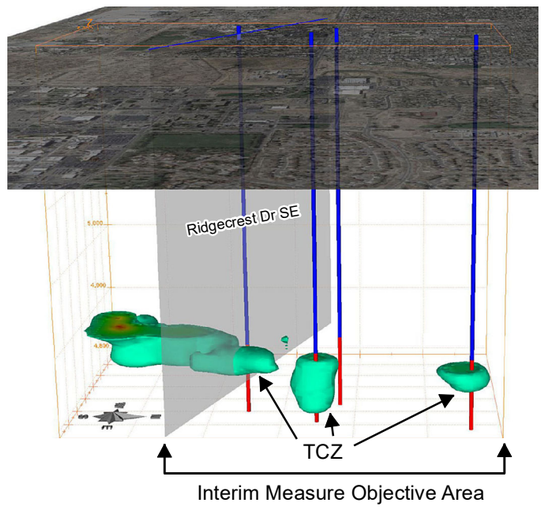
3D Modeled EDB Plume
Q2 2017



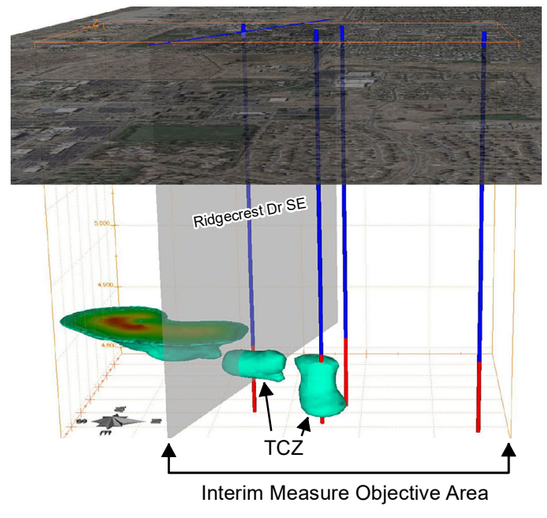
3D Modeled EDB Plume
Q4 2017



3D Modeled EDB Plume
Q2 2018



3D Modeled EDB Plume
Q4 2018



3D Modeled EDB Plume
Q2 2019

Legend

0.05 µg/L EDB Iso-shell

Notes:
Aerial Imagery from 04/22/2017 : Google Earth Pro, 2017
EDB plume model generated with C-Tech MVS Premier Version 9.94.
3D models vertically exaggerated by a factor of 10.
Target Capture Zone is EDB plume >0.05 µg/L north of Ridgecrest Drive SE.
µg/L = microgram(s) per liter
EDB = ethylene dibromide
TCZ = Target Capture Zone
Q2 = quarter 2
Q4 = quarter 4

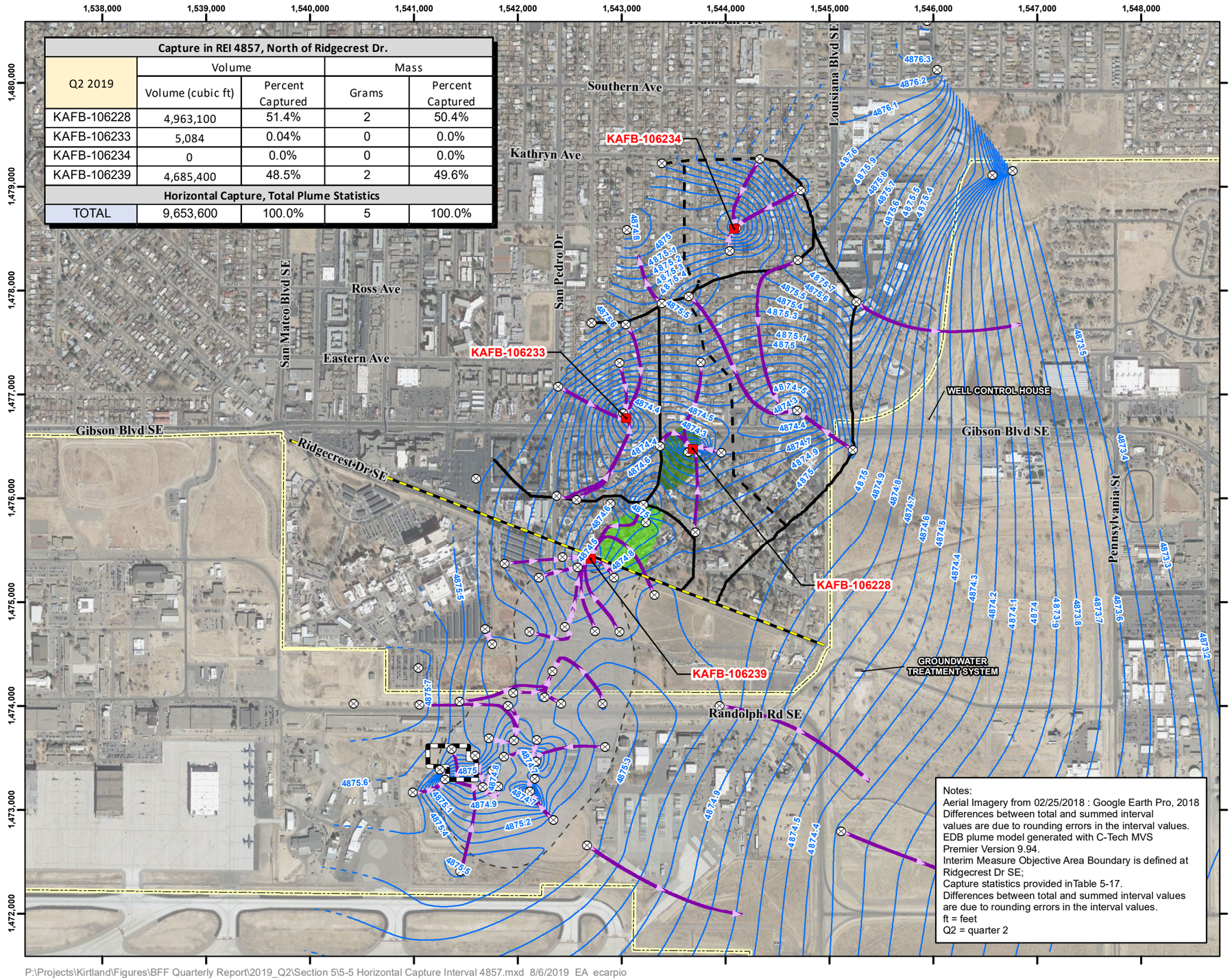
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FIGURE 5-4

COMPARISON OF EDB PLUME MORPHOLOGY
Q2 2016 - Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-4 Comparison of EDB Plume Morphology 2016-2019Q2.mxd 8/9/2019 EA ecarpio

Capture in REI 4857, North of Ridgecrest Dr.				
Q2 2019	Volume		Mass	
	Volume (cubic ft)	Percent Captured	Grams	Percent Captured
KAFB-106228	4,963,100	51.4%	2	50.4%
KAFB-106233	5,084	0.04%	0	0.0%
KAFB-106234	0	0.0%	0	0.0%
KAFB-106239	4,685,400	48.5%	2	49.6%
Horizontal Capture, Total Plume Statistics				
TOTAL	9,653,600	100.0%	5	100.0%

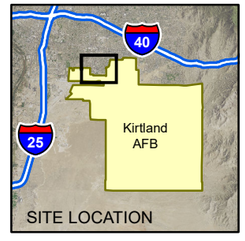


Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (0.1ft interval)
- Inferred Groundwater Level Contour (0.1ft)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Particle Flow Lines (Direction of Flow)
- Installation Fence Boundary
- Target Capture Zone Boundary

Plume Area Horizontal Capture Analysis

- Captured by KAFB-106228
- Captured by KAFB-106233
- Captured by KAFB-106239
- Plume Not Captured
- Outside Target Capture Zone
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Differences between total and summed interval values are due to rounding errors in the interval values.
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Interim Measure Objective Area Boundary is defined at Ridgecrest Dr SE;
Capture statistics provided inTable 5-17.
Differences between total and summed interval values are due to rounding errors in the interval values.
ft = feet
Q2 = quarter 2

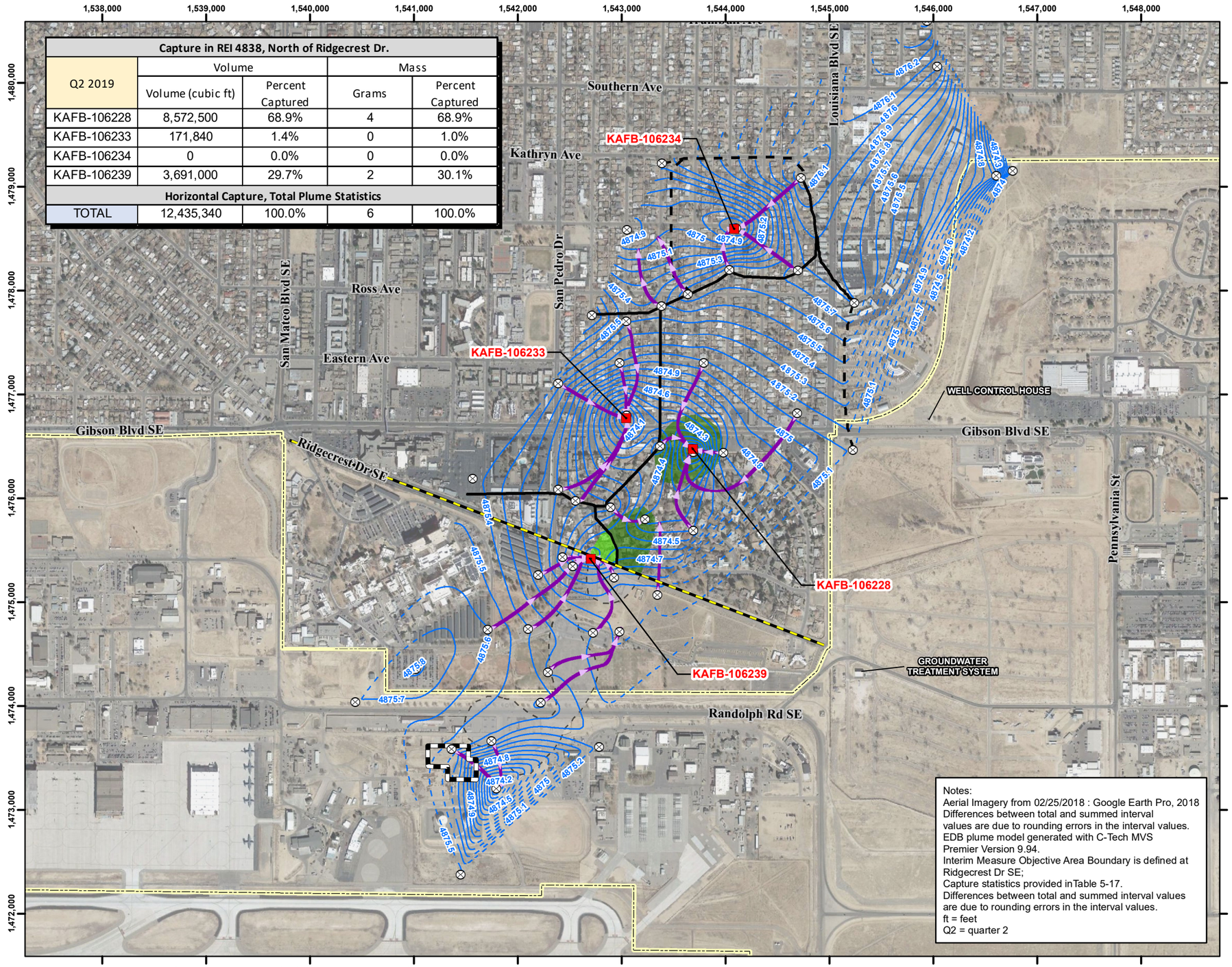
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FIGURE 5-5

HORIZONTAL CAPTURE OF EDB IN REFERENCE ELEVATION INTERVAL 4857, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-5 Horizontal Capture Interval 4857.mxd 8/6/2019 EA ecarpio

Capture in REI 4838, North of Ridgecrest Dr.				
Q2 2019	Volume		Mass	
	Volume (cubic ft)	Percent Captured	Grams	Percent Captured
KAFB-106228	8,572,500	68.9%	4	68.9%
KAFB-106233	171,840	1.4%	0	1.0%
KAFB-106234	0	0.0%	0	0.0%
KAFB-106239	3,691,000	29.7%	2	30.1%
Horizontal Capture, Total Plume Statistics				
TOTAL	12,435,340	100.0%	6	100.0%



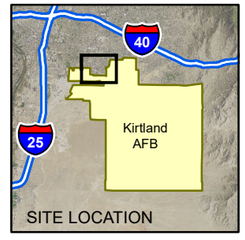
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
Differences between total and summed interval values are due to rounding errors in the interval values.
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Interim Measure Objective Area Boundary is defined at Ridgecrest Dr SE;
Capture statistics provided inTable 5-17.
Differences between total and summed interval values are due to rounding errors in the interval values.
ft = feet
Q2 = quarter 2

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (0.1ft interval)
- Inferred Groundwater Level Contour (0.1ft)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Particle Flow Lines (Direction of Flow)
- Installation Fence Boundary
- Target Capture Zone Boundary

Plume Area Horizontal Capture Analysis

- Captured by KAFB-106228
- Captured by KAFB-106233
- Captured by KAFB-106239
- Plume Not Captured
- Outside Target Capture Zone
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

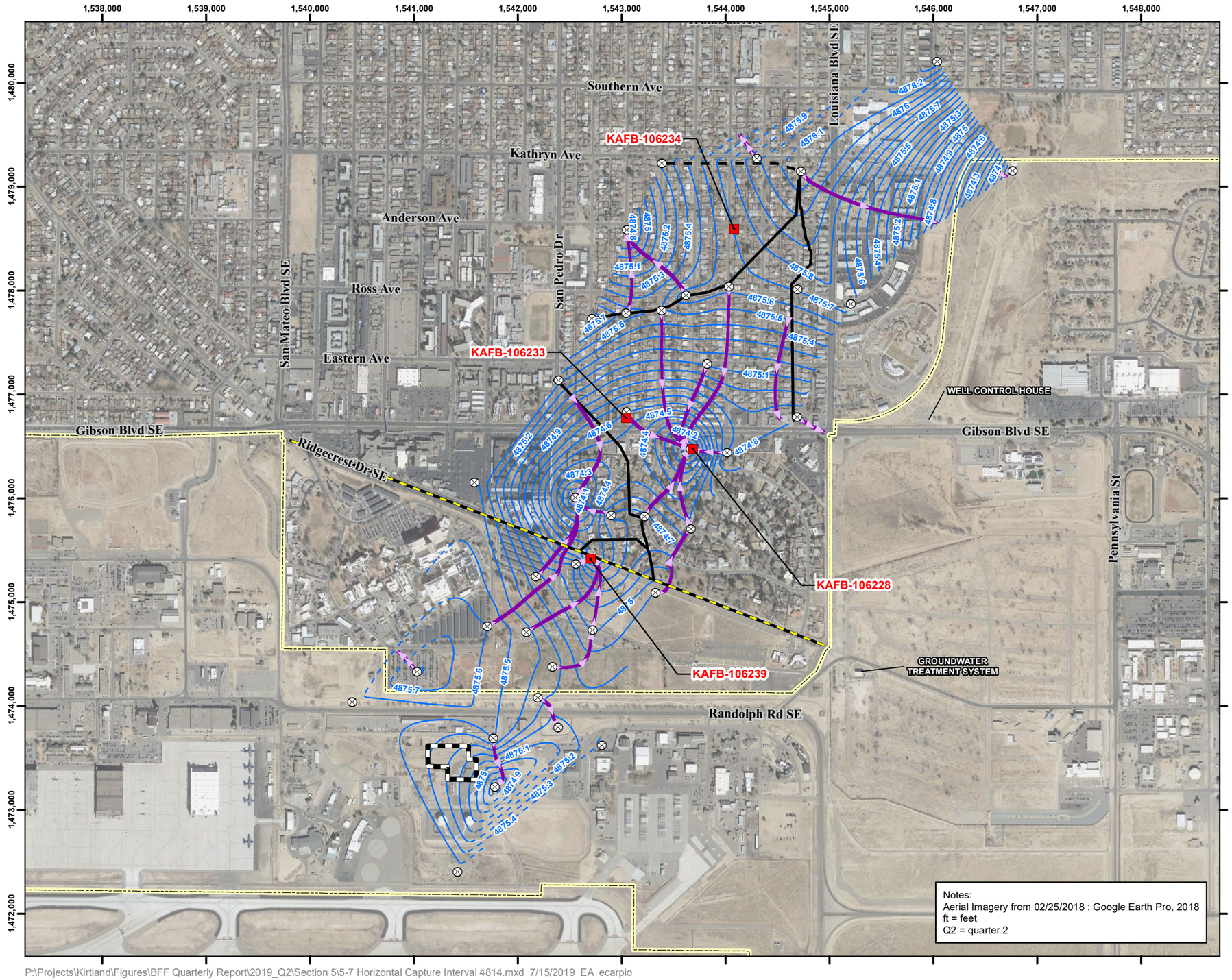
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-6

HORIZONTAL CAPTURE OF EDB IN REFERENCE ELEVATION INTERVAL 4838, Q2 2019

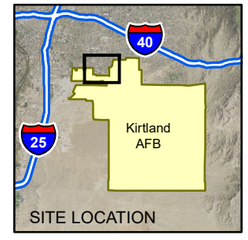
P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-6 Horizontal Capture Interval 4838.mxd 7/15/2019 EA ecarpio



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
ft = feet
Q2 = quarter 2

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (0.1ft interval)
- Inferred Groundwater Level Contour (0.1ft)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Particle Flow Lines (Direction of Flow)
- Installation Fence Boundary
- Target Capture Zone Boundary
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

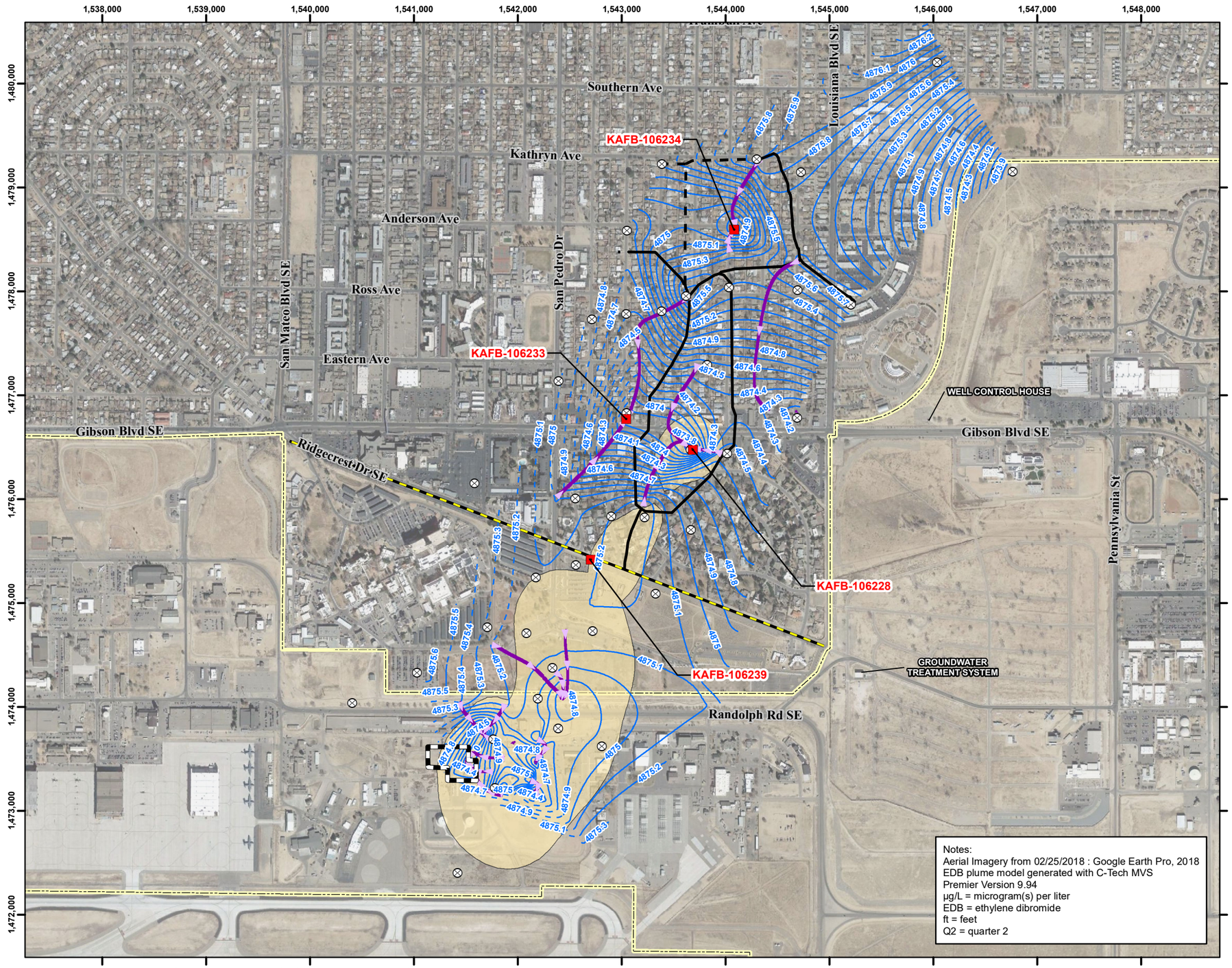
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-7

HORIZONTAL CAPTURE OF EDB IN REFERENCE ELEVATION INTERVAL 4814, Q2 2019

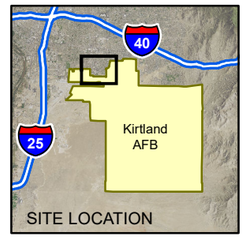
P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-7 Horizontal Capture Interval 4814.mxd 7/15/2019 EA ecarpio



Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume model generated with C-Tech MVS Premier Version 9.94
µg/L = microgram(s) per liter
EDB = ethylene dibromide
ft = feet
Q2 = quarter 2

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (0.1ft interval)
- Inferred Groundwater Level Contour (0.1ft)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Particle Flow Lines (Direction of Flow)
- Installation Fence Boundary
- Target Capture Zone Boundary
- EDB Plume Q2 2019 (> 0.05 µg/L)
- Source Area



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

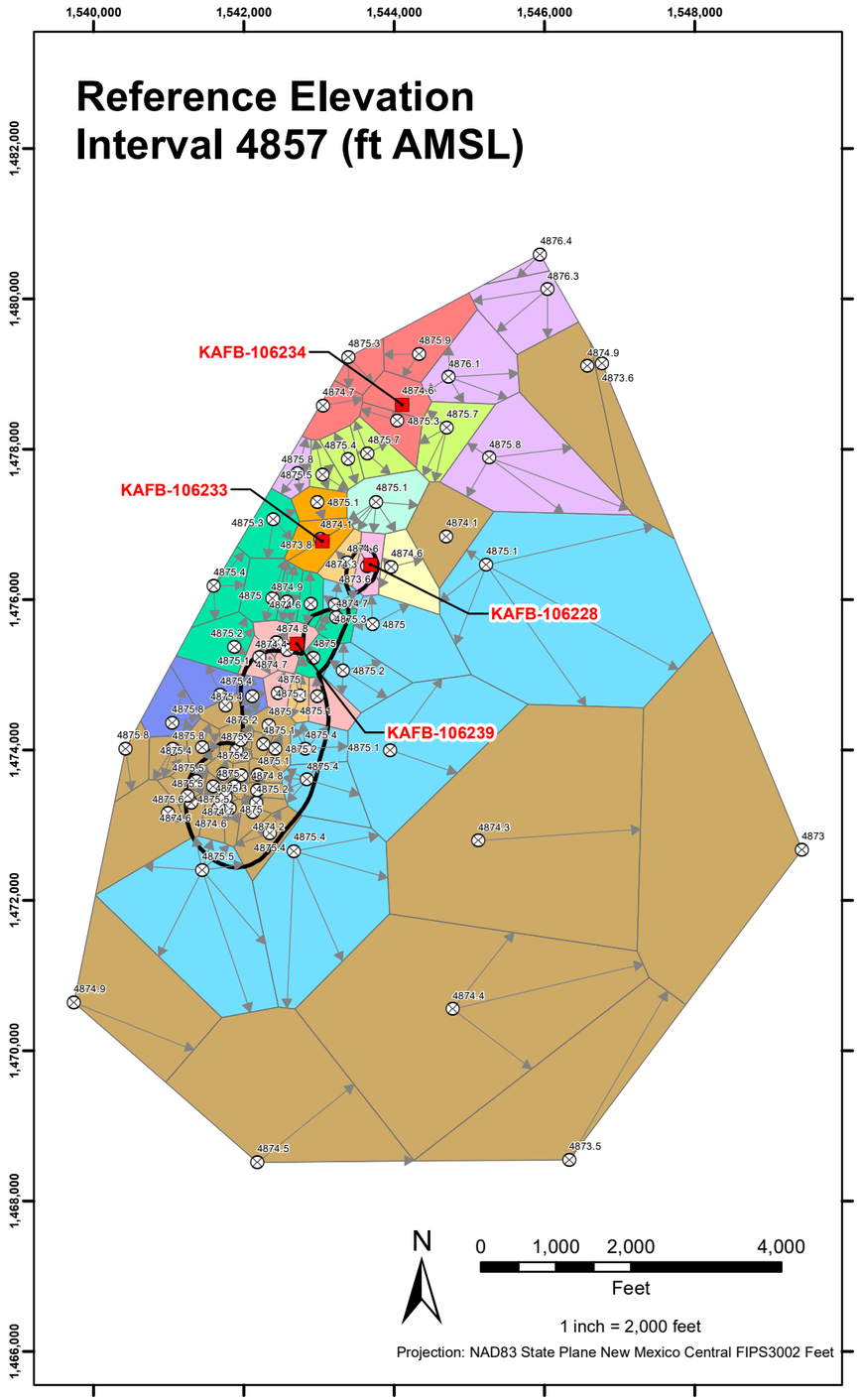
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

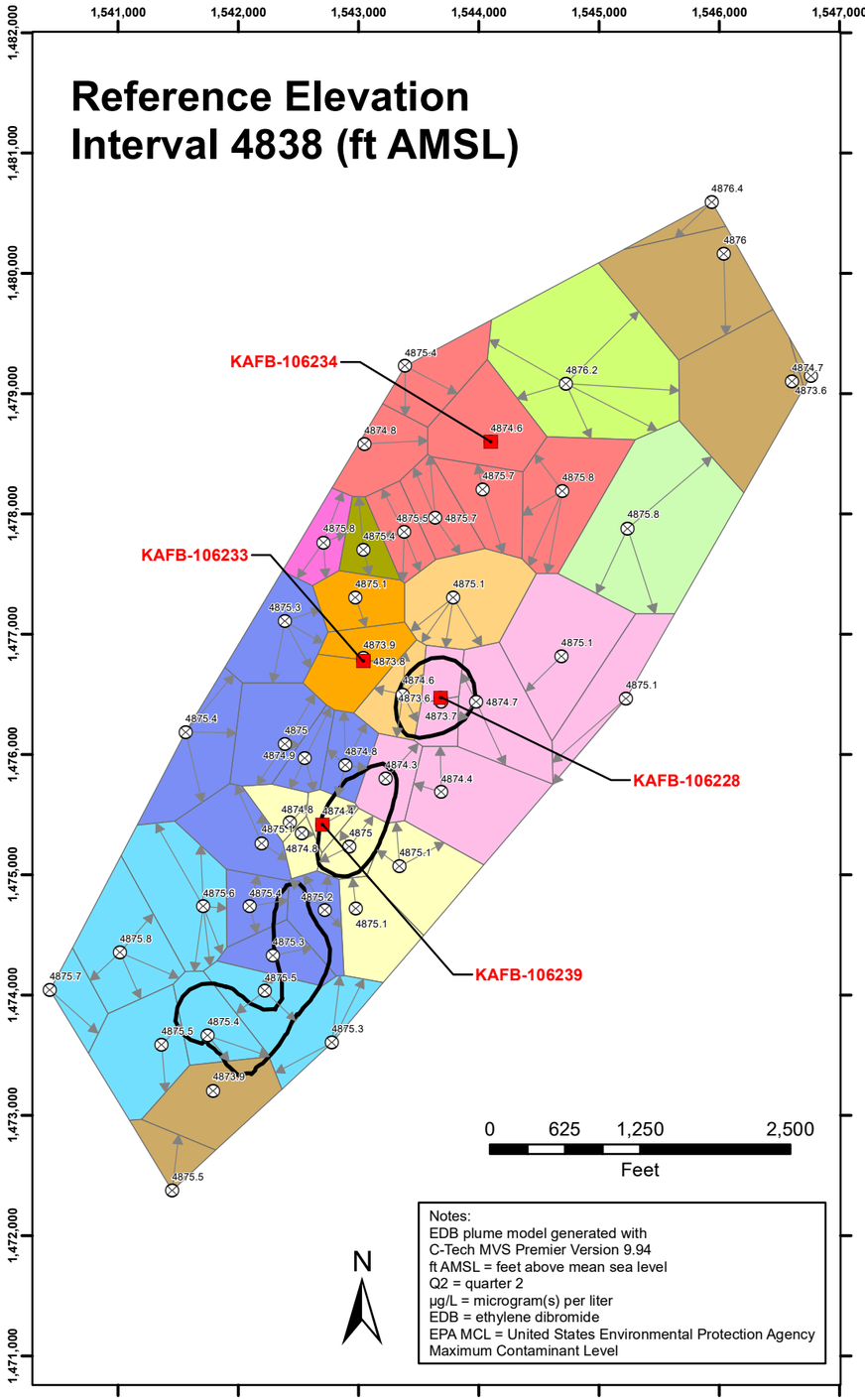
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FIGURE 5-8

HORIZONTAL CAPTURE AT THE WATER TABLE, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-8 Horizontal Capture Water Table.mxd 7/24/2019 EA ecarpio





Legend

- Groundwater Monitoring Pair Wells with Groundwater Elevation (ft AMSL)
- Extraction Well
- Flow Direction
- Q2 EDB Plume >0.05 µg/L (EPA MCL)

Captured by Extraction Well

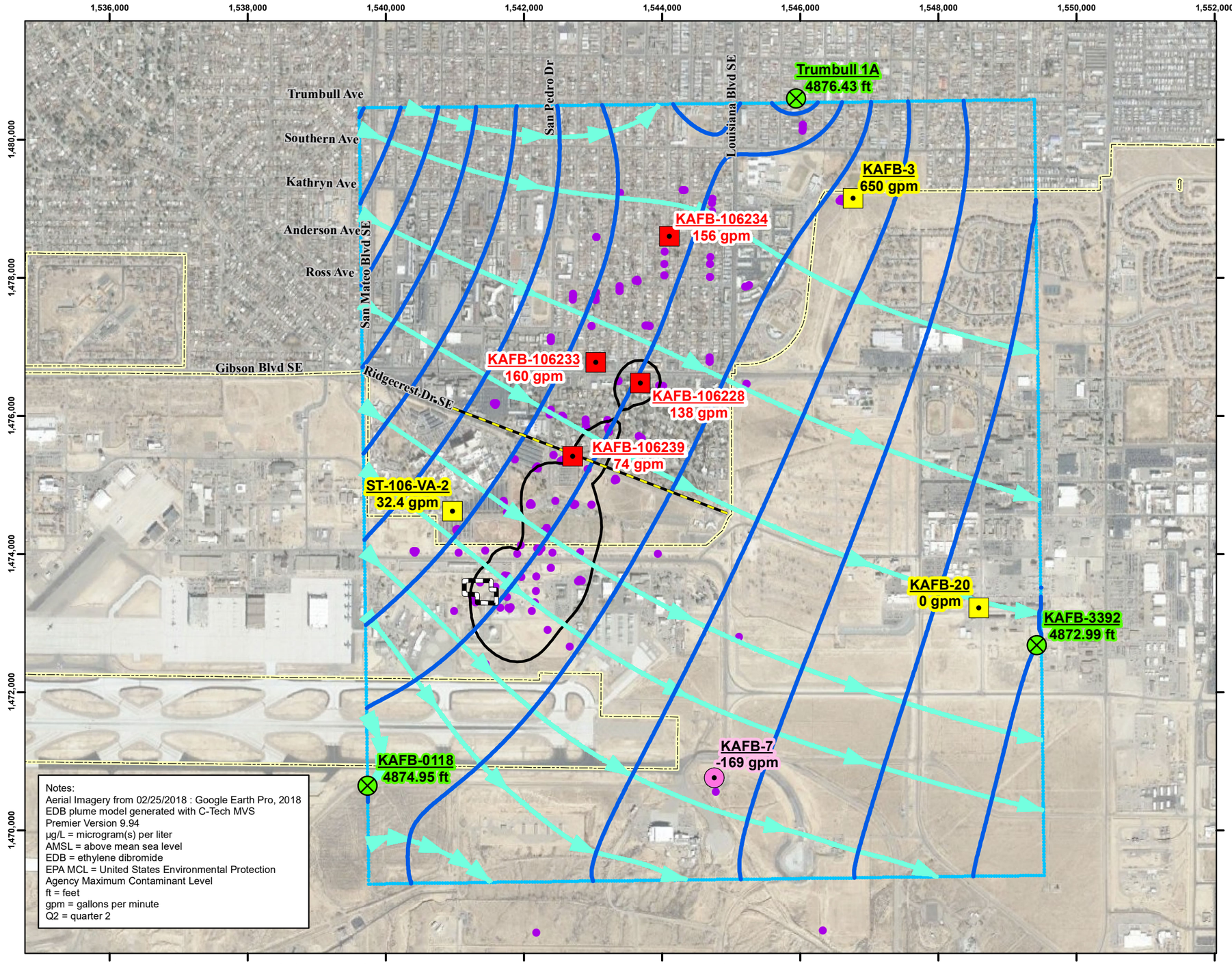
- KAFB-106228
- KAFB-106228 or KAFB106233
- KAFB-106228,KAFB-106233, KAFB-106234, KAFB-106239, or Not Captured
- KAFB-106228, KAFB-106233, KAFB-106234, or Not Captured
- KAFB-106228, KAFB-106233, KAFB-106239, or Not Captured
- KAFB-106228, KAFB-106233, or Not Captured
- KAFB-106228, or Not Captured
- KAFB-106233
- KAFB-106233 or KAFB-106239
- KAFB-106233, KAFB-106239, or Not Captured
- KAFB-106234
- KAFB-106239
- KAFB-106239 or Not Captured
- KAFB-106228, KAFB-106233, or KAFB-106234
- KAFB-106228, KAFB-106233, KAFB-106234, or KAFB-106239
- KAFB-106228, KAFB-106233, or KAFB-106239
- KAFB-106228 or KAFB-106239
- KAFB-106233 or KAFB-106234
- Not Captured

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FIGURE 5-9

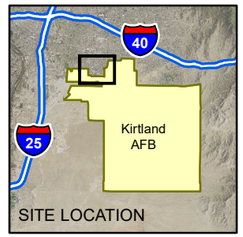
WATER LEVEL PAIRS
REI 4857 AND REI 4838
Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-9 Interval 4857 and Interval 4838 Water Level Pairs.mxd 7/24/2019 EA ecarpio



Legend

- Model Assigned Interim Remedy Extraction Well
- Model Assigned Drinking Water Supply Well
- Model Assigned Injection Well (Injection Rate)
- Gradient Analysis Well (Groundwater Elevation - ft AMSL)
- Groundwater Monitoring Well
- Constant Head Boundary
- Pre-Extraction Particle Track (Flow Direction)
- Pre-Extraction Potentiometric Surface Contours
- Target Capture Zone Boundary
- EDB Plume with Concentration > 0.05 µg/L (EPA MCL). The depicted boundary represents the 0.05 µg/L concentration contour.
- Source



N

0 750 1,500 3,000

Feet

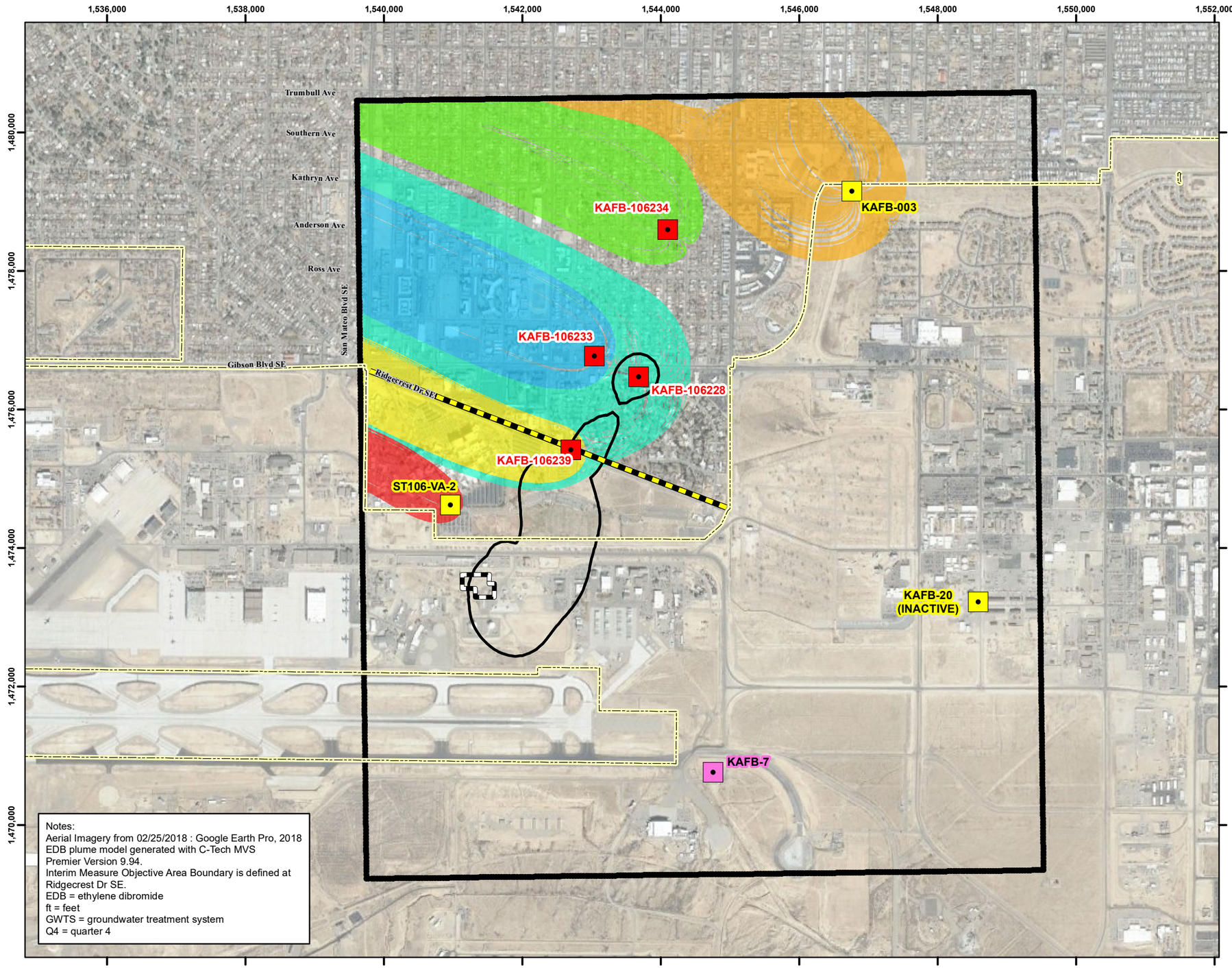
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-10

GROUNDWATER FLOW MODEL DOMAIN, KEY FEATURES AND NON-EXTRACTION FLOW FIELD, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-10 Groundwater Flow Model Domain, Key Features and Non-Extraction Flow Field, Q2 2019.mxd 8/29/2019 EA ecarpio



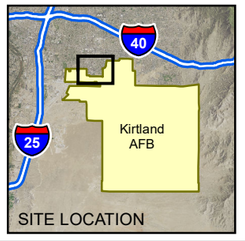
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Interim Measure Objective Area Boundary is defined at Ridgecrest Dr SE.
EDB = ethylene dibromide
ft = feet
GWTS = groundwater treatment system
Q4 = quarter 4

Legend

- Model Assigned Interim Measure Extraction Well
- Model Assigned Drinking Water Supply
- Injection Well KAFB-7
- Model Boundary

Q2 2019 Backward Capture Well Tracks

- KAFB-003 Extraction Well Capture Particle Track
- KAFB-106228 Extraction Well Capture Particle Track
- KAFB-106233 Extraction Well Capture Particle Track
- KAFB-106234 Extraction Well Capture Particle Track
- KAFB-106239 Extraction Well Capture Particle Track
- VA-2 Extraction Well Capture Particle
- Target Capture Zone Boundary
- Installation Fence Boundary
- Q2 2019 EDB Plume with Concentration >0.05 µg/L (EPA MCL)
- Source



N

0 750 1,500 3,000

Feet

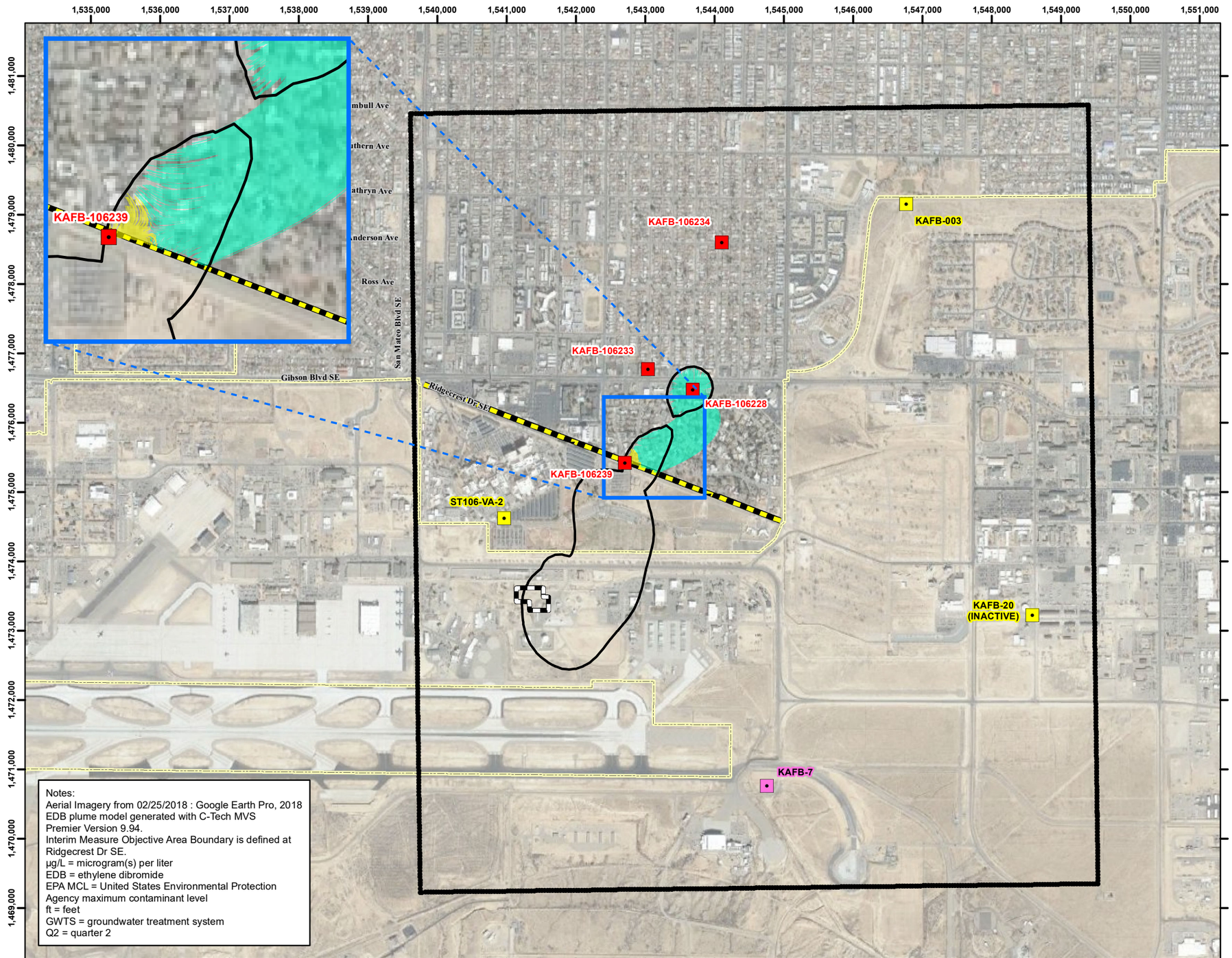
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-11

MODEL SIMULATED THREE-DIMENSIONAL STEADY STATE EXTRACTION WELL CAPTURE, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-11 Model Simulated Three-Dimensional Steady State Extraction Well Capture, Q2 2019.mxd 7/25/2019 EA ecarpio

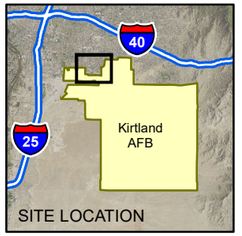


Legend

- Model Assigned Interim Measure Extraction Well
- Model Assigned Drinking Water Supply Well
- Injection Well KAFB-7
- Model Boundary

Forward Particle Tracks

- KAFB-106228 Extraction Well Capture Particle Track
- KAFB-106239 Extraction Well Capture Particle Track
- Target Capture Zone Boundary
- Installation Fence Boundary
- Q2 2019 EDB Plume with Concentration >0.05 µg/L (EPA MCL)
- Source Area



N

0 625 1,250 2,500

Feet

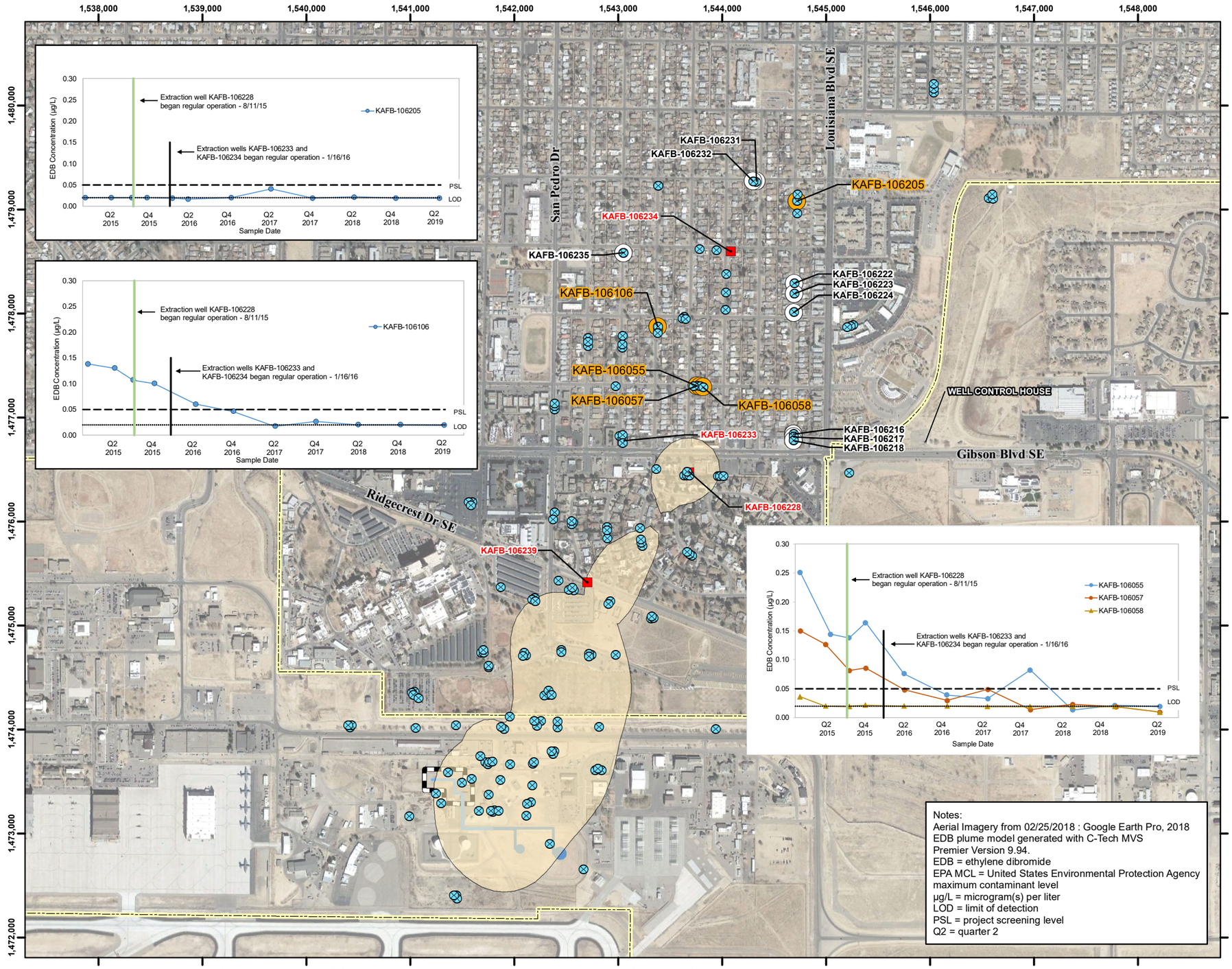
Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-12

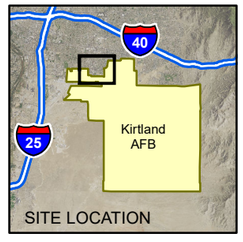
MODEL SIMULATED THREE-DIMENSIONAL EDB PLUME SPECIFIC STEADY STATE CAPTURE, Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-12 Model Simulated Three-Dimensional EDB Plume Specific Steady State Capture, Q2 2019.mxd 7/24/2019 EA ecarpio



Legend

- Performance Monitoring Well (Performance Assessment)
- Sentinel Well (Performance Assessment)
- Groundwater Monitoring Well
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area
- Q2 2019 EDB Plume with Concentration > 0.05 µg/L (EPA MCL)



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

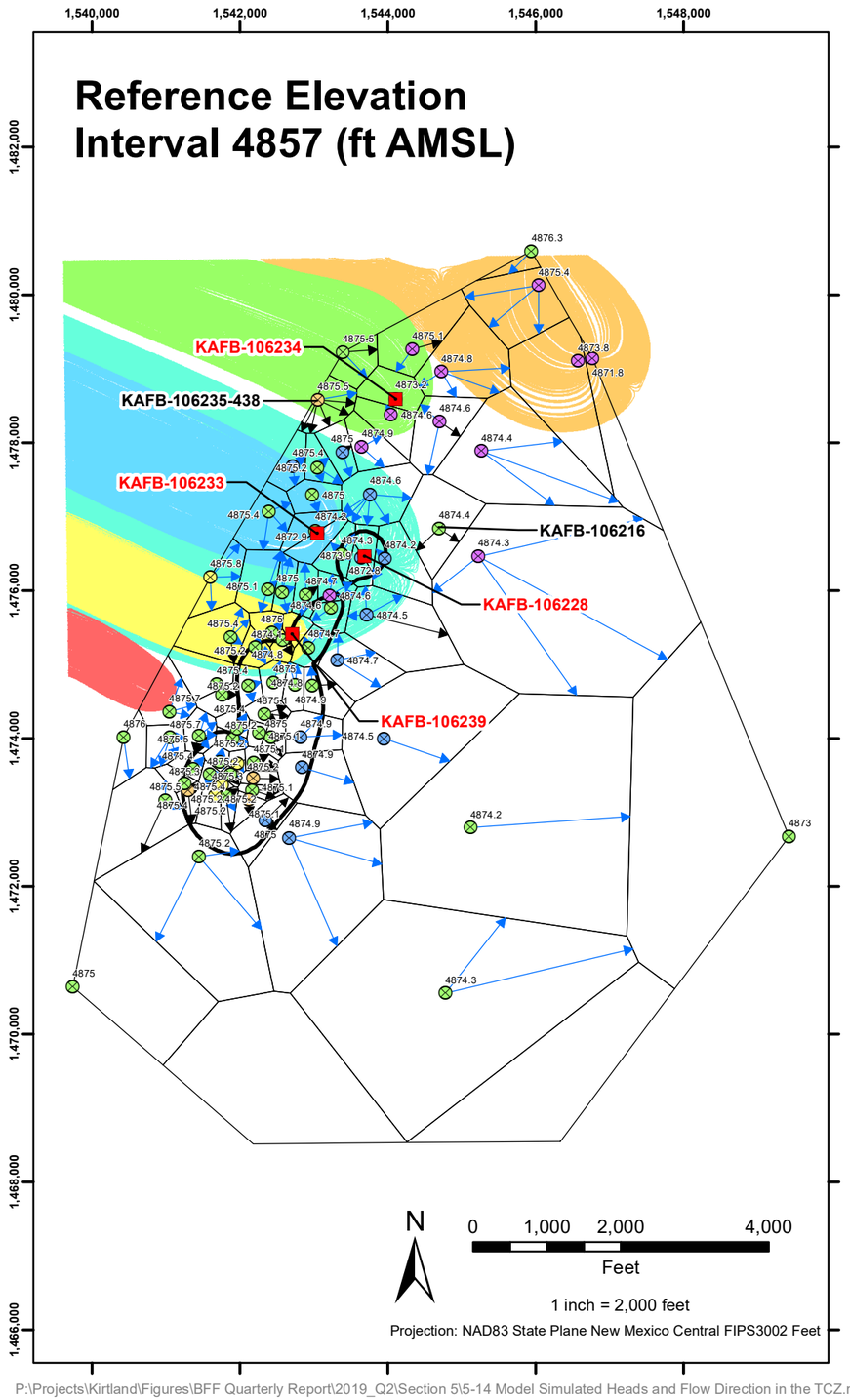
Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume model generated with C-Tech MVS Premier Version 9.94.
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency maximum contaminant level
µg/L = microgram(s) per liter
LOD = limit of detection
PSL = project screening level
Q2 = quarter 2

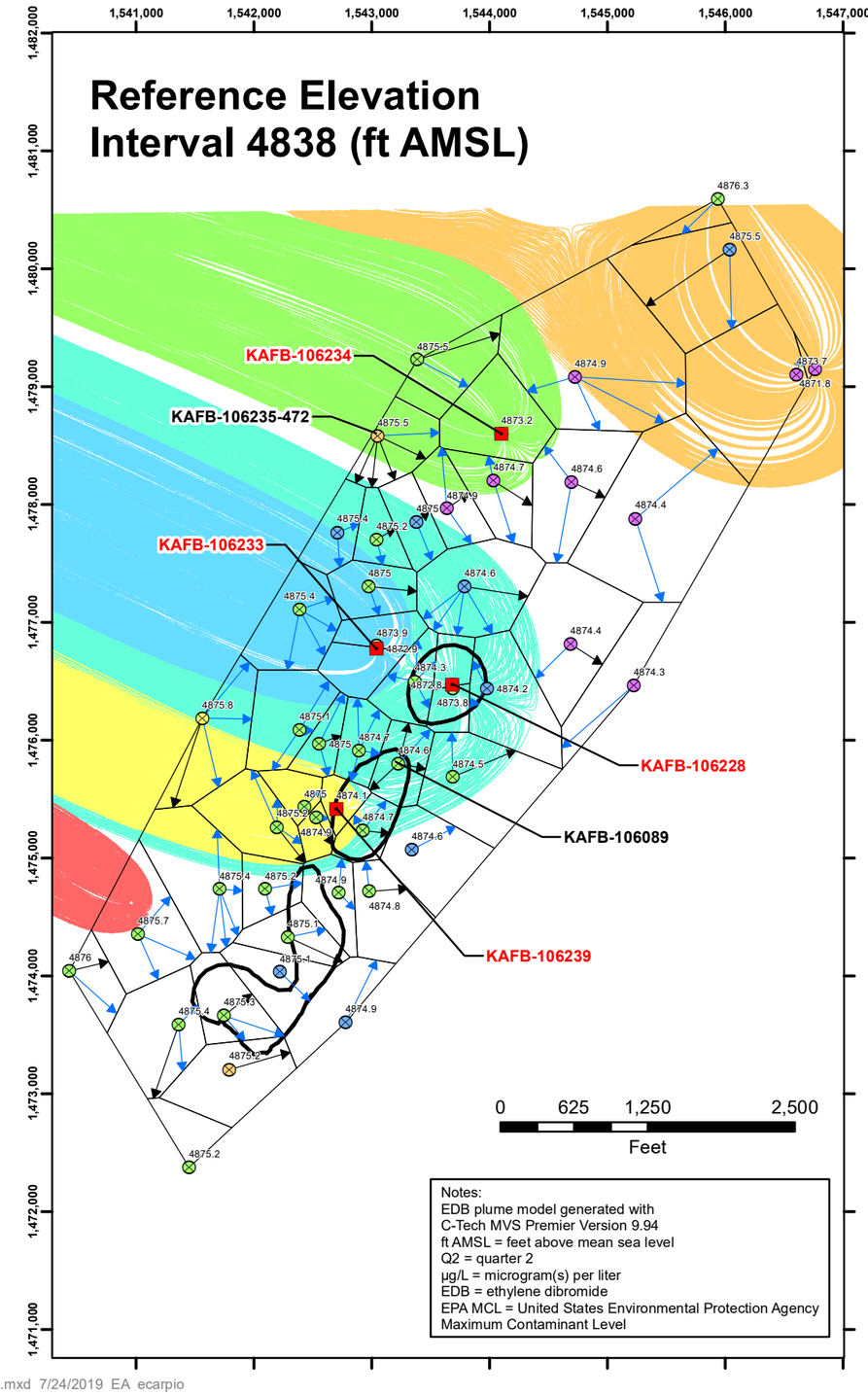
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FIGURE 5-13

CONCENTRATION TRENDS IN PERFORMANCE MONITORING WELLS, 2015 - 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-13 Concentration Trends in Performance Monitoring Wells, 2015-2019.mxd 7/24/2019 EA ecarpio





Legend

Groundwater Monitoring Wells with Simulated Head Values

- <-0.6
- -0.6 - -0.4
- -0.3 - 0.3
- 0.4 - 0.6
- >0.6
- Flow Direction Reversed from Observed
- Flow Direction Same as Observed
- EDB Plume Q2 2019 (>0.05 µg/L)

Q2 2019 Backward Capture Well Tracks

- KAFB-003 Extraction Well Capture Particle Track
- KAFB-106228 Extraction Well Capture Particle Track
- KAFB-106233 Extraction Well Capture Particle Track
- KAFB-106234 Extraction Well Capture Particle Track
- KAFB-106239 Extraction Well Capture Particle Track
- VA-2 Extraction Well Capture Particle

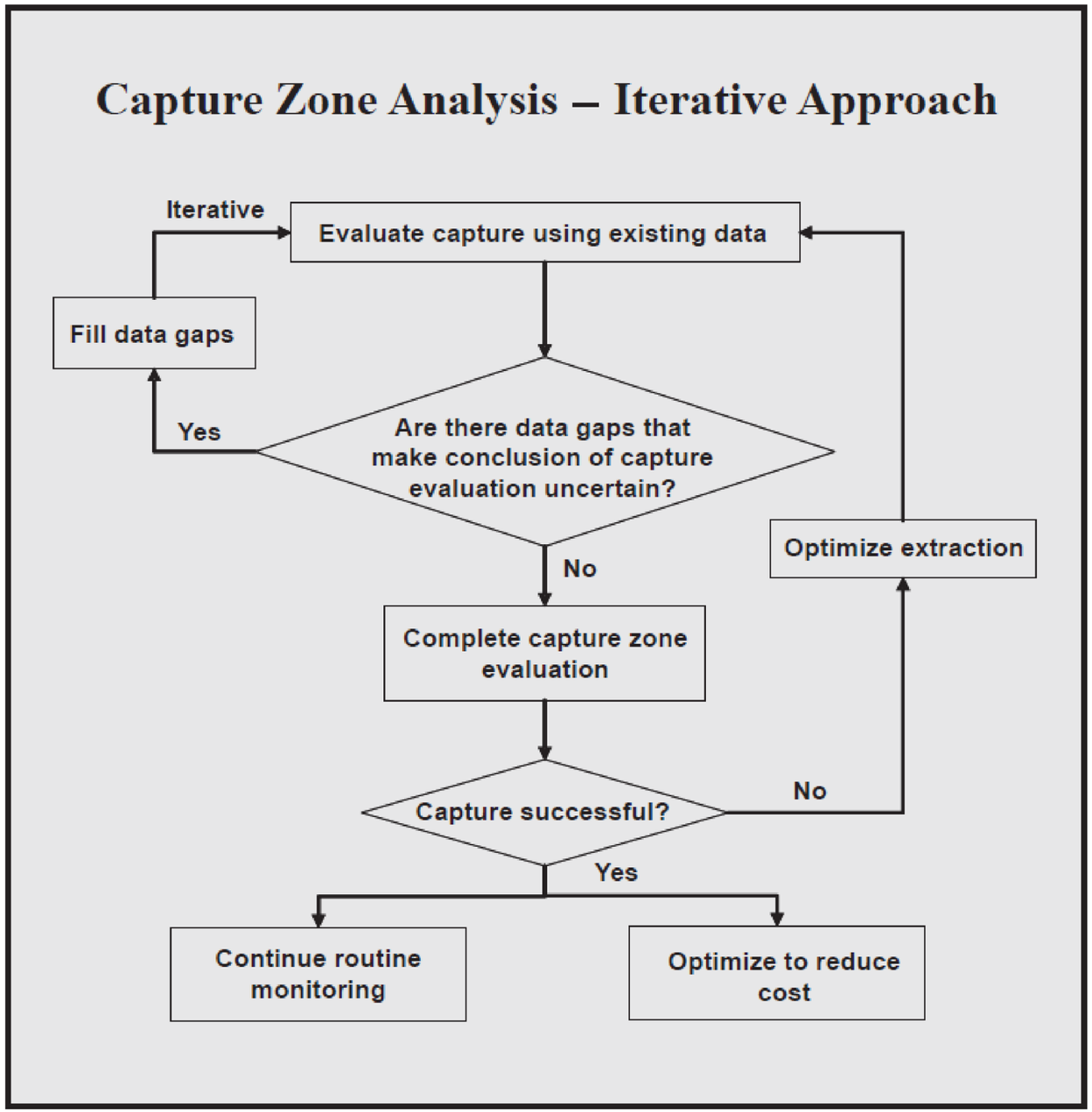
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FIGURE 5-14

MODEL SIMULATED HEADS AND FLOW DIRECTION IN THE TCZ

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-14 Model Simulated Heads and Flow Direction in the TCZ.mxd 7/24/2019 EA ecarpio

Exhibit 7



Notes:
Exhibit 7 reproduced from
A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems: Final Project Report.
U.S. Environmental Protection Agency 600/R-08/003.
January. pp. 166.

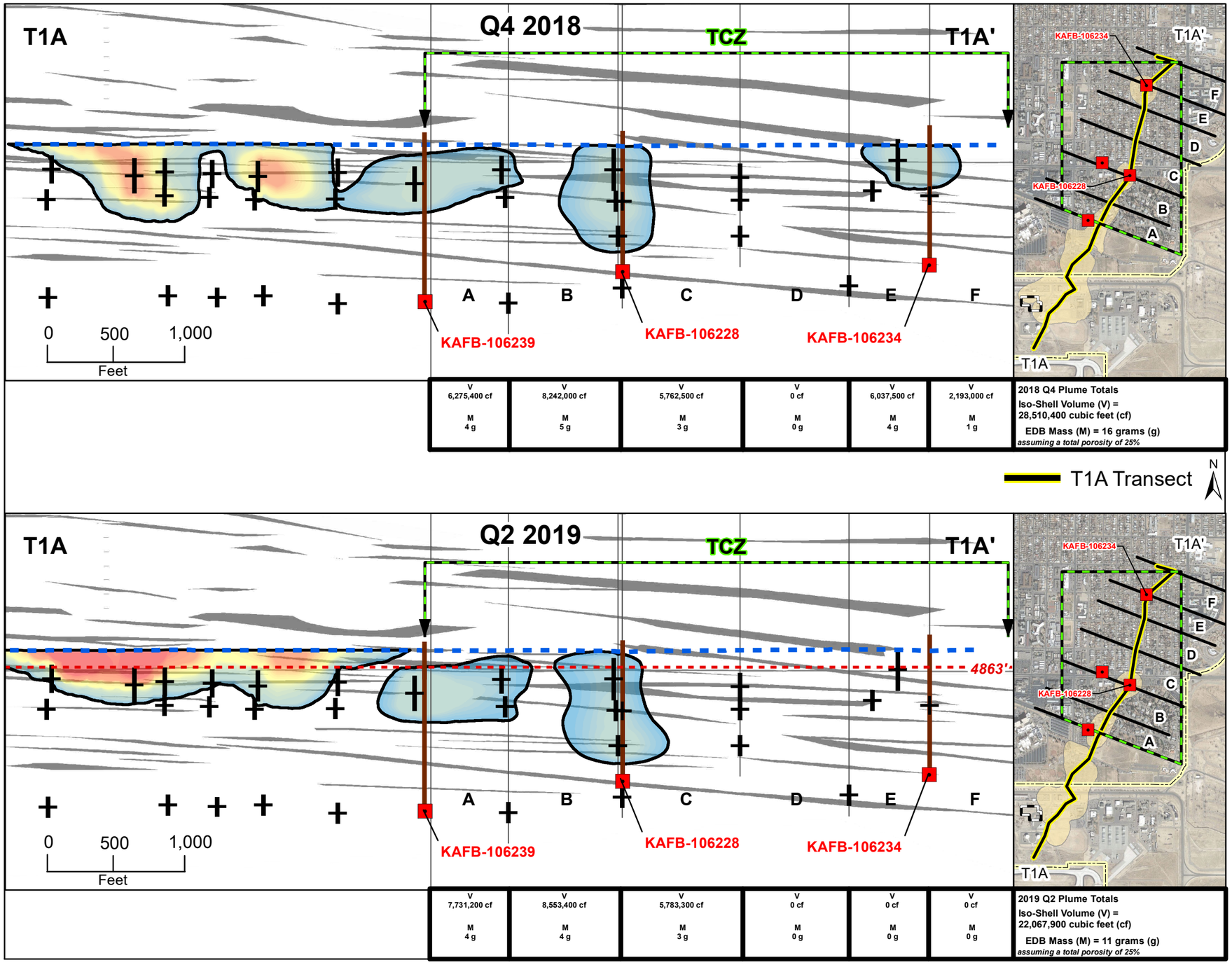
EPA = U.S. Environmental Protection Agency

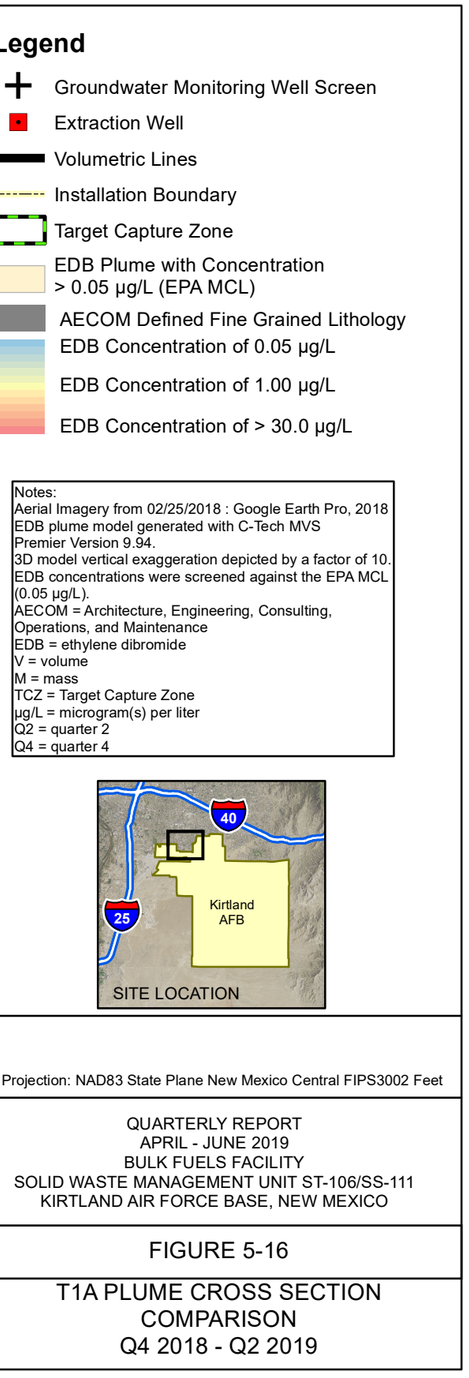
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FIGURE 5-15

EPA CAPTURE ZONE ANALYSIS - ITERATIVE APPROACH (EXHIBIT 7)

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-15 EPA Capture Zone Analysis - Iterative Approach (Exhibit 7).mxd 7/15/2019 EA ecarpio





Legend

- Groundwater Monitoring Well Screen
- Extraction Well
- Volumetric Lines
- Installation Boundary
- Target Capture Zone
- EDB Plume with Concentration > 0.05 µg/L (EPA MCL)
- AECOM Defined Fine Grained Lithology
- EDB Concentration of 0.05 µg/L
- EDB Concentration of 1.00 µg/L
- EDB Concentration of > 30.0 µg/L

Notes:
Aerial Imagery from 02/25/2018 : Google Earth Pro, 2018
EDB plume model generated with C-Tech MVS Premier Version 9.94.
3D model vertical exaggeration depicted by a factor of 10.
EDB concentrations were screened against the EPA MCL (0.05 µg/L).
AECOM = Architecture, Engineering, Consulting, Operations, and Maintenance
EDB = ethylene dibromide
V = volume
M = mass
TCZ = Target Capture Zone
µg/L = microgram(s) per liter
Q2 = quarter 2
Q4 = quarter 4

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 5-16

T1A PLUME CROSS SECTION COMPARISON
Q4 2018 - Q2 2019

P:\Projects\Kirtland\Figures\BFF Quarterly Report\2019_Q2\Section 5\5-16 T1A Plume Cross Section Comparison.mxd 8/29/2019 EA ecarpio

TABLES

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
Off Base	KAFB-106028	KAFB-106028-150	148.75	151.25	1/2	0.00136	0.409	0.615
		KAFB-106028-250	248.75	251.25	1/2	0.00136	0.409	0.752
		KAFB-106028-350	348.75	351.25	1/2	0.00136	0.409	0.888
		KAFB-106028-450	448.75	451.25	1/2	0.00136	0.409	1.024
	KAFB-106136	KAFB-106136-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106136-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106136-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106136-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106136-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106136-450	440	450	3	0.04909	1.636	23.725
	KAFB-106138	KAFB-106138-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106138-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106138-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106138-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106138-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106138-450	440	450	3	0.04909	1.636	23.725
	KAFB-106141	KAFB-106141-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106141-050	50	60	3/4	0.00307	1.636	1.820
		KAFB-106141-170	160	170	3/4	0.00307	1.636	2.158
		KAFB-106141-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106141-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106141-450	440	450	3	0.04909	1.636	23.725
	KAFB-106142	KAFB-106142-030	20	30	3/4	0.00307	1.636	1.728
		KAFB-106142-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106142-170	160	170	3/4	0.00307	1.636	2.158
		KAFB-106142-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106142-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106142-450	440	450	3	0.04909	1.636	23.725

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106108	KAFB-106108-025	15.3	25.3	3/4	0.00307	1.636	1.714
		KAFB-106108-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106108-150	140.2	150.2	3/4	0.00307	1.636	2.097
		KAFB-106108-250	240.3	250.3	3/4	0.00307	1.636	2.404
		KAFB-106108-350	340.3	350.3	3/4	0.00307	1.636	2.711
		KAFB-106108-450	440	450	3	0.04909	1.636	23.725
	KAFB-106109	KAFB-106109-025	15.2	25.2	3/4	0.00307	1.636	1.713
		KAFB-106109-050	40.1	50.1	3/4	0.00307	1.636	1.790
		KAFB-106109-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106109-250	240.2	250.2	3/4	0.00307	1.636	2.404
		KAFB-106109-350	340.6	350.6	3/4	0.00307	1.636	2.712
		KAFB-106109-450	440	450	3	0.04909	1.636	23.725
	KAFB-106110	KAFB-106110-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106110-050	40.1	50.1	3/4	0.00307	1.636	1.790
		KAFB-106110-150	140.3	150.3	3/4	0.00307	1.636	2.097
		KAFB-106110-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106110-350	340.2	350.2	3/4	0.00307	1.636	2.710
		KAFB-106110-450	440	450	3	0.04909	1.636	23.725
	KAFB-106111	KAFB-106111-025	15.2	25.2	3/4	0.00307	1.636	1.713
		KAFB-106111-050	40.1	50.1	3/4	0.00307	1.636	1.790
		KAFB-106111-150	140.3	150.3	3/4	0.00307	1.636	2.097
		KAFB-106111-250	240.3	250.3	3/4	0.00307	1.636	2.404
		KAFB-106111-350	340.4	350.4	3/4	0.00307	1.636	2.711
		KAFB-106111-450	440.3	450.3	3	0.04909	1.636	23.740
	KAFB-106112	KAFB-106112-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106112-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106112-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106112-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106112-350	339	349	3/4	0.00307	1.636	2.707
		KAFB-106112-450	439	449	3	0.04909	1.636	23.676

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106113	KAFB-106113-020	10	20	3/4	0.00307	1.636	1.697
		KAFB-106113-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106113-150	140	150	3/4	0.00307	1.636	2.096
	KAFB-106113	KAFB-106113-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106113-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106113-450	440	450	3	0.04909	1.636	23.725
	KAFB-106114	KAFB-106114-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106114-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106114-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106114-250	235	245	3/4	0.00307	1.636	2.388
		KAFB-106114-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106114-450	439.6	449.6	3	0.04909	1.636	23.706
	KAFB-106115	KAFB-106115-025	14.6	24.6	3/4	0.00307	1.636	1.711
		KAFB-106115-050	39.6	49.6	3/4	0.00307	1.636	1.788
		KAFB-106115-150	144.6	154.6	3/4	0.00307	1.636	2.110
		KAFB-106115-250	239.6	249.6	3/4	0.00307	1.636	2.402
		KAFB-106115-350	339.6	349.6	3/4	0.00307	1.636	2.709
		KAFB-106115-450	439.6	449.6	3	0.04909	1.636	23.706
	KAFB-106116	KAFB-106116-025	10	19.45	3/4	0.00307	1.54602	1.606
		KAFB-106116-050	40	49.45	3/4	0.00307	1.54602	1.698
		KAFB-106116-150	140	149.45	3/4	0.00307	1.54602	2.005
		KAFB-106116-250	240	249.45	3/4	0.00307	1.54602	2.311
		KAFB-106116-350	340	349.45	3/4	0.00307	1.54602	2.618
		KAFB-106116-450	440	448.95	3	0.04909	1.46422	23.502
	KAFB-106117	KAFB-106117-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106117-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106117-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106117-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106117-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106117-450	440	450	3	0.04909	1.636	23.725

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106118	KAFB-106118-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106118-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106118-160	150	160	3/4	0.00307	1.636	2.127
		KAFB-106118-265	255	265	3/4	0.00307	1.636	2.449
		KAFB-106118-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106118-450	440	450	3	0.04909	1.636	23.725
	KAFB-106119	KAFB-106119-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106119-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106119-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106119-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106119-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106119-450	440	450	3	0.04909	1.636	23.725
	KAFB-106120	KAFB-106120-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106120-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106120-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106120-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106120-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106120-450	434	444	3	0.04909	1.636	23.431
	KAFB-106121	KAFB-106121-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106121-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106121-145	135	145	3/4	0.00307	1.636	2.081
		KAFB-106121-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106121-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106121-450	434	444	3	0.04909	1.636	23.431
	KAFB-106122	KAFB-106122-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106122-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106122-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106122-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106122-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106122-450	434	444	3	0.04909	1.636	23.431

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106123	KAFB-106123-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106123-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106123-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106123-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106123-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106123-450	432	442	3	0.04909	1.636	23.333
	KAFB-106124	KAFB-106124-025	15.1	25	3/4	0.00307	1.61964	1.696
		KAFB-106124-050	40.1	50	3/4	0.00307	1.61964	1.773
		KAFB-106124-150	140.1	150	3/4	0.00307	1.61964	2.080
		KAFB-106124-250	240.1	250	3/4	0.00307	1.61964	2.387
		KAFB-106124-350	340.1	350	3/4	0.00307	1.61964	2.693
		KAFB-106124-450	440.1	450	3	0.04909	1.61964	23.709
	KAFB-106125	KAFB-106125-025	15.2	25	3/4	0.00307	1.60328	1.680
		KAFB-106125-050	40.2	50	3/4	0.00307	1.60328	1.757
		KAFB-106125-150	140.2	150	3/4	0.00307	1.60328	2.063
		KAFB-106125-250	240.2	250	3/4	0.00307	1.60328	2.370
		KAFB-106125-350	340.2	350	3/4	0.00307	1.60328	2.677
		KAFB-106125-450	440.2	450	3	0.04909	1.60328	23.693
	KAFB-106126	KAFB-106126-025	15.1	25	3/4	0.00307	1.61964	1.696
		KAFB-106126-050	40.1	50	3/4	0.00307	1.61964	1.773
		KAFB-106126-150	140.1	150	3/4	0.00307	1.61964	2.080
		KAFB-106126-250	240.1	250	3/4	0.00307	1.61964	2.387
		KAFB-106126-350	340.1	350	3/4	0.00307	1.61964	2.693
		KAFB-106126-450	440.2	450	3	0.04909	1.60328	23.693
	KAFB-106127	KAFB-106127-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106127-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106127-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106127-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106127-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106127-450	440	450	3	0.04909	1.636	23.725

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106128	KAFB-106128-025	15.04	25.04	3/4	0.00307	1.636	1.713
		KAFB-106128-050	40.07	50.07	3/4	0.00307	1.636	1.790
		KAFB-106128-150	140.19	150.19	3/4	0.00307	1.636	2.097
		KAFB-106128-250	240.29	250.29	3/4	0.00307	1.636	2.404
		KAFB-106128-350	340.39	350.39	3/4	0.00307	1.636	2.711
		KAFB-106128-450	440.06	450.06	3	0.04909	1.636	23.728
	KAFB-106129	KAFB-106129-025	15.1	25.1	3/4	0.00307	1.636	1.713
		KAFB-106129-050	39.7	49.7	3/4	0.00307	1.636	1.788
		KAFB-106129-150	140.2	150.2	3/4	0.00307	1.636	2.097
	KAFB-106129	KAFB-106129-250	240.1	250.1	3/4	0.00307	1.636	2.403
		KAFB-106129-350	337.4	347.4	3/4	0.00307	1.636	2.702
		KAFB-106129-450	440.7	450.7	3	0.04909	1.636	23.760
	KAFB-106130	KAFB-106130-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106130-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106130-150	150	160	3/4	0.00307	1.636	2.127
		KAFB-106130-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106130-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106130-450	440	450	3	0.04909	1.636	23.725
	KAFB-106131	KAFB-106131-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106131-055	45	55	3/4	0.00307	1.636	1.805
		KAFB-106131-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106131-245	235	245	3/4	0.00307	1.636	2.388
		KAFB-106131-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106131-450	430	440	3	0.04909	1.636	23.234
	KAFB-106132	KAFB-106132-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106132-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106132-175	164	174	3/4	0.00307	1.636	2.170
		KAFB-106132-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106132-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106132-450	440	450	3	0.04909	1.636	23.725

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106133	KAFB-106133-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106133-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106133-170	160	170	3/4	0.00307	1.636	2.158
		KAFB-106133-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106133-350	339	349	3/4	0.00307	1.636	2.707
		KAFB-106133-450	439	449	3	0.04909	1.636	23.676
	KAFB-106134	KAFB-106134-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106134-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106134-170	160	170	3/4	0.00307	1.636	2.158
		KAFB-106134-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106134-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106134-450	440	450	3	0.04909	1.636	23.725
	KAFB-106135	KAFB-106135-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106135-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106135-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106135-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106135-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106135-450	440	450	3	0.04909	1.636	23.725
	KAFB-106137	KAFB-106137-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106137-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106137-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106137-250	240.1	250.1	3/4	0.00307	1.636	2.403
		KAFB-106137-350	340.5	350.5	3/4	0.00307	1.636	2.711
		KAFB-106137-450	440	450	3	0.04909	1.636	23.725
	KAFB-106139	KAFB-106139-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106139-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106139-150	140	150	3/4	0.00307	1.636	2.096
		KAFB-106139-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106139-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106139-450	440	450	3	0.04909	1.636	23.725

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	KAFB-106140	KAFB-106140-025	15	25	3/4	0.00307	1.636	1.713
		KAFB-106140-050	40	50	3/4	0.00307	1.636	1.789
		KAFB-106140-150	141.8	151.8	3/4	0.00307	1.636	2.102
		KAFB-106140-250	240	250	3/4	0.00307	1.636	2.403
		KAFB-106140-350	340	350	3/4	0.00307	1.636	2.710
		KAFB-106140-450	440	450	3	0.04909	1.636	23.725
	SVMW-01	SVMW-01-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-01-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-01-250	250.7	253.2	1/2	0.00136	0.409	0.754
		SVMW-01-300	308.5	310	1/2	0.00136	0.2454	0.668
	SVMW-02	SVMW-02-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-02-100	97	99.5	1/2	0.00136	0.409	0.545
		SVMW-02-150	150	152.5	1/2	0.00136	0.409	0.617
	SVMW-05	SVMW-05-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-05-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-05-230	229.5	231	1/2	0.00136	0.2454	0.560
		SVMW-05-290	287.5	290	1/2	0.00136	0.409	0.804
	SVMW-06	SVMW-06-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-06-100	99.5	102	1/2	0.00136	0.409	0.548
		SVMW-06-252	252	254.5	1/2	0.00136	0.409	0.756
		SVMW-06-302	302.5	305	1/2	0.00136	0.409	0.825
	SVMW-07	SVMW-07-050	49.5	52	1/2	0.00136	0.409	0.480
		SVMW-07-100	95.5	98	1/2	0.00136	0.409	0.543
		SVMW-07-150	147.5	150	1/2	0.00136	0.409	0.614
	SVEW-10/SVMW-12	SVEW-10-410	400	410	2	0.02182	1.636	10.581
		SVMW-12-150	150	152.5	1/2	0.00136	0.409	0.617
		SVMW-12-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-12-350	350	352.5	1/2	0.00136	0.409	0.890
		SVMW-12-450	450	452.5	1/2	0.00136	0.409	1.026

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Outside the Source Area)	SVEW-11/SVMW-13	SVEW-11-410	400	410	2	0.02182	1.636	10.581
		SVMW-13-150	150	152.5	1/2	0.00136	0.409	0.617
		SVMW-13-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-13-350	350	352.5	1/2	0.00136	0.409	0.890
		SVMW-13-450	450	452.5	1/2	0.00136	0.409	1.026
	SVEW-12/SVMW-14	SVEW-12-410	400	410	2	0.02182	1.636	10.581
		SVMW-14-150	150	152.5	1/2	0.00136	0.409	0.617
		SVMW-14-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-14-350	350	352.5	1/2	0.00136	0.409	0.890
		SVMW-14-450	450	452.5	1/2	0.00136	0.409	1.026
	SVEW-13/SVMW-15	SVEW-13-410	400	410	2	0.02182	1.636	10.581
		SVMW-15-150	150	152.5	1/2	0.00136	0.409	0.617
		SVMW-15-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-15-350	350	352.5	1/2	0.00136	0.409	0.890
		SVMW-15-450	450	452.5	1/2	0.00136	0.409	1.026
On Base (Inside the Source Area)	SVEW-01	SVEW-01-260	245	260	2	0.02182	2.454	8.126
	SVEW-02/03	SVEW-02-060	45	60	2	0.02182	2.454	3.763
		SVEW-03-160	145	160	2	0.02182	2.454	5.945
	SVEW-04/05	SVEW-04-313	298	313	2	0.02182	2.454	9.283
		SVEW-05-460	445	460	2	0.02182	2.454	12.490
	SVEW-06/07	SVEW-06-060	45	60	2	0.02182	2.454	3.763
		SVEW-07-160	145	160	2	0.02182	2.454	5.945
	SVEW-08/09	SVEW-08-260	245	260	2	0.02182	2.454	8.126
		SVEW-09-460	443	457	2	0.02182	2.2904	12.261
	SVMW-03	SVMW-03-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-03-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-03-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-03-300	300	302.5	1/2	0.00136	0.409	0.821

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

AOI	Sample Location	Location ID	Screened Interval (ft bgs)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
			Top	Bottom				
On Base (Inside the Source Area)	SVMW-04	SVMW-04-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-04-100	98	100.5	1/2	0.00136	0.409	0.546
		SVMW-04-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-04-300	297.5	300	1/2	0.00136	0.409	0.818
	SVMW-08	SVMW-08-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-08-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-08-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-08-266[b]	266	268.5	1/2	0.00136	0.409	0.775
	SVMW-09	SVMW-09-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-09-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-09-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-09-266	266	268.5	1/2	0.00136	0.409	0.775
	SVMW-10	SVMW-10-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-10-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-10-150	150	152.5	1/2	0.00136	0.409	0.617
		SVMW-10-250	250	252.5	1/2	0.00136	0.409	0.753
	SVMW-11	SVMW-11-050	50	52.5	1/2	0.00136	0.409	0.481
		SVMW-11-100	100	102.5	1/2	0.00136	0.409	0.549
		SVMW-11-250	250	252.5	1/2	0.00136	0.409	0.753
		SVMW-11-260	260	262.5	1/2	0.00136	0.409	0.767

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

[a] Filter Pack Volume (V) was calculated using the following equation: $((\pi * d^2) / 4) * P * L = V$

$\pi \approx 3.14159$

d = Diameter of the borehole casing (0.833 ft)

P = Porosity of sand (assumed 0.3)

L = Length of the screened interval (ft)

[b] Measurements at SVMW-08-266 cannot be obtained because SVMW-08-266 is clogged.

