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DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)

MAR 2 7 2017

Colonel Eric H. Froehlich, USAF
377th Air Base Wing Commander
2000 Wyoming Blvd SE
Kirtland AFB NM 87117-5000

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NMED
Hazardous Waste
Bureau

Mr. John Kieling, Bureau Chief
Hazardous Waste Bureau (HWB)
New Mexico Environment Department (NMED)
2905 Rodeo Park Drive East, Building 1
Santa Fe NM 87505-6303

Dear Mr. Kieling

Attached please find the *Quarterly Report for October – December 2016 and Annual Report for 2016, Bulk Fuels Facility Spill, Solid Waste Management Unit ST-106/SS-111, Kirtland Air Force Base, New Mexico, dated March 2017.* This report has been prepared to summarize soil vapor monitoring, groundwater monitoring, and interim measure activities associated with the groundwater capture and treatment system at ST-106/SS-111.

If you have any questions or concerns, please contact Mr. Scott Clark at (505) 846-9017 or at scott.clark@us.af.mil or Dr. Adria Bodour at (210) 241-6276 or at adria.bodour.1@us.af.mil.

Sincerely

ERIC H. FROEHLICH, Colonel, USAF
Commander

Attachment:
1. Quarterly Report for October – December 2016 and Annual Report 2016, BFF, March 2017; 2 Hard Copies/2 CDs

cc:
NMED-RPD (McQuillan)
NMED-GWQB (Agnew, Pullen)
EPA Region 6 (King, Ellinger)
SAF-IEE (Lynnes)
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377TH AIR BASE WING (AFGSC)

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KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

QUARTERLY MONITORING REPORT
OCTOBER-DECEMBER 2016
AND ANNUAL REPORT FOR 2016
BULK FUELS FACILITY
SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

March 2017

377 MSG/CEI
2050 Wyoming Boulevard SE
Kirtland Air Force Base, New Mexico 87117-5270

KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

Quarterly Monitoring Report – October-December 2016 and Annual Report for 2016
Bulk Fuels Facility
Solid Waste Management Unit ST-106/SS-111
Kirtland Air Force Base, New Mexico

March 2017

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

Prepared by
EA Engineering, Science, and Technology, Inc., PBC
320 Gold Avenue Southwest, Suite 1300
Albuquerque, New Mexico 87102
Contract No. W912DR-12-D-0006
Delivery Order DM01

NOTICE

This report was prepared for the U.S. Army Corps of Engineers by EA Engineering, Science, and Technology, Inc., PBC for the purpose of documenting the progress of an Interim Action being implemented by the U.S. Air Force Environmental Restoration Program (ERP) at Kirtland Air Force Base. As the report relates to actual or possible releases of potentially hazardous substances, its release prior to a final decision on remedial action may be in the public's interest. The limited objectives of this report and the ongoing nature of the ERP, along with the evolving knowledge of site conditions and chemical effects on the environment and health, must be considered when evaluating this report, since subsequent facts may become known that may make this report premature or inaccurate.

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14. ABSTRACT

This Quarterly and Annual Report describes activities performed from October 3 through December 31, 2016 and the annual 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. Quarterly source area soil vapor, groundwater, proximal drinking water from supply well, and groundwater treatment system (GWTS) samples were collected and analyzed for contaminants of concern and other relevant field and laboratory parameters. The GWTS extracted and treated 30,070,100 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. The initial assessment of horizontal capture between the second quarter (Q2) and fourth quarter (Q4) 2016 within the interim measure objective zone shows the GWTS has captured (horizontally) between 92 and 97 percent (%) of the plume volume and contained 93-99% of the plume mass. The initial assessment of vertical capture within the interim measure objective zone shows that the GWTS is less effective at producing vertical plume containment. Between Q2 and Q4 2016, the GWTS has captured (vertically) between 68 and 85% of the plume volume and between 67 and 87% of the plume mass. Plume volume and mass changes within the plume suggest that the plume mass is starting to migrate toward the extraction points as designed.