AOI = area of interest

bgs = below ground surface

ft = feet

ft^2 = square feet

ft^3 = cubic feet

ID = identification

in = inch

KAFB = Kirtland Air Force Base

SVEW = soil vapor extraction well

SVMW = soil vapor monitoring well

SWMU = solid waste management unit

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
Off Base	KAFB-106028	KAFB-106028-150	4/23/19	SV028-150-192	-0.1	0.12	20.41	0	0.633	2.0
		KAFB-106028-250	4/23/19	SV028-250-192	-0.2	0.20	21.01	0	0.767	2.0
		KAFB-106028-350	4/23/19	SV028-350-192	-0.3	0.12	20.66	0	0.900	2.0
		KAFB-106028-450	4/23/19	SV028-450-192	-0.3	0.30	20.68	0	1.033	2.0
	KAFB-106136	KAFB-106136-025	4/23/19	SV136-025-192	0.0	0.26	20.85	1	1.733	4.0
		KAFB-106136-050	4/23/19	SV136-050-192	0.0	0.28	20.84	0	1.800	4.0
		KAFB-106136-150	4/23/19	SV136-150-192	-0.3	0.12	20.78	0	2.133	4.0
		KAFB-106136-250	4/23/19	SV136-250-192	-0.6	0.18	20.99	1	2.467	4.0
		KAFB-106136-350	4/23/19	SV136-350-192	-0.7	0.18	21.01	0	2.733	4.0
		KAFB-106136-450	4/23/19	SV136-450-192	-0.7	0.22	20.83	0	23.733	4.0
	KAFB-106138	KAFB-106138-025	4/23/19	SV138-025-192	-0.1	2.82	19.10	0	1.800	4.0
		KAFB-106138-050	4/23/19	SV138-050-192	-0.3	3.28	18.21	0	1.800	4.0
		KAFB-106138-150	4/23/19	SV138-150-192	-1.2	0.28	19.72	0	2.133	4.0
		KAFB-106138-250	4/23/19	SV138-250-192	-1.2	0.30	20.31	0	2.467	4.0
		KAFB-106138-350	4/23/19	SV138-350-192	-1.3	0.26	20.78	0	2.733	4.0
		KAFB-106138-450	4/23/19	SV138-450-192	-1.2	0.30	20.89	0	23.733	4.0
	KAFB-106141	KAFB-106141-025	4/23/19	SV141-025-192	-0.1	0.60	20.00	0	1.733	4.0
		KAFB-106141-050	4/23/19	SV141-050-192	-0.2	0.28	20.18	3	1.933	4.0
		KAFB-106141-170	4/23/19	SV141-170-192	-1.1	0.20	20.30	1	2.200	4.0
		KAFB-106141-250	4/23/19	SV141-250-192	-1.2	0.20	20.44	2	2.467	4.0
		KAFB-106141-350	4/23/19	SV141-350-192	-1.1	0.22	20.70	4	2.933	4.0
		KAFB-106141-450	4/23/19	SV141-450-192	-1.0	0.30	20.83	4	23.733	4.0
	KAFB-106142	KAFB-106142-030	4/23/19	SV142-030-192	0.0	0.30	20.59	0	1.733	4.0
		KAFB-106142-050	4/23/19	SV142-050-192	0.0	0.32	20.49	0	1.800	4.0
		KAFB-106142-170	4/23/19	SV142-170-192	-0.5	0.14	20.57	0	2.400	4.0
		KAFB-106142-250	4/23/19	SV142-250-192	-0.5	0.14	20.66	0	2.467	4.0
		KAFB-106142-350	4/23/19	SV142-350-192	-0.5	0.20	20.81	1	2.733	4.0
		KAFB-106142-450	4/23/19	SV142-450-192	-0.4	0.26	20.72	0	23.733	4.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106108	KAFB-106108-025	5/6/19	SV108-025-192	0.0	1.08	19.23	1	1.800	3.0
		KAFB-106108-050	5/6/19	SV108-050-192	0.0	2.52	17.47	1	1.850	3.0
		KAFB-106108-150	5/6/19	SV108-150-192	0.0	1.38	17.53	3	2.200	3.0
		KAFB-106108-250	5/6/19	SV108-250-192	0.0	0.56	17.98	0	2.500	3.0
		KAFB-106108-350	5/6/19	SV108-350-192	0.6	0.32	19.57	2	2.800	3.0
		KAFB-106108-450	5/6/19	SV108-450-192	1.1	0.50	19.70	2	24.100	3.0
	KAFB-106109	KAFB-106109-025	4/30/19	SV109-025-192	0.0	0.50	20.61	2	1.733	4.0
		KAFB-106109-050	4/30/19	SV109-050-192	0.0	1.04	20.62	2	1.800	4.0
		KAFB-106109-150	4/30/19	SV109-150-192	0.6	0.16	19.87	2	2.133	4.0
		KAFB-106109-250	4/30/19	SV109-250-192	0.7	0.28	20.35	2	2.467	4.0
		KAFB-106109-350	4/30/19	SV109-350-192	0.8	0.22	20.64	0	2.733	4.0
		KAFB-106109-450	4/30/19	SV109-450-192	1.0	0.68	20.73	0	23.733	4.0
	KAFB-106110	KAFB-106110-025	4/30/19	SV110-025-192	0.0	1.16	18.75	0	1.733	4.0
		KAFB-106110-050	4/30/19	SV110-050-192	0.0	1.60	18.40	0	1.800	4.0
		KAFB-106110-150	4/30/19	SV110-150-192	0.8	0.90	16.97	47	2.133	4.0
		KAFB-106110-250	4/30/19	SV110-250-192	0.9	0.76	16.27	1128	2.467	4.0
		KAFB-106110-350	4/30/19	SV110-350-192	1.0	0.26	19.07	0	2.733	4.0
		KAFB-106110-450	4/30/19	SV110-450-192	1.1	0.42	19.79	4	23.733	4.0
	KAFB-106111	KAFB-106111-025	4/23/19	SV111-025-192	0.0	1.02	18.26	2	1.800	3.0
		KAFB-106111-050	4/23/19	SV111-050-192	0.0	2.56	14.71	0	1.950	3.0
		KAFB-106111-150	4/23/19	SV111-150-192	-0.8	2.94	13.89	0	2.200	3.0
		KAFB-106111-250	4/23/19	SV111-250-192	-0.6	5.72	9.64	278	3.050	3.0
		KAFB-106111-350	4/23/19	SV111-350-192	-0.6	0.94	15.48	697	3.200	3.0
		KAFB-106111-450	4/23/19	SV111-450-192	-0.5	0.68	17.52	16	24.100	3.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106112	KAFB-106112-025	5/6/19	SV111-025-192	0.1	0.38	19.32	0	1.733	4.0
		KAFB-106112-050	5/6/19	SV111-050-192	0.1	0.60	18.90	0	1.800	4.0
		KAFB-106112-150	5/6/19	SV111-150-192	0.6	0.66	19.33	0	2.133	4.0
		KAFB-106112-250	5/6/19	SV111-250-192	0.7	0.92	18.98	11	2.467	4.0
		KAFB-106112-350	5/6/19	SV111-350-192	0.7	0.78	17.28	0	2.733	4.0
		KAFB-106112-450	5/6/19	SV111-450-192	0.7	2.74	13.42	1984	23.733	4.0
	KAFB-106113	KAFB-106113-020	4/30/19	SV113-020-192	-0.1	0.36	20.82	1	1.733	4.0
		KAFB-106113-050	4/30/19	SV113-050-192	-0.2	0.68	20.29	2	1.933	4.0
		KAFB-106113-150	4/30/19	SV113-150-192	0.4	0.44	20.06	0	2.133	4.0
		KAFB-106113-250	4/30/19	SV113-250-192	0.5	1.28	19.17	1	2.467	4.0
		KAFB-106113-350	4/30/19	SV113-350-192	0.9	0.44	19.26	90	2.733	4.0
		KAFB-106113-450	4/30/19	SV113-450-192	0.8	1.42	15.27	1065	23.733	4.0
	KAFB-106114	KAFB-106114-025	4/22/19	SV114-025-192	0.0	0.42	20.12	0	1.733	4.0
		KAFB-106114-050	4/22/19	SV114-050-192	0.0	0.56	19.35	0	1.800	4.0
		KAFB-106114-150	4/22/19	SV114-150-192	-0.6	0.48	19.45	0	2.200	4.0
		KAFB-106114-250	4/22/19	SV114-250-192	-0.6	1.82	17.12	0	2.400	4.0
		KAFB-106114-350	4/22/19	SV114-350-192	-0.5	0.58	16.77	1	2.733	4.0
		KAFB-106114-450	4/22/19	SV114-450-192	-0.6	3.14	10.35	3,430	23.733	4.0
	KAFB-106115	KAFB-106115-025	4/30/19	SV115-025-192	-0.1	0.52	20.63	0	1.733	4.0
		KAFB-106115-050	4/30/19	SV115-050-192	-0.1	0.68	20.76	0	1.800	4.0
		KAFB-106115-150	4/30/19	SV115-150-192	0.3	0.36	20.18	0	2.133	4.0
		KAFB-106115-250	4/30/19	SV115-250-192	0.6	0.32	20.24	0	2.467	4.0
		KAFB-106115-350	4/30/19	SV115-350-192	0.8	0.34	20.32	1	2.733	4.0
		KAFB-106115-450	4/30/19	SV115-450-192	0.8	1.26	18.58	534	23.733	4.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106116	KAFB-106116-025	4/22/19	SV116-025-192	-0.2	0.24	19.83	0	1.667	4.0
		KAFB-106116-050	4/22/19	SV116-050-192	-0.2	0.56	18.67	0	1.733	4.0
		KAFB-106116-150	4/22/19	SV116-150-192	-0.7	0.58	19.41	0	2.067	4.0
		KAFB-106116-250	4/22/19	SV116-250-192	-0.7	0.82	18.95	0	2.333	4.0
		KAFB-106116-350	4/22/19	SV116-350-192	-0.8	1.06	16.85	71	2.733	4.0
		KAFB-106116-450	4/22/19	SV116-450-192	-0.8	5.98	6.66	5,420	23.467	4.0
	KAFB-106117	KAFB-106117-025	4/23/19	SV117-025-192	0.0	1.66	16.58	1	1.850	3.0
		KAFB-106117-050	4/23/19	SV117-050-192	0.0	3.32	14.15	1	2.400	3.0
		KAFB-106117-150	4/23/19	SV117-150-192	0.0	3.90	13.65	1	2.300	3.0
		KAFB-106117-250	4/23/19	SV117-250-192	0.0	7.00	9.70	86	2.600	3.0
		KAFB-106117-350	4/23/19	SV117-350-192	0.0	13.80	3.18	1,269	2.850	3.0
		KAFB-106117-450	4/23/19	SV117-450-192	-0.5	13.02	0.71	6,760	25.150	3.0
	KAFB-106118	KAFB-106118-025	5/6/19	SV118-025-192	0.0	0.48	19.59	5	1.850	3.0
		KAFB-106118-050	5/6/19	SV118-050-192	0.0	0.86	19.11	6	1.950	3.0
		KAFB-106118-160	5/6/19	SV118-160-192	0.0	0.82	19.17	5	2.300	3.0
		KAFB-106118-265	5/6/19	SV118-265-192	0.0	0.88	19.12	2	2.550	3.0
		KAFB-106118-350	5/6/19	SV118-350-192	0.0	0.64	18.33	4	2.800	3.0
		KAFB-106118-450	5/6/19	SV118-450-192	0.0	1.34	16.60	7	24.150	3.0
	KAFB-106119	KAFB-106119-025	5/7/19	SV119-025-192	-0.1	0.86	17.41	0	1.733	4.0
		KAFB-106119-050	5/7/19	SV119-050-192	-0.2	3.30	12.18	0	1.800	4.0
		KAFB-106119-150	5/7/19	SV119-160-192	0.0	5.20	12.40	0	2.133	4.0
		KAFB-106119-250	5/7/19	SV119-265-192	0.0	8.38	7.08	674	2.467	4.0
		KAFB-106119-350	5/7/19	SV119-350-192	0.1	3.16	12.19	979	2.733	4.0
		KAFB-106119-450	5/7/19	SV119-450-192	0.1	5.56	5.96	157	23.733	4.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106120	KAFB-106120-025	4/29/19	SV120-025-192	0.0	1.04	19.77	0	1.733	4.0
		KAFB-106120-050	4/29/19	SV120-050-192	0.1	1.96	18.48	2	1.800	4.0
		KAFB-106120-150	4/29/19	SV120-150-192	0.6	0.34	19.52	2	2.133	4.0
		KAFB-106120-250	4/29/19	SV120-250-192	0.7	0.30	19.62	2	2.467	4.0
		KAFB-106120-350	4/29/19	SV120-350-192	0.9	0.30	19.59	3	2.800	4.0
		KAFB-106120-450	4/29/19	SV120-450-18	0.9	0.50	18.90	13	23.467	4.0
	KAFB-106121	KAFB-106121-025	4/29/19	SV121-025-192	0.0	1.10	19.93	0	1.733	4.0
		KAFB-106121-050	4/29/19	SV121-050-192	0.0	1.14	20.10	0	1.800	4.0
		KAFB-106121-145	4/29/19	SV121-145-192	0.1	0.28	20.39	0	2.133	4.0
		KAFB-106121-250	4/29/19	SV121-250-192	0.2	0.24	20.36	0	2.467	4.0
		KAFB-106121-350	4/29/19	SV121-350-192	0.5	0.30	20.78	0	2.733	4.0
		KAFB-106121-450	4/29/19	SV121-450-192	0.4	0.44	20.58	2	23.467	4.0
	KAFB-106122	KAFB-106122-025	4/29/19	SV122-025-192	0.0	1.24	19.69	0	1.733	4.0
		KAFB-106122-050	4/29/19	SV122-050-192	0.1	1.40	19.06	0	1.800	4.0
		KAFB-106122-150	4/29/19	SV122-150-192	0.5	0.24	19.59	0	2.133	4.0
		KAFB-106122-250	4/29/19	SV122-250-192	0.6	0.40	19.63	0	2.467	4.0
		KAFB-106122-350	4/29/19	SV122-350-192	0.8	0.26	19.94	0	2.733	4.0
		KAFB-106122-450	4/29/19	SV122-450-192	0.7	0.40	19.74	8	23.467	4.0
	KAFB-106123	KAFB-106123-025	4/29/19	SV123-025-192	0.0	0.86	20.03	0	1.733	4.0
		KAFB-106123-050	4/29/19	SV123-050-192	0.0	1.70	19.17	0	1.800	4.0
		KAFB-106123-150	4/29/19	SV123-150-192	0.1	0.26	20.08	0	2.133	4.0
		KAFB-106123-250	4/29/19	SV123-250-192	0.2	0.46	19.93	0	2.467	4.0
		KAFB-106123-350	4/29/19	SV123-350-192	0.4	0.38	20.16	0	2.733	4.0
		KAFB-106123-450	4/29/19	SV123-450-192	0.5	0.52	19.70	1	23.333	4.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106124	KAFB-106124-025	4/22/19	SV124-025-192	0.0	0.16	20.92	3	1.700	3.0
		KAFB-106124-050	4/22/19	SV124-050-192	0.0	1.16	20.24	4	2.333	4.0
		KAFB-106124-150	4/22/19	SV124-150-192	-0.8	0.34	19.58	0	2.350	3.0
		KAFB-106124-250	4/22/19	SV124-250-192	-0.6	0.22	19.89	0	2.500	3.0
		KAFB-106124-350	4/22/19	SV124-350-192	0.0	0.26	20.53	6	2.750	3.0
		KAFB-106124-450	5/6/19	SV124-450-192	1.0	0.48	20.07	207	23.733	4.0
	KAFB-106125	KAFB-106125-025	4/23/19	SV125-025-192	0.0	1.32	19.64	1	1.750	3.0
		KAFB-106125-050	4/23/19	SV125-050-192	0.0	2.52	19.04	3	1.900	3.0
		KAFB-106125-150	4/23/19	SV125-150-192	-0.5	0.46	19.77	3	2.150	3.0
		KAFB-106125-250	4/23/19	SV125-250-192	-1.1	0.26	20.17	6	2.400	3.0
		KAFB-106125-350	4/23/19	SV125-350-192	-0.9	0.22	20.46	3	2.750	3.0
		KAFB-106125-450	4/23/19	SV125-450-192	-1.1	0.70	19.94	102	25.350	3.0
	KAFB-106126	KAFB-106126-025	5/7/19	SV126-025-192	0.0	0.94	19.93	0	1.733	4.0
		KAFB-106126-050	5/7/19	SV126-050-192	0.0	1.30	19.53	0	1.867	4.0
		KAFB-106126-150	5/7/19	SV126-150-192	0.2	0.20	19.55	0	2.133	4.0
		KAFB-106126-250	5/7/19	SV126-250-192	0.3	0.20	19.58	1	2.467	4.0
		KAFB-106126-350	5/7/19	SV126-350-192	0.5	0.22	20.04	7	2.733	4.0
		KAFB-106126-450	5/7/19	SV126-450-192	0.3	0.50	19.68	442	23.733	4.0
	KAFB-106127	KAFB-106127-025	4/23/19	SV127-025-192	0.0	0.52	20.35	0	1.850	3.0
		KAFB-106127-050	4/23/19	SV127-050-192	0.0	0.72	20.62	1	1.850	3.0
		KAFB-106127-150	4/23/19	SV127-150-192	-1.0	0.26	20.51	1	2.100	3.0
		KAFB-106127-250	4/23/19	SV127-250-192	-1.1	0.18	19.83	2	2.550	3.0
		KAFB-106127-350	4/23/19	SV127-350-192	-1.1	0.24	20.65	2	2.700	3.0
		KAFB-106127-450	4/23/19	SV127-450-192	-0.9	0.50	20.46	111	24.150	3.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106128	KAFB-106128-025	4/23/19	SV128-025-192	-0.3	1.52	14.67	1	1.750	3.0
		KAFB-106128-050	4/23/19	SV128-050-192	-0.3	3.72	12.74	2	1.800	4.0
		KAFB-106128-150	4/23/19	SV128-150-192	-0.8	2.96	13.91	4	2.133	4.0
		KAFB-106128-250	4/23/19	SV128-250-192	-1.0	7.94	6.61	16	2.467	4.0
		KAFB-106128-350	4/23/19	SV128-350-192	-1.2	7.82	5.50	7,270	2.733	4.0
		KAFB-106128-450	4/23/19	SV128-450-192	-1.5	9.30	2.23	10,490	23.733	4.0
	KAFB-106129	KAFB-106129-025	5/6/19	SV127-025-192	-0.2	0.16	20.50	0	1.733	4.0
		KAFB-106129-050	5/6/19	SV127-050-192	-0.1	0.18	20.08	0	1.800	4.0
		KAFB-106129-150	5/6/19	SV127-150-192	-0.1	0.24	19.79	0	2.133	4.0
		KAFB-106129-250	5/6/19	SV127-250-192	0.0	0.54	19.53	1	2.467	4.0
		KAFB-106129-350	5/6/19	SV127-350-192	0.0	0.58	18.99	1	2.733	4.0
		KAFB-106129-450	5/6/19	SV127-450-192	0.1	1.72	16.05	383	23.800	4.0
	KAFB-106130	KAFB-106130-025	5/7/19	SV130-025-192	0.0	0.12	20.11	0	1.733	4.0
		KAFB-106130-050	5/7/19	SV130-050-192	0.0	0.18	19.89	0	1.800	4.0
		KAFB-106130-150	5/7/19	SV130-150-192	0.0	0.50	19.37	0	2.133	4.0
		KAFB-106130-250	5/7/19	SV130-250-192	0.1	0.70	19.28	0	2.467	4.0
		KAFB-106130-350	5/7/19	SV130-350-192	0.2	0.76	18.86	0	2.733	4.0
		KAFB-106130-450	5/7/19	SV130-450-192	0.2	1.58	16.93	50	23.800	4.0
	KAFB-106131	KAFB-106131-025	4/30/19	SV131-025-192	-0.2	0.28	20.27	0	1.733	4.0
		KAFB-106131-055	4/30/19	SV131-055-192	-0.1	0.22	20.11	0	1.867	4.0
		KAFB-106131-150	4/30/19	SV131-150-192	0.7	0.32	20.10	0	2.133	4.0
		KAFB-106131-245	4/30/19	SV131-245-192	0.7	0.50	19.80	0	2.400	4.0
		KAFB-106131-350	4/30/19	SV131-350-192	0.9	0.22	18.09	0	2.733	4.0
		KAFB-106131-450	4/30/19	SV131-450-192	0.8	0.52	16.77	148	23.267	4.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106132	KAFB-106132-025	4/29/19	SV132-025-192	0.0	1.78	18.50	3	1.850	3.0
		KAFB-106132-050	4/29/19	SV132-050-192	0.5	1.54	18.84	3	1.950	3.0
		KAFB-106132-175	4/29/19	SV132-175-192	1.7	0.56	19.34	5	2.300	3.0
		KAFB-106132-250	4/29/19	SV132-250-192	1.9	0.34	19.84	5	2.550	3.0
		KAFB-106132-350	4/29/19	SV132-350-192	1.9	0.54	20.07	4	2.850	3.0
		KAFB-106132-450	4/29/19	SV132-450-192	2.1	0.84	19.46	2	24.050	3.0
	KAFB-106133	KAFB-106133-025	4/23/19	SV133-025-192	0.0	1.62	19.47	0	1.733	4.0
		KAFB-106133-050	4/23/19	SV133-050-192	0.1	1.44	19.54	0	1.933	4.0
		KAFB-106133-170	4/23/19	SV133-170-192	0.0	0.50	19.56	0	2.850	4.0
		KAFB-106133-250	4/23/19	SV133-250-192	0.0	0.60	19.76	0	2.467	4.0
		KAFB-106133-350	4/23/19	SV133-350-192	-0.1	0.74	20.04	0	2.733	4.0
		KAFB-106133-450	4/23/19	SV133-450-192	-0.1	1.26	19.05	40	23.733	4.0
	KAFB-106134	KAFB-106134-025	4/29/19	SV134-025-192	0.0	0.18	20.08	2	1.850	3.0
		KAFB-106134-050	4/29/19	SV134-050-192	0.0	0.22	20.18	2	1.900	3.0
		KAFB-106134-170	4/29/19	SV134-170-192	0.6	0.26	20.01	2	2.250	3.0
		KAFB-106134-250	4/29/19	SV134-250-192	0.8	0.30	20.04	2	2.550	3.0
		KAFB-106134-350	4/29/19	SV134-350-192	1.2	0.44	20.19	4	2.850	3.0
		KAFB-106134-450	4/29/19	SV134-450-192	1.1	0.64	19.80	170	24.300	3.0
	KAFB-106135	KAFB-106135-025	4/29/19	SV135-025-192	0.0	0.26	20.67	2	1.850	3.0
		KAFB-106135-050	4/29/19	SV135-050-192	0.0	0.32	20.56	2	1.900	3.0
		KAFB-106135-150	4/29/19	SV135-175-192	0.0	0.14	20.38	1	2.200	3.0
		KAFB-106135-250	4/29/19	SV135-250-192	0.7	0.18	20.56	2	2.650	3.0
		KAFB-106135-350	4/29/19	SV135-350-192	0.6	0.28	20.15	2	2.850	3.0
		KAFB-106135-450	4/29/19	SV135-450-192	0.5	0.38	20.12	1	24.150	3.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	KAFB-106137	KAFB-106137-025	4/29/19	SV137-025-192	0.0	0.24	20.24	2	1.950	3.0
		KAFB-106137-050	4/29/19	SV137-050-192	0.0	0.34	20.72	2	2.050	3.0
		KAFB-106137-150	4/29/19	SV137-150-192	0.0	0.24	20.60	2	2.150	3.0
		KAFB-106137-250	4/29/19	SV137-250-192	0.0	0.28	19.79	2	2.550	3.0
		KAFB-106137-350	4/29/19	SV137-350-192	0.0	0.32	20.31	3	2.850	3.0
		KAFB-106137-450	4/29/19	SV137-450-192	0.0	1.54	18.46	1067	24.050	3.0
	KAFB-106139	KAFB-106139-025	4/29/19	SV139-025-192	0.1	0.60	20.20	0	1.867	4.0
		KAFB-106139-050	4/29/19	SV139-050-192	0.3	0.86	20.02	0	1.800	4.0
		KAFB-106139-150	4/29/19	SV139-150-192	1.2	0.56	19.22	0	2.133	4.0
		KAFB-106139-250	4/29/19	SV139-250-192	1.2	0.48	19.45	0	2.467	4.0
		KAFB-106139-350	4/29/19	SV139-350-192	1.4	0.42	19.88	0	2.733	4.0
		KAFB-106139-450	4/29/19	SV139-450-192	1.5	0.40	20.07	0	23.733	4.0
	KAFB-106140	KAFB-106140-025	4/29/19	SV140-025-192	-0.1	0.12	20.58	0	1.733	4.0
		KAFB-106140-050	4/29/19	SV140-050-192	-0.3	0.16	20.48	0	1.867	4.0
		KAFB-106140-150	4/29/19	SV140-150-192	0.0	0.16	19.92	0	2.133	4.0
		KAFB-106140-250	4/29/19	SV140-250-192	0.1	0.18	19.79	0	2.467	4.0
		KAFB-106140-350	4/29/19	SV140-350-192	0.2	0.26	20.26	0	2.733	4.0
		KAFB-106140-450	4/29/19	SV140-450-192	0.3	0.22	19.81	0	23.733	4.0
	SVMW-01	SVMW-01-050	5/6/19	SV01-050-192	0.1	7.68	8.51	0	0.500	2.0
		SVMW-01-100	5/6/19	SV01-100-192	0.1	11.26	3.62	6,340	0.567	2.0
		SVMW-01-250	5/6/19	SV01-250-192	0.2	2.16	13.11	2,740	0.767	2.0
		SVMW-01-300	5/6/19	SV01-300-192	0.3	0.34	19.19	30	0.700	2.0
	SVMW-02	SVMW-02-050	5/6/19	SV02-050-192	-0.1	6.16	8.48	0	0.500	2.0
		SVMW-02-100	5/6/19	SV02-100-192	-0.3	8.62	4.24	13,780	0.567	2.0
		SVMW-02-150	5/6/19	SV02-150-192	-0.1	2.88	13.15	939	0.633	2.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	SVMW-05	SVMW-05-050	5/6/19	SV05-050-192	0.0	4.00	14.82	0	0.500	2.0
		SVMW-05-100	5/6/19	SV05-100-192	0.0	6.32	11.96	0	0.567	2.0
		SVMW-05-230	5/6/19	SV05-230-192	0.1	0.96	16.10	183	0.567	2.0
		SVMW-05-290	5/6/19	SV05-290-192	0.2	0.40	19.63	0	0.833	2.0
	SVMW-06	SVMW-06-050	5/6/19	SV06-050-192	-0.1	0.92	18.62	0	0.500	2.0
		SVMW-06-100	5/6/19	SV06-100-192	-0.2	1.56	18.43	0	0.567	2.0
		SVMW-06-252	5/6/19	SV06-252-192	-0.3	1.78	16.85	339	0.767	2.0
		SVMW-06-302	5/6/19	SV06-290-192	0	1.18	17.81	1	0.833	2.0
	SVMW-07	SVMW-07-050	5/6/19	SV07-050-192	-0.2	1.30	17.97	0	0.500	2.0
		SVMW-07-100	5/6/19	SV07-100-192	-0.2	3.40	16.87	105	0.567	2.0
		SVMW-07-150	5/6/19	SV07-150-192	-0.1	2.94	17.42	0	0.633	2.0
	SVEW-10/SVMW-12	SVEW-10-410	5/6/19	SVE10-410-192	0.0	0.26	20.43	7	12.150	3.0
		SVMW-12-150	5/6/19	SV12-150-192	0.0	0.24	19.81	5	0.650	3.0
		SVMW-12-250	5/6/19	SV12-250-192	0.0	0.18	19.50	3	0.800	3.0
		SVMW-12-350	5/6/19	SV12-350-192	0.0	0.64	19.70	3	0.950	3.0
		SVMW-12-450	5/6/19	SV12-450-192	0.0	0.20	19.74	5	1.100	3.0
	SVEW-11/SVMW-13	SVEW-11-410	5/6/19	SVE11-410-192	0.0	1.12	17.39	263	11.500	3.0
		SVMW-13-150	5/6/19	SV13-150-192	0.0	6.18	7.65	1,185	0.750	3.0
		SVMW-13-250	5/6/19	SV13-250-192	0.0	0.60	19.89	4	1.300	3.0
		SVMW-13-350	5/6/19	SV13-350-192	0.0	0.68	19.62	5	0.950	3.0
		SVMW-13-450	5/6/19	SV13-450-192	0.0	0.76	17.72	11	1.150	3.0
	SVEW-12/SVMW-14	SVEW-12-410	4/30/19	SVE12-410-192	1.1	0.18	19.38	3	10.600	4.0
		SVMW-14-150	4/30/19	SV14-150-192	1.0	0.24	19.78	0	0.633	2.0
		SVMW-14-250	4/30/19	SV14-250-192	0.9	0.24	20.10	0	0.767	2.0
		SVMW-14-350	4/30/19	SV14-350-192	1.1	0.16	19.22	1	0.900	2.0
		SVMW-14-450	4/30/19	SV14-450-192	1.3	1.44	18.98	0	1.033	2.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Outside the Source Area)	SVEW-13/SVMW-15	SVEW-13-410	5/6/19	SVE13-410-192	0.5	1.44	15.17	636	11.000	3.0
		SVMW-15-150	5/6/19	SV15-150-192	0.0	0.48	19.49	5	0.700	3.0
		SVMW-15-250	5/6/19	SV15-250-192	0.1	0.58	19.37	13	0.900	3.0
		SVMW-15-350	5/6/19	SV15-350-192	0.9	0.72	17.70	69	0.950	3.0
		SVMW-15-450	5/6/19	SV15-450-192	0.8	3.20	11.92	2,240	1.100	3.0
On Base (Inside the Source Area)	SVEW-01	SVEW-01-260	N/A	SVE01-260-192	N/A	N/A	N/A	N/A	-	N/A
	SVEW-02/03	SVEW-02-060	N/A	SVE02-060-192	N/A	N/A	N/A	N/A	-	N/A
		SVEW-03-160	N/A	SVE03-160-192	N/A	N/A	N/A	N/A	-	N/A
	SVEW-04/05	SVEW-04-313	N/A	SVE04-313-192	N/A	N/A	N/A	N/A	-	N/A
		SVEW-05-460	N/A	SVE05-460-192	N/A	N/A	N/A	N/A	-	N/A
	SVEW-06/07	SVEW-06-060	4/22/19	SVE06-060-192	0.1	14.24	0.36	4,800	3.800	4.0
		SVEW-07-160	4/22/19	SVE07-160-192	0.0	6.58	3.68	24,960	6.000	4.0
	SVEW-08/09	SVEW-08-260	4/22/19	SVE08-260-192	0.3	3.94	12.51	9	8.200	4.0
		SVEW-09-460	4/22/19	SVE09-460-192	0.3	3.90	12.93	10	12.267	4.0
	SVMW-03	SVMW-03-050	4/22/19	SV03-050-192	0.0	13.31	0.08	6,090	0.500	2.0
		SVMW-03-100	4/22/19	SV03-100-192	-0.1	13.40	0.06	9,100	0.667	2.0
		SVMW-03-250	4/22/19	SV03-250-192	-0.4	12.38	0.39	14,290	0.767	2.0
		SVMW-03-300	4/22/19	SV03-300-192	-0.4	11.88	1.71	11,340	0.833	2.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

AOI	Sample Location	Location ID	Date	Sample ID	Static Pressure (inWC)	CO_2 (%)	O_2 (%)	HC (ppmv)	Volume Purged (ft^3)	Purge Rate (cfm)
On Base (Inside the Source Area)	SVMW-04	SVMW-04-050	4/22/19	SV04-050-192	0.0	10.26	5.29	295	0.500	2.0
		SVMW-04-100	4/22/19	SV04-100-192	0.1	9.74	3.60	13,670	0.567	2.0
		SVMW-04-250	4/22/19	SV04-250-192	-0.3	7.00	3.60	16,780	0.767	2.0
		SVMW-04-300	4/22/19	SV04-300-192	-0.1	0.78	16.95	1,300	0.833	2.0
	SVMW-08	SVMW-08-050	4/22/19	SV08-050-192	-0.1	7.78	3.82	11,370	0.500	2.0
		SVMW-08-100	4/22/19	SV08-100-192	0.2	14.10	0.29	32	0.567	2.0
		SVMW-08-250	4/22/19	SV08-250-192	0.2	12.18	0.12	11,600	0.767	2.0
		SVMW-08-266[b]	N/A	SV08-266-192	N/A	N/A	N/A	N/A	-	N/A
	SVMW-09	SVMW-09-050	4/22/19	SV09-050-192	0.2	14.10	0.11	1,434	0.500	2.0
		SVMW-09-100	4/22/19	SV09-100-192	0.3	10.48	0.20	24,050	0.567	2.0
		SVMW-09-250	4/22/19	SV09-250-192	0.1	8.88	1.88	14,600	0.767	2.0
		SVMW-09-266	4/22/19	SV09-266-192	0.0	6.98	1.39	24,790	0.800	2.0
	SVMW-10	SVMW-10-050	N/A	SV10-050-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-10-100	N/A	SV10-100-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-10-150	N/A	SV10-150-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-10-250	N/A	SV10-250-192	N/A	N/A	N/A	N/A	-	N/A
	SVMW-11	SVMW-11-050	N/A	SV11-050-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-11-100	N/A	SV11-100-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-11-250	N/A	SV11-250-192	N/A	N/A	N/A	N/A	-	N/A
		SVMW-11-260	N/A	SV11-260-192	N/A	N/A	N/A	N/A	-	N/A

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q2 2019

[a] Purge rate was not recorded; volume purged is estimated.

[b] Measurements at SVMW-08-266 could not be obtained because SVMW-08-266 is clogged.

-- = Parameter or analyte not required for analysis in Q1

AFB = Air Force base

AOI = area of interest

cfm = cubic foot per minute

CO_2 = carbon dioxide

ft^3 = cubic foot

HC = hydrocarbon

ID = identification

in = inch

O_2 = diatomic oxygen

ppmv = part per million by volume

SVEW = soil vapor extraction well

SVMW = soil vapor monitoring well

SWMU = solid waste management unit

WC = water colunm

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106028-150			KAFB-106028-250			KAFB-106028-350			KAFB-106028-450			KAFB-106136-025		
		Field Sample ID:	SV028-150-192			SV028-250-192			SV028-350-192			SV028-450-192			SV136-025-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	0.95	ND	U	0.74	0.36	J	0.71	ND	U	0.82	0.37	J	0.63
		1,1-Dichloroethane	ND	U	1.7	ND	U	1.3	1.6	J	1.3	2	J	1.5	ND	U	1.1
		1,2,4-Trichlorobenzene	ND	U	1.8	ND	U	1.4	ND	U	1.3	ND	U	1.6	ND	U	1.2
		1,2,4-Trimethylbenzene	1.5	J	0.95	1.7	J	0.74	3.3	--	0.71	0.4	J	0.82	ND	U	0.63
		1,2-Dibromoethane	ND	U	0.95	ND	U	0.74	ND	U	0.71	2.6	--	0.82	ND	U	0.63
		1,2-Dichlorobenzene	ND	U	0.95	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.63
		1,3,5-Trimethylbenzene	0.91	J	0.95	1.3	J	0.74	2.6	--	0.71	ND	U	0.82	ND	U	0.63
		1,3-Butadiene	ND	U	1.7	ND	U	1.3	ND	U	1.3	ND	U	1.5	ND	U	1.1
		1,4-Dioxane	0.43	J	0.95	ND	U	0.74	0.32	J	0.71	ND	U	0.82	ND	U	0.63
		2-Butanone	1	J	1.7	16	--	1.3	7.1	--	1.3	1	J	1.5	ND	U	1.1
		2-Hexanone	ND	U	0.95	2.2	J	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.63
		4-Methyl-2-Pentanone	ND	U	0.95	0.38	J	0.74	0.47	J	0.71	ND	U	0.82	ND	U	0.63
		Acetone	8.2	J	15	43	--	12	26	--	11	ND	U	13	12	J	10
		Benzene	1.1	J	0.95	0.98	J	0.74	1.6	J	0.71	0.63	J	0.82	ND	U	0.63
		Bromodichloromethane	ND	U	0.95	ND	U	0.74	ND	U	0.71	ND	U	0.82	1.1	J	0.63
		Bromoform	ND	U	1.8	ND	U	1.4	ND	U	1.3	ND	U	1.6	ND	U	1.2
		Carbon Disulfide	ND	U	3	1	J	2.3	2.2	J	2.3	2.6	J	2.6	6.7	--	2
		Carbon Tetrachloride	ND	U	0.95	ND	U	0.74	0.49	J	0.71	ND	U	0.82	ND	U	0.63
		Chloroethane	ND	U	1.7	0.37	J	1.3	3.8	--	1.3	8.9	--	1.5	ND	U	1.1
		Chloroform	ND	U	0.95	0.38	J	0.74	0.42	J	0.71	0.34	J	0.82	5.9	--	0.63
		Chloromethane	ND	U	1.7	ND	U	1.3	1.7	J	1.3	1.9	J	1.5	ND	U	1.1
		Cyclohexane	2.3	J	1.8	5.9	--	1.4	6.9	--	1.4	4.6	J	1.6	ND	U	1.2
		Dibromochloromethane	ND	U	0.95	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.63
		Dichlorodifluoromethane	3.7		1.7	7.5	--	1.3	2.2	--	1.3	1.6	J	1.5	1.7	J	1.1
		Ethanol	ND	U	4.6	3.6	J	3.6	ND	U	3.4	ND	U	4	1.4	J	3
		Ethyl Acetate	ND	U	3.6	ND	U	2.8	ND	U	2.7	ND	U	3.2	ND	U	2.4
		Ethylbenzene	0.78	J	0.95	0.96	J	0.74	2.5	--	0.71	0.53	J	0.82	ND	U	0.63
		Hexane	1.4	J	1.8	1.6	J	1.4	4.1	--	1.3	1.5	J	1.6	ND	U	1.2
		Isopropyl Alcohol	ND	U	3.5	1	J	2.7	ND	U	2.6	ND	U	3	1.4	J	2.3
		m- & p-Xylenes	3.4	J	1.9	3.8	J	1.5	7.1	--	1.4	1.7	J	1.6	ND	U	1.3
		Methylene Chloride	ND	U	1.8	ND	U	1.4	ND	U	1.3	ND	U	1.6	ND	U	1.2
		Naphthalene	ND	U	1.7	ND	U	1.3	ND	U	1.3	ND	U	1.5	ND	U	1.1
		n-Heptane	1.7	J	1.8	2.2	J	1.4	3.6	--	1.3	1.1	J	1.6	ND	U	1.2
		o-Xylene	2.5	J	0.95	3.5	--	0.74	7.6	--	0.71	0.84	J	0.82	ND	U	0.63
		Propylene (Propene)	ND	U	1.7	1.9	J	1.3	1.9	J	1.3	1.8	J	1.5	ND	U	1.1
		Styrene	ND	U	1.8	ND	U	1.4	ND	U	1.3	ND	U	1.6	ND	U	1.2
		Tetrachloroethene	0.71	J	0.95	ND	U	0.74	0.6	J	0.71	1.4	J	0.82	ND	U	0.63
		Tetrahydrofuran	23		0.95	110	--	0.74	4.4	--	0.71	0.79	J	0.82	ND	U	0.63
		Toluene	2.8	J	0.95	3	--	0.74	3.7	--	0.71	1.9	J	0.82	0.47	J	0.63
		Trichloroethene	ND	U	0.95	ND	U	0.74	ND	U	0.71	ND	U	0.82	0.31	J	0.63
		Trichlorofluoromethane	1.4	J	1.8	3	--	1.4	1.6	J	1.3	1	J	1.6	0.9	J	1.2
		Vinyl Chloride	ND	U	0.95	ND	U	0.74	1.9	J	0.71	2.2	J	0.82	ND	U	0.63
		Xylenes, Total	5.9	J	1.9	7.2	--	1.5	15	--	1.4	2.6	J	1.6	ND	U	1.3

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106136-050			KAFB-106136-150			KAFB-106136-250			KAFB-106136-350			KAFB-106136-450		
		Field Sample ID:	SV136-050-192			SV136-150-192			SV136-250-192			SV136-350-192			SV136-450-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46	J	0.74	0.89	J	0.71	1	J	0.82	0.4	J	0.79	0.34	J	0.76
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.4	1	J	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	0.66	J	0.76
		1,2-Dibromoethane	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		1,2-Dichlorobenzene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		1,3,5-Trimethylbenzene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		1,3-Butadiene	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	1	J	0.76
		2-Butanone	ND	U	1.4	ND	U	1.3	ND	U	1.5	0.84	J	1.4	26	--	1.4
		2-Hexanone	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	2.1	J	0.76
		4-Methyl-2-Pentanone	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	0.96	J	0.76
		Acetone	6.6	J	12	ND	U	11	ND	U	13	9.4	J	12	110	--	12
		Benzene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	1.3	J	0.76
		Bromodichloromethane	1.8	J	0.74	0.34	J	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		Bromoform	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.4
		Carbon Disulfide	6	--	2.4	2.4	J	2.3	5.2	J	2.6	7.1	--	2.5	180	--	2.4
		Carbon Tetrachloride	ND	U	0.74	1.7	J	0.71	2.8	--	0.82	1.5	J	0.79	1	J	0.76
		Chloroethane	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.4	5.3	--	1.4
		Chloroform	8.9	--	0.74	0.93	J	0.71	ND	U	0.82	ND	U	0.79	0.49	J	0.76
		Chloromethane	ND	U	1.3	ND	U	1.3	ND	U	1.4	ND	U	1.4	22	--	1.3
		Cyclohexane	ND	U	1.4	ND	U	1.4	ND	U	1.6	0.74	J	1.5	1.2	J	1.5
		Dibromochloromethane	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		Dichlorodifluoromethane	2.1	J	1.4	2.8	--	1.3	2.4	J	1.5	1.3	J	1.4	1.3	J	1.4
		Ethanol	ND	U	3.6	ND	U	3.4	ND	U	4	2	J	3.8	9.6	J	3.6
		Ethyl Acetate	ND	U	2.8	ND	U	2.7	ND	U	3.1	36	--	3	13	--	2.9
		Ethylbenzene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	0.47	J	0.76
		Hexane	ND	U	1.4	ND	U	1.3	ND	U	1.5	0.78	J	1.5	2.1	J	1.4
		Isopropyl Alcohol	ND	U	2.7	ND	U	2.6	ND	U	3	ND	U	2.9	3.8	J	2.8
		m- & p-Xylenes	ND	U	1.5	ND	U	1.4	1.5	J	1.6	1.6	J	1.6	2.6	J	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.4
		Naphthalene	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		n-Heptane	ND	U	1.4	1	J	1.3	1.2	J	1.5	1.1	J	1.5	4.8	--	1.4
		o-Xylene	ND	U	0.74	ND	U	0.71	0.42	J	0.82	0.48	J	0.79	0.83	J	0.76
		Propylene (Propene)	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.4	6.4	--	1.4
		Styrene	ND	U	1.4	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.4
		Tetrachloroethene	ND	U	0.74	0.95	J	0.71	1	J	0.82	0.35	J	0.79	3.6	--	0.76
		Tetrahydrofuran	ND	U	0.74	3.6	--	0.71	3.8	--	0.82	21	--	0.79	70	--	0.76
		Toluene	ND	U	0.74	0.45	J	0.71	1.2	J	0.82	5.1	--	0.79	5.7	--	0.76
		Trichloroethene	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	ND	U	0.76
		Trichlorofluoromethane	1.2	J	1.4	2.3	--	1.3	2.6	--	1.5	1.2	J	1.5	1	J	1.4
		Vinyl Chloride	ND	U	0.74	ND	U	0.71	ND	U	0.82	ND	U	0.79	8.8	--	0.76
		Xylenes, Total	ND	U	1.5	ND	U	1.4	1.9	J	1.6	2.1	J	1.6	3.4	J	1.5

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106138-025			KAFB-106138-050			KAFB-106138-150			KAFB-106138-250			KAFB-106138-350		
		Field Sample ID:	SV138-025-192			SV138-050-192			SV138-150-192			SV138-250-192			SV138-350-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.46	J	0.58	0.52	J	0.7	6.7	--	0.8	8.7	--	0.75	5	--	0.76
		1,1-Dichloroethane	ND	U	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	0.35	J	1.4
		1,2,4-Trichlorobenzene	ND	U	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	3.3	--	0.58	ND	U	0.7	4.1	--	0.8	2.6	--	0.75	1.3	J	0.76
		1,2-Dibromoethane	ND	U	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		1,2-Dichlorobenzene	ND	U	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		1,3,5-Trimethylbenzene	1.1	J	0.58	ND	U	0.7	2.7	--	0.8	1.5	J	0.75	0.85	J	0.76
		1,3-Butadiene	ND	U	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		2-Butanone	4.9	--	1.1	0.91	J	1.3	1.6	J	1.5	4.9	--	1.4	1.2	J	1.4
		2-Hexanone	ND	U	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		4-Methyl-2-Pentanone	2.7	--	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		Acetone	53	--	9.2	17	J	11	19	J	13	23	J	12	26	--	12
		Benzene	0.7	J	0.58	ND	U	0.7	0.43	J	0.8	0.36	J	0.75	0.49	J	0.76
		Bromodichloromethane	ND	U	0.58	ND	U	0.7	6.4	--	0.8	19	--	0.75	19	--	0.76
		Bromoform	ND	U	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	3.5	J	1.8	3.1	J	2.2	5.2	--	2.5	17	--	2.4	9.3	--	2.4
		Carbon Tetrachloride	ND	U	0.58	ND	U	0.7	2.5	--	0.8	3.7	--	0.75	2.7	--	0.76
		Chloroethane	ND	U	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		Chloroform	0.28	J	0.58	ND	U	0.7	27	--	0.8	78	--	0.75	87	--	0.76
		Chloromethane	ND	U	1	ND	U	1.2	ND	U	1.4	ND	U	1.3	0.52	J	1.3
		Cyclohexane	3.5	--	1.1	ND	U	1.4	2.1	J	1.6	1.1	J	1.5	ND	U	1.5
		Dibromochloromethane	ND	U	0.58	ND	U	0.7	0.65	J	0.8	3.5	--	0.75	2.4	--	0.76
		Dichlorodifluoromethane	2.1	--	1.1	2.4	--	1.3	5.4	--	1.5	4.9	--	1.4	2.7	--	1.4
		Ethanol	55	--	2.8	1.6	J	3.4	ND	U	3.9	8.3	J	3.6	3.4	J	3.6
		Ethyl Acetate	29	--	2.2	ND	U	2.7	ND	U	3.1	ND	U	2.9	ND	U	2.9
		Ethylbenzene	10	--	0.58	ND	U	0.7	2.5	--	0.8	1.4	J	0.75	0.89	J	0.76
		Hexane	7	--	1.1	ND	U	1.3	1.9	J	1.5	1.2	J	1.4	0.96	J	1.4
		Isopropyl Alcohol	47	--	2.1	ND	U	2.6	1.2	J	2.9	1.7	J	2.7	12	J	2.8
		m- & p-Xylenes	34	--	1.2	ND	U	1.4	31	--	1.6	15	--	1.5	9.7	J	1.5
		Methylene Chloride	5.3	--	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		Naphthalene	ND	U	1.1	ND	U	1.3	1.3	J	1.5	0.86	J	1.4	ND	U	1.4
		n-Heptane	3.2	--	1.1	ND	U	1.3	13	--	1.5	6.1	--	1.4	4.9	J	1.4
		o-Xylene	11	--	0.58	ND	U	0.7	9.6	--	0.8	4.8	--	0.75	3	--	0.76
		Propylene (Propene)	5	--	1.1	ND	U	1.3	ND	U	1.5	1.1	J	1.4	2.1	J	1.4
		Styrene	6.9	--	1.1	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	0.49	J	0.58	0.63	J	0.7	1.2	J	0.8	1.2	J	0.75	0.71	J	0.76
		Tetrahydrofuran	1.4	J	0.58	0.84	J	0.7	1.2	J	0.8	1.5	J	0.75	1.2	J	0.76
		Toluene	79	--	0.58	0.42	J	0.7	7.7	--	0.8	5.4	--	0.75	3.7	J	0.76
		Trichloroethene	0.43	J	0.58	ND	U	0.7	3.4	--	0.8	9.2	--	0.75	7.7	J	0.76
		Trichlorofluoromethane	7.7	--	1.1	15	--	1.3	18	--	1.5	18	--	1.4	3.8	--	1.4
		Vinyl Chloride	ND	U	0.58	ND	U	0.7	ND	U	0.8	ND	U	0.75	ND	U	0.76
		Xylenes, Total	45	--	1.2	ND	U	1.4	40	--	1.6	20	--	1.5	13	J	1.5

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106138-350			KAFB-106138-450			KAFB-106141-025			KAFB-106141-050			KAFB-106141-170		
		Field Sample ID:	SV138-350-592			SV138-450-192			SV141-025-192			SV141-050-192			SV141-170-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	5	--	0.72	1.5	J	0.8	0.62	J	0.72	0.75	J	0.8	0.95	J	0.75
		1,1-Dichloroethane	0.35	J	1.3	2.5	--	1.5	ND	U	1.3	ND	U	1.5	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	4.1	--	0.72	0.73	J	0.8	ND	U	0.72	ND	U	0.8	2.5	--	0.75
		1,2-Dibromoethane	ND	U	0.72	ND	U	0.8	ND	U	0.72	ND	U	0.8	ND	U	0.75
		1,2-Dichlorobenzene	ND	U	0.72	ND	U	0.8	ND	U	0.72	ND	U	0.8	0.5	J	0.75
		1,3,5-Trimethylbenzene	2.6	--	0.72	0.41	J	0.8	ND	U	0.72	ND	U	0.8	1.6	J	0.75
		1,3-Butadiene	ND	U	1.3	ND	U	1.5	ND	U	1.3	ND	U	1.5	ND	U	1.4
		1,4-Dioxane	ND	U	0.72	ND	U	0.8	ND	U	0.72	0.79	J	0.8	ND	U	0.75
		2-Butanone	4.1	J	1.3	2	J	1.5	ND	U	1.3	ND	U	1.5	2.5	J	1.4
		2-Hexanone	ND	U	0.72	ND	U	0.8	ND	U	0.72	ND	U	0.8	ND	U	0.75
		4-Methyl-2-Pentanone	ND	U	0.72	ND	U	0.8	ND	U	0.72	ND	U	0.8	ND	U	0.75
		Acetone	21	J	11	15	J	13	9.1	J	11	6	J	13	15	J	12
		Benzene	1	J	0.72	2.7	--	0.8	ND	U	0.72	ND	U	0.8	0.38	J	0.75
		Bromodichloromethane	20	--	0.72	12	--	0.8	ND	U	0.72	0.77	J	0.8	2.7	--	0.75
		Bromoform	ND	U	1.4	ND	U	1.5	0.76	J	1.4	ND	U	1.5	ND	U	1.4
		Carbon Disulfide	11	--	2.3	110	--	2.6	2.3	J	2.3	ND	U	2.5	3.2	J	2.4
		Carbon Tetrachloride	2.7	--	0.72	4.2	--	0.8	0.37	J	0.72	0.71	J	0.8	0.99	J	0.75
		Chloroethane	ND	U	1.3	3.6	--	1.5	ND	U	1.3	ND	U	1.5	ND	U	1.4
		Chloroform	85	--	0.72	32	--	0.8	3	--	0.72	7.1	--	0.8	19	--	0.75
		Chloromethane	ND	U	1.3	9.9	--	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.3
		Cyclohexane	2.8	J	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.6	ND	U	1.5
		Dibromochloromethane	2.6	--	0.72	2.4	J	0.8	ND	U	0.72	ND	U	0.8	ND	U	0.75
		Dichlorodifluoromethane	2.6	--	1.3	1.4	J	1.5	9.5	--	1.3	16	--	1.5	16	--	1.4
		Ethanol	2.4	J	3.5	ND	U	3.9	2.1	J	3.5	ND	U	3.9	14	J	3.6
		Ethyl Acetate	ND	U	2.7	ND	U	3.1	1.2	J	2.8	ND	U	3.1	ND	U	2.9
		Ethylbenzene	3.2	--	0.72	0.66	J	0.8	ND	U	0.72	ND	U	0.8	1.2	J	0.75
		Hexane	3.7	--	1.4	1	J	1.5	ND	U	1.4	ND	U	1.5	0.64	J	1.4
		Isopropyl Alcohol	0.98	J	2.6	2.7	J	2.9	1.3	J	2.6	ND	U	2.9	2.2	J	2.7
		m- & p-Xylenes	34	J	1.4	6.2	--	1.6	0.9	J	1.4	ND	U	1.6	12	--	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Naphthalene	0.61	J	1.3	ND	U	1.5	0.73	J	1.3	ND	U	1.5	ND	U	1.4
		n-Heptane	19	J	1.4	4.1	--	1.5	ND	U	1.4	ND	U	1.5	3.1	--	1.4
		o-Xylene	9.9	--	0.72	1.7	J	0.8	0.33	J	0.72	ND	U	0.8	4.3	--	0.75
		Propylene (Propene)	0.65	J	1.3	1.9	J	1.5	ND	U	1.3	ND	U	1.5	0.69	J	1.4
		Styrene	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Tetrachloroethene	19	J	0.72	0.35	J	0.8	0.85	J	0.72	1.5	J	0.8	2	J	0.75
		Tetrahydrofuran	1.7	J	0.72	1.6	J	0.8	0.57	J	0.72	ND	U	0.8	3.1	--	0.75
		Toluene	14	J	0.72	3.6	--	0.8	4.1	--	0.72	ND	U	0.8	4.1	--	0.75
		Trichloroethene	36	J	0.72	1.6	J	0.8	ND	U	0.72	ND	U	0.8	0.37	J	0.75
		Trichlorofluoromethane	3.8	--	1.4	0.82	J	1.5	9.1	--	1.4	17	--	1.5	22	--	1.4
		Vinyl Chloride	ND	U	0.72	3.5	--	0.8	ND	U	0.72	ND	U	0.8	ND	U	0.75
		Xylenes, Total	44	J	1.4	7.9	--	1.6	1.2	J	1.4	ND	U	1.6	17	--	1.5

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106141-250			KAFB-106141-350			KAFB-106141-450			KAFB-106142-030			KAFB-106142-050		
		Field Sample ID:	SV141-250-192			SV141-350-192			SV141-450-192			SV142-030-192			SV142-050-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.91	J	0.75	0.44	J	0.79	ND	U	0.79	0.43	J	0.74	0.47	J	0.58
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.4	2.3	J	1.4	ND	U	1.3	ND	U	1.1
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.1
		1,2,4-Trimethylbenzene	0.99	J	0.75	1.2	J	0.79	0.91	J	0.79	4	--	0.74	ND	U	0.58
		1,2-Dibromoethane	ND	U	0.75	ND	U	0.79	ND	U	0.79	ND	U	0.74	ND	U	0.58
		1,2-Dichlorobenzene	ND	U	0.75	ND	U	0.79	ND	U	0.79	ND	U	0.74	ND	U	0.58
		1,3,5-Trimethylbenzene	0.55	J	0.75	0.72	J	0.79	0.42	J	0.79	2.2	J	0.74	ND	U	0.58
		1,3-Butadiene	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.1
		1,4-Dioxane	2.2	J	0.75	0.7	J	0.79	ND	U	0.79	ND	U	0.74	ND	U	0.58
		2-Butanone	6.7	--	1.4	1.3	J	1.4	12	--	1.4	3.6	J	1.3	4	--	1.1
		2-Hexanone	ND	U	0.75	ND	U	0.79	ND	U	0.79	1.1	J	0.74	1	J	0.58
		4-Methyl-2-Pentanone	0.36	J	0.75	ND	U	0.79	4	--	0.79	ND	U	0.74	ND	U	0.58
		Acetone	28	--	12	13	J	13	55	--	12	25	--	12	15	J	9.2
		Benzene	0.4	J	0.75	0.56	J	0.79	0.99	J	0.79	ND	U	0.74	0.4	J	0.58
		Bromodichloromethane	2.7	--	0.75	1.7	J	0.79	ND	U	0.79	ND	U	0.74	ND	U	0.58
		Bromoform	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.1
		Carbon Disulfide	17	--	2.4	74	--	2.5	78	--	2.5	ND	U	2.3	0.99	J	1.8
		Carbon Tetrachloride	1	J	0.75	0.58	J	0.79	0.57	J	0.79	ND	U	0.74	ND	U	0.58
		Chloroethane	ND	U	1.4	ND	U	1.4	2.7	--	1.4	ND	U	1.3	ND	U	1.1
		Chloroform	21	--	0.75	7.7	--	0.79	2.1	J	0.79	1.1	J	0.74	0.9	J	0.58
		Chloromethane	0.51	J	1.3	ND	U	1.4	10	--	1.4	ND	U	1.3	0.29	J	1
		Cyclohexane	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.4	1.3	J	1.1
		Dibromochloromethane	0.71	J	0.75	ND	U	0.79	ND	U	0.79	ND	U	0.74	ND	U	0.58
		Dichlorodifluoromethane	11	--	1.4	4.9	--	1.4	3.1	--	1.4	2	J	1.3	2.1	--	1.1
		Ethanol	8.3	J	3.6	ND	U	3.8	ND	U	3.8	2.5	J	3.5	5.3	J	2.8
		Ethyl Acetate	8.7	--	2.9	ND	U	3	ND	U	3	ND	U	2.8	91	--	2.2
		Ethylbenzene	0.79	J	0.75	0.43	J	0.79	0.58	J	0.79	0.95	J	0.74	ND	U	0.58
		Hexane	0.92	J	1.4	0.66	J	1.5	0.88	J	1.5	ND	U	1.4	1.1	J	1.1
		Isopropyl Alcohol	2.5	J	2.7	ND	U	2.9	ND	U	2.9	5.1	J	2.7	2.1	J	2.1
		m- & p-Xylenes	6.3	--	1.5	3.9	J	1.6	4.3	J	1.6	1.6	J	1.5	ND	U	1.2
		Methylene Chloride	1	J	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.4	0.57	J	1.1
		Naphthalene	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.1
		n-Heptane	2.3	J	1.4	2.3	J	1.5	2.9	--	1.5	0.58	J	1.4	0.52	J	1.1
		o-Xylene	2	J	0.75	1.3	J	0.79	1.2	J	0.79	1.3	J	0.74	ND	U	0.58
		Propylene (Propene)	1.3	J	1.4	ND	U	1.4	1.6	J	1.4	ND	U	1.3	0.84	J	1.1
		Styrene	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.1
		Tetrachloroethene	1.4	J	0.75	0.41	J	0.79	0.48	J	0.79	0.38	J	0.74	0.23	J	0.58
		Tetrahydrofuran	28	--	0.75	13	--	0.79	90	--	0.79	ND	U	0.74	ND	U	0.58
		Toluene	6.3	--	0.75	2.5	--	0.79	3.5	--	0.79	0.72	J	0.74	10	--	0.58
		Trichloroethene	0.61	J	0.75	ND	U	0.79	ND	U	0.79	0.89	J	0.74	0.33	J	0.58
		Trichlorofluoromethane	22	--	1.4	9.2	--	1.5	5.4	--	1.5	1.2	J	1.4	1.3	J	1.1
		Vinyl Chloride	ND	U	0.75	ND	U	0.79	2.9	--	0.79	ND	U	0.74	ND	U	0.58
		Xylenes, Total	8.3	--	1.5	5.3	--	1.6	5.6	--	1.6	2.9	J	1.5	ND	U	1.2

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

		Location ID:	KAFB-106142-050			KAFB-106142-170			KAFB-106142-250			KAFB-106142-350			KAFB-106142-450		
		Field Sample ID:	SV142-050-592			SV142-170-192			SV142-250-192			SV142-350-192			SV142-450-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.48	J	0.71	0.58	J	0.72	0.64	J	0.72	ND	U	0.7	0.37	J	0.73
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	0.47	J	1.3
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.71	0.71	J	0.72	0.4	J	0.72	ND	U	0.7	1.3	J	0.73
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	1.4	J	0.73
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	ND	U	0.73
		1,3,5-Trimethylbenzene	ND	U	0.71	0.37	J	0.72	ND	U	0.72	ND	U	0.7	0.95	J	0.73
		1,3-Butadiene	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,4-Dioxane	1.4	J	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	ND	U	0.73
		2-Butanone	ND	U	1.3	ND	U	1.3	2.9	J	1.3	ND	U	1.3	17	--	1.3
		2-Hexanone	ND	U	0.71	ND	U	0.72	1.9	J	0.72	ND	U	0.7	ND	U	0.73
		4-Methyl-2-Pentanone	ND	U	0.71	ND	U	0.72	0.48	J	0.72	ND	U	0.7	0.62	J	0.73
		Acetone	7.3	J	11	ND	U	11	11	J	11	8.7	J	11	50	--	12
		Benzene	ND	U	0.71	0.78	J	0.72	ND	U	0.72	0.32	J	0.7	19	--	0.73
		Bromodichloromethane	ND	U	0.71	ND	U	0.72	ND	U	0.72	0.34	J	0.7	ND	U	0.73
		Bromoform	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4
		Carbon Disulfide	5.3	--	2.3	6.5	--	2.3	6.6	--	2.3	7.8	--	2.2	39	--	2.3
		Carbon Tetrachloride	ND	U	0.71	1.3	J	0.72	1.5	J	0.72	0.79	J	0.7	0.53	J	0.73
		Chloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	0.57	J	1.3
		Chloroform	1.1	J	0.71	0.4	J	0.72	1.5	J	0.72	5.2	--	0.7	2.3	--	0.73
		Chloromethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.2	1.9	J	1.3
		Cyclohexane	ND	U	1.4	1.4	J	1.4	ND	U	1.4	ND	U	1.4	1.3	J	1.4
		Dibromochloromethane	ND	U	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	ND	U	0.73
		Dichlorodifluoromethane	2.2	J	1.3	23	--	1.3	21	--	1.3	4.4	--	1.3	2.9	--	1.3
		Ethanol	ND	U	3.4	ND	U	3.5	1.9	J	3.5	ND	U	3.4	4	J	3.5
		Ethyl Acetate	ND	U	2.7	ND	U	2.8	1.5	J	2.8	ND	U	2.7	6	--	2.8
		Ethylbenzene	ND	U	0.71	0.98	J	0.72	0.37	J	0.72	0.35	J	0.7	2.2	J	0.73
		Hexane	ND	U	1.3	2	J	1.4	ND	U	1.4	0.46	J	1.3	1.9	J	1.4
		Isopropyl Alcohol	ND	U	2.6	ND	U	2.6	ND	U	2.6	ND	U	2.5	1.3	J	2.7
		m- & p-Xylenes	ND	U	1.4	5.4	--	1.4	1.8	J	1.4	1.7	J	1.4	7.6	--	1.5
		Methylene Chloride	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4
		Naphthalene	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		n-Heptane	ND	U	1.3	8.6	--	1.4	1.3	J	1.4	1.5	J	1.3	1.6	J	1.4
		o-Xylene	ND	U	0.71	1.5	J	0.72	0.59	J	0.72	0.52	J	0.7	6.2	--	0.73
		Propylene (Propene)	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	1.3	J	1.3
		Styrene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4
		Tetrachloroethene	ND	U	0.71	0.53	J	0.72	0.82	J	0.72	0.29	J	0.7	0.35	J	0.73
		Tetrahydrofuran	ND	U	0.71	2.6	--	0.72	5	--	0.72	6.2	--	0.7	14	--	0.73
		Toluene	0.31	J	0.71	7.6	--	0.72	2.4	--	0.72	2.5	--	0.7	23	--	0.73
		Trichloroethene	ND	U	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	ND	U	0.73
		Trichlorofluoromethane	1.3	J	1.3	16	--	1.4	18	--	1.4	6.9	--	1.3	3.9	--	1.4
		Vinyl Chloride	ND	U	0.71	ND	U	0.72	ND	U	0.72	ND	U	0.7	0.44	J	0.73
		Xylenes, Total	ND	U	1.4	6.8	--	1.4	2.4	J	1.4	2.3	J	1.4	14	--	1.5

Table 2-3
Analytical Data in Off-Base Soil Vapor Monitoring Points, Q2 2019

µg/m^3 = microgram per cubic meter
AFB = Air Force Base
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
ND = not detected
REG = normal field sample
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit.
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
-- = Validation qualifier not assigned.

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106108-025			KAFB-106108-050			KAFB-106108-150			KAFB-106108-250			KAFB-106108-350		
		Field Sample ID:	SV108-025-192			SV108-050-192			SV108-150-192			SV108-250-192			SV108-350-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.1	--	0.97	480	--	5.7	890	--	1.5	1,900	--	13	2,400	--	13
		1,1-Dichloroethane	ND	U	1.8	ND	U	1.3	ND	U	2.7	ND	U	1.5	ND	U	1.5
		1,2,4-Trichlorobenzene	ND	U	1.8	ND	U	1.3	ND	U	2.8	ND	U	1.5	ND	U	1.5
		1,2,4-Trimethylbenzene	1.7	J	0.97	ND	U	0.71	1.2	J	1.5	ND	U	0.8	ND	U	0.81
		1,2-Dibromoethane	0.76	J	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		1,2-Dichlorobenzene	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		1,3,5-Trimethylbenzene	0.77	J	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		1,3-Butadiene	ND	U	1.8	ND	U	1.3	ND	U	2.7	ND	U	1.5	ND	U	1.5
		1,4-Dioxane	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		2-Butanone	13	--	1.8	ND	U	1.3	ND	U	2.7	ND	U	1.5	1.2	J	1.5
		2-Hexanone	3.7	--	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		4-Methyl-2-Pentanone	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		Acetone	70	--	15	ND	U	11	ND	U	23	ND	U	13	ND	U	13
		Benzene	18	--	0.97	ND	U	0.71	1.5	J	1.5	0.47	J	0.8	2.9	--	0.81
		Bromodichloromethane	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		Bromoform	ND	U	1.8	ND	U	1.3	ND	U	2.8	ND	U	1.5	ND	U	1.5
		Carbon Disulfide	13	--	3.1	0.97	U	2.3	47	--	4.7	4.2	J	2.5	14	--	2.6
		Carbon Tetrachloride	3.5	--	0.97	51	--	0.71	94	--	1.5	240	--	0.8	73	--	0.81
		Chloroethane	ND	U	1.8	ND	U	1.3	ND	U	2.7	ND	U	1.5	ND	U	1.5
		Chloroform	ND	U	0.97	6.3	--	0.71	22	--	1.5	9.9	--	0.8	8	--	0.81
		Chloromethane	1.3	J	1.7	ND	U	1.3	ND	U	2.6	ND	U	1.4	ND	U	1.4
		Cyclohexane	5.4	J	1.9	ND	U	1.4	340	--	2.9	ND	U	1.6	1.1	J	1.6
		Dibromochloromethane	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		Dichlorodifluoromethane	9.1	--	1.8	13	--	1.3	20	--	2.7	24	--	1.5	8.4	--	1.5
		Ethanol	9	J	4.7	ND	U	3.4	10	J	7.1	6.4	J	3.9	3.7	J	3.9
		Ethyl Acetate	36	--	3.7	ND	U	2.7	ND	U	5.7	ND	U	3.1	ND	U	3.1
		Ethylbenzene	2.3	J	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		Hexane	1.6	J	1.8	ND	U	1.3	65	--	2.8	ND	U	1.5	ND	U	1.5
		Isopropyl Alcohol	2.6	J	3.5	ND	U	2.6	ND	U	5.4	ND	U	2.9	ND	U	3
		m- & p-Xylenes	8	--	1.9	ND	U	1.4	1.4	J	3	ND	U	1.6	ND	U	1.6
		Methylene Chloride	ND	U	1.8	ND	U	1.3	ND	U	2.8	ND	U	1.5	ND	U	1.5
		Naphthalene	1.8	J	1.8	ND	U	1.3	ND	U	2.7	ND	U	1.5	ND	U	1.5
		n-Heptane	1.1	J	1.8	ND	U	1.3	ND	U	2.8	ND	U	1.5	ND	U	1.5
		o-Xylene	4	--	0.97	ND	U	0.71	1.2	J	1.5	ND	U	0.8	0.37	J	0.81
		Propylene (Propene)	2.7	J	1.8	1.6	J	1.3	21	--	2.7	2.6	--	1.5	ND	U	1.5
		Styrene	0.71	J	1.8	ND	U	1.3	ND	U	2.8	ND	U	1.5	ND	U	1.5
		Tetrachloroethene	2.4	J	0.97	5.8	--	0.71	8	--	1.5	11	--	0.8	19	--	0.81
		Tetrahydrofuran	2.8	J	0.97	ND	U	0.71	ND	U	1.5	46	--	0.8	3.5	--	0.81
		Toluene	47	--	0.97	0.28	J	0.71	1.4	J	1.5	0.51	J	0.8	3.6	--	0.81
		Trichloroethene	1.9	J	0.97	1.1	J	0.71	10	--	1.5	11	--	0.8	11	--	0.81
		Trichlorofluoromethane	2.9	J	1.8	4.2	--	1.3	6.7	--	2.8	12	--	1.5	17	--	1.5
		Vinyl Chloride	ND	U	0.97	ND	U	0.71	ND	U	1.5	ND	U	0.8	ND	U	0.81
		Xylenes, Total	12	--	1.9	ND	U	1.4	2.6	J	3	ND	U	1.6	ND	U	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106108-350			KAFB-106108-450			KAFB-106109-025			KAFB-106109-050			KAFB-106109-050		
		Field Sample ID:	SV108-350-592			SV108-450-192			SV109-025-192			SV109-050-192			SV109-050-592		
		Sample Date:	5/6/2019			5/6/2019			4/30/2019			4/30/2019			4/30/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	2,200	--	12	200	--	0.74	11	--	0.71	30	--	0.72	28	--	0.72
		1,1-Dichloroethane	ND	U	1.3	0.7	J	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.74	0.38	J	0.74	0.37	J	0.71	ND	U	0.72	0.38	J	0.72
		1,2-Dibromoethane	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		1,2-Dichlorobenzene	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		1,3,5-Trimethylbenzene	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		1,3-Butadiene	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,4-Dioxane	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		2-Butanone	2.8	J	1.3	2.8	J	1.3	2.8	J	1.3	3.2	J	1.3	2.7	J	1.3
		2-Hexanone	ND	U	0.74	0.65	J	0.74	0.71	J	0.71	0.88	J	0.72	0.49	J	0.72
		4-Methyl-2-Pentanone	ND	U	0.74	1.2	J	0.74	0.4	J	0.71	ND	U	0.72	ND	U	0.72
		Acetone	ND	U	12	19	J	12	20	J	11	22	J	11	21	J	11
		Benzene	1.3	J	0.74	11	--	0.74	ND	U	0.71	ND	U	0.72	0.34	J	0.72
		Bromodichloromethane	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Bromoform	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	5	--	2.3	15	--	2.3	0.77	J	2.3	9.5	--	2.3	1.3	J	2.3
		Carbon Tetrachloride	74	--	0.74	14	--	0.74	0.37	J	0.71	1	J	0.72	1.1	J	0.72
		Chloroethane	ND	U	1.3	0.84	J	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		Chloroform	8	--	0.74	0.85	J	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Chloromethane	0.38	J	1.3	2.8	--	1.3	ND	U	1.3	ND	U	1.3	0.68	J	1.3
		Cyclohexane	3.1	J	1.4	1.8	J	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Dibromochloromethane	ND	U	0.74	ND	U	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Dichlorodifluoromethane	8.3	--	1.3	2.1	J	1.3	2.6	--	1.3	3.3	--	1.3	2.9	--	1.3
		Ethanol	2.2	J	3.5	1.8	J	3.6	ND	U	3.4	2.2	J	3.5	2.1	J	3.5
		Ethyl Acetate	ND	U	2.8	ND	U	2.8	ND	U	2.7	ND	U	2.8	ND	U	2.8
		Ethylbenzene	ND	U	0.74	0.64	J	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Hexane	ND	U	1.4	0.53	J	1.4	ND	U	1.3	1.8	J	1.4	ND	U	1.4
		Isopropyl Alcohol	ND	U	2.7	0.99	J	2.7	ND	U	2.6	ND	U	2.6	8.6	J	2.6
		m- & p-Xylenes	ND	U	1.5	4.1	J	1.5	0.92	J	1.4	ND	U	1.4	0.66	J	1.4
		Methylene Chloride	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4	0.75	J	1.4
		Naphthalene	ND	U	1.3	2.7	--	1.3	ND	U	1.3	ND	U	1.3	0.78	J	1.3
		n-Heptane	ND	U	1.4	ND	U	1.4	ND	U	1.3	0.58	J	1.4	ND	U	1.4
		o-Xylene	ND	U	0.74	2.2	J	0.74	0.38	J	0.71	ND	U	0.72	ND	U	0.72
		Propylene (Propene)	2.8	--	1.3	1.1	J	1.3	ND	U	1.3	0.57	J	1.3	1.5	J	1.3
		Styrene	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	19	--	0.74	9.8	--	0.74	3.6	--	0.71	0.47	J	0.72	0.62	J	0.72
		Tetrahydrofuran	0.83	J	0.74	4.9	--	0.74	0.59	J	0.71	ND	U	0.72	ND	U	0.72
		Toluene	0.95	J	0.74	44	--	0.74	1.8	J	0.71	0.62	J	0.72	1.2	J	0.72
		Trichloroethene	12	--	0.74	1	J	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Trichlorofluoromethane	17	--	1.4	1.5	J	1.4	1.4	J	1.3	2	J	1.4	2	J	1.4
		Vinyl Chloride	ND	U	0.74	1.1	J	0.74	ND	U	0.71	ND	U	0.72	ND	U	0.72
		Xylenes, Total	ND	U	1.5	6.3	--	1.5	1.3	J	1.4	ND	U	1.4	0.66	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106109-150			KAFB-106109-250			KAFB-106109-350			KAFB-106109-450			KAFB-106110-025		
		Field Sample ID:	SV109-150-192			SV109-250-192			SV109-350-192			SV109-450-192			SV110-025-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			4/30/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	68	--	0.73	190	--	0.71	130	--	0.72	22	--	0.73	52	--	0.74
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	6.2	--	1.3	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.73	ND	U	0.71	0.71	J	0.72	0.47	J	0.73	0.37	J	0.74
		1,2-Dibromoethane	ND	U	0.73	ND	U	0.71	ND	U	0.72	ND	U	0.73	ND	U	0.74
		1,2-Dichlorobenzene	ND	U	0.73	ND	U	0.71	ND	U	0.72	ND	U	0.73	ND	U	0.74
		1,3,5-Trimethylbenzene	ND	U	0.73	ND	U	0.71	0.51	J	0.72	ND	U	0.73	ND	U	0.74
		1,3-Butadiene	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.4
		1,4-Dioxane	ND	U	0.73	ND	U	0.71	ND	U	0.72	ND	U	0.73	1.8	J	0.74
		2-Butanone	0.56	J	1.3	5.7	--	1.3	13	--	1.3	17	--	1.3	7.1	--	1.4
		2-Hexanone	0.34	J	0.73	1	J	0.71	2.9	--	0.72	3.1	--	0.73	1.8	J	0.74
		4-Methyl-2-Pentanone	ND	U	0.73	ND	U	0.71	0.82	J	0.72	1.4	J	0.73	0.88	J	0.74
		Acetone	6.9	J	12	31	--	11	56	--	11	42	--	12	45	--	12
		Benzene	0.91	J	0.73	11	--	0.71	9.2	--	0.72	10	--	0.73	ND	U	0.74
		Bromodichloromethane	ND	U	0.73	ND	U	0.71	ND	U	0.72	ND	U	0.73	ND	U	0.74
		Bromoform	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	2.7	J	2.3	4.9	--	2.3	10	--	2.3	190	--	2.3	13	--	2.4
		Carbon Tetrachloride	17	--	0.73	23	--	0.71	6.9	--	0.72	2	J	0.73	22	--	0.74
		Chloroethane	ND	U	1.3	ND	U	1.3	1.5	J	1.3	8	--	1.3	ND	U	1.4
		Chloroform	0.89	J	0.73	2.7	--	0.71	1.7	J	0.72	0.55	J	0.73	0.77	J	0.74
		Chloromethane	ND	U	1.3	ND	U	1.3	2.4	--	1.3	24	--	1.3	0.48	J	1.3
		Cyclohexane	ND	U	1.4	4	J	1.4	1.3	J	1.4	0.73	J	1.4	ND	U	1.4
		Dibromochloromethane	ND	U	0.73	ND	U	0.71	ND	U	0.72	ND	U	0.73	ND	U	0.74
		Dichlorodifluoromethane	60	--	1.3	20	--	1.3	6.8	--	1.3	1.9	J	1.3	8.5	--	1.4
		Ethanol	ND	U	3.5	6.7	J	3.4	5.6	J	3.5	4.3	J	3.5	4.6	J	3.6
		Ethyl Acetate	ND	U	2.8	26	--	2.7	2.6	J	2.8	2.6	J	2.8	ND	U	2.8
		Ethylbenzene	ND	U	0.73	ND	U	0.71	0.47	J	0.72	0.85	J	0.73	ND	U	0.74
		Hexane	ND	U	1.4	ND	U	1.3	0.52	J	1.4	1.7	J	1.4	0.56	J	1.4
		Isopropyl Alcohol	ND	U	2.7	1.2	J	2.6	1.6	J	2.6	2.5	J	2.7	1.2	J	2.7
		m- & p-Xylenes	ND	U	1.5	ND	U	1.4	1.2	J	1.4	2.8	J	1.5	ND	U	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Naphthalene	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.4
		n-Heptane	ND	U	1.4	ND	U	1.3	ND	U	1.4	0.98	J	1.4	ND	U	1.4
		o-Xylene	ND	U	0.73	ND	U	0.71	0.57	J	0.72	0.91	J	0.73	ND	U	0.74
		Propylene (Propene)	ND	U	1.3	1	J	1.3	2.9	--	1.3	6.3	--	1.3	1.6	J	1.4
		Styrene	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	21	--	0.73	16	--	0.71	4.9	--	0.72	37	--	0.73	22	--	0.74
		Tetrahydrofuran	1.2	J	0.73	5.3	--	0.71	8.6	--	0.72	40	--	0.73	2.7	--	0.74
		Toluene	0.34	J	0.73	2.7	--	0.71	1.7	J	0.72	26	--	0.73	0.76	J	0.74
		Trichloroethene	330	--	0.73	200	--	0.71	220	--	0.72	31	--	0.73	0.77	J	0.74
		Trichlorofluoromethane	4.4	--	1.4	3.2	--	1.3	1	J	1.4	ND	U	1.4	2.2	J	1.4
		Vinyl Chloride	ND	U	0.73	ND	U	0.71	ND	U	0.72	10	--	0.73	ND	U	0.74
		Xylenes, Total	ND	U	1.5	ND	U	1.4	1.8	J	1.4	3.7	J	1.5	ND	U	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106110-025			KAFB-106110-050			KAFB-106110-150			KAFB-106110-250			KAFB-106110-350		
		Field Sample ID:	SV110-025-592			SV110-050-192			SV110-150-192			SV110-250-192			SV110-350-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			4/30/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	29	--	0.45	62	--	0.79	190	--	9.9	170	J	360	73	--	0.77
		1,1-Dichloroethane	ND	U	0.83	ND	U	1.4	ND	U	18	ND	U	650	0.93	J	1.4
		1,2,4-Trichlorobenzene	ND	U	0.86	ND	U	1.5	ND	U	19	ND	U	670	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	1.5	J	0.77
		1,2-Dibromoethane	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		1,2-Dichlorobenzene	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		1,3,5-Trimethylbenzene	ND	U	0.45	ND	U	0.79	5.7	J	9.9	ND	U	360	0.92	J	0.77
		1,3-Butadiene	ND	U	0.83	ND	U	1.4	ND	U	18	ND	U	650	ND	U	1.4
		1,4-Dioxane	0.63	J	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		2-Butanone	1.7	J	0.83	3.4	J	1.4	ND	U	18	ND	U	650	0.77	J	1.4
		2-Hexanone	0.28	J	0.45	0.84	J	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		4-Methyl-2-Pentanone	0.2	J	0.45	0.41	J	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		Acetone	16	--	7.2	36	--	13	ND	U	160	ND	U	5,700	ND	U	12
		Benzene	ND	U	0.45	ND	U	0.79	160	--	9.9	3,500	--	360	1.2	J	0.77
		Bromodichloromethane	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		Bromoform	ND	U	0.86	ND	U	1.5	ND	U	19	ND	U	670	ND	U	1.4
		Carbon Disulfide	0.7	J	1.4	2.1	J	2.5	13	J	32	ND	U	1,100	3.5	J	2.4
		Carbon Tetrachloride	12	--	0.45	25	--	0.79	190	--	9.9	ND	U	360	46	--	0.77
		Chloroethane	ND	U	0.83	ND	U	1.4	ND	U	18	ND	U	650	ND	U	1.4
		Chloroform	1.3	J	0.45	0.71	J	0.79	26	J	9.9	ND	U	360	3.1	--	0.77
		Chloromethane	ND	U	0.8	ND	U	1.4	ND	U	18	ND	U	630	ND	U	1.4
		Cyclohexane	ND	U	0.88	ND	U	1.5	11,000	--	19	150,000	--	690	9.4	--	1.5
		Dibromochloromethane	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		Dichlorodifluoromethane	4.7	--	0.83	10	--	1.4	40	--	18	ND	U	650	200	--	1.4
		Ethanol	1.3	J	2.2	2.8	J	3.8	ND	U	48	ND	U	1,700	ND	U	3.7
		Ethyl Acetate	ND	U	1.7	1.9	J	3	ND	U	38	ND	U	1,400	ND	U	2.9
		Ethylbenzene	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		Hexane	ND	U	0.86	ND	U	1.5	5,200	--	19	120,000	--	670	6.9	--	1.4
		Isopropyl Alcohol	ND	U	1.7	ND	U	2.9	ND	U	36	2,000	J	1,300	ND	U	2.8
		m- & p-Xylenes	ND	U	0.91	ND	U	1.6	ND	U	20	730	J	710	1.2	J	1.5
		Methylene Chloride	ND	U	0.86	ND	U	1.5	ND	U	19	ND	U	670	ND	U	1.4
		Naphthalene	ND	U	0.83	ND	U	1.4	ND	U	18	ND	U	650	ND	U	1.4
		n-Heptane	ND	U	0.86	ND	U	1.5	1,600	--	19	92,000	--	670	12	--	1.4
		o-Xylene	ND	U	0.45	0.59	J	0.79	20	J	9.9	300	J	360	0.57	J	0.77
		Propylene (Propene)	0.41	J	0.83	0.93	J	1.4	180	--	18	2,400	--	650	2	J	1.4
		Styrene	ND	U	0.86	ND	U	1.5	ND	U	19	ND	U	670	ND	U	1.4
		Tetrachloroethene	1.7	--	0.45	3.8	--	0.79	42	--	9.9	ND	U	360	18	--	0.77
		Tetrahydrofuran	12	--	0.45	2.4	J	0.79	ND	U	9.9	ND	U	360	0.71	J	0.77
		Toluene	0.39	J	0.45	0.33	J	0.79	7.9	J	9.9	2,400	--	360	1.8	J	0.77
		Trichloroethene	0.27	J	0.45	0.7	J	0.79	170	--	9.9	ND	U	360	57	--	0.77
		Trichlorofluoromethane	1.2	J	0.86	2.3	J	1.5	7.1	J	19	ND	U	670	13	--	1.4
		Vinyl Chloride	ND	U	0.45	ND	U	0.79	ND	U	9.9	ND	U	360	ND	U	0.77
		Xylenes, Total	ND	U	0.91	ND	U	1.6	20	J	20	1,000	J	710	1.7	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106110-450			KAFB-106111-025			KAFB-106111-050			KAFB-106111-150			KAFB-106111-250		
		Field Sample ID:	SV110-450-192			SV111-025-192			SV111-050-192			SV111-150-192			SV111-250-192		
		Sample Date:	4/30/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	7.9	--	1.5	62	--	0.71	120	--	0.72	140	--	0.7	150	J	98
		1,1-Dichloroethane	5.7	--	2.8	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	180
		1,2,4-Trichlorobenzene	ND	U	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	180
		1,2,4-Trimethylbenzene	3.4	J	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	70	J	98
		1,2-Dibromoethane	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		1,2-Dichlorobenzene	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		1,3,5-Trimethylbenzene	4.1	J	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	170	J	98
		1,3-Butadiene	1.2	J	2.8	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	180
		1,4-Dioxane	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		2-Butanone	13	--	2.8	0.89	J	1.3	0.6	J	1.3	ND	U	1.3	ND	U	180
		2-Hexanone	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		4-Methyl-2-Pentanone	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		Acetone	41	J	24	5.4	J	11	ND	U	11	ND	U	11	ND	U	1,600
		Benzene	270	--	1.5	ND	U	0.71	ND	U	0.72	0.75	J	0.7	2,900	--	98
		Bromodichloromethane	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		Bromoform	ND	U	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	180
		Carbon Disulfide	220	--	4.8	ND	U	2.3	ND	U	2.3	6.6	--	2.2	ND	U	310
		Carbon Tetrachloride	6.6	--	1.5	78	--	0.71	160	--	0.72	280	--	0.7	100	J	98
		Chloroethane	6.9	--	2.8	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	180
		Chloroform	ND	U	1.5	1	J	0.71	0.94	J	0.72	23	--	0.7	ND	U	98
		Chloromethane	30	--	2.7	ND	U	1.3	ND	U	1.3	ND	U	1.2	ND	U	170
		Cyclohexane	1,000	--	3	ND	U	1.4	ND	U	1.4	ND	U	1.4	9,700	--	190
		Dibromochloromethane	ND	U	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		Dichlorodifluoromethane	15	--	2.8	33	--	1.3	79	--	1.3	100	--	1.3	190	J	180
		Ethanol	ND	U	7.3	1.6	J	3.4	ND	U	3.5	ND	U	3.4	ND	U	470
		Ethyl Acetate	ND	U	5.8	ND	U	2.7	ND	U	2.7	4.6	--	2.7	ND	U	370
		Ethylbenzene	39	--	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	45	J	98
		Hexane	940	--	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	1,900	--	180
		Isopropyl Alcohol	ND	U	5.5	ND	U	2.6	ND	U	2.6	ND	U	2.6	ND	U	360
		m- & p-Xylenes	110	--	3	ND	U	1.4	ND	U	1.4	ND	U	1.4	87	J	200
		Methylene Chloride	ND	U	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	180
		Naphthalene	ND	U	2.8	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	180
		n-Heptane	830	--	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	180
		o-Xylene	26	--	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	130	J	98
		Propylene (Propene)	ND	U	2.8	0.86	J	1.3	1.9	J	1.3	2.7	--	1.3	ND	U	180
		Styrene	ND	U	2.9	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	180
		Tetrachloroethene	ND	U	1.5	6.3	--	0.71	10	--	0.72	10	--	0.7	ND	U	98
		Tetrahydrofuran	76	--	1.5	0.34	J	0.71	1.2	J	0.72	9.3	--	0.7	52	J	98
		Toluene	850	--	1.5	0.34	J	0.71	0.54	J	0.72	1.3	J	0.7	ND	U	98
		Trichloroethene	ND	U	1.5	1.5	J	0.71	4.3	--	0.72	48	--	0.7	ND	U	98
		Trichlorofluoromethane	0.84	J	2.9	4	--	1.3	7.9	--	1.4	9.3	--	1.3	ND	U	180
		Vinyl Chloride	8.4	--	1.5	ND	U	0.71	ND	U	0.72	ND	U	0.7	ND	U	98
		Xylenes, Total	130	--	3	ND	U	1.4	ND	U	1.4	ND	U	1.4	220	J	200

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106111-250			KAFB-106111-350			KAFB-106111-450			KAFB-106112-025			KAFB-106112-050		
		Field Sample ID:	SV111-250-592			SV111-350-192			SV111-450-192			SV112-025-192			SV112-050-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			5/6/2019			5/6/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	J	92	270	J	150	77	--	9.7	16	--	0.83	17	--	0.85
		1,1-Dichloroethane	ND	U	170	ND	U	270	ND	U	18	ND	U	1.5	ND	U	1.6
		1,2,4-Trichlorobenzene	ND	U	170	ND	U	280	ND	U	18	ND	U	1.6	ND	U	1.6
		1,2,4-Trimethylbenzene	ND	U	92	ND	U	150	8.1	J	9.7	0.5	J	0.83	0.77	J	0.85
		1,2-Dibromoethane	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		1,2-Dichlorobenzene	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	2.8	--	0.85
		1,3,5-Trimethylbenzene	140	J	92	200	J	150	7	J	9.7	ND	U	0.83	ND	U	0.85
		1,3-Butadiene	ND	U	170	ND	U	270	ND	U	18	ND	U	1.5	ND	U	1.6
		1,4-Dioxane	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		2-Butanone	ND	U	170	410	J	270	20	J	18	ND	U	1.5	9.3	--	1.6
		2-Hexanone	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		4-Methyl-2-Pentanone	ND	U	92	ND	U	150	11	J	9.7	ND	U	0.83	ND	U	0.85
		Acetone	ND	U	1,500	ND	U	2,400	ND	U	150	45	--	13	21	J	14
		Benzene	3,000	--	92	5,600	--	150	1,100	--	9.7	1.5	J	0.83	0.72	J	0.85
		Bromodichloromethane	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		Bromoform	ND	U	170	ND	U	280	ND	U	18	ND	U	1.6	ND	U	1.6
		Carbon Disulfide	ND	U	290	ND	U	470	170	--	31	1.7	U	2.6	49	--	2.7
		Carbon Tetrachloride	98	J	92	74	J	150	9.6	J	9.7	9.3	--	0.83	11	--	0.85
		Chloroethane	ND	U	170	ND	U	270	4.4	J	18	ND	U	1.5	ND	U	1.6
		Chloroform	ND	U	92	ND	U	150	ND	U	9.7	20	--	0.83	22	--	0.85
		Chloromethane	ND	U	160	ND	U	260	23	J	17	ND	U	1.5	ND	U	1.5
		Cyclohexane	9,900	--	180	55,000	--	290	2,000	--	19	ND	U	1.6	ND	U	1.7
		Dibromochloromethane	ND	U	92	ND	U	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		Dichlorodifluoromethane	190	J	170	630	--	270	93	--	18	12	--	1.5	12	--	1.6
		Ethanol	ND	U	440	ND	U	720	ND	U	47	13	J	4	6.1	J	4.1
		Ethyl Acetate	ND	U	350	550	J	570	ND	U	37	ND	U	3.2	ND	U	3.3
		Ethylbenzene	ND	U	92	160	J	150	85	--	9.7	ND	U	0.83	ND	U	0.85
		Hexane	2,000	--	170	18,000	--	280	1,400	--	18	1.1	J	1.6	1	J	1.6
		Isopropyl Alcohol	ND	U	330	ND	U	540	ND	U	36	56	--	3	2.5	J	3.1
		m- & p-Xylenes	ND	U	180	500	J	300	260	--	19	0.89	J	1.7	1.9	J	1.7
		Methylene Chloride	ND	U	170	ND	U	280	ND	U	18	ND	U	1.6	ND	U	1.6
		Naphthalene	ND	U	170	ND	U	270	ND	U	18	ND	U	1.5	0.92	U	1.6
		n-Heptane	ND	U	170	8,600	--	280	1,800	--	18	1	J	1.6	0.94	J	1.6
		o-Xylene	110	J	92	660	--	150	73	--	9.7	0.42	J	0.83	0.71	J	0.85
		Propylene (Propene)	ND	U	170	860	--	270	44	--	18	5.8	--	1.5	0.99	J	1.6
		Styrene	ND	U	170	ND	U	280	ND	U	18	ND	U	1.6	ND	U	1.6
		Tetrachloroethene	ND	U	92	ND	U	150	ND	U	9.7	2.3	J	0.83	1.6	J	0.85
		Tetrahydrofuran	44	J	92	61	J	150	52	--	9.7	3.4	--	0.83	17	--	0.85
		Toluene	ND	U	92	2,700	--	150	3,000	--	9.7	1.3	J	0.83	2.2	J	0.85
		Trichloroethene	ND	U	92	180	J	150	ND	U	9.7	ND	U	0.83	ND	U	0.85
		Trichlorofluoromethane	ND	U	170	87	J	280	8.4	J	18	3.1	--	1.6	3.2	--	1.6
		Vinyl Chloride	ND	U	92	ND	U	150	5.1	J	9.7	ND	U	0.83	ND	U	0.85
		Xylenes, Total	110	J	180	1,200	--	300	340	--	19	1.3	J	1.7	2.6	J	1.7

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106112-150			KAFB-106112-250			KAFB-106112-350			KAFB-106112-450			KAFB-106112-450		
		Field Sample ID:	SV112-150-192			SV112-250-192			SV112-350-192			SV112-450-192			SV112-450-592		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	9.3	--	0.77	15	J	16	260	--	0.79	ND	U	700	ND	U	580
		1,1-Dichloroethane	ND	U	1.4	ND	U	29	ND	U	1.4	ND	U	1,300	ND	U	1,100
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	30	ND	U	1.5	ND	U	1,300	ND	U	1,100
		1,2,4-Trimethylbenzene	1.2	J	0.77	ND	U	16	ND	U	0.79	1,300	J	700	1,200	J	580
		1,2-Dibromoethane	ND	U	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		1,2-Dichlorobenzene	ND	U	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		1,3,5-Trimethylbenzene	0.48	J	0.77	9.5	J	16	ND	U	0.79	1,500	J	700	1,400	J	580
		1,3-Butadiene	ND	U	1.4	ND	U	29	ND	U	1.4	ND	U	1,300	ND	U	1,100
		1,4-Dioxane	2.6	--	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		2-Butanone	13	--	1.4	ND	U	29	4.9	--	1.4	ND	U	1,300	ND	U	1,100
		2-Hexanone	3.2	--	0.77	ND	U	16	1.2	J	0.79	ND	U	700	ND	U	580
		4-Methyl-2-Pentanone	0.72	J	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Acetone	35	--	12	ND	U	260	20	J	13	ND	U	11,000	ND	U	9,300
		Benzene	1.3	J	0.77	18,000	--	81	2.3	J	0.79	37,000	--	700	44,000	--	580
		Bromodichloromethane	ND	U	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Bromoform	ND	U	1.4	ND	U	30	ND	U	1.5	ND	U	1,300	ND	U	1,100
		Carbon Disulfide	14	--	2.4	23	J	51	2.2	J	2.5	ND	U	2,200	ND	U	1,900
		Carbon Tetrachloride	2.2	J	0.77	10	J	16	17	--	0.79	ND	U	700	ND	U	580
		Chloroethane	0.59	J	1.4	ND	U	29	ND	U	1.4	ND	U	1,300	ND	U	1,100
		Chloroform	0.82	J	0.77	ND	U	16	2.1	J	0.79	ND	U	700	ND	U	580
		Chloromethane	1.4	J	1.4	ND	U	29	ND	U	1.4	ND	U	1,200	ND	U	1,000
		Cyclohexane	ND	U	1.5	100	--	31	ND	U	1.5	200,000	--	1,400	230,000	--	1,100
		Dibromochloromethane	ND	U	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Dichlorodifluoromethane	8.5	--	1.4	ND	U	29	7.3	--	1.4	ND	U	1,300	ND	U	1,100
		Ethanol	6.2	J	3.7	ND	U	78	6	J	3.8	ND	UJ	3,400	ND	UJ	2,800
		Ethyl Acetate	3.2	J	2.9	ND	U	62	ND	U	3	ND	U	2,700	ND	U	2,200
		Ethylbenzene	0.71	J	0.77	ND	U	16	ND	U	0.79	3,100	--	700	3,700	--	580
		Hexane	0.95	J	1.4	31	J	30	ND	U	1.5	94,000	--	1,300	120,000	--	1,100
		Isopropyl Alcohol	1.2	J	2.8	39	J	59	1.4	J	2.9	ND	U	2,600	ND	U	2,100
		m- & p-Xylenes	2.4	J	1.5	ND	U	32	ND	U	1.6	15,000	--	1,400	18,000	--	1,200
		Methylene Chloride	ND	U	1.4	ND	U	30	ND	U	1.5	ND	U	1,300	ND	U	1,100
		Naphthalene	3.3	--	1.4	ND	U	29	ND	U	1.4	ND	U	1,300	ND	U	1,100
		n-Heptane	1	J	1.4	ND	U	30	ND	U	1.5	60,000	--	1,300	71,000	--	1,100
		o-Xylene	1	J	0.77	8.4	J	16	ND	U	0.79	8,400	--	700	9,500	--	580
		Propylene (Propene)	1.1	J	1.4	ND	U	29	1.3	J	1.4	2,500	--	1,300	2,700	--	1,100
		Styrene	ND	U	1.4	ND	U	30	ND	U	1.5	ND	U	1,300	ND	U	1,100
		Tetrachloroethene	3.1	--	0.77	ND	U	16	4.1	--	0.79	ND	U	700	ND	U	580
		Tetrahydrofuran	12	--	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Toluene	5.6	--	0.77	51	--	16	0.33	J	0.79	40,000	--	700	47,000	--	580
		Trichloroethene	0.38	J	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Trichlorofluoromethane	1.7	J	1.4	ND	U	30	2.6	--	1.5	ND	U	1,300	ND	U	1,100
		Vinyl Chloride	ND	U	0.77	ND	U	16	ND	U	0.79	ND	U	700	ND	U	580
		Xylenes, Total	3.4	J	1.5	ND	U	32	ND	U	1.6	24,000	--	1,400	27,000	--	1,200

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106113-020			KAFB-106113-050			KAFB-106113-150			KAFB-106113-250			KAFB-106113-350		
		Field Sample ID:	SV113-020-192			SV113-050-192			SV113-150-192			SV113-250-192			SV113-350-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			4/30/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.1	J	0.76	2.5	--	0.66	1.8	J	0.7	4	--	0.75	3.5	J	7.6
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		1,2,4-Trimethylbenzene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		1,2-Dibromoethane	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		1,2-Dichlorobenzene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		1,3,5-Trimethylbenzene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	20	J	7.6
		1,3-Butadiene	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		1,4-Dioxane	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		2-Butanone	ND	U	1.4	0.56	J	1.2	2.2	J	1.3	7.7	--	1.4	ND	U	14
		2-Hexanone	0.33	J	0.76	ND	U	0.66	0.52	J	0.7	2	J	0.75	ND	U	7.6
		4-Methyl-2-Pentanone	0.35	J	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		Acetone	9.5	J	12	6.3	J	10	16	J	11	22	J	12	ND	U	120
		Benzene	ND	U	0.76	ND	U	0.66	0.89	J	0.7	0.82	J	0.75	1,200	--	7.6
		Bromodichloromethane	ND	U	0.76	2.9	--	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		Bromoform	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		Carbon Disulfide	ND	U	2.4	2	J	2.1	9.8	--	2.2	13	--	2.4	70	--	24
		Carbon Tetrachloride	2.7	--	0.76	18	--	0.66	20	--	0.7	29	--	0.75	ND	U	7.6
		Chloroethane	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		Chloroform	0.65	J	0.76	35	--	0.66	3	--	0.7	3.1	--	0.75	ND	U	7.6
		Chloromethane	ND	U	1.3	ND	U	1.2	ND	U	1.2	ND	U	1.3	ND	U	13
		Cyclohexane	ND	U	1.5	ND	U	1.3	ND	U	1.4	ND	U	1.5	2,800	--	15
		Dibromochloromethane	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		Dichlorodifluoromethane	2.8	--	1.4	3.9	--	1.2	6.4	--	1.3	36	--	1.4	130	--	14
		Ethanol	2.9	J	3.7	2.5	J	3.2	ND	U	3.4	39	--	3.6	ND	U	37
		Ethyl Acetate	ND	U	2.9	7.4	--	2.5	ND	U	2.7	ND	U	2.9	ND	U	29
		Ethylbenzene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	14	J	7.6
		Hexane	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	830	--	14
		Isopropyl Alcohol	ND	U	2.8	ND	U	2.4	ND	U	2.6	1.4	J	2.7	ND	U	28
		m- & p-Xylenes	ND	U	1.5	ND	U	1.3	ND	U	1.4	ND	U	1.5	37	J	15
		Methylene Chloride	ND	U	1.4	1.1	J	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		Naphthalene	0.59	J	1.4	ND	U	1.2	ND	U	1.3	0.73	J	1.4	ND	U	14
		n-Heptane	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		o-Xylene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	47	--	7.6
		Propylene (Propene)	ND	U	1.4	ND	U	1.2	ND	U	1.3	1.7	J	1.4	390	--	14
		Styrene	ND	U	1.4	ND	U	1.2	ND	U	1.3	ND	U	1.4	ND	U	14
		Tetrachloroethene	0.61	J	0.76	4.1	--	0.66	2.7	--	0.7	0.39	J	0.75	ND	U	7.6
		Tetrahydrofuran	0.88	J	0.76	1.2	J	0.66	32	--	0.7	13	--	0.75	ND	U	7.6
		Toluene	0.78	J	0.76	0.94	J	0.66	0.83	J	0.7	1.2	J	0.75	600	--	7.6
		Trichloroethene	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		Trichlorofluoromethane	1.2	J	1.4	1.1	J	1.2	0.95	J	1.3	2.6	--	1.4	14	J	14
		Vinyl Chloride	ND	U	0.76	ND	U	0.66	ND	U	0.7	ND	U	0.75	ND	U	7.6
		Xylenes, Total	ND	U	1.5	ND	U	1.3	ND	U	1.4	ND	U	1.5	83	--	15

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106113-450			KAFB-106114-025			KAFB-106114-050			KAFB-106114-150			KAFB-106114-150		
		Field Sample ID:	SV113-450-192			SV114-025-192			SV114-050-192			SV114-150-192			SV114-150-592		
		Sample Date:	4/30/2019			4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	64	9.3	--	0.68	7.8	--	0.96	19	--	0.77	19	--	0.71
		1,1-Dichloroethane	ND	U	120	ND	U	1.2	ND	U	1.8	ND	U	1.4	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	120	ND	U	1.3	ND	U	1.8	ND	U	1.4	ND	U	1.3
		1,2,4-Trimethylbenzene	2,800	--	64	1.8	J	0.68	ND	U	0.96	2.6	--	0.77	1.1	J	0.71
		1,2-Dibromoethane	110	J	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		1,2-Dichlorobenzene	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		1,3,5-Trimethylbenzene	2,500	--	64	1.2	J	0.68	ND	U	0.96	1.7	J	0.77	0.56	J	0.71
		1,3-Butadiene	ND	U	120	ND	U	1.2	ND	U	1.8	ND	U	1.4	ND	U	1.3
		1,4-Dioxane	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		2-Butanone	82	J	120	7.1	--	1.2	ND	U	1.8	1.1	J	1.4	2.4	J	1.3
		2-Hexanone	ND	U	64	2	J	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		4-Methyl-2-Pentanone	ND	U	64	1.3	J	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		Acetone	ND	U	1,000	47	--	11	ND	U	15	91	--	12	59	--	11
		Benzene	23,000	--	64	1.4	J	0.68	ND	U	0.96	2.1	J	0.77	1	J	0.71
		Bromodichloromethane	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		Bromoform	ND	U	120	ND	U	1.3	ND	U	1.8	ND	U	1.4	ND	U	1.3
		Carbon Disulfide	130	J	200	8.4	--	2.1	ND	U	3.1	11	--	2.4	6.4	--	2.2
		Carbon Tetrachloride	ND	U	64	6.3	--	0.68	0.73	J	0.96	14	--	0.77	14	--	0.71
		Chloroethane	ND	U	120	ND	U	1.2	0.49	J	1.8	ND	U	1.4	ND	U	1.3
		Chloroform	ND	U	64	0.59	J	0.68	ND	U	0.96	0.92	J	0.77	0.91	J	0.71
		Chloromethane	36	J	110	ND	U	1.2	0.68	J	1.7	ND	U	1.4	ND	U	1.2
		Cyclohexane	28,000	--	120	11	--	1.3	ND	U	1.9	3.3	J	1.5	ND	U	1.4
		Dibromochloromethane	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		Dichlorodifluoromethane	230	--	120	61	--	1.2	130	--	1.8	100	--	1.4	110	--	1.3
		Ethanol	ND	U	310	13	J	3.3	10	J	4.7	2	J	3.7	ND	U	3.4
		Ethyl Acetate	ND	U	250	5.7	--	2.6	ND	U	3.7	ND	U	2.9	ND	U	2.7
		Ethylbenzene	3,100	--	64	1.4	J	0.68	ND	U	0.96	1.6	J	0.77	0.87	J	0.71
		Hexane	27,000	--	120	3.6	--	1.3	ND	U	1.8	5	--	1.4	0.9	J	1.3
		Isopropyl Alcohol	160	J	230	8.7	--	2.5	ND	U	3.5	ND	U	2.8	ND	U	2.6
		m- & p-Xylenes	13,000	--	130	6.3	--	1.4	ND	U	1.9	10	--	1.5	3	J	1.4
		Methylene Chloride	ND	U	120	0.95	J	1.3	ND	U	1.8	ND	U	1.4	ND	U	1.3
		Naphthalene	150	J	120	ND	U	1.2	ND	U	1.8	ND	U	1.4	ND	U	1.3
		n-Heptane	24,000	--	120	7.8	--	1.3	ND	U	1.8	16	J	1.4	2.8	J	1.3
		o-Xylene	6,300	--	64	3.4	--	0.68	ND	U	0.96	5.1	--	0.77	1.5	J	0.71
		Propylene (Propene)	4,200	--	120	2.1	--	1.2	2.2	J	1.8	ND	UJ	1.4	ND	U	1.3
		Styrene	ND	U	120	0.7	J	1.3	ND	U	1.8	ND	U	1.4	ND	U	1.3
		Tetrachloroethene	ND	U	64	0.69	J	0.68	ND	U	0.96	1.1	J	0.77	1.4	J	0.71
		Tetrahydrofuran	91	J	64	1.9	J	0.68	2.7	J	0.96	5.8	--	0.77	2.6	--	0.71
		Toluene	38,000	--	64	20	--	0.68	ND	U	0.96	12	J	0.77	4.2	J	0.71
		Trichloroethene	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	0.41	J	0.71
		Trichlorofluoromethane	ND	U	120	9	--	1.3	11	--	1.8	10	--	1.4	11	--	1.3
		Vinyl Chloride	ND	U	64	ND	U	0.68	ND	U	0.96	ND	U	0.77	ND	U	0.71
		Xylenes, Total	20,000	--	130	9.7	--	1.4	ND	U	1.9	15	--	1.5	4.5	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106114-250			KAFB-106114-350			KAFB-106114-450			KAFB-106115-025			KAFB-106115-050		
		Field Sample ID:	SV114-250-192			SV114-350-192			SV114-450-192			SV115-025-192			SV115-050-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/30/2019			4/30/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	--	0.71	120	--	0.77	270	J	300	0.49	J	0.74	0.52	J	0.71
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.4	ND	U	550	ND	U	1.3	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.4	ND	U	560	ND	U	1.4	ND	U	1.3
		1,2,4-Trimethylbenzene	0.89	J	0.71	ND	U	0.77	9,100	--	300	0.78	J	0.74	0.44	J	0.71
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		1,3,5-Trimethylbenzene	0.51	J	0.71	0.74	J	0.77	7,000	--	300	0.51	J	0.74	0.36	J	0.71
		1,3-Butadiene	ND	U	1.3	ND	U	1.4	ND	U	550	ND	U	1.3	ND	U	1.3
		1,4-Dioxane	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		2-Butanone	2.6	J	1.3	0.69	J	1.4	370	J	550	0.67	J	1.3	2.2	J	1.3
		2-Hexanone	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	0.43	J	0.71
		4-Methyl-2-Pentanone	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		Acetone	16	J	11	ND	U	12	ND	U	4,800	ND	U	12	10	J	11
		Benzene	0.63	J	0.71	7.9	--	0.77	20,000	--	300	0.91	J	0.74	ND	U	0.71
		Bromodichloromethane	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		Bromoform	ND	U	1.3	ND	U	1.4	ND	U	560	ND	U	1.4	ND	U	1.3
		Carbon Disulfide	9	--	2.3	ND	U	2.4	ND	U	950	ND	U	2.3	2.5	J	2.3
		Carbon Tetrachloride	72	--	0.71	4.5	--	0.77	ND	U	300	3.4	--	0.74	4.5	--	0.71
		Chloroethane	ND	U	1.3	ND	U	1.4	ND	U	550	ND	U	1.3	ND	U	1.3
		Chloroform	13	--	0.71	1.3	J	0.77	ND	U	300	1.5	J	0.74	2	J	0.71
		Chloromethane	ND	U	1.3	ND	U	1.4	ND	U	530	ND	U	1.3	ND	U	1.3
		Cyclohexane	0.78	J	1.4	66	--	1.5	190,000	--	580	ND	U	1.4	ND	U	1.4
		Dibromochloromethane	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		Dichlorodifluoromethane	150	--	1.3	1,700	--	14	3,600	--	550	2.1	J	1.3	2.2	J	1.3
		Ethanol	2.7	J	3.4	ND	U	3.7	ND	U	1,400	ND	U	3.5	6.5	J	3.4
		Ethyl Acetate	ND	U	2.7	ND	U	2.9	ND	U	1,100	ND	U	2.8	4.2	J	2.7
		Ethylbenzene	1.3	J	0.71	0.36	J	0.77	8,900	--	300	ND	U	0.74	ND	U	0.71
		Hexane	1.1	J	1.3	1.6	J	1.4	120,000	--	560	ND	U	1.4	ND	U	1.3
		Isopropyl Alcohol	ND	U	2.6	ND	U	2.8	ND	U	1,100	ND	U	2.7	ND	U	2.6
		m- & p-Xylenes	6.6	--	1.4	1.8	J	1.5	58,000	--	600	0.61	J	1.5	0.79	J	1.4
		Methylene Chloride	ND	U	1.3	ND	U	1.4	ND	U	560	ND	U	1.4	2	J	1.3
		Naphthalene	ND	U	1.3	ND	U	1.4	ND	U	550	ND	U	1.3	0.66	J	1.3
		n-Heptane	3.4	--	1.3	2	J	1.4	380,000	--	2,300	ND	U	1.4	ND	U	1.3
		o-Xylene	2.6	--	0.71	3.5	--	0.77	30,000	--	300	ND	U	0.74	0.37	J	0.71
		Propylene (Propene)	0.65	J	1.3	6.3	J	1.4	6,100	J	550	ND	U	1.3	ND	U	1.3
		Styrene	ND	U	1.3	ND	U	1.4	ND	U	560	ND	U	1.4	ND	U	1.3
		Tetrachloroethene	0.8	J	0.71	4.2	--	0.77	ND	U	300	0.84	J	0.74	1.7	J	0.71
		Tetrahydrofuran	1.1	J	0.71	ND	U	0.77	ND	U	300	0.32	J	0.74	38	--	0.71
		Toluene	2.8	--	0.71	ND	U	0.77	70,000	--	300	0.8	J	0.74	2.1	J	0.71
		Trichloroethene	0.99	J	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		Trichlorofluoromethane	15	--	1.3	350	--	1.4	730	J	560	1.1	J	1.4	1.2	J	1.3
		Vinyl Chloride	ND	U	0.71	ND	U	0.77	ND	U	300	ND	U	0.74	ND	U	0.71
		Xylenes, Total	9.2	--	1.4	5.3	--	1.5	89,000	--	600	0.61	J	1.5	1.2	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106115-150			KAFB-106115-250			KAFB-106115-350			KAFB-106115-350			KAFB-106115-450		
		Field Sample ID:	SV115-150-192			SV115-250-192			SV115-350-192			SV115-350-592			SV115-450-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			4/30/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.76	J	0.71	1.7	J	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	340
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	350
		1,2,4-Trimethylbenzene	ND	U	0.71	ND	U	0.73	0.35	J	0.69	1.1	J	0.7	ND	U	190
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		1,3,5-Trimethylbenzene	ND	U	0.71	ND	U	0.73	ND	U	0.69	0.5	J	0.7	ND	U	190
		1,3-Butadiene	1	J	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	340
		1,4-Dioxane	2.7	--	0.71	0.29	J	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		2-Butanone	7.7	--	1.3	3.8	J	1.3	2	J	1.3	2	J	1.3	ND	U	340
		2-Hexanone	1.6	J	0.71	0.38	J	0.73	0.59	J	0.69	2.6	--	0.7	ND	U	190
		4-Methyl-2-Pentanone	0.94	J	0.71	ND	U	0.73	0.78	J	0.69	ND	U	0.7	ND	U	190
		Acetone	42	--	11	18	J	12	ND	U	11	ND	U	11	ND	U	3,000
		Benzene	0.4	J	0.71	0.61	J	0.73	3.9	--	0.69	1	J	0.7	3,600	--	190
		Bromodichloromethane	ND	U	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Bromoform	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	350
		Carbon Disulfide	13	--	2.2	ND	U	2.3	17	--	2.2	19	--	2.2	ND	U	590
		Carbon Tetrachloride	6.5	--	0.71	0.88	J	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Chloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	340
		Chloroform	1.2	J	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Chloromethane	ND	U	1.2	ND	U	1.3	0.35	J	1.2	0.46	J	1.2	ND	U	330
		Cyclohexane	ND	U	1.4	ND	U	1.4	ND	U	1.3	ND	U	1.4	4,400	--	360
		Dibromochloromethane	ND	U	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Dichlorodifluoromethane	1	J	1.3	0.51	J	1.3	ND	U	1.3	ND	U	1.3	ND	U	340
		Ethanol	28	--	3.4	ND	U	3.5	4.6	J	3.3	2.5	J	3.4	ND	U	900
		Ethyl Acetate	ND	U	2.7	ND	U	2.8	ND	U	2.6	ND	U	2.7	ND	U	720
		Ethylbenzene	ND	U	0.71	ND	U	0.73	ND	U	0.69	0.39	J	0.7	180	J	190
		Hexane	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	2,200	--	350
		Isopropyl Alcohol	2.1	J	2.6	ND	U	2.7	ND	U	2.5	ND	U	2.5	ND	U	680
		m- & p-Xylenes	ND	U	1.4	ND	U	1.5	0.67	J	1.4	1.9	J	1.4	490	J	370
		Methylene Chloride	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	350
		Naphthalene	ND	U	1.3	ND	U	1.3	ND	U	1.3	0.67	J	1.3	ND	U	340
		n-Heptane	ND	U	1.3	ND	U	1.4	ND	U	1.3	0.5	J	1.3	270	J	350
		o-Xylene	ND	U	0.71	ND	U	0.73	ND	U	0.69	0.75	J	0.7	180	J	190
		Propylene (Propene)	3.8	--	1.3	ND	U	1.3	0.79	J	1.3	0.71	J	1.3	540	J	340
		Styrene	0.46	J	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	350
		Tetrachloroethene	1.1	J	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Tetrahydrofuran	8.2	--	0.71	0.51	J	0.73	16	--	0.69	28	--	0.7	ND	U	190
		Toluene	1.8	J	0.71	0.75	J	0.73	1.3	J	0.69	2.8	--	0.7	5,100	--	190
		Trichloroethene	0.3	J	0.71	0.47	J	0.73	13	--	0.69	13	--	0.7	ND	U	190
		Trichlorofluoromethane	1.1	J	1.3	0.6	J	1.4	ND	U	1.3	ND	U	1.3	ND	U	350
		Vinyl Chloride	ND	U	0.71	ND	U	0.73	ND	U	0.69	ND	U	0.7	ND	U	190
		Xylenes, Total	ND	U	1.4	ND	U	1.5	0.67	J	1.4	2.6	J	1.4	670	J	370

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106116-025			KAFB-106116-050			KAFB-106116-150			KAFB-106116-250			KAFB-106116-350		
		Field Sample ID:	SV116-025-192			SV116-050-192			SV116-150-192			SV116-250-192			SV116-350-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	14	--	0.71	28	--	0.78	7.1	--	0.77	10	--	0.78	ND	U	33
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	60
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	62
		1,2,4-Trimethylbenzene	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		1,3,5-Trimethylbenzene	ND	U	0.71	ND	U	0.78	ND	U	0.77	3.6	--	0.78	ND	U	33
		1,3-Butadiene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	60
		1,4-Dioxane	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		2-Butanone	3.2	J	1.3	4.4	J	1.4	ND	U	1.4	6.4	--	1.4	ND	U	60
		2-Hexanone	0.56	J	0.71	0.97	J	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		4-Methyl-2-Pentanone	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		Acetone	17	J	11	26	--	12	6	J	12	30	--	12	ND	U	520
		Benzene	ND	U	0.71	ND	U	0.78	0.99	J	0.77	26	--	0.78	390	--	33
		Bromodichloromethane	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		Bromoform	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	62
		Carbon Disulfide	1.7	J	2.3	3.5	J	2.5	10	--	2.4	27	--	2.5	ND	U	100
		Carbon Tetrachloride	2.3	--	0.71	9.4	--	0.78	5.1	--	0.77	16	--	0.78	ND	U	33
		Chloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	60
		Chloroform	0.58	J	0.71	0.7	J	0.78	1	J	0.77	0.61	J	0.78	ND	U	33
		Chloromethane	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	58
		Cyclohexane	ND	U	1.4	ND	U	1.5	ND	U	1.5	14	--	1.5	5,500	--	64
		Dibromochloromethane	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		Dichlorodifluoromethane	21	--	1.3	46	--	1.4	11	--	1.4	17	--	1.4	94	J	60
		Ethanol	2.5	J	3.4	6.9	J	3.8	ND	U	3.7	3.7	J	3.8	ND	U	160
		Ethyl Acetate	ND	U	2.7	22	--	3	ND	U	2.9	ND	U	3	ND	U	130
		Ethylbenzene	ND	U	0.71	ND	U	0.78	ND	U	0.77	0.92	J	0.78	ND	U	33
		Hexane	ND	U	1.3	ND	U	1.5	ND	U	1.4	1.1	J	1.5	560	--	62
		Isopropyl Alcohol	ND	U	2.6	ND	U	2.8	ND	U	2.8	7	J	2.9	ND	U	120
		m- & p-Xylenes	ND	U	1.4	ND	U	1.6	ND	U	1.5	2.4	J	1.6	ND	U	66
		Methylene Chloride	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	62
		Naphthalene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	60
		n-Heptane	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	62
		o-Xylene	ND	U	0.71	ND	U	0.78	ND	U	0.77	3.8	--	0.78	ND	U	33
		Propylene (Propene)	0.57	J	1.3	0.64	J	1.4	ND	UJ	1.4	2.3	J	1.4	170	J	60
		Styrene	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	62
		Tetrachloroethene	ND	U	0.71	0.53	J	0.78	1.5	J	0.77	37	--	0.78	54	J	33
		Tetrahydrofuran	0.6	J	0.71	73	--	0.78	4	--	0.77	3.5	--	0.78	ND	U	33
		Toluene	0.47	J	0.71	3.1	--	0.78	1.1	J	0.77	18	--	0.78	ND	U	33
		Trichloroethene	ND	U	0.71	ND	U	0.78	ND	U	0.77	1.3	J	0.78	76	J	33
		Trichlorofluoromethane	3.2	--	1.3	6.1	--	1.5	1.6	J	1.4	2	J	1.5	ND	U	62
		Vinyl Chloride	ND	U	0.71	ND	U	0.78	ND	U	0.77	ND	U	0.78	ND	U	33
		Xylenes, Total	ND	U	1.4	ND	U	1.6	ND	U	1.5	6.3	--	1.6	ND	U	66

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106116-450			KAFB-106116-450			KAFB-106117-025			KAFB-106117-050			KAFB-106117-150		
		Field Sample ID:	SV116-450-192			SV116-450-592			SV117-025-192			SV117-050-192			SV117-150-192		
		Sample Date:	4/22/2019			4/22/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			Field Duplicate			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	1,000	ND	U	320	50	--	0.73	68	--	0.73	72	--	0.7
		1,1-Dichloroethane	ND	U	1,800	ND	U	580	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1,900	ND	U	600	ND	U	1.4	ND	U	1.4	ND	U	1.3
		1,2,4-Trimethylbenzene	4,600	--	1,000	5,300	--	320	12	--	0.73	15	--	0.73	6.6	--	0.7
		1,2-Dibromoethane	930	J	1,000	ND	U	320	ND	U	0.73	0.32	J	0.73	ND	U	0.7
		1,2-Dichlorobenzene	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	ND	U	0.7
		1,3,5-Trimethylbenzene	4,600	--	1,000	5,100	--	320	9	--	0.73	9	--	0.73	4.2	--	0.7
		1,3-Butadiene	ND	U	1,800	ND	U	580	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,4-Dioxane	ND	U	1,000	ND	U	320	ND	U	0.73	0.6	J	0.73	ND	U	0.7
		2-Butanone	ND	U	1,800	490	J	580	0.74	J	1.3	42	--	1.3	3.6	J	1.3
		2-Hexanone	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	0.92	J	0.7
		4-Methyl-2-Pentanone	ND	U	1,000	ND	U	320	ND	U	0.73	0.41	J	0.73	ND	U	0.7
		Acetone	ND	U	16,000	ND	U	5,000	8.8	J	12	77	--	12	36	--	11
		Benzene	61,000	--	1,000	55,000	--	320	0.41	J	0.73	0.7	J	0.73	1.3	J	0.7
		Bromodichloromethane	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	ND	U	0.7
		Bromoform	ND	U	1,900	ND	U	600	ND	U	1.4	ND	U	1.4	ND	U	1.3
		Carbon Disulfide	ND	U	3,200	380	J	1,000	3.6	J	2.3	55	--	2.3	18	--	2.2
		Carbon Tetrachloride	ND	U	1,000	ND	U	320	14	--	0.73	22	--	0.73	25	--	0.7
		Chloroethane	ND	U	1,800	ND	U	580	ND	U	1.3	ND	U	1.3	ND	U	1.3
		Chloroform	ND	U	1,000	ND	U	320	0.38	J	0.73	0.57	J	0.73	4.2	--	0.7
		Chloromethane	ND	U	1,800	ND	U	560	ND	U	1.3	ND	U	1.3	ND	U	1.2
		Cyclohexane	560,000	--	1,900	500,000	--	3,100	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Dibromochloromethane	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	ND	U	0.7
		Dichlorodifluoromethane	570	J	1,800	490	J	580	73	--	1.3	110	--	1.3	140	--	1.3
		Ethanol	ND	U	4,800	ND	U	1,500	2.8	J	3.5	2.8	J	3.5	4.4	J	3.4
		Ethyl Acetate	ND	U	3,800	ND	U	1,200	ND	U	2.8	ND	U	2.8	6.2	--	2.7
		Ethylbenzene	10,000	--	1,000	9,100	--	320	ND	U	0.73	0.49	J	0.73	0.52	J	0.7
		Hexane	440,000	--	1,900	360,000	--	3,000	ND	U	1.4	ND	U	1.4	ND	U	1.3
		Isopropyl Alcohol	ND	U	3,600	ND	U	1,200	ND	U	2.7	1.3	J	2.7	ND	U	2.5
		m- & p-Xylenes	50,000	--	2,000	47,000	--	630	2.9	J	1.5	3.8	J	1.5	2.6	J	1.4
		Methylene Chloride	ND	U	1,900	ND	U	600	ND	U	1.4	ND	U	1.4	ND	U	1.3
		Naphthalene	ND	U	1,800	ND	U	580	5.6	--	1.3	5.5	--	1.3	1.5	J	1.3
		n-Heptane	630,000	--	1,900	570,000	--	3,000	0.47	J	1.4	2.1	J	1.4	0.71	J	1.3
		o-Xylene	27,000	--	1,000	25,000	--	320	4.5	--	0.73	5.5	--	0.73	3.2	--	0.7
		Propylene (Propene)	12,000	--	1,800	7,400	J	580	0.68	J	1.3	3.5	--	1.3	1.5	J	1.3
		Styrene	ND	U	1,900	ND	U	600	ND	U	1.4	ND	U	1.4	ND	U	1.3
		Tetrachloroethene	ND	U	1,000	ND	U	320	1	J	0.73	1.5	J	0.73	1.7	J	0.7
		Tetrahydrofuran	ND	U	1,000	ND	U	320	0.57	J	0.73	42	--	0.73	12	--	0.7
		Toluene	130,000	--	1,000	120,000	--	320	0.95	J	0.73	1.5	J	0.73	4.9	--	0.7
		Trichloroethene	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	0.75	J	0.7
		Trichlorofluoromethane	ND	U	1,900	ND	U	600	10	--	1.4	14	--	1.4	18	--	1.3
		Vinyl Chloride	ND	U	1,000	ND	U	320	ND	U	0.73	ND	U	0.73	ND	U	0.7
		Xylenes, Total	77,000	--	2,000	72,000	--	630	7.4	--	1.5	9.4	--	1.5	5.8	--	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106117-250			KAFB-106117-350			KAFB-106117-450			KAFB-106117-450			KAFB-106118-025		
		Field Sample ID:	SV117-250-192			SV117-350-192			SV117-450-192			SV117-450-592			SV118-025-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			5/6/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	60	J	29	64	J	83	ND	U	1,200	ND	U	1,400	8.7	--	0.75
		1,1-Dichloroethane	ND	U	53	ND	U	150	ND	U	2,100	ND	U	2,600	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	54	ND	U	160	ND	U	2,200	ND	U	2,700	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	29	240	J	83	15,000	--	1,200	23,000	--	1,400	0.36	J	0.75
		1,2-Dibromoethane	ND	U	29	230	J	83	ND	U	1,200	2,300	J	1,400	ND	U	0.75
		1,2-Dichlorobenzene	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		1,3,5-Trimethylbenzene	34	J	29	240	J	83	8,300	--	1,200	12,000	--	1,400	ND	U	0.75
		1,3-Butadiene	ND	U	53	ND	U	150	ND	U	2,100	ND	U	2,600	ND	U	1.4
		1,4-Dioxane	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		2-Butanone	ND	U	53	ND	U	150	ND	U	2,100	ND	U	2,600	1.3	J	1.4
		2-Hexanone	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		4-Methyl-2-Pentanone	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		Acetone	ND	U	460	ND	U	1,300	ND	U	18,000	ND	U	22,000	9.1	J	12
		Benzene	30	J	29	ND	U	83	12,000	--	1,200	14,000	--	1,400	ND	U	0.75
		Bromodichloromethane	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		Bromoform	ND	U	54	ND	U	160	ND	U	2,200	ND	U	2,700	ND	U	1.4
		Carbon Disulfide	ND	U	92	ND	U	260	ND	U	3,700	ND	U	4,500	13	--	2.4
		Carbon Tetrachloride	22	J	29	ND	U	83	ND	U	1,200	ND	U	1,400	5.3	--	0.75
		Chloroethane	ND	U	53	ND	U	150	ND	U	2,100	ND	U	2,600	ND	U	1.4
		Chloroform	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	1.1	J	0.75
		Chloromethane	ND	U	51	ND	U	150	ND	U	2,100	ND	U	2,500	ND	U	1.3
		Cyclohexane	100	J	56	16,000	--	160	500,000	--	2,300	550,000	--	2,700	ND	U	1.5
		Dibromochloromethane	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		Dichlorodifluoromethane	82	J	53	130	J	150	ND	U	2,100	ND	U	2,600	9.7	--	1.4
		Ethanol	ND	U	140	ND	U	400	ND	U	5,600	ND	U	6,800	ND	UJ	3.6
		Ethyl Acetate	ND	U	110	ND	U	320	ND	U	4,400	ND	U	5,400	ND	U	2.9
		Ethylbenzene	ND	U	29	54	J	83	23,000	--	1,200	27,000	--	1,400	ND	U	0.75
		Hexane	37	J	54	5,400	--	160	330,000	--	2,200	360,000	--	2,700	ND	U	1.4
		Isopropyl Alcohol	52	J	110	240	J	300	ND	U	4,200	ND	U	5,100	ND	U	2.7
		m- & p-Xylenes	ND	U	58	160	J	170	180,000	--	2,300	210,000	--	2,800	0.95	J	1.5
		Methylene Chloride	ND	U	54	ND	U	160	ND	U	2,200	ND	U	2,700	ND	U	1.4
		Naphthalene	ND	U	53	ND	U	150	ND	U	2,100	ND	U	2,600	ND	U	1.4
		n-Heptane	63	J	54	10,000	--	160	660,000	--	2,200	730,000	--	2,700	ND	U	1.4
		o-Xylene	16	J	29	250	J	83	56,000	--	1,200	69,000	--	1,400	ND	U	0.75
		Propylene (Propene)	ND	U	53	260	--	150	14,000	--	2,100	14,000	--	2,600	0.65	J	1.4
		Styrene	ND	U	54	ND	U	160	ND	U	2,200	ND	U	2,700	ND	U	1.4
		Tetrachloroethene	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	0.48	J	0.75
		Tetrahydrofuran	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	0.58	J	0.75
		Toluene	26	J	29	65	J	83	130,000	--	1,200	150,000	--	1,400	0.84	J	0.75
		Trichloroethene	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		Trichlorofluoromethane	ND	U	54	ND	U	160	ND	U	2,200	ND	U	2,700	3.7	--	1.4
		Vinyl Chloride	ND	U	29	ND	U	83	ND	U	1,200	ND	U	1,400	ND	U	0.75
		Xylenes, Total	ND	U	58	410	J	170	230,000	--	2,300	280,000	--	2,800	0.95	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

	Location ID:	KAFB-106118-050			KAFB-106118-160			KAFB-106118-265			KAFB-106118-350			KAFB-106118-450		
	Field Sample ID:	SV118-050-192			SV118-160-192			SV118-265-192			SV118-350-192			SV118-450-192		
	Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
	Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	--	0.79	4.5	--	0.81	17	--	0.77	5.2	--	0.81	13	--	2.1
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	3.4	J	3.8
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	3.9
		1,2,4-Trimethylbenzene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		1,2-Dibromoethane	ND	U	0.79	ND	U	0.81	0.71	J	0.77	ND	U	0.81	ND	U	2.1
		1,2-Dichlorobenzene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		1,3,5-Trimethylbenzene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		1,3-Butadiene	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	3.8
		1,4-Dioxane	ND	U	0.79	ND	U	0.81	ND	U	0.77	0.36	J	0.81	ND	U	2.1
		2-Butanone	1.1	J	1.4	ND	U	1.5	170	--	1.4	0.79	J	1.5	1.8	J	3.8
		2-Hexanone	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		4-Methyl-2-Pentanone	ND	U	0.79	ND	U	0.81	0.62	J	0.77	ND	U	0.81	ND	U	2.1
		Acetone	8.9	J	13	ND	U	13	220	--	12	ND	U	13	ND	U	33
		Benzene	1.5	J	0.79	ND	U	0.81	3.1	--	0.77	ND	U	0.81	46	--	2.1
		Bromodichloromethane	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		Bromoform	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	3.9
		Carbon Disulfide	1.6	J	2.5	ND	U	2.6	8.7	--	2.5	11	--	2.6	220	--	6.6
		Carbon Tetrachloride	7.1	--	0.79	3.6	--	0.81	40	--	0.77	16	--	0.81	98	--	2.1
		Chloroethane	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	4.5	J	3.8
		Chloroform	1.5	J	0.79	1.1	J	0.81	1	J	0.77	8.1	--	0.81	12	--	2.1
		Chloromethane	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4	21	--	3.6
		Cyclohexane	ND	U	1.5	ND	U	1.6	1.2	J	1.5	ND	U	1.6	1,200	--	4
		Dibromochloromethane	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		Dichlorodifluoromethane	11	--	1.4	7.7	--	1.5	3.5	--	1.4	2.6	--	1.5	2.3	J	3.8
		Ethanol	ND	UJ	3.8	ND	UJ	3.9	ND	UJ	3.7	ND	UJ	3.9	ND	UJ	9.9
		Ethyl Acetate	ND	U	3	ND	U	3.1	ND	U	3	ND	U	3.1	ND	U	7.9
		Ethylbenzene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	3	J	2.1
		Hexane	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	110	--	3.9
		Isopropyl Alcohol	ND	U	2.9	ND	U	2.9	1.6	J	2.8	ND	U	2.9	ND	U	7.5
		m- & p-Xylenes	ND	U	1.6	ND	U	1.6	0.7	J	1.5	ND	U	1.6	11	J	4.1
		Methylene Chloride	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	3.9
		Naphthalene	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	3.8
		n-Heptane	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	6.7	--	3.9
		o-Xylene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	4.2	J	2.1
		Propylene (Propene)	ND	U	1.4	ND	U	1.5	4	--	1.4	8.2	--	1.5	7.1	--	3.8
		Styrene	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	3.9
		Tetrachloroethene	0.33	J	0.79	0.38	J	0.81	0.32	J	0.77	0.57	J	0.81	0.85	J	2.1
		Tetrahydrofuran	13	--	0.79	ND	U	0.81	110	--	0.77	0.32	J	0.81	43	--	2.1
		Toluene	1.4	J	0.79	ND	U	0.81	9.6	--	0.77	ND	U	0.81	310	--	2.1
		Trichloroethene	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	ND	U	2.1
		Trichlorofluoromethane	4.4	--	1.5	3.1	--	1.5	6	--	1.5	7.3	--	1.5	7.4	--	3.9
		Vinyl Chloride	ND	U	0.79	ND	U	0.81	ND	U	0.77	ND	U	0.81	5.1	J	2.1
		Xylenes, Total	ND	U	1.6	ND	U	1.6	0.7	J	1.5	ND	U	1.6	15	--	4.1

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106118-450			KAFB-106119-025			KAFB-106119-050			KAFB-106119-150			KAFB-106119-250		
		Field Sample ID:	SV118-450-592			SV119-025-192			SV119-050-192			SV119-150-192			SV119-250-192		
		Sample Date:	5/6/2019			5/7/2019			5/7/2019			5/7/2019			5/7/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	12	--	0.71	51	--	0.82	110	--	0.78	180	--	0.85	220	J	210
		1,1-Dichloroethane	3	--	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	380
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	390
		1,2,4-Trimethylbenzene	0.52	J	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		1,3,5-Trimethylbenzene	0.6	J	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	130	J	210
		1,3-Butadiene	0.52	J	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	380
		1,4-Dioxane	ND	U	0.71	0.32	J	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		2-Butanone	3.1	J	1.3	1.1	J	1.5	2.8	J	1.4	5.5	--	1.6	ND	U	380
		2-Hexanone	ND	U	0.71	ND	U	0.82	0.6	J	0.78	1	J	0.85	ND	U	210
		4-Methyl-2-Pentanone	ND	U	0.71	ND	U	0.82	ND	U	0.78	0.48	J	0.85	ND	U	210
		Acetone	ND	U	11	9.2	J	13	13	J	12	23	J	14	ND	U	3,300
		Benzene	42	--	0.71	ND	U	0.82	ND	U	0.78	1.9	J	0.85	5,600	--	210
		Bromodichloromethane	ND	U	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		Bromoform	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	390
		Carbon Disulfide	210	--	2.3	27	--	2.6	1.4	J	2.5	2.6	J	2.7	ND	U	660
		Carbon Tetrachloride	90	--	0.71	3.2	--	0.82	4.3	--	0.78	77	--	0.85	100	J	210
		Chloroethane	4	--	1.3	ND	U	1.5	ND	U	1.4	0.67	J	1.6	ND	U	380
		Chloroform	11	--	0.71	0.35	J	0.82	ND	U	0.78	12	--	0.85	ND	U	210
		Chloromethane	12	--	1.3	ND	U	1.4	ND	U	1.4	3.3	--	1.5	ND	U	370
		Cyclohexane	1,100	--	14	ND	U	1.6	ND	U	1.5	1.3	J	1.7	34,000	--	400
		Dibromochloromethane	ND	U	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		Dichlorodifluoromethane	2.3	--	1.3	8.5	--	1.5	15	--	1.4	14	--	1.6	ND	U	380
		Ethanol	6	J	3.4	ND	UJ	3.9	ND	UJ	3.8	2.6	J	4.1	ND	UJ	1,000
		Ethyl Acetate	290	--	2.7	ND	U	3.1	2.9	J	3	ND	U	3.3	ND	U	790
		Ethylbenzene	2.9	--	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		Hexane	110	--	1.3	ND	U	1.5	ND	U	1.5	0.97	J	1.6	3,700	--	390
		Isopropyl Alcohol	2.1	J	2.6	ND	U	3	ND	U	2.9	1.2	J	3.1	ND	U	760
		m- & p-Xylenes	11	--	1.4	1	J	1.6	ND	U	1.6	ND	U	1.7	ND	U	410
		Methylene Chloride	1.2	J	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	390
		Naphthalene	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.6	1,100	--	380
		n-Heptane	6.7	--	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.6	110	J	390
		o-Xylene	4	--	0.71	0.5	J	0.82	ND	U	0.78	ND	U	0.85	390	J	210
		Propylene (Propene)	6.3	--	1.3	ND	U	1.5	ND	U	1.4	140	--	1.6	430	J	380
		Styrene	ND	U	1.3	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	390
		Tetrachloroethene	0.74	J	0.71	1.4	J	0.82	0.86	J	0.78	1.4	J	0.85	ND	U	210
		Tetrahydrofuran	47	--	0.71	ND	U	0.82	0.41	J	0.78	ND	U	0.85	ND	U	210
		Toluene	270	--	0.71	0.9	J	0.82	0.6	J	0.78	ND	U	0.85	ND	U	210
		Trichloroethene	ND	U	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		Trichlorofluoromethane	6.9	--	1.3	2.4	J	1.5	3.6	--	1.5	9.8	--	1.6	ND	U	390
		Vinyl Chloride	4.7	--	0.71	ND	U	0.82	ND	U	0.78	ND	U	0.85	ND	U	210
		Xylenes, Total	15	--	1.4	1.5	J	1.6	ND	U	1.6	ND	U	1.7	390	J	410

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106119-350			KAFB-106119-450			KAFB-106120-025			KAFB-106120-050			KAFB-106120-150		
		Field Sample ID:	SV119-350-192			SV119-450-192			SV120-025-192			SV120-050-192			SV120-150-192		
		Sample Date:	5/7/2019			5/7/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	460	J	180	160	--	32	0.43	J	0.74	0.63	J	0.72	0.68	J	0.85
		1,1-Dichloroethane	ND	U	330	ND	U	59	ND	U	1.3	ND	U	1.3	ND	U	1.5
		1,2,4-Trichlorobenzene	ND	U	340	ND	U	60	ND	U	1.4	ND	U	1.4	ND	U	1.6
		1,2,4-Trimethylbenzene	260	J	180	ND	U	32	ND	U	0.74	ND	U	0.72	0.4	J	0.85
		1,2-Dibromoethane	ND	U	180	12	J	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		1,2-Dichlorobenzene	ND	U	180	ND	U	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		1,3,5-Trimethylbenzene	520	J	180	19	J	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		1,3-Butadiene	ND	U	330	ND	U	59	ND	U	1.3	ND	U	1.3	ND	U	1.5
		1,4-Dioxane	ND	U	180	ND	U	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		2-Butanone	ND	U	330	ND	U	59	0.8	J	1.3	48	--	1.3	11	--	1.5
		2-Hexanone	ND	U	180	ND	U	32	ND	U	0.74	1	J	0.72	0.37	J	0.85
		4-Methyl-2-Pentanone	ND	U	180	ND	U	32	ND	U	0.74	ND	U	0.72	0.42	J	0.85
		Acetone	ND	U	2,800	ND	U	510	5.3	J	12	24	--	11	13	J	13
		Benzene	26,000	--	180	330	--	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		Bromodichloromethane	ND	U	180	ND	U	32	91	--	0.74	500	--	7.2	4	--	0.85
		Bromoform	ND	U	340	ND	U	60	ND	U	1.4	0.62	J	1.4	ND	U	1.6
		Carbon Disulfide	ND	U	570	41	J	100	ND	U	2.3	1.5	J	2.3	85	--	2.7
		Carbon Tetrachloride	89	J	180	25	J	32	3.7	--	0.74	21	--	0.72	18	--	0.85
		Chloroethane	ND	U	330	ND	U	59	ND	U	1.3	ND	U	1.3	ND	U	1.5
		Chloroform	170	J	180	ND	U	32	430	--	0.74	1,200	--	7.2	37	--	0.85
		Chloromethane	ND	U	320	ND	U	57	ND	U	1.3	ND	U	1.3	ND	U	1.5
		Cyclohexane	120,000	--	350	10,000	--	62	ND	U	1.4	ND	U	1.4	ND	U	1.6
		Dibromochloromethane	ND	U	180	ND	U	32	2.8	--	0.74	88	--	0.72	ND	U	0.85
		Dichlorodifluoromethane	ND	U	330	22	J	59	2.3	--	1.3	2.3	--	1.3	5.7	--	1.5
		Ethanol	ND	U	870	ND	U	150	1.6	J	3.5	ND	U	3.5	37	--	4.1
		Ethyl Acetate	ND	U	690	ND	U	120	ND	U	2.8	ND	U	2.8	ND	U	3.2
		Ethylbenzene	ND	U	180	15	J	32	ND	U	0.74	ND	U	0.72	0.42	J	0.85
		Hexane	39,000	--	340	880	--	60	ND	U	1.4	ND	U	1.4	ND	U	1.6
		Isopropyl Alcohol	ND	U	650	ND	U	120	ND	U	2.7	ND	U	2.6	4.5	J	3.1
		m- & p-Xylenes	270	J	360	140	J	64	ND	U	1.5	2.4	J	1.4	0.99	J	1.7
		Methylene Chloride	ND	U	340	ND	U	60	3	--	1.4	5	--	1.4	ND	U	1.6
		Naphthalene	ND	U	330	ND	U	59	ND	U	1.3	ND	U	1.3	0.7	J	1.5
		n-Heptane	39,000	--	340	1,000	--	60	ND	U	1.4	0.68	J	1.4	ND	U	1.6
		o-Xylene	1,500	--	180	76	J	32	ND	U	0.74	0.62	J	0.72	ND	U	0.85
		Propylene (Propene)	1,400	--	330	78	J	59	ND	U	1.3	ND	U	1.3	0.75	J	1.5
		Styrene	ND	U	340	ND	U	60	ND	U	1.4	ND	U	1.4	ND	U	1.6
		Tetrachloroethene	ND	U	180	ND	U	32	4	--	0.74	10	--	0.72	3	--	0.85
		Tetrahydrofuran	ND	U	180	ND	U	32	1.4	J	0.74	69	--	0.72	9.3	--	0.85
		Toluene	220	J	180	390	--	32	1.3	J	0.74	2	J	0.72	1.3	J	0.85
		Trichloroethene	ND	U	180	ND	U	32	2.2	J	0.74	3.8	--	0.72	ND	U	0.85
		Trichlorofluoromethane	ND	U	340	ND	U	60	1	J	1.4	0.9	J	1.4	0.78	J	1.6
		Vinyl Chloride	ND	U	180	ND	U	32	ND	U	0.74	ND	U	0.72	ND	U	0.85
		Xylenes, Total	1,800	--	360	210	--	64	ND	U	1.5	3	J	1.4	0.99	J	1.7

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106120-150			KAFB-106120-250			KAFB-106120-350			KAFB-106120-450			KAFB-106121-025		
		Field Sample ID:	SV120-150-592			SV120-250-192			SV120-350-192			SV120-450-192			SV121-025-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.71	J	0.73	0.81	J	0.88	2.8	J	1.9	3.8	J	5.7	0.62	J	0.72
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.6	ND	U	3.5	5	J	10	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.6	ND	U	3.6	ND	U	11	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.73	ND	U	0.88	ND	U	1.9	13	J	5.7	ND	U	0.72
		1,2-Dibromoethane	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	ND	U	0.72
		1,2-Dichlorobenzene	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	ND	U	0.72
		1,3,5-Trimethylbenzene	ND	U	0.73	ND	U	0.88	ND	U	1.9	11	J	5.7	ND	U	0.72
		1,3-Butadiene	ND	U	1.3	ND	U	1.6	ND	U	3.5	ND	U	10	ND	U	1.3
		1,4-Dioxane	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	ND	U	0.72
		2-Butanone	1	J	1.3	ND	U	1.6	ND	U	3.5	89	--	10	2.1	J	1.3
		2-Hexanone	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	ND	U	0.72
		4-Methyl-2-Pentanone	ND	U	0.73	ND	U	0.88	ND	U	1.9	8.3	J	5.7	ND	U	0.72
		Acetone	6.8	J	12	ND	U	14	ND	U	30	160	J	91	25	--	11
		Benzene	ND	U	0.73	ND	U	0.88	48	--	1.9	280	--	5.7	1.4	J	0.72
		Bromodichloromethane	4	--	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	42	--	0.72
		Bromoform	ND	U	1.4	ND	U	1.6	ND	U	3.6	ND	U	11	ND	U	1.4
		Carbon Disulfide	4.9	--	2.3	ND	U	2.8	2.5	J	6	300	--	18	ND	U	2.3
		Carbon Tetrachloride	18	--	0.73	2.9	--	0.88	ND	U	1.9	ND	U	5.7	15	--	0.72
		Chloroethane	ND	U	1.3	ND	U	1.6	ND	U	3.5	11	J	10	ND	U	1.3
		Chloroform	37	--	0.73	2.9	--	0.88	ND	U	1.9	ND	U	5.7	620	--	7.2
		Chloromethane	ND	U	1.3	ND	U	1.5	ND	U	3.4	42	--	10	ND	U	1.3
		Cyclohexane	ND	U	1.4	ND	U	1.7	25	--	3.7	54	--	11	ND	U	1.4
		Dibromochloromethane	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	1.7	J	0.72
		Dichlorodifluoromethane	5.4	--	1.3	11	--	1.6	99	--	3.5	150	--	10	2.6	--	1.3
		Ethanol	2.5	J	3.5	ND	U	4.2	ND	U	9.2	ND	U	28	2.7	J	3.5
		Ethyl Acetate	ND	U	2.8	ND	U	3.3	ND	U	7.3	ND	U	22	ND	U	2.8
		Ethylbenzene	ND	U	0.73	ND	U	0.88	ND	U	1.9	40	--	5.7	ND	U	0.72
		Hexane	ND	U	1.4	ND	U	1.6	6.6	--	3.6	60	--	11	ND	U	1.4
		Isopropyl Alcohol	ND	U	2.7	ND	U	3.2	ND	U	6.9	20	J	21	41	--	2.6
		m- & p-Xylenes	ND	U	1.5	ND	U	1.8	ND	U	3.8	100	--	11	ND	U	1.4
		Methylene Chloride	ND	U	1.4	ND	U	1.6	ND	U	3.6	ND	U	11	0.68	J	1.4
		Naphthalene	ND	U	1.3	ND	U	1.6	ND	U	3.5	ND	U	10	ND	U	1.3
		n-Heptane	ND	U	1.4	ND	U	1.6	ND	U	3.6	32	--	11	ND	U	1.4
		o-Xylene	ND	U	0.73	ND	U	0.88	ND	U	1.9	44	--	5.7	ND	U	0.72
		Propylene (Propene)	ND	U	1.3	ND	U	1.6	5	J	3.5	15	J	10	5.9	--	1.3
		Styrene	ND	U	1.4	ND	U	1.6	ND	U	3.6	ND	U	11	ND	U	1.4
		Tetrachloroethene	2.9	--	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	4.9	--	0.72
		Tetrahydrofuran	12	--	0.73	ND	U	0.88	ND	U	1.9	55	--	5.7	1	J	0.72
		Toluene	0.63	J	0.73	ND	U	0.88	2.9	J	1.9	520	--	5.7	0.58	J	0.72
		Trichloroethene	ND	U	0.73	ND	U	0.88	ND	U	1.9	ND	U	5.7	2	J	0.72
		Trichlorofluoromethane	0.77	J	1.4	0.91	J	1.6	11	--	3.6	16	J	11	1	J	1.4
		Vinyl Chloride	ND	U	0.73	ND	U	0.88	ND	U	1.9	9.7	J	5.7	ND	U	0.72
		Xylenes, Total	ND	U	1.5	ND	U	1.8	ND	U	3.8	150	--	11	ND	U	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106121-050			KAFB-106121-145			KAFB-106121-250			KAFB-106121-250			KAFB-106121-350		
		Field Sample ID:	SV121-050-192			SV121-145-192			SV121-250-192			SV121-250-592			SV121-350-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	J	0.78	0.76	J	0.74	1.3	J	0.75	1.3	J	0.76	3.6	--	0.77
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		1,2-Dibromoethane	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		1,2-Dichlorobenzene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		1,3,5-Trimethylbenzene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		1,3-Butadiene	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		2-Butanone	ND	U	1.4	4.9	--	1.3	ND	U	1.4	ND	U	1.4	1.4	J	1.4
		2-Hexanone	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		4-Methyl-2-Pentanone	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Acetone	ND	U	12	5.4	J	12	ND	U	12	ND	U	12	6	J	12
		Benzene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	1	J	0.77
		Bromodichloromethane	45	--	0.78	2.8	--	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Bromoform	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	2.3	J	2.5	3	J	2.3	4	J	2.4	6.7	--	2.4	7.9	--	2.4
		Carbon Tetrachloride	16	--	0.78	14	--	0.74	1.9	J	0.75	1.8	J	0.76	0.39	J	0.77
		Chloroethane	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Chloroform	660	--	7.8	38	--	0.74	2	J	0.75	2	J	0.76	0.44	J	0.77
		Chloromethane	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.4
		Cyclohexane	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.5
		Dibromochloromethane	2.2	J	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Dichlorodifluoromethane	2.8	--	1.4	12	--	1.3	24	--	1.4	24	--	1.4	110	--	1.4
		Ethanol	ND	U	3.8	ND	U	3.5	ND	U	3.6	ND	U	3.7	1.8	J	3.7
		Ethyl Acetate	ND	U	3	ND	U	2.8	ND	U	2.9	ND	U	2.9	ND	U	2.9
		Ethylbenzene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Hexane	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Isopropyl Alcohol	ND	U	2.8	ND	U	2.7	ND	U	2.7	ND	U	2.8	ND	U	2.8
		m- & p-Xylenes	ND	U	1.6	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5
		Methylene Chloride	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Naphthalene	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		n-Heptane	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		o-Xylene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Propylene (Propene)	ND	U	1.4	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Styrene	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	4.9	--	0.78	2.1	J	0.74	0.38	J	0.75	ND	U	0.76	0.71	J	0.77
		Tetrahydrofuran	4.3	--	0.78	56	--	0.74	6.2	--	0.75	6	--	0.76	1.1	J	0.77
		Toluene	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	0.76	J	0.77
		Trichloroethene	1.8	J	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Trichlorofluoromethane	0.99	J	1.5	1.1	J	1.4	1.9	J	1.4	1.9	J	1.4	12	--	1.4
		Vinyl Chloride	ND	U	0.78	ND	U	0.74	ND	U	0.75	ND	U	0.76	ND	U	0.77
		Xylenes, Total	ND	U	1.6	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106121-450			KAFB-106122-025			KAFB-106122-050			KAFB-106122-150			KAFB-106122-250		
		Field Sample ID:	SV121-450-192			SV122-025-192			SV122-050-192			SV122-150-192			SV122-250-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.8	--	0.76	0.5	J	0.76	0.55	J	0.74	0.62	J	0.78	0.8	J	0.77
		1,1-Dichloroethane	6	--	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.4	2.4	--	1.4	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	2.7	--	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		1,2-Dibromoethane	ND	U	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		1,2-Dichlorobenzene	ND	U	0.76	ND	U	0.76	1.1	J	0.74	ND	U	0.78	ND	U	0.77
		1,3,5-Trimethylbenzene	1.3	J	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		1,3-Butadiene	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	0.76	ND	U	0.76	0.72	J	0.74	ND	U	0.78	ND	U	0.77
		2-Butanone	26	--	1.4	3.1	J	1.4	6.2	--	1.4	ND	U	1.4	3.9	J	1.4
		2-Hexanone	ND	U	0.76	0.98	J	0.76	1.2	J	0.74	ND	U	0.78	1.1	J	0.77
		4-Methyl-2-Pentanone	0.52	J	0.76	ND	U	0.76	ND	U	0.74	1.2	J	0.78	ND	U	0.77
		Acetone	100	--	12	24	--	12	34	--	12	10	J	12	35	--	12
		Benzene	190	--	0.76	0.38	J	0.76	ND	U	0.74	0.43	J	0.78	ND	U	0.77
		Bromodichloromethane	ND	U	0.76	45	--	0.76	49	--	0.74	1.5	J	0.78	ND	U	0.77
		Bromoform	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Carbon Disulfide	230	--	2.4	2.9	J	2.4	1.4	J	2.4	4.5	J	2.5	5.8	--	2.4
		Carbon Tetrachloride	ND	U	0.76	7.4	--	0.76	15	--	0.74	13	--	0.78	2.2	J	0.77
		Chloroethane	7	--	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Chloroform	0.65	J	0.76	820	--	7.6	380	--	0.74	20	--	0.78	0.62	J	0.77
		Chloromethane	17	--	1.3	ND	U	1.3	0.87	J	1.3	ND	U	1.4	ND	U	1.4
		Cyclohexane	22	--	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.5
		Dibromochloromethane	ND	U	0.76	1.3	J	0.76	1.7	J	0.74	ND	U	0.78	ND	U	0.77
		Dichlorodifluoromethane	150	--	1.4	3.3	--	1.4	2.4	--	1.4	3.7	--	1.4	16	--	1.4
		Ethanol	4.2	J	3.6	5.6	J	3.6	3.6	J	3.6	2.5	J	3.8	6.2	J	3.7
		Ethyl Acetate	2.5	J	2.9	ND	U	2.9	ND	U	2.8	100	--	3	ND	U	2.9
		Ethylbenzene	35	--	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		Hexane	12	--	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Isopropyl Alcohol	1.3	J	2.8	1.7	J	2.8	1.3	J	2.7	ND	U	2.8	ND	U	2.8
		m- & p-Xylenes	50	--	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.4	ND	U	1.4	1.8	J	1.5	ND	U	1.4
		Naphthalene	ND	U	1.4	ND	U	1.4	0.75	J	1.4	ND	U	1.4	ND	U	1.4
		n-Heptane	4.6	--	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.4
		o-Xylene	17	--	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		Propylene (Propene)	5.5	--	1.4	1.3	J	1.4	1.3	J	1.4	ND	U	1.4	0.88	J	1.4
		Styrene	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Tetrachloroethene	1.4	J	0.76	3.9	--	0.76	6.1	--	0.74	2.3	J	0.78	ND	U	0.77
		Tetrahydrofuran	96	--	0.76	2.6	--	0.76	ND	U	0.74	7.5	--	0.78	7.8	--	0.77
		Toluene	750	--	7.6	1.2	J	0.76	1.5	J	0.74	2.3	J	0.78	0.37	J	0.77
		Trichloroethene	ND	U	0.76	3.2	--	0.76	1	J	0.74	ND	U	0.78	ND	U	0.77
		Trichlorofluoromethane	18	--	1.4	1.1	J	1.4	1	J	1.4	0.72	J	1.5	1.3	J	1.4
		Vinyl Chloride	7.7	--	0.76	ND	U	0.76	ND	U	0.74	ND	U	0.78	ND	U	0.77
		Xylenes, Total	67	--	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106122-350			KAFB-106122-450			KAFB-106123-025			KAFB-106123-050			KAFB-106123-150		
		Field Sample ID:	SV122-350-192			SV122-450-192			SV123-025-192			SV123-050-192			SV123-150-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.4	J	0.85	1.5	J	0.71	0.47	J	0.76	0.94	J	0.76	0.96	J	0.75
		1,1-Dichloroethane	ND	U	1.6	5.5	--	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.6	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.85	3.7	--	0.71	ND	U	0.76	0.35	J	0.76	ND	U	0.75
		1,2-Dibromoethane	ND	U	0.85	ND	U	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		1,2-Dichlorobenzene	ND	U	0.85	ND	U	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		1,3,5-Trimethylbenzene	ND	U	0.85	2.9	--	0.71	0.81	J	0.76	ND	U	0.76	ND	U	0.75
		1,3-Butadiene	ND	U	1.6	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	0.85	ND	U	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		2-Butanone	ND	U	1.6	250	--	1.3	ND	U	1.4	5.1	--	1.4	5.9	--	1.4
		2-Hexanone	ND	U	0.85	ND	U	0.71	ND	U	0.76	1	J	0.76	0.59	J	0.75
		4-Methyl-2-Pentanone	ND	U	0.85	ND	U	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		Acetone	ND	U	14	200	--	11	ND	U	12	16	J	12	24	--	12
		Benzene	0.39	J	0.85	220	--	0.71	0.45	J	0.76	0.38	J	0.76	ND	U	0.75
		Bromodichloromethane	ND	U	0.85	ND	U	0.71	270	--	0.76	440	--	0.76	2.9	--	0.75
		Bromoform	ND	U	1.6	ND	U	1.3	1.2	J	1.4	11	--	1.4	ND	U	1.4
		Carbon Disulfide	4.6	J	2.7	250	--	2.3	2.4	J	2.4	61	--	2.4	4.1	J	2.4
		Carbon Tetrachloride	ND	U	0.85	ND	U	0.71	5.5	--	0.76	21	--	0.76	11	--	0.75
		Chloroethane	ND	U	1.6	9.1	--	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Chloroform	0.82	J	0.85	1.9	J	0.71	640	--	7.6	1,000	--	7.6	23	--	0.75
		Chloromethane	ND	U	1.5	21	--	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3
		Cyclohexane	ND	U	1.7	66	--	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.5
		Dibromochloromethane	ND	U	0.85	ND	U	0.71	43	--	0.76	120	--	0.76	ND	U	0.75
		Dichlorodifluoromethane	45	--	1.6	65	--	1.3	2.5	--	1.4	5.5	--	1.4	16	--	1.4
		Ethanol	ND	U	4.1	5.9	J	3.4	ND	U	3.7	4.4	J	3.7	2.4	J	3.6
		Ethyl Acetate	2.3	J	3.3	ND	U	2.7	ND	U	2.9	ND	U	2.9	ND	U	2.9
		Ethylbenzene	ND	U	0.85	35	--	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		Hexane	ND	U	1.6	41	--	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Isopropyl Alcohol	ND	U	3.1	1.8	J	2.6	ND	U	2.8	1.2	J	2.8	1.2	J	2.7
		m- & p-Xylenes	ND	U	1.7	60	--	1.4	0.74	J	1.5	0.63	J	1.5	ND	U	1.5
		Methylene Chloride	ND	U	1.6	ND	U	1.3	1.9	J	1.4	7.4	--	1.4	ND	U	1.4
		Naphthalene	ND	U	1.6	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		n-Heptane	ND	U	1.6	7.6	--	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		o-Xylene	ND	U	0.85	20	--	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		Propylene (Propene)	ND	U	1.6	10	--	1.3	11	--	1.4	1.2	J	1.4	0.87	J	1.4
		Styrene	ND	U	1.6	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	0.66	J	0.85	1.2	J	0.71	3.9	--	0.76	8.7	--	0.76	1.9	J	0.75
		Tetrahydrofuran	ND	U	0.85	320	--	0.71	3.5	--	0.76	0.37	J	0.76	1.3	J	0.75
		Toluene	0.46	J	0.85	830	--	7.1	1.3	J	0.76	0.89	J	0.76	0.42	J	0.75
		Trichloroethene	ND	U	0.85	ND	U	0.71	1.2	J	0.76	3.4	--	0.76	ND	U	0.75
		Trichlorofluoromethane	4.6	--	1.6	7.1	--	1.3	1	J	1.4	1.2	J	1.4	1.3	J	1.4
		Vinyl Chloride	ND	U	0.85	9	--	0.71	ND	U	0.76	ND	U	0.76	ND	U	0.75
		Xylenes, Total	ND	U	1.7	80	--	1.4	0.74	J	1.5	0.63	J	1.5	ND	U	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106123-250			KAFB-106123-350			KAFB-106123-450			KAFB-106124-025			KAFB-106124-050		
		Field Sample ID:	SV123-250-192			SV123-350-192			SV123-450-192			SV124-025-192			SV124-050-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	3	--	0.74	7.5	--	0.76	6.9	--	0.82	0.46	J	0.77	0.42	J	0.77
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.4	0.61	J	1.5	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	0.37	J	0.74	0.34	J	0.76	0.55	J	0.82	2.7	--	0.77	1.1	J	0.77
		1,2-Dibromoethane	ND	U	0.74	0.53	J	0.76	ND	U	0.82	ND	U	0.77	ND	U	0.77
		1,2-Dichlorobenzene	ND	U	0.74	ND	U	0.76	ND	U	0.82	ND	U	0.77	ND	U	0.77
		1,3,5-Trimethylbenzene	ND	U	0.74	ND	U	0.76	ND	U	0.82	0.95	J	0.77	0.39	J	0.77
		1,3-Butadiene	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	0.4	J	0.74	0.31	J	0.76	ND	U	0.82	ND	U	0.77	ND	U	0.77
		2-Butanone	ND	U	1.4	0.51	J	1.4	13	--	1.5	5.2	--	1.4	5.8	--	1.4
		2-Hexanone	ND	U	0.74	ND	U	0.76	ND	U	0.82	4.1	--	0.77	2	J	0.77
		4-Methyl-2-Pentanone	ND	U	0.74	ND	U	0.76	ND	U	0.82	1.9	J	0.77	0.38	J	0.77
		Acetone	ND	U	12	ND	U	12	18	J	13	31	--	12	54	--	12
		Benzene	ND	U	0.74	0.57	J	0.76	2.2	J	0.82	0.65	J	0.77	ND	U	0.77
		Bromodichloromethane	1.9	J	0.74	1.2	J	0.76	50	--	0.82	9.6	--	0.77	250	--	0.77
		Bromoform	ND	U	1.4	ND	U	1.4	2.7	--	1.6	ND	U	1.4	22	--	1.4
		Carbon Disulfide	2.8	J	2.4	0.99	J	2.4	20	--	2.6	1.1	J	2.4	1.6	J	2.4
		Carbon Tetrachloride	6.6	--	0.74	1.4	J	0.76	0.68	J	0.82	0.52	J	0.77	20	--	0.77
		Chloroethane	ND	U	1.4	ND	U	1.4	0.77	J	1.5	ND	U	1.4	ND	U	1.4
		Chloroform	5.2	--	0.74	11	--	0.76	68	--	0.82	84	--	0.77	2,000	--	7.7
		Chloromethane	ND	U	1.3	0.39	J	1.3	0.46	J	1.5	ND	U	1.4	ND	U	1.4
		Cyclohexane	ND	U	1.4	ND	U	1.5	ND	U	1.6	1.1	J	1.5	ND	U	1.5
		Dibromochloromethane	0.32	J	0.74	0.56	J	0.76	22	--	0.82	0.54	J	0.77	72	--	0.77
		Dichlorodifluoromethane	62	--	1.4	240	--	1.4	260	--	1.5	2.1	J	1.4	1.9	J	1.4
		Ethanol	ND	U	3.6	ND	U	3.7	15	J	4	3.5	J	3.7	ND	U	3.7
		Ethyl Acetate	ND	U	2.8	ND	U	2.9	5.5	--	3.2	ND	U	2.9	ND	U	2.9
		Ethylbenzene	ND	U	0.74	ND	U	0.76	0.63	J	0.82	1.8	J	0.77	0.5	J	0.77
		Hexane	ND	U	1.4	ND	U	1.4	1.4	J	1.6	0.64	J	1.4	ND	U	1.4
		Isopropyl Alcohol	ND	U	2.7	ND	U	2.8	1.5	J	3	2.5	J	2.8	ND	U	2.8
		m- & p-Xylenes	ND	U	1.5	ND	U	1.5	1.5	J	1.6	7.3	--	1.5	2	J	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.4	1.1	J	1.6	1.3	J	1.4	2.2	J	1.4
		Naphthalene	ND	U	1.4	ND	U	1.4	ND	U	1.5	0.7	J	1.4	ND	U	1.4
		n-Heptane	ND	U	1.4	ND	U	1.4	ND	U	1.6	1	J	1.4	ND	U	1.4
		o-Xylene	ND	U	0.74	ND	U	0.76	0.64	J	0.82	3.4	--	0.77	0.98	J	0.77
		Propylene (Propene)	ND	U	1.4	ND	U	1.4	2.2	J	1.5	0.59	J	1.4	ND	U	1.4
		Styrene	ND	U	1.4	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	ND	U	0.74	0.66	J	0.76	2.9	--	0.82	50	--	0.77	12	--	0.77
		Tetrahydrofuran	0.58	J	0.74	4.1	--	0.76	13	--	0.82	1.3	J	0.77	96	--	0.77
		Toluene	0.65	J	0.74	0.61	J	0.76	6.5	--	0.82	12	--	0.77	1.7	J	0.77
		Trichloroethene	ND	U	0.74	ND	U	0.76	0.49	J	0.82	5.3	--	0.77	4.7	--	0.77
		Trichlorofluoromethane	5	--	1.4	29	--	1.4	31	--	1.6	1	J	1.4	0.99	J	1.4
		Vinyl Chloride	ND	U	0.74	ND	U	0.76	0.85	J	0.82	0.43	J	0.77	ND	U	0.77
		Xylenes, Total	ND	U	1.5	ND	U	1.5	2.1	J	1.6	11	--	1.5	3	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106124-150			KAFB-106124-250			KAFB-106124-350			KAFB-106124-350			KAFB-106124-450[a]		
		Field Sample ID:	SV124-150-192			SV124-250-192			SV124-350-192			SV124-350-592			SV124-450-192-R		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019			5/6/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.33	J	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	540
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	550
		1,2,4-Trimethylbenzene	14	--	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		1,2-Dibromoethane	0.62	J	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		1,2-Dichlorobenzene	ND	U	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		1,3,5-Trimethylbenzene	4.1	--	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		1,3-Butadiene	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	540
		1,4-Dioxane	ND	U	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		2-Butanone	2.2	J	1.3	1.9	J	1.4	1.7	J	1.3	4	J	1.3	ND	U	540
		2-Hexanone	2.1	J	0.72	1.2	J	0.79	1	J	0.72	ND	U	0.74	ND	U	290
		4-Methyl-2-Pentanone	0.5	J	0.72	ND	U	0.79	0.58	J	0.72	0.74	J	0.74	ND	U	290
		Acetone	14	J	11	27	--	12	ND	U	11	ND	U	12	ND	U	4,700
		Benzene	1.3	J	0.72	ND	U	0.79	19	--	0.72	20	--	0.74	490	J	290
		Bromodichloromethane	12	--	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		Bromoform	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	550
		Carbon Disulfide	5	--	2.3	11	--	2.5	8.6	--	2.3	14	--	2.3	ND	U	930
		Carbon Tetrachloride	27	--	0.72	3.3	--	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		Chloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	540
		Chloroform	120	--	0.72	2.9	--	0.79	0.63	J	0.72	1.1	J	0.74	ND	U	290
		Chloromethane	ND	U	1.3	0.46	J	1.4	ND	U	1.3	0.59	J	1.3	ND	U	520
		Cyclohexane	ND	U	1.4	ND	U	1.5	44	--	1.4	47	--	1.4	3,300	--	570
		Dibromochloromethane	0.99	J	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		Dichlorodifluoromethane	1.3	J	1.3	0.78	J	1.4	ND	U	1.3	ND	U	1.3	ND	U	540
		Ethanol	1.8	J	3.5	ND	U	3.8	1.6	J	3.5	32	--	3.5	ND	U	1,400
		Ethyl Acetate	24	--	2.8	ND	U	3	2	J	2.8	ND	U	2.8	ND	U	1,100
		Ethylbenzene	8.4	--	0.72	ND	U	0.79	ND	U	0.72	0.87	J	0.74	ND	U	290
		Hexane	ND	U	1.4	ND	U	1.5	8.3	--	1.4	9.3	--	1.4	520	J	550
		Isopropyl Alcohol	ND	U	2.6	ND	U	2.9	ND	U	2.6	1.7	J	2.7	ND	U	1,100
		m- & p-Xylenes	34	--	1.4	0.87	J	1.6	ND	U	1.4	1.5	J	1.5	ND	U	590
		Methylene Chloride	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.4	ND	U	550
		Naphthalene	0.8	J	1.3	ND	U	1.4	ND	U	1.3	ND	U	1.3	ND	U	540
		n-Heptane	0.48	J	1.4	ND	U	1.5	ND	U	1.4	0.51	J	1.4	220	J	550
		o-Xylene	14	--	0.72	ND	U	0.79	ND	U	0.72	0.51	J	0.74	ND	U	290
		Propylene (Propene)	ND	U	1.3	ND	U	1.4	5.9	--	1.3	7.5	--	1.3	ND	U	540
		Styrene	ND	U	1.4	ND	U	1.5	ND	U	1.4	0.76	J	1.4	ND	U	550
		Tetrachloroethene	6.3	--	0.72	1.1	J	0.79	0.55	J	0.72	0.72	J	0.74	ND	U	290
		Tetrahydrofuran	3.8	--	0.72	7.5	--	0.79	5.5	--	0.72	13	--	0.74	ND	U	290
		Toluene	31	--	0.72	1.1	J	0.79	2	J	0.72	4.4	--	0.74	150	J	290
		Trichloroethene	0.43	J	0.72	ND	U	0.79	0.94	J	0.72	1	J	0.74	ND	U	290
		Trichlorofluoromethane	0.97	J	1.4	0.67	J	1.5	ND	U	1.4	ND	U	1.4	ND	U	550
		Vinyl Chloride	ND	U	0.72	ND	U	0.79	ND	U	0.72	ND	U	0.74	ND	U	290
		Xylenes, Total	48	--	1.4	0.87	J	1.6	ND	U	1.4	2	J	1.5	ND	U	590