15. SUBJECT TERMS
Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111, Interim Measures, Resource Conservation and Recovery Act, soil vapor, vadose zone, groundwater sampling, groundwater treatment system operation, granular activated carbon, ethylene dibromide, vertical capture, horizontal capture, plume mass, performance assessment

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December 2016

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ERIC H. FROEHLICH, Colonel, U.S. Air Force
Commander, 377th Air Base Wing

This document has been approved for public release.

KIRTLAND AIR FORCE BASE
377th Air Base Wing Public Affairs

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PREFACE

This Quarterly and Annual Report – October-December 2016 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 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.

Quarterly monitoring of soil vapor, groundwater, and drinking water and operation of the groundwater treatment system were conducted from October 3 through December 30, 2016. Mr. Trent Simpler, PE, 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. Ms. Devon Jercinovic is the EA Project Manager.

Devon Jercinovic, PG, CPG, PMP
Project Manager
EA Engineering, Science, and Technology, Inc., PBC

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LIST OF ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
µg/L	microgram(s) per liter
µS/cm	microsiemens per centimeter
%	percent
AFB	Air Force Base
amsl	above mean sea level
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
DMS	dual-membrane sampler
DO	dissolved oxygen
EA	EA Engineering, Science, and Technology, Inc., PBC
EDB	ethylene dibromide
ELLE	Eurofins Lancaster Laboratories Environmental, LLC
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
GAC	granular activated carbon
gpm	gallon(s) per minute
GWM	groundwater monitoring
GWTS	groundwater treatment system
HC	total hydrocarbon
Horiba	Horiba MEXA 584L auto emissions analyzer
H/V	horizontal/vertical
ID	identification
IDW	investigation-derived waste
LNAPL	light non-aqueous phase liquid
MCL	maximum contaminant level
mg/L	milligram(s) per liter
MVS	Mining Visualization System
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
No.	number
NTU	nephelometric turbidity unit

LIST OF ACRONYMS AND ABBREVIATIONS (CONCLUDED)

O_2	oxygen
ORP	oxidation reduction potential
PDB	passive diffusion bag
ppmv	parts per million by volume
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
QC	quality control
RCRA	Resource Conservation and Recovery Act
REI	reference elevation interval
SE	southeast
SM	Standard Method
SVE	soil vapor extraction
SVM	soil vapor monitoring
SVMP	soil vapor monitoring point
SWMU	Solid Waste Management Unit
TPH	total petroleum hydrocarbon
USACE	U.S. Army Corps of Engineers
VA	Veterans Affairs
VFD	Variable Frequency Drive
VOC	volatile organic compound

EXECUTIVE SUMMARY

Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF), designated as Solid Waste Management Unit (SWMU) ST-106/SS-111, became a cleanup site in November 1999 after fuel was observed day-lighting from the ground surface near the BFF fuel off-loading rack. Subsequent pressure testing identified three leaks emanating from lines that transferred aircraft fuel from the off-loading rack to the BFF pump house. The leaking lines were immediately taken off-line and a temporary, alternate off-loading rack was installed and used until construction of a new state-of-the-art BFF was brought on-line in March 2011. The ongoing investigation and cleanup activities at the BFF site began in 1999 with characterization of the extent of fuel contamination along with removal of contaminated soil, soil vapor (from the vadose zone), and groundwater. These cleanup efforts are ongoing.

This Executive Summary describes soil vapor monitoring (SVM), groundwater monitoring (GWM), and interim measure activities performed at the BFF between October and December 2016, comprising the fourth quarter (Q4) of calendar year 2016 (Q4 2016) and summarizes all activities conducted during 2016 that include the following:

- Sampling the entire SVM and GWM networks
- Evaluating vertical chemical gradients within GWM well screens to determine the proper placement of passive samplers in the future
- Sampling the drinking water supply wells located in the vicinity of the dissolved benzene and ethylene dibromide (EDB, also known as 1,2-dibromoethane) plumes
- Expanding the GWM well network with the installation of nested wells at KAFB-106235 and KAFB-106236
- Expanding the groundwater treatment system (GWTS) to include construction of a second treatment train capable of treating an additional 400 gallons per minute (gpm), and installation of a fourth extraction well (KAFB-106239)
- Operating and maintaining the GWTS
- Evaluating the initial performance assessment of the GWTS horizontal and vertical capture between the second quarter (Q2) and Q4 2016 within the interim measure objective zone.