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106125-025			KAFB-106125-050			KAFB-106125-150			KAFB-106125-250			KAFB-106125-350		
		Field Sample ID:	SV125-025-192			SV125-050-192			SV125-150-192			SV125-250-192			SV125-350-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.4	J	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	ND	U	0.73
		1,1-Dichloroethane	ND	U	1.5	ND	U	1.8	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.8	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	2.9	--	0.8	1.5	J	0.98	0.94	J	0.74	0.77	J	0.73	1.1	J	0.73
		1,2-Dibromoethane	ND	U	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	ND	U	0.73
		1,2-Dichlorobenzene	ND	U	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	ND	U	0.73
		1,3,5-Trimethylbenzene	0.92	J	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	0.4	J	0.73
		1,3-Butadiene	0.46	J	1.5	ND	U	1.8	ND	U	1.3	ND	U	1.3	ND	U	1.3
		1,4-Dioxane	ND	U	0.8	ND	U	0.98	ND	U	0.74	0.78	J	0.73	ND	U	0.73
		2-Butanone	ND	U	1.5	0.98	J	1.8	0.82	J	1.3	2.8	J	1.3	6.2	--	1.3
		2-Hexanone	ND	U	0.8	ND	U	0.98	ND	U	0.74	0.49	J	0.73	0.94	J	0.73
		4-Methyl-2-Pentanone	ND	U	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	0.33	J	0.73
		Acetone	7.2	J	13	ND	U	16	ND	U	12	19	J	12	77	--	12
		Benzene	2.8	--	0.8	1.5	J	0.98	0.8	J	0.74	0.84	J	0.73	1.4	J	0.73
		Bromodichloromethane	48	--	0.8	200	--	0.98	1.5	J	0.74	ND	U	0.73	0.88	J	0.73
		Bromoform	ND	U	1.5	ND	U	1.8	ND	U	1.4	ND	U	1.4	2.3	--	1.4
		Carbon Disulfide	2.3	J	2.6	2	J	3.1	6.1	--	2.3	26	--	2.3	5.9	--	2.3
		Carbon Tetrachloride	3.2	--	0.8	16	--	0.98	31	--	0.74	0.99	J	0.73	1	J	0.73
		Chloroethane	ND	U	1.5	ND	U	1.8	ND	U	1.3	ND	U	1.3	0.67	J	1.3
		Chloroform	400	--	0.8	1,400	--	9.8	49	--	0.74	1.2	J	0.73	2.1	J	0.73
		Chloromethane	ND	U	1.4	ND	U	1.7	ND	U	1.3	ND	U	1.3	3.5	--	1.3
		Cyclohexane	1.7	J	1.6	ND	U	1.9	ND	U	1.4	ND	U	1.4	8.6	--	1.4
		Dibromochloromethane	0.77	J	0.8	7.1	--	0.98	ND	U	0.74	ND	U	0.73	0.73	J	0.73
		Dichlorodifluoromethane	2	J	1.5	1.9	J	1.8	1.2	J	1.3	ND	U	1.3	ND	U	1.3
		Ethanol	5	J	3.9	6.5	J	4.7	3.1	J	3.6	24	--	3.5	8.1	J	3.5
		Ethyl Acetate	ND	U	3.1	ND	U	3.8	ND	U	2.8	2.7	J	2.8	7.7	--	2.8
		Ethylbenzene	2	J	0.8	0.85	J	0.98	0.59	J	0.74	0.7	J	0.73	1	J	0.73
		Hexane	ND	U	1.5	ND	U	1.8	ND	U	1.4	ND	U	1.4	2.2	J	1.4
		Isopropyl Alcohol	ND	U	2.9	ND	U	3.6	ND	U	2.7	1.2	J	2.7	1.8	J	2.7
		m- & p-Xylenes	6.6	--	1.6	2.7	J	2	2	J	1.5	2.3	J	1.5	3.3	J	1.5
		Methylene Chloride	ND	U	1.5	3	J	1.8	ND	U	1.4	ND	U	1.4	0.9	J	1.4
		Naphthalene	0.7	J	1.5	0.9	J	1.8	ND	U	1.3	ND	U	1.3	ND	U	1.3
		n-Heptane	0.91	J	1.5	0.5	J	1.8	ND	U	1.4	0.42	J	1.4	0.7	J	1.4
		o-Xylene	2.5	J	0.8	1.1	J	0.98	0.76	J	0.74	0.86	J	0.73	1.2	J	0.73
		Propylene (Propene)	2.4	J	1.5	1.7	J	1.8	0.81	J	1.3	1.1	J	1.3	4.4	--	1.3
		Styrene	0.51	J	1.5	ND	U	1.8	ND	U	1.4	ND	U	1.4	0.47	J	1.4
		Tetrachloroethene	5.5	--	0.8	15	--	0.98	6.1	--	0.74	ND	U	0.73	0.35	J	0.73
		Tetrahydrofuran	5.8	--	0.8	18	--	0.98	30	--	0.74	14	--	0.73	18	--	0.73
		Toluene	7.2	--	0.8	3.6	--	0.98	2.4	--	0.74	2.7	--	0.73	7.8	--	0.73
		Trichloroethene	0.53	J	0.8	2.6	J	0.98	ND	U	0.74	ND	U	0.73	5.3	--	0.73
		Trichlorofluoromethane	1	J	1.5	1	J	1.8	1.2	J	1.4	0.96	J	1.4	ND	U	1.4
		Vinyl Chloride	ND	U	0.8	ND	U	0.98	ND	U	0.74	ND	U	0.73	ND	U	0.73
		Xylenes, Total	9.1	--	1.6	3.9	J	2	2.7	J	1.5	3.2	J	1.5	4.5	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106125-450			KAFB-106126-025			KAFB-106126-050			KAFB-106126-150			KAFB-106126-250		
		Field Sample ID:	SV125-450-192			SV126-025-192			SV126-050-192			SV126-150-192			SV126-250-192		
		Sample Date:	4/23/2019			5/7/2019			5/7/2019			5/7/2019			5/7/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	19	0.55	J	1	0.45	J	0.82	ND	U	0.94	ND	U	0.82
		1,1-Dichloroethane	ND	U	36	ND	U	1.9	ND	U	1.5	ND	U	1.7	ND	U	1.5
		1,2,4-Trichlorobenzene	ND	U	37	ND	U	1.9	ND	U	1.5	ND	U	1.8	ND	U	1.6
		1,2,4-Trimethylbenzene	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		1,2-Dibromoethane	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		1,2-Dichlorobenzene	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		1,3,5-Trimethylbenzene	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		1,3-Butadiene	ND	U	36	ND	U	1.9	ND	U	1.5	ND	U	1.7	ND	U	1.5
		1,4-Dioxane	ND	U	19	ND	U	1	0.4	J	0.82	0.35	J	0.94	0.44	J	0.82
		2-Butanone	300	--	36	1.6	J	1.9	4.1	J	1.5	13	--	1.7	5.8	--	1.5
		2-Hexanone	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	0.97	J	0.82
		4-Methyl-2-Pentanone	ND	U	19	ND	U	1	ND	U	0.82	ND	U	0.94	0.48	J	0.82
		Acetone	ND	U	310	ND	U	16	12	J	13	ND	U	15	25	J	13
		Benzene	330	--	19	0.84	J	1	0.8	J	0.82	ND	U	0.94	0.6	J	0.82
		Bromodichloromethane	ND	U	19	6.9	--	1	60	--	0.82	0.57	J	0.94	ND	U	0.82
		Bromoform	ND	U	37	ND	U	1.9	ND	U	1.5	ND	U	1.8	ND	U	1.6
		Carbon Disulfide	210	--	62	7.8	--	3.2	12	--	2.6	2.9	J	3	2.9	J	2.6
		Carbon Tetrachloride	ND	U	19	7.5	--	1	23	--	0.82	6.7	--	0.94	1.8	J	0.82
		Chloroethane	ND	U	36	ND	U	1.9	ND	U	1.5	ND	U	1.7	ND	U	1.5
		Chloroform	10	J	19	120	--	1	500	--	8.2	12	--	0.94	1	J	0.82
		Chloromethane	42	J	34	ND	U	1.8	ND	U	1.4	ND	U	1.7	0.63	J	1.5
		Cyclohexane	61	J	38	4.2	J	2	ND	U	1.6	ND	U	1.8	ND	U	1.6
		Dibromochloromethane	ND	U	19	ND	U	1	1.4	J	0.82	ND	U	0.94	ND	U	0.82
		Dichlorodifluoromethane	ND	U	36	2.3	J	1.9	2.3	J	1.5	0.66	J	1.7	0.47	J	1.5
		Ethanol	ND	U	94	ND	U	4.9	3.6	J	4	ND	U	4.5	6.6	J	4
		Ethyl Acetate	ND	U	75	ND	U	3.9	ND	U	3.1	ND	U	3.6	ND	U	3.2
		Ethylbenzene	37	J	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		Hexane	64	--	37	2.5	J	1.9	ND	U	1.5	ND	U	1.8	ND	U	1.6
		Isopropyl Alcohol	ND	U	71	ND	U	3.7	ND	U	3	ND	U	3.4	ND	U	3
		m- & p-Xylenes	57	J	39	ND	U	2	ND	U	1.6	ND	U	1.9	ND	U	1.6
		Methylene Chloride	ND	U	37	ND	U	1.9	1	J	1.5	ND	U	1.8	ND	U	1.6
		Naphthalene	ND	U	36	ND	U	1.9	ND	U	1.5	ND	U	1.7	ND	U	1.5
		n-Heptane	ND	U	37	ND	U	1.9	ND	U	1.5	ND	U	1.8	0.47	J	1.6
		o-Xylene	15	J	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		Propylene (Propene)	ND	U	36	ND	U	1.9	1.1	J	1.5	ND	U	1.7	ND	U	1.5
		Styrene	ND	U	37	ND	U	1.9	ND	U	1.5	ND	U	1.8	ND	U	1.6
		Tetrachloroethene	ND	U	19	2.3	J	1	5.9	--	0.82	0.99	J	0.94	ND	U	0.82
		Tetrahydrofuran	71	--	19	0.46	J	1	52	--	0.82	150	--	0.94	130	--	0.82
		Toluene	690	--	19	0.98	J	1	0.62	J	0.82	0.44	J	0.94	0.98	J	0.82
		Trichloroethene	ND	U	19	0.79	J	1	1.6	J	0.82	ND	U	0.94	ND	U	0.82
		Trichlorofluoromethane	ND	U	37	1.1	J	1.9	1.2	J	1.5	1.8	J	1.8	1.3	J	1.6
		Vinyl Chloride	6.9	J	19	ND	U	1	ND	U	0.82	ND	U	0.94	ND	U	0.82
		Xylenes, Total	72	J	39	ND	U	2	ND	U	1.6	ND	U	1.9	ND	U	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106126-350			KAFB-106126-450			KAFB-106127-025			KAFB-106127-050			KAFB-106127-150		
		Field Sample ID:	SV126-350-192			SV126-450-192			SV127-025-192			SV127-050-192			SV127-150-192		
		Sample Date:	5/7/2019			5/7/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	58	ND	U	580	0.42	J	0.73	0.4	J	0.78	ND	U	0.75
		1,1-Dichloroethane	ND	U	110	ND	U	1,100	ND	U	1.3	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	110	ND	U	1,100	ND	U	1.4	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		1,2-Dibromoethane	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		1,2-Dichlorobenzene	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		1,3,5-Trimethylbenzene	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		1,3-Butadiene	ND	U	110	ND	U	1,100	ND	U	1.3	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		2-Butanone	ND	U	110	ND	U	1,100	1.7	J	1.3	37	--	1.4	3.8	J	1.4
		2-Hexanone	ND	U	58	ND	U	580	0.51	J	0.73	ND	U	0.78	0.58	J	0.75
		4-Methyl-2-Pentanone	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		Acetone	ND	U	920	ND	U	9,200	12	J	12	ND	U	12	23	J	12
		Benzene	33	J	58	500	J	580	ND	U	0.73	0.5	J	0.78	ND	U	0.75
		Bromodichloromethane	ND	U	58	ND	U	580	49	--	0.73	65	--	0.78	4.4	--	0.75
		Bromoform	ND	U	110	ND	U	1,100	ND	U	1.4	4.2	--	1.5	ND	U	1.4
		Carbon Disulfide	ND	U	180	ND	U	1,800	1.7	J	2.3	3.3	J	2.5	1.6	J	2.4
		Carbon Tetrachloride	ND	U	58	ND	U	580	6	--	0.73	19	--	0.78	14	--	0.75
		Chloroethane	ND	U	110	ND	U	1,100	ND	U	1.3	ND	U	1.4	ND	U	1.4
		Chloroform	ND	U	58	ND	U	580	440	--	0.73	460	--	0.78	54	--	0.75
		Chloromethane	ND	U	100	ND	U	1,000	ND	U	1.3	ND	U	1.4	0.41	J	1.3
		Cyclohexane	380	--	110	8,800	--	1,100	ND	U	1.4	2.4	J	1.5	0.84	J	1.5
		Dibromochloromethane	ND	U	58	ND	U	580	4.2	--	0.73	22	--	0.78	ND	U	0.75
		Dichlorodifluoromethane	ND	U	110	ND	U	1,100	1.8	J	1.3	1.9	J	1.4	0.93	J	1.4
		Ethanol	ND	U	280	ND	U	2,800	2.6	J	3.5	9.4	J	3.8	37	--	3.6
		Ethyl Acetate	ND	U	220	ND	U	2,200	ND	U	2.8	78	--	3	13	--	2.9
		Ethylbenzene	ND	U	58	ND	U	580	ND	U	0.73	0.7	J	0.78	ND	U	0.75
		Hexane	58	J	110	3,000	--	1,100	ND	U	1.4	2.3	J	1.5	0.73	J	1.4
		Isopropyl Alcohol	ND	U	210	ND	U	2,100	ND	U	2.7	3.4	J	2.8	1	J	2.7
		m- & p-Xylenes	ND	U	120	ND	U	1,200	ND	U	1.5	2.2	J	1.6	ND	U	1.5
		Methylene Chloride	ND	U	110	ND	U	1,100	1.2	J	1.4	1.6	J	1.5	ND	U	1.4
		Naphthalene	2,900	--	110	ND	U	1,100	ND	U	1.3	ND	U	1.4	0.69	J	1.4
		n-Heptane	49	J	110	610	J	1,100	ND	U	1.4	1	J	1.5	ND	U	1.4
		o-Xylene	ND	U	58	ND	U	580	ND	U	0.73	0.81	J	0.78	ND	U	0.75
		Propylene (Propene)	ND	U	110	ND	U	1,100	ND	U	1.3	0.89	J	1.4	0.62	J	1.4
		Styrene	ND	U	110	ND	U	1,100	ND	U	1.4	0.43	J	1.5	ND	U	1.4
		Tetrachloroethene	ND	U	58	ND	U	580	4.6	--	0.73	6.7	--	0.78	3	--	0.75
		Tetrahydrofuran	ND	U	58	ND	U	580	2.2	J	0.73	110	--	0.78	1.4	J	0.75
		Toluene	ND	U	58	310	J	580	0.31	J	0.73	25	--	0.78	6.5	--	0.75
		Trichloroethene	ND	U	58	ND	U	580	3.1	--	0.73	2.5	--	0.78	ND	U	0.75
		Trichlorofluoromethane	ND	U	110	ND	U	1,100	0.91	J	1.4	0.97	J	1.5	1	J	1.4
		Vinyl Chloride	ND	U	58	ND	U	580	ND	U	0.73	ND	U	0.78	ND	U	0.75
		Xylenes, Total	ND	U	120	ND	U	1,200	ND	U	1.5	3	J	1.6	ND	U	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106127-150			KAFB-106127-250			KAFB-106127-350			KAFB-106127-450			KAFB-106128-025		
		Field Sample ID:	SV127-150-592			SV127-250-192			SV127-350-192			SV127-450-192			SV128-025-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	97	--	0.68
		1,1-Dichloroethane	ND	U	1.5	ND	U	1.5	ND	U	1.1	ND	U	77	ND	U	1.2
		1,2,4-Trichlorobenzene	ND	U	1.6	ND	U	1.5	ND	U	1.2	ND	U	80	ND	U	1.3
		1,2,4-Trimethylbenzene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	0.42	J	0.68
		1,2-Dibromoethane	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		1,2-Dichlorobenzene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		1,3,5-Trimethylbenzene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		1,3-Butadiene	ND	U	1.5	ND	U	1.5	ND	U	1.1	ND	U	77	ND	U	1.2
		1,4-Dioxane	0.41	J	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		2-Butanone	0.58	J	1.5	4.3	J	1.5	0.6	J	1.1	ND	U	77	1.2	J	1.2
		2-Hexanone	ND	U	0.84	0.77	J	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		4-Methyl-2-Pentanone	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		Acetone	6.2	J	13	31	--	13	ND	U	9.8	ND	U	670	5.9	J	11
		Benzene	0.74	J	0.84	ND	U	0.81	0.75	J	0.62	48	J	42	1.2	J	0.68
		Bromodichloromethane	4	--	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		Bromoform	ND	U	1.6	ND	U	1.5	ND	U	1.2	ND	U	80	ND	U	1.3
		Carbon Disulfide	2.5	J	2.7	4.1	J	2.6	1	J	2	ND	U	130	ND	U	2.2
		Carbon Tetrachloride	13	--	0.84	2.8	--	0.81	ND	U	0.62	ND	U	42	91	--	0.68
		Chloroethane	ND	U	1.5	ND	U	1.5	ND	U	1.1	ND	U	77	ND	U	1.2
		Chloroform	50	--	0.84	2.3	J	0.81	ND	U	0.62	ND	U	42	7.9	--	0.68
		Chloromethane	ND	U	1.5	0.62	J	1.4	ND	U	1.1	ND	U	75	ND	U	1.2
		Cyclohexane	ND	U	1.6	ND	U	1.6	3.3	J	1.2	580	--	82	0.6	J	1.3
		Dibromochloromethane	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		Dichlorodifluoromethane	1.1	J	1.5	1.2	J	1.5	ND	U	1.1	ND	U	77	750	--	12
		Ethanol	ND	U	4	6.9	J	3.9	ND	U	3	ND	U	200	1.7	J	3.3
		Ethyl Acetate	ND	U	3.2	7	--	3.1	ND	U	2.4	ND	U	160	23	--	2.6
		Ethylbenzene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	0.3	J	0.68
		Hexane	ND	U	1.6	ND	U	1.5	0.92	J	1.2	120	J	80	0.58	J	1.3
		Isopropyl Alcohol	ND	U	3.1	1.1	J	3	ND	U	2.2	ND	U	150	ND	U	2.5
		m- & p-Xylenes	ND	U	1.7	0.78	J	1.6	ND	U	1.2	ND	U	85	1.3	J	1.4
		Methylene Chloride	ND	U	1.6	2.2	J	1.5	ND	U	1.2	ND	U	80	ND	U	1.3
		Naphthalene	ND	U	1.5	ND	U	1.5	ND	U	1.1	ND	U	77	ND	U	1.2
		n-Heptane	ND	U	1.6	ND	U	1.5	ND	U	1.2	150	--	80	0.37	J	1.3
		o-Xylene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	0.44	J	0.68
		Propylene (Propene)	ND	U	1.5	0.88	J	1.5	1.4	J	1.1	ND	U	77	1.3	J	1.2
		Styrene	ND	U	1.6	ND	U	1.5	ND	U	1.2	ND	U	80	ND	U	1.3
		Tetrachloroethene	2.7	--	0.84	ND	U	0.81	0.3	J	0.62	ND	U	42	2.1	--	0.68
		Tetrahydrofuran	2.2	J	0.84	2.5	J	0.81	ND	U	0.62	ND	U	42	0.51	J	0.68
		Toluene	1.1	J	0.84	1.6	J	0.81	ND	U	0.62	68	J	42	6.7	--	0.68
		Trichloroethene	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	0.84	J	0.68
		Trichlorofluoromethane	1	J	1.6	1.2	J	1.5	ND	U	1.2	ND	U	80	130	--	1.3
		Vinyl Chloride	ND	U	0.84	ND	U	0.81	ND	U	0.62	ND	U	42	ND	U	0.68
		Xylenes, Total	ND	U	1.7	0.78	J	1.6	ND	U	1.2	ND	U	85	1.7	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106128-050			KAFB-106128-150			KAFB-106128-250			KAFB-106128-350			KAFB-106128-450		
		Field Sample ID:	SV128-050-192			SV128-150-192			SV128-250-192			SV128-350-192			SV128-450-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	87	--	0.94	110	--	0.66	140	--	1.9	ND	U	1,300	2,400	--	710
		1,1-Dichloroethane	ND	U	1.7	ND	U	1.2	ND	U	3.5	ND	U	2,400	ND	U	1,300
		1,2,4-Trichlorobenzene	ND	U	1.8	ND	U	1.2	ND	U	3.6	ND	U	2,500	ND	U	1,300
		1,2,4-Trimethylbenzene	ND	U	0.94	0.36	J	0.66	ND	U	1.9	2,100	J	1,300	2,600	--	710
		1,2-Dibromoethane	ND	U	0.94	ND	U	0.66	ND	U	1.9	2,100	J	1,300	3,900	--	710
		1,2-Dichlorobenzene	ND	U	0.94	ND	U	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		1,3,5-Trimethylbenzene	ND	U	0.94	ND	U	0.66	ND	U	1.9	2,200	J	1,300	2,400	--	710
		1,3-Butadiene	ND	U	1.7	ND	U	1.2	ND	U	3.5	ND	U	2,400	ND	U	1,300
		1,4-Dioxane	ND	U	0.94	ND	U	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		2-Butanone	2	J	1.7	5.1	--	1.2	1.2	J	3.5	ND	U	2,400	4,200	--	1,300
		2-Hexanone	ND	U	0.94	0.5	J	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		4-Methyl-2-Pentanone	ND	U	0.94	0.63	J	0.66	ND	U	1.9	ND	U	1,300	5,000	--	710
		Acetone	20	J	15	140	--	10	56	J	30	ND	U	21,000	17,000	J	11,000
		Benzene	ND	U	0.94	0.5	J	0.66	2	J	1.9	42,000	--	1,300	43,000	--	710
		Bromodichloromethane	ND	U	0.94	ND	U	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		Bromoform	ND	U	1.8	ND	U	1.2	ND	U	3.6	ND	U	2,500	ND	U	1,300
		Carbon Disulfide	1.1	J	3	16	--	2.1	14	--	6	ND	U	4,200	ND	U	2,200
		Carbon Tetrachloride	78	--	0.94	250	--	0.66	140	--	1.9	ND	U	1,300	1,800	J	710
		Chloroethane	ND	U	1.7	ND	U	1.2	ND	U	3.5	ND	U	2,400	ND	U	1,300
		Chloroform	0.76	J	0.94	69	--	0.66	38	--	1.9	ND	U	1,300	ND	U	710
		Chloromethane	ND	U	1.7	ND	U	1.2	ND	U	3.3	ND	U	2,400	ND	U	1,200
		Cyclohexane	ND	U	1.8	ND	U	1.3	1,200	--	3.7	220,000	--	2,600	670,000	--	1,400
		Dibromochloromethane	ND	U	0.94	ND	U	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		Dichlorodifluoromethane	880	--	17	800	--	12	1,400	--	26	3,200	J	2,400	24,000	--	1,300
		Ethanol	5.8	J	4.5	4	J	3.2	ND	U	9.1	ND	U	6,400	ND	U	3,400
		Ethyl Acetate	2.1	J	3.6	ND	U	2.5	ND	U	7.2	ND	U	5,100	ND	U	2,700
		Ethylbenzene	ND	U	0.94	0.46	J	0.66	1.4	J	1.9	41,000	--	1,300	18,000	--	710
		Hexane	ND	U	1.8	ND	U	1.2	140	--	3.6	280,000	--	2,500	470,000	--	5,300
		Isopropyl Alcohol	1.5	J	3.4	1.4	J	2.4	ND	U	6.9	ND	U	4,900	ND	U	2,600
		m- & p-Xylenes	ND	U	1.9	1.6	J	1.3	2.1	J	3.8	150,000	--	2,700	180,000	--	1,400
		Methylene Chloride	1.4	J	1.8	0.96	J	1.2	ND	U	3.6	ND	U	2,500	ND	U	1,300
		Naphthalene	ND	U	1.7	ND	U	1.2	ND	U	3.5	ND	U	2,400	ND	U	1,300
		n-Heptane	ND	U	1.8	0.34	J	1.2	22	--	3.6	390,000	--	2,500	960,000	--	5,300
		o-Xylene	ND	U	0.94	0.57	J	0.66	1.1	J	1.9	39,000	--	1,300	43,000	--	710
		Propylene (Propene)	1.7	J	1.7	2	J	1.2	9.4	--	3.5	12,000	--	2,400	22,000	--	1,300
		Styrene	ND	U	1.8	ND	U	1.2	ND	U	3.6	ND	U	2,500	ND	U	1,300
		Tetrachloroethene	2.8	J	0.94	1.9	J	0.66	4.2	J	1.9	ND	U	1,300	ND	U	710
		Tetrahydrofuran	1	J	0.94	19	--	0.66	26	--	1.9	ND	U	1,300	ND	U	710
		Toluene	1.8	J	0.94	2.4	--	0.66	4.1	J	1.9	520,000	--	1,300	230,000	--	710
		Trichloroethene	0.87	J	0.94	30	--	0.66	10	--	1.9	ND	U	1,300	ND	U	710
		Trichlorofluoromethane	120	--	1.8	97	--	1.2	190	--	3.6	ND	U	2,500	3,400	--	1,300
		Vinyl Chloride	ND	U	0.94	ND	U	0.66	ND	U	1.9	ND	U	1,300	ND	U	710
		Xylenes, Total	ND	U	1.9	2.1	J	1.3	3.3	J	3.8	190,000	--	2,700	220,000	--	1,400

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106129-025			KAFB-106129-050			KAFB-106129-150			KAFB-106129-250			KAFB-106129-350		
		Field Sample ID:	SV129-025-192			SV129-050-192			SV129-150-192			SV129-250-192			SV129-350-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.4	J	0.71	1.7	J	0.79	3.5	--	0.85	4.3	--	0.68	1.3	J	0.78
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.6	ND	U	1.2	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.5	ND	U	1.6	ND	U	1.3	ND	U	1.5
		1,2,4-Trimethylbenzene	ND	U	0.71	ND	U	0.79	ND	U	0.85	0.31	J	0.68	ND	U	0.78
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		1,3,5-Trimethylbenzene	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		1,3-Butadiene	ND	U	1.3	ND	U	1.4	ND	U	1.6	ND	U	1.2	ND	U	1.4
		1,4-Dioxane	0.4	J	0.71	0.48	J	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		2-Butanone	3.8	J	1.3	2.6	J	1.4	2	J	1.6	4.9	--	1.2	0.67	J	1.4
		2-Hexanone	1.2	J	0.71	0.55	J	0.79	ND	U	0.85	1.5	J	0.68	0.34	J	0.78
		4-Methyl-2-Pentanone	0.48	J	0.71	0.54	J	0.79	ND	U	0.85	0.46	J	0.68	ND	U	0.78
		Acetone	18	J	11	13	J	12	6.3	J	14	16	J	11	8.4	J	12
		Benzene	2	J	0.71	ND	U	0.79	ND	U	0.85	2.1	--	0.68	1.1	J	0.78
		Bromodichloromethane	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		Bromoform	ND	U	1.3	ND	U	1.5	ND	U	1.6	ND	U	1.3	ND	U	1.5
		Carbon Disulfide	3.1	J	2.3	3.5	J	2.5	6.2	--	2.7	4	J	2.2	14	--	2.5
		Carbon Tetrachloride	1.9	J	0.71	2.5	--	0.79	2.7	--	0.85	3.2	--	0.68	0.96	J	0.78
		Chloroethane	ND	U	1.3	ND	U	1.4	ND	U	1.6	ND	U	1.2	ND	U	1.4
		Chloroform	0.78	J	0.71	1.2	J	0.79	1.1	J	0.85	0.65	J	0.68	0.57	J	0.78
		Chloromethane	ND	U	1.3	ND	U	1.4	ND	U	1.5	ND	U	1.2	ND	U	1.4
		Cyclohexane	ND	U	1.4	ND	U	1.5	ND	U	1.7	2.7	J	1.3	ND	U	1.5
		Dibromochloromethane	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		Dichlorodifluoromethane	2.7	--	1.3	2.8	--	1.4	2.6	J	1.6	3.2	--	1.2	2	J	1.4
		Ethanol	5.6	J	3.4	4	J	3.8	ND	U	4.1	31	--	3.3	2.5	J	3.8
		Ethyl Acetate	ND	U	2.7	8.1	--	3	ND	U	3.3	510	--	2.6	ND	U	3
		Ethylbenzene	ND	U	0.71	ND	U	0.79	ND	U	0.85	0.42	J	0.68	ND	U	0.78
		Hexane	ND	U	1.3	ND	U	1.5	ND	U	1.6	ND	U	1.3	ND	U	1.5
		Isopropyl Alcohol	ND	U	2.6	ND	U	2.9	ND	U	3.1	2.5	J	2.5	ND	U	2.8
		m- & p-Xylenes	ND	U	1.4	ND	U	1.6	ND	U	1.7	1.3	J	1.4	0.69	J	1.6
		Methylene Chloride	ND	U	1.3	ND	U	1.5	ND	U	1.6	1.6	U	1.3	ND	U	1.5
		Naphthalene	0.66	J	1.3	ND	U	1.4	ND	U	1.6	ND	U	1.2	0.8	J	1.4
		n-Heptane	ND	U	1.3	ND	U	1.5	ND	U	1.6	8.6	--	1.3	ND	U	1.5
		o-Xylene	ND	U	0.71	ND	U	0.79	ND	U	0.85	0.5	J	0.68	ND	U	0.78
		Propylene (Propene)	1.1	J	1.3	0.88	J	1.4	ND	U	1.6	1.3	J	1.2	1.3	J	1.4
		Styrene	ND	U	1.3	ND	U	1.5	ND	U	1.6	0.78	J	1.3	ND	U	1.5
		Tetrachloroethene	0.61	J	0.71	0.49	J	0.79	1.3	J	0.85	2	J	0.68	2.9	--	0.78
		Tetrahydrofuran	4	--	0.71	9.3	--	0.79	10	--	0.85	1	J	0.68	2.5	--	0.78
		Toluene	0.94	J	0.71	0.38	J	0.79	0.52	J	0.85	13	--	0.68	2.7	--	0.78
		Trichloroethene	ND	U	0.71	ND	U	0.79	1.8	J	0.85	6.9	--	0.68	13	--	0.78
		Trichlorofluoromethane	1.1	J	1.3	1.1	J	1.5	1.1	J	1.6	0.75	J	1.3	0.59	J	1.5
		Vinyl Chloride	ND	U	0.71	ND	U	0.79	ND	U	0.85	ND	U	0.68	ND	U	0.78
		Xylenes, Total	ND	U	1.4	ND	U	1.6	ND	U	1.7	1.8	J	1.4	0.69	J	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106129-450			KAFB-106130-025			KAFB-106130-050			KAFB-106130-150			KAFB-106130-250		
		Field Sample ID:	SV129-450-192			SV130-025-192			SV130-050-192			SV130-150-192			SV130-250-192		
		Sample Date:	5/6/2019			5/7/2019			5/7/2019			5/7/2019			5/7/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	76	5	--	0.87	6.8	--	0.7	9.1	--	0.8	8	--	0.85
		1,1-Dichloroethane	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		1,2,4-Trichlorobenzene	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		1,2,4-Trimethylbenzene	49	J	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		1,2-Dibromoethane	ND	U	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		1,2-Dichlorobenzene	ND	U	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		1,3,5-Trimethylbenzene	420	--	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		1,3-Butadiene	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		1,4-Dioxane	ND	U	76	0.84	J	0.87	2.1	J	0.7	ND	U	0.8	ND	U	0.85
		2-Butanone	ND	U	140	7	--	1.6	17	--	1.3	0.6	J	1.5	0.6	J	1.6
		2-Hexanone	ND	U	76	0.74	J	0.87	0.9	J	0.7	ND	U	0.8	ND	U	0.85
		4-Methyl-2-Pentanone	ND	U	76	ND	U	0.87	0.33	J	0.7	ND	U	0.8	ND	U	0.85
		Acetone	ND	U	1,200	47	--	14	190	--	11	17	J	13	22	J	14
		Benzene	6,300	--	76	0.43	J	0.87	0.42	J	0.7	0.72	J	0.8	0.52	J	0.85
		Bromodichloromethane	ND	U	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		Bromoform	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Carbon Disulfide	240	J	240	45	--	2.8	2.2	J	2.2	11	--	2.6	12	--	2.7
		Carbon Tetrachloride	ND	U	76	0.82	J	0.87	1.2	J	0.7	1.3	J	0.8	1.6	J	0.85
		Chloroethane	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Chloroform	ND	U	76	1	J	0.87	1.3	J	0.7	ND	U	0.8	0.36	J	0.85
		Chloromethane	ND	U	130	ND	U	1.5	ND	U	1.2	ND	U	1.4	ND	U	1.5
		Cyclohexane	7,600	--	150	ND	U	1.7	ND	U	1.4	ND	U	1.6	ND	U	1.7
		Dibromochloromethane	ND	U	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		Dichlorodifluoromethane	120	J	140	4.2	--	1.6	4.8	--	1.3	4.7	--	1.5	2.5	J	1.6
		Ethanol	ND	U	370	3.6	J	4.2	2.5	J	3.4	3.5	J	3.9	3.1	J	4.1
		Ethyl Acetate	ND	U	290	ND	U	3.3	ND	U	2.7	ND	U	3.1	ND	U	3.3
		Ethylbenzene	190	J	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		Hexane	4,500	--	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Isopropyl Alcohol	ND	U	280	1.4	J	3.2	ND	U	2.5	ND	U	2.9	ND	U	3.1
		m- & p-Xylenes	560	--	150	ND	U	1.7	ND	U	1.4	0.69	J	1.6	ND	U	1.7
		Methylene Chloride	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Naphthalene	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		n-Heptane	4,100	--	140	ND	U	1.6	ND	U	1.3	0.47	J	1.5	ND	U	1.6
		o-Xylene	860	--	76	ND	U	0.87	ND	U	0.7	0.4	J	0.8	ND	U	0.85
		Propylene (Propene)	780	--	140	1.3	J	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Styrene	ND	U	140	ND	U	1.6	ND	U	1.3	ND	U	1.5	ND	U	1.6
		Tetrachloroethene	ND	U	76	2.8	--	0.87	3.5	--	0.7	11	--	0.8	11	--	0.85
		Tetrahydrofuran	98	J	76	0.51	J	0.87	160	--	0.7	6	--	0.8	4.3	--	0.85
		Toluene	4,200	--	76	0.74	J	0.87	0.87	J	0.7	1.2	J	0.8	1.1	J	0.85
		Trichloroethene	ND	U	76	5.3	--	0.87	7.2	--	0.7	7.5	--	0.8	43	--	0.85
		Trichlorofluoromethane	ND	U	140	1.2	J	1.6	1.3	J	1.3	1.3	J	1.5	1	J	1.6
		Vinyl Chloride	ND	U	76	ND	U	0.87	ND	U	0.7	ND	U	0.8	ND	U	0.85
		Xylenes, Total	1,400	--	150	ND	U	1.7	ND	U	1.4	1.1	J	1.6	ND	U	1.7

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106130-350			KAFB-106130-450			KAFB-106130-450			KAFB-106131-025			KAFB-106131-055		
		Field Sample ID:	SV130-350-192			SV130-450-192			SV130-450-592			SV131-025-192			SV131-055-192		
		Sample Date:	5/7/2019			5/7/2019			5/7/2019			4/30/2019			4/30/2019		
		Sample Type:	REG			REG			Field Duplicate			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.3	J	0.74	ND	U	12	ND	U	11	35	--	0.79	42	--	0.72
		1,1-Dichloroethane	ND	U	1.3	ND	U	21	ND	U	20	ND	U	1.4	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	22	ND	U	21	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	0.84	J	0.74	9.7	J	12	9.1	J	11	ND	U	0.79	ND	U	0.72
		1,2-Dibromoethane	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		1,2-Dichlorobenzene	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		1,3,5-Trimethylbenzene	0.63	J	0.74	16	J	12	14	J	11	ND	U	0.79	ND	U	0.72
		1,3-Butadiene	ND	U	1.3	ND	U	21	ND	U	20	ND	U	1.4	ND	U	1.3
		1,4-Dioxane	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		2-Butanone	11	--	1.3	120	--	21	120	--	20	ND	U	1.4	ND	U	1.3
		2-Hexanone	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		4-Methyl-2-Pentanone	0.95	J	0.74	24	J	12	23	J	11	ND	U	0.79	ND	U	0.72
		Acetone	49	--	12	ND	U	190	ND	U	180	ND	U	13	ND	U	11
		Benzene	4.5	--	0.74	3,400	--	12	3,000	--	11	ND	U	0.79	ND	U	0.72
		Bromodichloromethane	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		Bromoform	ND	U	1.4	ND	U	22	ND	U	21	ND	U	1.5	ND	U	1.4
		Carbon Disulfide	28	--	2.3	140	--	37	140	--	35	ND	U	2.5	3	J	2.3
		Carbon Tetrachloride	0.69	J	0.74	ND	U	12	ND	U	11	9.5	--	0.79	13	--	0.72
		Chloroethane	ND	U	1.3	ND	U	21	ND	U	20	ND	U	1.4	ND	U	1.3
		Chloroform	1.1	J	0.74	ND	U	12	ND	U	11	2	J	0.79	0.73	J	0.72
		Chloromethane	0.62	J	1.3	38	--	21	33	--	20	ND	U	1.4	ND	U	1.3
		Cyclohexane	1.8	J	1.4	340	--	23	290	--	22	ND	U	1.5	ND	U	1.4
		Dibromochloromethane	ND	U	0.74	ND	U	12	ND	U	11	ND	U	0.79	ND	U	0.72
		Dichlorodifluoromethane	1.8	J	1.3	ND	U	21	ND	U	20	100	--	1.4	130	--	1.3
		Ethanol	5.7	J	3.6	ND	U	56	ND	U	54	ND	U	3.8	2.2	J	3.5
		Ethyl Acetate	95	--	2.8	ND	U	45	ND	U	43	ND	U	3	ND	U	2.8
		Ethylbenzene	1.2	J	0.74	77	--	12	69	--	11	ND	U	0.79	ND	U	0.72
		Hexane	1.4	J	1.4	180	--	22	410	--	21	ND	U	1.5	ND	U	1.4
		Isopropyl Alcohol	1.3	J	2.7	ND	U	43	26	J	41	ND	U	2.9	ND	U	2.6
		m- & p-Xylenes	4.5	J	1.5	190	--	23	170	--	22	ND	U	1.6	ND	U	1.4
		Methylene Chloride	ND	U	1.4	ND	U	22	ND	U	21	ND	U	1.5	ND	U	1.4
		Naphthalene	ND	U	1.3	ND	U	21	72	--	20	ND	U	1.4	ND	U	1.3
		n-Heptane	2.2	J	1.4	100	--	22	160	--	21	ND	U	1.5	ND	U	1.4
		o-Xylene	1.8	J	0.74	78	--	12	69	--	11	ND	U	0.79	ND	U	0.72
		Propylene (Propene)	0.94	J	1.3	52	--	21	44	--	20	ND	U	1.4	ND	U	1.3
		Styrene	ND	U	1.4	ND	U	22	ND	U	21	ND	U	1.5	ND	U	1.4
		Tetrachloroethene	1.6	J	0.74	ND	U	12	ND	U	11	0.33	J	0.79	0.45	J	0.72
		Tetrahydrofuran	60	--	0.74	28	J	12	26	J	11	0.45	J	0.79	4.3	--	0.72
		Toluene	15	--	0.74	1,800	--	12	1,600	--	11	0.3	J	0.79	ND	U	0.72
		Trichloroethene	7.8	--	0.74	15	J	12	13	J	11	ND	U	0.79	ND	U	0.72
		Trichlorofluoromethane	1.1	J	1.4	ND	U	22	ND	U	21	12	--	1.5	16	--	1.4
		Vinyl Chloride	ND	U	0.74	ND	U	12	5	J	11	ND	U	0.79	ND	U	0.72
		Xylenes, Total	6.3	--	1.5	270	--	23	240	--	22	ND	U	1.6	ND	U	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106131-150			KAFB-106131-245			KAFB-106131-350			KAFB-106131-450			KAFB-106132-025		
		Field Sample ID:	SV131-150-192			SV131-245-192			SV131-350-192			SV131-450-192			SV132-025-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	42	--	0.68	31	--	0.69	440	--	0.87	360	--	28	22	J	16
		1,1-Dichloroethane	ND	U	1.2	ND	U	1.3	ND	U	1.6	ND	U	51	ND	U	30
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.3	ND	U	1.6	ND	U	53	ND	U	31
		1,2,4-Trimethylbenzene	ND	U	0.68	ND	U	0.69	ND	U	0.87	16	J	28	ND	U	16
		1,2-Dibromoethane	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		1,2-Dichlorobenzene	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		1,3,5-Trimethylbenzene	ND	U	0.68	ND	U	0.69	ND	U	0.87	31	J	28	ND	U	16
		1,3-Butadiene	ND	U	1.2	ND	U	1.3	ND	U	1.6	ND	U	51	ND	U	30
		1,4-Dioxane	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		2-Butanone	8.3	--	1.2	1.2	J	1.3	4.9	J	1.6	ND	U	51	ND	U	30
		2-Hexanone	1.1	J	0.68	ND	U	0.69	1.6	J	0.87	ND	U	28	ND	U	16
		4-Methyl-2-Pentanone	ND	U	0.68	ND	U	0.69	0.55	J	0.87	ND	U	28	ND	U	16
		Acetone	36	--	11	ND	U	11	68	--	14	ND	U	450	ND	U	260
		Benzene	ND	U	0.68	0.32	J	0.69	0.9	J	0.87	4,200	--	28	ND	U	16
		Bromodichloromethane	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		Bromoform	ND	U	1.3	ND	U	1.3	ND	U	1.6	ND	U	53	ND	U	31
		Carbon Disulfide	6.9	--	2.2	7.3	--	2.2	9.5	--	2.8	220	--	89	ND	U	52
		Carbon Tetrachloride	18	--	0.68	47	--	0.69	12	--	0.87	ND	U	28	11	J	16
		Chloroethane	ND	U	1.2	ND	U	1.3	ND	U	1.6	ND	U	51	ND	U	30
		Chloroform	3.1	--	0.68	5.9	--	0.69	2.1	J	0.87	ND	U	28	16	J	16
		Chloromethane	ND	U	1.2	ND	U	1.2	ND	U	1.5	27	J	50	ND	U	29
		Cyclohexane	ND	U	1.3	ND	U	1.3	ND	U	1.7	950	--	54	ND	U	32
		Dibromochloromethane	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		Dichlorodifluoromethane	560	--	12	610	--	13	5,000	--	32	5,600	--	51	ND	U	30
		Ethanol	3.8	J	3.3	ND	U	3.3	4.1	J	4.2	ND	U	140	ND	U	78
		Ethyl Acetate	ND	U	2.6	6.2	--	2.6	ND	U	3.3	ND	U	110	160	--	62
		Ethylbenzene	ND	U	0.68	ND	U	0.69	ND	U	0.87	120	--	28	ND	U	16
		Hexane	ND	U	1.3	ND	U	1.3	ND	U	1.6	400	--	53	ND	U	31
		Isopropyl Alcohol	0.93	J	2.5	ND	U	2.5	ND	U	3.2	ND	U	100	ND	U	59
		m- & p-Xylenes	ND	U	1.4	ND	U	1.4	ND	U	1.7	280	--	56	ND	U	32
		Methylene Chloride	ND	U	1.3	ND	U	1.3	ND	U	1.6	ND	U	53	ND	U	31
		Naphthalene	ND	U	1.2	ND	U	1.3	ND	U	1.6	ND	U	51	ND	U	30
		n-Heptane	ND	U	1.3	ND	U	1.3	ND	U	1.6	520	--	53	ND	U	31
		o-Xylene	ND	U	0.68	ND	U	0.69	ND	U	0.87	120	--	28	ND	U	16
		Propylene (Propene)	0.71	J	1.2	ND	U	1.3	4.8	--	1.6	61	J	51	ND	U	30
		Styrene	ND	U	1.3	ND	U	1.3	ND	U	1.6	ND	U	53	ND	U	31
		Tetrachloroethene	ND	U	0.68	ND	U	0.69	23	--	0.87	12	J	28	30	J	16
		Tetrahydrofuran	18	--	0.68	78	--	0.69	3.5	--	0.87	67	J	28	ND	U	16
		Toluene	ND	U	0.68	0.5	J	0.69	2.7	J	0.87	2,400	--	28	6.6	J	16
		Trichloroethene	0.46	J	0.68	ND	U	0.69	0.72	J	0.87	ND	U	28	7,600	--	16
		Trichlorofluoromethane	55	--	1.3	53	--	1.3	870	--	33	950	--	53	ND	U	31
		Vinyl Chloride	ND	U	0.68	ND	U	0.69	ND	U	0.87	ND	U	28	ND	U	16
		Xylenes, Total	ND	U	1.4	ND	U	1.4	ND	U	1.7	400	--	56	ND	U	32

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106132-050			KAFB-106132-175			KAFB-106132-250			KAFB-106132-350			KAFB-106132-450		
		Field Sample ID:	SV132-050-192			SV132-175-192			SV132-250-192			SV132-350-192			SV132-450-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	21	J	13	32	J	41	1	J	0.79	ND	U	43	0.85	J	0.85
		1,1-Dichloroethane	ND	U	23	ND	U	74	ND	U	1.4	ND	U	78	3.5	--	1.5
		1,2,4-Trichlorobenzene	ND	U	24	ND	U	76	ND	U	1.5	ND	U	80	ND	U	1.6
		1,2,4-Trimethylbenzene	ND	U	13	ND	U	41	0.57	J	0.79	ND	U	43	0.55	J	0.85
		1,2-Dibromoethane	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		1,2-Dichlorobenzene	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		1,3,5-Trimethylbenzene	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		1,3-Butadiene	ND	U	23	ND	U	74	ND	U	1.4	ND	U	78	0.79	J	1.5
		1,4-Dioxane	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		2-Butanone	ND	U	23	ND	U	74	4.5	J	1.4	ND	U	78	11	--	1.5
		2-Hexanone	ND	U	13	ND	U	41	1	J	0.79	ND	U	43	ND	U	0.85
		4-Methyl-2-Pentanone	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		Acetone	ND	U	200	ND	U	640	31	--	12	ND	U	680	21	J	13
		Benzene	ND	U	13	ND	U	41	1.4	J	0.79	ND	U	43	3.1	--	0.85
		Bromodichloromethane	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		Bromoform	ND	U	24	ND	U	76	ND	U	1.5	ND	U	80	ND	U	1.6
		Carbon Disulfide	ND	U	41	ND	U	130	18	--	2.5	ND	U	140	39	--	2.7
		Carbon Tetrachloride	13	J	13	28	J	41	1.7	J	0.79	ND	U	43	0.71	J	0.85
		Chloroethane	ND	U	23	ND	U	74	ND	U	1.4	ND	U	78	4.1	--	1.5
		Chloroform	18	J	13	17	J	41	7.9	--	0.79	25	J	43	1.4	J	0.85
		Chloromethane	ND	U	23	ND	U	72	0.52	J	1.4	ND	U	75	14	--	1.5
		Cyclohexane	ND	U	25	ND	U	79	ND	U	1.5	ND	U	83	ND	U	1.6
		Dibromochloromethane	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	ND	U	0.85
		Dichlorodifluoromethane	ND	U	23	ND	U	74	0.44	J	1.4	ND	U	78	ND	U	1.5
		Ethanol	ND	U	62	ND	U	200	7	J	3.8	ND	U	210	4	J	4.1
		Ethyl Acetate	ND	U	49	ND	U	160	25	--	3	ND	U	160	ND	U	3.2
		Ethylbenzene	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	0.4	J	0.85
		Hexane	ND	U	24	ND	U	76	0.81	J	1.5	ND	U	80	1.8	J	1.6
		Isopropyl Alcohol	ND	U	47	100	J	150	ND	U	2.9	63	J	160	ND	U	3.1
		m- & p-Xylenes	ND	U	26	ND	U	81	1.9	J	1.6	ND	U	85	1.9	J	1.7
		Methylene Chloride	ND	U	24	ND	U	76	ND	U	1.5	ND	U	80	ND	U	1.6
		Naphthalene	ND	U	23	ND	U	74	ND	U	1.4	ND	U	78	ND	U	1.5
		n-Heptane	ND	U	24	ND	U	76	0.56	J	1.5	ND	U	80	0.93	J	1.6
		o-Xylene	ND	U	13	ND	U	41	0.79	J	0.79	ND	U	43	0.71	J	0.85
		Propylene (Propene)	ND	U	23	31	J	74	1.3	J	1.4	ND	U	78	ND	U	1.5
		Styrene	ND	U	24	ND	U	76	ND	U	1.5	ND	U	80	ND	U	1.6
		Tetrachloroethene	34	J	13	52	J	41	2.4	J	0.79	27	J	43	1.6	J	0.85
		Tetrahydrofuran	14	J	13	ND	U	41	8.8	--	0.79	290	--	43	38	--	0.85
		Toluene	ND	U	13	ND	U	41	2.1	J	0.79	ND	U	43	13	--	0.85
		Trichloroethene	9,300	--	32	29,000	--	81	730	--	7.9	23,000	--	43	470	--	0.85
		Trichlorofluoromethane	ND	U	24	ND	U	76	0.49	J	1.5	ND	U	80	ND	U	1.6
		Vinyl Chloride	ND	U	13	ND	U	41	ND	U	0.79	ND	U	43	5.1	--	0.85
		Xylenes, Total	ND	U	26	ND	U	81	2.7	J	1.6	ND	U	85	2.6	J	1.7

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106133-025			KAFB-106133-050			KAFB-106133-170			KAFB-106133-250			KAFB-106133-350		
		Field Sample ID:	SV133-025-192			SV133-050-192			SV133-170-192			SV133-250-192			SV133-350-192		
		Sample Date:	4/23/2019			4/23/2019			4/23/2019			4/23/2019			4/23/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	--	0.71	4.6	--	0.73	12	--	0.76	14	--	0.76	1.7	J	0.73
		1,1-Dichloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	0.89	J	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	0.44	J	0.73
		1,2-Dibromoethane	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		1,2-Dichlorobenzene	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		1,3,5-Trimethylbenzene	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		1,3-Butadiene	ND	U	1.3	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3
		1,4-Dioxane	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		2-Butanone	7.3	--	1.3	1.9	J	1.3	0.57	J	1.4	0.81	J	1.4	6.5	--	1.3
		2-Hexanone	2	J	0.71	ND	U	0.73	ND	U	0.76	0.44	J	0.76	1.2	J	0.73
		4-Methyl-2-Pentanone	0.65	J	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	0.53	J	0.73
		Acetone	67	--	11	14	J	12	28	--	12	27	--	12	700	--	12
		Benzene	0.6	J	0.71	0.54	J	0.73	0.57	J	0.76	1.6	J	0.76	6.6	--	0.73
		Bromodichloromethane	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		Bromoform	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	9.4	--	2.3	1.7	J	2.3	7.5	--	2.4	8.7	--	2.4	9.7	--	2.3
		Carbon Tetrachloride	0.49	J	0.71	0.59	J	0.73	2.6	--	0.76	6.6	--	0.76	1.3	J	0.73
		Chloroethane	ND	U	1.3	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.3
		Chloroform	0.62	J	0.71	0.81	J	0.73	1.1	J	0.76	1.7	J	0.76	3	--	0.73
		Chloromethane	ND	U	1.3	ND	U	1.3	ND	U	1.3	ND	U	1.3	0.55	J	1.3
		Cyclohexane	ND	U	1.4	ND	U	1.4	ND	U	1.5	ND	U	1.5	0.65	J	1.4
		Dibromochloromethane	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		Dichlorodifluoromethane	2.4	--	1.3	2.3	--	1.3	2.7	--	1.4	1.8	J	1.4	0.53	J	1.3
		Ethanol	7.9	J	3.4	ND	U	3.5	ND	U	3.6	3.1	J	3.6	3.4	J	3.5
		Ethyl Acetate	1.9	J	2.7	ND	U	2.8	ND	U	2.9	ND	U	2.9	ND	U	2.8
		Ethylbenzene	0.89	J	0.71	0.5	J	0.73	ND	U	0.76	0.33	J	0.76	0.35	J	0.73
		Hexane	1	J	1.3	0.5	J	1.4	ND	U	1.4	ND	U	1.4	0.62	J	1.4
		Isopropyl Alcohol	6.6	J	2.6	ND	U	2.7	ND	U	2.8	ND	U	2.8	3.4	J	2.7
		m- & p-Xylenes	3.4	J	1.4	1.3	J	1.5	1.2	J	1.5	1.4	J	1.5	1.4	J	1.5
		Methylene Chloride	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Naphthalene	ND	U	1.3	ND	U	1.3	ND	U	1.4	0.63	J	1.4	ND	U	1.3
		n-Heptane	1	J	1.3	0.71	J	1.4	0.67	J	1.4	0.59	J	1.4	0.86	J	1.4
		o-Xylene	1.1	J	0.71	0.39	J	0.73	0.38	J	0.76	0.54	J	0.76	0.56	J	0.73
		Propylene (Propene)	1.8	J	1.3	0.8	J	1.3	ND	U	1.4	0.75	J	1.4	3.6	--	1.3
		Styrene	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	4.7	--	0.71	5.9	--	0.73	24	--	0.76	23	--	0.76	2.3	--	0.73
		Tetrahydrofuran	1.9	J	0.71	0.65	J	0.73	15	--	0.76	7.4	--	0.76	9.3	--	0.73
		Toluene	8.5	--	0.71	1.6	J	0.73	1.6	J	0.76	1.5	J	0.76	2.3	J	0.73
		Trichloroethene	73	--	0.71	95	--	0.73	2,100	--	7.6	530	--	7.6	490	--	7.3
		Trichlorofluoromethane	1	J	1.3	1.1	J	1.4	1.2	J	1.4	0.81	J	1.4	ND	U	1.4
		Vinyl Chloride	ND	U	0.71	ND	U	0.73	ND	U	0.76	ND	U	0.76	ND	U	0.73
		Xylenes, Total	4.6	J	1.4	1.7	J	1.5	1.6	J	1.5	2	J	1.5	2	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106133-450			KAFB-106134-025			KAFB-106134-050			KAFB-106134-170			KAFB-106134-250		
		Field Sample ID:	SV133-450-192			SV134-025-192			SV134-050-192			SV134-170-192			SV134-250-192		
		Sample Date:	4/23/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	9.5	0.83	J	0.79	0.98	J	0.78	1.7	J	0.77	1.2	J	0.75
		1,1-Dichloroethane	ND	U	17	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	18	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	9.5	1.3	J	0.79	1.5	J	0.78	1.1	J	0.77	1.1	J	0.75
		1,2-Dibromoethane	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		1,2-Dichlorobenzene	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		1,3,5-Trimethylbenzene	ND	U	9.5	0.57	J	0.79	0.74	J	0.78	0.42	J	0.77	0.41	J	0.75
		1,3-Butadiene	ND	U	17	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		2-Butanone	270	--	17	0.61	J	1.4	3.9	J	1.4	14	--	1.4	7.4	--	1.4
		2-Hexanone	ND	U	9.5	ND	U	0.79	0.57	J	0.78	2.4	J	0.77	1.6	J	0.75
		4-Methyl-2-Pentanone	ND	U	9.5	ND	U	0.79	ND	U	0.78	0.91	J	0.77	0.43	J	0.75
		Acetone	240	J	150	7	J	12	26	--	12	76	--	12	59	--	12
		Benzene	800	--	9.5	0.46	J	0.79	0.69	J	0.78	1.4	J	0.77	1.7	J	0.75
		Bromodichloromethane	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		Bromoform	ND	U	18	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.4
		Carbon Disulfide	120	--	30	4	J	2.5	28	--	2.5	11	--	2.5	10	--	2.4
		Carbon Tetrachloride	ND	U	9.5	ND	U	0.79	ND	U	0.78	0.46	J	0.77	0.44	J	0.75
		Chloroethane	ND	U	17	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		Chloroform	ND	U	9.5	ND	U	0.79	ND	U	0.78	0.5	J	0.77	0.48	J	0.75
		Chloromethane	16	J	17	ND	U	1.4	ND	U	1.4	0.69	J	1.4	ND	U	1.3
		Cyclohexane	1,000	--	18	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.5
		Dibromochloromethane	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		Dichlorodifluoromethane	ND	U	17	2.5	--	1.4	2.6	--	1.4	2.3	J	1.4	2	J	1.4
		Ethanol	ND	U	46	1.9	J	3.8	5.1	J	3.8	80	--	3.7	9.5	J	3.6
		Ethyl Acetate	ND	U	36	5.8	--	3	18	--	3	27	--	3	79	--	2.9
		Ethylbenzene	15	J	9.5	ND	U	0.79	0.44	J	0.78	0.42	J	0.77	0.5	J	0.75
		Hexane	450	--	18	ND	U	1.5	ND	U	1.5	0.71	J	1.5	0.83	J	1.4
		Isopropyl Alcohol	ND	U	35	ND	U	2.9	ND	U	2.9	4.7	J	2.8	1.8	J	2.7
		m- & p-Xylenes	25	J	19	3.1	J	1.6	5.5	--	1.6	3	J	1.5	3.1	J	1.5
		Methylene Chloride	ND	U	18	ND	U	1.5	ND	U	1.5	ND	U	1.5	1.9	J	1.4
		Naphthalene	ND	U	17	ND	U	1.4	ND	U	1.4	ND	U	1.4	ND	U	1.4
		n-Heptane	110	--	18	ND	U	1.5	0.65	J	1.5	0.68	J	1.5	0.7	J	1.4
		o-Xylene	15	J	9.5	1.4	J	0.79	2.4	J	0.78	1.3	J	0.77	1.3	J	0.75
		Propylene (Propene)	130	--	17	ND	U	1.4	ND	U	1.4	2.7	--	1.4	1.8	J	1.4
		Styrene	ND	U	18	ND	U	1.5	ND	U	1.5	ND	U	1.5	ND	U	1.4
		Tetrachloroethene	ND	U	9.5	0.41	J	0.79	0.64	J	0.78	1.4	J	0.77	1.6	J	0.75
		Tetrahydrofuran	64	--	9.5	ND	U	0.79	5.1	--	0.78	7.7	--	0.77	8.6	--	0.75
		Toluene	310	--	9.5	1.2	J	0.79	2.7	--	0.78	3.7	--	0.77	4.8	--	0.75
		Trichloroethene	130	--	9.5	6	--	0.79	15	--	0.78	83	--	0.77	55	--	0.75
		Trichlorofluoromethane	ND	U	18	1.2	J	1.5	1.2	J	1.5	1.1	J	1.5	0.95	J	1.4
		Vinyl Chloride	ND	U	9.5	ND	U	0.79	ND	U	0.78	ND	U	0.77	ND	U	0.75
		Xylenes, Total	40	J	19	4.6	J	1.6	7.8	--	1.6	4.3	J	1.5	4.4	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106134-250			KAFB-106134-350			KAFB-106134-450			KAFB-106135-025			KAFB-106135-050		
		Field Sample ID:	SV134-250-592			SV134-350-192			SV134-450-192			SV135-025-192			SV135-050-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	J	0.83	0.71	J	0.77	ND	U	18	1.8	J	0.86	1.2	J	0.81
		1,1-Dichloroethane	ND	U	1.5	ND	U	1.4	ND	U	32	ND	U	1.6	0.37	J	1.5
		1,2,4-Trichlorobenzene	ND	U	1.6	ND	U	1.5	ND	U	33	ND	U	1.6	ND	U	1.5
		1,2,4-Trimethylbenzene	2.8	--	0.83	1.3	J	0.77	ND	U	18	15	--	0.86	6.1	--	0.81
		1,2-Dibromoethane	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	ND	U	0.81
		1,2-Dichlorobenzene	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	0.5	J	0.81
		1,3,5-Trimethylbenzene	1.2	J	0.83	0.51	J	0.77	150	--	18	8.6	--	0.86	3.3	--	0.81
		1,3-Butadiene	ND	U	1.5	ND	U	1.4	ND	U	32	ND	U	1.6	ND	U	1.5
		1,4-Dioxane	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	ND	U	0.81
		2-Butanone	2.5	J	1.5	3.4	J	1.4	ND	U	32	4.7	J	1.6	14	--	1.5
		2-Hexanone	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	1.8	J	0.81
		4-Methyl-2-Pentanone	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	0.63	J	0.81
		Acetone	37	--	13	16	J	12	ND	U	280	26	J	14	72	--	13
		Benzene	1.8	J	0.83	2	J	0.77	2,200	--	18	2.2	J	0.86	1.2	J	0.81
		Bromodichloromethane	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	ND	U	0.81
		Bromoform	ND	U	1.6	ND	U	1.5	ND	U	33	ND	U	1.6	ND	U	1.5
		Carbon Disulfide	18	--	2.6	37	--	2.5	38	J	56	2.5	J	2.7	3.1	J	2.6
		Carbon Tetrachloride	0.38	J	0.83	0.48	J	0.77	ND	U	18	0.38	J	0.86	0.42	J	0.81
		Chloroethane	ND	U	1.5	ND	U	1.4	ND	U	32	ND	U	1.6	ND	U	1.5
		Chloroform	0.47	J	0.83	0.7	J	0.77	ND	U	18	0.69	J	0.86	1.1	J	0.81
		Chloromethane	ND	U	1.5	ND	U	1.4	ND	U	31	ND	U	1.5	1.1	J	1.4
		Cyclohexane	ND	U	1.6	120	--	1.5	11,000	--	34	2.6	J	1.7	ND	U	1.6
		Dibromochloromethane	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	ND	U	0.81
		Dichlorodifluoromethane	2	J	1.5	2.2	J	1.4	ND	U	32	2.2	J	1.6	2.3	J	1.5
		Ethanol	2.9	J	4	5.7	J	3.7	ND	U	85	5.5	J	4.1	5	J	3.9
		Ethyl Acetate	ND	U	3.2	20	--	3	ND	U	68	3.9	J	3.3	ND	U	3.1
		Ethylbenzene	0.76	J	0.83	0.5	J	0.77	12	J	18	3.9	--	0.86	2	J	0.81
		Hexane	ND	U	1.6	12	--	1.5	5,400	--	33	3.3	--	1.6	ND	U	1.5
		Isopropyl Alcohol	1.4	J	3	ND	U	2.8	ND	U	64	1.2	J	3.1	ND	U	2.9
		m- & p-Xylenes	9.5	--	1.7	3.8	J	1.5	20	J	35	73	--	1.7	34	--	1.6
		Methylene Chloride	ND	U	1.6	1	J	1.5	ND	U	33	ND	U	1.6	ND	U	1.5
		Naphthalene	ND	U	1.5	ND	U	1.4	ND	U	32	ND	U	1.6	ND	U	1.5
		n-Heptane	0.94	J	1.6	0.62	J	1.5	3,500	--	33	2.8	--	1.6	0.72	J	1.5
		o-Xylene	3.9	--	0.83	1.6	J	0.77	180	--	18	38	--	0.86	17	--	0.81
		Propylene (Propene)	1.7	J	1.5	3	--	1.4	ND	U	32	1	J	1.6	1.7	J	1.5
		Styrene	ND	U	1.6	ND	U	1.5	ND	U	33	ND	U	1.6	ND	U	1.5
		Tetrachloroethene	1.6	J	0.83	0.65	J	0.77	ND	U	18	3.4	--	0.86	140	--	0.81
		Tetrahydrofuran	11	--	0.83	6.8	--	0.77	ND	U	18	1.7	J	0.86	14	--	0.81
		Toluene	3.7	--	0.83	3.2	--	0.77	ND	U	18	15	--	0.86	12	--	0.81
		Trichloroethene	58	--	0.83	56	--	0.77	ND	U	18	180	--	0.86	300	--	0.81
		Trichlorofluoromethane	0.95	J	1.6	0.91	J	1.5	ND	U	33	1.3	J	1.6	1.3	J	1.5
		Vinyl Chloride	ND	U	0.83	ND	U	0.77	ND	U	18	ND	U	0.86	ND	U	0.81
		Xylenes, Total	13	--	1.7	5.4	--	1.5	200	--	35	110	--	1.7	50	--	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106135-150			KAFB-106135-250			KAFB-106135-350			KAFB-106135-350			KAFB-106135-450		
		Field Sample ID:	SV135-150-192			SV135-250-192			SV135-350-192			SV135-350-592			SV135-450-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.6	--	0.8	1.2	J	0.77	ND	U	0.84	0.33	J	0.73	ND	U	0.82
		1,1-Dichloroethane	ND	U	1.5	0.66	J	1.4	ND	U	1.5	ND	U	1.3	ND	U	1.5
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.6
		1,2,4-Trimethylbenzene	4.1	--	0.8	2.6	--	0.77	2.2	J	0.84	5.2	--	0.73	1	J	0.82
		1,2-Dibromoethane	ND	U	0.8	ND	U	0.77	ND	U	0.84	ND	U	0.73	ND	U	0.82
		1,2-Dichlorobenzene	ND	U	0.8	0.37	J	0.77	ND	U	0.84	ND	U	0.73	ND	U	0.82
		1,3,5-Trimethylbenzene	2	J	0.8	1.3	J	0.77	1.1	J	0.84	3.6	--	0.73	0.53	J	0.82
		1,3-Butadiene	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.3	1.4	J	1.5
		1,4-Dioxane	ND	U	0.8	ND	U	0.77	ND	U	0.84	ND	U	0.73	ND	U	0.82
		2-Butanone	26	--	1.5	11	--	1.4	1.6	J	1.5	6.7	--	1.3	7.6	--	1.5
		2-Hexanone	ND	U	0.8	2.3	J	0.77	ND	U	0.84	2.1	J	0.73	0.37	J	0.82
		4-Methyl-2-Pentanone	ND	U	0.8	0.97	J	0.77	ND	U	0.84	ND	U	0.73	5.1	--	0.82
		Acetone	57	--	13	49	--	12	26	J	13	42	--	12	31	--	13
		Benzene	1	J	0.8	1	J	0.77	0.84	J	0.84	1.8	J	0.73	1.6	J	0.82
		Bromodichloromethane	ND	U	0.8	ND	U	0.77	ND	U	0.84	ND	U	0.73	ND	U	0.82
		Bromoform	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.6
		Carbon Disulfide	9.5	--	2.5	8.9	--	2.4	7.3	--	2.7	23	--	2.3	67	--	2.6
		Carbon Tetrachloride	1.4	J	0.8	0.56	J	0.77	0.58	J	0.84	0.61	J	0.73	0.59	J	0.82
		Chloroethane	ND	U	1.5	0.58	J	1.4	ND	U	1.5	ND	U	1.3	4.3	--	1.5
		Chloroform	1.7	J	0.8	1.4	J	0.77	ND	U	0.84	ND	U	0.73	3.2	--	0.82
		Chloromethane	0.42	J	1.4	1.5	J	1.4	ND	U	1.5	0.52	J	1.3	17	--	1.5
		Cyclohexane	ND	U	1.6	ND	U	1.5	ND	U	1.6	ND	U	1.4	ND	U	1.6
		Dibromochloromethane	ND	U	0.8	ND	U	0.77	ND	U	0.84	ND	U	0.73	ND	U	0.82
		Dichlorodifluoromethane	2	J	1.5	1.1	J	1.4	0.61	J	1.5	0.63	J	1.3	0.57	J	1.5
		Ethanol	1.9	J	3.9	6.4	J	3.7	ND	U	4.1	30	--	3.5	2.2	J	4
		Ethyl Acetate	ND	U	3.1	ND	U	2.9	ND	U	3.2	ND	U	2.8	ND	U	3.2
		Ethylbenzene	1.3	J	0.8	1.2	J	0.77	0.66	J	0.84	2.1	J	0.73	1.4	J	0.82
		Hexane	0.54	J	1.5	0.86	J	1.4	ND	U	1.6	0.71	J	1.4	0.83	J	1.6
		Isopropyl Alcohol	ND	U	2.9	1.4	J	2.8	ND	U	3.1	ND	U	2.7	1.3	J	3
		m- & p-Xylenes	21	--	1.6	17	--	1.5	11	--	1.7	38	--	1.5	8.8	--	1.6
		Methylene Chloride	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.6
		Naphthalene	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.3	ND	U	1.5
		n-Heptane	0.71	J	1.5	0.66	J	1.4	0.54	J	1.6	1.6	J	1.4	1	J	1.6
		o-Xylene	9.2	--	0.8	8	--	0.77	4.8	--	0.84	16	--	0.73	2.9	--	0.82
		Propylene (Propene)	ND	U	1.5	1.5	J	1.4	ND	U	1.5	0.79	J	1.3	ND	U	1.5
		Styrene	ND	U	1.5	ND	U	1.4	ND	U	1.6	ND	U	1.4	ND	U	1.6
		Tetrachloroethene	2.3	J	0.8	110	--	0.77	ND	U	0.84	ND	U	0.73	51	--	0.82
		Tetrahydrofuran	21	--	0.8	5.2	--	0.77	9.6	--	0.84	38	--	0.73	41	--	0.82
		Toluene	5.6	--	0.8	7.9	--	0.77	3.4	--	0.84	11	--	0.73	3.7	--	0.82
		Trichloroethene	1,200	--	8	320	--	0.77	24	--	0.84	25	--	0.73	8.3	--	0.82
		Trichlorofluoromethane	1	J	1.5	0.66	J	1.4	0.49	J	1.6	0.49	J	1.4	0.45	J	1.6
		Vinyl Chloride	ND	U	0.8	ND	U	0.77	ND	U	0.84	ND	U	0.73	3	--	0.82
		Xylenes, Total	30	--	1.6	25	--	1.5	16	--	1.7	54	--	1.5	12	--	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106137-025			KAFB-106137-050			KAFB-106137-150			KAFB-106137-250			KAFB-106137-350		
		Field Sample ID:	SV137-025-192			SV137-050-192			SV137-150-192			SV137-250-192			SV137-350-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.47	J	0.8	0.47	J	0.79	0.33	J	0.73	0.37	J	0.63	ND	U	0.94
		1,1-Dichloroethane	ND	U	1.5	ND	U	1.4	ND	U	1.3	ND	U	1.2	ND	U	1.7
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		1,2,4-Trimethylbenzene	25	--	0.8	2.8	--	0.79	4.2	--	0.73	2	--	0.63	0.79	J	0.94
		1,2-Dibromoethane	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		1,2-Dichlorobenzene	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		1,3,5-Trimethylbenzene	9.6	--	0.8	1.2	J	0.79	1.7	J	0.73	0.77	J	0.63	ND	U	0.94
		1,3-Butadiene	ND	U	1.5	ND	U	1.4	ND	U	1.3	ND	U	1.2	ND	U	1.7
		1,4-Dioxane	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		2-Butanone	2.5	J	1.5	0.81	J	1.4	9	--	1.3	3.6	J	1.2	2	J	1.7
		2-Hexanone	ND	U	0.8	0.67	J	0.79	1.4	J	0.73	ND	U	0.63	0.62	J	0.94
		4-Methyl-2-Pentanone	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Acetone	95	--	13	19	J	13	43	--	12	37	--	10	15	J	15
		Benzene	0.44	J	0.8	1.4	J	0.79	ND	U	0.73	0.75	J	0.63	0.44	J	0.94
		Bromodichloromethane	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Bromoform	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		Carbon Disulfide	2.1	J	2.5	9.1	--	2.5	14	--	2.3	14	--	2	5.1	J	3
		Carbon Tetrachloride	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	0.65	J	0.94
		Chloroethane	ND	U	1.5	ND	U	1.4	ND	U	1.3	ND	U	1.2	ND	U	1.7
		Chloroform	0.41	J	0.8	0.45	J	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Chloromethane	ND	U	1.4	ND	U	1.4	ND	U	1.3	0.4	J	1.1	ND	U	1.7
		Cyclohexane	1.2	J	1.6	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		Dibromochloromethane	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Dichlorodifluoromethane	2.4	J	1.5	2.5	--	1.4	3.3	--	1.3	3.1	--	1.2	3.2	--	1.7
		Ethanol	2.2	J	3.9	ND	U	3.8	3.2	J	3.5	4.4	J	3.1	ND	U	4.5
		Ethyl Acetate	18	--	3.1	25	--	3	1.9	J	2.8	5	--	2.4	ND	U	3.6
		Ethylbenzene	2.8	--	0.8	ND	U	0.79	0.65	J	0.73	0.39	J	0.63	ND	U	0.94
		Hexane	0.74	J	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		Isopropyl Alcohol	ND	U	2.9	ND	U	2.9	1.5	J	2.7	ND	U	2.3	ND	U	3.4
		m- & p-Xylenes	29	--	1.6	3.3	J	1.6	6.5	--	1.5	3.4	J	1.3	1.4	J	1.9
		Methylene Chloride	1.2	J	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		Naphthalene	1.2	J	1.5	ND	U	1.4	ND	U	1.3	ND	U	1.2	ND	U	1.7
		n-Heptane	3.9	--	1.5	0.71	J	1.5	1.5	J	1.4	0.75	J	1.2	ND	U	1.8
		o-Xylene	14	--	0.8	1.7	J	0.79	2.8	--	0.73	1.5	J	0.63	0.65	J	0.94
		Propylene (Propene)	0.81	J	1.5	ND	U	1.4	1.4	J	1.3	0.72	J	1.2	ND	U	1.7
		Styrene	ND	U	1.5	ND	U	1.5	ND	U	1.4	ND	U	1.2	ND	U	1.8
		Tetrachloroethene	0.65	J	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Tetrahydrofuran	0.34	J	0.8	1	J	0.79	0.67	J	0.73	37	--	0.63	5.7	--	0.94
		Toluene	4.9	--	0.8	1	J	0.79	1.5	J	0.73	2.8	--	0.63	0.81	J	0.94
		Trichloroethene	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Trichlorofluoromethane	1.2	J	1.5	1.2	J	1.5	1.1	J	1.4	1.1	J	1.2	1.9	J	1.8
		Vinyl Chloride	ND	U	0.8	ND	U	0.79	ND	U	0.73	ND	U	0.63	ND	U	0.94
		Xylenes, Total	43	--	1.6	5	J	1.6	9.3	--	1.5	4.9	--	1.3	2.1	J	1.9

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106137-450			KAFB-106139-025			KAFB-106139-050			KAFB-106139-150			KAFB-106139-250		
		Field Sample ID:	SV137-450-192			SV139-025-192			SV139-050-192			SV139-150-192			SV139-250-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	130	22	--	0.74	30	--	0.8	470	--	0.79	760	--	8.8
		1,1-Dichloroethane	ND	U	240	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.6
		1,2,4-Trichlorobenzene	ND	U	250	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.7
		1,2,4-Trimethylbenzene	6,400	--	130	ND	U	0.74	17	--	0.8	ND	U	0.79	ND	U	0.88
		1,2-Dibromoethane	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		1,2-Dichlorobenzene	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		1,3,5-Trimethylbenzene	6,300	--	130	ND	U	0.74	4.5	--	0.8	ND	U	0.79	ND	U	0.88
		1,3-Butadiene	ND	U	240	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.6
		1,4-Dioxane	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		2-Butanone	ND	U	240	ND	U	1.4	4.5	J	1.5	45	--	1.4	1.6	J	1.6
		2-Hexanone	ND	U	130	ND	U	0.74	ND	U	0.8	0.61	J	0.79	ND	U	0.88
		4-Methyl-2-Pentanone	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		Acetone	ND	U	2,100	ND	U	12	20	J	13	39	--	12	ND	U	14
		Benzene	33,000	--	130	ND	U	0.74	12	--	0.8	ND	U	0.79	62	--	0.88
		Bromodichloromethane	ND	U	130	ND	U	0.74	ND	U	0.8	1.1	J	0.79	1.6	J	0.88
		Bromoform	ND	U	250	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.7
		Carbon Disulfide	ND	U	420	1	J	2.4	5	J	2.5	4.9	J	2.5	8	--	2.8
		Carbon Tetrachloride	ND	U	130	13	--	0.74	18	--	0.8	190	--	0.79	190	--	0.88
		Chloroethane	ND	U	240	ND	U	1.4	ND	U	1.5	ND	U	1.4	ND	U	1.6
		Chloroform	ND	U	130	2.6	--	0.74	4.6	--	0.8	240	--	0.79	390	--	0.88
		Chloromethane	ND	U	230	ND	U	1.3	ND	U	1.4	ND	U	1.4	ND	U	1.6
		Cyclohexane	18,000	--	260	ND	U	1.4	9.4	--	1.6	ND	U	1.5	6.5	--	1.7
		Dibromochloromethane	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		Dichlorodifluoromethane	ND	U	240	2.1	J	1.4	2.2	J	1.5	3.5	--	1.4	3.8	--	1.6
		Ethanol	ND	U	640	ND	U	3.6	2.2	J	3.9	3.9	J	3.8	ND	U	4.2
		Ethyl Acetate	ND	U	500	ND	U	2.8	ND	U	3.1	ND	U	3	ND	U	3.4
		Ethylbenzene	9,200	--	130	ND	U	0.74	9.1	--	0.8	ND	U	0.79	ND	U	0.88
		Hexane	7,400	--	250	ND	U	1.4	8.2	--	1.5	ND	U	1.5	ND	U	1.7
		Isopropyl Alcohol	230	J	480	ND	U	2.7	ND	U	2.9	ND	U	2.9	ND	U	3.2
		m- & p-Xylenes	110,000	--	260	ND	U	1.5	24	--	1.6	ND	U	1.6	0.97	J	1.8
		Methylene Chloride	ND	U	250	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.7
		Naphthalene	ND	U	240	ND	U	1.4	1.4	J	1.5	ND	U	1.4	ND	U	1.6
		n-Heptane	9,100	--	250	ND	U	1.4	8	--	1.5	ND	U	1.5	ND	U	1.7
		o-Xylene	60,000	--	130	ND	U	0.74	11	--	0.8	ND	U	0.79	0.7	J	0.88
		Propylene (Propene)	650	--	240	ND	U	1.4	ND	U	1.5	ND	U	1.4	2.4	J	1.6
		Styrene	ND	U	250	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.7
		Tetrachloroethene	ND	U	130	ND	U	0.74	0.4	J	0.8	2.1	J	0.79	2.8	--	0.88
		Tetrahydrofuran	73	J	130	1.2	J	0.74	15	--	0.8	32	--	0.79	17	--	0.88
		Toluene	71,000	--	130	0.39	J	0.74	46	--	0.8	0.36	J	0.79	46	--	0.88
		Trichloroethene	ND	U	130	ND	U	0.74	ND	U	0.8	0.55	J	0.79	1.5	J	0.88
		Trichlorofluoromethane	ND	U	250	2.3	J	1.4	2.9	--	1.5	49	--	1.5	73	--	1.7
		Vinyl Chloride	ND	U	130	ND	U	0.74	ND	U	0.8	ND	U	0.79	ND	U	0.88
		Xylenes, Total	170,000	--	260	ND	U	1.5	35	--	1.6	ND	U	1.6	1.7	J	1.8

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106139-350			KAFB-106139-450			KAFB-106139-450			KAFB-106140-025			KAFB-106140-050		
		Field Sample ID:	SV139-350-192			SV139-450-192			SV139-450-592			SV140-025-192			SV140-050-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			Field Duplicate			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	370	--	1.2	110	--	2	120	--	0.73	ND	U	1.7	0.51	J	0.72
		1,1-Dichloroethane	ND	U	2.1	ND	U	3.6	0.71	J	1.3	ND	U	3.1	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	2.2	ND	U	3.7	ND	U	1.4	ND	U	3.2	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	1.2	ND	U	2	ND	U	0.73	ND	U	1.7	0.4	J	0.72
		1,2-Dibromoethane	ND	U	1.2	ND	U	2	ND	U	0.73	ND	U	1.7	ND	U	0.72
		1,2-Dichlorobenzene	ND	U	1.2	ND	U	2	ND	U	0.73	ND	U	1.7	ND	U	0.72
		1,3,5-Trimethylbenzene	ND	U	1.2	ND	U	2	ND	U	0.73	ND	U	1.7	ND	U	0.72
		1,3-Butadiene	ND	U	2.1	ND	U	3.6	0.56	J	1.3	ND	U	3.1	ND	U	1.3
		1,4-Dioxane	ND	U	1.2	ND	U	2	0.73	J	0.73	ND	U	1.7	1.2	J	0.72
		2-Butanone	5	J	2.1	6	J	3.6	8.6	--	1.3	2.2	J	3.1	4	J	1.3
		2-Hexanone	1.2	J	1.2	0.84	J	2	1.3	J	0.73	ND	U	1.7	0.94	J	0.72
		4-Methyl-2-Pentanone	ND	U	1.2	2.1	J	2	2.6	--	0.73	ND	U	1.7	0.51	J	0.72
		Acetone	ND	U	19	ND	U	31	38	--	12	ND	U	27	30	--	11
		Benzene	33	--	1.2	4.1	J	2	2.5	--	0.73	2	J	1.7	0.43	J	0.72
		Bromodichloromethane	14	--	1.2	3.4	J	2	3.9	--	0.73	ND	U	1.7	ND	U	0.72
		Bromoform	ND	U	2.2	ND	U	3.7	ND	U	1.4	ND	U	3.2	ND	U	1.4
		Carbon Disulfide	4.9	J	3.7	74	--	6.3	64	--	2.3	4.9	J	5.4	23	--	2.3
		Carbon Tetrachloride	120	--	1.2	140	--	2	150	--	0.73	1.8	J	1.7	4.1	--	0.72
		Chloroethane	ND	U	2.1	7.2	--	3.6	8.5	--	1.3	ND	U	3.1	ND	U	1.3
		Chloroform	630	--	1.2	48	--	2	55	--	0.73	1.8	J	1.7	3.8	--	0.72
		Chloromethane	ND	U	2.1	31	--	3.5	25	--	1.3	ND	U	3	ND	U	1.3
		Cyclohexane	6.9	J	2.3	4.5	J	3.8	ND	U	1.4	4.2	J	3.3	ND	U	1.4
		Dibromochloromethane	ND	U	1.2	ND	U	2	0.37	J	0.73	ND	U	1.7	ND	U	0.72
		Dichlorodifluoromethane	2.5	J	2.1	1.7	J	3.6	1.3	J	1.3	2.4	J	3.1	2.2	J	1.3
		Ethanol	5.5	J	5.7	15	J	9.5	3.7	J	3.5	5.4	J	8.2	6.2	J	3.5
		Ethyl Acetate	ND	U	4.5	5.3	J	7.5	7.3	--	2.8	37	--	6.5	25	--	2.8
		Ethylbenzene	0.61	J	1.2	3.3	J	2	3.8	--	0.73	ND	U	1.7	ND	U	0.72
		Hexane	0.98	J	2.2	1.9	J	3.7	0.88	J	1.4	ND	U	3.2	ND	U	1.4
		Isopropyl Alcohol	1.6	J	4.3	ND	U	7.2	1.4	J	2.7	ND	U	6.2	1.2	J	2.6
		m- & p-Xylenes	2.2	J	2.4	11	J	3.9	12	--	1.5	ND	U	3.4	0.96	J	1.4
		Methylene Chloride	ND	U	2.2	ND	U	3.7	0.77	J	1.4	ND	U	3.2	1.8	J	1.4
		Naphthalene	ND	U	2.1	ND	U	3.6	ND	U	1.3	ND	U	3.1	ND	U	1.3
		n-Heptane	1.2	J	2.2	1.5	J	3.7	1.5	J	1.4	ND	U	3.2	ND	U	1.4
		o-Xylene	0.92	J	1.2	2.4	J	2	2.6	--	0.73	ND	U	1.7	0.35	J	0.72
		Propylene (Propene)	2.1	J	2.1	5.9	J	3.6	5.7	--	1.3	ND	U	3.1	0.69	J	1.3
		Styrene	ND	U	2.2	ND	U	3.7	ND	U	1.4	ND	U	3.2	ND	U	1.4
		Tetrachloroethene	3.3	J	1.2	2.8	J	2	3.1	--	0.73	ND	U	1.7	60	--	0.72
		Tetrahydrofuran	5.6	--	1.2	63	--	2	74	--	0.73	2.4	J	1.7	8	--	0.72
		Toluene	27	--	1.2	3.9	J	2	2.5	--	0.73	3.2	J	1.7	2.6	--	0.72
		Trichloroethene	3.5	J	1.2	6.2	--	2	7.3	--	0.73	ND	U	1.7	1.3	J	0.72
		Trichlorofluoromethane	60	--	2.2	7	--	3.7	7.6	--	1.4	1.1	J	3.2	1.1	J	1.4
		Vinyl Chloride	ND	U	1.2	5.4	J	2	6.3	--	0.73	ND	U	1.7	ND	U	0.72
		Xylenes, Total	3.1	J	2.4	14	--	3.9	15	--	1.5	ND	U	3.4	1.3	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	KAFB-106140-150			KAFB-106140-250			KAFB-106140-250			KAFB-106140-350			KAFB-106140-450		
		Field Sample ID:	SV140-150-192			SV140-250-192			SV140-250-592			SV140-350-192			SV140-450-192		
		Sample Date:	4/29/2019			4/29/2019			4/29/2019			4/29/2019			4/29/2019		
		Sample Type:	REG			REG			Field Duplicate			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	0.91	0.39	J	0.75	0.36	J	0.72	ND	U	1	ND	U	0.71
		1,1-Dichloroethane	ND	U	1.7	ND	U	1.4	ND	U	1.3	ND	U	1.9	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.7	ND	U	1.4	ND	U	1.4	ND	U	1.9	ND	U	1.3
		1,2,4-Trimethylbenzene	ND	U	0.91	0.98	J	0.75	ND	U	0.72	1.1	J	1	0.33	J	0.71
		1,2-Dibromoethane	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		1,2-Dichlorobenzene	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		1,3,5-Trimethylbenzene	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		1,3-Butadiene	ND	U	1.7	ND	U	1.4	ND	U	1.3	ND	U	1.9	ND	U	1.3
		1,4-Dioxane	3.9	--	0.91	0.74	J	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		2-Butanone	3.2	J	1.7	10	--	1.4	1.7	J	1.3	8.6	--	1.9	230	--	1.3
		2-Hexanone	1.3	J	0.91	1.1	J	0.75	ND	U	0.72	0.98	J	1	ND	U	0.71
		4-Methyl-2-Pentanone	ND	U	0.91	0.62	J	0.75	ND	U	0.72	ND	U	1	2.7	--	0.71
		Acetone	23	J	14	34	--	12	ND	U	11	47	--	16	190	--	11
		Benzene	0.44	J	0.91	0.97	J	0.75	2.4	--	0.72	18	--	1	26	--	0.71
		Bromodichloromethane	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		Bromoform	ND	U	1.7	ND	U	1.4	ND	U	1.4	ND	U	1.9	ND	U	1.3
		Carbon Disulfide	ND	U	2.9	5.6	--	2.4	7.5	--	2.3	3.5	J	3.3	13	--	2.3
		Carbon Tetrachloride	7.4	--	0.91	3.1	--	0.75	3	--	0.72	ND	U	1	3.5	--	0.71
		Chloroethane	ND	U	1.7	ND	U	1.4	ND	U	1.3	ND	U	1.9	0.58	J	1.3
		Chloroform	2.5	J	0.91	1.5	J	0.75	1.4	J	0.72	ND	U	1	1.8	J	0.71
		Chloromethane	ND	U	1.6	ND	U	1.3	ND	U	1.3	1.2	J	1.8	1.6	J	1.3
		Cyclohexane	ND	U	1.8	ND	U	1.5	ND	U	1.4	16	--	2	7.3	--	1.4
		Dibromochloromethane	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		Dichlorodifluoromethane	2.1	J	1.7	9.8	--	1.4	9.3	--	1.3	13	--	1.9	3.8	--	1.3
		Ethanol	7.7	J	4.4	8.9	J	3.6	ND	U	3.5	8.9	J	4.9	4	J	3.4
		Ethyl Acetate	57	--	3.5	ND	U	2.9	ND	U	2.8	20	--	3.9	3.5	J	2.7
		Ethylbenzene	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	1.1	J	0.71
		Hexane	ND	U	1.7	ND	U	1.4	ND	U	1.4	ND	U	1.9	1.9	J	1.3
		Isopropyl Alcohol	1.5	J	3.3	1.5	J	2.7	ND	U	2.6	1.6	J	3.7	1.6	J	2.6
		m- & p-Xylenes	ND	U	1.8	0.93	J	1.5	ND	U	1.4	1	J	2	2.5	J	1.4
		Methylene Chloride	0.88	J	1.7	ND	U	1.4	ND	U	1.4	0.93	J	1.9	1.3	J	1.3
		Naphthalene	ND	U	1.7	1.6	J	1.4	ND	U	1.3	ND	U	1.9	ND	U	1.3
		n-Heptane	ND	U	1.7	ND	U	1.4	ND	U	1.4	ND	U	1.9	0.67	J	1.3
		o-Xylene	ND	U	0.91	0.39	J	0.75	ND	U	0.72	0.46	J	1	0.96	J	0.71
		Propylene (Propene)	0.71	J	1.7	0.73	J	1.4	ND	U	1.3	1.7	J	1.9	0.86	J	1.3
		Styrene	ND	U	1.7	ND	U	1.4	ND	U	1.4	ND	U	1.9	ND	U	1.3
		Tetrachloroethene	1.3	J	0.91	ND	U	0.75	ND	U	0.72	0.86	J	1	0.43	J	0.71
		Tetrahydrofuran	ND	U	0.91	27	--	0.75	30	--	0.72	31	--	1	49	--	0.71
		Toluene	2.1	J	0.91	1.3	J	0.75	0.6	J	0.72	2.1	J	1	22	--	0.71
		Trichloroethene	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	ND	U	0.71
		Trichlorofluoromethane	0.64	J	1.7	1.2	J	1.4	0.99	J	1.4	1.5	J	1.9	0.8	J	1.3
		Vinyl Chloride	ND	U	0.91	ND	U	0.75	ND	U	0.72	ND	U	1	0.4	J	0.71
		Xylenes, Total	ND	U	1.8	1.3	J	1.5	ND	U	1.4	1.5	J	2	3.4	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

	Location ID:	SVEW-10-410			SVEW-10-410			SVEW-11-410			SVEW-12-410			SVEW-12-410		
	Field Sample ID:	SVE10-410-192			SVE10-410-592			SVE11-410-192			SVE12-410-192			SVE12-410-592		
	Sample Date:	5/6/2019			5/6/2019			5/6/2019			4/30/2019			4/30/2019		
	Sample Type:	REG			Field Duplicate			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,400	--	15	1,100	--	7.8	ND	U	120	22	--	0.76	19	--	0.69
		1,1-Dichloroethane	ND	U	3.2	ND	U	1.4	ND	U	220	2.2	J	1.4	1.9	J	1.3
		1,2,4-Trichlorobenzene	ND	U	3.3	ND	U	1.5	ND	U	220	ND	U	1.4	ND	U	1.3
		1,2,4-Trimethylbenzene	4.5	J	1.7	5.6	--	0.78	480	--	120	ND	U	0.76	0.63	J	0.69
		1,2-Dibromoethane	ND	U	1.7	ND	U	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		1,2-Dichlorobenzene	ND	U	1.7	ND	U	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		1,3,5-Trimethylbenzene	3.4	J	1.7	4.2	--	0.78	520	--	120	ND	U	0.76	ND	U	0.69
		1,3-Butadiene	ND	U	3.2	ND	U	1.4	ND	U	220	ND	U	1.4	ND	U	1.3
		1,4-Dioxane	ND	U	1.7	ND	U	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		2-Butanone	4.3	J	3.2	8.7	--	1.4	ND	U	220	9.1	--	1.4	19	--	1.3
		2-Hexanone	ND	U	1.7	ND	U	0.78	ND	U	120	1.3	J	0.76	1	J	0.69
		4-Methyl-2-Pentanone	ND	U	1.7	0.56	J	0.78	ND	U	120	ND	U	0.76	0.52	J	0.69
		Acetone	ND	U	28	ND	U	12	ND	U	1,900	31	--	12	64	--	11
		Benzene	410	--	1.7	340	--	0.78	7,300	--	120	1.5	J	0.76	0.73	J	0.69
		Bromodichloromethane	ND	U	1.7	ND	U	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		Bromoform	ND	U	3.3	ND	U	1.5	ND	U	220	ND	U	1.4	ND	U	1.3
		Carbon Disulfide	ND	U	5.5	15	--	2.5	ND	U	380	2.5	J	2.4	1.3	J	2.2
		Carbon Tetrachloride	15	--	1.7	14	--	0.78	ND	U	120	27	--	0.76	24	--	0.69
		Chloroethane	ND	U	3.2	1.1	J	1.4	ND	U	220	ND	U	1.4	ND	U	1.3
		Chloroform	7.8	--	1.7	7	--	0.78	ND	U	120	2.1	J	0.76	1.9	J	0.69
		Chloromethane	16	--	3.1	7.7	--	1.4	ND	U	210	0.57	J	1.3	0.65	J	1.2
		Cyclohexane	39	--	3.4	36	--	1.5	6,900	--	230	1.1	J	1.5	0.9	J	1.3
		Dibromochloromethane	ND	U	1.7	ND	U	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		Dichlorodifluoromethane	6	--	3.2	5.5	--	1.4	ND	U	220	400	--	1.4	360	--	1.3
		Ethanol	4.4	J	8.4	6	J	3.8	ND	U	570	ND	U	3.6	ND	U	3.3
		Ethyl Acetate	ND	U	6.6	1.7	J	3	ND	U	460	19	--	2.9	37	--	2.6
		Ethylbenzene	35	--	1.7	30	--	0.78	990	--	120	ND	U	0.76	ND	U	0.69
		Hexane	100	--	3.3	90	--	1.5	2,200	--	220	1.2	J	1.4	0.72	J	1.3
		Isopropyl Alcohol	ND	U	6.3	1.8	J	2.9	ND	U	430	1.1	J	2.8	1.6	J	2.5
		m- & p-Xylenes	130	--	3.5	120	--	1.6	9,800	--	240	ND	U	1.5	1.1	J	1.4
		Methylene Chloride	ND	U	3.3	0.77	J	1.5	ND	U	220	ND	U	1.4	5.2	--	1.3
		Naphthalene	ND	U	3.2	0.73	J	1.4	ND	U	220	ND	U	1.4	0.54	J	1.3
		n-Heptane	44	--	3.3	40	--	1.5	4,000	--	220	0.83	J	1.4	0.79	J	1.3
		o-Xylene	38	--	1.7	35	--	0.78	2,900	--	120	ND	U	0.76	0.56	J	0.69
		Propylene (Propene)	10	--	3.2	11	--	1.4	260	J	220	1.1	J	1.4	1.8	J	1.3
		Styrene	ND	U	3.3	ND	U	1.5	ND	U	220	ND	U	1.4	ND	U	1.3
		Tetrachloroethene	16	--	1.7	14	--	0.78	ND	U	120	36	--	0.76	33	--	0.69
		Tetrahydrofuran	46	--	1.7	84	--	0.78	ND	U	120	2.4	--	0.76	5.5	--	0.69
		Toluene	1,800	--	15	1,300	--	7.8	13,000	--	120	3.4	--	0.76	4.6	--	0.69
		Trichloroethene	40	--	1.7	36	--	0.78	ND	U	120	74	--	0.76	66	--	0.69
		Trichlorofluoromethane	2.6	J	3.3	2.4	J	1.5	ND	U	220	27	--	1.4	24	--	1.3
		Vinyl Chloride	1.2	J	1.7	1.2	J	0.78	ND	U	120	ND	U	0.76	ND	U	0.69
		Xylenes, Total	170	--	3.5	160	--	1.6	13,000	--	240	ND	U	1.5	1.7	J	1.4

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVEW-13-410			SVMW-01-050			SVMW-01-100			SVMW-01-250			SVMW-01-300		
		Field Sample ID:	SVE13-410-192			SV01-050-192			SV01-100-192			SV01-250-192			SV01-300-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	100	50	--	0.89	ND	U	1,600	ND	U	550	1,000	--	18
		1,1-Dichloroethane	ND	U	190	ND	U	1.6	ND	U	2,900	ND	U	1,000	ND	U	33
		1,2,4-Trichlorobenzene	ND	U	200	ND	U	1.7	ND	U	3,000	ND	U	1,000	ND	U	34
		1,2,4-Trimethylbenzene	ND	U	100	ND	U	0.89	1,600	J	1,600	ND	U	550	13	J	18
		1,2-Dibromoethane	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	ND	U	18
		1,2-Dichlorobenzene	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	ND	U	18
		1,3,5-Trimethylbenzene	270	J	100	ND	U	0.89	1,100	J	1,600	ND	U	550	12	J	18
		1,3-Butadiene	ND	U	190	ND	U	1.6	ND	U	2,900	ND	U	1,000	ND	U	33
		1,4-Dioxane	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	ND	U	18
		2-Butanone	ND	U	190	11	--	1.6	ND	U	2,900	ND	U	1,000	ND	U	33
		2-Hexanone	ND	U	100	1.2	J	0.89	ND	U	1,600	ND	U	550	ND	U	18
		4-Methyl-2-Pentanone	ND	U	100	0.39	J	0.89	ND	U	1,600	ND	U	550	ND	U	18
		Acetone	ND	U	1,700	40	--	14	ND	U	25,000	ND	U	8,800	ND	U	290
		Benzene	14,000	--	100	0.65	J	0.89	73,000	--	1,600	5,700	--	550	3,700	--	18
		Bromodichloromethane	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	ND	U	18
		Bromoform	ND	U	200	ND	U	1.7	ND	U	3,000	ND	U	1,000	ND	U	34
		Carbon Disulfide	ND	U	330	4.6	J	2.8	ND	U	5,000	ND	U	1,800	ND	U	58
		Carbon Tetrachloride	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	27	J	18
		Chloroethane	ND	U	190	ND	U	1.6	ND	U	2,900	ND	U	1,000	ND	U	33
		Chloroform	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	11	J	18
		Chloromethane	ND	U	180	ND	U	1.6	ND	U	2,800	ND	U	980	ND	U	32
		Cyclohexane	63,000	--	200	ND	U	1.7	560,000	--	3,100	310,000	--	1,100	5,000	--	35
		Dibromochloromethane	ND	U	100	ND	U	0.89	ND	U	1,600	ND	U	550	ND	U	18
		Dichlorodifluoromethane	ND	U	190	3.3	--	1.6	ND	U	2,900	ND	U	1,000	17	J	33
		Ethanol	ND	U	500	9.7	J	4.3	ND	U	7,700	ND	U	2,700	ND	U	87
		Ethyl Acetate	ND	U	400	6.2	--	3.4	ND	U	6,100	ND	U	2,100	ND	U	69
		Ethylbenzene	120	J	100	ND	U	0.89	4,100	J	1,600	260	J	550	ND	U	18
		Hexane	54,000	--	200	ND	U	1.7	870,000	--	3,000	220,000	--	1,000	2,500	--	34
		Isopropyl Alcohol	ND	U	380	2	J	3.3	ND	U	5,800	ND	U	2,000	ND	U	66
		m- & p-Xylenes	390	J	210	ND	U	1.8	15,000	--	3,200	ND	U	1,100	80	J	36
		Methylene Chloride	ND	U	200	ND	U	1.7	ND	U	3,000	ND	U	1,000	ND	U	34
		Naphthalene	ND	U	190	ND	U	1.6	ND	U	2,900	ND	U	1,000	ND	U	33
		n-Heptane	33,000	--	200	ND	U	1.7	350,000	--	3,000	190,000	--	1,000	1,700	--	34
		o-Xylene	650	--	100	ND	U	0.89	6,300	--	1,600	530	J	550	50	J	18
		Propylene (Propene)	1,900	--	190	3.2	--	1.6	1,400	J	2,900	5,700	--	1,000	97	--	33
		Styrene	ND	U	200	ND	U	1.7	ND	U	3,000	ND	U	1,000	ND	U	34
		Tetrachloroethene	ND	U	100	1.3	J	0.89	ND	U	1,600	ND	U	550	10	J	18
		Tetrahydrofuran	ND	U	100	0.6	J	0.89	ND	U	1,600	ND	U	550	ND	U	18
		Toluene	3,300	--	100	0.82	J	0.89	53,000	--	1,600	1,800	--	550	65	--	18
		Trichloroethene	74	J	100	ND	U	0.89	ND	U	1,600	ND	U	550	32	J	18
		Trichlorofluoromethane	ND	U	200	4.5	--	1.7	ND	U	3,000	ND	U	1,000	ND	U	34
		Vinyl Chloride	ND	U	100	ND	U	0.89	ND	U	1,600	490	J	550	ND	U	18
		Xylenes, Total	1,000	--	210	ND	U	1.8	22,000	--	3,200	530	J	1,100	130	--	36

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-02-050			SVMW-02-100			SVMW-02-150			SVMW-02-150			SVMW-05-050		
		Field Sample ID:	SV02-050-192			SV02-100-192			SV02-150-192			SV02-150-592			SV05-050-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	18	--	0.94	ND	U	1,200	460	--	86	330	--	57	33	--	1.1
		1,1-Dichloroethane	ND	U	1.7	ND	U	2,200	ND	U	160	ND	U	100	ND	U	2.1
		1,2,4-Trichlorobenzene	ND	U	1.8	ND	U	2,300	ND	U	160	ND	U	110	ND	U	2.1
		1,2,4-Trimethylbenzene	ND	U	0.94	1,500	J	1,200	65	J	86	47	J	57	ND	U	1.1
		1,2-Dibromoethane	ND	U	0.94	1,800	J	1,200	ND	U	86	ND	U	57	ND	U	1.1
		1,2-Dichlorobenzene	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		1,3,5-Trimethylbenzene	ND	U	0.94	2,300	J	1,200	290	--	86	250	--	57	ND	U	1.1
		1,3-Butadiene	ND	U	1.7	ND	U	2,200	ND	U	160	ND	U	100	ND	U	2.1
		1,4-Dioxane	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		2-Butanone	ND	U	1.7	ND	U	2,200	ND	U	160	ND	U	100	ND	U	2.1
		2-Hexanone	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		4-Methyl-2-Pentanone	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		Acetone	6.9	J	15	ND	U	19,000	ND	U	1,400	ND	U	900	8.2	J	18
		Benzene	ND	U	0.94	210,000	--	1,200	16,000	--	86	11,000	--	57	1.3	J	1.1
		Bromodichloromethane	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		Bromoform	ND	U	1.8	ND	U	2,300	ND	U	160	ND	U	110	ND	U	2.1
		Carbon Disulfide	3.9	J	3	ND	U	3,800	ND	U	270	ND	U	180	1.3	J	3.6
		Carbon Tetrachloride	0.95	J	0.94	ND	U	1,200	170	J	86	120	J	57	ND	U	1.1
		Chloroethane	ND	U	1.7	ND	U	2,200	ND	U	160	ND	U	100	ND	U	2.1
		Chloroform	ND	U	0.94	ND	U	1,200	110	J	86	ND	U	57	ND	U	1.1
		Chloromethane	ND	U	1.7	ND	U	2,100	ND	U	150	ND	U	100	ND	U	2
		Cyclohexane	ND	U	1.8	1,400,000	--	2,300	55,000	--	170	38,000	--	110	ND	U	2.2
		Dibromochloromethane	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		Dichlorodifluoromethane	2.7	J	1.7	ND	U	2,200	ND	U	160	ND	U	100	2.6	J	2.1
		Ethanol	ND	U	4.5	ND	U	5,800	ND	U	420	ND	U	270	9.4	J	5.5
		Ethyl Acetate	ND	U	3.6	ND	U	4,600	ND	U	330	ND	U	220	4.6	J	4.4
		Ethylbenzene	ND	U	0.94	5,800	--	1,200	180	J	86	130	J	57	ND	U	1.1
		Hexane	ND	U	1.8	250,000	--	2,300	45,000	--	160	31,000	--	110	ND	U	2.1
		Isopropyl Alcohol	ND	U	3.4	ND	U	4,400	ND	U	320	ND	U	210	ND	U	4.2
		m- & p-Xylenes	ND	U	1.9	47,000	--	2,400	340	J	170	230	J	110	ND	U	2.3
		Methylene Chloride	ND	U	1.8	ND	U	2,300	ND	U	160	ND	U	110	ND	U	2.1
		Naphthalene	ND	U	1.7	ND	U	2,200	ND	U	160	ND	U	100	ND	U	2.1
		n-Heptane	ND	U	1.8	79,000	--	2,300	34,000	--	160	24,000	--	110	ND	U	2.1
		o-Xylene	ND	U	0.94	17,000	--	1,200	1,100	--	86	870	--	57	ND	U	1.1
		Propylene (Propene)	1.5	J	1.7	6,400	--	2,200	730	--	160	460	--	100	ND	U	2.1
		Styrene	ND	U	1.8	ND	U	2,300	ND	U	160	ND	U	110	ND	U	2.1
		Tetrachloroethene	0.99	J	0.94	ND	U	1,200	ND	U	86	ND	U	57	0.86	J	1.1
		Tetrahydrofuran	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	18	--	1.1
		Toluene	0.5	J	0.94	330,000	--	1,200	1,000	--	86	670	--	57	1.4	J	1.1
		Trichloroethene	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		Trichlorofluoromethane	1.7	J	1.8	ND	U	2,300	ND	U	160	ND	U	110	1.6	J	2.1
		Vinyl Chloride	ND	U	0.94	ND	U	1,200	ND	U	86	ND	U	57	ND	U	1.1
		Xylenes, Total	ND	U	1.9	63,000	--	2,400	1,500	--	170	1,100	--	110	ND	U	2.3

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-05-050			SVMW-05-100			SVMW-05-230			SVMW-05-290			SVMW-06-050		
		Field Sample ID:	SV05-050-592			SV05-100-192			SV05-230-192			SV05-290-192			SV06-050-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	Field Duplicate			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	33	--	1.3	61	--	1.3	230	--	12	450	--	0.81	16	--	0.93
		1,1-Dichloroethane	ND	U	2.4	ND	U	2.4	ND	U	22	ND	U	1.5	ND	U	1.7
		1,2,4-Trichlorobenzene	ND	U	2.5	ND	U	2.4	ND	U	23	ND	U	1.5	ND	U	1.8
		1,2,4-Trimethylbenzene	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		1,2-Dibromoethane	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		1,2-Dichlorobenzene	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		1,3,5-Trimethylbenzene	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		1,3-Butadiene	ND	U	2.4	ND	U	2.4	ND	U	22	ND	U	1.5	ND	U	1.7
		1,4-Dioxane	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	0.47	J	0.93
		2-Butanone	2.1	J	2.4	ND	U	2.4	ND	U	22	6	--	1.5	1.1	J	1.7
		2-Hexanone	ND	U	1.3	ND	U	1.3	ND	U	12	0.91	J	0.81	ND	U	0.93
		4-Methyl-2-Pentanone	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		Acetone	11	J	21	ND	U	21	ND	U	190	31	--	13	8	J	15
		Benzene	2.8	J	1.3	1.8	J	1.3	150	--	12	0.97	J	0.81	0.71	J	0.93
		Bromodichloromethane	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		Bromoform	ND	U	2.5	ND	U	2.4	ND	U	23	ND	U	1.5	ND	U	1.8
		Carbon Disulfide	1.9	J	4.2	4.1	J	4.1	ND	U	38	16	--	2.6	1.1	J	3
		Carbon Tetrachloride	ND	U	1.3	ND	U	1.3	32	J	12	28	--	0.81	9.4	--	0.93
		Chloroethane	ND	U	2.4	ND	U	2.4	ND	U	22	ND	U	1.5	ND	U	1.7
		Chloroform	ND	U	1.3	ND	U	1.3	ND	U	12	1.9	J	0.81	ND	U	0.93
		Chloromethane	ND	U	2.4	ND	U	2.3	ND	U	21	0.48	J	1.4	ND	U	1.6
		Cyclohexane	1.7	J	2.6	1.6	J	2.5	25,000	--	46	30	--	1.6	ND	U	1.8
		Dibromochloromethane	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		Dichlorodifluoromethane	2.6	J	2.4	5.1	--	2.4	48	--	22	19	--	1.5	13	--	1.7
		Ethanol	24	J	6.4	8.8	J	6.2	ND	U	58	19	J	3.9	ND	U	4.5
		Ethyl Acetate	ND	U	5.1	11	--	4.9	ND	U	46	ND	U	3.1	ND	U	3.6
		Ethylbenzene	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		Hexane	1.2	J	2.5	1.4	J	2.4	6,500	--	23	4.8	--	1.5	ND	U	1.8
		Isopropyl Alcohol	ND	U	4.9	ND	U	4.7	ND	U	44	5.3	J	3	ND	U	3.4
		m- & p-Xylenes	ND	U	2.7	ND	U	2.6	ND	U	24	ND	U	1.6	ND	U	1.9
		Methylene Chloride	ND	U	2.5	ND	U	2.4	ND	U	23	ND	U	1.5	ND	U	1.8
		Naphthalene	ND	U	2.4	ND	U	2.4	ND	U	22	ND	U	1.5	ND	U	1.7
		n-Heptane	0.69	J	2.5	ND	U	2.4	43	--	23	ND	U	1.5	ND	U	1.8
		o-Xylene	0.63	J	1.3	ND	U	1.3	16	J	12	ND	U	0.81	ND	U	0.93
		Propylene (Propene)	ND	U	2.4	2.3	J	2.4	470	--	22	3.5	--	1.5	ND	U	1.7
		Styrene	ND	U	2.5	ND	U	2.4	ND	U	23	ND	U	1.5	ND	U	1.8
		Tetrachloroethene	0.88	J	1.3	1.7	J	1.3	12	J	12	11	--	0.81	1.7	J	0.93
		Tetrahydrofuran	30	--	1.3	1.4	J	1.3	ND	U	12	0.69	J	0.81	0.64	J	0.93
		Toluene	2.5	J	1.3	2.4	J	1.3	ND	U	12	1.1	J	0.81	2.4	J	0.93
		Trichloroethene	ND	U	1.3	ND	U	1.3	30	J	12	10	--	0.81	ND	U	0.93
		Trichlorofluoromethane	1.6	J	2.5	1.9	J	2.4	ND	U	23	2.9	--	1.5	3.1	--	1.8
		Vinyl Chloride	ND	U	1.3	ND	U	1.3	ND	U	12	ND	U	0.81	ND	U	0.93
		Xylenes, Total	ND	U	2.7	ND	U	2.6	16	J	24	ND	U	1.6	ND	U	1.9

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

	Location ID:	SVMW-06-100			SVMW-06-100			SVMW-06-252			SVMW-06-302			SVMW-07-050		
	Field Sample ID:	SV06-100-192			SV06-100-592			SV06-252-192			SV06-302-192			SV07-050-192		
	Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
	Sample Type:	REG			Field Duplicate			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	17	--	0.77	17	--	0.8	ND	U	340	41	--	2	140	--	0.73
		1,1-Dichloroethane	ND	U	1.4	ND	U	1.5	ND	U	610	ND	U	3.6	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	1.5	ND	U	630	ND	U	3.8	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.77	ND	U	0.8	ND	U	340	ND	U	2	0.58	J	0.73
		1,2-Dibromoethane	ND	U	0.77	ND	U	0.8	ND	U	340	140	--	2	ND	U	0.73
		1,2-Dichlorobenzene	ND	U	0.77	ND	U	0.8	ND	U	340	ND	U	2	ND	U	0.73
		1,3,5-Trimethylbenzene	ND	U	0.77	ND	U	0.8	310	J	340	2.5	J	2	0.61	J	0.73
		1,3-Butadiene	ND	U	1.4	ND	U	1.5	ND	U	610	ND	U	3.6	ND	U	1.3
		1,4-Dioxane	ND	U	0.77	ND	U	0.8	ND	U	340	ND	U	2	6.2	--	0.73
		2-Butanone	1.7	J	1.4	5	--	1.5	ND	U	610	28	--	3.6	13	--	1.3
		2-Hexanone	ND	U	0.77	1.1	J	0.8	ND	U	340	ND	U	2	2.9	--	0.73
		4-Methyl-2-Pentanone	ND	U	0.77	0.36	J	0.8	ND	U	340	ND	U	2	0.62	J	0.73
		Acetone	17	J	12	37	--	13	ND	U	5,300	62	J	32	51	--	12
		Benzene	0.4	J	0.77	2.4	J	0.8	300,000	--	670	160	--	2	3.3	--	0.73
		Bromodichloromethane	ND	U	0.77	ND	U	0.8	ND	U	340	ND	U	2	ND	U	0.73
		Bromoform	ND	U	1.5	ND	U	1.5	ND	U	630	ND	U	3.8	ND	U	1.4
		Carbon Disulfide	ND	U	2.5	1.8	J	2.5	ND	U	1,100	3	J	6.3	1.3	J	2.3
		Carbon Tetrachloride	9.2	--	0.77	8.5	--	0.8	ND	U	340	28	--	2	42	--	0.73
		Chloroethane	ND	U	1.4	ND	U	1.5	ND	U	610	ND	U	3.6	0.58	J	1.3
		Chloroform	4.1	--	0.77	4.1	--	0.8	ND	U	340	6.9	--	2	19	--	0.73
		Chloromethane	ND	U	1.4	ND	U	1.4	ND	U	590	3	J	3.5	0.43	J	1.3
		Cyclohexane	ND	U	1.5	2.7	J	1.6	79,000	--	650	1,300	--	3.9	6.3	--	1.4
		Dibromochloromethane	ND	U	0.77	ND	U	0.8	ND	U	340	ND	U	2	ND	U	0.73
		Dichlorodifluoromethane	14	--	1.4	13	--	1.5	ND	U	610	15	--	3.6	3.5	--	1.3
		Ethanol	ND	U	3.7	3.1	J	3.9	900	J	1,600	ND	U	9.6	5.2	J	3.5
		Ethyl Acetate	1.6	J	3	ND	U	3.1	ND	U	1,300	ND	U	7.6	ND	U	2.8
		Ethylbenzene	ND	U	0.77	ND	U	0.8	150	J	340	ND	U	2	0.53	J	0.73
		Hexane	ND	U	1.5	1.8	J	1.5	17,000	--	630	67	--	3.8	2.3	--	1.4
		Isopropyl Alcohol	ND	U	2.8	ND	U	2.9	660	J	1,200	11	J	7.3	1.6	J	2.7
		m- & p-Xylenes	ND	U	1.5	2.1	J	1.6	1,700	J	670	8.9	J	4	4.9	--	1.5
		Methylene Chloride	ND	U	1.5	ND	U	1.5	ND	U	630	ND	U	3.8	ND	U	1.4
		Naphthalene	ND	U	1.4	ND	U	1.5	ND	U	610	ND	U	3.6	ND	U	1.3
		n-Heptane	ND	U	1.5	2	J	1.5	540	J	630	ND	U	3.8	0.69	J	1.4
		o-Xylene	ND	U	0.77	0.82	J	0.8	4,400	--	340	17	--	2	2.5	--	0.73
		Propylene (Propene)	ND	U	1.4	1	J	1.5	310	J	610	48	--	3.6	5.6	--	1.3
		Styrene	ND	U	1.5	ND	U	1.5	ND	U	630	ND	U	3.8	ND	U	1.4
		Tetrachloroethene	1.2	J	0.77	1.1	J	0.8	ND	U	340	3.1	J	2	0.95	J	0.73
		Tetrahydrofuran	0.93	J	0.77	1.7	J	0.8	ND	U	340	4	J	2	0.3	J	0.73
		Toluene	1.8	J	0.77	7.4	--	0.8	12,000	--	340	11	--	2	14	--	0.73
		Trichloroethene	ND	U	0.77	ND	U	0.8	ND	U	340	2.5	J	2	ND	U	0.73
		Trichlorofluoromethane	3.1	--	1.5	3.1	--	1.5	ND	U	630	7.7	--	3.8	17	--	1.4
		Vinyl Chloride	ND	U	0.77	ND	U	0.8	ND	U	340	0.68	J	2	ND	U	0.73
		Xylenes, Total	ND	U	1.5	2.9	J	1.6	6,100	--	670	26	--	4	7.4	--	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-07-100			SVMW-07-150			SVMW-12-150			SVMW-12-250			SVMW-12-350		
		Field Sample ID:	SV07-100-192			SV07-150-192			SV12-150-192			SV12-250-192			SV12-350-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	70	11	--	0.88	480	--	6.3	1,000	--	7.8	9.8	--	0.79
		1,1-Dichloroethane	ND	U	130	ND	U	1.6	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	130	ND	U	1.7	ND	U	1.5	ND	U	1.5	ND	U	1.5
		1,2,4-Trimethylbenzene	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	0.35	J	0.79
		1,2-Dibromoethane	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	ND	U	0.79
		1,2-Dichlorobenzene	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	ND	U	0.79
		1,3,5-Trimethylbenzene	ND	U	70	ND	U	0.88	ND	U	0.79	0.74	J	0.78	ND	U	0.79
		1,3-Butadiene	ND	U	130	ND	U	1.6	ND	U	1.4	ND	U	1.4	ND	U	1.4
		1,4-Dioxane	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	0.99	J	0.79
		2-Butanone	ND	U	130	0.58	J	1.6	18	--	1.4	1	J	1.4	3.2	J	1.4
		2-Hexanone	ND	U	70	ND	U	0.88	5.9	--	0.79	ND	U	0.78	0.98	J	0.79
		4-Methyl-2-Pentanone	ND	U	70	ND	U	0.88	1.7	J	0.79	ND	U	0.78	0.43	J	0.79
		Acetone	ND	U	1,100	ND	U	14	83	--	13	ND	U	12	43	--	13
		Benzene	240	--	70	1	J	0.88	1.8	J	0.79	280	--	0.78	2.2	J	0.79
		Bromodichloromethane	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	1.3	J	0.79
		Bromoform	ND	U	130	ND	U	1.7	ND	U	1.5	ND	U	1.5	3	--	1.5
		Carbon Disulfide	ND	U	220	1.9	J	2.8	1.8	J	2.5	2.9	J	2.5	8	--	2.5
		Carbon Tetrachloride	ND	U	70	4.5	--	0.88	11	--	0.79	23	--	0.78	4.7	--	0.79
		Chloroethane	ND	U	130	ND	U	1.6	0.53	J	1.4	0.49	J	1.4	1.2	J	1.4
		Chloroform	ND	U	70	ND	U	0.88	5.7	--	0.79	10	--	0.78	3.3	--	0.79
		Chloromethane	ND	U	120	ND	U	1.6	0.55	J	1.4	ND	U	1.4	2.2	J	1.4
		Cyclohexane	14,000	--	140	1.8	J	1.7	1.5	J	1.5	140	--	1.5	ND	U	1.5
		Dibromochloromethane	ND	U	70	ND	U	0.88	ND	U	0.79	ND	U	0.78	1.3	J	0.79
		Dichlorodifluoromethane	36	J	130	3.2	--	1.6	33	--	1.4	19	--	1.4	1	J	1.4
		Ethanol	790	J	340	ND	U	4.2	29	--	3.8	3.3	J	3.8	11	J	3.8
		Ethyl Acetate	ND	U	270	ND	U	3.4	46	--	3	13	--	3	ND	U	3
		Ethylbenzene	ND	U	70	ND	U	0.88	ND	U	0.79	0.49	J	0.78	0.45	J	0.79
		Hexane	1,400	--	130	ND	U	1.7	1.1	J	1.5	16	--	1.5	1.1	J	1.5
		Isopropyl Alcohol	110	J	250	ND	U	3.2	3	J	2.9	ND	U	2.9	1.3	J	2.9
		m- & p-Xylenes	ND	U	140	1.5	J	1.8	ND	U	1.6	1.7	J	1.6	1.4	J	1.6
		Methylene Chloride	100	J	130	ND	U	1.7	1.7	J	1.5	ND	U	1.5	ND	U	1.5
		Naphthalene	ND	U	130	ND	U	1.6	ND	U	1.4	ND	U	1.4	0.93	J	1.4
		n-Heptane	67	J	130	0.47	J	1.7	0.53	J	1.5	ND	U	1.5	0.41	J	1.5
		o-Xylene	71	J	70	0.75	J	0.88	ND	U	0.79	3.4	--	0.78	ND	U	0.79
		Propylene (Propene)	ND	U	130	0.72	J	1.6	2.3	J	1.4	7.6	--	1.4	2.1	J	1.4
		Styrene	ND	U	130	ND	U	1.7	ND	U	1.5	ND	U	1.5	ND	U	1.5
		Tetrachloroethene	ND	U	70	0.93	J	0.88	15	--	0.79	15	--	0.78	4.7	--	0.79
		Tetrahydrofuran	ND	U	70	0.46	J	0.88	2	J	0.79	3.1	--	0.78	ND	U	0.79
		Toluene	160	J	70	4	--	0.88	3.4	--	0.79	25	--	0.78	1.9	J	0.79
		Trichloroethene	ND	U	70	ND	U	0.88	240	--	0.79	150	--	0.78	ND	U	0.79
		Trichlorofluoromethane	ND	U	130	3.7	--	1.7	5	--	1.5	4.8	--	1.5	0.38	J	1.5
		Vinyl Chloride	130	J	70	ND	U	0.88	6.2	--	0.79	16	--	0.78	14	--	0.79
		Xylenes, Total	71	J	140	2.2	J	1.8	ND	U	1.6	5.1	--	1.6	1.4	J	1.6

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-12-450			SVMW-13-150			SVMW-13-250			SVMW-13-350			SVMW-13-450		
		Field Sample ID:	SV12-450-192			SV13-150-192			SV13-250-192			SV13-350-192			SV13-450-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,000	--	7.9	ND	U	240	3	--	0.87	2.4	J	3.2	ND	U	2.2
		1,1-Dichloroethane	ND	U	1.4	ND	U	430	ND	U	1.6	ND	U	5.8	ND	U	3.9
		1,2,4-Trichlorobenzene	ND	U	1.5	ND	U	450	ND	U	1.6	ND	U	6	ND	U	4.1
		1,2,4-Trimethylbenzene	ND	U	0.79	1,400	--	240	14	--	0.87	6.1	J	3.2	ND	U	2.2
		1,2-Dibromoethane	ND	U	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		1,2-Dichlorobenzene	ND	U	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		1,3,5-Trimethylbenzene	ND	U	0.79	1,200	--	240	10	--	0.87	4.6	J	3.2	1.7	J	2.2
		1,3-Butadiene	ND	U	1.4	ND	U	430	ND	U	1.6	ND	U	5.8	ND	U	3.9
		1,4-Dioxane	ND	U	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		2-Butanone	2.7	J	1.4	ND	U	430	2.3	J	1.6	ND	U	5.8	5.2	J	3.9
		2-Hexanone	0.52	J	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		4-Methyl-2-Pentanone	ND	U	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		Acetone	ND	U	13	ND	U	3,800	14	J	14	ND	U	50	ND	U	34
		Benzene	10	--	0.79	5,100	--	240	2.3	J	0.87	5.3	J	3.2	540	--	2.2
		Bromodichloromethane	ND	U	0.79	ND	U	240	0.75	J	0.87	ND	U	3.2	ND	U	2.2
		Bromoform	ND	U	1.5	ND	U	450	ND	U	1.6	ND	U	6	ND	U	4.1
		Carbon Disulfide	5.6	--	2.5	ND	U	760	3.8	J	2.8	8.3	J	10	3.5	J	6.9
		Carbon Tetrachloride	14	--	0.79	ND	U	240	0.56	J	0.87	1.9	J	3.2	2.1	J	2.2
		Chloroethane	ND	U	1.4	ND	U	430	0.64	J	1.6	ND	U	5.8	ND	U	3.9
		Chloroform	4.6	--	0.79	ND	U	240	0.77	J	0.87	1.9	J	3.2	ND	U	2.2
		Chloromethane	ND	U	1.4	ND	U	420	1.3	J	1.5	ND	U	5.6	ND	U	3.8
		Cyclohexane	4.8	--	1.5	26,000	--	460	4.6	J	1.7	3.5	J	6.2	500	--	4.2
		Dibromochloromethane	ND	U	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	ND	U	2.2
		Dichlorodifluoromethane	7.3	--	1.4	ND	U	430	8.7	--	1.6	4	J	5.8	3	J	3.9
		Ethanol	4.7	J	3.8	ND	U	1,100	ND	U	4.2	ND	U	15	ND	U	10
		Ethyl Acetate	ND	U	3	ND	U	910	ND	U	3.3	7.4	J	12	ND	U	8.3
		Ethylbenzene	ND	U	0.79	ND	U	240	1	J	0.87	ND	U	3.2	ND	U	2.2
		Hexane	0.68	J	1.5	2,100	--	450	ND	U	1.6	ND	U	6	53	--	4.1
		Isopropyl Alcohol	ND	U	2.9	ND	U	870	ND	U	3.2	ND	U	12	ND	U	7.9
		m- & p-Xylenes	ND	U	1.6	4,600	--	480	22	--	1.7	20	J	6.4	11	J	4.3
		Methylene Chloride	ND	U	1.5	ND	U	450	ND	U	1.6	ND	U	6	ND	U	4.1
		Naphthalene	ND	U	1.4	ND	U	430	1	J	1.6	ND	U	5.8	ND	U	3.9
		n-Heptane	ND	U	1.5	2,700	--	450	1.4	J	1.6	2.3	J	6	ND	U	4.1
		o-Xylene	0.37	J	0.79	480	J	240	5.1	--	0.87	4.5	J	3.2	8.1	--	2.2
		Propylene (Propene)	1.6	J	1.4	1,100	--	430	ND	U	1.6	ND	U	5.8	52	--	3.9
		Styrene	ND	U	1.5	ND	U	450	ND	U	1.6	ND	U	6	ND	U	4.1
		Tetrachloroethene	13	--	0.79	ND	U	240	1	J	0.87	13	--	3.2	61	--	2.2
		Tetrahydrofuran	0.66	J	0.79	660	J	240	5	--	0.87	25	--	3.2	1.9	J	2.2
		Toluene	1.3	J	0.79	1,300	--	240	4.3	--	0.87	12	--	3.2	9.5	--	2.2
		Trichloroethene	39	--	0.79	ND	U	240	ND	U	0.87	ND	U	3.2	2.3	J	2.2
		Trichlorofluoromethane	2.9	--	1.5	ND	U	450	1.4	J	1.6	1.7	J	6	2.3	J	4.1
		Vinyl Chloride	5.4	--	0.79	2,600	--	240	5.1	--	0.87	16	--	3.2	7.8	--	2.2
		Xylenes, Total	ND	U	1.6	5,100	--	480	27	--	1.7	25	--	6.4	19	--	4.3

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-14-150			SVMW-14-250			SVMW-14-350			SVMW-14-450			SVMW-15-150		
		Field Sample ID:	SV14-150-192			SV14-250-192			SV14-350-192			SV14-450-192			SV15-150-192		
		Sample Date:	4/30/2019			4/30/2019			4/30/2019			4/30/2019			5/6/2019		
		Sample Type:	REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	--	0.72	140	--	0.8	32	--	0.77	0.47	J	0.83	7.2	--	0.76
		1,1-Dichloroethane	1	J	1.3	0.63	J	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		1,2,4-Trichlorobenzene	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.4
		1,2,4-Trimethylbenzene	ND	U	0.72	0.54	J	0.8	ND	U	0.77	ND	U	0.83	0.34	J	0.76
		1,2-Dibromoethane	ND	U	0.72	ND	U	0.8	ND	U	0.77	ND	U	0.83	ND	U	0.76
		1,2-Dichlorobenzene	ND	U	0.72	ND	U	0.8	ND	U	0.77	ND	U	0.83	ND	U	0.76
		1,3,5-Trimethylbenzene	ND	U	0.72	ND	U	0.8	ND	U	0.77	ND	U	0.83	1.1	J	0.76
		1,3-Butadiene	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		1,4-Dioxane	ND	U	0.72	ND	U	0.8	ND	U	0.77	0.49	J	0.83	ND	U	0.76
		2-Butanone	4.5	--	1.3	33	--	1.5	510	--	14	3.1	J	1.5	1	J	1.4
		2-Hexanone	0.61	J	0.72	3.1	--	0.8	1.1	J	0.77	ND	U	0.83	ND	U	0.76
		4-Methyl-2-Pentanone	ND	U	0.72	0.48	J	0.8	0.45	J	0.77	ND	U	0.83	ND	U	0.76
		Acetone	16	J	11	80	--	13	1,200	--	12	19	J	13	10	J	12
		Benzene	0.99	J	0.72	1.2	J	0.8	5.1	--	0.77	0.77	J	0.83	4	--	0.76
		Bromodichloromethane	ND	U	0.72	ND	U	0.8	ND	U	0.77	ND	U	0.83	ND	U	0.76
		Bromoform	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.4
		Carbon Disulfide	9.4	--	2.3	4.4	J	2.5	6.7	--	2.5	17	--	2.6	2.1	J	2.4
		Carbon Tetrachloride	260	--	0.72	290	--	0.8	53	--	0.77	1.6	J	0.83	1.5	J	0.76
		Chloroethane	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		Chloroform	11	--	0.72	11	--	0.8	3.5	--	0.77	ND	U	0.83	0.54	J	0.76
		Chloromethane	0.56	J	1.3	0.83	J	1.4	2.4	--	1.4	1.5	J	1.5	0.46	J	1.3
		Cyclohexane	0.69	J	1.4	1.1	J	1.6	ND	U	1.5	ND	U	1.6	4.9	--	1.5
		Dibromochloromethane	ND	U	0.72	ND	U	0.8	ND	U	0.77	ND	U	0.83	ND	U	0.76
		Dichlorodifluoromethane	31	--	1.3	51	--	1.5	440	--	14	2.6	--	1.5	4.5	--	1.4
		Ethanol	2	J	3.5	3.4	J	3.9	7.9	J	3.7	ND	U	4	3.2	J	3.6
		Ethyl Acetate	ND	U	2.7	3.2	J	3.1	ND	U	3	ND	U	3.2	19	--	2.9
		Ethylbenzene	ND	U	0.72	ND	U	0.8	0.59	J	0.77	ND	U	0.83	0.5	J	0.76
		Hexane	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.6	4.6	--	1.4
		Isopropyl Alcohol	ND	U	2.6	1.3	J	2.9	2	J	2.8	ND	U	3	ND	U	2.8
		m- & p-Xylenes	ND	U	1.4	ND	U	1.6	1.6	J	1.5	ND	U	1.7	1.3	J	1.5
		Methylene Chloride	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.4
		Naphthalene	ND	U	1.3	ND	U	1.5	ND	U	1.4	ND	U	1.5	ND	U	1.4
		n-Heptane	0.4	J	1.4	0.55	J	1.5	ND	U	1.5	ND	U	1.6	7.5	--	1.4
		o-Xylene	ND	U	0.72	ND	U	0.8	0.74	J	0.77	ND	U	0.83	1.6	J	0.76
		Propylene (Propene)	ND	U	1.3	1.7	J	1.5	1.3	J	1.4	ND	U	1.5	ND	U	1.4
		Styrene	ND	U	1.4	ND	U	1.5	ND	U	1.5	ND	U	1.6	ND	U	1.4
		Tetrachloroethene	120	--	0.72	140	--	0.8	75	--	0.77	1.4	J	0.83	2.3	J	0.76
		Tetrahydrofuran	540	--	7.2	250	--	0.8	580	--	7.7	13	--	0.83	25	--	0.76
		Toluene	1	J	0.72	1.6	J	0.8	12	--	0.77	2	J	0.83	6.7	--	0.76
		Trichloroethene	510	--	7.2	510	--	8	200	--	0.77	0.87	J	0.83	ND	U	0.76
		Trichlorofluoromethane	9	--	1.4	10	--	1.5	38	--	1.5	ND	U	1.6	1.2	J	1.4
		Vinyl Chloride	ND	U	0.72	ND	U	0.8	1.1	J	0.77	1	J	0.83	ND	U	0.76
		Xylenes, Total	ND	U	1.4	ND	U	1.6	2.3	J	1.5	ND	U	1.7	3	J	1.5

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

		Location ID:	SVMW-15-250			SVMW-15-350			SVMW-15-450		
		Field Sample ID:	SV15-250-192			SV15-350-192			SV15-450-192		
		Sample Date:	5/6/2019			5/6/2019			5/6/2019		
		Sample Type:	REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	J	5.7	ND	U	20	ND	U	460
		1,1-Dichloroethane	ND	U	10	ND	U	36	ND	U	840
		1,2,4-Trichlorobenzene	ND	U	11	ND	U	38	ND	U	870
		1,2,4-Trimethylbenzene	ND	U	5.7	ND	U	20	1,100	J	460
		1,2-Dibromoethane	ND	U	5.7	26	J	20	320	J	460
		1,2-Dichlorobenzene	ND	U	5.7	ND	U	20	ND	U	460
		1,3,5-Trimethylbenzene	ND	U	5.7	11	J	20	2,100	--	460
		1,3-Butadiene	ND	U	10	ND	U	36	ND	U	840
		1,4-Dioxane	ND	U	5.7	ND	U	20	ND	U	460
		2-Butanone	ND	U	10	ND	U	36	ND	U	840
		2-Hexanone	ND	U	5.7	ND	U	20	ND	U	460
		4-Methyl-2-Pentanone	ND	U	5.7	ND	U	20	ND	U	460
		Acetone	ND	U	91	ND	U	320	ND	U	7,300
		Benzene	2,900	--	5.7	2,200	--	20	59,000	--	460
		Bromodichloromethane	ND	U	5.7	ND	U	20	ND	U	460
		Bromoform	ND	U	11	ND	U	38	ND	U	870
		Carbon Disulfide	ND	U	18	ND	U	63	ND	U	1,500
		Carbon Tetrachloride	3.1	J	5.7	ND	U	20	ND	U	460
		Chloroethane	ND	U	10	ND	U	36	ND	U	840
		Chloroform	ND	U	5.7	ND	U	20	ND	U	460
		Chloromethane	ND	U	10	ND	U	35	ND	U	810
		Cyclohexane	3,200	--	11	15,000	--	39	350,000	--	900
		Dibromochloromethane	ND	U	5.7	ND	U	20	ND	U	460
		Dichlorodifluoromethane	4.6	J	10	17	J	36	ND	U	840
		Ethanol	ND	U	28	ND	U	96	ND	U	2,200
		Ethyl Acetate	ND	U	22	ND	U	76	ND	U	1,800
		Ethylbenzene	ND	U	5.7	ND	U	20	6,000	--	460
		Hexane	330	--	11	3,800	--	38	330,000	--	1,700
		Isopropyl Alcohol	ND	U	21	ND	U	73	ND	U	1,700
		m- & p-Xylenes	23	J	11	24	J	40	13,000	--	920
		Methylene Chloride	ND	U	11	ND	U	38	ND	U	870
		Naphthalene	ND	U	10	ND	U	36	ND	U	840
		n-Heptane	4.1	J	11	14	J	38	250,000	--	1,700
		o-Xylene	19	--	5.7	39	J	20	6,200	--	460
		Propylene (Propene)	16	J	10	130	--	36	7,600	--	840
		Styrene	ND	U	11	ND	U	38	ND	U	870
		Tetrachloroethene	4.1	J	5.7	ND	U	20	ND	U	460
		Tetrahydrofuran	ND	U	5.7	ND	U	20	ND	U	460
		Toluene	77	--	5.7	200	--	20	150,000	--	460
		Trichloroethene	ND	U	5.7	82	--	20	ND	U	460
		Trichlorofluoromethane	ND	U	11	ND	U	38	ND	U	870
		Vinyl Chloride	1.9	J	5.7	ND	U	20	ND	U	460
		Xylenes, Total	42	--	11	64	J	40	19,000	--	920

Table 2-4
Soil Vapor Analytical Results On-Base (Outside the Source Area), Q2 2019

[a]KAFB-106124-450 was sampled on April 22, 2019, but was underpurged. Only the data from the May 6, 2019 event is presented in this report.
µg/m^3 = microgram per cubic meter
AFB = Air Force Base
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
ND = not detected
REG = normal field sample
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
-- = Validation qualifier not assigned.

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

		Location ID:	SVEW-06-060			SVEW-07-160			SVEW-07-160			SVEW-08-260			SVEW-09-460		
		Field Sample ID:	SVE06-060-192			SVE07-160-192			SVE07-160-592			SVE08-260-192			SVE09-460-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			Field Duplicate			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	1,100	25,000	--	4,000	ND	U	5,500	130	--	0.76	130	--	0.72
		1,1-Dichloroethane	ND	U	2,100	ND	U	7,400	ND	U	10,000	ND	U	1.4	ND	U	1.3
		1,2,4-Trichlorobenzene	ND	U	2,100	ND	U	7,600	ND	U	10,000	ND	U	1.4	ND	U	1.4
		1,2,4-Trimethylbenzene	16,000	--	1,100	53,000	J	4,000	4,700	J	5,500	12	--	0.76	8.2	--	0.72
		1,2-Dibromoethane	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		1,2-Dichlorobenzene	ND	U	1,100	4,100	J	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		1,3,5-Trimethylbenzene	5,900	--	1,100	20,000	--	4,000	ND	U	5,500	3.8	--	0.76	2.7	--	0.72
		1,3-Butadiene	ND	U	2,100	ND	U	7,400	ND	U	10,000	ND	U	1.4	ND	U	1.3
		1,4-Dioxane	ND	U	1,100	41,000	--	4,000	ND	U	5,500	ND	U	0.76	3.8	--	0.72
		2-Butanone	30,000	--	2,100	150,000	J	7,400	37,000	J	10,000	5.3	--	1.4	8.2	--	1.3
		2-Hexanone	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		4-Methyl-2-Pentanone	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Acetone	130,000	--	18,000	330,000	--	64,000	ND	U	88,000	19	J	12	33	--	11
		Benzene	140,000	--	1,100	950,000	J	4,000	270,000	J	5,500	24	--	0.76	11	--	0.72
		Bromodichloromethane	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Bromoform	ND	U	2,100	ND	U	7,600	ND	U	10,000	ND	U	1.4	ND	U	1.4
		Carbon Disulfide	ND	U	3,600	ND	U	13,000	ND	U	18,000	ND	U	2.4	69	--	2.3
		Carbon Tetrachloride	ND	U	1,100	ND	U	4,000	ND	U	5,500	7.3	--	0.76	7.7	--	0.72
		Chloroethane	ND	U	2,100	ND	U	7,400	ND	U	10,000	ND	U	1.4	ND	U	1.3
		Chloroform	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Chloromethane	ND	U	2,000	ND	U	7,100	ND	U	9,800	ND	U	1.3	0.64	J	1.3
		Cyclohexane	660,000	--	2,200	3,700,000	J	7,800	1,200,000	J	11,000	32	--	1.5	17	--	1.4
		Dibromochloromethane	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Dichlorodifluoromethane	ND	U	2,100	ND	U	7,400	ND	U	10,000	6.9	--	1.4	6.9	--	1.3
		Ethanol	14,000	J	5,500	15,000	J	19,000	ND	U	27,000	2.3	J	3.6	5.6	J	3.5
		Ethyl Acetate	ND	U	4,300	ND	U	15,000	ND	U	21,000	ND	U	2.9	10	--	2.7
		Ethylbenzene	70,000	--	1,100	160,000	J	4,000	24,000	J	5,500	12	--	0.76	8.4	--	0.72
		Hexane	620,000	--	2,100	7,500,000	J	28,000	2,500,000	J	10,000	40	--	1.4	20	--	1.4
		Isopropyl Alcohol	5,100	J	4,100	20,000	J	15,000	ND	U	20,000	ND	U	2.8	1.7	J	2.6
		m- & p-Xylenes	70,000	--	2,300	320,000	J	8,100	52,000	J	11,000	29	--	1.5	21	--	1.4
		Methylene Chloride	ND	U	2,100	6,600	J	7,600	ND	U	10,000	ND	U	1.4	ND	U	1.4
		Naphthalene	1,500	J	2,100	ND	U	7,400	ND	U	10,000	2.3	--	1.4	0.79	J	1.3
		n-Heptane	570,000	--	2,100	3,000,000	J	28,000	860,000	J	10,000	50	--	1.4	24	--	1.4
		o-Xylene	25,000	--	1,100	100,000	J	4,000	16,000	J	5,500	9.8	--	0.76	7.6	--	0.72
		Propylene (Propene)	7,100	--	2,100	61,000	J	7,400	16,000	J	10,000	4.9	--	1.4	6.1	--	1.3
		Styrene	ND	U	2,100	ND	U	7,600	ND	U	10,000	ND	U	1.4	ND	U	1.4
		Tetrachloroethene	ND	U	1,100	46,000	--	4,000	ND	U	5,500	3	--	0.76	3	--	0.72
		Tetrahydrofuran	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	1.1	J	0.72
		Toluene	330,000	--	1,100	1,400,000	J	4,000	310,000	J	5,500	74	--	0.76	44	--	0.72
		Trichloroethene	ND	U	1,100	12,000	J	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Trichlorofluoromethane	ND	U	2,100	ND	U	7,600	ND	U	10,000	5.5	--	1.4	5.1	--	1.4
		Vinyl Chloride	ND	U	1,100	ND	U	4,000	ND	U	5,500	ND	U	0.76	ND	U	0.72
		Xylenes, Total	95,000	--	2,300	430,000	J	8,100	68,000	J	11,000	39	--	1.5	29	--	1.4

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

		Location ID:	SVMW-03-050			SVMW-03-100			SVMW-03-250			SVMW-03-300		
		Field Sample ID:	SV03-050-192			SV03-100-192			SV03-250-192			SV03-300-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		1,1-Dichloroethane	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		1,2,4-Trichlorobenzene	ND	U	11,000	ND	U	4,100	ND	U	5,600	ND	U	5,700
		1,2,4-Trimethylbenzene	3,600	J	6,000	2,500	J	2,200	4,800	J	3,000	13,000	--	3,000
		1,2-Dibromoethane	ND	U	6,000	ND	U	2,200	3,500	J	3,000	2,200	J	3,000
		1,2-Dichlorobenzene	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		1,3,5-Trimethylbenzene	ND	U	6,000	2,100	J	2,200	4,800	J	3,000	6,500	J	3,000
		1,3-Butadiene	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		1,4-Dioxane	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		2-Butanone	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		2-Hexanone	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		4-Methyl-2-Pentanone	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Acetone	ND	U	96,000	ND	U	35,000	ND	U	47,000	ND	U	48,000
		Benzene	91,000	--	6,000	85,000	--	2,200	220,000	--	3,000	120,000	--	3,000
		Bromodichloromethane	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Bromoform	ND	U	11,000	ND	U	4,100	ND	U	5,600	ND	U	5,700
		Carbon Disulfide	ND	U	19,000	ND	U	6,900	ND	U	9,500	ND	U	9,600
		Carbon Tetrachloride	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Chloroethane	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		Chloroform	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Chloromethane	ND	U	11,000	ND	U	3,900	ND	U	5,300	ND	U	5,300
		Cyclohexane	850,000	--	12,000	500,000	--	4,200	1,500,000	--	5,800	660,000	--	5,900
		Dibromochloromethane	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Dichlorodifluoromethane	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		Ethanol	ND	U	29,000	ND	U	11,000	9,100	J	14,000	ND	U	15,000
		Ethyl Acetate	ND	U	23,000	ND	U	8,400	ND	U	11,000	ND	U	12,000
		Ethylbenzene	28,000	--	6,000	19,000	--	2,200	51,000	--	3,000	63,000	--	3,000
		Hexane	640,000	--	11,000	400,000	--	4,100	1,400,000	--	5,600	330,000	--	5,700
		Isopropyl Alcohol	ND	U	22,000	ND	U	8,000	ND	U	11,000	ND	U	11,000
		m- & p-Xylenes	58,000	--	12,000	41,000	--	4,400	160,000	--	6,000	180,000	--	6,100
		Methylene Chloride	ND	U	11,000	ND	U	4,100	ND	U	5,600	ND	U	5,700
		Naphthalene	ND	U	11,000	ND	U	4,000	ND	U	5,400	ND	U	5,500
		n-Heptane	730,000	--	11,000	360,000	--	4,100	1,300,000	--	5,600	640,000	--	5,700
		o-Xylene	13,000	J	6,000	8,600	--	2,200	35,000	--	3,000	51,000	--	3,000
		Propylene (Propene)	5,500	J	11,000	6,000	J	4,000	21,000	--	5,400	7,900	J	5,500
		Styrene	ND	U	11,000	ND	U	4,100	ND	U	5,600	ND	U	5,700
		Tetrachloroethene	3,600	J	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Tetrahydrofuran	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Toluene	210,000	--	6,000	85,000	--	2,200	670,000	--	3,000	720,000	--	3,000
		Trichloroethene	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Trichlorofluoromethane	ND	U	11,000	ND	U	4,100	ND	U	5,600	ND	U	5,700
		Vinyl Chloride	ND	U	6,000	ND	U	2,200	ND	U	3,000	ND	U	3,000
		Xylenes, Total	71,000	--	12,000	49,000	--	4,400	190,000	--	6,000	230,000	--	6,100

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

		Location ID:	SVMW-04-050			SVMW-04-100			SVMW-04-250			SVMW-04-300		
		Field Sample ID:	SV04-050-192			SV04-100-192			SV04-250-192			SV04-300-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	600	ND	U	3,200	ND	U	3,100	740	J	300
		1,1-Dichloroethane	ND	U	1,100	ND	U	5,800	ND	U	5,600	ND	U	550
		1,2,4-Trichlorobenzene	ND	U	1,100	ND	U	6,000	ND	U	5,800	ND	U	560
		1,2,4-Trimethylbenzene	ND	U	600	9,300	J	3,200	ND	U	3,100	410	J	300
		1,2-Dibromoethane	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		1,2-Dichlorobenzene	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		1,3,5-Trimethylbenzene	ND	U	600	5,200	J	3,200	ND	U	3,100	380	J	300
		1,3-Butadiene	ND	U	1,100	ND	U	5,800	ND	U	5,600	ND	U	550
		1,4-Dioxane	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		2-Butanone	ND	U	1,100	ND	U	5,800	ND	U	5,600	ND	U	550
		2-Hexanone	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		4-Methyl-2-Pentanone	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Acetone	ND	U	9,600	ND	U	50,000	ND	U	49,000	ND	U	4,800
		Benzene	ND	U	600	410,000	--	3,200	250,000	--	3,100	33,000	--	300
		Bromodichloromethane	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Bromoform	ND	U	1,100	ND	U	6,000	ND	U	5,800	ND	U	560
		Carbon Disulfide	ND	U	1,900	ND	U	10,000	ND	U	9,800	ND	U	950
		Carbon Tetrachloride	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Chloroethane	ND	U	1,100	ND	U	5,800	ND	U	5,600	ND	U	550
		Chloroform	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Chloromethane	ND	U	1,100	ND	U	5,600	ND	U	5,500	ND	U	530
		Cyclohexane	ND	U	1,200	1,500,000	--	6,100	1,500,000	--	6,000	210,000	--	580
		Dibromochloromethane	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Dichlorodifluoromethane	ND	U	1,100	ND	U	5,800	ND	U	5,600	ND	U	550
		Ethanol	ND	U	2,900	ND	U	15,000	ND	U	15,000	ND	U	1,400
		Ethyl Acetate	ND	U	2,300	ND	U	12,000	ND	U	12,000	ND	U	1,100
		Ethylbenzene	ND	U	600	31,000	--	3,200	3,100	J	3,100	150	J	300
		Hexane	ND	U	1,100	2,000,000	--	6,000	1,900,000	--	12,000	160,000	--	560
		Isopropyl Alcohol	ND	U	2,200	ND	U	12,000	ND	U	11,000	ND	U	1,100
		m- & p-Xylenes	ND	U	1,200	120,000	--	6,300	13,000	J	6,200	2,000	--	600
		Methylene Chloride	ND	U	1,100	ND	U	6,000	ND	U	5,800	ND	U	560
		Naphthalene	ND	U	1,100	ND	U	5,800	ND	U	5,600	320	J	550
		n-Heptane	ND	U	1,100	1,200,000	--	6,000	1,700,000	--	5,800	120,000	--	560
		o-Xylene	ND	U	600	38,000	--	3,200	10,000	--	3,100	580	J	300
		Propylene (Propene)	ND	U	1,100	9,700	J	5,800	36,000	--	5,600	2,400	--	550
		Styrene	ND	U	1,100	ND	U	6,000	ND	U	5,800	ND	U	560
		Tetrachloroethene	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Tetrahydrofuran	ND	U	600	ND	U	3,200	ND	U	3,100	200	J	300
		Toluene	300	J	600	580,000	--	3,200	42,000	--	3,100	1,800	--	300
		Trichloroethene	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Trichlorofluoromethane	ND	U	1,100	ND	U	6,000	ND	U	5,800	ND	U	560
		Vinyl Chloride	ND	U	600	ND	U	3,200	ND	U	3,100	ND	U	300
		Xylenes, Total	ND	U	1,200	160,000	--	6,300	23,000	--	6,200	2,600	--	600

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

		Location ID:	SVMW-04-300			SVMW-08-050			SVMW-08-100			SVMW-08-250		
		Field Sample ID:	SV04-300-592			SV08-050-192			SV08-100-192			SV08-250-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	Field Duplicate			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	740	J	300	ND	U	3,000	23	J	34	ND	U	5,800
		1,1-Dichloroethane	ND	U	540	ND	U	5,500	ND	U	61	ND	U	11,000
		1,2,4-Trichlorobenzene	ND	U	560	ND	U	5,600	ND	U	63	ND	U	11,000
		1,2,4-Trimethylbenzene	210	J	300	ND	U	3,000	50	J	34	14,000	J	5,800
		1,2-Dibromoethane	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		1,2-Dichlorobenzene	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		1,3,5-Trimethylbenzene	220	J	300	ND	U	3,000	28	J	34	6,000	J	5,800
		1,3-Butadiene	ND	U	540	ND	U	5,500	ND	U	61	ND	U	11,000
		1,4-Dioxane	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		2-Butanone	ND	U	540	ND	U	5,500	30	J	61	ND	U	11,000
		2-Hexanone	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		4-Methyl-2-Pentanone	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Acetone	ND	U	4,700	ND	U	48,000	ND	U	530	ND	U	92,000
		Benzene	31,000	--	300	340,000	--	3,000	87	J	34	510,000	--	5,800
		Bromodichloromethane	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Bromoform	ND	U	560	ND	U	5,600	ND	U	63	ND	U	11,000
		Carbon Disulfide	ND	U	950	ND	U	9,500	ND	U	110	ND	U	18,000
		Carbon Tetrachloride	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Chloroethane	ND	U	540	ND	U	5,500	ND	U	61	ND	U	11,000
		Chloroform	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Chloromethane	ND	U	530	ND	U	5,300	ND	U	59	ND	U	10,000
		Cyclohexane	200,000	--	580	2,100,000	--	5,800	1,800	--	65	1,800,000	--	11,000
		Dibromochloromethane	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Dichlorodifluoromethane	ND	U	540	ND	U	5,500	ND	U	61	ND	U	11,000
		Ethanol	ND	U	1,400	ND	U	14,000	ND	U	160	ND	U	28,000
		Ethyl Acetate	ND	U	1,100	ND	U	11,000	ND	U	130	ND	U	22,000
		Ethylbenzene	ND	U	300	ND	U	3,000	22	J	34	43,000	--	5,800
		Hexane	160,000	--	560	2,400,000	--	11,000	280	--	63	2,100,000	--	11,000
		Isopropyl Alcohol	ND	U	1,100	ND	U	11,000	ND	U	120	ND	U	21,000
		m- & p-Xylenes	1,400	J	600	7,900	J	6,000	62	J	67	110,000	--	12,000
		Methylene Chloride	ND	U	560	ND	U	5,600	ND	U	63	ND	U	11,000
		Naphthalene	ND	U	540	ND	U	5,500	ND	U	61	ND	U	11,000
		n-Heptane	110,000	--	560	1,300,000	--	5,600	220	--	63	730,000	--	11,000
		o-Xylene	370	J	300	9,400	--	3,000	32	J	34	33,000	--	5,800
		Propylene (Propene)	2,300	--	540	31,000	--	5,500	ND	U	61	18,000	J	11,000
		Styrene	ND	U	560	ND	U	5,600	ND	U	63	ND	U	11,000
		Tetrachloroethene	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Tetrahydrofuran	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Toluene	1,200	--	300	51,000	--	3,000	150	--	34	660,000	--	5,800
		Trichloroethene	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Trichlorofluoromethane	ND	U	560	ND	U	5,600	ND	U	63	ND	U	11,000
		Vinyl Chloride	ND	U	300	ND	U	3,000	ND	U	34	ND	U	5,800
		Xylenes, Total	1,800	J	600	17,000	J	6,000	95	J	67	140,000	--	12,000

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

		Location ID:	SVMW-09-050			SVMW-09-100			SVMW-09-250			SVMW-09-266		
		Field Sample ID:	SV09-050-192			SV09-100-192			SV09-250-192			SV09-266-192		
		Sample Date:	4/22/2019			4/22/2019			4/22/2019			4/22/2019		
		Sample Type:	REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
VOCs	Method TO-15 (µg/m^3)	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		1,1-Dichloroethane	ND	U	1,100	ND	U	11,000	ND	U	11,000	ND	U	13,000
		1,2,4-Trichlorobenzene	ND	U	1,200	ND	U	11,000	ND	U	11,000	ND	U	14,000
		1,2,4-Trimethylbenzene	ND	U	620	13,000	J	5,900	ND	U	5,800	17,000	J	7,200
		1,2-Dibromoethane	ND	U	620	ND	U	5,900	ND	U	5,800	5,200	J	7,200
		1,2-Dichlorobenzene	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		1,3,5-Trimethylbenzene	ND	U	620	7,200	J	5,900	ND	U	5,800	12,000	J	7,200
		1,3-Butadiene	ND	U	1,100	ND	U	11,000	ND	U	11,000	ND	U	13,000
		1,4-Dioxane	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		2-Butanone	ND	U	1,100	5,500	J	11,000	ND	U	11,000	6,800	J	13,000
		2-Hexanone	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		4-Methyl-2-Pentanone	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Acetone	ND	U	9,900	ND	U	93,000	ND	U	92,000	ND	U	110,000
		Benzene	12,000	--	620	580,000	--	5,900	410,000	--	5,800	950,000	--	7,200
		Bromodichloromethane	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Bromoform	ND	U	1,200	ND	U	11,000	ND	U	11,000	ND	U	14,000
		Carbon Disulfide	ND	U	2,000	ND	U	19,000	ND	U	18,000	ND	U	23,000
		Carbon Tetrachloride	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Chloroethane	ND	U	1,100	ND	U	11,000	ND	U	11,000	ND	U	13,000
		Chloroform	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Chloromethane	ND	U	1,100	ND	U	10,000	ND	U	10,000	ND	U	13,000
		Cyclohexane	250,000	--	1,200	2,200,000	--	11,000	1,600,000	--	11,000	2,800,000	--	14,000
		Dibromochloromethane	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Dichlorodifluoromethane	ND	U	1,100	ND	U	11,000	ND	U	11,000	ND	U	13,000
		Ethanol	ND	U	3,000	ND	U	28,000	ND	U	28,000	ND	U	35,000
		Ethyl Acetate	ND	U	2,400	ND	U	22,000	ND	U	22,000	ND	U	27,000
		Ethylbenzene	1,100	J	620	33,000	--	5,900	19,000	--	5,800	98,000	--	7,200
		Hexane	100,000	--	1,200	2,700,000	--	11,000	2,700,000	--	11,000	4,100,000	--	14,000
		Isopropyl Alcohol	ND	U	2,300	ND	U	21,000	ND	U	21,000	ND	U	26,000
		m- & p-Xylenes	1,800	J	1,200	94,000	--	12,000	100,000	--	12,000	200,000	--	14,000
		Methylene Chloride	ND	U	1,200	ND	U	11,000	ND	U	11,000	ND	U	14,000
		Naphthalene	ND	U	1,100	ND	U	11,000	ND	U	11,000	ND	U	13,000
		n-Heptane	69,000	--	1,200	1,800,000	--	11,000	2,000,000	--	11,000	2,900,000	--	14,000
		o-Xylene	1,100	J	620	27,000	--	5,900	27,000	--	5,800	52,000	--	7,200
		Propylene (Propene)	ND	U	1,100	17,000	J	11,000	58,000	--	11,000	65,000	--	13,000
		Styrene	ND	U	1,200	ND	U	11,000	ND	U	11,000	ND	U	14,000
		Tetrachloroethene	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Tetrahydrofuran	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Toluene	11,000	--	620	1,000,000	--	5,900	720,000	--	5,800	2,100,000	--	7,200
		Trichloroethene	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Trichlorofluoromethane	ND	U	1,200	ND	U	11,000	ND	U	11,000	ND	U	14,000
		Vinyl Chloride	ND	U	620	ND	U	5,900	ND	U	5,800	ND	U	7,200
		Xylenes, Total	2,900	J	1,200	120,000	--	12,000	130,000	--	12,000	250,000	--	14,000

Table 2-5
Soil Vapor Analytical Results On-Base (Inside the Source Area), Q2 2019

µg/m^3 = microgram per cubic meter
AFB = Air Force Base
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
ND = not detected
REG = normal field sample
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
-- = Validation qualifier not assigned.

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Current Monitoring Well Objective[f,g]
Newly Added Wells[a]					
KAFB-106240-449[b,d]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	VA Proximal
KAFB-106241-428[b,d]	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106242-418[b,d]	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106243-425[b,d]	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106244-445[b,d]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	VA Proximal
KAFB-106245-460[b,d]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	KAFB-016 Sentinel
KAFB-106247-450[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106S1-447[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S2-451	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S3-449	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S4-446	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S5-446	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S7-451[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S8-451[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106S9-447	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
Groundwater Monitoring Wells[a]					
KAFB-106001	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106002	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106003	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal, KAFB-015 Sentinel
KAFB-106004	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106005[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106006	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106007	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106008	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106009[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106010	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106011	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106012R	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106013	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106014	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106015[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106016	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106017	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106018	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106019	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106020	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106021[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106022[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106023[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106024	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106025[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106026[c]	--	--	--	--	Groundwater Monitoring
KAFB-106027	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106028	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106029[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Current Monitoring Well Objective[f,g]
Groundwater Monitoring Wells[a]					
KAFB-106030[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106031[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106032[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106033[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106034[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106035[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring; Groundwater well paired with KAFB-106228 extraction well
KAFB-106036[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring; Groundwater well paired with KAFB-106228 extraction well
KAFB-106037[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring; Groundwater well paired with KAFB-106228 extraction well
KAFB-106038	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106039	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106040	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106041[b]	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106042[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106043[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106044	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106045	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106046	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106047	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106048	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106049[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106050[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106051[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106052[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106053[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106054[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106055[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106057[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106058[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106059	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106060	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106061	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106062	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106063	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106064	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106065	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Current Monitoring Well Objective[f,g]
KAFB-106066	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
Groundwater Monitoring Wells[a]					
KAFB-106067	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106068	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106069	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106070[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106071[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106072[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106073	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106074	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106075	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106076	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106077	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106078	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106079[b]	None	BTEX, EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106080	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106081	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106082	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106083	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106084	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106085[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106086[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106087[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106088[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106089[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106090[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106091[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106092[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106093[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106094	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106095[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106096	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106097	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106098	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106099	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106100	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106101	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal, KAFB-015 Sentinel
KAFB-106102	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal, KAFB-015 Sentinel
KAFB-106103[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106104[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106105[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106106[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106107[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106149-484[b]	EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106151-484[b]	EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106152-484[b]	EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106153-484[b]	EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106201[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	KAFB-003 Sentinel

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Current Monitoring Well Objective[f,g]
KAFB-106202[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	KAFB-003 Sentinel
KAFB-106203[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	KAFB-003 Sentinel
Groundwater Monitoring Wells[a]					
KAFB-106204[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106205[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106206[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106207[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106208[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106209[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106211[h]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106212[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106213[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106214[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106215[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106216[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106217[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106218[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106219[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106220[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106221[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106222[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106223[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106224[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal (Seasonal)
KAFB-106225[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106226[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106227[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106229[e]	None	EDB	None	EDB	Groundwater well paired with KAFB-106233 extraction well
KAFB-106230[c]	--	--	--	--	Groundwater Monitoring
KAFB-106231[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106232[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106235-438[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106235-472[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106235-501[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106236-436[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106236-470[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-106236-499[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Former Downgradient Proximal; Current Upgradient Well
KAFB-3411	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring

Table 3-1
Groundwater Monitoring Program

[a] The groundwater monitoring network consists of 162 wells, 159 wells that are currently sampled under Solid Waste Management Unit ST106/SS-111, one well which will be sampled once water level has risen sufficiently, and two wells that are not currently sampled due to safety concerns. Select wells are identified for additional or more frequent monitoring of risk-driving constituents. Metals analysis consists of select total metals (arsenic, calcium, lead, potassium, magnesium, and sodium) and select dissolved metals (iron and manganese). Anions analysis consists of bromide, chloride, nitrate/nitrite nitrogen, and sulfate. Field parameters include pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity.

[b] Well sampled with passive sampling methodology; field parameter measurements are not representative and therefore are not collected.

[c] Well no longer sampled due to safety concerns.

[d] Newly installed groundwater monitoring well that was completed in third quarter 2018.

[e] KAFB-106229 is not formally part of the groundwater monitoring network. However, it gets sampled semiannually for EDB.

[f] In previous reports, groundwater monitoring wells were designated based on their location relative to the groundwater gradient and the EDB plume (i.e., “downgradient,” “source area,” etc.). However, due to the changing regional groundwater gradient (see Quarter 2 2018 Quarterly Monitoring Report [USACE, 2018b]), these designations are not always appropriate. To simplify and more accurately represent dynamic hydrologic conditions, all groundwater monitorings wells will be designated simply as “groundwater monitoring well” after completing a baseline sampling of four quarters. Prior to the baseline sampling, the wells will be designated as "newly added".

[g] Monitoring Well Objective:
Downgradient Proximal (Seasonal) Wells—Primarily located north of Ridgecrest Drive SE surrounding the historical EDB plume to the north and east into the distal portion of the GWM network. One well located to the south and east of the Benzene plume. Groundwater flow direction varies seasonally; these wells are downgradient of the EDB plume during part of each year. Analytical data for these wells have been historically below the maximum contaminant level (MCL) for EDB. Sampled every quarter. These wells assist in plume boundary definition.

Former Downgradient Proximal; Current Upgradient Wells - Primarily located north of Ridgecrest Drive SE to the west and north of the historical EDB plume. These wells were previously downgradient of the historical EDB plume, but as groundwater flow direction has shifted, they are currently upgradient.

Groundwater Monitoring Wells—Primarily located north of Ridgecrest Drive SE within the historical footprint of the EDB plume. Analytical data from these wells help to estimate the volume and mass of the EDB plume throughout the GWM network. Sampled in Q2 and Q4.

KAFB-003 Sentinel Wells - One set of nested wells located west of drinking water production well KAFB-003. Sampled every quarter. These wells help to assess any potential contaminant migration towards KAFB-003.
KAFB-015 Sentinel Wells - One set of nested wells located east of drinking water production well KAFB-015. Sampled every quarter. These wells help to assess any potential contaminant migration towards KAFB-015.
KAFB-016 Sentinel Well - One well located west of drinking water production well KAFB-016. Sampled every quarter. This well helps to assess the potential for contaminant migration towards KAFB-016.
Newly Added Wells—Newly added wells can include both existing wells that are added to the GWM network as well as newly installed wells. Newly added GWM wells require a minimum of four consecutive quarters of baseline full-suite analytical sampling before receiving a designation that determines their long-term sampling regime. These wells have been added to assess the plume boundaries and provide additional water table monitoring due to the rising groundwater elevation.
Signal Wells—Three wells located along the south side of Ridgecrest Drive SE to monitor BTEX and provide early indication if the benzene plume is migrating from the source area into the interim measure target area capture zone created by the groundwater extraction wells. Sampled during Q2 and Q4.

Source Area Wells—Primarily located in the Bulk Fuels Facility south of Randolph Road SE and proximal to the spill site on-Base. Sampled during Q2 and Q4. These wells monitor the higher concentrations of dissolved-phase plumes on-Base.
Veterans Affairs (VA) Proximal Wells—Three sets of nested wells located between the historical EDB plume south of Ridgecrest Drive SE and the Raymond G. Murphy VA Medical Center as a means to observe for potential contaminant migration towards the VA medical campus. Sampled every quarter. These wells provide additional wellhead protection monitoring for the VA supply well.

[h] KAFB-106211 will be included for sampling when it has enough saturated water column to deploy passive samplers (former air sparge well).

BTEX = benzene, toluene, ethylbenzene, and total xylenes

EDB = ethylene dibromide

FP = field parameter

ID = identification

NA = not applicable

VOC = volatile organic compound

USACE. 2018b. *Quarterly Monitoring Report April-June 2018, Bulk Fuels Facility, SWMU ST-106/SS-111.*
Prepared by EA Engineering, Science, and Technology, Inc., PBC for the USACE–Albuquerque District under USACE Contract No. W912WR-12-D-0006. September.