ES-1 Vadose Zone Monitoring

ES-1.1 Vadose Zone Q4 Summary

Soil vapor samples were collected from 56 SVM locations (comprised of a total of 284 individual SVM points [SVMPs]) for field parameter measurements and laboratory analyses. Each SVM location is comprised of up to six SVMPs that are screened at discrete intervals ranging from approximately 25- to 450-feet below ground surface (bgs). Each SVMP has a unique database identification (ID) that includes the SVM location followed by a number identifying the approximate depth of the screened interval (e.g., SVMW-04-250 is located at SVMW-04 and is screened at approximately 250-feet bgs).

SVM locations were separated into the three following areas of interest (AOIs) to evaluate soil vapor concentrations: off-Base SVM locations, on-Base SVM locations outside of the source area, and on-Base

SVM locations inside of the source area. The source area is defined as a 100-foot buffer zone around the original jet fuel pipeline that was the source of the BFF releases. Within each AOI, EDB, benzene, and total hydrocarbon (HC) concentrations were evaluated to determine areas of relative higher or lower contamination. Percent oxygen (O_2), along with carbon dioxide (CO_2) were measured at each SVMP, and were evaluated as indicators of aerobic HC biodegradation.

The off-Base SVM AOI includes 28 SVMPs ranging in depth from approximately 25- to 450-feet bgs. All EDB, benzene, and HC concentrations in this area were below the three comparison concentrations of 0.5, 1, and 1,000 parts per million by volume (ppmv), respectively. The comparison concentrations used in this Report were determined using historical maximum and minimum soil vapor concentrations to illustrate the SVMPs with relatively high or low concentrations. The highest off-Base EDB and benzene concentrations (0.0015 and 0.006 ppmv, respectively) were detected in KAFB-106142-450. The highest HC concentration (5 ppmv) was detected in KAFB-106141-450 and KAFB-106138-250. O_2 levels in this area were near atmospheric, between 16.33 and 20.66 percent (%) (atmospheric O_2 is approximately 21%), and conducive to microbial activity. CO_2 levels were slightly elevated, ranging from 0.12 to 4.66% (atmospheric CO_2 is approximately 0.04%).

The on-Base SVM AOI located outside of the source area includes 224 SVMPs. SVMPs with EDB, benzene, or HC concentrations greater than 0.5, 1, or 1,000 ppmv, respectively, were screened at depths ranging from approximately 100- to 450-feet bgs. The highest EDB and HC concentrations (1.8 and 6,650 ppmv, respectively) were detected in KAFB-106128-450. The highest benzene concentration (120 ppmv) was detected in SVMW-06-252. Both locations are within 200-feet of the source area along the contaminant migration pathway. O_2 ranged from 3.15 to 21.43%. O_2 levels greater than 15% were measured in 210 out of 224 SVMPs (94%). The lowest O_2 level (3.15%) was recorded at KAFB-106117-450, located approximately 100-feet east of the source area. CO_2 levels ranged from 0.16 to 11.02%. The maximum CO_2 level was recorded at KAFB-106117-350.

The on-Base SVM AOI located inside the source area includes 32 SVMPs. The source area AOI had the highest EDB, benzene, and HC concentrations compared to the other AOIs. All SVMPs with EDB, benzene, and HC concentrations greater than 0.5, 1, and 1,000 ppmv, respectively, were screened at depths ranging from approximately 50- to 300-feet bgs. The highest EDB concentration detected within the source area was 17 ppmv at SVMW-10-100. The highest source area benzene and HC concentrations (630 and 32,700 ppmv, respectively) were detected in SVMW-11-100. SVMW-10-100 and SVMW-11-100 are located below the original jet fuel pipeline that was the source of the BFF releases. O_2 in the source area SVMPs ranged from 0.07 to 20.85. Twenty-seven SVMPs (84%) had O_2 levels below 15%, and ranged from approximately 50- to 300-feet bgs. Of those 27 SVMPs, 20 (63%) had O_2 levels below 5% and ranged from approximately 50- to 300-feet bgs. CO_2 levels ranged from 0.00 to 13.52%. The maximum CO_2 level was observed at SVEW-06-060.