Table 3-2
Groundwater Monitoring Wells Included in Q2 2019 Monitoring Activities

Location ID	Reference Elevation Interval (ft AMSL)	Well Installation Date[a]	Date Sampled	Screen Interval[b] (ft bgs)	Screen Interval[b] (ft AMSL)	Sampling System	Screen Submerged (Yes/No)?	Submergence Depth Q2 2019 (ft)	Estimated Pump Intake Depth (ft bgs)[c,d,e]	Analytical Suite[f]
Reference Elevation Interval 4857 (ft AMSL) Groundwater Monitoring Wells										
KAFB-106001[g]	4857/4838	11/10/2000	NA	483-508	4859-4834	Portable pump	Yes	16.9	485	EDB, metals, anions, alkalinity, FP
KAFB-106002	4857	3/26/2002	4/2/2019	479-504	4861-4836	Dedicated pump	Yes	14.9	492	EDB, metals, anions, alkalinity, FP
KAFB-106003	4857	1/25/2003	4/25/2019	476-501	4861-4836	Portable pump	Yes	14.5	478	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106004	4857	1/4/2006	5/1/2019	484-509	4859-4834	Portable pump	Yes	16.7	486	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106005	4857	1/22/2007	4/18/2019	479-504	4865-4840	Passive sampler	Yes	10.2	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106006	4857	10/31/2007	4/25/2019	484-509	4865-4840	Portable pump	Yes	10.4	486	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106007	4857	11/14/2007	4/24/2019	484-509	4861-4836	Portable pump	Yes	14.5	486	EDB, metals, anions, alkalinity, FP
KAFB-106008[g]	4857	11/21/2007	NA	486-511	4863-4838	Portable pump	Yes	12.3	488	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106009	4857	11/28/2007	4/16/2019	480-505	4865-4840	Passive sampler	Yes	10.4	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106010	4857	12/6/2007	4/23/2019	483-508	4860-4835	Portable pump	Yes	14.8	485	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106011	4857	9/23/2008	4/2/2019	486-511	4864-4839	Dedicated pump	Yes	11.3	499	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106012R	4857	4/22/2014	4/23/2019	466-495	4877-4847	Portable pump	No	-1.1	493	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106013	4857	9/19/2008	4/30/2019	487-512	4861-4836	Portable pump	Yes	14.4	489	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106014	4857	10/3/2008	5/1/2019	486-511	4861-4836	Portable pump	Yes	14.2	488	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106015	4857/4838	10/14/2008	4/16/2019	485-510	4855-4830	Passive sampler	Yes	20.2	NA	EDB, metals, anions, alkalinity
KAFB-106016	4857	10/17/2008	4/2/2019	475-500	4864-4839	Dedicated pump	Yes	11.4	488	EDB, metals, anions, alkalinity, FP
KAFB-106017	4857/4838	11/19/2008	4/2/2019	482-507	4857-4832	Dedicated pump	Yes	18.1	495	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP
KAFB-106018	4857/4838	11/24/2008	4/4/2019	476-501	4857-4832	Dedicated pump	Yes	17.5	489	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP
KAFB-106019	4857/4838	12/9/2008	5/1/2019	493-518	4859-4834	Portable pump	Yes	16.4	495	EDB, metals, anions, alkalinity, FP
KAFB-106020	4857	12/19/2008	5/2/2019	482-507	4859-4834	Portable pump	Yes	16.1	484	EDB, metals, anions, alkalinity, FP
KAFB-106021	4857/4838	6/7/2009	4/15/2019	458-483	4856-4831	Passive sampler	Yes	18.7	NA	EDB, metals, anions, alkalinity
KAFB-106022	4857/4838	6/12/2009	4/15/2019	462-487	4856-4831	Passive sampler	Yes	18.5	NA	EDB, metals, anions, alkalinity
KAFB-106023	4857	6/27/2009	4/9/2019	473-498	4856-4831	Passive sampler	Yes	19.2	NA	EDB, metals, anions, alkalinity
KAFB-106024	4857	8/3/2009	4/3/2019	481-506	4863-4838	Dedicated pump	Yes	12.9	494	EDB, metals, anions, alkalinity, FP
KAFB-106025	4857/4838	12/5/2010	4/9/2019	465-490	4852-4827	Passive sampler	Yes	22.8	NA	EDB, metals, anions, alkalinity
KAFB-106027	4857	5/1/2010	4/1/2019	481-501	4864-4844	Dedicated pump	Yes	11.1	491	EDB, metals, anions, alkalinity, FP
KAFB-106028	4857	5/16/2010	4/22/2019	486-511	4863-4838	Dedicated pump	Yes	12.1	499	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106029	4857	6/4/2011	4/15/2019	451-471	4860-4840	Passive sampler	Yes	15.2	NA	EDB, metals, anions, alkalinity
KAFB-106032	4857	6/24/2011	4/15/2019	456-476	4862-4842	Passive sampler	Yes	13.8	NA	EDB, metals, anions, alkalinity
KAFB-106035	4857	8/9/2011	4/10/2019	452-482	4869-4839	Passive sampler	Yes	4.8	NA	EDB, metals, anions, alkalinity
KAFB-106038	4857	8/5/2011	4/4/2019	478-508	4870-4840	Portable pump	Yes	4.8	480	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP
KAFB-106041	4857	6/6/2011	4/8/2019	449-469	4875-4855	Passive sampler	Yes	0.4	NA	EDB, metals, anions, alkalinity
KAFB-106042	4857	5/31/2011	4/8/2019	469-484	4855-4841	Passive sampler	Yes	20.6	NA	EDB, metals, anions, alkalinity
KAFB-106046	4857	4/8/2011	4/3/2019	490-510	4863-4843	Dedicated pump	Yes	12.5	500	EDB, metals, anions, alkalinity, FP
KAFB-106049	4857	5/13/2011	4/9/2019	457-477	4859-4839	Passive sampler	Yes	16.5	NA	EDB, metals, anions, alkalinity
KAFB-106052	4857	7/25/2011	4/8/2019	450-480	4869-4839	Passive sampler	Yes	6.3	NA	EDB, metals, anions, alkalinity
KAFB-106055	4857	6/24/2011	4/15/2019	466-486	4859-4839	Passive sampler	Yes	15.8	NA	EDB, metals, anions, alkalinity
KAFB-106059	4857	4/7/2011	4/26/2019	483-503	4861-4841	Portable pump	Yes	13.8	485	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106064[h]	4857	3/24/2011	NA	485-505	4863-4843	Bladder pump	Yes	NA	495	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106067	4857	5/11/2011	4/1/2019	485-505	4862-4842	Dedicated pump	Yes	12.6	495	BTEX, EDB, metals, anions, alkalinity, FP

Table 3-2
Groundwater Monitoring Wells Included in Q2 2019 Monitoring Activities

Location ID	Reference Elevation Interval (ft AMSL)	Well Installation Date[a]	Date Sampled	Screen Interval[b] (ft bgs)	Screen Interval[b] (ft AMSL)	Sampling System	Screen Submerged (Yes/No)?	Submergence Depth Q2 2019 (ft)	Estimated Pump Intake Depth (ft bgs)[c,d,e]	Analytical Suite[f]
KAFB-106070	4857	5/23/2011	4/16/2019	460-480	4859-4839	Passive sampler	Yes	16.1	NA	EDB, metals, anions, alkalinity
KAFB-106075	4857	4/17/2011	4/3/2019	480-500	4860-4840	Dedicated pump	Yes	14.6	490	EDB, metals, anions, alkalinity, FP
KAFB-106076	4857	4/8/2011	5/2/2019	480-500	4865-4845	Portable pump	Yes	10.1	482	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106079[g]	4857	3/22/2011	NA	484-504	4863-4843	Portable pump	Yes	12.2	486	BTEX, EDB, metals, anions, alkalinity
KAFB-106082	4857	4/5/2011	4/29/2019	472-492	4863-4843	Portable pump	Yes	11.4	474	EDB, metals, anions, alkalinity, FP
KAFB-106085	4857	7/8/2011	4/10/2019	447-477	4871-4841	Passive sampler	Yes	4.2	NA	EDB, metals, anions, alkalinity
KAFB-106088	4857	6/3/2011	4/10/2019	460-480	4864-4844	Passive sampler	Yes	10.4	NA	EDB, metals, anions, alkalinity
KAFB-106091	4857	6/4/2011	4/10/2019	454-474	4860-4840	Passive sampler	Yes	13.7	NA	EDB, metals, anions, alkalinity
KAFB-106094	4857	6/26/2011	4/3/2019	484-504	4861-4841	Dedicated pump	Yes	14.5	494	EDB, metals, anions, alkalinity, FP
KAFB-106106	4857	8/10/2011	4/9/2019	454-484	4868-4838	Passive sampler	Yes	7.2	NA	EDB, metals, anions, alkalinity
KAFB-106149-484	4857	9/16/2011	4/16/2019	354-484	4992-4862	Passive sampler	No	-117.1	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106151-484	4857	9/30/2011	4/18/2019	355-484	4990-4861	Passive sampler	No	-115.5	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106152-484	4857	10/7/2011	4/18/2019	355-484	4992-4863	Passive sampler	No	-117.2	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106153-484	4857	10/27/2011	4/18/2019	355-484	4994-4865	Passive sampler	No	-118.6	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106201	4857	10/4/2012	4/15/2019	487-517	4867-4837	Passive sampler	Yes	7.5	NA	EDB, metals, anions, alkalinity
KAFB-106204	4857	8/29/2012	4/9/2019	463-493	4870-4840	Passive sampler	Yes	5.8	NA	EDB, metals, anions, alkalinity
KAFB-106207	4857	8/22/2012	4/8/2019	473-503	4871-4841	Passive sampler	Yes	5.0	NA	EDB, metals, anions, alkalinity
KAFB-106213	4857	2/10/2015	4/16/2019	448-478	4877-4847	Passive sampler	No	-2.7	NA	EDB, metals, anions, alkalinity
KAFB-106216	4857	2/10/2015	4/9/2019	456-486	4878-4848	Passive sampler	No	-4.3	NA	EDB, metals, anions, alkalinity
KAFB-106219	4857	3/20/2015	4/10/2019	463-493	4878-4848	Passive sampler	No	-1.9	NA	EDB, metals, anions, alkalinity
KAFB-106222	4857	1/15/2015	4/9/2019	458-488	4875-4845	Passive sampler	Yes	0.3	NA	EDB, metals, anions, alkalinity
KAFB-106225	4857	1/19/2015	4/9/2019	450-480	4876-4846	Passive sampler	No	-1.0	NA	EDB, metals, anions, alkalinity
KAFB-106229	4857	8/20/2015	4/8/2019	431-531	4883-4783	Passive sampler	No	-9.4	NA	EDB
KAFB-106231	4857	9/8/2015	4/15/2019	440-475	4888-4853	Passive sampler	No	-11.7	NA	EDB, metals, anions, alkalinity
KAFB-106235-438	4857	10/31/2016	4/8/2019	438-463	4878-4853	Passive sampler	No	-2.3	NA	EDB, metals, anions, alkalinity
KAFB-106236-436	4857	11/23/2016	4/8/2019	436-461	4880-4855	Passive sampler	No	-4.0	NA	EDB, metals, anions, alkalinity
KAFB-106240-449[i]	4857	6/14/2018	4/8/2019	449-489	4899-4859	Passive sampler	No	-23.3	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106241-428	4857	8/16/2018	4/8/2019	428-468	4896-4856	Passive sampler	No	-21.4	NA	EDB, metals, anions, alkalinity
KAFB-106242-418	4857	8/23/2018	4/15/2019	418-458	4898-4858	Passive sampler	No	-23.0	NA	EDB, metals, anions, alkalinity
KAFB-106243-425	4857	7/27/2018	4/8/2019	425-465	4896-4856	Passive sampler	No	-20.8	NA	EDB, metals, anions, alkalinity
KAFB-106244-445[i]	4857	7/12/2018	4/8/2019	445-485	4898-4858	Passive sampler	No	-22.8	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106245-460[j]	4857	9/7/2018	4/8/2019	461-501	4897-4857	Passive sampler	No	-22.1	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106247-450[k]	4857	3/1/2019	4/16/2019	450-490	4898-4858	Passive sampler	No	-22.9	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S1-447[k]	4857	2/18/2019	4/16/2019	447-487	4898-4858	Passive sampler	No	-22.9	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S2-451[k]	4857	11/21/2018	4/16/2019	451-491	4898-4858	Passive sampler	No	-23.0	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S3-449[k]	4857	11/29/2018	4/16/2019	449-489	4899-4859	Passive sampler	No	-24.1	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S4-446[k]	4857	11/16/2018	4/16/2019	446-486	4897-4857	Passive sampler	No	-22.1	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S5-446[k]	4857	11/5/2018	4/16/2019	446-486	4898-4858	Passive sampler	No	-22.3	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S7-451[k]	4857	2/4/2019	4/16/2019	451-491	4898-4858	Passive sampler	No	-22.9	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S8-451[k]	4857	3/1/2019	4/16/2019	451-491	4897-4857	Passive sampler	No	-22.0	NA	BTEX, EDB, metals, anions, alkalinity
KAFB-106S9-447[k]	4857	11/8/2019	4/16/2019	447-487	4899-4859	Passive sampler	No	-23.8	NA	BTEX, EDB, metals, anions, alkalinity

Table 3-2
Groundwater Monitoring Wells Included in Q2 2019 Monitoring Activities

Location ID	Reference Elevation Interval (ft AMSL)	Well Installation Date[a]	Date Sampled	Screen Interval[b] (ft bgs)	Screen Interval[b] (ft AMSL)	Sampling System	Screen Submerged (Yes/No)?	Submergence Depth Q2 2019 (ft)	Estimated Pump Intake Depth (ft bgs)[c,d,e]	Analytical Suite[f]
KAFB-3411	4857	11/10/1999	4/23/2019	477-502	4863-4838	Portable pump	Yes	12.1	479	EDB, metals, anions, alkalinity, FP
Reference Elevation Interval 4838 (ft AMSL) Groundwater Monitoring Wells										
KAFB-106030	4838	5/25/2011	4/15/2019	470-485	4842-4827	Passive sampler	Yes	33.8	NA	EDB, metals, anions, alkalinity
KAFB-106033	4838	6/18/2011	4/15/2019	477-492	4841-4826	Passive sampler	Yes	34.7	NA	EDB, metals, anions, alkalinity
KAFB-106036	4838	8/5/2011	4/10/2019	482-497	4840-4825	Passive sampler	Yes	34.1	NA	EDB, metals, anions, alkalinity
KAFB-106037	4838	7/14/2011	4/10/2019	507-522	4815-4800	Passive sampler	Yes	58.7	NA	EDB, metals, anions, alkalinity
KAFB-106039	4838	7/26/2011	4/22/2019	508-523	4840-4825	Portable pump	Yes	35.2	510	EDB, metals, anions, alkalinity, FP
KAFB-106044	4838	1/7/2011	4/1/2019	504-519	4841-4826	Dedicated pump	Yes	34.1	512	EDB, metals, anions, alkalinity, FP
KAFB-106047	4838	4/8/2011	4/3/2019	512-527	4841-4826	Dedicated pump	Yes	34.4	520	EDB, metals, anions, alkalinity, FP
KAFB-106050	4838	5/2/2011	4/9/2019	474-489	4841-4826	Passive sampler	Yes	34.7	NA	EDB, metals, anions, alkalinity
KAFB-106053	4838	7/11/2011	4/8/2019	478-493	4840-4825	Passive sampler	Yes	35.1	NA	EDB, metals, anions, alkalinity
KAFB-106057	4838	6/19/2011	4/15/2019	485-500	4841-4826	Passive sampler	Yes	34.5	NA	EDB, metals, anions, alkalinity
KAFB-106060	4838	4/16/2011	4/1/2019	503-518	4842-4827	Dedicated pump	Yes	33.0	511	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106063[h]	4838	4/8/2011	NA	505-520	4844-4829	Bladder pump	Yes	NA	513	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106065	4838	5/17/2011	4/2/2019	508-523	4841-4826	Dedicated pump	Yes	34.5	516	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106069	4838	5/1/2011	4/30/2019	506-521	4841-4826	Portable pump	Yes	33.9	508	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106072	4838	5/1/2011	4/16/2019	475-495	4844-4824	Passive sampler	Yes	30.5	NA	EDB, metals, anions, alkalinity
KAFB-106073	4838	5/5/2011	5/2/2019	500-515	4840-4825	Portable pump	Yes	34.8	502	EDB, metals, anions, alkalinity, FP
KAFB-106077	4838	4/8/2011	4/23/2019	504-519	4841-4826	Portable pump	Yes	33.2	506	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106080	4838	4/17/2011	4/3/2019	503-518	4843-4828	Dedicated pump	Yes	33.0	511	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106083	4838	4/15/2011	4/30/2019	496-511	4840-4825	Portable pump	Yes	35.2	498	EDB, metals, anions, alkalinity, FP
KAFB-106086	4838	6/26/2011	4/10/2019	476-491	4842-4827	Passive sampler	Yes	33.3	NA	EDB, metals, anions, alkalinity
KAFB-106089	4838	5/23/2011	4/10/2019	482-497	4842-4827	Passive sampler	Yes	32.3	NA	EDB, metals, anions, alkalinity
KAFB-106092	4838	5/24/2011	4/16/2019	474-489	4841-4826	Passive sampler	Yes	33.4	NA	EDB, metals, anions, alkalinity
KAFB-106095	4838	6/24/2011	5/2/2019	504-519	4841-4826	Portable pump	Yes	34.6	506	EDB, metals, anions, alkalinity
KAFB-106097	4838	4/27/2011	4/29/2019	506-521	4842-4827	Portable pump	Yes	33.9	508	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106099	4838	5/12/2011	5/1/2019	501-516	4842-4827	Portable pump	Yes	34.0	503	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106101	4838	2/21/2011	4/26/2019	496-511	4842-4826	Portable pump	Yes	34.2	498	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106103	4838	6/21/2011	4/9/2019	485-500	4843-4828	Passive sampler	Yes	31.0	NA	EDB, metals, anions, alkalinity
KAFB-106105	4838	8/19/2011	4/9/2019	484-499	4838-4823	Passive sampler	Yes	37.5	NA	EDB, metals, anions, alkalinity
KAFB-106202	4838	9/23/2012	4/15/2019	517-532	4838-4823	Passive sampler	Yes	36.8	NA	EDB, metals, anions, alkalinity
KAFB-106205	4838	8/21/2012	4/9/2019	493-508	4841-4826	Passive sampler	Yes	35.4	NA	EDB, metals, anions, alkalinity
KAFB-106208	4838	8/16/2012	4/8/2019	503-518	4841-4826	Passive sampler	Yes	35.1	NA	EDB, metals, anions, alkalinity
KAFB-106214	4838	3/13/2015	4/16/2019	478-493	4847-4833	Passive sampler	Yes	27.5	NA	EDB, metals, anions, alkalinity
KAFB-106217	4838	2/17/2015	4/9/2019	485-500	4849-4834	Passive sampler	Yes	26.3	NA	EDB, metals, anions, alkalinity
KAFB-106220	4838	3/20/2015	4/10/2019	493-508	4847-4832	Passive sampler	Yes	28.5	NA	EDB, metals, anions, alkalinity
KAFB-106223	4838	2/17/2015	4/9/2019	488-503	4846-4831	Passive sampler	Yes	29.6	NA	EDB, metals, anions, alkalinity
KAFB-106226	4838	2/3/2015	4/9/2019	480-495	4847-4832	Passive sampler	Yes	28.4	NA	EDB, metals, anions, alkalinity
KAFB-106235-472	4838	10/31/2016	4/8/2019	472-492	4844-4824	Passive sampler	Yes	31.7	NA	EDB, metals, anions, alkalinity
KAFB-106236-470	4838	11/23/2016	4/8/2019	470-490	4846-4826	Passive sampler	Yes	30.0	NA	EDB, metals, anions, alkalinity

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Groundwater Monitoring Wells Included in Q2 2019 Monitoring Activities

Location ID	Reference Elevation Interval (ft AMSL)	Well Installation Date[a]	Date Sampled	Screen Interval[b] (ft bgs)	Screen Interval[b] (ft AMSL)	Sampling System	Screen Submerged (Yes/No)?	Submergence Depth Q2 2019 (ft)	Estimated Pump Intake Depth (ft bgs)[c,d,e]	Analytical Suite[f]
Reference Elevation Interval 4814 (ft AMSL) Groundwater Monitoring Wells										
KAFB-106031	4814	5/25/2011	4/15/2019	496-510	4815-4802	Passive sampler	Yes	60.1	NA	EDB, metals, anions, alkalinity
KAFB-106034	4814	6/24/2011	4/15/2019	502-517	4817-4802	Passive sampler	Yes	58.8	NA	EDB, metals, anions, alkalinity
KAFB-106040	4814	7/19/2011	4/22/2019	531-546	4817-4802	Portable pump	Yes	58.5	533	EDB, metals, anions, alkalinity, FP
KAFB-106043	4814	5/18/2011	4/8/2019	543-558	4781-4767	Passive sampler	Yes	94.4	NA	EDB, metals, anions, alkalinity
KAFB-106045	4814	1/17/2011	4/24/2019	528-543	4817-4802	Portable pump	Yes	58.8	530	EDB, metals, anions, alkalinity, FP
KAFB-106048	4814	4/8/2011	4/26/2019	536-551	4817-4802	Portable pump	Yes	58.3	538	EDB, metals, anions, alkalinity, FP
KAFB-106051	4814	4/26/2011	4/9/2019	501-516	4815-4800	Passive sampler	Yes	60.8	NA	EDB, metals, anions, alkalinity
KAFB-106054	4814	6/28/2011	4/8/2019	504-519	4814-4799	Passive sampler	Yes	61.2	NA	EDB, metals, anions, alkalinity
KAFB-106058	4814	6/14/2011	4/15/2019	512-527	4814-4799	Passive sampler	Yes	60.9	NA	EDB, metals, anions, alkalinity
KAFB-106061	4814	4/8/2011	4/2/2019	573-588	4772-4757	Dedicated pump	Yes	103.3	581	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106062	4814	3/19/2011	4/4/2019	575-590	4773-4758	Dedicated pump	Yes	102.2	583	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106066	4814	5/16/2011	4/2/2019	576-591	4773-4758	Dedicated pump	Yes	101.9	584	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106068	4814	5/2/2011	4/1/2019	580-595	4767-4752	Dedicated pump	Yes	107.8	588	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106071	4814	5/13/2011	4/16/2019	548-563	4773-4758	Passive sampler	Yes	101.8	NA	EDB, metals, anions, alkalinity
KAFB-106074	4814	4/28/2011	4/25/2019	570-585	4771-4756	Portable pump	Yes	104.0	572	EDB, metals, anions, alkalinity, FP
KAFB-106078	4814	4/8/2011	4/2/2019	574-589	4771-4756	Dedicated pump	Yes	103.6	582	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106081	4814	4/16/2011	4/24/2019	575-589	4772-4757	Portable pump	Yes	103.7	577	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106084	4814	4/5/2011	4/29/2019	566-581	4768-4753	Portable pump	Yes	106.6	568	EDB, metals, anions, alkalinity, FP
KAFB-106087	4814	6/19/2011	4/10/2019	546-561	4771-4756	Passive sampler	Yes	103.1	NA	EDB, metals, anions, alkalinity
KAFB-106090	4814	5/23/2011	4/10/2019	555-570	4768-4753	Passive sampler	Yes	107.0	NA	EDB, metals, anions, alkalinity
KAFB-106093	4814	5/24/2011	4/16/2019	544-559	4771-4756	Passive sampler	Yes	104.0	NA	EDB, metals, anions, alkalinity
KAFB-106096	4814	6/7/2011	4/1/2019	576-591	4769-4754	Dedicated pump	Yes	106.6	584	EDB, metals, anions, alkalinity, FP
KAFB-106098	4814	4/17/2011	4/30/2019	531-546	4817-4802	Portable pump	Yes	58.8	533	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106100	4814	5/3/2011	5/1/2019	526-541	4817-4802	Portable pump	Yes	59.0	528	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106102	4814	3/3/2011	4/25/2019	521-535	4816-4803	Portable pump	Yes	59.2	523	BTEX, EDB, metals, anions, alkalinity, FP
KAFB-106104	4814	6/15/2011	4/9/2019	510-525	4818-4803	Passive sampler	Yes	56.5	NA	EDB, metals, anions, alkalinity
KAFB-106107	4814	8/30/2011	4/9/2019	510-525	4812-4797	Passive sampler	Yes	63.6	NA	EDB, metals, anions, alkalinity
KAFB-106203	4814	9/9/2012	4/15/2019	620-635	4734-4719	Passive sampler	Yes	139.5	NA	EDB, metals, anions, alkalinity
KAFB-106206	4814	8/9/2012	4/9/2019	594-608	4740-4725	Passive sampler	Yes	136.2	NA	EDB, metals, anions, alkalinity
KAFB-106209	4814	8/7/2012	4/8/2019	603-617	4740-4726	Passive sampler	Yes	135.9	NA	EDB, metals, anions, alkalinity
KAFB-106212	4814	2/17/2015	4/10/2019	543-558	4779-4764	Passive sampler	Yes	95.2	NA	EDB, metals, anions, alkalinity
KAFB-106215	4814	4/28/2015	4/10/2019	547-562	4779-4764	Passive sampler	Yes	96.0	NA	EDB, metals, anions, alkalinity
KAFB-106218	4814	5/26/2015	4/9/2019	552-567	4782-4767	Passive sampler	Yes	93.2	NA	EDB, metals, anions, alkalinity
KAFB-106221	4814	6/5/2015	4/10/2019	561-576	4779-4764	Passive sampler	Yes	96.7	NA	EDB, metals, anions, alkalinity
KAFB-106224	4814	5/15/2015	4/9/2019	555-570	4780-4765	Passive sampler	Yes	95.6	NA	EDB, metals, anions, alkalinity
KAFB-106227	4814	5/6/2015	4/9/2019	548-563	4780-4765	Passive sampler	Yes	95.5	NA	EDB, metals, anions, alkalinity
KAFB-106232	4814	9/15/2015	4/15/2019	503-518	4824-4809	Passive sampler	Yes	51.8	NA	EDB, metals, anions, alkalinity
KAFB-106235-501	4814	10/31/2016	4/8/2019	501-521	4815-4795	Passive sampler	Yes	60.7	NA	EDB, metals, anions, alkalinity
KAFB-106236-499	4814	11/23/2016	4/8/2019	499-519	4817-4797	Passive sampler	Yes	59.0	NA	EDB, metals, anions, alkalinity

Table 3-2
Groundwater Monitoring Wells Included in Q2 2019 Monitoring Activities

[a] Well installation date is the date provided in ERPIMS, with the following exceptions: (1) where the date in ERPIMS falls outside of the drilling and installation period and requires correction, and (2) where the date in ERPIMS is the start of drilling. For these exceptions, the well installation date is the date provided in the well completion diagram submitted to the NMOSE.

[b] Screen interval is rounded to the nearest foot.

[c] Portable equipment sampling depths are estimated to the nearest foot due to slight inaccuracies with the mechanism measuring the pump setting in the field.

[d] Portable pump setting estimated as 2 ft below top of screen if submerged or 2 ft above bottom of screen if not submerged.

[e] Dedicated pump setting estimated as half-way between top and bottom of screen.

[f] The analytical methods for EDB and VOCs are 8011 and 8260C, respectively. Metals analyses consisted of select total metals (arsenic, calcium, lead, potassium, magnesium, and sodium by analytical method 6020A/6010C and select and dissolved metals (iron and manganese) (6010C). Anions analysis consisted of bromide by method 300.0A, chloride by method 300.0A, nitrate/nitrite nitrogen by method 353.2, and sulfate by method 300.0A. Field parameters include pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity.

[g] Sample not collected due to biofouling in the well.

[h] Sample not collected due to equipment in the well for the *in situ* biodegradation pilot test.

[i] Sampled for BTEX on 5/09/2019.

[j] Sampled for BTEX on 5/20/2019.

[k] Sampled for dissolved metals, alkalinity, and anions on 5/9/2019.

AMSL = above mean sea level
bgs = below ground surface
BTEX = benzene, toluene, ethylbenzene and xylene
EDB = ethylene dibromide
ERPIMS = Environmental Resources Program Info Management System
FP = field parameter
ft = foot/feet
ID = identification
NA = not applicable
NMOSE = New Mexico Office of the State Engineer
VOC = volatile organic compound

Table 3-3
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q2 2019

Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	MRP Elevation (ft AMSL)	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	LNAPL Elevation (ft AMSL)	Groundwater Elevation Corrected for LNAPL Thickness[a] (ft AMSL)
KAFB-106001[b]	4857/4838	4/17/2019	5344.90	—	469.43	—	—	4875.47
KAFB-106002	4857	4/17/2019	5342.24	—	466.46	—	—	4875.78
KAFB-106003	4857	4/17/2019	5340.28	—	464.49	—	—	4875.79
KAFB-106004	4857	4/17/2019	5345.81	—	470.04	—	—	4875.77
KAFB-106005	4857	4/19/2019	5346.91	—	471.67	—	—	4875.24
KAFB-106006	4857	4/18/2019	5351.48	—	476.31	—	—	4875.17
KAFB-106007	4857	4/17/2019	5349.60	—	474.20	—	—	4875.40
KAFB-106008	4857	4/18/2019	5351.77	—	476.61	—	—	4875.16
KAFB-106009	4857	4/18/2019	5348.55	—	473.33	—	—	4875.22
KAFB-106010	4857	4/18/2019	5343.26	—	468.25	—	—	4875.01
KAFB-106011	4857	4/17/2019	5353.15	—	477.74	—	—	4875.41
KAFB-106012R	4857	4/17/2019	5345.00	—	469.59	—	—	4875.41
KAFB-106013	4857	4/17/2019	5350.62	—	475.21	—	—	4875.41
KAFB-106014	4857	4/18/2019	5350.22	474.96	475.06	0.10	4875.26	4875.23
KAFB-106015[b]	4857/4838	4/18/2019	5342.44	—	467.32	—	—	4875.12
KAFB-106016	4857	4/17/2019	5342.43	—	466.87	—	—	4875.56
KAFB-106017[b]	4857/4838	4/17/2019	5342.52	—	467.54	—	—	4874.98
KAFB-106018[b]	4857/4838	4/18/2019	5336.31	—	461.49	—	—	4874.82
KAFB-106019[b]	4857/4838	4/17/2019	5354.62	—	479.55	—	—	4875.07
KAFB-106020	4857	4/18/2019	5341.05	—	465.86	—	—	4875.19
KAFB-106021[b]	4857/4838	4/18/2019	5314.33	—	439.34	—	—	4874.99
KAFB-106022[b]	4857/4838	4/18/2019	5318.06	—	443.47	—	—	4874.59
KAFB-106023	4857	4/18/2019	5328.76	—	453.80	—	—	4874.96
KAFB-106024	4857	4/17/2019	5343.55	—	468.06	—	—	4875.49
KAFB-106025[b]	4857/4838	4/18/2019	5317.28	—	442.19	—	—	4875.09
KAFB-106027	4857	4/17/2019	5348.62	—	473.10	—	—	4875.52
KAFB-106028	4857	4/18/2019	5348.89	—	473.89	—	—	4875.00
KAFB-106029	4857	4/18/2019	5310.94	—	435.62	—	—	4875.32
KAFB-106030	4838	4/18/2019	5311.03	—	435.70	—	—	4875.33
KAFB-106031	4814	4/18/2019	5311.06	—	435.73	—	—	4875.33
KAFB-106032	4857	4/18/2019	5317.60	—	442.17	—	—	4875.43
KAFB-106033	4838	4/18/2019	5317.76	—	442.31	—	—	4875.45
KAFB-106034	4814	4/18/2019	5318.63	—	443.18	—	—	4875.45
KAFB-106035	4857	4/18/2019	5321.58	—	447.30	—	—	4874.28
KAFB-106036	4838	4/18/2019	5321.85	—	447.75	—	—	4874.10
KAFB-106037	4838	4/18/2019	5322.10	—	448.39	—	—	4873.71
KAFB-106038	4857	4/17/2019	5351.61	—	476.45	—	—	4875.16
KAFB-106039	4838	4/17/2019	5351.32	—	476.23	—	—	4875.09
KAFB-106040	4814	4/17/2019	5350.26	—	475.15	—	—	4875.11
KAFB-106041	4857	4/17/2019	5324.35	—	448.63	—	—	4875.72
KAFB-106042	4857	4/17/2019	5324.07	—	448.39	—	—	4875.68
KAFB-106043	4814	4/17/2019	5324.30	—	448.62	—	—	4875.68
KAFB-106044	4838	4/17/2019	5348.79	—	473.25	—	—	4875.54
KAFB-106045	4814	4/17/2019	5348.52	—	472.95	—	—	4875.57
KAFB-106046	4857	4/17/2019	5352.84	—	477.47	—	—	4875.37
KAFB-106047	4838	4/17/2019	5352.81	—	477.56	—	—	4875.25
KAFB-106048	4814	4/17/2019	5352.58	—	477.25	—	—	4875.33
KAFB-106049	4857	4/17/2019	5316.10	—	440.31	—	—	4875.79
KAFB-106050	4838	4/17/2019	5315.51	—	439.69	—	—	4875.82
KAFB-106051	4814	4/17/2019	5315.78	—	440.00	—	—	4875.78

Table 3-3
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q2 2019

Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	MRP Elevation (ft AMSL)	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	LNAPL Elevation (ft AMSL)	Groundwater Elevation Corrected for LNAPL Thickness[a] (ft AMSL)
KAFB-106052	4857	4/17/2019	5318.86	—	443.34	—	—	4875.52
KAFB-106053	4838	4/17/2019	5318.67	—	443.26	—	—	4875.41
KAFB-106054	4814	4/17/2019	5318.38	—	442.83	—	—	4875.55
KAFB-106055	4857	4/18/2019	5325.09	—	450.04	—	—	4875.05
KAFB-106057	4838	4/18/2019	5325.46	—	450.38	—	—	4875.08
KAFB-106058	4814	4/18/2019	5326.05	—	450.93	—	—	4875.12
KAFB-106059	4857	4/18/2019	5347.87	472.57	472.78	0.21	4875.30	4875.25
KAFB-106060	4838	4/17/2019	5345.32	—	469.96	—	—	4875.36
KAFB-106061	4814	4/17/2019	5345.43	—	469.92	—	—	4875.51
KAFB-106062	4814	4/18/2019	5351.20	—	476.08	—	—	4875.12
KAFB-106063[c]	4838	—	—	—	—	—	—	—
KAFB-106064[c]	4857	—	—	—	—	—	—	—
KAFB-106065	4838	4/17/2019	5348.76	—	473.48	—	—	4875.28
KAFB-106066	4814	4/17/2019	5349.09	—	473.71	—	—	4875.38
KAFB-106067	4857	4/17/2019	5347.50	—	472.42	—	—	4875.08
KAFB-106068	4814	4/17/2019	5347.23	—	472.25	—	—	4874.98
KAFB-106069	4838	4/17/2019	5347.25	—	472.05	—	—	4875.20
KAFB-106070	4857	4/18/2019	5318.54	—	443.95	—	—	4874.59
KAFB-106071	4814	4/18/2019	5320.90	—	446.16	—	—	4874.74
KAFB-106072	4838	4/18/2019	5319.29	—	444.46	—	—	4874.83
KAFB-106073	4838	4/18/2019	5339.87	—	464.72	—	—	4875.15
KAFB-106074	4814	4/18/2019	5340.59	—	465.46	—	—	4875.13
KAFB-106075	4857	4/18/2019	5340.50	—	465.44	—	—	4875.06
KAFB-106076	4857	4/18/2019	5344.92	469.89	469.90	0.01	4875.03	4875.03
KAFB-106077	4838	4/17/2019	5344.72	—	470.79	—	—	4873.93
KAFB-106078	4814	4/17/2019	5344.60	—	469.92	—	—	4874.68
KAFB-106079	4857	4/18/2019	5349.67	474.57	474.71	0.14	4875.10	4875.06
KAFB-106080	4838	4/17/2019	5348.48	—	472.95	—	—	4875.53
KAFB-106081	4814	4/17/2019	5349.48	—	474.13	—	—	4875.35
KAFB-106082	4857	4/18/2019	5335.26	—	460.59	—	—	4874.67
KAFB-106083	4838	4/18/2019	5335.04	—	460.27	—	—	4874.77
KAFB-106084	4814	4/18/2019	5337.94	—	463.04	—	—	4874.90
KAFB-106085	4857	4/18/2019	5317.23	—	442.34	—	—	4874.89
KAFB-106086	4838	4/18/2019	5317.65	—	442.73	—	—	4874.92
KAFB-106087	4814	4/18/2019	5316.87	—	442.92	—	—	4873.95
KAFB-106088	4857	4/18/2019	5324.27	—	449.59	—	—	4874.68
KAFB-106089	4838	4/18/2019	5323.54	—	449.29	—	—	4874.25
KAFB-106090	4814	4/18/2019	5322.85	—	448.12	—	—	4874.73
KAFB-106091	4857	4/18/2019	5314.33	—	440.27	—	—	4874.06
KAFB-106092	4838	4/18/2019	5314.51	—	440.63	—	—	4873.88
KAFB-106093	4814	4/18/2019	5314.62	—	440.02	—	—	4874.60
KAFB-106094	4857	4/17/2019	5345.07	—	469.67	—	—	4875.40
KAFB-106095	4838	4/17/2019	5344.66	—	469.25	—	—	4875.41
KAFB-106096	4814	4/17/2019	5345.31	—	469.87	—	—	4875.44
KAFB-106097	4838	4/17/2019	5347.74	—	472.13	—	—	4875.61
KAFB-106098	4814	4/17/2019	5347.83	—	472.23	—	—	4875.60
KAFB-106099	4838	4/17/2019	5342.85	—	467.02	—	—	4875.83
KAFB-106100	4814	4/17/2019	5342.85	—	467.03	—	—	4875.82
KAFB-106101	4838	4/17/2019	5340.32	—	464.63	—	—	4875.69
KAFB-106102	4814	4/17/2019	5340.32	—	464.76	—	—	4875.56
KAFB-106103	4838	4/18/2019	5328.44	—	454.04	—	—	4874.40

Table 3-3
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q2 2019

Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	MRP Elevation (ft AMSL)	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	LNAPL Elevation (ft AMSL)	Groundwater Elevation Corrected for LNAPL Thickness[a] (ft AMSL)
KAFB-106104	4814	4/18/2019	5328.08	—	453.57	—	—	4874.51
KAFB-106105	4838	4/17/2019	5321.96	—	446.49	—	—	4875.47
KAFB-106106	4857	4/17/2019	5321.80	—	446.37	—	—	4875.43
KAFB-106107	4814	4/17/2019	5322.12	—	446.63	—	—	4875.49
KAFB-106148-484[d]	4857	4/18/2019	5344.24	—	468.90	—	—	4875.34
KAFB-106149-484[d]	4857	4/18/2019	5345.94	—	470.89	—	—	4875.05
KAFB-106150-484[d]	4857	4/18/2019	5344.10	—	469.18	—	—	4874.92
KAFB-106151-484[d]	4857	4/19/2019	5345.49	—	470.73	—	—	4874.76
KAFB-106152-484[d]	4857	4/19/2019	5347.68	—	472.49	—	—	4875.19
KAFB-106153-484[d]	4857	4/19/2019	5348.99	—	473.86	—	—	4875.13
KAFB-106154-484[d]	4857	4/18/2019	5347.34	—	472.06	—	—	4875.28
KAFB-106155-484[d]	4857	4/18/2019	5347.13	—	472.44	—	—	4874.69
KAFB-106156-484[d]	4857	4/18/2019	5341.19	—	465.88	—	—	4875.31
KAFB-106201	4857	4/17/2019	5357.00	—	482.10	—	—	4874.90
KAFB-106202	4838	4/17/2019	5357.80	—	483.14	—	—	4874.66
KAFB-106203	4814	4/17/2019	5357.52	—	483.53	—	—	4873.99
KAFB-106204	4857	4/17/2019	5332.86	—	456.72	—	—	4876.14
KAFB-106205	4838	4/17/2019	5333.29	—	457.11	—	—	4876.18
KAFB-106206	4814	4/17/2019	5333.46	—	457.26	—	—	4876.20
KAFB-106207	4857	4/19/2019	5344.20	—	467.94	—	—	4876.26
KAFB-106208	4838	4/17/2018	5343.85	—	467.84	—	—	4876.01
KAFB-106209	4814	4/17/2018	5343.38	—	467.02	—	—	4876.36
KAFB-106211[d]	4857	4/17/2019	5342.51	—	Dry	—	—	—
KAFB-106212	4814	4/18/2019	5321.80	—	447.94	—	—	4873.86
KAFB-106213	4857	4/18/2019	5325.19	—	450.60	—	—	4874.59
KAFB-106214	4838	4/18/2019	5325.45	—	450.74	—	—	4874.71
KAFB-106215	4814	4/18/2019	5325.77	—	450.95	—	—	4874.82
KAFB-106216	4857	4/18/2019	5333.91	—	459.78	—	—	4874.13
KAFB-106217	4838	4/18/2019	5333.85	—	458.71	—	—	4875.14
KAFB-106218	4814	4/18/2019	5333.64	—	458.83	—	—	4874.81
KAFB-106219	4857	4/17/2019	5340.41	—	464.62	—	—	4875.79
KAFB-106220	4838	4/17/2019	5340.34	—	464.53	—	—	4875.81
KAFB-106221	4814	4/17/2019	5340.10	—	464.32	—	—	4875.78
KAFB-106222	4857	4/17/2019	5333.24	—	457.52	—	—	4875.72
KAFB-106223	4838	4/17/2019	5333.96	—	458.20	—	—	4875.76
KAFB-106224	4814	4/17/2019	5335.08	—	459.37	—	—	4875.71
KAFB-106225	4857	4/17/2019	5326.36	—	451.03	—	—	4875.33
KAFB-106226	4838	4/17/2019	5327.31	—	451.62	—	—	4875.69
KAFB-106227	4814	4/17/2019	5328.09	—	452.46	—	—	4875.63
KAFB-106229[b,d]	4857/4838	4/18/2019	5314.31	—	440.44	—	—	4873.87
KAFB-106231	4857	4/18/2019	5327.56	—	451.66	—	—	4875.90
KAFB-106232	4814	4/18/2019	5327.20	—	451.22	—	—	4875.98
KAFB-106235-438	4857	4/17/2019	5315.67	—	440.29	—	—	4875.38
KAFB-106235-472	4838	4/17/2019	5315.67	—	440.24	—	—	4875.43
KAFB-106235-501	4814	4/17/2019	5315.67	—	440.29	—	—	4875.38
KAFB-106236-436	4857	4/17/2019	5316.02	—	439.96	—	—	4876.06
KAFB-106236-470	4838	4/17/2019	5316.02	—	439.94	—	—	4876.08
KAFB-106236-499	4814	4/17/2019	5316.02	—	439.98	—	—	4876.04
KAFB-106240-449	4857	4/18/2019	5347.57	—	472.38	—	—	4875.19
KAFB-106241-428	4857	4/18/2019	5324.06	—	449.54	—	—	4874.52

Table 3-3
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q2 2019

Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	MRP Elevation (ft AMSL)	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	LNAPL Elevation (ft AMSL)	Groundwater Elevation Corrected for LNAPL Thickness[a] (ft AMSL)
KAFB-106242-418	4857	4/18/2019	5316.15	—	441.16	—	—	4874.99
KAFB-106243-425[e]	4857	4/18/2019	5320.57	—	445.88	—	—	4874.69
KAFB-106244-445	4857	4/17/2019	5343.51	—	467.85	—	—	4875.66
KAFB-106245-460	4857	4/17/2019	5360.90	—	485.79	—	—	4875.11
KAFB-106247-450	4857	4/17/2019	5351.60	—	476.25	—	—	4875.35
KAFB-106S1-447	4857	4/18/2019	5345.22	—	469.90	—	—	4875.32
KAFB-106S2-451	4857	4/18/2019	5352.40	—	477.22	—	—	4875.18
KAFB-106S3-449	4857	4/18/2019	5351.01	—	476.30	—	—	4874.71
KAFB-106S4-446	4857	4/18/2019	5346.57	—	471.34	—	—	4875.23
KAFB-106S5-446	4857	4/18/2019	5343.58	—	468.38	—	—	4875.20
KAFB-106S7-451	4857	4/18/2019	5348.88	—	473.85	—	—	4875.03
KAFB-106S8-451	4857	4/18/2019	5351.45	—	476.22	—	—	4875.23
KAFB-106S9-447	4857	4/18/2019	5345.82	—	470.91	—	—	4874.91
KAFB-3411	4857	4/17/2019	5343.49	—	467.99	—	—	4875.50

[a] Groundwater elevation corrected for LNAPL thickness was calculated by the following formula: MRP Elevation - Depth to LNAPL/water interface + (LNAPL Thickness * Specific Gravity of Weathered JP4/JP8 Fuel) where the specific gravity of JP4/JP8 fuel is 0.7592. The specific gravity is based on the December 13, 2018 site-specific fuel testing report from PTS Laboratories using LNAPL collected from wells KAFB-106014, KAFB-106059, and KAFB-106079.

[b] Well used in analyses for both REI 4857 and 4838.

[c] Well was not gauged due to presence of monitoring equipment.

[d] Well not permanently designated in REI listed.

[e] Well KAFB-106243-425 was re-gauged on 4/30/19 as the initial measurement was found to be erroneous. Because this was out of the normal gauging window, GWM wells KAFB-106088, KAFB-106089, and KAFB-106090 were gauged at the same time to determine the change in water level since the initial event. The change in water level in these three wells was then applied to the water level measured in KAFB-106243-425, and the water level presented here is that corrected value. See Appendix E-2 for a table showing the re-gauging event and corrections applied.

AMSL = above mean sea level
ft = foot/feet
ID = identification
JP = jet propellant
LNAPL = light non-aqueous phase liquid
MRP = measurement reference point
REI = reference elevation interval

Table 3-4
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness

Location ID	Q2 2018			Q4 2018			Q2 2019			Difference between Q2 2019 and Q4 2018		Difference between Q2 2019 and Q2 2018	
	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	LNAPL Thickness (ft)	Groundwater Elevations (ft)	LNAPL Thickness (ft)	Groundwater Elevations (ft)
Reference Elevation Interval 4857 (ft AMSL) Groundwater Monitoring Wells													
KAFB-106001[b]	5/15/2018	0	4873.42	10/10/2018	0	4873.11	4/17/2019	0	4875.47	-	2.36	-	2.05
KAFB-106002	5/15/2018	0	4873.69	10/9/2018	0	4873.54	4/17/2019	0	4875.78	-	2.24	-	2.09
KAFB-106003	5/15/2018	0	4873.89	10/9/2018	0	4873.85	4/17/2019	0	4875.79	-	1.94	-	1.90
KAFB-106004	5/16/2018	0	4873.60	10/10/2018	0	4873.32	4/17/2019	0	4875.77	-	2.45	-	2.17
KAFB-106005	5/15/2018	0	4873.57	10/10/2018	0	4873.04	4/19/2019	0	4875.24	-	2.20	-	1.67
KAFB-106006	5/15/2018	0	4873.40	10/11/2018	0	4872.83	4/18/2019	0	4875.17	-	2.34	-	1.77
KAFB-106007	5/15/2018	0	4873.38	10/10/2018	0	4872.88	4/17/2019	0	4875.40	-	2.52	-	2.02
KAFB-106008	5/15/2018	0	4873.44	10/10/2018	0	4872.91	4/18/2019	0	4875.16	-	2.25	-	1.72
KAFB-106009	5/15/2018	0	4873.51	10/9/2018	0	4873.16	4/18/2019	0	4875.22	-	2.06	-	1.71
KAFB-106010	5/17/2018	0	4873.44	10/10/2018	0	4872.64	4/18/2019	0	4875.01	-	2.37	-	1.57
KAFB-106011	5/15/2018	0	4873.45	10/9/2018	0	4872.82	4/17/2019	0	4875.41	-	2.59	-	1.96
KAFB-106012R	5/15/2018	0	4873.33	10/9/2018	0	4873.08	4/17/2019	0	4875.41	-	2.33	-	2.08
KAFB-106013	5/15/2018	0	4873.25	10/10/2018	0	4872.86	4/17/2019	0	4875.41	-	2.55	-	2.16
KAFB-106014	5/15/2018	0	4873.52	10/9/2018	0	4873.01	4/18/2019	0.1	4875.23	0.10	2.23	0.10	1.72
KAFB-106015[b]	5/17/2018	0	4873.12	10/11/2018	0	4871.60	4/18/2019	0	4875.12	-	3.52	-	2.00
KAFB-106016	5/15/2018	0	4873.60	10/9/2018	0	4873.55	4/17/2019	0	4875.56	-	2.01	-	1.96
KAFB-106017[b]	5/17/2018	0	4873.09	10/10/2018	0	4872.23	4/17/2019	0	4874.98	-	2.75	-	1.89
KAFB-106018[b]	5/17/2018	0	4873.29	10/11/2018	0	4872.45	4/18/2019	0	4874.82	-	2.37	-	1.53
KAFB-106019[b]	5/17/2018	0	4873.18	10/10/2018	0	4872.32	4/17/2019	0	4875.07	-	2.75	-	1.89
KAFB-106020	5/15/2018	0	4873.44	10/11/2018	0	4872.90	4/18/2019	0	4875.19	-	2.29	-	1.75
KAFB-106021[b]	5/18/2018	0	4873.43	10/8/2018	0	4872.95	4/18/2019	0	4874.99	-	2.04	-	1.56
KAFB-106022[b]	5/14/2018	0	4872.88	10/10/2018	0	4872.19	4/18/2019	0	4874.59	-	2.40	-	1.71
KAFB-106023	5/14/2018	0	4873.15	10/10/2018	0	4872.29	4/18/2019	0	4874.96	-	2.67	-	1.81
KAFB-106024	5/15/2018	0	4873.40	10/10/2018	0	4873.08	4/17/2019	0	4875.49	-	2.41	-	2.09
KAFB-106025[b]	5/14/2018	0	4873.40	10/10/2018	0	4872.65	4/18/2019	0	4875.09	-	2.44	-	1.69
KAFB-106027	5/15/2018	0	4873.54	10/9/2018	0	4873.39	4/17/2019	0	4875.52	-	2.13	-	1.98
KAFB-106028	5/17/2018	0	4873.43	10/10/2018	0	4872.69	4/18/2019	0	4875.00	-	2.31	-	1.57
KAFB-106029	5/18/2018	0	4873.78	10/8/2018	0	4873.20	4/18/2019	0	4875.32	-	2.12	-	1.54
KAFB-106032	5/17/2018	0	4873.78	10/11/2018	0	4873.24	4/18/2019	0	4875.43	-	2.19	-	1.65
KAFB-106035	5/14/2018	0	4872.59	10/10/2018	0	4871.69	4/18/2019	0	4874.28	-	2.59	-	1.69
KAFB-106038	5/17/2018	0	4873.24	10/10/2018	0	4872.32	4/17/2019	0	4875.16	-	2.84	-	1.92
KAFB-106041	5/14/2018	0	4873.64	10/9/2018	0	4872.63	4/17/2019	0	4875.72	-	3.09	-	2.08
KAFB-106042	5/14/2018	0	4873.60	10/9/2018	0	4872.61	4/17/2019	0	4875.68	-	3.07	-	2.08
KAFB-106046	5/15/2018	0	4873.38	10/9/2018	0	4872.92	4/17/2019	0	4875.37	-	2.45	-	1.99
KAFB-106049	5/14/2018	0	4873.80	10/10/2018	0	4872.96	4/17/2019	0	4875.79	-	2.83	-	1.99
KAFB-106052	5/14/2018	0	4873.52	10/10/2018	0	4872.62	4/17/2019	0	4875.52	-	2.90	-	2.00
KAFB-106055	5/14/2018	0	4873.34	10/9/2018	0	4872.41	4/18/2019	0	4875.05	-	2.64	-	1.71
KAFB-106059	5/15/2018	0	4873.36	10/10/2018	0	4872.98	4/18/2019	0.21	4875.25	0.21	2.27	0.21	1.89
KAFB-106064[c]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KAFB-106067	5/17/2018	0	4873.21	10/10/2018	0	4872.37	4/17/2019	0	4875.08	-	2.71	-	1.87
KAFB-106070	5/14/2018	0	4872.94	10/10/2018	0	4872.29	4/18/2019	0	4874.59	-	2.30	-	1.65
KAFB-106075	5/15/2018	0	4873.37	10/11/2018	0	4872.74	4/18/2019	0	4875.06	-	2.32	-	1.69
KAFB-106076	5/15/2018	0	4873.18	10/11/2018	0.01	4872.72	4/18/2019	0.01	4875.03	0.00	2.31	0.01	1.85
KAFB-106079	5/15/2018	0.03	4873.29	10/10/2018	0	4872.68	4/18/2019	0.14	4875.06	0.14	2.39	0.11	1.77
KAFB-106082	5/18/2018	0	4873.15	10/11/2018	0	4872.26	4/18/2019	0	4874.67	-	2.41	-	1.52

Table 3-4
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness

	Q2 2018			Q4 2018			Q2 2019			Difference between Q2 2019 and Q4 2018		Difference between Q2 2019 and Q2 2018	
Location ID	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	LNAPL Thickness (ft)	Groundwater Elevations (ft)	LNAPL Thickness (ft)	Groundwater Elevations (ft)
KAFB-106085	5/14/2018	0	4873.25	10/10/2018	0	4872.67	4/18/2019	0	4874.89	-	2.22	-	1.64
KAFB-106088	5/14/2018	0	4872.99	10/10/2018	0	4872.24	4/18/2019	0	4874.68	-	2.44	-	1.69
KAFB-106091	5/14/2018	0	4872.38	10/10/2018	0	4872.53	4/18/2019	0	4874.06	-	1.53	-	1.68
KAFB-106094	5/17/2018	0	4873.38	10/10/2018	0	4872.77	4/17/2019	0	4875.40	-	2.63	-	2.02
KAFB-106106	5/14/2018	0	4873.39	10/9/2018	0	4872.46	4/17/2019	0	4875.43	-	2.97	-	2.04
KAFB-106148-484	5/15/2018	0	4873.47	10/10/2018	0	4873.06	4/18/2019	0	4875.34	-	2.28	-	1.87
KAFB-106149-484	5/15/2018	0	4873.22	10/11/2018	0	4872.68	4/18/2019	0	4875.05	-	2.37	-	1.83
KAFB-106150-484	5/15/2018	0.06	4873.13	10/11/2018	0.11	4872.67	4/18/2019	0	4874.92	-0.11	2.25	-0.06	1.79
KAFB-106151-484	5/15/2018	0	4873.03	10/10/2018	0	4872.54	4/19/2019	0	4874.87	-	2.33	-	1.84
KAFB-106152-484	5/15/2018	0	4873.30	10/10/2018	0	4872.81	4/19/2019	0	4875.19	-	2.38	-	1.89
KAFB-106153-484	5/15/2018	0	4873.29	10/10/2018	0	4872.70	4/19/2019	0	4875.13	-	2.43	-	1.84
KAFB-106154-484	5/15/2018	0.03	4873.42	10/11/2018	0.04	4872.97	4/18/2019	0	4875.28	-0.04	2.31	-0.03	1.86
KAFB-106155-484	5/15/2018	0	4872.89	10/10/2018	0	4872.37	4/18/2019	0	4874.72	-	2.35	-	1.83
KAFB-106156-484	5/15/2018	0	4873.41	10/10/2018	0	4873.08	4/18/2019	0	4875.31	-	2.23	-	1.90
KAFB-106201	5/17/2018	0	4872.32	10/10/2018	0	4870.16	4/17/2019	0	4874.90	-	4.74	-	2.58
KAFB-106204	5/17/2018	0	4873.92	10/9/2018	0	4872.31	4/17/2019	0	4876.14	-	3.83	-	2.22
KAFB-106207	5/17/2018	0	4873.84	10/9/2018	0	4871.69	4/19/2019	0	4876.26	-	4.57	-	2.42
KAFB-106211	5/17/2018	NA	NA	10/10/2018	NA	NA	4/17/2019	NA	NA	NA	NA	NA	NA
KAFB-106213	5/14/2018	0	4872.90	10/10/2018	0	4871.79	4/18/2019	0	4874.59	-	2.80	-	1.69
KAFB-106216	5/14/2018	0	4873.27	10/11/2018	0	4871.95	4/18/2019	0	4874.13	-	2.18	-	0.86
KAFB-106219	5/18/2018	0	4873.60	10/10/2018	0	4871.79	4/17/2019	0	4875.79	-	4.00	-	2.19
KAFB-106222	5/14/2018	0	4873.56	10/9/2018	0	4872.03	4/17/2019	0	4875.72	-	3.69	-	2.16
KAFB-106225	5/14/2018	0	4873.27	10/9/2018	0	4871.91	4/17/2019	0	4875.33	-	3.42	-	2.06
KAFB-106229	5/14/2018	0	4872.11	10/10/2018	0	4872.55	4/18/2019	0	4873.87	-	1.32	-	1.76
KAFB-106231	5/18/2018	0	4874.11	10/8/2018	0	4872.45	4/18/2019	0	4875.90	-	3.45	-	1.79
KAFB-106235-438[d]	5/14/2018	0	4873.23	10/11/2018	0	4872.08	4/17/2019	0	4875.22	-	3.14	-	1.99
KAFB-106236-436[d]	5/17/2018	0	4873.66	10/9/2018	0	4872.45	4/17/2019	0	4875.74	-	3.29	-	2.08
KAFB-106240-449	NA	NA	NA	10/10/2018	0	4870.10	4/18/2019	0	4872.38	-	2.28	NA	NA
KAFB-106241-428	NA	NA	NA	10/9/2018	0	4871.75	4/18/2019	0	4874.52	-	2.77	NA	NA
KAFB-106242-418	NA	NA	NA	10/8/2018	0	4872.80	4/18/2019	0	4874.99	-	2.19	NA	NA
KAFB-106243-425[e]	NA	NA	NA	10/10/2018	0	4872.29	4/18/2019	0	4874.69	-	2.40	NA	NA
KAFB-106244-445	NA	NA	NA	10/10/2018	0	4873.26	4/17/2019	0	4875.66	-	2.40	NA	NA
KAFB-106245-460	NA	NA	NA	10/9/2018	0	4872.30	4/17/2019	0	4875.11	-	2.81	NA	NA
KAFB-106247-450	NA	NA	NA	NA	NA	NA	4/17/2019	0	4875.35	NA	NA	NA	NA
KAFB-106S1-447	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.32	NA	NA	NA	NA
KAFB-106S2-451	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.21	NA	NA	NA	NA
KAFB-106S3-449	NA	NA	NA	NA	NA	NA	4/18/2019	0	4874.72	NA	NA	NA	NA
KAFB-106S4-446	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.25	NA	NA	NA	NA
KAFB-106S5-446	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.22	NA	NA	NA	NA
KAFB-106S7-451	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.03	NA	NA	NA	NA
KAFB-106S8-451	NA	NA	NA	NA	NA	NA	4/18/2019	0	4875.23	NA	NA	NA	NA
KAFB-106S9-447	NA	NA	NA	NA	NA	NA	4/18/2019	0	4874.92	NA	NA	NA	NA
KAFB-3411	5/15/2018	0	4873.46	10/9/2018	0	4873.35	4/17/2019	0	4875.50	-	2.15	-	2.04

Table 3-4
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness

Location ID	Q2 2018			Q4 2018			Q2 2019			Difference between Q2 2019 and Q4 2018		Difference between Q2 2019 and Q2 2018	
	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	LNAPL Thickness (ft)	Groundwater Elevations (ft)	LNAPL Thickness (ft)	Groundwater Elevations (ft)
Reference Elevation Interval 4838 (ft AMSL) Groundwater Monitoring Wells													
KAFB-106030	5/18/2018	0	4873.77	10/8/2018	0	4872.21	4/18/2019	0	4875.33	-	3.12	-	1.56
KAFB-106033	5/17/2018	0	4873.82	10/11/2018	0	4873.27	4/18/2019	0	4875.45	-	2.18	-	1.63
KAFB-106036	5/14/2018	0	4872.42	10/10/2018	0	4871.50	4/18/2019	0	4874.10	-	2.60	-	1.68
KAFB-106037	5/14/2018	0	4871.98	10/10/2018	0	4871.08	4/18/2019	0	4873.71	-	2.63	-	1.73
KAFB-106039	5/17/2018	0	4873.13	10/10/2018	0	4872.21	4/17/2019	0	4875.09	-	2.88	-	1.96
KAFB-106044	5/15/2018	0	4873.56	10/9/2018	0	4873.42	4/17/2019	0	4875.54	-	2.12	-	1.98
KAFB-106047	5/15/2018	0	4873.26	10/9/2018	0	4872.80	4/17/2019	0	4875.25	-	2.45	-	1.99
KAFB-106050	5/14/2018	0	4873.81	10/10/2018	0	4872.96	4/17/2019	0	4875.82	-	2.86	-	2.01
KAFB-106053	5/14/2018	0	4873.40	10/10/2018	0	4872.51	4/17/2019	0	4875.41	-	2.90	-	2.01
KAFB-106057	5/14/2018	0	4873.34	10/9/2018	0	4872.40	4/18/2019	0	4875.08	-	2.68	-	1.74
KAFB-106060	5/15/2018	0	4873.28	10/10/2018	0	4872.94	4/17/2019	0	4875.36	-	2.42	-	2.08
KAFB-106063[c]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KAFB-106065	5/17/2018	0	4873.35	10/10/2018	0	4872.64	4/17/2019	0	4875.28	-	2.64	-	1.93
KAFB-106069	5/17/2018	0	4873.34	10/10/2018	0	4872.50	4/17/2019	0	4875.20	-	2.70	-	1.86
KAFB-106072	5/14/2018	0	4873.19	10/10/2018	0	4872.53	4/18/2019	0	4874.83	-	2.30	-	1.64
KAFB-106073	5/15/2018	0	4873.45	10/10/2018	0	4872.81	4/18/2019	0	4875.15	-	2.34	-	1.70
KAFB-106077	5/15/2018	0	4871.87	10/10/2018	0	4871.50	4/17/2019	0	4873.93	-	2.43	-	2.06
KAFB-106080	5/15/2018	0	4873.53	10/9/2018	0	4873.11	4/17/2019	0	4875.53	-	2.42	-	2.00
KAFB-106083	5/18/2018	0	4873.26	10/11/2018	0	4872.37	4/18/2019	0	4874.77	-	2.40	-	1.51
KAFB-106086	5/14/2018	0	4873.28	10/10/2018	0	4872.67	4/18/2019	0	4874.92	-	2.25	-	1.64
KAFB-106089	5/14/2018	0	4872.55	10/11/2018	0	4871.80	4/18/2019	0	4874.25	-	2.45	-	1.70
KAFB-106092	5/14/2018	0	4872.20	10/10/2018	0	4872.57	4/18/2019	0	4873.88	-	1.31	-	1.68
KAFB-106095	5/17/2018	0	4873.38	10/10/2018	0	4872.80	4/17/2019	0	4875.41	-	2.61	-	2.03
KAFB-106097	5/15/2018	0	4873.45	10/10/2018	0	4873.01	4/17/2019	0	4875.61	-	2.60	-	2.16
KAFB-106099	5/15/2018	0	4873.65	10/10/2018	0	4873.41	4/17/2019	0	4875.83	-	2.42	-	2.18
KAFB-106101	5/15/2018	0	4873.69	10/9/2018	0	4873.65	4/17/2019	0	4875.69	-	2.04	-	2.00
KAFB-106103	5/14/2018	0	4872.59	10/10/2018	0	4871.69	4/18/2019	0	4874.40	-	2.71	-	1.81
KAFB-106105	5/14/2018	0	4873.43	10/9/2018	0	4872.54	4/17/2019	0	4875.47	-	2.93	-	2.04
KAFB-106202	5/17/2018	0	4872.02	10/10/2018	0	4869.93	4/17/2019	0	4874.66	-	4.73	-	2.64
KAFB-106205	5/17/2018	0	4873.92	10/9/2018	0	4872.30	4/17/2019	0	4876.18	-	3.88	-	2.26
KAFB-106208	5/17/2018	0	4873.74	10/9/2018	0	4871.62	4/17/2018	0	4876.01	-	4.39	-	2.27
KAFB-106214	5/14/2018	0	4872.96	10/10/2018	0	4871.91	4/18/2019	0	4874.71	-	2.80	-	1.75
KAFB-106217	5/14/2018	0	4873.30	10/11/2018	0	4871.95	4/18/2019	0	4875.14	-	3.19	-	1.84
KAFB-106220	5/18/2018	0	4873.60	10/10/2018	0	4871.81	4/17/2019	0	4875.81	-	4.00	-	2.21
KAFB-106223	5/14/2018	0	4873.60	10/9/2018	0	4872.10	4/17/2019	0	4875.76	-	3.66	-	2.16
KAFB-106226	5/14/2018	0	4873.56	10/9/2018	0	4872.26	4/17/2019	0	4875.69	-	3.43	-	2.13
KAFB-106235-472[d]	5/14/2018	0	4873.25	10/11/2018	0	4872.11	4/17/2019	0	4875.27	-	3.16	-	2.02
KAFB-106236-470[d]	5/17/2018	0	4873.65	10/9/2018	0	4872.48	4/17/2019	0	4875.76	-	3.28	-	2.11

Table 3-4
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness

Location ID	Q2 2018			Q4 2018			Q2 2019			Difference between Q2 2019 and Q4 2018		Difference between Q2 2019 and Q2 2018	
	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	Date of Measurement	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)[a]	LNAPL Thickness (ft)	Groundwater Elevations (ft)	LNAPL Thickness (ft)	Groundwater Elevations (ft)
Reference Elevation Interval 4814 (ft AMSL) Groundwater Monitoring Wells													
KAFB-106031	5/18/2018	0	4873.75	10/8/2018	0	4873.21	4/18/2019	0	4875.33	-	2.12	-	1.58
KAFB-106034	5/17/2018	0	4873.79	10/11/2018	0	4873.27	4/18/2019	0	4875.45	-	2.18	-	1.66
KAFB-106040	5/17/2018	0	4873.18	10/10/2018	0	4872.24	4/17/2019	0	4875.11	-	2.87	-	1.93
KAFB-106043	5/14/2018	0	4873.57	10/9/2018	0	4872.60	4/17/2019	0	4875.68	-	3.08	-	2.11
KAFB-106045	5/15/2018	0	4873.57	10/9/2018	0	4873.43	4/17/2019	0	4875.57	-	2.14	-	2.00
KAFB-106048	5/15/2018	0	4873.31	10/9/2018	0	4872.86	4/17/2019	0	4875.33	-	2.47	-	2.02
KAFB-106051	5/14/2018	0	4873.77	10/10/2018	0	4872.93	4/17/2019	0	4875.78	-	2.85	-	2.01
KAFB-106054	5/14/2018	0	4873.54	10/10/2018	0	4872.61	4/17/2019	0	4875.55	-	2.94	-	2.01
KAFB-106058	5/14/2018	0	4873.38	10/9/2018	0	4872.44	4/18/2019	0	4875.12	-	2.68	-	1.74
KAFB-106061	5/15/2018	0	4873.42	10/10/2018	0	4873.06	4/17/2019	0	4875.51	-	2.45	-	2.09
KAFB-106062	5/15/2018	0	4873.32	10/10/2018	0	4872.86	4/18/2019	0	4875.12	-	2.26	-	1.80
KAFB-106066	5/17/2018	0	4873.33	10/10/2018	0	4872.72	4/17/2019	0	4875.38	-	2.66	-	2.05
KAFB-106068	5/17/2018	0	4872.98	10/10/2018	0	4872.28	4/17/2019	0	4874.98	-	2.70	-	2.00
KAFB-106071	5/14/2018	0	4873.05	10/10/2018	0	4872.40	4/18/2019	0	4874.74	-	2.34	-	1.69
KAFB-106074	5/15/2018	0	4873.43	10/11/2018	0	4872.78	4/18/2019	0	4875.13	-	2.35	-	1.70
KAFB-106078	5/15/2018	0	4872.60	10/10/2018	0	4872.24	4/17/2019	0	4874.68	-	2.44	-	2.08
KAFB-106081	5/15/2018	0	4873.30	10/9/2018	0	4872.91	4/17/2019	0	4875.35	-	2.44	-	2.05
KAFB-106084	5/18/2018	0	4873.25	10/11/2018	0	4872.47	4/18/2019	0	4874.90	-	2.43	-	1.65
KAFB-106087	5/14/2018	0	4873.26	10/10/2018	0	4872.70	4/18/2019	0	4873.95	-	1.25	-	0.69
KAFB-106090	5/14/2018	0	4873.00	10/10/2018	0	4872.29	4/18/2019	0	4874.73	-	2.44	-	1.73
KAFB-106093	5/14/2018	0	4872.92	10/10/2018	0	4872.60	4/18/2019	0	4874.60	-	2.00	-	1.68
KAFB-106096	5/17/2018	0	4873.40	10/10/2018	0	4872.86	4/17/2019	0	4875.44	-	2.58	-	2.04
KAFB-106098	5/15/2018	0	4873.45	10/10/2018	0	4873.05	4/17/2019	0	4875.60	-	2.55	-	2.15
KAFB-106100	5/15/2018	0	4873.60	10/10/2018	0	4873.32	4/17/2019	0	4875.82	-	2.50	-	2.22
KAFB-106102	5/15/2018	0	4873.56	10/9/2018	0	4873.54	4/17/2019	0	4875.56	-	2.02	-	2.00
KAFB-106104	5/14/2018	0	4872.79	10/10/2018	0	4871.90	4/18/2019	0	4874.51	-	2.61	-	1.72
KAFB-106107	5/14/2018	0	4873.51	10/9/2018	0	4872.58	4/17/2019	0	4875.49	-	2.91	-	1.98
KAFB-106203	5/17/2018	0	4871.24	10/10/2018	0	4869.27	4/17/2019	0	4873.99	-	4.72	-	2.75
KAFB-106206	5/17/2018	0	4873.91	10/9/2018	0	4872.30	4/17/2019	0	4876.20	-	3.90	-	2.29
KAFB-106209	5/17/2018	0	4873.66	10/9/2018	0	4871.67	4/17/2018	0	4876.36	-	4.69	-	2.70
KAFB-106212	5/14/2018	0	4872.09	10/10/2018	0	4871.20	4/18/2019	0	4873.86	-	2.66	-	1.77
KAFB-106215	5/14/2018	0	4873.06	10/10/2018	0	4872.01	4/18/2019	0	4874.82	-	2.81	-	1.76
KAFB-106218	5/14/2018	0	4872.93	10/11/2018	0	4871.58	4/18/2019	0	4874.81	-	3.23	-	1.88
KAFB-106221	5/18/2018	0	4873.59	10/10/2018	0	4871.80	4/17/2019	0	4875.78	-	3.98	-	2.19
KAFB-106224	5/14/2018	0	4873.57	10/9/2018	0	4872.11	4/17/2019	0	4875.71	-	3.60	-	2.14
KAFB-106227	5/14/2018	0	4873.57	10/9/2018	0	4872.34	4/17/2019	0	4875.63	-	3.29	-	2.06
KAFB-106232	5/18/2018	0	4874.14	10/8/2018	0	4872.57	4/18/2019	0	4875.98	-	3.41	-	1.84
KAFB-106235-501[d]	5/14/2018	0	4873.17	10/11/2018	0	4872.05	4/17/2019	0	4875.22	-	3.17	-	2.05
KAFB-106236-499[d]	5/17/2018	0	4873.61	10/9/2018	0	4872.43	4/17/2019	0	4875.72	-	3.29	-	2.11

Table 3-4
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness

[a] Groundwater elevation corrected for LNAPL thickness was calculated using the following formula: MRP Elevation - Depth to LNAPL/water interface + (LNAPL Thickness * Specific Gravity of Weathered JP4/JP8 Fuel). Through Q4 2018, 0.803 was used for the specific gravity of JP4/JP8 based on published values (American Petroleum Institute, 1989. A guide to the assessment and remediation of underground petroleum releases, Publ. 1628, API, Washington, DC, 81 pp.). Beginning in Q1 2019, a specific gravity of 0.7592 is used, based on the December 13, 2018 site-specific fuel testing report from PTS Laboratories using LNAPL collected from wells KAFB-106014, KAFB-106059, and KAFB-106079. Data from previous quarters is presented as originally published.

[b] Well used in analyses for both REI 4857 and 4838.

[c] Well was not gauged due to presence of monitoring equipment.

[d] Location ID for this well is based on the bottom of screen.

[e] In Q2 2019, GWM Well KAFB-106243-425 was re-gauged on 4/30/19 as the initial measurement was found to be erroneous. Because this was out of the normal gauging window, GWM wells KAFB-106088, KAFB-106089, and KAFB-106090 were gaug same time to determine the change in water level since the initial event. The change in water level in these three wells was then applied to the water level measured in KAFB-106243-425, and the water level presented here is that corrected value. See A 2 for a table showing the re-gauging event and corrections applied.

AMSL = above mean sea level
ft = foot/feet
ID = identification
LNAPL = light non-aqueous phase liquid
MRP = measurement reference point
NA = not applicable
Q2 = second quarter
Q4 = fourth quarter
REI = reference elevation interval
- = LNAPL not detected in either quarter

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q2 2019

Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond.	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106001[a]	–	–	–	–	–	–	–
KAFB-106002	4/2/2019	18.0	7.68	398.2	7.20	150.3	0.24
KAFB-106003	4/25/2019	21.1	7.95	763.0	6.21	217.5	0.02
KAFB-106004	5/1/2019	21.7	7.76	426.5	6.05	268.3	0.33
KAFB-106005[b]	4/18/2019	NA	NA	NA	NA	NA	NA
KAFB-106006	4/25/2019	20.9	7.52	269.6	0.22	-118.0	3.11
KAFB-106007	4/24/2019	17.9	8.11	294.8	4.65	208.2	0.02
KAFB-106008[a]	–	–	–	–	–	–	–
KAFB-106009[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106010	4/23/2019	17.8	7.20	412.4	0.70	-126.3	2.00
KAFB-106011	4/2/2019	17.4	7.52	619.0	2.05	139.9	0.92
KAFB-106012R	4/23/2019	18.3	7.85	1237.0	6.91	289.4	0.55
KAFB-106013	4/30/2019	19.8	7.82	364.8	4.41	305.9	14.30
KAFB-106014	5/1/2019	18.0	8.12	1329.0	0.44	-235.7	9.25
KAFB-106015[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106016	4/2/2019	18.6	8.00	323.4	3.73	143.5	12.30
KAFB-106017	4/2/2019	17.8	7.39	436.1	0.52	-37.1	3.23
KAFB-106018	4/4/2019	18.4	7.76	397.4	0.16	63.3	0.36
KAFB-106019	5/1/2019	18.7	8.12	2317.0	3.00	-10.0	72.90
KAFB-106020	5/2/2019	20.8	7.10	732	4.48	-5.5	578
KAFB-106021[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106022[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106023[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106024	4/3/2019	19.6	7.47	347.8	0.33	136.1	0.80
KAFB-106025[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106027	4/1/2019	17.7	7.59	433.1	3.72	131.8	2.05
KAFB-106028	4/22/2019	17.7	7.34	774	0.13	-242.5	7.12
KAFB-106029[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106030[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106031[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106032[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106033[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106034[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106035[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106036[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106037[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106038	4/4/2019	19.7	7.61	596	3.13	151.1	7.72
KAFB-106039	4/22/2019	19.5	8.05	627.0	3.49	260.6	0.73
KAFB-106040	4/22/2019	19.9	8.00	487.3	4.92	265.0	0.42
KAFB-106041[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106042[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106043[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106044	4/1/2019	17.0	7.39	320.5	7.46	124.8	0.56
KAFB-106045	4/24/2019	22.6	8.11	265.6	2.39	196.4	0.02
KAFB-106046	4/3/2019	18.7	7.68	322.0	5.88	152.4	0.52
KAFB-106047	4/3/2019	18.6	7.67	314.3	4.67	150.8	0.98
KAFB-106048	4/26/2019	20.2	7.87	623	5.91	339.5	0.81
KAFB-106049[b]	4/9/2019	NA	NA	NA	NA	NA	NA

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q2 2019

Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond.	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106050[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106051[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106052[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106053[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106054[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106055[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106057[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106058[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106059	4/26/2019	20.7	6.86	1579	0.41	-61.7	7.20
KAFB-106060	4/1/2019	18.0	7.10	731	1.00	123.5	7.78
KAFB-106061	4/2/2019	17.8	7.62	321.4	3.98	142.1	15.9
KAFB-106062	4/4/2019	17.9	7.77	262.9	4.05	152.3	3.62
KAFB-106063[c]	—	—	—	—	—	—	—
KAFB-106064[c]	—	—	—	—	—	—	—
KAFB-106065	4/2/2019	17.0	7.31	615	0.35	-52.8	2.86
KAFB-106066	4/2/2019	16.1	7.52	333.1	7.69	203.5	4.33
KAFB-106067	4/1/2019	18.1	7.37	475.2	0.17	-11.2	4.76
KAFB-106068	4/1/2019	17.9	7.69	222.4	4.94	339.1	3.26
KAFB-106069	4/30/2019	19.4	7.30	471.5	1.32	137.5	3.28
KAFB-106070[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106071[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106072[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106073	5/2/2019	19.4	7.48	455.7	5.16	-51.4	38.20
KAFB-106074	4/25/2019	19.1	7.97	591	5.21	259.9	0.08
KAFB-106075	4/3/2019	17.5	7.67	632.0	0.31	189.9	2.57
KAFB-106076	5/2/2019	19.3	7.59	417.4	1.53	-207.9	53.60
KAFB-106077	4/23/2019	17.3	8.22	269.8	3.22	241.4	1.02
KAFB-106078	4/2/2019	19.9	7.98	325.4	2.35	219.5	1.42
KAFB-106079[a]	—	—	—	—	—	—	—
KAFB-106080	4/3/2019	18.1	6.76	1169	0.21	-72.0	1.97
KAFB-106081	4/24/2019	21.6	7.99	278.4	5.44	222.7	3.32
KAFB-106082	4/29/2019	19.8	7.30	543.9	2.38	126.9	4.84
KAFB-106083	4/30/2019	18.9	7.39	479.9	0.66	147.6	8.05
KAFB-106084	4/29/2019	20.4	7.94	313.8	4.14	399.2	2.86
KAFB-106085[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106086[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106087[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106088[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106089[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106090[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106091[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106092[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106093[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106094	4/3/2019	18.4	7.64	468.3	0.23	52.0	3.91
KAFB-106095	5/2/2019	20.4	7.67	396.4	2.87	264.2	0.98
KAFB-106096	4/1/2019	18.5	7.41	310.3	6.67	351.8	9.63

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q2 2019

Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond.	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106097	4/29/2019	19.2	7.95	328.5	4.60	389.3	0.83
KAFB-106098	4/30/2019	18.8	7.83	307.3	4.27	351.5	1.79
KAFB-106099	5/1/2019	19.3	7.79	358.4	6.65	260.8	0.40
KAFB-106100	5/1/2019	19.7	7.88	321.7	5.93	269.8	2.00
KAFB-106101	4/26/2019	20.4	7.94	724	5.02	365.7	1.52
KAFB-106102	4/25/2019	19.8	8.03	450.7	3.83	223.0	0.36
KAFB-106103[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106104[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106105[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106106[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106107[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106149-484[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106151-484[b]	4/18/2019	NA	NA	NA	NA	NA	NA
KAFB-106152-484[b]	4/18/2019	NA	NA	NA	NA	NA	NA
KAFB-106153-484[b]	4/18/2019	NA	NA	NA	NA	NA	NA
KAFB-106201[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106202[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106203[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106204[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106205[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106206[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106207[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106208[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106209[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106212[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106213[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106214[b]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106215[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106216[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106217[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106218[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106219[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106220[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106221[b]	4/10/2019	NA	NA	NA	NA	NA	NA
KAFB-106222[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106223[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106224[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106225[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106226[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106227[b]	4/9/2019	NA	NA	NA	NA	NA	NA
KAFB-106229[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106231[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106232[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106235-438[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106235-472[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106235-501[b]	4/8/2019	NA	NA	NA	NA	NA	NA

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q2 2019

Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond.	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106236-436[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106236-470[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106236-499[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106240-449[b,d]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106241-428[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106242-418[b]	4/15/2019	NA	NA	NA	NA	NA	NA
KAFB-106243-425[b]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106244-445[b,d]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106245-460[b,e]	4/8/2019	NA	NA	NA	NA	NA	NA
KAFB-106247-450[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-3411	4/23/2019	19.2	8.2	262.4	3.10	291.8	1.29
KAFB-106S1-447[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S2-451[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S3-449[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S4-446[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S5-446[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S7-451[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S8-451[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA
KAFB-106S9-447[b,f]	4/16/2019	NA	NA	NA	NA	NA	NA

[a] Sample not collected due to biofouling in the well.
[b] Samples collected via passive sampling methodology; no field water quality measurement available.
[c] Sample not collected due to equipment in the well for the *in situ* biodegradation pilot test.
[d] Sampled for BTEX on 5/9/2019.
[e] Sampled for BTEX on 5/20/2019
[f] Sampled for dissolved metals, alkalinity, and anions on 5/9/2019.
°C = degrees Celsius
µS/cm = microSiemens per centimeter
DO = dissolved oxygen
ID = identification
mg/L = milligram per liter
mV = millivolt
NA = not available
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
Spec. Cond. = specific conductivity
S.U. = standard unit
— = not sampled

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106240-449[a]			KAFB-106240-449[a]			KAFB-106241-428		
			Field Sample ID:				GW240-449-192			GW240-449-192			GW241-428-192		
			Sample Date:				4/8/2019			5/9/2019			4/8/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				473.14			473.14			452.2		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	—	--	—	0.033	--	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	ND	U	0.5	—	--	—
		Ethylbenzene	700	700	15	700	—	--	—	ND	U	0.8	—	--	—
		Toluene	1,000	1,000	1,100	1,000	—	--	—	ND	U	0.5	—	--	—
		Xylenes, Total	620	10,000	190	620	—	--	—	ND	U	2	—	--	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	121	--	0.1	—	--	—	44.9	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.0804	J	0.1	—	--	—	ND	U	0.1
		Magnesium	NS	NS	NS	NS	17.6	--	0.05	—	--	—	6.23	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	—	--	—	0.0083	J	0.0025
		Potassium	NS	NS	NS	NS	4.12	--	0.375	—	--	—	2.57	--	0.375
		Sodium	NS	NS	NS	NS	38.3	--	0.5	—	--	—	25.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	—	--	—	0.0012	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	--	—	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2.1	J	2	—	--	—	ND	U	2
		Chloride	250	250	NS	250	136	--	60	—	--	—	22.6	--	1.5
		Sulfate	600	250	NS	250	117	--	18	—	--	—	38.4	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	3.6	--	0.09	—	--	—	0.66	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	128	--	4	—	--	—	121	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	—	--	—	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	128	--	4	—	--	—	121	J	4

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106242-418			KAFB-106243-425			KAFB-106244-445[a]		
			Field Sample ID:				GW242-418-192			GW243-425-192			GW244-445-192		
			Sample Date:				4/15/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				442.24			449.14			469.19		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	0.044	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	—	--	—	—	--	—
		Ethylbenzene	700	700	15	700	—	--	—	—	--	—	—	--	—
		Toluene	1,000	1,000	1,100	1,000	—	--	—	—	--	—	—	--	—
		Xylenes, Total	620	10,000	190	620	—	--	—	—	--	—	—	--	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	99.7	--	0.1	54.8	--	0.1	144	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.228	--	0.1
		Magnesium	NS	NS	NS	NS	14.1	--	0.05	8.48	--	0.05	22	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	**0.233**	--	0.0025	0.0064	J	0.0025
		Potassium	NS	NS	NS	NS	3.77	--	0.375	3.66	--	0.375	4.6	--	0.375
		Sodium	NS	NS	NS	NS	37	--	0.5	36.9	--	0.5	57	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0014	J	0.0016	0.00083	J	0.0016	0.001	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	92.2	--	6	20.3	--	1.5	182	--	60
		Sulfate	600	250	NS	250	150	--	18	40.8	--	4.5	**323**	--	180
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	2.2	--	0.09	ND	U	0.09	3.5	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	116	--	4	146	--	4	106	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	116	--	4	146	--	4	106	--	4

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106244-445[a]			KAFB-106245-460[a]			KAFB-106245-460[a]		
			Field Sample ID:				GW244-445-192			GW245-460-192			GW245-460-192		
			Sample Date:				5/9/2019			4/8/2019			5/20/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				469.19			487.77			487.77		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	—	--	—	ND	U	0.019	—	--	—
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	—	--	—	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.8	—	--	—	ND	U	0.8
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	—	--	—	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	2	—	--	—	ND	U	2
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	--	—	46.6	--	0.1	—	--	—
		Iron, dissolved	1.0	NS	NS	1.0	—	--	—	ND	U	0.1	—	--	—
		Magnesium	NS	NS	NS	NS	—	--	—	6.79	--	0.05	—	--	—
		Manganese, dissolved	0.2	NS	NS	0.2	—	--	—	ND	U	0.0025	—	--	—
		Potassium	NS	NS	NS	NS	—	--	—	2.19	--	0.375	—	--	—
		Sodium	NS	NS	NS	NS	—	--	—	22.6	--	0.5	—	--	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	--	—	0.0015	J	0.0016	—	--	—
		Lead	0.015	0.015	0.015	0.015	—	--	—	ND	U	0.0024	—	--	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	--	—	ND	U	2	—	--	—
		Chloride	250	250	NS	250	—	--	—	37.1	--	15	—	--	—
		Sulfate	600	250	NS	250	—	--	—	28.5	--	4.5	—	--	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	—	--	—	0.86	J	0.09	—	--	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	112	--	4	—	--	—
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	ND	U	4	—	--	—
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	112	--	4	—	--	—

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106247-450[a]			KAFB-106247-450[a]			KAFB-106S1-447[a]		
			Field Sample ID:				GW247-490-192			GW247-490-192			GWS1-447-192		
			Sample Date:				4/16/2019			5/9/2019			4/16/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				477.42			477.42			471.12		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	—	--	—	**250**	--	97
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	—	--	—	**6,600**	--	100
		Ethylbenzene	700	700	15	700	ND	U	0.8	—	--	—	580	--	160
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	—	--	—	**8,900**	--	100
		Xylenes, Total	620	10,000	190	620	ND	U	2	—	--	—	**2,400**	--	400
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.1	--	0.1	—	--	—	75.9	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	—	--	—	ND	U	0.1	—	--	—
		Magnesium	NS	NS	NS	NS	6.14	--	0.05	—	--	—	12.5	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	—	--	—	**0.311**	--	0.0025	—	--	—
		Potassium	NS	NS	NS	NS	2.87	--	0.375	—	--	—	3.26	--	0.375
		Sodium	NS	NS	NS	NS	25.3	--	0.5	—	--	—	28.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00084	J	0.0016	—	--	—	0.002	--	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	--	—	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	--	—	ND	U	2	—	--	—
		Chloride	250	250	NS	250	—	--	—	12.6	--	1.5	—	--	—
		Sulfate	600	250	NS	250	—	--	—	27.5	--	4.5	—	--	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	—	--	—	0.28	J	0.09	—	--	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	125	--	4	—	--	—
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	ND	U	4	—	--	—
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	125	--	4	—	--	—

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S1-447[a]			KAFB-106S2-451[a]			KAFB-106S2-451[a]		
			Field Sample ID:				GWS1-447-192			GWS2-451-192			GWS2-451-592		
			Sample Date:				5/9/2019			4/16/2019			4/16/2019		
			Sample Type:				REG			REG			Field Duplicate		
			Sample Depth (ft bgs):				471.12			478.15			478.15		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	—	--	—	**260**	--	95	**210**	--	96
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	**8,800**	--	100	**9,400**	--	100
		Ethylbenzene	700	700	15	700	—	--	—	**930**	--	160	**1,000**	--	160
		Toluene	1,000	1,000	1,100	1,000	—	--	—	**15,000**	--	100	**16,000**	--	100
		Xylenes, Total	620	10,000	190	620	—	--	—	**4,100**	--	400	**4,500**	--	400
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	--	—	124	--	0.1	125	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	**2.87**	J	0.1	—	--	—	—	--	—
		Magnesium	NS	NS	NS	NS	—	--	—	21.3	--	0.05	21.5	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**3**	--	0.0025	—	--	—	—	--	—
		Potassium	NS	NS	NS	NS	—	--	—	3.86	--	0.375	3.92	--	0.375
		Sodium	NS	NS	NS	NS	—	--	—	39.7	--	0.5	40.5	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	--	—	0.01	--	0.0016	0.0097	--	0.0016
		Lead	0.015	0.015	0.015	0.015	—	--	—	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	—	--	—	—	--	—
		Chloride	250	250	NS	250	12.5	--	1.5	—	--	—	—	--	—
		Sulfate	600	250	NS	250	ND	U	4.5	—	--	—	—	--	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	ND	U	0.09	—	--	—	—	--	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	271	--	4	—	--	—	—	--	—
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	—	--	—	—	--	—
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	271	--	4	—	--	—	—	--	—

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S2-451[a]			KAFB-106S2-451[a]			KAFB-106S3-449[a]		
			Field Sample ID:				GWS2-451-192			GWS2-451-592			GWS3-449-192		
			Sample Date:				5/9/2019			5/9/2019			4/16/2019		
			Sample Type:				REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				478.15			478.15			478.91		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	—	--	—	—	--	—	**11**	--	2
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	—	--	—	**4,800**	--	50
		Ethylbenzene	700	700	15	700	—	--	—	—	--	—	**720**	--	80
		Toluene	1,000	1,000	1,100	1,000	—	--	—	—	--	—	**6,000**	--	50
		Xylenes, Total	620	10,000	190	620	—	--	—	—	--	—	**2,200**	--	200
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	--	—	—	--	—	144	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	**9.57**	J	0.1	**7.42**	J	0.1	—	--	—
		Magnesium	NS	NS	NS	NS	—	--	—	—	--	—	24.8	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**6.17**	--	0.0025	**6.31**	--	0.0025	—	--	—
		Potassium	NS	NS	NS	NS	—	--	—	—	--	—	4.43	--	0.375
		Sodium	NS	NS	NS	NS	—	--	—	—	--	—	43.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	--	—	—	--	—	0.0057	--	0.0016
		Lead	0.015	0.015	0.015	0.015	—	--	—	—	--	—	0.0012	J	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2.2	J	2	ND	U	2	—	--	—
		Chloride	250	250	NS	250	46.4	J	6	18.4	J	1.5	—	--	—
		Sulfate	600	250	NS	250	2.8	J	4.5	ND	U	4.5	—	--	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	ND	U	0.09	ND	U	0.09	—	--	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	335	--	4	318	--	4	—	--	—
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	—	--	—
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	335	--	4	318	--	4	—	--	—

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S3-449[a]			KAFB-106S4-446[a]			KAFB-106S4-446[a]		
			Field Sample ID:				GWS3-449-192			GWS4-446-192			GWS4-446-192		
			Sample Date:				5/9/2019			4/16/2019			5/9/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				478.91			473.04			473.04		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	—	--	—	0.041	--	0.019	—	--	—
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	ND	U	0.5	—	--	—
		Ethylbenzene	700	700	15	700	—	--	—	ND	U	0.8	—	--	—
		Toluene	1,000	1,000	1,100	1,000	—	--	—	ND	U	0.5	—	--	—
		Xylenes, Total	620	10,000	190	620	—	--	—	ND	U	2	—	--	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	--	—	186	--	0.1	—	--	—
		Iron, dissolved	1.0	NS	NS	1.0	**13.1**	--	0.1	—	--	—	ND	UJ	0.1
		Magnesium	NS	NS	NS	NS	—	--	—	29.5	--	0.05	—	--	—
		Manganese, dissolved	0.2	NS	NS	0.2	**5.24**	--	0.0025	—	--	—	ND	U	0.0025
		Potassium	NS	NS	NS	NS	—	--	—	5.19	--	0.375	—	--	—
		Sodium	NS	NS	NS	NS	—	--	—	67.1	--	0.5	—	--	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	--	—	0.0012	J	0.0016	—	--	—
		Lead	0.015	0.015	0.015	0.015	—	--	—	ND	U	0.0024	—	--	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2	J	2	—	--	—	3.1	--	2
		Chloride	250	250	NS	250	79.9	--	6	—	--	—	235	--	60
		Sulfate	600	250	NS	250	2.9	J	4.5	—	--	—	**440**	--	180
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	ND	U	0.09	—	--	—	6.1	--	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	397	--	4	—	--	—	101	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	—	--	—	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	397	--	4	—	--	—	101	--	4

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S5-446[a]			KAFB-106S5-446[a]			KAFB-106S7-451[a]		
			Field Sample ID:				GWS5-446-192			GWS5-446-192			GWS7-491-192		
			Sample Date:				4/16/2019			5/9/2019			4/16/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				470.1			470.1			475.1		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**15**	--	1.9	—	--	—	**8.7**	--	0.95
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**1,300**	--	25	—	--	—	**3,800**	--	25
		Ethylbenzene	700	700	15	700	**1,400**	--	40	—	--	—	450	--	40
		Toluene	1,000	1,000	1,100	1,000	**2,500**	--	25	—	--	—	**3,600**	--	25
		Xylenes, Total	620	10,000	190	620	**1,900**	--	100	—	--	—	**2,200**	--	100
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	71.8	--	0.1	—	--	—	122	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	—	--	—	**2.91**	J	0.1	—	--	—
		Magnesium	NS	NS	NS	NS	11.9	--	0.05	—	--	—	21.4	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	—	--	—	**2.27**	--	0.0025	—	--	—
		Potassium	NS	NS	NS	NS	3.08	--	0.375	—	--	—	4.12	--	0.375
		Sodium	NS	NS	NS	NS	30.9	--	0.5	—	--	—	40	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0049	--	0.0016	—	--	—	0.0026	--	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	--	—	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	--	—	ND	U	2	—	--	—
		Chloride	250	250	NS	250	—	--	—	24.9	--	1.5	—	--	—
		Sulfate	600	250	NS	250	—	--	—	ND	U	4.5	—	--	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	—	--	—	ND	U	0.09	—	--	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	273	--	4	—	--	—
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	ND	U	4	—	--	—
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	273	--	4	—	--	—

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S7-451[a]			KAFB-106S8-451[a]			KAFB-106S8-451[a]		
			Field Sample ID:				GWS7-491-192			GWS8-491-192			GWS8-491-192		
			Sample Date:				5/9/2019			4/16/2019			5/9/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				475.1			478.32			478.32		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	—	--	—	**96**	--	19	—	--	—
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	--	—	**2,100**	--	100	—	--	—
		Ethylbenzene	700	700	15	700	—	--	—	550	--	160	—	--	—
		Toluene	1,000	1,000	1,100	1,000	—	--	—	**10,000**	--	100	—	--	—
		Xylenes, Total	620	10,000	190	620	—	--	—	**2,700**	--	400	—	--	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	--	—	82.7	--	0.1	—	--	—
		Iron, dissolved	1.0	NS	NS	1.0	**12.5**	--	0.1	—	--	—	0.477	J	0.1
		Magnesium	NS	NS	NS	NS	—	--	—	13.3	--	0.05	—	--	—
		Manganese, dissolved	0.2	NS	NS	0.2	**4.47**	--	0.0025	—	--	—	**2.75**	--	0.0025
		Potassium	NS	NS	NS	NS	—	--	—	3.27	--	0.375	—	--	—
		Sodium	NS	NS	NS	NS	—	--	—	31.6	--	0.5	—	--	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	--	—	0.0011	J	0.0016	—	--	—
		Lead	0.015	0.015	0.015	0.015	—	--	—	ND	U	0.0024	—	--	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	—	--	—	1.8	J	2
		Chloride	250	250	NS	250	4.1	--	1.5	—	--	—	21.1	--	1.5
		Sulfate	600	250	NS	250	8.1	--	4.5	—	--	—	8.3	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	ND	U	0.09	—	--	—	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	367	--	4	—	--	—	267	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	—	--	—	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	367	--	4	—	--	—	267	--	4

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

			Well Location ID:				KAFB-106S9-447[a]			KAFB-106S9-447[a]		
			Field Sample ID:				GWS9-447-192			GWS9-447-192		
			Sample Date:				4/16/2019			5/9/2019		
			Sample Type:				REG			REG		
			Sample Depth (ft bgs):				473.7			473.7		
			Reference Elevation Interval (ft AMSL):				4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**EPA MCL[c]**	**EPA RSL[d]**	**Project Screening Level[e]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**63**	--	19	—	--	—
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**9,000**	--	100	—	--	—
		Ethylbenzene	700	700	15	700	**1,200**	--	16	—	--	—
		Toluene	1,000	1,000	1,100	1,000	**14,000**	--	100	—	--	—
		Xylenes, Total	620	10,000	190	620	**2,800**	--	40	—	--	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	89.6	--	0.1	—	--	—
		Iron, dissolved	1.0	NS	NS	1.0	—	--	—	**2.05**	J	0.1
		Magnesium	NS	NS	NS	NS	16.3	--	0.05	—	--	—
		Manganese, dissolved	0.2	NS	NS	0.2	—	--	—	**2.52**	--	0.0025
		Potassium	NS	NS	NS	NS	3.72	--	0.375	—	--	—
		Sodium	NS	NS	NS	NS	33.1	--	0.5	—	--	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.004	--	0.0016	—	--	—
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	--	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	--	—	1.8	J	2
		Chloride	250	250	NS	250	—	--	—	50.7	--	15
		Sulfate	600	250	NS	250	—	--	—	94.9	--	45
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[f]	10[f]	NS	10[f]	—	--	—	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	317	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	—	--	—	317	--	4

Table 3-6
Groundwater Analytical Results for Newly Added Wells, Q2 2019

[a] Full suite of analytes was collected over two sample dates.

[b] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018). For metals, the NMWQCC numeric standard applies to dissolved metals.

[c] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).

[d] EPA Region 6 RSL for Tapwater (May 2019) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.

[e] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

[f] Based on the geochemical equilibrium of the site groundwater and previous site data analyses, nitrate/nitrite results represent nitrate concentrations.

µg/L = microgram per liter
AFB = Air Force Base
AMSL = above mean sea level
BFF = Bulk Fuels Facility
bgs = belowv ground surface
$CaCO_3$ = calcium carbonate
CFR = Code of Federal Regulations
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
ft = foot/feet
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
MCL = maximum contaminant level
mg/L = milligram per liter
ND = not detected
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
REG = normal field sample
RSL = regional screening level
SWMU = Solid Waste Management Unit
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.
— = Compound not analyzed for.

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106002			KAFB-106003			KAFB-106004			KAFB-106005		
			Field Sample ID:				GW002-192			GW003-192			GW004-192			GW005-192		
			Sample Date:				4/2/2019			4/25/2019			5/1/2019			4/18/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				479-504			482			488.74			482.57		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	**0.4**	J	0.094
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	ND	U	0.5	ND	U	0.5	**120**	--	0.5
		Ethylbenzene	700	700	15	700	—	—	—	ND	U	0.8	ND	U	0.8	51	--	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	3	--	0.5	2	--	0.5	2	--	0.5
		Xylenes, Total	620	10,000	190	620	—	—	—	ND	U	2	ND	U	2	110	--	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106006			KAFB-106007			KAFB-106009			KAFB-106009		
			Field Sample ID:				GW006-192			GW007-192			GW009-192			GW009-592		
			Sample Date:				4/25/2019			4/24/2019			4/16/2019			4/16/2019		
			Sample Type:				REG			REG			REG			Field Duplicate		
			Sample Depth (ft bgs):				509.68			490			484.39			484.39		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.035	--	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.02
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**22**	--	0.5	—	—	—	1	--	0.5	0.9	J	0.5
		Ethylbenzene	700	700	15	700	0.8	J	0.8	—	—	—	ND	U	0.8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	27	--	0.5	—	—	—	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	5	--	2	—	—	—	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106010			KAFB-106010			KAFB-106011			KAFB-106012R		
			Field Sample ID:				GW010-192			GW010-592			GW011-192			GW012R-192		
			Sample Date:				4/23/2019			4/23/2019			4/2/2019			4/23/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				506			506			486-511			495		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**0.65**	--	0.19	**0.64**	--	0.19	0.013	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**280**	--	0.5	**290**	--	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	130	--	0.8	130	--	0.8	ND	U	0.8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	28	--	0.5	28	--	0.5	ND	U	0.5	0.9	J	0.5
		Xylenes, Total	620	10,000	190	620	40	--	2	40	--	2	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106013			KAFB-106014			KAFB-106014			KAFB-106015		
			Field Sample ID:				GW013-192			GW014-192			GW014-592			GW015-192		
			Sample Date:				4/30/2019			5/1/2019			5/1/2019			4/16/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				491			491			491			488.22		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	**0.1**	--	0.019	**0.099**	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	**53**	--	0.5	**53**	--	0.5	—	—	—
		Ethylbenzene	700	700	15	700	ND	U	0.8	67	--	0.8	67	--	0.8	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	4	--	0.5	460	--	5	380	--	5	—	—	—
		Xylenes, Total	620	10,000	190	620	ND	U	2	190	--	2	190	--	2	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106016			KAFB-106017			KAFB-106017			KAFB-106018		
			Field Sample ID:				GW016-192			GW017-192			GW017-592			GW018-192		
			Sample Date:				4/2/2019			4/2/2019			4/2/2019			4/4/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				475-500			482-507			482-507			476-501		
			Reference Elevation Interval (ft AMSL):				4857			4857 and 4838			4857 and 4838			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	**0.2**	--	0.019	**0.2**	--	0.019	0.038	--	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	0.6	J	0.5	0.7	J	0.5	0.2	J	0.5
		Ethylbenzene	700	700	15	700	—	—	—	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	ND	U	2	ND	U	2	ND	U	2
		Toluene	1,000	1,000	1,100	1,000	—	—	—	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	—	—	—	ND	U	2	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106019			KAFB-106020			KAFB-106021			KAFB-106022		
			Field Sample ID:				GW019-192			GW020-192			GW021-192			GW022-192		
			Sample Date:				5/1/2019			5/2/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				498			484			458.70			462.70		
			Reference Elevation Interval (ft AMSL):				4857 and 4838			4857			4857 and 4838			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.016	J	0.019	ND	U	0.019	ND	U	0.019	0.022	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106023			KAFB-106024			KAFB-106025			KAFB-106027		
			Field Sample ID:				GW023-192			GW024-192			GW025-192			GW027-192		
			Sample Date:				4/9/2019			4/3/2019			4/9/2019			4/1/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				473.74			481-506			465.70			481-501		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857 and 4838			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106028			KAFB-106028			KAFB-106029			KAFB-106030		
			Field Sample ID:				GW028-192			GW028-592			GW029-192			GW030-192		
			Sample Date:				4/22/2019			4/22/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				486-511			486-511			451.50			470.20		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**0.34**	--	0.095	**0.34**	--	0.095	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**220**	--	0.5	**240**	--	0.5	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	130	--	0.8	140	--	0.8	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	77	--	0.5	82	--	0.5	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	38	--	2	40	--	2	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106031			KAFB-106032			KAFB-106033			KAFB-106034		
			Field Sample ID:				GW031-192			GW032-192			GW033-192			GW034-192		
			Sample Date:				4/15/2019			4/15/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				496.50			456.70			477.70			502.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106035			KAFB-106036			KAFB-106037			KAFB-106037		
			Field Sample ID:				GW035-192			GW036-192			GW037-192			GW037-592		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			REG			REG			Field Duplicate		
			Sample Depth (ft bgs):				452.83			482.58			507.75			507.75		
			Reference Elevation Interval (ft AMSL):				4857			4838			4838			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**0.12**	--	0.019	**0.13**	--	0.019	**0.13**	--	0.019	**0.13**	--	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106038			KAFB-106039			KAFB-106040			KAFB-106041		
			Field Sample ID:				GW038-192			GW039-192			GW040-192			GW041-192		
			Sample Date:				4/4/2019			4/22/2019			4/22/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				483			513			535			452.30		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	0.015	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	ND	U	0.8	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	ND	U	2	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	63	--	0.5	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	ND	U	2	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106042			KAFB-106043			KAFB-106044			KAFB-106045		
			Field Sample ID:				GW042-192			GW043-192			GW044-192			GW045-192		
			Sample Date:				4/8/2019			4/8/2019			4/1/2019			4/24/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				469.7			543.70			504.2-519.2			528.3-543.3		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.027	J	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106046			KAFB-106047			KAFB-106048			KAFB-106049		
			Field Sample ID:				GW046-192			GW047-192			GW048-192			GW049-192		
			Sample Date:				4/3/2019			4/3/2019			4/26/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				490-510			512-527			538			457.50		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106050			KAFB-106051			KAFB-106052			KAFB-106053		
			Field Sample ID:				GW050-192			GW051-192			GW052-192			GW053-192		
			Sample Date:				4/9/2019			4/9/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				475.1			501.50			450.30			479.10		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106054			KAFB-106055			KAFB-106055			KAFB-106057		
			Field Sample ID:				GW054-192			GW055-192			GW055-592			GW057-192		
			Sample Date:				4/8/2019			4/15/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				504.70			466.50			466.50			485.60		
			Reference Elevation Interval (ft AMSL):				4814			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	0.019	J	0.019	0.018	J	0.019	0.01	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106058			KAFB-106058			KAFB-106059			KAFB-106060		
			Field Sample ID:				GW058-192			GW058-592			GW059-192			GW060-192		
			Sample Date:				4/15/2019			4/15/2019			4/26/2019			4/1/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				512.50			512.50			504			503-518		
			Reference Elevation Interval (ft AMSL):				4814			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.0095	J	0.019	ND	U	0.019	**3.1**	--	0.38	0.049	--	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	**12,000**	--	50	ND	U	0.5
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	**900**	--	8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	**15,000**	--	50	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	**3,100**	--	20	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106061			KAFB-106062			KAFB-106065			KAFB-106066		
			Field Sample ID:				GW061-192			GW062-192			GW065-192			GW066-192		
			Sample Date:				4/2/2019			4/4/2019			4/2/2019			4/2/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				573.2-588.2			575.3-590.3			508-523			575.6-590.6		
			Reference Elevation Interval (ft AMSL):				4814			4814			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106067			KAFB-106068			KAFB-106069			KAFB-106070		
			Field Sample ID:				GW067-192			GW068-192			GW069-192			GW070-192		
			Sample Date:				4/1/2019			4/1/2019			4/30/2019			4/16/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				485-505			580-595			508			460.70		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.027	J	0.019	ND	U	0.019	0.014	J	0.019	ND	U	0.026
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	1	--	0.5	ND	U	0.5	ND	U	0.5	—	—	—
		Ethylbenzene	700	700	15	700	2	--	0.8	ND	U	0.8	ND	U	0.8	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	0.2	J	0.5	—	—	—
		Xylenes, Total	620	10,000	190	620	ND	U	2	ND	U	2	ND	U	2	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106070			KAFB-106071			KAFB-106072			KAFB-106073		
			Field Sample ID:				GW070-592			GW071-192			GW072-192			GW073-192		
			Sample Date:				4/16/2019			4/16/2019			4/16/2019			5/2/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				460.70			548.70			475.70			501		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.019	J	0.019	ND	U	0.019	0.03	--	0.019	0.015	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106073			KAFB-106074			KAFB-106075			KAFB-106076		
			Field Sample ID:				GW073-592			GW074-192			GW075-192			GW076-192		
			Sample Date:				5/2/2019			4/25/2019			4/3/2019			5/2/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				501			572			480-500			482		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.014	J	0.019	ND	U	0.019	0.043	--	0.019	0.047	--	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	4	--	0.5
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	40	--	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	41	--	0.5
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	100	--	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106076			KAFB-106077			KAFB-106078			KAFB-106080		
			Field Sample ID:				GW076-592			GW077-192			GW078-192			GW080-192		
			Sample Date:				5/2/2019			4/23/2019			4/2/2019			4/3/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				482			506			573.5-588.5			503.1-518.1		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.048	--	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	4	--	0.5	ND	U	0.5	ND	U	0.5	**8**	--	0.5
		Ethylbenzene	700	700	15	700	40	--	0.8	ND	U	0.8	ND	U	0.8	5	--	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	39	--	0.5	0.5	J	0.5	ND	U	0.5	0.3	J	0.5
		Xylenes, Total	620	10,000	190	620	100	--	2	ND	U	2	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106081			KAFB-106082			KAFB-106083			KAFB-106084		
			Field Sample ID:				GW081-192			GW082-192			GW083-192			GW084-192		
			Sample Date:				4/24/2019			4/29/2019			4/30/2019			4/29/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				580			474			498			571		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	0.026	J	0.019	ND	U	0.095
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	ND	U	0.8	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	3	--	0.5	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	ND	U	2	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106085			KAFB-106085			KAFB-106086			KAFB-106087		
			Field Sample ID:				GW085-192			GW085-592			GW086-192			GW087-192		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				447.20			447.20			476.70			546.70		
			Reference Elevation Interval (ft AMSL):				4857			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	0.014	J	0.019	0.016	J	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106088			KAFB-106089			KAFB-106090			KAFB-106091		
			Field Sample ID:				GW088-192			GW089-192			GW090-192			GW091-192		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				460.70			482.26			555.78			454.70		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**0.085**	--	0.019	**0.058**	--	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106091			KAFB-106092			KAFB-106093			KAFB-106094		
			Field Sample ID:				GW091-592			GW092-192			GW093-192			GW094-192		
			Sample Date:				4/10/2019			4/16/2019			4/16/2019			4/3/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				454.70			474.70			544.70			484.2-504.2		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	0.019	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106095			KAFB-106096			KAFB-106096			KAFB-106097		
			Field Sample ID:				GW095-192			GW096-192			GW096-592			GW097-192		
			Sample Date:				5/2/2019			4/1/2019			4/1/2019			4/29/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				505.85			576.3-591.3			576.3-591.3			508		
			Reference Elevation Interval (ft AMSL):				4838			4814			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.19
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	ND	U	0.5
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	3	--	0.5
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106098			KAFB-106099			KAFB-106100			KAFB-106101		
			Field Sample ID:				GW098-192			GW099-192			GW100-192			GW101-192		
			Sample Date:				4/30/2019			5/1/2019			5/1/2019			4/26/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				533			503			528			505		
			Reference Elevation Interval (ft AMSL):				4814			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	1	--	0.5	0.7	J	0.5	4	--	0.5	1	--	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106102			KAFB-106103			KAFB-106104			KAFB-106105		
			Field Sample ID:				GW102-192			GW103-192			GW104-192			GW105-192		
			Sample Date:				4/25/2019			4/9/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				526			485.76			510.75			484.70		
			Reference Elevation Interval (ft AMSL):				4814			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	ND	U	0.8	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	1	--	0.5	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	ND	U	2	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106106			KAFB-106106			KAFB-106107			KAFB-106149-484		
			Field Sample ID:				GW106-192			GW106-592			GW107-192			GW149-484-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/16/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				454.30			454.30			510.90			472.00		
			Reference Elevation Interval (ft AMSL):				4857			4857			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	**36**	--	3.8
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	**26,000**	--	250
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	**1,600**	--	400
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	**33,000**	--	250
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	**6,000**	--	1,000

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106151-484			KAFB-106152-484			KAFB-106153-484			KAFB-106201		
			Field Sample ID:				GW151-484-192			GW152-484-192			GW153-484-192			GW201-192		
			Sample Date:				4/18/2019			4/18/2019			4/18/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				472.19			474.88			474.89			490.35		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	**4.3**	--	0.94	ND	U	0.095	**350**	--	95	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	**1,900**	--	10	**430**	--	5	**9,200**	--	100	—	—	—
		Ethylbenzene	700	700	15	700	600	--	16	300	--	8	440	--	160	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	70	--	1	12	--	0.5	**9,100**	--	100	—	—	—
		Xylenes, Total	620	10,000	190	620	350	--	4	290	--	20	**1,800**	--	400	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106202			KAFB-106203			KAFB-106204			KAFB-106205		
			Field Sample ID:				GW202-192			GW203-192			GW204-192			GW205-192		
			Sample Date:				4/15/2019			4/15/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				520.60			623.78			463.20			493.20		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106206			KAFB-106207			KAFB-106208			KAFB-106209		
			Field Sample ID:				GW206-192			GW207-192			GW208-192			GW209-192		
			Sample Date:				4/9/2019			4/8/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				594.20			473.70			503.70			603.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106212			KAFB-106213			KAFB-106214			KAFB-106215		
			Field Sample ID:				GW212-192			GW213-192			GW214-192			GW215-192		
			Sample Date:				4/10/2019			4/16/2019			4/16/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				543.90			451.30			478.95			547.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106216			KAFB-106217			KAFB-106218			KAFB-106219		
			Field Sample ID:				GW216-192			GW217-192			GW218-192			GW219-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				461.40			485.70			552.70			466.00		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106220			KAFB-106221			KAFB-106222			KAFB-106223		
			Field Sample ID:				GW220-192			GW221-192			GW222-192			GW223-192		
			Sample Date:				4/10/2019			4/10/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				493.70			561.70			461.10			488.50		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106224			KAFB-106225			KAFB-106225			KAFB-106226		
			Field Sample ID:				GW224-192			GW225-192			GW225-592			GW226-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				555.70			453.30			453.30			480.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	0.018	J	0.019	0.013	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106227			KAFB-106229			KAFB-106231			KAFB-106232		
			Field Sample ID:				GW227-192			GW229-192			GW231-192			GW232-192		
			Sample Date:				4/9/2019			4/8/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				548.70			442.10			453.70			503.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4857			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106235-438			KAFB-106235-472			KAFB-106235-501			KAFB-106236-436		
			Field Sample ID:				GW235-463-192			GW235-492-192			GW235-521-192			GW236-461-192		
			Sample Date:				4/8/2019			4/8/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				443.90			472.70			501.70			441.90		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106236-470			KAFB-106236-499			KAFB-3411		
			Field Sample ID:				GW236-490-192			GW236-519-192			GW3411-192		
			Sample Date:				4/8/2019			4/8/2019			4/23/2019		
			Sample Type:				REG			REG			REG		
			Sample Depth (ft bgs):				470.70			499.70			482		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.6	5	—	—	—	—	—	—	—	—	—
		Ethylbenzene	700	700	15	700	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1,000	1,100	1,000	—	—	—	—	—	—	—	—	—
		Xylenes, Total	620	10,000	190	620	—	—	—	—	—	—	—	—	—

Table 3-7
Groundwater Analytical Results for Organic Compounds for Groundwater Monitoring Wells, Q2 2019

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018). For metals, the NMWQCC numeric standard applies to dissolved metals.

[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).

[c] EPA Region 6 RSL for Tapwater (May 2019) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.

[d] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

µg/L = microgram per liter
AFB = Air Force Base
AMSL = above mean sea level
BFF = Bulk Fuels Facility
bgs = below-ground surface
CFR = Code of Federal Regulations
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
ft = foot/feet
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
MCL = maximum contaminant level
ND = not detected
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
REG = normal field sample
RSL = regional screening level
SWMU = Solid Waste Management Unit
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.
— = Compound not analyzed for.

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106002			KAFB-106003			KAFB-106004			KAFB-106005		
			Field Sample ID:				GW002-192			GW003-192			GW004-192			GW005-192		
			Sample Date:				4/2/2019			4/25/2019			5/1/2019			4/18/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				479-504			482			488.74			482.57		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	39.4	--	0.1	54.9	--	0.1	46	--	0.1	208	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	0.489	J	0.1
		Magnesium	NS	NS	NS	NS	5.99	--	0.05	8.42	--	0.05	6.79	--	0.05	34.5	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	**0.812**	--	0.0025
		Potassium	NS	NS	NS	NS	2.36	--	0.375	2.77	--	0.375	2.66	--	0.375	4.85	--	0.375
		Sodium	NS	NS	NS	NS	21.6	--	0.5	28.2	--	0.5	23.7	--	0.5	76.9	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00094	J	0.0016	0.0015	J	0.0016	0.0015	J	0.0016	0.0037	--	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	2.7	--	2
		Chloride	250	250	NS	250	12.6	--	1.5	43.5	--	30	27.2	--	1.5	210	--	60
		Sulfate	600	250	NS	250	34.3	--	4.5	112	--	90	41.6	--	4.5	**283**	--	180
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.95	--	0.09	1.7	--	0.09	1.1	J	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	101	J	4	97.7	J	4	97.7	J	4	245	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	101	J	4	97.7	J	4	97.7	J	4	245	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106006			KAFB-106007			KAFB-106009			KAFB-106009		
			Field Sample ID:				GW006-192			GW007-192			GW009-192			GW009-592		
			Sample Date:				4/25/2019			4/24/2019			4/16/2019			4/16/2019		
			Sample Type:				REG			REG			REG			Field Duplicate		
			Sample Depth (ft bgs):				509.68			490			484.39			484.39		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	40.5	--	0.1	32.6	--	0.1	204	--	0.1	166	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.448	--	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.91	--	0.05	4.78	--	0.05	31	--	0.05	25.1	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**0.741**	--	0.0025	0.0019	J	0.0025	**0.712**	J	0.0025	0.0851	J	0.0025
		Potassium	NS	NS	NS	NS	2.23	--	0.375	2.01	--	0.375	4.93	--	0.375	4.25	--	0.375
		Sodium	NS	NS	NS	NS	24.6	--	0.5	21.3	--	0.5	64.1	--	0.5	53.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0011	J	0.0016	0.0013	J	0.0016	ND	U	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	2.2	J	2	2	J	2
		Chloride	250	250	NS	250	9.9	--	1.5	7.2	--	1.5	157	--	15	148	--	15
		Sulfate	600	250	NS	250	7.6	--	4.5	29.8	--	4.5	235	--	45	224	--	45
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	0.24	--	0.09	6.4	--	0.9	5.2	J	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	150	J	4	113	--	4	124	J	4	119	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	150	J	4	113	--	4	124	J	4	119	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106010			KAFB-106010			KAFB-106011			KAFB-106012R		
			Field Sample ID:				GW010-192			GW010-592			GW011-192			GW012R-192		
			Sample Date:				4/23/2019			4/23/2019			4/2/2019			4/23/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				506			506			486-511			495		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	56	--	0.1	55.3	--	0.1	67.9	--	0.1	194	--	0.5
		Iron, dissolved	1.0	NS	NS	1.0	0.2	J	0.1	0.202	--	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.97	--	0.05	8.91	--	0.05	9.37	--	0.05	29.8	--	0.25
		Manganese, dissolved	0.2	NS	NS	0.2	**1.51**	--	0.0025	**1.49**	--	0.0025	0.0028	J	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.7	--	0.375	2.7	--	0.375	2.71	--	0.375	5.09	--	1.88
		Sodium	NS	NS	NS	NS	27	--	0.5	27	--	0.5	29.2	--	0.5	72.5	--	2.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	ND	U	0.0016	0.0011	J	0.0016	0.0011	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	2.2	J	2
		Chloride	250	250	NS	250	12	--	1.5	11.6	--	1.5	44.7	--	15	149	--	15
		Sulfate	600	250	NS	250	33.8	--	4.5	32.3	--	4.5	72	--	4.5	**351**	--	45
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	ND	U	0.09	1.8	--	0.09	5.2	--	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	189	--	4	188	--	4	139	J	4	109	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	189	--	4	188	--	4	139	J	4	109	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106013			KAFB-106014			KAFB-106014			KAFB-106015		
			Field Sample ID:				GW013-192			GW014-192			GW014-592			GW015-192		
			Sample Date:				4/30/2019			5/1/2019			5/1/2019			4/16/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				491			491			491			488.22		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	39.2	--	0.1	108	--	0.1	109	--	0.1	38.8	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	0.116	J	0.1	0.111	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.73	--	0.05	15.8	--	0.05	16.2	--	0.05	5.22	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	**1.29**	--	0.0025	**1.27**	--	0.0025	0.0027	J	0.0025
		Potassium	NS	NS	NS	NS	2.34	--	0.375	3.58	--	0.375	3.64	--	0.375	2.05	--	0.375
		Sodium	NS	NS	NS	NS	21.8	--	0.5	40.2	--	0.5	40.4	--	0.5	19.2	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.002	J	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	1.9	J	2	2	J	2	ND	U	2
		Chloride	250	250	NS	250	14	--	1.5	130	--	60	121	--	30	19.6	--	1.5
		Sulfate	600	250	NS	250	38.1	--	4.5	31.9	--	4.5	31.4	--	4.5	26.8	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.4	--	0.09	ND	UJ	0.09	ND	UJ	0.09	0.33	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	105	--	4	234	J	4	236	J	4	112	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	105	--	4	234	J	4	236	J	4	112	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106016			KAFB-106017			KAFB-106017			KAFB-106018		
			Field Sample ID:				GW016-192			GW017-192			GW017-592			GW018-192		
			Sample Date:				4/2/2019			4/2/2019			4/2/2019			4/4/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				475-500			482-507			482-507			476-501		
			Reference Elevation Interval (ft AMSL):				4857			4857 and 4838			4857 and 4838			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	31.6	--	0.1	47.3	--	0.1	48	--	0.1	50.9	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.0474	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.66	--	0.05	6.67	--	0.05	6.75	--	0.05	7.86	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.0033	J	0.0025	**0.273**	--	0.0025	**0.273**	--	0.0025	**0.831**	--	0.0025
		Potassium	NS	NS	NS	NS	2.23	--	0.375	2.51	--	0.375	2.57	--	0.375	2.56	--	0.375
		Sodium	NS	NS	NS	NS	19.5	--	0.5	24.8	--	0.5	25.1	--	0.5	24.2	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	0.0011	J	0.0016	ND	U	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	8.7	--	1.5	15	--	1.5	15.1	--	1.5	33.3	--	6
		Sulfate	600	250	NS	250	27.9	--	4.5	40.1	--	4.5	39.8	--	4.5	50.8	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.22	--	0.09	ND	U	0.09	ND	U	0.09	0.049	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	98.6	J	4	142	J	4	142	J	4	123	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	98.6	J	4	142	J	4	142	J	4	123	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106019			KAFB-106020			KAFB-106021			KAFB-106022		
			Field Sample ID:				GW019-192			GW020-192			GW021-192			GW022-192		
			Sample Date:				5/1/2019			5/2/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				498			484			458.70			462.70		
			Reference Elevation Interval (ft AMSL):				4857 and 4838			4857			4857 and 4838			4857 and 4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	200	--	0.1	72.1	--	0.1	37.2	--	0.1	45.9	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.069	J	0.1	0.0602	J	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	27.2	--	0.05	10.5	--	0.05	4.98	--	0.05	6.39	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.06	--	0.0025	0.0457	--	0.0025	0.0071	J	0.0025	0.0155	J	0.0025
		Potassium	NS	NS	NS	NS	4.4	--	0.375	2.68	--	0.375	2.34	--	0.375	2.35	--	0.375
		Sodium	NS	NS	NS	NS	53.7	--	0.5	28.8	--	0.5	22	--	0.5	23.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.002	--	0.0016	**0.021**	--	0.0016	ND	U	0.0016	0.00093	J	0.0016
		Lead	0.015	0.015	0.015	0.015	0.0018	J	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	3.5	--	2	1.7	J	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	**861**	--	60	67	--	15	20.2	--	1.5	18.3	--	1.5
		Sulfate	600	250	NS	250	**772**	--	180	95	J	45	33.9	--	4.5	37.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	7.8	J	0.45	1.8	--	0.09	0.28	J	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	84.8	J	4	94.8	--	4	98.3	--	4	120	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	84.8	J	4	94.8	--	4	98.3	--	4	120	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106023			KAFB-106024			KAFB-106025			KAFB-106027		
			Field Sample ID:				GW023-192			GW024-192			GW025-192			GW027-192		
			Sample Date:				4/9/2019			4/3/2019			4/9/2019			4/1/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				473.74			481-506			465.70			481-501		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857 and 4838			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.3	--	0.1	39.8	--	0.1	34.2	--	0.1	44	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.191	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.22	--	0.05	6.69	--	0.05	1.32	--	0.05	6.55	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	0.0105	J	0.0025	0.139	--	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.19	--	0.375	2.38	--	0.375	6.85	--	0.375	2.39	--	0.375
		Sodium	NS	NS	NS	NS	26.6	--	0.5	21.6	--	0.5	14.4	--	0.5	23.9	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00094	J	0.0016	0.0012	J	0.0016	0.00081	J	0.0016	0.0013	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	14.4	--	1.5	11.6	--	1.5	9.3	--	1.5	16.4	--	1.5
		Sulfate	600	250	NS	250	34.3	--	4.5	28.4	--	4.5	9.9	--	4.5	35.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.65	--	0.09	0.065	J	0.09	ND	U	0.09	2.9	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	109	--	4	129	--	4	94.9	J	4	115	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	109	--	4	129	--	4	94.9	J	4	115	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106028			KAFB-106028			KAFB-106029			KAFB-106030		
			Field Sample ID:				GW028-192			GW028-592			GW029-192			GW030-192		
			Sample Date:				4/22/2019			4/22/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				486-511			486-511			451.50			470.20		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	101	--	0.1	102	--	0.1	55.4	--	0.1	56.4	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.673	--	0.1	0.678	--	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	15.4	--	0.05	15.4	--	0.05	7.85	--	0.05	7.95	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**2.9**	--	0.0025	**2.95**	--	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.16	--	0.375	3.18	--	0.375	2.71	--	0.375	2.75	--	0.375
		Sodium	NS	NS	NS	NS	39	--	0.5	39.4	--	0.5	26.3	--	0.5	27.2	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	ND	U	0.0016	0.0011	J	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	25.9	--	1.5	25.6	--	1.5	33.2	--	3	53.7	--	3
		Sulfate	600	250	NS	250	37	--	4.5	36.6	--	4.5	65.3	--	4.5	46.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	ND	U	0.09	1.5	J	0.09	1.7	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	285	--	4	285	--	4	90.9	--	4	87.9	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	285	--	4	285	--	4	90.9	--	4	87.9	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106031			KAFB-106032			KAFB-106033			KAFB-106034		
			Field Sample ID:				GW031-192			GW032-192			GW033-192			GW034-192		
			Sample Date:				4/15/2019			4/15/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				496.50			456.70			477.70			502.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	60.6	--	0.1	84.3	--	0.1	59.7	--	0.1	53	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.0492	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.66	--	0.05	12.2	--	0.05	8.81	--	0.05	7.76	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	0.0025	J	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.8	--	0.375	3.3	--	0.375	3.18	--	0.375	3.22	--	0.375
		Sodium	NS	NS	NS	NS	25.6	--	0.5	29.4	--	0.5	25.7	--	0.5	24.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00074	J	0.0016	0.00089	J	0.0016	0.00082	J	0.0016	0.00097	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	42.6	--	3	58.9	--	15	35.1	--	3	41.8	--	3
		Sulfate	600	250	NS	250	82.5	--	9	89.9	--	45	62.7	--	4.5	67.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.3	--	0.09	2.1	J	0.45	1.2	J	0.09	0.94	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	92.8	J	4	84.9	--	4	85.4	J	4	86.9	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	92.8	J	4	84.9	--	4	85.4	J	4	86.9	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106035			KAFB-106036			KAFB-106037			KAFB-106037		
			Field Sample ID:				GW035-192			GW036-192			GW037-192			GW037-592		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			REG			REG			Field Duplicate		
			Sample Depth (ft bgs):				452.83			482.58			507.75			507.75		
			Reference Elevation Interval (ft AMSL):				4857			4838			4838			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	43.2	--	0.1	42.4	--	0.1	46.8	--	0.1	43	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	6.19	--	0.05	5.98	--	0.05	6.75	--	0.05	6.22	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.34	--	0.375	2.18	--	0.375	2.51	--	0.375	2.33	--	0.375
		Sodium	NS	NS	NS	NS	26.4	--	0.5	25.3	--	0.5	26.9	--	0.5	25.4	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	0.00093	J	0.0016	0.0011	J	0.0016	0.001	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	14.3	--	1.5	14.8	--	1.5	14.3	--	1.5	14	--	1.5
		Sulfate	600	250	NS	250	38.6	--	4.5	40.6	--	4.5	37	--	4.5	35.4	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	0.14	J	0.09	0.22	J	0.09	0.22	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	126	J	4	118	J	4	113	J	4	114	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	3.5	J	4	3.4	J	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	126	J	4	122	J	4	116	J	4	114	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106038			KAFB-106039			KAFB-106040			KAFB-106041		
			Field Sample ID:				GW038-192			GW039-192			GW040-192			GW041-192		
			Sample Date:				4/4/2019			4/22/2019			4/22/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				483			513			535			452.30		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	82.8	--	0.1	57.6	--	0.1	45.9	--	0.1	47	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	11.4	--	0.05	7.44	--	0.05	5.84	--	0.05	6.4	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.21	--	0.375	2.32	--	0.375	2.28	--	0.375	2.85	--	0.375
		Sodium	NS	NS	NS	NS	33.8	--	0.5	30.4	--	0.5	27.8	--	0.5	24.7	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	0.001	J	0.0016	0.001	J	0.0016	0.0011	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	73.6	J	15	34.7	--	6	20	--	1.5	20.9	--	1.5
		Sulfate	600	250	NS	250	106	--	45	54.6	--	4.5	47	--	4.5	46.4	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	2.2	J	0.09	1.1	--	0.09	0.69	--	0.09	0.067	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	130	J	4	121	--	4	106	--	4	117	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	130	J	4	121	--	4	106	--	4	117	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106042			KAFB-106043			KAFB-106044			KAFB-106045		
			Field Sample ID:				GW042-192			GW043-192			GW044-192			GW045-192		
			Sample Date:				4/8/2019			4/8/2019			4/1/2019			4/24/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				469.70			543.70			504.2-519.2			528.3		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	50.1	--	0.1	44.7	--	0.1	30.6	--	0.1	29.2	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	6.84	--	0.05	6.08	--	0.05	4.51	--	0.05	4.42	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	0.0014	J	0.0025
		Potassium	NS	NS	NS	NS	2.87	--	0.375	2.69	--	0.375	2.05	--	0.375	1.93	--	0.375
		Sodium	NS	NS	NS	NS	25.3	--	0.5	24.3	--	0.5	20.2	--	0.5	19.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.001	J	0.0016	0.00096	J	0.0016	0.0017	J	0.0016	0.0013	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	24.8	--	1.5	17.5	--	1.5	6.9	--	1.5	5.5	--	1.5
		Sulfate	600	250	NS	250	59.6	--	4.5	48.3	--	4.5	27	--	4.5	26.4	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.54	--	0.09	0.36	--	0.09	0.042	J	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	109	--	4	105	J	4	101	--	4	102	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	109	--	4	105	J	4	101	--	4	102	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106046			KAFB-106047			KAFB-106048			KAFB-106049		
			Field Sample ID:				GW046-192			GW047-192			GW048-192			GW049-192		
			Sample Date:				4/3/2019			4/3/2019			4/26/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				543.3			512-527			538			457.50		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	36.9	--	0.1	34.9	--	0.1	34.7	--	0.1	167	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	0.0455	J	0.1
		Magnesium	NS	NS	NS	NS	5.37	--	0.05	4.71	--	0.05	5.16	--	0.05	23.6	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	0.0013	J	0.0025	0.0016	J	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	ND	U	0.375	ND	U	0.375	2.08	--	0.375	4.24	--	0.375
		Sodium	NS	NS	NS	NS	23.5	--	0.5	21.5	--	0.5	23.1	--	0.5	36.5	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	0.0013	J	0.0016	0.0013	J	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	9.7	--	1.5	11.2	--	1.5	7.6	--	1.5	115	--	15
		Sulfate	600	250	NS	250	28.7	--	4.5	32.2	--	4.5	27.7	--	4.5	228	--	45
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.49	--	0.09	0.62	--	0.09	0.18	--	0.09	4.1	--	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	117	--	4	289	--	4	108	--	4	73.8	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	117	--	4	289	--	4	108	--	4	73.8	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106050			KAFB-106051			KAFB-106052			KAFB-106053		
			Field Sample ID:				GW050-192			GW051-192			GW052-192			GW053-192		
			Sample Date:				4/9/2019			4/9/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				475.10			501.50			450.30			479.10		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	67.3	--	0.1	58.6	--	0.1	112	--	0.1	55.7	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.062	J	0.1	0.0515	J	0.1	0.0541	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	9.55	--	0.05	8.29	--	0.05	15.6	--	0.05	7.82	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.17	--	0.375	2.64	--	0.375	3.89	--	0.375	2.84	--	0.375
		Sodium	NS	NS	NS	NS	27.7	--	0.5	25.1	--	0.5	34.5	--	0.5	26	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00078	J	0.0016	0.001	J	0.0016	0.00075	J	0.0016	0.00078	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	54.7	--	15	46.3	--	15	80.5	--	6	33.4	--	6
		Sulfate	600	250	NS	250	70.2	--	4.5	73.9	--	4.5	199	--	18	66.2	--	18
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.67	--	0.09	0.69	--	0.09	3	--	0.45	1.3	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	86.6	--	4	86.3	--	4	87.2	--	4	95.4	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	86.6	--	4	86.3	--	4	87.2	--	4	95.4	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106054			KAFB-106055			KAFB-106055			KAFB-106057		
			Field Sample ID:				GW054-192			GW055-192			GW055-592			GW057-192		
			Sample Date:				4/8/2019			4/15/2019			4/15/2019			4/15/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				504.70			466.50			466.50			485.60		
			Reference Elevation Interval (ft AMSL):				4814			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	49.3	--	0.1	55.4	--	0.1	56.5	--	0.1	41.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	0.0418	J	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	6.54	--	0.05	7.8	--	0.05	7.94	--	0.05	5.74	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	0.0218	--	0.0025	0.021	--	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.93	--	0.375	2.53	--	0.375	2.61	--	0.375	2.33	--	0.375
		Sodium	NS	NS	NS	NS	22.3	--	0.5	27.1	--	0.5	27.7	--	0.5	23.2	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00087	J	0.0016	0.00075	J	0.0016	0.00073	J	0.0016	0.00078	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	32.9	--	6	28.7	--	1.5	29.7	--	1.5	12.5	--	1.5
		Sulfate	600	250	NS	250	58.6	--	18	37.7	--	4.5	38.4	--	4.5	31.2	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.1	--	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	88.4	--	4	125	--	4	126	--	4	117	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	88.4	--	4	125	--	4	126	--	4	117	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106058			KAFB-106058			KAFB-106059			KAFB-106060		
			Field Sample ID:				GW058-192			GW058-592			GW059-192			GW060-192		
			Sample Date:				4/15/2019			4/15/2019			4/26/2019			4/1/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				512.50			512.50			504			503-518		
			Reference Elevation Interval (ft AMSL):				4814			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	35.5	--	0.1	35.6	--	0.1	105	--	0.1	85.1	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	**5.45**	--	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5	--	0.05	5	--	0.05	17.9	--	0.05	12.7	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	**3.06**	--	0.0025	0.0121	J	0.0025
		Potassium	NS	NS	NS	NS	2.02	--	0.375	2.04	--	0.375	3.57	--	0.375	3.42	--	0.375
		Sodium	NS	NS	NS	NS	21.7	--	0.5	21.8	--	0.5	34.3	--	0.5	34.7	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00086	J	0.0016	0.0012	J	0.0016	0.003	--	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	8.2	--	1.5	8.3	--	1.5	38.1	--	6	42.9	--	6
		Sulfate	600	250	NS	250	25.9	--	4.5	26.6	--	4.5	ND	U	4.5	21.2	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.083	J	0.09	0.064	J	0.09	ND	U	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	109	J	4	108	--	4	322	--	4	250	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	109	J	4	108	--	4	322	--	4	250	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106061			KAFB-106062			KAFB-106065			KAFB-106066		
			Field Sample ID:				GW061-192			GW062-192			GW065-192			GW066-192		
			Sample Date:				4/2/2019			4/4/2019			4/2/2019			4/2/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				573.2-588.2			575.3-590.3			508-523			575.6-590.6		
			Reference Elevation Interval (ft AMSL):				4814			4814			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	31.2	--	0.1	32.3	--	0.1	65.1	--	0.1	32.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.0463	J	0.1	ND	U	0.1	0.394	--	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.56	--	0.05	4.56	--	0.05	10.5	--	0.05	4.56	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.0054	J	0.0025	ND	U	0.0025	**1.65**	--	0.0025	0.0025	J	0.0025
		Potassium	NS	NS	NS	NS	2.01	--	0.375	ND	U	0.375	2.71	--	0.375	1.88	--	0.375
		Sodium	NS	NS	NS	NS	20.5	--	0.5	21	--	0.5	33.4	--	0.5	21	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0014	J	0.0016	0.0013	J	0.0016	ND	U	0.0016	0.0012	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	7	--	1.5	8.1	J	1.5	15.6	--	1.5	4.9	--	1.5
		Sulfate	600	250	NS	250	26.2	--	4.5	29.2	--	4.5	32	--	4.5	21.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	ND	UJ	0.09	ND	U	0.09	0.13	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	102	J	4	108	--	4	212	J	4	104	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	102	J	4	108	--	4	212	J	4	104	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106067			KAFB-106068			KAFB-106069			KAFB-106070		
			Field Sample ID:				GW067-192			GW068-192			GW069-192			GW070-192		
			Sample Date:				4/1/2019			4/1/2019			4/30/2019			4/16/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				485-505			580-595			508			460.70		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	56.5	--	0.1	32.9	--	0.1	45.9	--	0.1	58.4	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.143	J	0.1	ND	U	0.1	ND	U	0.1	0.746	--	0.1
		Magnesium	NS	NS	NS	NS	8.26	--	0.05	4.54	--	0.05	6.45	--	0.05	8.56	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**1.1**	--	0.0025	ND	U	0.0025	0.0131	J	0.0025	**0.277**	--	0.0025
		Potassium	NS	NS	NS	NS	2.47	--	0.375	1.96	--	0.375	2.47	--	0.375	2.67	--	0.375
		Sodium	NS	NS	NS	NS	27.8	--	0.5	21.1	--	0.5	24.9	--	0.5	26.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00094	J	0.0016	0.0014	J	0.0016	0.00091	J	0.0016	0.001	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	14.4	--	1.5	7.9	--	1.5	13.8	--	1.5	42.5	--	3
		Sulfate	600	250	NS	250	29	--	4.5	28.6	--	4.5	37	--	4.5	38.5	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	0.19	--	0.09	0.57	--	0.09	ND	UJ	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	185	--	4	108	--	4	128	--	4	132	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	185	--	4	108	--	4	128	--	4	132	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106070			KAFB-106071			KAFB-106072			KAFB-106073		
			Field Sample ID:				GW070-592			GW071-192			GW072-192			GW073-192		
			Sample Date:				4/16/2019			4/16/2019			4/16/2019			5/2/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				460.70			548.70			475.70			501		
			Reference Elevation Interval (ft AMSL):				4857			4814			4838			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	61	--	0.1	32.1	--	0.1	54.6	--	0.1	44.9	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.555	--	0.1	ND	U	0.1	0.555	--	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.51	--	0.05	4.53	--	0.05	7.62	--	0.05	6.58	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**0.284**	--	0.0025	ND	U	0.0025	**0.371**	--	0.0025	0.003	J	0.0025
		Potassium	NS	NS	NS	NS	2.82	--	0.375	2.08	--	0.375	2.67	--	0.375	2.6	--	0.375
		Sodium	NS	NS	NS	NS	26.5	--	0.5	20.8	--	0.5	25.7	--	0.5	23.3	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.001	J	0.0016	0.0013	J	0.0016	0.001	J	0.0016	0.0016	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	44	--	3	8.9	--	1.5	26.9	--	3	16.2	--	1.5
		Sulfate	600	250	NS	250	44.7	--	4.5	26.9	--	4.5	43.7	--	4.5	40	J	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	UJ	0.09	ND	UJ	0.09	ND	UJ	0.09	0.3	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	136	J	4	104	J	4	135	J	4	120	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	136	J	4	104	J	4	135	J	4	120	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106073			KAFB-106074			KAFB-106075			KAFB-106076		
			Field Sample ID:				GW073-592			GW074-192			GW075-192			GW076-192		
			Sample Date:				5/2/2019			4/25/2019			4/3/2019			5/2/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				501			572			480-500			482		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	44.1	--	0.1	40.3	--	0.1	71.5	--	0.1	41.4	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	0.139	J	0.1
		Magnesium	NS	NS	NS	NS	6.43	--	0.05	5.62	--	0.05	10.7	--	0.05	6.18	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.0029	J	0.0025	ND	U	0.0025	0.187	--	0.0025	**0.339**	--	0.0025
		Potassium	NS	NS	NS	NS	2.58	--	0.375	2.23	--	0.375	3.23	--	0.375	2.48	--	0.375
		Sodium	NS	NS	NS	NS	22.9	--	0.5	24.4	--	0.5	29.5	--	0.5	22.9	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0015	J	0.0016	0.0012	J	0.0016	ND	U	0.0016	0.0016	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	1.3	J	2	ND	U	2
		Chloride	250	250	NS	250	15.8	--	1.5	18	--	1.5	70.8	--	30	11.8	--	1.5
		Sulfate	600	250	NS	250	39.3	J	4.5	44.5	--	4.5	63.9	--	4.5	16	J	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.3	--	0.09	0.61	--	0.09	1.1	--	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	120	--	4	97.6	J	4	136	--	4	139	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	120	--	4	97.6	J	4	136	--	4	139	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106076			KAFB-106077			KAFB-106078			KAFB-106080		
			Field Sample ID:				GW076-592			GW077-192			GW078-192			GW080-192		
			Sample Date:				5/2/2019			4/23/2019			4/2/2019			4/3/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				482			506			573.5-588.5			503.1-518.1		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	41.7	--	0.1	33.5	--	0.1	30.7	--	0.1	142	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.169	J	0.1	ND	U	0.1	ND	U	0.1	**3.46**	--	0.1
		Magnesium	NS	NS	NS	NS	6.22	--	0.05	5.05	--	0.05	4.38	--	0.05	25.1	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**0.345**	--	0.0025	ND	U	0.0025	ND	U	0.0025	**5.25**	--	0.0025
		Potassium	NS	NS	NS	NS	2.52	--	0.375	2.19	--	0.375	1.91	--	0.375	3.97	--	0.375
		Sodium	NS	NS	NS	NS	22.9	--	0.5	21	--	0.5	20.2	--	0.5	41.7	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0011	J	0.0016	0.0011	J	0.0016	0.0012	J	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	3.1	--	2
		Chloride	250	250	NS	250	11.9	--	1.5	7.9	--	1.5	7.8	--	1.5	201	--	60
		Sulfate	600	250	NS	250	16	J	4.5	31.6	--	4.5	25.8	--	4.5	37	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	0.39	--	0.09	ND	U	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	141	--	4	110	--	4	104	J	4	105	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	141	--	4	110	--	4	104	J	4	105	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106081			KAFB-106082			KAFB-106083			KAFB-106084		
			Field Sample ID:				GW081-192			GW082-192			GW083-192			GW084-192		
			Sample Date:				4/24/2019			4/29/2019			4/30/2019			4/29/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				580			474			498			571		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	32.5	--	0.1	52.7	--	0.1	45.9	--	0.1	32.6	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.66	--	0.05	7.72	--	0.05	6.51	--	0.05	4.61	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	**0.28**	--	0.0025	0.181	--	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.17	--	0.375	2.77	--	0.375	2.55	--	0.375	2.1	--	0.375
		Sodium	NS	NS	NS	NS	21.7	--	0.5	25.4	--	0.5	24.2	--	0.5	22.3	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0013	J	0.0016	0.00089	J	0.0016	0.00075	J	0.0016	0.0013	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	7.7	--	1.5	42	--	15	21.2	--	1.5	7	--	1.5
		Sulfate	600	250	NS	250	26.6	--	4.5	46.3	--	4.5	43.7	--	4.5	26.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.097	J	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	103	J	4	116	--	4	119	--	4	106	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	103	J	4	116	--	4	119	--	4	106	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106085			KAFB-106085			KAFB-106086			KAFB-106087		
			Field Sample ID:				GW085-192			GW085-592			GW086-192			GW087-192		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				447.20			447.20			476.70			546.70		
			Reference Elevation Interval (ft AMSL):				4857			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	50.9	--	0.1	50.4	--	0.1	63.4	--	0.1	33.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	7.43	--	0.05	7.34	--	0.05	8.88	--	0.05	4.73	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.18	--	0.0025	0.182	--	0.0025	0.0016	J	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.84	--	0.375	2.52	--	0.375	3.22	--	0.375	2.12	--	0.375
		Sodium	NS	NS	NS	NS	25.1	--	0.5	24.8	--	0.5	28.6	--	0.5	21.4	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	ND	U	0.0016	0.00078	J	0.0016	0.0012	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	39.4	--	6	38.8	--	6	53.2	--	6	7.6	--	1.5
		Sulfate	600	250	NS	250	41.7	--	4.5	40.8	--	4.5	59	--	4.5	27.4	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	ND	U	0.09	1.5	--	0.09	0.062	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	111	J	4	111	J	4	98.2	J	4	104	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	111	J	4	111	J	4	98.2	J	4	104	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106088			KAFB-106089			KAFB-106090			KAFB-106091		
			Field Sample ID:				GW088-192			GW089-192			GW090-192			GW091-192		
			Sample Date:				4/10/2019			4/10/2019			4/10/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				460.70			482.26			555.78			454.70		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	44.6	--	0.1	41	--	0.1	34.3	--	0.1	80.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	6.25	--	0.05	5.71	--	0.05	4.88	--	0.05	11.3	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.31	--	0.375	2.31	--	0.375	2.14	--	0.375	3.19	--	0.375
		Sodium	NS	NS	NS	NS	24.6	--	0.5	23.6	--	0.5	22.6	--	0.5	30.6	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00088	J	0.0016	0.00082	J	0.0016	0.0014	J	0.0016	0.00073	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	12.4	--	1.5	12.3	--	1.5	8.8	--	1.5	85.8	--	30
		Sulfate	600	250	NS	250	36.7	--	4.5	39.2	--	4.5	29.4	--	4.5	128	--	90
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.18	--	0.09	0.51	--	0.09	0.17	--	0.09	2.2	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	125	J	4	110	J	4	108	J	4	89.6	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	125	J	4	110	J	4	108	J	4	89.6	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106091			KAFB-106092			KAFB-106093			KAFB-106094		
			Field Sample ID:				GW091-592			GW092-192			GW093-192			GW094-192		
			Sample Date:				4/10/2019			4/16/2019			4/16/2019			4/3/2019		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				454.70			474.70			544.70			484.2-504.2		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	80.2	--	0.1	41.9	--	0.1	32.8	--	0.1	53.7	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	0.0766	J	0.1
		Magnesium	NS	NS	NS	NS	11.2	--	0.05	5.8	--	0.05	4.54	--	0.05	8.01	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	**0.78**	--	0.0025
		Potassium	NS	NS	NS	NS	3.14	--	0.375	2.48	--	0.375	2.18	--	0.375	2.87	--	0.375
		Sodium	NS	NS	NS	NS	30.5	--	0.5	22.7	--	0.5	24.8	--	0.5	26.4	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00083	J	0.0016	0.0011	J	0.0016	0.0014	J	0.0016	0.0007	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	77.2	--	30	18.2	--	1.5	9	--	1.5	16.7	--	1.5
		Sulfate	600	250	NS	250	119	--	90	28.6	--	4.5	21	--	4.5	35.8	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	2.2	J	0.09	0.58	J	0.09	ND	UJ	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	92.8	J	4	98.2	J	4	108	J	4	167	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	92.8	J	4	98.2	J	4	108	J	4	169	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106095			KAFB-106096			KAFB-106096			KAFB-106097		
			Field Sample ID:				GW095-192			GW096-192			GW096-592			GW097-192		
			Sample Date:				5/2/2019			4/1/2019			4/1/2019			4/29/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				505.85			576.3-591.3			576.3-591.3			508		
			Reference Elevation Interval (ft AMSL):				4838			4814			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	42.9	--	0.1	31.3	--	0.1	32.3	--	0.1	35.4	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	6.18	--	0.05	4.39	--	0.05	4.61	--	0.05	5.15	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	0.0028	J	0.0025	0.0027	J	0.0025	0.0027	J	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.54	--	0.375	2	--	0.375	2.05	--	0.375	2.33	--	0.375
		Sodium	NS	NS	NS	NS	23.7	--	0.5	21.4	--	0.5	22.1	--	0.5	21.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00075	J	0.0016	0.0014	J	0.0016	0.0016	J	0.0016	0.0014	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	12.3	--	1.5	6.9	--	1.5	7.1	--	1.5	10.6	--	1.5
		Sulfate	600	250	NS	250	32.1	J	4.5	27.4	--	4.5	27.7	--	4.5	31.6	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.11	--	0.09	0.21	--	0.09	0.14	--	0.09	0.32	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	148	--	4	103	--	4	102	--	4	101	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	148	--	4	103	--	4	102	--	4	101	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106098			KAFB-106099			KAFB-106100			KAFB-106101		
			Field Sample ID:				GW098-192			GW099-192			GW100-192			GW101-192		
			Sample Date:				4/30/2019			5/1/2019			5/1/2019			4/26/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				533			503			528			505		
			Reference Elevation Interval (ft AMSL):				4814			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	31.7	--	0.1	37.3	--	0.1	32.9	--	0.1	39.5	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.61	--	0.05	5.56	--	0.05	4.94	--	0.05	6.07	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.18	--	0.375	2.38	--	0.375	2.3	--	0.375	2.36	--	0.375
		Sodium	NS	NS	NS	NS	19.6	--	0.5	21.1	--	0.5	19.9	--	0.5	23	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0014	J	0.0016	0.0015	J	0.0016	0.0015	J	0.0016	0.0014	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	7.7	--	1.5	14.6	--	1.5	9.3	--	1.5	15.5	--	1.5
		Sulfate	600	250	NS	250	28.1	--	4.5	33.9	--	4.5	28.3	--	4.5	35.9	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.15	--	0.09	0.66	J	0.09	0.38	J	0.09	0.95	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	100	--	4	99.3	J	4	99.5	J	4	103	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	100	--	4	99.3	J	4	99.5	J	4	103	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106102			KAFB-106103			KAFB-106104			KAFB-106105		
			Field Sample ID:				GW102-192			GW103-192			GW104-192			GW105-192		
			Sample Date:				4/25/2019			4/9/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				526			485.76			510.75			484.70		
			Reference Elevation Interval (ft AMSL):				4814			4838			4814			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	32	--	0.1	37.5	--	0.1	32.2	--	0.1	57.5	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.8	--	0.05	5.07	--	0.05	4.33	--	0.05	7.94	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.16	--	0.375	2.2	--	0.375	2.01	--	0.375	2.74	--	0.375
		Sodium	NS	NS	NS	NS	19.9	--	0.5	25.7	--	0.5	23.8	--	0.5	26.3	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0015	J	0.0016	0.0009	J	0.0016	0.001	J	0.0016	0.00082	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	8	--	1.5	14.4	--	1.5	7.2	--	1.5	37.5	--	3
		Sulfate	600	250	NS	250	27.2	--	4.5	33.4	--	4.5	29.6	--	4.5	72.3	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.14	--	0.09	0.45	--	0.09	ND	U	0.09	2.5	--	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	98.8	J	4	110	J	4	111	--	4	94.1	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	98.8	J	4	110	J	4	111	--	4	94.1	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106106			KAFB-106106			KAFB-106107			KAFB-106149-484		
			Field Sample ID:				GW106-192			GW106-592			GW107-192			GW149-484-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/16/2019		
			Sample Type:				REG			Field Duplicate			REG			REG		
			Sample Depth (ft bgs):				454.30			454.30			510.90			472.00		
			Reference Elevation Interval (ft AMSL):				4857			4857			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	75.8	--	0.1	75.2	--	0.1	46.7	--	0.1	52.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.0514	J	0.1	ND	U	0.1	0.0541	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	10.3	--	0.05	10.2	--	0.05	6.36	--	0.05	8.23	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	**0.778**	--	0.0025
		Potassium	NS	NS	NS	NS	3.31	--	0.375	3.22	--	0.375	2.43	--	0.375	2.77	--	0.375
		Sodium	NS	NS	NS	NS	30	--	0.5	29.5	--	0.5	23.5	--	0.5	26.9	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	0.00097	J	0.0016	0.00091	J	0.0016	0.0017	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	67.2	--	6	68.4	--	6	33.1	--	6	11	--	1.5
		Sulfate	600	250	NS	250	99.5	--	18	102	--	18	54.1	--	4.5	ND	U	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	2	J	0.09	2.1	J	0.09	0.77	J	0.09	ND	UJ	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	84.3	--	4	90.7	--	4	98.9	--	4	ND	U	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	84.3	--	4	90.7	--	4	98.9	--	4	ND	U	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106151-484			KAFB-106152-484			KAFB-106153-484			KAFB-106201		
			Field Sample ID:				GW151-484-192			GW152-484-192			GW153-484-192			GW201-192		
			Sample Date:				4/18/2019			4/18/2019			4/18/2019			4/15/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				472.19			474.88			474.89			490.35		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	124	--	0.1	162	--	0.1	139	--	0.1	81.7	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	0.194	J	0.1	0.582	J	0.1	0.129	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	19.8	--	0.05	25.6	--	0.05	20.7	--	0.05	10.9	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	**2.77**	--	0.0025	**4.15**	--	0.0025	**2.62**	--	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.44	--	0.375	4.2	--	0.375	3.88	--	0.375	2.69	--	0.375
		Sodium	NS	NS	NS	NS	34.2	--	0.5	41.1	--	0.5	38.8	--	0.5	31.9	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	ND	U	0.0016	0.0014	J	0.0016	ND	U	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	ND	U	1.5	71.7	--	15	ND	U	1.5	48.2	--	3
		Sulfate	600	250	NS	250	ND	U	4.5	61.2	--	45	ND	U	4.5	95.8	--	9
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.09	ND	U	0.09	ND	U	0.09	1.5	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	395	--	4	406	--	4	399	--	4	106	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	395	--	4	406	--	4	399	--	4	106	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106202			KAFB-106203			KAFB-106204			KAFB-106205		
			Field Sample ID:				GW202-192			GW203-192			GW204-192			GW205-192		
			Sample Date:				4/15/2019			4/15/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				520.60			623.78			463.20			493.20		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	41.1	--	0.1	38.2	--	0.1	60.5	--	0.1	48	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.0547	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.58	--	0.05	4.94	--	0.05	8.45	--	0.05	6.58	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.13	--	0.375	2.05	--	0.375	3.05	--	0.375	2.94	--	0.375
		Sodium	NS	NS	NS	NS	28.6	--	0.5	20.4	--	0.5	31.6	--	0.5	29.4	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00098	J	0.0016	0.001	J	0.0016	ND	U	0.0016	0.0009	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	1.3	J	2	ND	U	2
		Chloride	250	250	NS	250	21.3	--	1.5	9.3	--	1.5	45.1	--	15	37.3	--	15
		Sulfate	600	250	NS	250	45.5	--	4.5	28.5	--	4.5	71.8	--	4.5	51.8	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.58	J	0.09	ND	U	0.09	1.3	--	0.09	0.79	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	111	--	4	113	J	4	101	--	4	104	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	111	--	4	113	J	4	101	--	4	104	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106206			KAFB-106207			KAFB-106208			KAFB-106209		
			Field Sample ID:				GW206-192			GW207-192			GW208-192			GW209-192		
			Sample Date:				4/9/2019			4/8/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				594.20			473.70			503.70			603.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	58.4	--	0.1	60.8	--	0.1	55	--	0.1	37	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.02	--	0.05	8.14	--	0.05	8.14	--	0.05	5.05	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.04	--	0.375	3.05	--	0.375	2.88	--	0.375	2.45	--	0.375
		Sodium	NS	NS	NS	NS	32.9	--	0.5	26.8	--	0.5	27	--	0.5	23.1	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0009	J	0.0016	0.00072	J	0.0016	ND	U	0.0016	0.00071	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	60.1	--	15	52.3	--	15	48.3	--	15	19.9	--	1.5
		Sulfate	600	250	NS	250	63	--	4.5	55.4	--	4.5	53.5	--	4.5	30.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.3	J	0.09	1.3	--	0.09	1.2	--	0.09	0.24	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	90.3	--	4	98	J	4	94.7	J	4	106	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	90.3	--	4	98	J	4	94.7	J	4	106	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106212			KAFB-106213			KAFB-106214			KAFB-106215		
			Field Sample ID:				GW212-192			GW213-192			GW214-192			GW215-192		
			Sample Date:				4/10/2019			4/16/2019			4/16/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				543.90			451.30			478.95			547.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4838			4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	37.2	--	0.1	35.2	--	0.1	43.4	--	0.1	34.1	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.3	--	0.05	4.95	--	0.05	5.94	--	0.05	4.65	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.09	--	0.375	2.06	--	0.375	2.37	--	0.375	2.2	--	0.375
		Sodium	NS	NS	NS	NS	25.7	--	0.5	25.9	--	0.5	28.7	--	0.5	27	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	0.001	J	0.0016	0.00081	J	0.0016	0.00096	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	26.2	--	1.5	12.9	--	1.5	27.9	--	1.5	8.8	--	1.5
		Sulfate	600	250	NS	250	25.2	--	4.5	25.2	--	4.5	33	--	4.5	28.5	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.2	--	0.09	0.26	J	0.09	0.85	--	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	105	J	4	8.5	J	4	106	J	4	110	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	105	J	4	8.5	J	4	106	J	4	111	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106216			KAFB-106217			KAFB-106218			KAFB-106219		
			Field Sample ID:				GW216-192			GW217-192			GW218-192			GW219-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/10/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				461.40			485.70			552.70			466.00		
			Reference Elevation Interval (ft AMSL):				4857			4838			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	61.1	--	0.1	53	--	0.1	35.8	--	0.1	60.2	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.54	--	0.05	6.67	--	0.05	4.49	--	0.05	9.06	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.74	--	0.375	2.54	--	0.375	2.17	--	0.375	2.61	--	0.375
		Sodium	NS	NS	NS	NS	25.4	--	0.5	25.1	--	0.5	23.2	--	0.5	23.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00079	J	0.0016	ND	U	0.0016	0.00076	J	0.0016	0.001	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	67.9	--	30	40.8	--	15	7.3	--	1.5	36.8	--	15
		Sulfate	600	250	NS	250	37.4	--	4.5	44.9	--	4.5	28.1	--	4.5	67.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.6	--	0.09	0.95	--	0.09	0.042	J	0.09	2	J	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	99.1	--	4	106	--	4	112	--	4	103	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	99.1	--	4	106	--	4	112	--	4	103	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106220			KAFB-106221			KAFB-106222			KAFB-106223		
			Field Sample ID:				GW220-192			GW221-192			GW222-192			GW223-192		
			Sample Date:				4/10/2019			4/10/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				493.70			561.70			461.10			488.50		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.7	--	0.1	36	--	0.1	63.4	--	0.1	56	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	5.25	--	0.05	4.8	--	0.05	9.49	--	0.05	7.87	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.05	--	0.375	2.02	--	0.375	3.16	--	0.375	2.8	--	0.375
		Sodium	NS	NS	NS	NS	20.3	--	0.5	22.1	--	0.5	33	--	0.5	30.8	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00091	J	0.0016	0.00087	J	0.0016	ND	U	0.0016	0.00076	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	9.9	--	1.5	7.5	--	1.5	68	--	6	41.8	--	15
		Sulfate	600	250	NS	250	30.7	--	4.5	28.2	--	4.5	51.3	--	4.5	62.9	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.068	J	0.09	0.047	J	0.09	3	J	0.09	1.7	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	113	J	4	112	J	4	98.3	--	4	105	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	113	J	4	112	J	4	98.3	--	4	105	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106224			KAFB-106225			KAFB-106225			KAFB-106226		
			Field Sample ID:				GW224-192			GW225-192			GW225-592			GW226-192		
			Sample Date:				4/9/2019			4/9/2019			4/9/2019			4/9/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
			Sample Depth (ft bgs):				555.70			453.30			453.30			480.70		
			Reference Elevation Interval (ft AMSL):				4814			4857			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	30.4	--	0.1	59.6	--	0.1	60.9	--	0.1	44.3	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.05	--	0.05	8.29	--	0.05	8.48	--	0.05	6.2	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.02	--	0.375	2.88	--	0.375	2.9	--	0.375	2.46	--	0.375
		Sodium	NS	NS	NS	NS	24.6	--	0.5	27.4	--	0.5	28	--	0.5	24.5	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0012	J	0.0016	ND	U	0.0016	ND	U	0.0016	0.00097	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	7.4	--	1.5	40.3	J	3	26.6	J	1.5	16.9	--	1.5
		Sulfate	600	250	NS	250	23.5	--	4.5	67.7	--	4.5	54.8	--	4.5	37.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.04	J	0.09	0.98	--	0.09	0.93	--	0.09	0.2	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	111	--	4	113	--	4	113	--	4	116	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	111	--	4	113	--	4	113	--	4	116	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106227			KAFB-106231			KAFB-106232			KAFB-106235-438		
			Field Sample ID:				GW227-192			GW231-192			GW232-192			GW235-463-192		
			Sample Date:				4/9/2019			4/15/2019			4/15/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				548.70			453.70			503.70			443.90		
			Reference Elevation Interval (ft AMSL):				4814			4857			4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	35.2	--	0.1	90.1	--	0.1	52.8	--	0.1	58.5	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.0462	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	4.86	--	0.05	12.4	--	0.05	7.27	--	0.05	8.43	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	2.14	--	0.375	3.89	--	0.375	2.71	--	0.375	3.64	--	0.375
		Sodium	NS	NS	NS	NS	22.4	--	0.5	41.8	--	0.5	26.4	--	0.5	27	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0007	J	0.0016	ND	U	0.0016	ND	U	0.0016	0.001	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	1.8	J	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	8.2	--	1.5	163	--	15	43.4	--	3	73.8	--	30
		Sulfate	600	250	NS	250	23.8	--	4.5	33.3	--	4.5	53.1	--	4.5	58.7	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.07	J	0.09	3.9	J	0.45	1.3	J	0.09	1.7	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	110	--	4	77.9	--	4	94.7	--	4	83.4	J	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	110	--	4	77.9	--	4	94.7	--	4	83.4	J	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106235-472			KAFB-106235-501			KAFB-106236-436			KAFB-106236-470		
			Field Sample ID:				GW235-492-192			GW235-521-192			GW236-461-192			GW236-490-192		
			Sample Date:				4/8/2019			4/8/2019			4/8/2019			4/8/2019		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				472.70			501.70			441.90			470.70		
			Reference Elevation Interval (ft AMSL):				4838			4814			4857			4838		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	57	--	0.1	54.2	--	0.1	49.3	--	0.1	56.8	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	0.0823	J	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	8.21	--	0.05	7.54	--	0.05	6.83	--	0.05	7.94	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
		Potassium	NS	NS	NS	NS	3.06	--	0.375	2.89	--	0.375	3.2	--	0.375	3.07	--	0.375
		Sodium	NS	NS	NS	NS	26.2	--	0.5	24.4	--	0.5	28.5	--	0.5	25.6	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00093	J	0.0016	0.0011	J	0.0016	0.001	J	0.0016	0.00093	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	60.5	--	30	51.4	--	30	56.3	--	30	61	--	30
		Sulfate	600	250	NS	250	64	--	4.5	62.9	--	4.5	46.5	--	4.5	60.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.3	--	0.09	1.2	--	0.09	1.3	--	0.09	0.96	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	87.1	J	4	87.1	J	4	92.9	J	4	86.6	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	87.1	J	4	87.1	J	4	92.9	J	4	86.6	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

			Well Location ID:				KAFB-106236-499			KAFB-3411		
			Field Sample ID:				GW236-519-192			GW3411-192		
			Sample Date:				4/8/2019			4/23/2019		
			Sample Type:				REG			REG		
			Sample Depth (ft bgs):				499.70			482		
			Reference Elevation Interval (ft AMSL):				4814			4857		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	57.2	--	0.1	32.1	--	0.1
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	7.98	--	0.05	4.88	--	0.05
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	0.0017	J	0.0025
		Potassium	NS	NS	NS	NS	3	--	0.375	2.09	--	0.375
		Sodium	NS	NS	NS	NS	25.6	--	0.5	18.3	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.00098	J	0.0016	0.0012	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	ND	U	0.0024
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	64.3	--	30	6.9	--	1.5
		Sulfate	600	250	NS	250	102	--	90	29.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.97	--	0.09	0.16	--	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, Bicarbonate (As $CaCO_3$)	NS	NS	NS	NS	84.9	--	4	107	--	4
		Alkalinity, carbonate (as $CaCO_3$)	NS	NS	NS	NS	ND	U	4	ND	U	4
		Alkalinity, total (as $CaCO_3$)	NS	NS	NS	NS	84.9	--	4	107	--	4

Table 3-8
Groundwater Analytical Results for Inorganic Compounds for Groundwater Monitoring Wells, Q2 2019

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018). For metals, the NMWQCC numeric standard applies to dissolved metals.

[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).

[c] EPA Region 6 RSL for Tapwater (May 2019) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.

[d] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

[e] Based on the geochemical equilibrium of the site groundwater and previous site data analyses, nitrate/nitrite results represent nitrate concentrations.

AFB = Air Force Base
AMSL = above mean sea level
BFF = Bulk Fuels Facility
bgs = below-ground surface
$CaCO_3$ = calcium carbonate
CFR = Code of Federal Regulations
EPA = U.S. Environmental Protection Agency
ft = foot/feet
ID = identification
KAFB = Kirtland Air F0orce Base
LOD = limit of detection
MCL = maximum contaminant level
mg/L = milligram per liter
ND = not detected
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
REG = normal field sample
RSL = regional screening level
SWMU = Solid Waste Management Unit
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.

Table 3-9
Status of Quarterly Baseline Sampling Newly Added Wells and Summary of Q2 2019 Analytical Results

Well Location ID	Reference Elevation Interval (ft AMSL)	Dates Newly Added Wells Sampled	Number of Quarters Sampled	Remaining Quarters to Complete Baseline	Quarter for Baseline Completion	Analytical Results for Samples Collected During Q2 2019
KAFB-106240-449[a,b,c]	4857	9/4/2018	1	2	4	EDB and BTEX were not detected. No inorganic compounds exceeded their respective PSL.
		10/1/2018	2			
		1/15/2019	3			
		4/8/2019, 5/9/2019	4			
		TBD	5			
		TBD	6			
KAFB-106241-428	4857	10/2/2018	1	1	4	EDB was detected below the MCL. No inorganic compounds exceeded their respective PSL.
		1/15/2019	2			
		4/8/2019	3			
		TBD	4			
KAFB-106242-418	4857	10/8/2018	1	1	4	EDB was not detected. No inorganic compounds exceeded their respective PSL.
		1/18/2019	2			
		4/15/2019	3			
		TBD	4			
KAFB-106243-425	4857	9/4/2018	1	1	4	EDB was detected below the MCL. Dissolved manganese exceeded the PSL. No other inorganic compounds exceeded their PSL.
		10/2/2018	2			
		1/15/2019	3			
		4/8/2019	4			
		TBD	5			
KAFB-106244-445[a,b,c]	4857	9/4/2018	1	2	4	EDB and BTEX were not detected. Sulfate exceeded the PSL. No other inorganic compounds exceeded their respective PSL.
		10/1/2018	2			
		1/15/2019	3			
		4/8/2019, 5/9/2019	4			
		TBD	5			
		TBD	6			
KAFB-106245-460[c,d]	4857	10/9/2018	1	2	4	EDB and BTEX were not detected. No inorganic compounds exceeded their respective PSL.
		1/15/2019	2			
		4/8/2019, 5/20/19	3			
		TBD	4			
		TBD	5			
KAFB-106247-450[e]	4857	4/16/2019, 5/9/2019	1	3	4	EDB and BTEX were not detected. Dissolved manganese exceeded the PSL. No other inorganic compounds exceeded their respective PSL.
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106S1-447[e]	4857	4/16/2019, 5/9/2019	1	3	4	EDB, benzene, toluene, and xylene exceeded their respective MCLs. Ethylbenzene was detected below the MCL. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106S2-451[e]	4857	1/15/2019	1	2	4	EDB and BTEX exceeded their respective MCLs. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		4/16/2019, 5/9/2019	2			
		TBD	3			
		TBD	4			
KAFB-106S3-449[e]	4857	1/15/2019	1	2	4	EDB and BTEX exceeded their respective MCLs. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		4/16/2019, 5/9/2019	2			
		TBD	3			
		TBD	4			
KAFB-106S4-446[e]	4857	1/15/2019	1	2	4	EDB was detected below the MCL. BTEX was not detected. Sulfate exceeded the PSL. No other inorganic compounds exceeded their respective PSL.
		4/16/2019, 5/9/2019	2			
		TBD	3			
		TBD	4			
KAFB-106S5-446[e]	4857	1/15/2019	1	2	4	EDB and BTEX exceeded their respective MCLs. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		4/16/2019, 5/9/2019	2			
		TBD	3			
		TBD	4			
KAFB-106S7-451[e]	4857	4/16/2019, 5/9/2019	1	3	4	EDB, benzene, toluene, and total xylenes exceeded their respective MCLs. Ethylbenzene was detected below its MCL. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		TBD	2			
		TBD	3			
		TBD	4			

Table 3-9
Status of Quarterly Baseline Sampling Newly Added Wells and Summary of Q2 2019 Analytical Results

Well Location ID	Reference Elevation Interval (ft AMSL)	Dates Newly Added Wells Sampled	Number of Quarters Sampled	Remaining Quarters to Complete Baseline	Quarter for Baseline Completion	Analytical Results for Samples Collected During Q2 2019
KAFB-106S8-451[e]	4857	4/16/2019, 5/9/2019	1	3	4	EDB, benzene, toluene, and total xylenes exceeded their respective MCLs. Ethylbenzene was detected below the MCL. Dissolved manganese exceeded the PSL. No other inorganic compounds exceeded their respective PSL.
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106S9-447[e]	4857	4/16/2019, 5/9/2019	1	2	4	EDB and BTEX exceeded their respective MCLs. Dissolved manganese and iron exceeded their PSLs. No other inorganic compounds exceeded their respective PSL.
		TBD	2			
		TBD	3			
		TBD	4			

[a]This well was sampled for BTEX on 5/9/2019

[b]Because the Q3 2018 and Q4 2018 sampling events were only one month apart, this well will be sampled for an additional quarter to complete baseline.

[c]This well was not analyzed for BTEX in Q1 2019; this was a variance from the work plan and this well will be sampled for an additional quarter to complete baseline.