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 with each of the AOIs indicate that microbial degradation is on-going at the Site, primarily in and around the source area. Field O_2 levels measured in SVMPs with HC concentrations greater than 1,000 ppmv ranged from 0.07 to 20.01%. The lowest O_2 level was measured in SVMW-11-260, located within the source area. There were 21 SVMPs (7% of the total) with less than 5% O_2, and correspondingly elevated CO_2, indicating that aerobic microbial activity has depleted O_2 in this area, and that current O_2 levels are considered less than optimal for continued aerobic microbial degradation of HC.

ES-1.2 Vadose Zone Annual Summary

In Q4 2016, an analysis was performed to identify SVMPs at background concentrations (i.e., SVMPs that have had HC concentrations consistently below 20 ppmv since shutdown). In Q4 2016, 214 out of 284 SVMPs (75%) were identified as background SVMPs. Mann-Kendall analysis was performed on the remaining 70 SVMPs to determine whether there was a statistically significant trend in the 2016 EDB, benzene, and HC concentrations at a 95% confidence interval. Although soil vapor data were variable through calendar year 2016, no SVMPs had a statistically significant increasing or decreasing trend in concentrations for EDB, benzene, and HC at a 95% confidence interval, suggesting that these SVMPs were approaching or had reached equilibrium conditions following soil vapor extraction (SVE) shutdown.

In the source area, the number of SVMPs with less than 5% O_2 increased each quarter from 47% in the first quarter (Q1) to 63% in Q4 2016. This indicated that in the source area, ongoing aerobic microbial activity was depleting O_2 when compared to atmospheric O_2 as fuel constituents were consumed. Fuel biodegradation was further supported by the CO_2 measurements that showed levels significantly greater than atmospheric CO_2 levels in the source area SVMPs that measured less than 5% O_2. In Q4 2016, the SVMPs with less than 5% O_2 had CO_2 concentrations ranging from 6.0 to 13.52%.

Soil vapor analytical data from 2016 continued to support the conclusions of the 2015 shutdown test results that were reported in the *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (U.S. Army Corps of Engineers [USACE], 2016b). Shallow SVMPs in all areas of the Site (15-30-feet bgs) continue to have low or background HC concentrations. In Q4 2016, these shallow SVMPs measured HC concentrations ranging between 0 and 5 ppmv. SVMPs sampled in Q4 2016 with O_2 concentrations less than 5% were generally located within the same areas with highest concentrations of residual fuel as determined in the shutdown test report (USACE, 2016b). Although most SVMPs had reached equilibrium in HC concentrations by Q4 2015, nine on-Base SVMPs in and outside of the source area were still experiencing increasing HC concentrations (i.e., rebound) (USACE, 2016b). In 2016, none of these nine SVMPs had a statistically significant increasing trend in HC concentrations at a 95% confidence interval. This indicates that these SVMPs were approaching or had reached post-SVE shutdown equilibrium conditions.

ES-2 Groundwater Monitoring Network Gauging and Sampling

ES-2.1 Groundwater Q4 Summary

In previous reports, the distribution of groundwater contamination had been described in terms of shallow, intermediate, and deep intervals within the EDB plume. These intervals were broadly defined by permeable zones in which EDB migration had been identified, and these intervals have been used to guide the vertical design of monitoring wells. However, with the implementation of the GWTS interim measure north of Ridgecrest Drive, Southeast (SE), combined with the anticipated continuing water table rebound of approximately 2-feet per year for the next decade, these definitions of shallow, intermediate, and deep become problematic. Not all contamination will move upward with the rising water table; therefore, the base of the deep zone is expected to remain somewhat fixed. In addition, as the water table rises, the plume is expected to increase in thickness over time and impact a shallower layer of the aquifer that is not present today. For these reasons, the continued use of shallow, intermediate, and deep nomenclature will be inadequate to accurately describe changing vertical plume concentrations and changes in the plume related to the GWTS operation.