[d]This well was sampled for BTEX on 5/20/2019

[e]This well was sampled for dissolved metals, anions, and alkalinity on 5/9/2019
AMSL = above mean sea level
BTEX = benzene, toluene, ethylbenzene, and total xylenes
EDB = ethylene dibromide (1,2-dibromoethane)
ft = foot/feet
ID = identification
MCL = maximum contaminant level
PSL = project screening level
TBD = to be determined

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

	Chemical Class		**Anions (mg/L)**									
	Parameter		Chloride			Sulfate			Nitrate/Nitrite Nitrogen			
	Analytical Method		Method E300.0			Method E300.0			Method E353.2			
	NMAC NMWQCC[a]		250			600			10[e]			
	EPA MCLs[b]		250			250			10[e]			
	EPA RSLs[c]		NS			NS			NS			
	Project Screening Level[d]		250			250			10[e]			
Location ID	**Field Sample ID**	**Sample Date**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
KAFB-106005	ST106-GW-P-1065-16062010	6/16/2010	133	--	10	173	--	10	—	—	—
	ST106-GW-P-1065-14072010	7/14/2010	145	--	10	181	--	10	—	—	—
	ST106-GW-P-1065-20102010	10/20/2010	161	--	10	164	--	10	—	—	—
	GW0005	2/21/2011	160	--	0.5	154	--	2	—	—	—
	GW0045	6/10/2011	156	--	10	101	J	25	—	—	—
	GW0134	9/20/2011	151	--	20	20.3	J	40	ND	U	1.5
	GW0259	12/12/2011	137	--	0.5	19.0	--	2	ND	U	1.5
	GW0384	3/1/2012	130	--	2.5	33.3	--	10	ND	U	1.5
	GW0508	5/9/2012	175	--	0.5	106	--	2.5	ND	U	1.5
	GW0632	8/9/2012	19.3	--	0.5	8.73	--	2.5	ND	U	1.5
	GW0756	11/12/2012	149	--	0.5	28.7	--	2.5	ND	U	1.5
	GW0890	3/25/2013	154	--	0.5	114	--	2.5	1.01	J	1.5
	GW1025	5/15/2013	149	--	2.5	99.6	--	2.5	0.67	J	1.5
	GW1159	8/27/2013	141	--	0.5	69.3	--	2.5	0.934	J	1.5
	GW1292	11/13/2013	101	--	0.5	ND	U	2	ND	U	1.5
	GW1425	3/13/2014	183	--	0.5	101	--	2	0.734	J	1.5
	GW1558	6/3/2014	173	--	0.5	91	--	2.5	0.704	J	1.5
	GW1722	9/4/2014	167	--	0.5	88.7	--	2.5	1.51	--	1.5
	GW1855	11/20/2014	174	--	0.5	97.3	--	2.5	1.12	--	0.2
	GW1988	3/12/2015	208	--	0.5	184	--	2.5	1.85	--	0.2
	GW2154	6/18/2015	185	--	0.5	123	--	2.5	1.11	--	0.2
	GW2304	9/1/2015	159	--	0.5	108	--	2.5	1.62	--	0.2
	GW2445	11/30/2015	171	--	0.5	147	--	2.5	2.12	--	0.2
	GW005-161	2/11/2016	147	--	20.0	130	--	50.0	2.3	J-	0.10
	GW005-162	5/17/2016	155	--	20	158	--	20	2.3	--	0.10
	GW005-163	8/3/2016	154	--	40.0	216	--	100	2.7	--	0.1
	GW005-164	11/15/2016	225	--	20.0	**339**	--	50.0	0.45	--	0.10
	GW005-171	1/16/2017	202	--	40.0	**404**	--	100	1.2	J	0.10
	GW005-172	5/2/2017	**257**	J	80.0	**524**	J	200	0.27	--	0.10
	GW005-173	7/18/2017	205	--	40.0	**396**	--	100	0.22	--	0.10
	GW005-174	10/23/2017	211	J	20.0	**480**	--	50.0	0.5	J	0.10
	GW005-181	1/11/2018	204	--	80.0	**353**	--	200	0.65	--	0.10
	GW005-182	4/19/2018	188	J	20.0	**379**	J	50.0	0.40	--	0.10
	GW005-183	8/15/2018	231	--	40.0	**519**	--	100	0.13	--	0.10
	GW005-184	10/3/2018	207	--	40.0	**517**	--	100	ND	U	0.10
	GW005-191	1/14/2019	197	--	30.0	**393**	--	90.0	0.073	J	0.090
	GW005-192	4/18/2019	210	--	60.0	**283**	--	180	ND	U	0.090

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

		Chemical Class	Anions (mg/L)								
		Parameter	Chloride			Sulfate			Nitrate/Nitrite Nitrogen		
		Analytical Method	Method E300.0			Method E300.0			Method E353.2		
		NMAC NMWQCC[a]	250			600			10[e]		
		EPA MCLs[b]	250			250			10[e]		
		EPA RSLs[c]	NS			NS			NS		
		Project Screening Level[d]	250			250			10[e]		
Location ID	Field Sample ID	Sample Date	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
KAFB-106009	ST106-GW-1069-06052010	5/6/2010	26	--	1	25.3	--	1	—	—	—
	ST106-GW-P-1069-16062010	6/16/2010	25.1	--	1	29.8	--	1	—	—	—
	ST106-GW-P-1069-14072010	7/14/2010	39	--	1	28.7	--	1	—	—	—
	ST106-GW-P-1069-20102010	10/20/2010	47.1	--	2	17.4	--	1	—	—	—
	GW0010	2/17/2011	50.2	--	0.5	14.9	--	2	—	—	—
	GW0049	5/13/2011	52.2	--	1	7.58	--	2.5	—	—	—
	GW0139	9/28/2011	74.5	--	20	15.2	J	40	ND	U	1.5
	GW0263	11/22/2011	83.9	--	10	4.13	J	20	ND	U	1.5
	GW0388	2/27/2012	107	--	2.5	ND	U	10	ND	U	1.5
	GW0513	5/9/2012	118	--	0.5	ND	U	2.5	ND	U	1.5
	GW0637	8/9/2012	124	--	0.5	ND	U	2.5	ND	U	1.5
	GW0761	11/5/2012	129	--	0.5	ND	U	2.5	ND	U	1.5
	GW0895	1/23/2013	129	--	0.5	ND	U	2	ND	U	1.5
	GW1030	5/21/2013	118	--	2.5	12.2	--	2.5	0.421	J	1.5
	GW1163	8/20/2013	135	--	0.5	7.95	--	2.5	ND	U	1.5
	GW1296	11/19/2013	120	--	0.5	2.76	--	2.0	ND	U	1.5
	GW1429	3/5/2014	129	--	0.5	52.6	--	2.0	ND	U	1.5
	GW1562	6/3/2014	186	--	0.5	135	--	2.5	5.64	--	1.5
	GW1726	9/2/2014	205	--	0.5	129	--	2.5	8.18	--	1.5
	GW1859	11/18/2014	248	--	0.5	165	--	2.5	**15.7**	--	1.2
	GW1992	3/11/2015	**312**	--	1	**292**	--	5.0	**18.7**	--	1
	GW2158	6/18/2015	**312**	--	2.5	**273**	--	12.5	**14.2**	--	1
	GW2308	8/27/2015	**308**	--	2.5	**289**	--	12.5	**15.1**	--	2
	GW2459	11/3/2015	**330**	J-	2.5	**319**	J-	12.5	**16.3**	J-	2
	GW009-161	2/9/2016	**421**	J+	200	**372**	--	50.0	**14.9**	--	0.50
	GW009-162	5/5/2016	**336**	--	40	**423**	--	100	**25.3**	--	1
	GW009-163	7/21/2016	**367**	--	40.0	**446**	--	100	**13.5**	J	0.50
	GW009-164	11/3/2016	**411**	--	200	**428**	--	50.0	**19.9**	J	0.50
	GW009-171	2/1/2017	**354**	--	200	**468**	--	200	**15.3**	--	0.50
	GW009-172	5/1/2017	**289**	--	40.0	**442**	--	100	**12.5**	--	1.0
	GW009-173	7/12/2017	**315**	J	200	**433**	J	50.0	**12.9**	--	1.0
	GW009-174	11/3/2017	**284**	--	20.0	**396**	J	50.0	**10.6**	--	0.50
	GW009-181	1/8/2018	ND	U	2.0	1.8	J	5.0	**11.2**	--	1.0
	GW009-182	4/9/2018	**282**	J	20.0	**391**	--	50.0	**10.9**	J	0.50
	GW009-183	7/11/2018	273	--	20.0	**357**	--	50.0	**10.7**	--	0.50
	GW009-184	10/3/2018	212	--	40.0	**308**	--	100	8.6	--	1.0
	GW009-191	1/14/2019	ND	U	1.5	ND	U	4.5	4.3	J	0.18
	GW009-192	4/16/2019	157	--	15.0	235	--	45.0	6.4	--	0.90

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

		Chemical Class	Anions (mg/L)								
		Parameter	Chloride			Sulfate			Nitrate/Nitrite Nitrogen		
		Analytical Method	Method E300.0			Method E300.0			Method E353.2		
		NMAC NMWQCC[a]	250			600			10[e]		
		EPA MCLs[b]	250			250			10[e]		
		EPA RSLs[c]	NS			NS			NS		
		Project Screening Level[d]	250			250			10[e]		
Location ID	Field Sample ID	Sample Date	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
KAFB-106012R	GW1565	5/20/2014	95.4	--	0.5	128	--	2.5	2.37	--	1.5
	GW1730	8/12/2014	154	--	0.5	**262**	--	5	4.40	--	1.5
	GW1862	10/23/2014	170	--	1	**302**	--	5	2.22	--	0.2
	GW1995	2/2/2015	162	--	0.5	**329**	--	5	4.75	--	0.4
	GW2161	5/27/2015	179	--	0.5	**330**	--	12.5	5.21	--	0.4
	GW2311	7/27/2015	186	--	0.5	**336**	--	12.5	5.36	--	1
	GW2462	10/21/2015	189	--	0.5	**344**	--	12.5	5.92	--	1
	GW012R-161	2/8/2016	168	J+	20.0	**297**	--	50.0	5.7	--	0.50
	GW012R-162	4/25/2016	200	--	40	**343**	--	25	ND	U	0.5
	GW012R-163	7/19/2016	194	--	40.0	**372**	--	25.0	5.8	--	0.50
	GW012R-164	11/8/2016	175	--	20.0	**378**	--	50.0	5.6	--	0.50
	GW012R-171	1/26/2017	176	--	20.0	**396**	J	50.0	6.1	--	0.50
	GW012R-172	4/24/2017	158	--	20.0	**355**	--	50.0	5.7	--	0.50
	GW012R-173	7/19/2017	156	J	20.0	**357**	J	50.0	5.4	--	0.50
	GW012R-174	10/24/2017	154	J	20.0	**352**	--	50.0	5.4	--	0.20
	GW012R-181	1/22/2018	183	--	20.0	**390**	--	50.0	5.1	J	0.20
	GW012R-182	4/24/2018	153	J	20.0	**340**	J	50.0	5.3	J	0.20
	GW012R-183	7/17/2018	156	--	20.0	**359**	--	50.0	6.0	--	0.50
	GW012R-184	11/9/2018	163	J	20.0	**338**	J	50.0	5.3	--	0.50
	GW012R-191	1/17/2019	154	--	15.0	**355**	J	45.0	5.6	--	0.18
	GW012R-192	4/23/2019	149	--	15.0	**351**	--	45.0	5.2	--	0.18

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

		Chemical Class	Metals (mg/L)						Field Parameter
		Parameter	Calcium			Sodium			ORP (mV)
		Analytical Method	Method SW6010C			Method SW6010C			--
		NMAC NMWQCC[a]	NS			NS			NS
		EPA MCLs[b]	NS			NS			NS
		EPA RSLs[c]	NS			NS			NS
		Project Screening Level[d]	NS			NS			NS
Location ID	Field Sample ID	Sample Date	Result	Val Qual	LOD	Result	Val Qual	LOD	Result
KAFB-106005	ST106-GW-P-1065-16062010	6/16/2010	128	--	0.1	64.4	--	0.3	94.1
	ST106-GW-P-1065-14072010	7/14/2010	122	--	0.1	64.7	--	0.3	288
	ST106-GW-P-1065-20102010	10/20/2010	118	--	0.1	65.9	--	0.3	145
	GW0005	2/21/2011	138	--	5	79.8	--	5	-61
	GW0045	6/10/2011	117	--	5	67.2	--	5	-25
	GW0134	9/20/2011	132	--	5	69.9	--	5	-114
	GW0259	12/12/2011	137	--	5	71.7	--	5	-239
	GW0384	3/1/2012	131	--	5	59.8	--	5	-290
	GW0508	5/9/2012	147	--	5	73.9		5	-295
	GW0632	8/9/2012	44.8	--	5	27.5	--	5	-293
	GW0756	11/12/2012	136	--	5	64.9	--	5	-335
	GW0890	3/25/2013	146	--	5	67.6	--	5	-329
	GW1025	5/15/2013	138	--	5	65.1	--	5	-332
	GW1159	8/27/2013	131	--	5	62	--	5	-320
	GW1292	11/13/2013	125	--	5	54	--	5	-300
	GW1425	3/13/2014	143	--	5	71.6	--	5	-276
	GW1558	6/3/2014	153	--	5	75.4	--	5	-329
	GW1722	9/4/2014	141	--	5	72.3	--	5	-341
	GW1855	11/20/2014	136	--	5	69.2	--	5	-309
	GW1988	3/12/2015	176	--	5	83.1	--	5	-336
	GW2154	6/18/2015	164	J	5	67.6	--	5	-333
	GW2304	9/1/2015	150	--	10	73.4	--	5	-329
	GW2445	11/30/2015	138	--	10	62.7	--	5	0.01
	GW005-161	2/11/2016	165	--	0.100	73.9	--	0.500	-303.5
	GW005-162	5/17/2016	157	--	0.1	69.6	--	0.5	-315.5
	GW005-163	8/3/2016	177	J	0.200	75.1	--	0.500	-313.9
	GW005-164	11/15/2016	226	--	0.200	88.0	--	0.500	-213
	GW005-171	1/16/2017	245	--	0.200	91.1	J	0.500	-207.5
	GW005-172	5/2/2017	247	--	0.200	86.8	--	0.500	-200.5
	GW005-173	7/18/2017	255	--	0.200	86.8	--	0.500	-178.7
	GW005-174	10/23/2017	250	--	0.200	80.9	--	0.500	-154.9
	GW005-181	1/11/2018	231	--	0.200	80.3	--	0.500	-288.6
	GW005-182	4/19/2018	255	--	0.200	85.2	--	0.500	-221.2
	GW005-183	8/15/2018	244	--	0.100	76.5	--	0.500	NA
	GW005-184	10/3/2018	216	--	0.100	66.5	--	0.500	NA
	GW005-191	1/14/2019	221	--	0.100	75.0	--	0.500	NA
	GW005-192	4/18/2019	208	--	0.100	76.9	--	0.500	NA

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

	Chemical Class		Metals (mg/L)						Field Parameter
	Parameter		Calcium			Sodium			ORP (mV)
	Analytical Method		Method SW6010C			Method SW6010C			--
	NMAC NMWQCC[a]		NS			NS			NS
	EPA MCLs[b]		NS			NS			NS
	EPA RSLs[c]		NS			NS			NS
	Project Screening Level[d]		NS			NS			NS
Location ID	**Field Sample ID**	**Sample Date**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**
KAFB-106009	ST106-GW-1069-06052010	5/6/2010	67.9	--	0.1	30.6	--	0.3	NA
	ST106-GW-P-1069-16062010	6/16/2010	61.4	--	0.1	27.4	--	0.3	-215
	ST106-GW-P-1069-14072010	7/14/2010	76.7	--	0.1	30.2	--	0.3	0.2
	ST106-GW-P-1069-20102010	10/20/2010	89.1	--	0.1	34.8	--	0.3	-2.44
	GW0010	2/17/2011	110	--	5	37.7	--	5	-127
	GW0049	5/13/2011	124	--	5	38.3	--	5	-203
	GW0139	9/28/2011	122	--	5	36.9	--	5	-207
	GW0263	11/22/2011	120	--	5	34.5	--	5	-147
	GW0388	2/27/2012	163	--	5	44.0	--	5	-145
	GW0513	5/9/2012	174	--	5	46.3	--	5	-235
	GW0637	8/9/2012	172	--	5	46.6	--	5	-173
	GW0761	11/5/2012	169	--	5	46.3	--	5	-146
	GW0895	1/23/2013	170	--	5	48.1	--	5	-175
	GW1030	5/21/2013	149	--	5	50.3	--	5	-165
	GW1163	8/20/2013	171	--	5	49.2	--	5	-306
	GW1296	11/19/2013	153	--	5	42.9	--	5	-302
	GW1429	3/5/2014	147	--	5	49.7	J+	5	-127
	GW1562	6/3/2014	164	--	5	49.7	--	5	-170
	GW1726	9/2/2014	191	--	5	53.7	--	5	86
	GW1859	11/18/2014	184	--	5	51.3	--	5	-53
	GW1992	3/11/2015	242	--	5	59.9	--	5	89
	GW2158	6/18/2015	246	--	5	52.3	--	5	88
	GW2308	8/27/2015	244	--	25	54.7	--	5	79
	GW2459	11/3/2015	266	--	25	55.4	--	5	NR
	GW009-161	2/9/2016	285	--	0.100	55.4	--	0.500	115.7
	GW009-162	5/5/2016	302	--	0.1	59.7	--	0.5	14.1
	GW009-163	7/21/2016	329	--	0.200	65	--	0.500	80.7
	GW009-164	11/3/2016	305	--	0.200	62.8	--	0.500	55.0
	GW009-171	2/1/2017	311	--	0.200	67.3	--	0.500	165.9
	GW009-172	5/1/2017	287	--	0.200	68.3	--	0.500	4.2
	GW009-173	7/12/2017	265	--	0.200	65.7	--	0.500	132.2
	GW009-174	11/3/2017	259	--	0.200	65.6	--	0.500	-7.2
	GW009-181	1/8/2018	242	--	0.200	63.4	--	0.500	NA
	GW009-182	4/9/2018	260		0.200	71.1	--	0.500	-221.2
	GW009-183	7/11/2018	228		0.100	68.6	--	0.500	NA
	GW009-184	10/3/2018	178	--	0.100	50.0	--	0.500	NA
	GW009-191	1/14/2019	223	--	0.100	63.2	--	0.500	NA
	GW009-192	4/16/2019	204	--	0.100	64.1	--	0.500	NA

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

		Chemical Class	Metals (mg/L)						Field Parameter
		Parameter	Calcium			Sodium			ORP (mV)
		Analytical Method	Method SW6010C			Method SW6010C			--
		NMAC NMWQCC[a]	NS			NS			NS
		EPA MCLs[b]	NS			NS			NS
		EPA RSLs[c]	NS			NS			NS
		Project Screening Level[d]	NS			NS			NS
Location ID	Field Sample ID	Sample Date	Result	Val Qual	LOD	Result	Val Qual	LOD	Result
KAFB-106012R	GW1565	5/20/2014	101	--	5	35.8	--	5	103
	GW1730	8/12/2014	175	--	5	50.8	--	5	147
	GW1862	10/23/2014	165	--	5	47.7	--	5	136
	GW1995	2/2/2015	165	--	5	50.6	--	5	128
	GW2161	5/27/2015	169	--	5	49.1	J-	5	132.2
	GW2311	7/27/2015	173	--	10	50.9	--	5	122
	GW2462	10/21/2015	189	--	25	52.8	--	5	181
	GW012R-161	2/8/2016	186	--	0.100	53.7	--	0.500	164.4
	GW012R-162	4/25/2016	191	--	0.1	55.3	--	0.5	106.8
	GW012R-163	7/19/2016	214	--	0.200	59.3	--	0.500	179.2
	GW012R-164	11/8/2016	200	--	0.200	56.9	--	0.500	150.9
	GW012R-171	1/26/2017	192	--	0.200	57.0	--	0.500	113.4
	GW012R-172	4/24/2017	196	--	0.200	56.7	--	0.500	157.3
	GW012R-173	7/19/2017	198	--	0.200	57.4	--	0.500	46.3
	GW012R-174	10/24/2017	191	--	0.200	58.2	--	0.500	146
	GW012R-181	1/22/2018	185	--	0.200	58.1	--	0.500	175.2
	GW012R-182	4/24/2018	196	--	0.200	61.5	--	0.500	57.7
	GW012R-183	7/17/2018	189	--	0.100	62.2	--	0.500	77.2
	GW012R-184	11/9/2018	191	--	0.100	60.1	--	0.500	132.6
	GW012R-191	1/17/2019	197	--	0.100	69.2	--	0.500	157
	GW012R-192	4/23/2019	194	--	0.500	72.5	--	2.50	289.4

Table 3-10
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, and Sodium Concentrations, and Oxidation Reduction Potential in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q2 2019

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018).
[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40 CFR Part 141, 143 (May 2018).
[c] EPA Region 6 RSL for Tapwater (November 2018) for hazard index = 1.0 for noncarcinogens and a 10^{-5} cancer risk level for carcinogens.
[d] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.
[e] Based on the geochemical equilibrium of the site groundwater and previous site data analyses, nitrate/nitrite results represent nitrate concentrations.
AFB = Air Force Base
BFF = Bulk Fuels Facility
CFR = Code of Federal Regulations
EPA = U.S. Environmental Protection Agency
ID = identification
KAFB = Kirtland Air Force Base
LOD = limit of detection
MCL = maximum contaminant level
mg/L = milligram per liter
mV = millivolt
NA = not available
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
ORP = oxidation reduction potential
RSL = regional screening level
SWMU = Solid Waste Management Unit
Val Qual = validation qualifier
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
J+ = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated with a potential high bias.
J- = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated with a potential low bias.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.
— = Compound not analyzed for.

Table 4-1
Drinking Water Supply Well Analytical Results, Q2 2019

			Location ID:				KAFB-003			KAFB-003			KAFB-003		
			Field Sample ID:				GWK003-1921			GWK003-1922			GWK003-1923		
			Sample Date:				4/2/2019			5/7/2019			6/4/2019		
			Sample Type:				REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**
EDB	Method E504.1 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017
BTEX	Method E524.2 (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	0.5	ND	U	0.5	ND	U	0.5
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	42.2	--	0.100	—	—	—	—	—	—
		Iron, dissolved	1.0	NS	NS	1	ND	U	0.100	—	—	—	—	—	—
		Magnesium	NS	NS	NS	NS	5.86	--	0.0500	—	—	—	—	—	—
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	—	—	—	—	—	—
		Potassium	NS	NS	NS	NS	2.29	--	0.375	—	—	—	—	—	—
		Sodium	NS	NS	NS	NS	22.3	--	0.500	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0010	J	0.0016	—	—	—	—	—	—
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	—	—	—	—	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	UJ	2.0	—	—	—	—	—	—
		Chloride	250	250	NS	250	17.0	J	1.5	—	—	—	—	—	—
		Sulfate	600	250	NS	250	27.4	J	4.5	—	—	—	—	—	—
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	1.5	—	—	—	—	—	—
	Method SM4500NH3B/C (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	—	—	—	—	—	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.60	J	0.090	—	—	—	—	—	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	110	--	4.0	—	—	—	—	—	—
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	4.0	—	—	—	—	—	—
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	110	--	4.0	—	—	—	—	—	—
Field Parameters		Temperature (°C)	NS	NS	NS	NS	19.0			20.2			21.5		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	374.8			356.2			838		
		pH (S.U.)	NS	NS	NS	NS	7.11			7.93			7.92		
		ORP (mV)	NS	NS	NS	NS	222.2			248.1			242.9		
		DO (mg/L)	NS	NS	NS	NS	5.60			3.20			4.14		
		Turbidity (NTU)	NS	NS	NS	NS	0.16			0.18			0.18		

Table 4-1
Drinking Water Supply Well Analytical Results, Q2 2019

			Location ID:				KAFB-015			KAFB-015			KAFB-015		
			Field Sample ID:				GWK015-1921			GWK015-1922			GWK015-1923		
			Sample Date:				4/2/2019			5/7/2019			6/4/2019		
			Sample Type:				REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**
EDB	Method E504.1 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017
BTEX	Method E524.2 (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	0.5	ND	U	0.5	ND	U	0.5
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	30.9	--	0.100	—	—	—	—	—	—
		Iron, dissolved	1.0	NS	NS	1	ND	U	0.100	—	—	—	—	—	—
		Magnesium	NS	NS	NS	NS	7.79	--	0.0500	—	—	—	—	—	—
		Manganese, dissolved	0.2	NS	NS	0.2	0.0269	--	0.0025	—	—	—	—	—	—
		Potassium	NS	NS	NS	NS	6.66	--	0.375	—	—	—	—	—	—
		Sodium	NS	NS	NS	NS	37.5	--	0.500	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	**0.0161**	--	0.0016	—	—	—	—	—	—
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	—	—	—	—	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	UJ	2.0	—	—	—	—	—	—
		Chloride	250	250	NS	250	40.7	J	15.0	—	—	—	—	—	—
		Sulfate	600	250	NS	250	30.1	J	4.5	—	—	—	—	—	—
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	1.5	—	—	—	—	—	—
	Method SM4500NH3B/C (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	0.45	J	0.60	—	—	—	—	—	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.090	—	—	—	—	—	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	92.6	--	4.0	—	—	—	—	—	—
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	4.0	—	—	—	—	—	—
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	92.6	--	4.0	—	—	—	—	—	—
Field Parameters		Temperature (°C)	NS	NS	NS	NS	25.4			24.8			25.8		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	419.8			436.0			890		
		pH (S.U.)	NS	NS	NS	NS	8.01			8.03			7.94		
		ORP (mV)	NS	NS	NS	NS	158.9			217.2			240.5		
		DO (mg/L)	NS	NS	NS	NS	1.81			1.23			1.59		
		Turbidity (NTU)	NS	NS	NS	NS	0.65			0.11			0.76		

Table 4-1
Drinking Water Supply Well Analytical Results, Q2 2019

			Location ID:				KAFB-016			KAFB-016			KAFB-016			KAFB-016		
			Field Sample ID:				GWK016-1921			GWK016-1922			GWK016-5922			GWK016-1923		
			Sample Date:				4/2/2019			5/7/2019			5/7/2019			6/4/2019		
			Sample Type:				REG			REG			Field Duplicate			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**
EDB	Method E504.1 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017
BTEX	Method E524.2 (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	45.3	--	0.100	—	—	—	—	—	—	—	—	—
		Iron, dissolved	1.0	NS	NS	1	0.0414	J	0.100	—	—	—	—	—	—	—	—	—
		Magnesium	NS	NS	NS	NS	5.18	--	0.0500	—	—	—	—	—	—	—	—	—
		Manganese, dissolved	0.2	NS	NS	0.2	0.0082	J	0.0025	—	—	—	—	—	—	—	—	—
		Potassium	NS	NS	NS	NS	3.56	--	0.375	—	—	—	—	—	—	—	—	—
		Sodium	NS	NS	NS	NS	27.3	--	0.500	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	**0.0238**	--	0.0016	—	—	—	—	—	—	—	—	—
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	—	—	—	—	—	—	—	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	UJ	2.0	—	—	—	—	—	—	—	—	—
		Chloride	250	250	NS	250	37.1	J	15.0	—	—	—	—	—	—	—	—	—
		Sulfate	600	250	NS	250	26.2	J	4.5	—	—	—	—	—	—	—	—	—
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	1.5	—	—	—	—	—	—	—	—	—
	Method SM4500NH3B/C (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	0.30	J	0.60	—	—	—	—	—	—	—	—	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.090	—	—	—	—	—	—	—	—	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	91.6	--	4.0	—	—	—	—	—	—	—	—	—
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	4.0	—	—	—	—	—	—	—	—	—
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	91.6	--	4.0	—	—	—	—	—	—	—	—	—
Field Parameters		Temperature (°C)	NS	NS	NS	NS	24.5			23.7			23.7			24.7		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	452.1			462.4			462.4			965		
		pH (S.U.)	NS	NS	NS	NS	7.77			7.94			7.94			7.65		
		ORP (mV)	NS	NS	NS	NS	176.6			184.7			184.7			274.4		
		DO (mg/L)	NS	NS	NS	NS	2.50			0.82			0.82			3.37		
		Turbidity (NTU)	NS	NS	NS	NS	0.12			0.15			0.15			0.83		

Table 4-1
Drinking Water Supply Well Analytical Results, Q2 2019

			Location ID:				ST106-VA2			ST106-VA2			ST106-VA2		
			Field Sample ID:				GWVA2-1921			GWVA2-1922			GWVA2-1923		
			Sample Date:				4/2/2019			5/7/2019			6/4/2019		
			Sample Type:				REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**
EDB	Method E504.1 (µg/L)	1,2-dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.018
BTEX	Method E524.2 (µg/L)	Benzene	5	5	4.6	5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	1,000	1,000	1,100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	10,000	190	620	ND	U	0.5	ND	U	0.5	ND	U	0.5
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.1	--	0.100	—	—	—	—	—	—
		Iron, dissolved	1.0	NS	NS	1	ND	U	0.100	—	—	—	—	—	—
		Magnesium	NS	NS	NS	NS	7.44	--	0.0500	—	—	—	—	—	—
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0025	—	—	—	—	—	—
		Potassium	NS	NS	NS	NS	4.04	--	0.375	—	—	—	—	—	—
		Sodium	NS	NS	NS	NS	21.8	--	0.500	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0027	--	0.0016	—	—	—	—	—	—
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0024	—	—	—	—	—	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	UJ	2.0	—	—	—	—	—	—
		Chloride	250	250	NS	250	31.6	J	15.0	—	—	—	—	—	—
		Sulfate	600	250	NS	250	24.0	J	4.5	—	—	—	—	—	—
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	1.5	—	—	—	—	—	—
	Method SM4500NH3B/C (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	—	—	—	—	—	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.044	J	0.090	—	—	—	—	—	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	97.9	--	4.0	—	—	—	—	—	—
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	4.0	—	—	—	—	—	—
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	97.9	--	4.0	—	—	—	—	—	—
Field Parameters		Temperature (°C)	NS	NS	NS	NS	21.5			21.9			17.9		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	370.2			206.5			818		
		pH (S.U.)	NS	NS	NS	NS	7.76			7.87			7.84		
		ORP (mV)	NS	NS	NS	NS	154.0			276.8			258.2		
		DO (mg/L)	NS	NS	NS	NS	1.66			1.33			1.55		
		Turbidity (NTU)	NS	NS	NS	NS	0.32			0.29			0.95		

Table 4-1
Drinking Water Supply Well Analytical Results, Q2 2019

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018).
[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).
[c] EPA Region 6 RSL for Tapwater (May 2019) for hazard index = 1.0 for non-carcinogens and a 10-5 cancer risk level for carcinogens.
[d] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.
µg/L = micrograms per liter
µS/cm = micro siemens per centimeter
ºC = degree Celsius
BFF = Bulk Fuels Facility
BTEX = benzene, toluene, ethylbenzene, and total xylenes
CFR = Code of Federal Regulations
DO = dissolved oxygen
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
GW = groundwater
ID = identification
KAFB = Kirtland Air Force Base
LOQ = limit of quantitation
MCL = maximum contaminant level
mg/L = milligram per liter
mV = millivolt
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
REG = normal field sample
RSL = regional screening level
S.U. = standard units
SWMU = Solid Waste Management Unit
VA = U.S. Department of Veterans Affairs
Val Qual = validation qualifier
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screeni
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOQ.
-- = Validation qualifier not assigned.
— = Compound not analyzed for.

Table 5-1
DP-1839 Discharge Permit Terms and Conditions, Operations and Maintenance Plan Cross References

Condition No.	Terms and Conditions	Reference Location in Quarterly Report
15	The Permittee shall ensure the treated effluent conveyance system, i.e., piping, between the GWTS and the UIC well(s) does not leak and shall report any such leakage to the NMED GWQB in accordance with 20.6.2.1203(A) NMAC and copy the NMED HWB.	5.3.4 Effluent Conveyance Line Integrity (not applicable in Q2 2019)
	Within 1 year of the effective date of this Discharge Permit, the Permittee shall demonstrate the structural integrity of the treated effluent conveyance system between the GWTS and KAFB-7.	5.3.4 Effluent Conveyance Line Integrity (not applicable in Q2 2019)
	Prior to testing, the Permittee shall propose for NMED approval the test method to be used.	5.3.4 Effluent Conveyance Line Integrity (not applicable in Q2 2019)
	The results of the mechanical integrity testing shall be submitted to NMED within 60 days of test completion.	5.3.4 Effluent Conveyance Line Integrity (not applicable in Q2 2019)
	The Permittee shall integrity test the treated effluent conveyance system between GWTS and the UIC well(s) prior to submitting a permit renewal application. [20.6.2.3106(C) NMAC, 20.6.2.3107(A) NMAC]	5.3.4 Effluent Conveyance Line Integrity (not applicable in Q2 2019)
17	The Permittee shall conduct the monitoring, operations, and reporting listed below.	5.1 Groundwater Treatment System Operation
	Unless otherwise specified, all periodic monitoring results or general information obtained shall be reported in the forthcoming quarterly report. [20.6.2.3107 NMAC]	5.1 Groundwater Treatment System Operation
18	Unless otherwise approved by NMED, the Permittee shall conduct sampling in accordance with standard industry practice.	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal
	Sampling in accordance with the most current version of the GWTS Sampling and Analysis Plan (Appendix L of the O&M Plan), which includes sampling locations, procedures, field measurements, quality control samples, handling and custody, analytical methods, quality control, analytical validation, and reporting requirements, satisfies this Condition. [20.6.2.3107(B) NMAC]	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal
19	The Permittee shall submit quarterly and annual reports to NMED pursuant to the most recent NMED HWB approved Work Plans.	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal
	The Permittee shall identify the portions of these reports pertaining to this Discharge Permit with a table in the reports that identifies those portions.	Table 5-1 DP-1839 Discharge Permit Terms and Conditions, Operations and Maintenance Plan Cross References
	Quarterly reports shall be submitted as specified below unless otherwise authorized by NMED: • January 1st through March 31st - due by June 30th • April 1st through June 30th - due by September 30th • July 1st through September 30th - due by December 31st • October 1st through December 31st - due by March 31st	Noted
	Annual reporting requirements for the previous year, i.e., January 1 through December 31, shall be reported in the March 31 quarterly report. [20.6.2.3107(A) NMAC]	Noted
20	The Permittee shall monitor the concentration of all COCs listed on Table 2 in GWTS treated effluent. Associated sampling and analysis shall be performed monthly at a minimum.	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal Table 5-6 Monthly GWTS Performance Analytical Results for Train 1, Q2 2019 Table 5-7 Monthly GWTS Performance Analytical Results for Train 2, Q2 2019
	When groundwater from a new extraction well is first introduced to the GWTS, COC monitoring of the GWTS treated effluent shall occur daily for the first week of treatment, weekly for the first month of treatment, and monthly thereafter.	Not applicable in Q2 2019
	If alterations to, or conditions at, the GWTS result in a potential impact to effluent quality, the Permittee will repeat this sampling sequence as directed by NMED.	No effluent quality impacts Q2 2019
20	A representative sample of GWTS influent and effluent shall be analyzed annually for the constituents identified in Table 3.	Performed in Q3 2018, last reported in Q3 2018; Not applicable to Q2 2019
	A representative sample of GWTS influent and effluent shall be analyzed every 5 years for the constituents identified in Table 4	Performed in Q3 2017; last reported in Q3 2017; Not applicable to Q2 2019
	The first analysis of the 5-year constituent list shall occur in July 2017. Any newly identified constituents detected during the 5-year sampling events will be added to the annual sampling constituent list in Table 3.	Performed in Q3 2017; last reported in Q3 2017; Not applicable to Q2 2019
	All analysis of GWTS influent and effluent shall utilize analytical methods with detection limits that are sufficiently low to allow comparison to the standards included in the above referenced state and federal regulations.	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal Table 5-6 Monthly GWTS Performance Analytical Results for Train 1, Q2 2019 Table 5-7 Monthly GWTS Performance Analytical Results for Train 2, Q2 2019
	All sampling, analysis, and reporting shall comply with the most recent approved Work Plans. [20.6.2.3107(A) NMAC and 20.6.2.3107(B) NMAC]	5.2 Groundwater Treatment System Performance Monitoring and Ethylene Dibromide Removal

Table 5-1
DP-1839 Discharge Permit Terms and Conditions, Operations and Maintenance Plan Cross References

Condition No.	Terms and Conditions	Reference Location in Quarterly Report
21	The Permittee shall report the volume of treated GWTS effluent discharged to each UIC well each quarter. This report shall include the following:	See Below
	a. Monthly average, maximum, and minimum values for flow rate and volume of treated effluent transferred to each UIC well	Table 5-4 Groundwater Treatment System Injection Well Performance, Q2 2019
	b. The totalized monthly volume of treated effluent transferred to all UIC wells	Table 5-2 Quantities of Groundwater Treated and Discharged, Q2 2019
	c. Monthly average, maximum, and minimum head values of injection water for each UIC well.	Table 5-4 Groundwater Treatment System Injection Well Performance, Q2 2019
	The Permittee shall monitor the GWTS effluent volume utilizing an effluent flow meter installed on the effluent pump skid after the GAC units. Each UIC well shall have a dedicated flowmeter. Flowmeters shall be inspected and calibrated in accordance with the associated manufacturer's recommendations. [20.6.2.3107 NMAC]	Table 5-4 Groundwater Treatment System Injection Well Performance, Q2 2019 Table 5-9 GWTS Routine Maintenance (Monthly Flowmeter Inspection and Annual Calibration Verification)
22	The Permittee shall include the following results and general information in quarterly reports to NMED:	See Below
	a. Any mechanical integrity (tests) conducted on either the GWTS or a UIC well	5.3.3 Non-Routine Maintenance Table 5-10 GWTS Non-Routine Maintenance Items, Q2 2019
	b. Any replacement of GAC media and the associated data that initiated the decision to replace the media	5.3.3 Non-Routine Maintenance Table 5-10 GWTS Non-Routine Maintenance Items, Q2 2019
	c. Any UIC well rehabilitation conducted	5.3.3 Non-Routine Maintenance Table 5-10 GWTS Non-Routine Maintenance Items, Q2 2019
	d. Any malfunction, repair, or replacement of a flowmeter	5.3.3 Non-Routine Maintenance Table 5-10 GWTS Non-Routine Maintenance Items, Q2 2019
	e. Any additional operational changes with the potential to affect the discharge. [20.6.2.3107 NMAC]	5.3.3 Non-Routine Maintenance Table 5-10 GWTS Non-Routine Maintenance Items, Q2 2019
23	The Permittee shall monitor the groundwater wells in the vicinity of KAFB-7 and in the vicinity of any newly installed UIC well(s) to determine any change to aquifer chemistry that may be the result of injection.	Performed in Q4 of each year, last reported in Q4 2018
	This monitoring shall be performed annually, shall conform to the procedures of the most current approved Work Plan, and shall measure the COCs listed in Table 2. This chemistry will be reported in the Annual Report for BFF.	Reported in Q4 of each year, last reported in Q4 2018
	ST-105 Annual Report includes elevation contour mapping and analytical parameters identified in the Stage 2 Abatement Plan.	Reported annually in the ST-105 Annual Report
	The Permittee shall develop a groundwater elevation contour map depicting the groundwater flow direction in the vicinity of each UIC well and report it in the ST-105 Annual Report.	Reported annually in the ST-105 Annual Report Also reported in Q4 of each year, last reported in Q4 2018
	If the chemical quality of the treated groundwater being injected changes over time, NMED may require the Permittee to repeat geochemical modeling (numeric or analytical) to predict the interaction between the treated effluent and receiving groundwater. [20.6.2.3107 NMAC]	Not applicable in Q2 2019
24	The Permittee shall post all reports required by this Discharge Permit on Kirtland AFB's most current website (e.g., https://kirtlandafb.tlisolutions.com/main.aspx.) [20.6.2.3107(A) NMAC]	http://afcec.publicadmin-record.us.af.mil/search.aspx
34	In the event the Permittee proposes a change to the facility or the facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated, or discharged by the facility that differs from the terms and conditions in this Discharge Permit, the Permittee shall notify NMED prior to implementing such changes.	Noted
	The Permittee shall obtain approval (which may require modification of this Discharge Permit) by NMED prior to implementing such changes. [20.6.2.7(P) NMAC, 20.6.2.3107(C) NMAC, 20.6.2.3109(E) and (G) NMAC]	Noted
35	In the event the Permittee proposes to construct or change an existing system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the Permittee shall submit construction plans and specifications to NMED for the proposed system or process unit prior to the commencement of construction.	Noted
	In the event the Permittee implements changes to an existing system authorized by this Discharge Permit which will result in only a minor effect on the quality of the discharge, the Permittee shall report such changes (including the submission of record drawings, where applicable) in the next quarterly report to NMED. [20.6.2.1202(A) and (C) NMAC, New Mexico Statutes Annotated 1978, §§ 61-23-1 through 61-23-32]	Not applicable in Q2 2019

Table 5-1
DP-1839 Discharge Permit Terms and Conditions, Operations and Maintenance Plan Cross References

COC = contaminant of concern
GAC = granular activated carbon
GWTS = groundwater treatment system
GWQB = Groundwater Quality Bureau
HWB = Hazardous Waste Bureau
NMAC = New Mexico Administrative Code
NMED = New Mexico Environment Department
No. = number
O&M = Operation and maintenance
UIC = underground injection control

Table 5-2
Cumulative Quantities of Groundwater Treated and Discharged, Q2 2019

GWTS Operating Month	Train 1 Total Groundwater Treated (gallons)	Train 2 Total Groundwater Treated (gallons)	Total Groundwater Extracted (gallons)	Treated Groundwater Injected to Injection Well KAFB-7 (gallons)	Treated Groundwater Discharged to the GCMP[a] (gallons)
Totalizing Flowmeter[b]	FE/FIT-3108	FE/FIT-3208	FE/FIT-3108 + FE/FIT-3208	FE/FIT-3108 + FE/FIT-3208	FE/FIT-3108 + FE/FIT-3208
Dec-15[c]	17,664,900	0	17,664,900	0	17,664,900
2015 Total	17,664,900	0	17,664,900	0	17,664,900
Jan-16	1,777,200	0	1,777,200	0	1,777,200
Feb-16	881,000	0	881,000	181,300	699,700
Mar-16	22,168,080	0	22,168,080	1,231,350	20,936,730
Apr-16	12,649,920	0	12,649,920	582,570	12,067,350
May-16	12,090,000	0	12,090,000	0	12,090,000
Jun-16	8,850,000	0	8,850,000	0	8,850,000
Jul-16	9,940,000	0	9,940,000	0	9,940,000
Aug-16	9,400,000	0	9,400,000	0	9,400,000
Sep-16	12,980,000	0	12,980,000	0	12,980,000
Oct-16	8,300,000	0	8,300,000	0	8,300,000
Nov-16	7,200,000	0	7,200,000	2,970,000	4,230,000
Dec-16	14,570,100	0	14,570,100	14,501,190	68,910
2016 Total	120,806,300	0	120,806,300	19,466,410	101,339,890
Jan-17	6,089,700	87,300	6,177,000	5,877,600	299,400
Feb-17	1,637,100	2,357,400	3,994,500	2,216,600	1,777,900
Mar-17	5,551,200	5,705,400	11,256,600	5,172,800	6,083,800
Apr-17	7,269,000	6,712,700	13,981,700	2,248,062	11,733,638
May-17	9,234,900	9,453,700	18,688,600	4,722,563	13,966,037
Jun-17	9,706,100	9,055,100	18,761,200	1,592,700	17,168,500
Jul-17	13,260,800	10,875,200	24,136,000	3,023,500	21,112,500
Aug-17	9,461,200	8,999,500	18,460,700	4,847,500	13,613,200
Sep-17	9,734,500	9,227,600	18,962,100	6,752,400	12,209,700
Oct-17	8,684,700	12,941,900	21,626,600	14,775,800	6,850,800
Nov-17	0	12,513,400	12,513,400	3,734,900	8,778,500
Dec-17	0	13,304,300	13,304,300	10,724,700	2,579,600
2017 Total	80,629,200	101,233,500	181,862,700	65,689,125	116,173,575
Jan-18	9,865,000	5,497,700	15,362,700	13,887,700	1,475,000
Feb-18	10,785,300	6,786,100	17,571,400	13,765,300	3,806,100
Mar-18	11,006,000	7,092,900	18,098,900	9,235,300	8,863,600
Apr-18	7,468,200	5,800,700	13,268,900	0[d]	13,268,900

Table 5-2
Cumulative Quantities of Groundwater Treated and Discharged, Q2 2019

GWTS Operating Month	Train 1 Total Groundwater Treated (gallons)	Train 2 Total Groundwater Treated (gallons)	Total Groundwater Extracted (gallons)	Treated Groundwater Injected to Injection Well KAFB-7 (gallons)	Treated Groundwater Discharged to the GCMP[a] (gallons)
May-18	11,238,400	8,061,600	19,300,000	0[d]	19,300,000
Jun-18	14,746,800	10,186,400	24,933,200	0[d]	24,933,200
Jul-18	12,038,500	7,901,100	19,939,600	0[d]	19,939,600
Aug-18	14,973,100	9,583,900	24,557,000	0[d]	24,557,000
Sep-18	9,516,900	7,509,600	17,026,500	0[d]	17,026,500
Oct-18	1,572,600	7,288,500	8,861,100	0[d]	8,861,100
Nov-18	7,788,300	4,682,900	12,471,200	7,517,100	4,954,100
Dec-18	15,521,500	10,282,100	25,803,600	23,080,800	2,722,800
2018 Total	126,520,600	90,673,500	217,194,100	67,486,200	149,707,900
Jan-19	13,105,900	8,431,000	21,536,900	19,494,500	2,042,400
Feb-19	12,821,800	8,443,300	21,265,100	13,624,600	7,640,500
Mar-19	16,066,200	10,450,300	26,516,500	13,435,900	13,080,600
Apr-19	12,729,900	8,472,000	21,201,900	7,170,800	14,031,100
May-19	12,789,200	10,082,100	22,871,300	5,779,900	17,091,400
Jun-19[e]	9,569,300	7,798,200	17,367,500	1,512,500	15,855,000
Q2 2019 Total	35,088,400	26,352,300	61,440,700	14,463,200	46,977,500
2019 Total[f]	77,082,300	53,676,900	130,759,200	61,018,200	69,741,000
Cumulative Total	422,703,300	245,583,900	668,287,200	213,659,935	454,627,265

[a] Corrected volumes from human machine interface datasets.

[b] Flowmeters are inspected monthly, see Appendix I-1.

[c] Train 1 treatment volume for December 2015 includes all water treated by the temporary treatment system and water treated by train 1 during December

[d] On March 14, 2018 at 0206, the KAFB-7 V-Smart valve hydraulic assembly failed downhole. Repairs to KAFB-7 were completed on November 14, 2018. All treated water between March 14, 2018 and November 15, 2018 was discharged to the GCMP.

[e] Treatment volumes for June 2019 are calculated through June 30, 2019.

[f] Cumulative 2019 total through June 30, 2019.

FE/FIT-3208 = Flow meter/flow meter transmitter (followed by the component designation)
GCMP = Tijeras Arroyo Golf Course main pond.
GWTS = groundwater treatment system.
Q = quarter.

Table 5-3
Groundwater Treatment System Extraction Well Performance, Q2 2019

Well ID	Well Parameter	April	May	June	Q2 (Average)
KAFB-106228	Average Operational Flow Rate[a] (gpm)	139.6	139.8	140.6	140.0
	Flow Rate Range[b] (gpm; min-max)	139.2 - 140.0	107.3 - 149.8	0.0 - 143.7	0.0 -149.8
	Average Drawdown[c] (ft)	18.0	18.4	14.3	17.0
	Water Level Elevation Range[b] (ft; min-max)	4857.4 - 4858.5	4857.0 - 4858.2	4857.9 - 4876.0	4857.0 - 4876.0
	Average Specific Capacity[d] (gpm/ft)	7.7	7.6	9.9	8.4
	Average Transmissivity[d] (gpd/ft)	11,611	11,415	14,920	12,598
	Run Time %[e]	97%	92%	81%	90%
	Notes	NA	NA	NA	NA
KAFB-106233	Average Operational Flow Rate[a] (gpm)	162.7	160.2	166.0	163.0
	Flow Rate Range[b] (gpm; min-max)	160.9 - 164.8	0.0 - 162.6	0.0 - 182.5	0.0 - 182.5
	Average Drawdown[c] (ft)	8.4	6.5	7.3	7.4
	Water Level Elevation Range[b] (ft; min-max)	4864.6 - 4865.3	4865.3 - 4871.2	4865.7 - 4871.9	4864.6 - 4871.9
	Average Specific Capacity[d] (gpm/ft)	19.4	20.7	22.7	20.9
	Average Transmissivity[d] (gpd/ft)	29,154	31,032	34,080	31,301
	Run Time %[e]	98%	71%	85%	85%
	Notes	NA	NA	NA	NA
KAFB-106234	Average Operational Flow Rate[a] (gpm)	158.7	157.9	150.3	155.9
	Flow Rate Range[b] (gpm; min-max)	158.3 - 159.2	154.9 - 160.4	0.0 - 175.0	0.0 - 175.0
	Average Drawdown[c] (ft)	7.0	6.5	5.3	6.3
	Water Level Elevation Range[b] (ft; min-max)	4866.5 - 4867.0	4866.8 - 4868.5	4868.1 - 4883.8	4866.5 - 4883.8
	Average Specific Capacity[d] (gpm/ft)	22.8	24.2	27.8	24.8
	Average Transmissivity[d] (gpd/ft)	34,258	36,366	42,353	37,240
	Run Time %[e]	98%	94%	82%	91%
	Notes	NA	NA	NA	NA
KAFB-106239	Average Operational Flow Rate[a] (gpm)	74.1	72.4	74.1	73.5
	Flow Rate Range[b] (gpm; min-max)	72.2 - 75.5	0.0 - 73.7	0.0 - 74.7	0.0 - 75.5
	Average Drawdown[c] (ft)	9.7	10.0	8.3	9.4
	Water Level Elevation Range[b] (ft; min-max)	4864.8 - 4866.1	4864.4 - 4877.6	4865.5 - 4877.7	4864.4 - 4877.7
	Average Specific Capacity[d] (gpm/ft)	7.7	7.3	9.0	7.9
	Average Transmissivity[d] (gpd/ft)	11,488	10,964	13,578	11,921
	Run Time %[e]	98%	83%	77%	86%
	Notes	NA	NA	NA	NA
Combined Extraction Well Totals	Combined Average Operational Flow Rate[a] (gpm)	535.1	482.4	469.3	495.5
	Combined Flow Rate Range (gpm)	532.5 - 538.0	304.9 - 540.7	214.6 - 555.6	214.6 - 555.6
	Run Time %[e]	98%	99%	97%	98%

Table 5-3
Groundwater Treatment System Extraction Well Performance, Q2 2019

[a] Flow rate calculation is an average rate that only includes time while the system was operational; average values were computed from daily values throughout Q2 2019.

[b] Ranges are provided from daily values throughout Q2 2019.

[c] Average drawdown calculated from approximate static water elevation in Q2 2019, only includes time while system was operational and does not account for dynamic water elevation increases in the aquifer; average values were computed from daily values throughout Q1 that were obtained from the HMI for all the extraction wells.

[d] Specific capacity and transmissivity average values only include pump run time (i.e., pump down time is not factored into the calculation); average values were computed from daily values throughout Q2.

[e] Percent run time is calculated when the given well is running at a minimum of 50 gpm; dataset includes readings for every minute throughout Q2.

% = percent

ft = foot/feet
gpd = gallon per day

gpm = gallon per minute

HMI = human machine interface
max = maximum
min = minimum
NA = not applicable
Q2 = second quarter

Table 5-4
Groundwater Treatment System Injection Well Performance, Q2 2019

Well ID	Well Parameter	April	May	June	Q2
KAFB-7	Average Operational Flow Rate[a] (gpm)	555.1	503.4	429.9	517.9
	Flow Rate Range[b] (gpm; min-max)	0.0 - 663.6	0.0 - 662.9	0.0 - 662.6	0.0 - 663.6
	Volume Injected[c] (gal)	7,170,800	5,779,900	1,512,500	4,821,067
	Average Water Level Elevation[d] (ft AMSL)	4889.2	4886.8	4882.3	4,886.1
	Water Level Elevation Range[d] (ft AMSL)	4872.9 - 4913.4	4875.3 - 4917.9	4874.7 - 4912.7	4872.9 - 4917.9
	Notes	NA	NA	NA	NA
GWTS Effluent	Average Operational Flow Rate[a] (gpm)	542.1	481.9	496.4	499.4
	Flow Rate Range[b] (gpm; min-max)	0.0 - 670.4	0.0 - 764.5	0.0 - 698.6	0.0 - 764.5

[a] Flow rate calculation is an average rate that only includes time while the system was operational; average values were computed from HMI values throughout Q2 2019.

[b] Ranges are provided from HMI values throughout Q2 2019. KAFB-7 flow rate fluctuates due to surging, etc. and is not consistent with GWTS effluent flow rates.

[c] Volume injected is calculated using totalizer readings from flow meters installed on the GWTS effluent skids. June injection volume calculated through June 30, 2019.

[d] Water level elevation averages and ranges include times when injection wells are not being utilized and data was collected from the HMI for Q2

AMSL = above mean sea level

ft = foot/feet

gal = gallon

gpd = gallon per day

gpm = gallon per minute

GWTS = groundwater treatment system

HMI = human machine interface

max = maximum

min = minimum

NA = not applicable

Table 5-5
Groundwater Treatment System EDB Removal, Q2 2019

Treatment Train	Month	Date[a]	Cumulative Volume Extracted (gal)	Monthly Volume Treated (gal)	EDB Concentration (µg/L)[b]	Cumulative Mass of EDB Extracted (mg)	Mass of EDB Removed (mg)[c]
Train 1	April	4/1/2019	387,614,900	12,729,900	0.013	77,760	1060
		4/8/2019	390,812,200		0.022	78,027	
		4/15/2019	393,992,900		0.022	78,292	
		4/22/2019	397,185,000		0.022	78,557	
		4/29/2019	400,344,800		0.022	78,821	
	May	5/6/2019	402,379,600	12,789,200	0.016	78,727	558
		5/13/2019	405,106,900		0.016	78,892	
		5/20/2019	408,204,600		0.016	79,080	
		5/27/2019	411,126,500		0.016	79,257	
		6/3/2019	413,134,000		0.016	79,379	
	June	6/10/2019	415,097,700	9,569,300	0.015	79,406	543
		6/17/2019	417,262,400		0.015	79,529	
		6/24/2019	420,344,400		0.015	79,704	
		7/1/2019	422,703,300		0.015	79,922	
Train 2	April	4/1/2019	219,231,600	8,472,000	0.029	35,566	609
		4/8/2019	221,305,900		0.019	35,715	
		4/15/2019	223,436,600		0.019	35,868	
		4/22/2019	225,577,500		0.019	36,022	
		4/29/2019	227,703,600		0.019	36,175	
	May	5/6/2019	229,767,800	10,082,100	0.028	36,612	1287
		5/13/2019	231,900,500		0.028	36,838	
		5/20/2019	234,007,800		0.028	37,061	
		5/27/2019	236,314,300		0.028	37,306	
		6/3/2019	237,785,700		0.028	37,462	
	June	6/10/2019	239,857,400	7,798,200	0.029	37,751	838
		6/17/2019	241,525,400		0.029	37,934	
		6/24/2019	243,544,100		0.029	38,156	
		7/1/2019	245,583,900		0.029	38,299	

Table 5-5
Groundwater Treatment System EDB Removal, Q2 2019

Treatment Train	Month	Date[a]	Cumulative Volume Extracted (gal)	Monthly Volume Treated (gal)	EDB Concentration (µg/L)[b]	Cumulative Mass of EDB Extracted (mg)	Mass of EDB Removed (mg)[c]
Q2 2019 Train 1 Total				35,088,400			2,161
Q2 2019 Train 2 Total				26,352,300			2,734
Q2 2019 Total				61,440,700			4,895

[a] Monthly date ranges may include dates falling outside of the actual month as weekly human machine interface data retrievals occur every Monday.
[b] Estimated EDB concentrations from monthly EDB sampling.
[c] Quantities of mass = sum of weekly influent concentration multiplied by respective weekly treated volume.
µg/L = microgram per liter
EDB = ethylene dibromide
gal = gallon
mg = milligram

Table 5-6
Monthly Groundwater Treatment System Performance Analytical Results for Train 1, Q2 2019

			Well Location ID:		GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1		
			Field Sample ID:		GWTS-INF1-040419			GWTS-GAC1-040419			GWTS-EFF1-040419			GWTS-EFF1DUP-040419			GWTS-INF1-050119			GWTS-GAC1-050119		
			Sample Date:		4/4/2019			4/4/2019			4/4/2019			4/4/2019			5/1/2019			5/1/2019		
			Sample Type:		REG			REG			REG			Field Duplicate			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	0.022	J	0.019	0.026	J	0.019	0.015	J	0.019	0.014	J	0.019	0.016	J	0.019	0.02	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	0.0025	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.5	ND	U	0.1	0.293	--	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0028	J	0.0025	ND	U	0.0025	ND	U	2	ND	U	0.0025	0.0032	J	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.9			19.8			19.8						19.9			19.9		
		Spec Cond (µS/cm)	NS	NS	418.1			417.1			416.6						456.9			455.6		
		pH (S.U.)	NS	NS	7.8			7.52			7.43						7.59			7.2		
		ORP (mV)	NS	NS	699.4			155.3			467.2						78.7			77.9		
		DO (mg/L)	NS	NS	6.91			3.73			7.13						5.8			3.36		

Table 5-6
Monthly Groundwater Treatment System Performance Analytical Results for Train 1, Q2 2019

			Well Location ID:		GWTS-BFF-EFF1			GWTS-BFF-EFF2			GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1		
			Field Sample ID:		GWTS-EFF1-050119			GWTS-EFF2DUP-050119			GWTS-INF1-060619			GWTS-GAC1-060619			GWTS-EFF1-060619		
			Sample Date:		5/1/2019			5/1/2019			6/6/2019			6/6/2019			6/6/2019		
			Sample Type:		REG			Field Duplicate			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	ND	U	0.019	0.015	J	0.019	0.02	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.1	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1
		Xylenes, Total	620	620	ND	U	0.0025	ND	U	2	ND	U	2	ND	U	2	ND	U	0.0025
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.5	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.5
		Manganese, dissolved	0.2	0.2	ND	U	2	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	2
Field Parameters		Temperature (°C)	NS	NS	19.9						19.5			19.5			1		
		Spec Cond (µS/cm)	NS	NS	455						535.3			534.7			5		
		pH (S.U.)	NS	NS	7.12						7.87			7.55			7		
		ORP (mV)	NS	NS	85.7						7			5.1			4		
		DO (mg/L)	NS	NS	5.63						5.1			3.36			4		

Table 5-6
Monthly Groundwater Treatment System Performance Analytical Results for Train 1, Q2 2019

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018).

[b] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

µg/L = microgram per liter
µS/cm = microSiemens per centimeter
ºC = degree Celsius
BFF = Bulk Fuels Facility
EDB = ethylene dibromide (1,2-dibromoethane)
EFF = effluent
EPA = U.S. Environmental Protection Agency
ft = foot/feet
GAC = granular activated carbon
GWTS = groundwater treatment system
ID = identification
INF = influent
LOD = limit of detection
MCL = maximum contaminant level
mg/L= milligram per liter
mV = millivolt
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
ORP = oxidation reduction potential
REG = normal field sample
RSL = regional screening level
Spec Cond = specific conductivity
S.U. = standard unit
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation.
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.

Table 5-7
Monthly Groundwater Treatment System Performance Analytical Results for Train 2, Q2 2019

			Well Location ID:		GWTS-BFF-INF2			GWTS-BFF-GAC2			GWTS-BFF-EFF2			GWTS-BFF-INF2			GWTS-BFF-GAC2		
			Field Sample ID:		GWTS-INF2-040419			GWTS-GAC2-040419			GWTS-EFF2-040419			GWTS-INF2-050119			GWTS-GAC2-050119		
			Sample Date:		4/4/2019			4/4/2019			4/4/2019			5/1/2019			5/1/2019		
			Sample Type:		REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	0.018	J	0.019	ND	U	0.019	0.028	J	0.019	0.014	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0304	--	0.0025	ND	U	0.0025	ND	U	0.0025	0.0348	--	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.9			19.7			19.8			20.1			20.1		
		Spec Cond (µS/cm)	NS	NS	332.9			331.8			331.1			361.7			359.8		
		pH (S.U.)	NS	NS	7.97			7.46			7.42			7.54			7.11		
		ORP (mV)	NS	NS	410.6			153.5			129.9			74			75.5		
		DO (mg/L)	NS	NS	6.23			1.24			4.97			6.79			1.21		

Table 5-7
Monthly Groundwater Treatment System Performance Analytical Results for Train 2, Q2 2019

			Well Location ID:		GWTS-BFF-EFF2			GWTS-BFF-EFF2			GWTS-BFF-INF2			GWTS-BFF-GAC2			GWTS-BFF-EFF2		
			Field Sample ID:		GWTS-EFF2-050119			GWTS-EFF2DUP-050119			GWTS-INF2-060619			GWTS-GAC2-060619			GWTS-EFF2-060619		
			Sample Date:		5/1/2019			5/1/2019			6/6/2019			6/6/2019			6/6/2019		
			Sample Type:		REG			Field Duplicate			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	ND	U	0.019	0.029	--	0.019	0.011	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	J	0.1
		Manganese, dissolved	0.2	0.2	ND	U	0.0025	ND	U	0.0025	0.0407	--	0.0025	ND	U	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	20.1			20.1			19.6			19.8			19.7		
		Spec Cond (µS/cm)	NS	NS	359.9			359.9			430.4			429.7			427		
		pH (S.U.)	NS	NS	6.99			6.99			7.83			7.41			7.33		
		ORP (mV)	NS	NS	125.8			125.8			33.6			31.4			51		
		DO (mg/L)	NS	NS	4.89			4.89			4.73			0.97			3.85		

Table 5-7
Monthly Groundwater Treatment System Performance Analytical Results for Train 2, Q2 2019

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018).

[b] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

µg/L = microgram per liter
µS/cm = microSiemens per centimeter
ºC = degree Celsius
BFF = Bulk Fuels Facility
EDB = ethylene dibromide (1,2-dibromoethane)
EFF = effluent
EPA = U.S. Environmental Protection Agency
ft = foot/feet
GAC = granular activated carbon
GWTS = groundwater treatment system
ID = identification
INF = influent
LOD = limit of detection
MCL = maximum contaminant level
mg/L= milligram per liter
mV = millivolt
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
ORP = oxidation reduction potential
REG = normal field sample
RSL = regional screening level
Spec Cond = specific conductivity
S.U. = standard unit
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Val Quals based on independent data validation.
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Validation qualifier not assigned.

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1		
			Field Sample ID:		GWTS-INF1-061319			GWTS-GAC1-061319			GWTS-EFF1-061319			GWTS-INF1-061419			GWTS-GAC1-061419		
			Sample Date:		6/13/2019			6/13/2019			6/13/2019			6/14/2019			6/14/2019		
			Sample Type:		REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	0.014	J	0.019	ND	U	0.019	ND	U	0.019	0.014	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0023	J	0.0025	ND	U	0.0025	0.0154	J	0.0025	0.0018	J	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.6			19.7			19.8			19.6			19.6		
		Spec Cond (µS/cm)	NS	NS	503.2			500.5			512.5			407.6			409.2		
		pH (S.U.)	NS	NS	7.82			7.37			8.71			7.78			7.52		
		ORP (mV)	NS	NS	6.2			6.7			48.1			26			33.1		
		DO (mg/L)	NS	NS	5.19			0.86			4.9			5.69			2.99		

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-EFF1		
			Field Sample ID:		GWTS-EFF1-061419			GWTS-INF1-061519			GWTS-GAC1-061519			GWTS-EFF1-061519			GWTS-EFF1DUP-061519		
			Sample Date:		6/14/2019			6/15/2019			6/15/2019			6/15/2019			6/15/2019		
			Sample Type:		REG			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	0.014	J	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0087	J	0.0025	0.0016	J	0.0025	ND	U	0.0025	0.0048	J	0.0025	0.0048	J	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.7			19.7			19.7			19.7			19.7		
		Spec Cond (µS/cm)	NS	NS	408.9			407.9			408.5			409.3			409.3		
		pH (S.U.)	NS	NS	8.35			7.8			7.46			8.31			8.31		
		ORP (mV)	NS	NS	95.2			26.7			38.6			72.7			72.7		
		DO (mg/L)	NS	NS	5.35			5.77			3.14			4.97			4.97		

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1		
			Field Sample ID:		GWTS-INF1-061619			GWTS-GAC1-061619			GWTS-EFF1-061619			GWTS-INF1-061719			GWTS-GAC1-061719		
			Sample Date:		6/16/2019			6/16/2019			6/16/2019			6/17/2019			6/17/2019		
			Sample Type:		REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	0.014	J	0.019	ND	U	0.019	ND	U	0.019	0.013	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0016	J	0.0025	ND	U	0.0025	0.0031	J	0.0025	0.0016	J	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.6			19.6			19.7			19.7			19.7		
		Spec Cond (µS/cm)	NS	NS	431.2			430.3			432			693			692		
		pH (S.U.)	NS	NS	7.72			7.4			7.92			7.77			7.38		
		ORP (mV)	NS	NS	27.4			52.6			77.6			29.4			45		
		DO (mg/L)	NS	NS	5.91			3.58			5.67			5.93			3.11		

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-EFF1		
			Field Sample ID:		GWTS-EFF1-061719			GWTS-INF1-061819			GWTS-GAC1-061819			GWTS-EFF1-061819			GWTS-EFF1DUP-061819		
			Sample Date:		6/17/2019			6/18/2019			6/18/2019			6/18/2019			6/18/2019		
			Sample Type:		REG			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	0.014	J	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0022	J	0.0025	0.0016	J	0.0025	ND	U	0.0025	0.002	J	0.0025	0.0018	J	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.8			19.6			19.7			19.7			19.7		
		Spec Cond (µS/cm)	NS	NS	693			709			708			710			710		
		pH (S.U.)	NS	NS	7.62			7.84			7.48			7.69			7.69		
		ORP (mV)	NS	NS	88			27.1			41.9			77.4			77.4		
		DO (mg/L)	NS	NS	5.9			6.17			3.32			5.47			5.47		

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1		
			Field Sample ID:		GWTS-INF1-061919			GWTS-GAC1-061919			GWTS-EFF1-061919			GWTS-INF1-062019			GWTS-GAC1-062019		
			Sample Date:		6/19/2019			6/19/2019			6/19/2019			6/20/2019			6/20/2019		
			Sample Type:		REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	0.014	J	0.019	ND	U	0.019	ND	U	0.019	0.016	J	0.019	0.012	J	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0015	J	0.0025	ND	U	0.0025	0.0017	J	0.0025	0.0016	J	0.0025	ND	U	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.7			19.7			19.7			19.7			19.7		
		Spec Cond (µS/cm)	NS	NS	809			807			801			851			850		
		pH (S.U.)	NS	NS	7.81			7.46			7.69			7.87			7.44		
		ORP (mV)	NS	NS	30.1			45.9			66.2			31.7			44.1		
		DO (mg/L)	NS	NS	6.32			3.47			5.89			5.93			3.2		

Table 5-8
GWTS GAC Changeout Analytical Results for Train 1, Q2 2019

			Location ID:		GWTS-BFF-EFF1			GWTS-BFF-INF1			GWTS-BFF-GAC1			GWTS-BFF-EFF1			GWTS-BFF-EFF1		
			Field Sample ID:		GWTS-EFF1-062019			GWTS-INF1-062619			GWTS-GAC1-062619			GWTS-EFF1-062619			GWTS-EFF1DUP-062619		
			Sample Date:		6/20/2019			6/26/2019			6/26/2019			6/26/2019			6/26/2019		
			Sample Type:		REG			REG			REG			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	ND	U	0.019	0.0097	J	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	620	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	0.2	0.0019	J	0.0025	0.002	J	0.0025	ND	U	0.0025	0.0031	J	0.0025	0.0029	J	0.0025
Field Parameters		Temperature (°C)	NS	NS	19.8			19.8			20			20			20		
		Spec Cond (µS/cm)	NS	NS	853			821			842			831			831		
		pH (S.U.)	NS	NS	7.44			7.93			7.42			7.14			7.14		
		ORP (mV)	NS	NS	63.7			28			15.3			67.3			67.3		
		DO (mg/L)	NS	NS	5.24			6.02			1.3			5.38			5.38		

Table 5-9
Groundwater Treatment System Routine Maintenance Schedule, Q2 2019

	Frequency			
Maintenance Activity	**Daily**	**Weekly**	**Monthly**	**As Needed**
Recording and inspecting influent, GAC vessel, and effluent skid pressure, flow rate, and totalizer readings from their respective gauges and the human machine interface	X			
Recording extraction well pressure, flow rate, and totalizer readings from the human machine interface	X			
Recording extraction well pressure, flow rate, and totalizer readings from the gauges at the well vaults		X		
Inspecting well control house and recording well control house pressure, flow rate, and totalizer readings		X		
Recording totalizer reading at KAFB-7		X		
Running and inspecting the GWTS air compressor		X		
Inspecting extraction well, conveyance line, and air release valve vaults			X	
Inspecting wellhead and associated equipment of injection well KAFB-7			X	
Inspecting and performing maintenance of flowmeters throughout the system			X	
Inspecting and performing maintenance on actuating valves throughout the system			X	
Performing confined space entries			X	
Gauging extraction well filter pack			X	
Semiannual inspections and maintenance of Tijeras Arroyo Gold Course ponds				X
Logging lockout-tagout entries				X
Logging system shutdowns				X
Emptying storm water runoff flooded vaults				X
Performing air compressor maintenance				X
Cleaning GWTS sumps				X
Draining air release valve containment vessels				X
Grounds keeping including vegetation control				X
Inspecting and cleaning the GWTS Wye-strainer				X
Performing flow meter calibration				X[a]
Greasing pump bearings				X[b]
Changing process pump oil				X[b]
Changing air filter on control room air conditioner				X[b]
Changing bag filters				X[c]
Changing out GAC				X[c]
Disinfection of extraction wells and conveyance lines				X[d]
Testing of alarms and interlocks				X[e]
Cleaning coils and replacing air filter for the Well Control House air conditioner				X[f]
GAC Skimming of the lead GAC vessel				X[g]

Table 5-9
Groundwater Treatment System Routine Maintenance Schedule, Q2 2019

[a] Flowmeters are calibrated at a minimum of once per year, but may be calibrated more often as needed.

[b] Changing of process pump oil, greasing pump bearings, and replacing the air filter in the air conditioning unit are required every 3 months, but may be changed more often as needed.

[c] Bag filters are scheduled for change out when the pressure differential across a bag filter vessel exceeds 15 psi and GAC is scheduled for change out when the pressure differential across a GAC vessel exceeds 10 psi.

[d] Disinfection of extraction wells and conveyance lines occurs semiannually or more often as needed.

[e] Testing of alarms and interlocks occurs annually or more often as needed.

[f] Cleaning of the coil and replacing of the air filter are scheduled as quarterly activities, but frequency may be adjusted as necessary.

[g] GAC skimming is performed when the differential pressure in the lead GAC vessel has increased from the operational differential pressure by at least 7 psi.

GAC = granular activated carbon
GWTS = groundwater treatment system
KAFB = Kirtland Air Force Base
psi = pound per square inch

Table 5-10
Groundwater Treatment System Non-Routine Maintenance Items, Q2 2019

Date	Extent of Shutdown	Approximate Downtime (hours)	Cause of Shutdown
5/2/2019	GWTS Train 1	1.0	Removed the Train 1 GAC Tank A slurry line to fix a leak in the pipe
5/6/2019	N/A	N/A	Began initial temporary shutdown of the Miox sodium hypochlorite generator
5/9/2019	N/A	N/A	Added a drain to the sodium hypochlorite generator brine tank to facilitate temporary generator shutdown
5/14/2019	N/A	N/A	Completed temporary shutdown of the Miox sodium hypochlorite generator
5/15/2019	GWTS Train 1	5.0	Reattached the Train 1 GAC Tank A slurry line after fix; took samples of the Train 1 GAC Tank B carbon for analysis
5/16/2019	GWTS Train 1	1.0	Rewelded the Train 1 GAC Tank A slurry line when a small leak was found at the new weld on an elbow joint
5/24/2019	KAFB-106239	12.0	Disinfected KAFB-106239
5/28/2019	KAFB-106239	12.0	Disinfected KAFB-106239
5/30/2019	KAFB-106233, KAFB-106234	12.0	Disinfected KAFB-106233, KAFB-106234
5/31/2019	KAFB-106233, KAFB-106234	12.0	Disinfected KAFB-106233, KAFB-106234
6/4/2019	KAFB-106228	12.0	Disinfected KAFB-106228
6/5/2019	KAFB-106228	12.0	Disinfected KAFB-106228
6/11/2019	GWTS Train 1	17.0	Changed-out the GAC in the Train 1 GAC Tank B
6/12/2019	GWTS Train 1	24.0	Train 1 offline to allow new GAC to settle
6/13/2019	GWTS Train 1	10.0	Backwashed new GAC in the Train 1 GAC Tank B
6/25/2019	KAFB-106234	17.0	Replaced pump in KAFB-106234
6/26/2019	KAFB-106234	24.0	Replaced pump in KAFB-106234
6/27/2019	KAFB-106234	24.0	Replaced pump in KAFB-106234
6/28/2019	KAFB-106234	15.0	Replaced pump in KAFB-106234

ARV = air relief valve
CPVC = chlorinated polyvinyl chloride
GCMP = Golf Course main pond
GWTS = groundwater treatment system
HMI = human machine interface
KAFB = Kirtland Air Force Base
PLC = programmable logic controller
VFD = variable-frequency drive

Table 5-11
Horizontal Capture Analysis for the Target Capture Zone

Sample Period	Capture Interval	Plume[a]		Horizontal Capture[a]		Percent Captured	
		Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)	Volume	Mass
2016 Q4	REI 4857	6.57E+07	64	6.57E+07	64	100.0%	100.0%
	REI 4838	4.90E+07	40	4.53E+07	38	92.5%	95.0%
		1.15E+08	104	1.11E+08	102	96.8%	98.1%
2017 Q2	REI 4857	4.75E+07	47	4.75E+07	47	100.0%	100.0%
	REI 4838	4.13E+07	34	4.13E+07	34	100.0%	100.0%
		8.88E+07	82	8.88E+07	82	100.0%	100.0%
2017 Q4	REI 4857	5.30E+07	45	5.30E+07	45	100.0%	100.0%
	REI 4838	4.58E+07	35	4.58E+07	35	100.0%	100.0%
		9.89E+07	80	9.89E+07	80	100.0%	100.0%
2018 Q2	REI 4857	2.24E+07	11	2.24E+07	11	100.0%	100.0%
	REI 4838	1.44E+07	8	1.44E+07	8	100.0%	100.0%
		3.68E+07	19	3.68E+07	19	100.0%	100.0%
2018 Q4	REI 4857	1.92E+07	12	1.92E+07	12	100.0%	100.0%
	REI 4838	9.39E+06	5	9.39E+06	5	100.0%	100.0%
		2.85E+07	17	2.85E+07	17	100.0%	100.0%
2019 Q2	REI 4857	9.65E+06	5	9.65E+06	5	100.0%	100.0%
	REI 4838	1.24E+07	6	1.24E+07	6	100.0%	100.0%
		2.21E+07	11	2.21E+07	11	100.0%	100.0%

[a] Plume mass value assumes a uniform total porosity of 25% for the aquifer

Differences between total and summed interval values are due to rounding errors in the interval values.

REI = Reference elevation interval

Table 5-12
Extraction Well Horizontal Capture Analysis for the Target Capture Zone

Sample Period	Dissolved EDB Plume Segment North of Ridgecrest	REI 4857				REI 4838			
		Volume		Mass[a]		Volume		Mass[a]	
		Cubic Feet	Percent Captured	Grams	Percent Captured	Cubic Feet	Percent Captured	Grams	Percent Captured
2016 Q4	KAFB-106228 cb	4.27E+07	65.0%	37	57.4%	3.24E+07	66.0%	25	63.0%
	KAFB-106233 cb	0.00E+00	0.0%	0	0.0%	0.00E+00	0.0%	0	0.0%
	KAFB-106234 cb	2.30E+07	35.0%	27	42.6%	1.29E+07	26.0%	12	31.0%
	TOTAL	6.57E+07	100.0%	64	100.0%	4.53E+07	92.0%	38	94.0%
2017 Q2	KAFB-106228 cb	1.27E+07	26.8%	13	27.7%	2.47E+07	59.8%	24	69.0%
	KAFB-106233 cb	1.83E+07	38.5%	10	21.3%	1.44E+07	35.0%	9	26.0%
	KAFB-106234 cb	1.65E+07	34.7%	24	51.1%	2.15E+06	5.2%	2	4.9%
	TOTAL	4.75E+07	100.0%	47	100.0%	4.13E+07	100.0%	34	100.0%
2017 Q4	KAFB-106228 cb	2.86E+07	54.0%	21	46.7%	3.26E+07	71.1%	25	71.4%
	KAFB-106233 cb	3.94E+06	7.4%	2	4.4%	4.30E+06	9.4%	2	5.7%
	KAFB-106234 cb	2.05E+07	38.6%	22	48.9%	8.95E+06	19.5%	8	22.9%
	TOTAL	5.30E+07	100.0%	45	100.0%	4.58E+07	100.0%	35	100.0%
2018 Q2	KAFB-106228 cb	6.86E+06	30.6%	3	31.3%	1.41E+07	97.8%	8	98.2%
	KAFB-106233 cb	8.63E+06	38.6%	4	35.4%	8.19E+01	0.0%	0	0.0%
	KAFB-106234 cb	6.74E+06	30.1%	4	32.4%	3.18E+05	2.2%	0	1.8%
	KAFB-106239 cb	1.58E+05	0.7%	0	0.8%	0.00E+00	0.0%	0	0.0%
	TOTAL	2.24E+07	100.0%	11	100.0%	1.44E+07	100.0%	8	100.0%
2018 Q4	KAFB-106228 cb	6.66E+06	34.8%	4	32.2%	8.49E+06	90.4%	4	90.7%
	KAFB-106233 cb	0.00E+00	0.0%	0	0.0%	0.00E+00	0.0%	0	0.0%
	KAFB-106234 cb	7.42E+06	38.8%	5	41.4%	8.09E+05	8.6%	0	8.4%
	KAFB-106239 cb	5.07E+06	26.4%	3	26.4%	9.62E+04	1.0%	0	0.9%
	TOTAL	1.92E+07	100.0%	12	100.0%	9.39E+06	100.0%	5	100.0%

Table 5-12
Extraction Well Horizontal Capture Analysis for the Target Capture Zone

Sample Period	Dissolved EDB Plume Segment North of Ridgecrest	REI 4857				REI 4838			
		Volume		Mass[a]		Volume		Mass[a]	
		Cubic Feet	Percent Captured	Grams	Percent Captured	Cubic Feet	Percent Captured	Grams	Percent Captured
2019 Q2	KAFB-106228 cb	4.96E+06	51.4%	2	50.4%	8.57E+06	68.9%	4	68.9%
	KAFB-106233 cb	5.08E+03	0.1%	0	0.0%	1.72E+05	1.4%	0	1.0%
	KAFB-106234 cb	0.00E+00	0.0%	0	0.0%	0.00E+00	0.0%	0	0.0%
	KAFB-106239 cb	4.69E+06	48.5%	2	49.6%	3.69E+06	29.7%	2	30.1%
	TOTAL	9.65E+06	100.0%	5	100.0%	1.24E+07	100.0%	6	100.0%

[a] Plume mass value assumes a uniform total porosity of 25% for the aquifer

Differences between total and summed interval values are due to rounding errors in the interval values.

% = percent

cb = capture basin

EDB = ethylene dibromide (1,2-dibromoethane)

Q2 = second quarter

Q4 = fourth quarter

REI = reference elevation interval (feet above mean sea level)

Table 5-13
Vertical Containment Analysis for the Target Capture Zone

Sample Period	Dissolved EDB Plume Segment North of Ridgecrest Drive SE	Plume[a]		Vertical Containment[a]		Percent Contained	
		Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)	Volume	Mass
2016 Q4	Above REI 4838 mid-point	8.31E+07	80	6.35E+07	59	76.3%	73.8%
	Below REI 4838 mid-point	3.15E+07	24	1.73E+07	14	54.8%	58.3%
	Total	1.15E+08	104	8.08E+07	73	70.4%	70.2%
2017 Q2	Above REI 4838 mid-point	5.87E+07	55	5.24E+07	47	89.3%	85.0%
	Below REI 4838 mid-point	3.01E+07	26	2.36E+07	18	78.5%	68.5%
	Total	8.88E+07	82	7.60E+07	65	85.6%	79.9%
2017 Q4	Above REI 4838 mid-point	6.81E+07	58	5.77E+07	48	84.7%	82.8%
	Below REI 4838 mid-point	3.07E+07	22	2.23E+07	15	72.5%	68.2%
	Total	9.89E+07	80	8.00E+07	63	80.9%	78.0%
2018 Q2	Above REI 4838 mid-point	2.24E+07	11	1.44E+07	7	64.4%	63.4%
	Below REI 4838 mid-point	1.44E+07	8	7.99E+06	4	55.3%	51.9%
	Total	3.68E+07	19	2.24E+07	11	60.8%	58.6%
2018 Q4	Above REI 4838 mid-point	1.92E+07	12	1.92E+07	12	100.0%	100.0%
	Below REI 4838 mid-point	9.39E+06	5	9.14E+06	5	97.4%	97.6%
	Total	2.85E+07	17	2.83E+07	16	99.1%	99.3%
2019 Q2	Above REI 4838 mid-point	9.65E+06	5	9.65E+06	5	100.0%	100.0%
	Below REI 4838 mid-point	1.24E+07	6	1.24E+07	6	100.0%	100.0%
	Total	2.21E+07	11	2.21E+07	11	100.0%	100.0%

[a] Plume mass value assumes a uniform total porosity of 25% for the aquifer

Differences between total and summed interval values are due to rounding errors in the interval values.

EDB = ethylene dibromide (1,2-dibromoethane)

REI = reference elevation interval (feet above mean sea level)

Table 5-14
Summary of Model Assignments and Completion Details for Model Domain Wells, Q2 2019

	Model Assignments					Well Completion Information					
Location ID	Extraction Rate (gpm)	Well Radius (in.)	Top of Screen Elevation (ft)	Bottom Of Screen Elevation (ft)	Model Layer	Ground Surface Elevation (ft)	Depth to Screen Top (ft)	Depth to Screen Bottom (ft)	Screen Interval (ft)	Pump Capacity (gpm)	Percent of Screen Interval Above A2
KAFB-3	650	7	4,905	4,546	1, 2, 3, 4	5,357	452	900	448	650	80%
KAFB-7	-169	8	4,774	4,701	3, 4	5,352	578	976	374	NA	20%
KAFB-20	0	10	4,680	4,570	4	5,390	710	1180	380	1400	29%
KAFB-106228	138	4	4,882	4,782	1, 2, 3	5,322	440	540	100	150	100%
KAFB-106233	160	4	4,884	4,782	1, 2, 3	5,314	430	532	102	175	100%
KAFB-106234	156	4	4,886	4,786	1, 2, 3	5,326	440	540	100	175	100%
KAFB-106239	74	4	4,863	4,761	1, 2, 3	5,333	470	573	103	75	100%
VA-2	32.4	7	4,753	4,697	4	5,343	590	990	360	750	16%

Negative extraction rate indicates injection

KAFB-20 has three screen intervals (120, 80, 180 ft) totaling 380 ft broken by blank casing lengths of 30 and 60 ft

VA-2 has two screen intervals of 180 ft each separated by 40 ft of blank casing

KAFB-7 has two screen intervals below the water table (278, 96 ft) totaling 374 ft separated by 24 ft of blank casing

KAFB-3 penetrates but is not screened below A2

KAFB-106228 was calculated to running at 92% of pump capacity before gauging

KAFB-106234 was calculated to running at 89% of pump capacity before gauging

KAFB-106239 was calculated to be running at 99% of pump capacity before gauging

KAFB-106233 was calculated to be running at 91% of pump capacity before gauging

Table 5-15
Comparison of Capture Zone Evaluation Methods for the Target Capture Zone

Sample Period	Dissolved EDB Plume Segment North of Ridgecrest	Step 3: Potentiometric Surface Analysis				Step 4: Numerical Flow Model			
		Volume		Mass[a]		Volume		Mass[a]	
		Cubic Feet	Percent Captured	Grams	Percent Captured	Cubic Feet	Percent Captured	Grams	Percent Captured
2019 Q2	KAFB-106228 cb	1.35E+07	61.3%	7	61.0%	2.13E+07	96.5%	11	96.5%
	KAFB-106233 cb	1.77E+05	0.8%	0	0.6%	0.00E+00	0.0%	0	0.0%
	KAFB-106234 cb	0.00E+00	0.0%	0	0.0%	0.00E+00	0.0%	0	0.0%
	KAFB-106239 cb	8.38E+06	37.9%	4	38.5%	7.63E+05	3.5%	0.4	3.5%
	Total	2.21E+07	100%	11	100%	2.21E+07	100.0%	11	100.0%

[a] Plume mass value assumes a uniform total porosity of 25% for the aquifer

Differences between total and summed interval values are due to rounding errors in the interval values.

% = percent

cb = capture basin

EDB = ethylene dibromide (1,2-dibromoethane)

REI = reference elevation interval (feet above mean sea level)

Table 5-16
Summary of Target Capture Zone Evaluation

Step	Summary/Conclusions
Step 1: Review site data, site conceptual model, remedy objectives	Completed, all determined to be up-to-date and adequate. Nine new monitoring wells screened across the water-table have been installed and data measurements from these wells have been included to the Q2 2019 performance assessment.
Step 2: Define Target Capture Zone	Updated and clearly defined, illustrated on maps. Incorporates all new water-table wells. Does not pertain to entire thickness of aquifer. Dissolved ethylene dibromide plume volume and mass have been delineated at and above the Maximum Contaminant Level value in three dimensions.
Step 3a: Water level maps: Potentiometric Surface Analysis	Analysis is performed within the two reference elevation intervals shown to contain portions of the Target Capture Zone. Interpreted capture zone is larger than the Target Capture Zone within the Interim Remedy Objective Area in both reference elevation intervals. Analysis predicts 100% capture of the Target Capture Zone under Q2 2019 conditions.
Step 3b: Water level maps: Vertical Difference Analysis	Analysis is performed across the Target Capture Zone area at three distinct elevation intervals at depth within the aquifer. Interpreted vertical containment includes all of the Target Capture Zone within the Interim Remedy Objective Area. Analysis predicts dissolved ethylene dibromide plume is 100% hydraulically contained in the vertical direction in the Target Capture Zone under Q2 2019 conditions.
Step 3c: Water level pairs	Inward flow at all pairs along the Target Capture Zone boundary within the Interim Remedy Objective Area.
Step 4: Perform Calculations	Simple two-dimensional horizontal capture calculations were performed in 2016 but are not considered to be adequate to represent capture in this system and, therefore, were not updated in this reporting effort.
Step 4b: Groundwater flow modeling with particle tracking	Three-dimensional simulation of groundwater flow based on measured aquifer parameters and current extraction rates. Particle tracking results indicate capture of 100% of the Target Capture Zone within the Interim Remedy Objective Area for steady-state pumping at current rates and conditions.
Step 5: Concentration trends	Updated with current water chemistry data and indicates that the plume has not migrated into previously "clean" or previously remediated aquifer. Due to rising water table elevation, this analysis is not strongly relied upon for short-term evaluation of capture.
Step 6: Interpret actual capture and Compare to Target Capture Zone	The actual capture zone is interpreted to be sufficient relative to the Target Capture Zone within the Interim Remedy Objective Area. Steps 3 and 4 are in agreement that 100% of the Target Capture Zone is being hydraulically contained under Q2 2019 conditions. Results of Step 5 support that no loss of capture has occurred between assessment periods. Capture evaluation will continue to be performed every second and fourth quarter in order to address changes in capture zones due to changes in aquifer stresses (Interim Remedy and non-Interim Remedy based) and changes in regional flow-field.
Step 6: Interpret actual capture and Compare to Target Capture Zone	

Q2 = second quarter

Table 5-17
Plume Volume and Mass Comparison for the Target Capture Zone

Interval	Well		Q4 2016		Q2 2017		Q4 2017	
	From	To	Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)	Volume (cubic feet)	Mass (grams)
A	Ridgecrest Dr	KAFB-106090	18,450,000	13	4,328,300	2	10,891,000	7
B	KAFB-106090	KAFB-106228	33,142,000	31	33,313,000	26	25,969,000	20
C	KAFB-106228	KAFB-106058	19,645,000	17	32,423,000	28	27,318,000	21
D	KAFB-106058	KAFB-106227	16,209,000	11	1,350,400	1	10,599,000	6
E	KAFB-106227	KAFB-106234	21,380,000	29	11,231,000	19	18,561,000	22
F	KAFB-106234	KAFB-106206	5,836,100	4	6,130,300	6	5,499,400	4
Total A-F (interim remedy TCZ)			**114,662,100**	**104**	**88,776,000**	**82**	**98,837,400**	**80**
Interval	**Well**		**Q2 2018**		**Q4 2018**		**Q2 2019**	
	From	**To**	**Volume (cubic feet)**	**Mass (grams)**	**Volume (cubic feet)**	**Mass (grams)**	**Volume (cubic feet)**	**Mass (grams)**
A	Ridgecrest Dr	KAFB-106090	8,896,200	4	6,275,400	4	7,731,200	4
B	KAFB-106090	KAFB-106228	15,300,000	8	8,242,000	5	8,553,400	4
C	KAFB-106228	KAFB-106058	5,550,900	3	5,762,500	3	5,783,300	3
D	KAFB-106058	KAFB-106227	248,520	0	0	0	0	0
E	KAFB-106227	KAFB-106234	5,841,800	3	6,037,500	4	0	0
F	KAFB-106234	KAFB-106206	963,770	0	2,193,000	1	0	0
Total A-F (interim remedy TCZ)			**36,801,190**	**19**	**28,510,400**	**16**	**22,067,900**	**11**

Differences between total and summed interval values are due to rounding errors in the interval values.

Mass value assumes a uniform total porosity of 25% for the contaminated thickness of the aquifer.

Interval F is split between the interim remedy objective area, and the area to the south of Ridgecrest Drive SE; however, the majority of the plume volume in this interval falls outside (to the south) of the interim remedy objective area (Figure 5-8), and this is interval is therefore used as a general dividing line.

Q2 = second quarter

Q4 = fourth quarter