To assess performance of the GWTS, particularly regarding plume capture and plume collapse, several methods of analysis that compare variations in groundwater flow paths and contaminant concentration trends will be employed both horizontally and vertically. Horizontally, visualizing how concentrations

vary in map view, from upgradient to downgradient, around Bullhead Park and the Veterans Affairs (VA) Medical Center, has not changed as these features are fixed. However, in the vertical dimension, shallow, intermediate, and deep are changing with time and are not fixed. Therefore, to fix these layers to accommodate consistent performance analysis in the vertical dimension, and to provide for future addition of new layers (i.e., a shallower zone) as the water table rises, the concept of reference elevation interval (REI) is introduced in this Report. In concept, what were once the deep, intermediate, or shallow zones will now be represented as layers in cake (e.g., with a bottom elevation and a top elevation). Because of the nature of the permeable zones, the bottom and top undulate somewhat rather than being perfectly flat; however, the plume can still be visualized in terms of these layers. As the water table rises, layers can be added to the top. Because these fixed layers are defined, vertical water levels and vertical contaminant concentrations can be compared over time and always to the same references. This will allow meaningful analysis of trends that demonstrate plume capture and collapse with consistent reference points. The three REIs are 4857, 4838, and 4814, corresponding to the historically identified shallow, intermediate, and deep zones, respectively.

In Q4 2016, the depth to groundwater and light non-aqueous phase liquid (LNAPL) thickness was measured in 138 of the active GWM wells. Groundwater samples were collected from 132 GWM wells (the two newly installed nested well locations [KAFB-106235 and KAFB-106236] with a total of six available wells were not sampled in Q4 2016), and the samples were analyzed for field parameters and submitted for laboratory analyses. The following are the findings of the field sampling event:

- Groundwater levels continued to rise during 2016 throughout the GWM network. The average increase in groundwater level from the third quarter (Q3) to Q4 2016 was 0.62-feet, while the average annual increase in the GWM network in 2016 was 2.39-feet (Appendix L-2). The increasing water level caused the screen of one additional well (KAFB-106052) to become submerged in Q4 2016.

- All 138 GWM wells gauged (including the newly installed nested well locations) were evaluated for floating fuel on the water table (i.e., LNAPL). Only one GWM well (KAFB-106008) had measurable LNAPL with a thickness of 0.03-feet in Q4 2016. A clear bailer was used to sample the groundwater interface and confirmed LNAPL was present in KAFB-106008.

- Field parameters were measured for groundwater samples collected from 132 GWM wells in Q4 2016 and measurements ranged as follows: temperature from 16.4 to 23.1 degrees Celsius (°C), pH from 6.8 to 8.3 standard units, specific conductivity from 307.3 to 4547.0 microsiemens per centimeter (µS/cm), dissolved oxygen (DO) from 0.0 to >10 milligrams per liter (mg/L) (DO measurements >10 mg/L were considered anomalous readings), oxidation reduction potential (ORP) from -213.0 to 250.0 millivolts, and turbidity from 0.1 to 91.0 nephelometric turbidity units (NTUs). DO and ORP measurements indicated aerobic conditions in most wells, while shallow wells in the source area generally had lower DO and ORP measurements indicative of anaerobic conditions.

- In addition to the standard GWM activities, vertical profile evaluations using passive diffusion bags (PDBs) were completed on seven wells along the longitudinal axis of the EDB plume. Varying numbers of PDBs were deployed throughout the length of the screened intervals in each of the seven wells, ranging from six to 11 PDBs deployed. The purpose of this evaluation was to determine if there are vertical EDB or benzene concentration gradients present within the screened intervals at these GWM locations that would impact selection of the passive sampler deployment. For wells located downgradient of the source area, the vertical profile evaluation demonstrated little vertical gradation of the contaminants within the screened intervals and that

passive samplers (e.g., PDBs) provide comparable data to the low flow sampling method. Based on the data, passive sampling was determined to be an appropriate replacement sampling method for the low-flow sampling technique (Bennett pumps) north of Ridgecrest Drive, SE. For wells in the source area, initial data were too limited to evaluate possible vertical gradients in the screened intervals, and additional evaluation will be performed in Q1 2017.

- All 26 downgradient proximal wells, and nine VA proximal wells were sampled in Q4 2016 (35 wells total within these two groups). There were no EDB or volatile organic compound (VOC) detections in groundwater collected from any of the proximal wells, with the exception of an estimated toluene concentration of 0.5 micrograms per liter (µg/L) in KAFB-106217. That concentration was below the 750 µg/L project screening level (PSL).

- Three signal wells (KAFB-106017, KAFB-106018, and KAFB-106038) are designated to monitor benzene, toluene, ethylbenzene, total xylenes (BTEX) and naphthalene migration from the source area into the interim measure Target Capture Zone, defined at an EDB concentration of 0.05 µg/L north of Ridgecrest Drive, SE. An estimated benzene concentration of 0.6 µg/L was detected in KAFB-106017; however, no other BTEX or naphthalene constituents were detected in any of the three signal wells.

- Thirteen of the 26 groundwater samples collected from the source area wells had EDB detected at concentrations exceeding the 0.05 µg/L PSL. Benzene concentrations >500 µg/L, characterized as listed hazardous waste (D018), were detected in six source area wells, while groundwater samples collected from six other source area wells had benzene concentrations that exceeded the PSL of 5 µg/L. These 12 source area wells were the only wells in the entire GWM network that had benzene detections greater than the PSL; an additional nine wells had benzene detections below the PSL. Within the entire GWM network, five wells had toluene concentrations that exceeded the PSL (750 µg/L), one well exceeded the PSL (700 µg/L) for ethylbenzene, and four wells exceeded the PSL (620 µg/L) for total xylenes.

- Groundwater samples collected from all the GWM network wells were analyzed for VOCs. Benzene was detected in three wells (KAFB-106037, KAFB-106225, and KAFB-106226); however, none of the benzene concentrations were above the 5 µg/L PSL. Toluene, ethylbenzene, and total xylenes were not detected in any of the GWM network wells at concentrations above their 750, 700, and 620 µg/L PSLs, respectively.

In addition to the standard Q4 2016 monitoring activities outlined above, two new nested GWM well locations (KAFB-106235 and KAFB-106236) were installed in October and November 2016, each with four GWM wells in each nest. The nested wells consisted of three GWM wells screened at various depths in the groundwater and a fourth 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. The new wells were installed northwest of the current EDB plume to define the plume boundaries and will be sampled using a combination of PDBs and dual-membrane samplers (DMSs) starting in Q1 2017. The addition of these nested wells brings the total number of active GWM wells to 138.

ES-2.2 Groundwater Annual Summary

Depths to LNAPL and groundwater were measured, and groundwater samples were collected from GWM wells throughout 2016. In accordance with the optimization schedule, all active GWM wells were sampled in Q2 and Q4, with an abbreviated list of wells monitored in Q1 and Q3.

- Groundwater levels continued to rise an average of 2.39-feet across the GWM network during 2016 due to groundwater conservation measures within the basin (i.e., reduced pumping from production wells), rising an average of 1.12-feet from Q1 to Q2 2016, 0.72-feet from Q2 to Q3 2016, and 0.62-feet from Q3 to Q4 2016. The greatest single increase from Q3 to Q4 2016 was 1.95-feet in KAFB-106203, located in the northeastern portion of the GWM network.

- KAFB-106005 was the only well with measurable LNAPL thickness in Q1 2016. The number of wells with LNAPL presence decreased from three wells in both Q2 and Q3 (KAFB-106005, KAFB-106008, and KAFB-106076) to one well in Q4 2016 (KAFB-106008). All wells with confirmed LNAPL in 2016 were within the historical benzene plume footprint.

- The extent and configuration of the EDB plume changed notably in the distal part of the plume in 2016 due to decreasing EDB concentration trends in wells KAFB-106055 and KAFB-106057. Those wells are positioned approximately equidistant between extraction well KAFB-106234 and KAFB-106228. Both KAFB-106055 and KAFB-106057 had EDB concentrations near or above the 0.05 µg/L PSL in Q2 2016, but decreased to concentrations below the PSL in Q4 2016 resulting in the EDB plume dividing into two distinct parts.

- Although some intra-well concentrations of benzene and toluene showed fluctuation from Q2 to Q4 2016, these plume boundaries remained consistent in 2016.

- Ethylbenzene was detected in two wells at concentrations above the PSL of 700 µg/L (KAFB-106010 and KAFB-106059) in Q2, but was detected above the PSL in only KAFB-106010 in Q4. These wells are within the source area.

- Total xylenes were detected in two wells at concentrations above the PSL of 620 µg/L (KAFB-106010 and KAFB-106059) in Q2, but increased to four detections above the PSL (KAFB-1060006, KAFB-106010, KAFB-10628, and KAFB-106059) in Q4. These wells are located within the source area.

- Statistical trends are not provided for organic analyses within the plume because the plume mass is now under pumping stress and the measurement of plume response to the interim measure plume capture will be evaluated under U.S. Environmental Protection Agency (EPA) recommended performance assessment guidelines (EPA, 2008).

- The inorganic analyte concentrations and iso-contours were relatively consistent throughout 2016 with the exception of bromide, which demonstrated a variable distribution among the GWM network. Throughout the year, the highest bromide concentrations have been consistently found downgradient of the source area in KAFB-106009. This is a line of evidence for the anaerobic degradation of EDB within the source area.

- The results of a Mann-Kendall analysis for inorganic analytes in KAFB-106005, KAFB-106009, and KAFB-1060012R indicated that calcium and sodium concentration trends were increasing and statistically significant in all three monitoring wells. Chloride and sulfate concentrations in KAFB-106009 and KAFB-106012R showed statistically significant increasing trends. Nitrate concentration trends were increasing and statistically significant only in KAFB-106009. The groundwater analytical results for all three wells were consistent with the potential impact from a sanitary sewer source. Investigation by Kirtland AFB indicated that while the sewer lines are intact, the junction manhole may be a source of sanitary waste. Final results from that investigation were not available at the time that this report was written.

- Prior to Q4 2016 sampling, a Work Plan amendment was approved that modified the sampling techniques. Previous well purging (one casing volume) was replaced with low-flow sampling with field parameter stabilization. Forty dedicated sampling systems were removed during 2016 primarily due to pump failure and passive sampler evaluation. A combination of portable Bennett pump systems and passive sampling equipment (e.g., PDBs and DMSs) will be used to sample these wells in the future.

ES-3 Drinking Water Supply Well Monitoring

ES-3.1 Drinking Water Q4 Summary

Four drinking water supply wells (KAFB-003, KAFB-015, KAFB-016, and ST106-VA-2) are located in the vicinity of the benzene and EDB plumes. KAFB-003, ST106-VA-2, and KAFB-015 were sampled monthly for EDB and BTEX from October through December of 2016, and sampled for inorganic compounds in October 2016. KAFB-016 was not sampled during Q4 2016 due to ongoing repairs. All inorganic compounds detected in drinking water supply wells KAFB-003, KAFB-015, and ST106-VA-2 were below PSLs. No EDB or BTEX concentrations were detected for drinking water supply wells KAFB-003, ST106-VA-2, or KAFB-015 in Q4 2016.

ES-3.2 Drinking Water Annual Summary

KAFB-003 and ST106-VA-2 were sampled monthly for EDB and BTEX from February through December 2016. KAFB-015 was undergoing repairs and maintenance in Q1 through Q2 2016, and was sampled monthly from September to December 2016. KAFB-016 was not sampled in 2016 due to ongoing repairs.

The majority of drinking water supply well samples were nondetect for all fuel-related constituents. However, in February, March, and April 2016, toluene was detected at low concentrations in a total of five samples collected from both KAFB-003 and ST106-VA-2. These detections were validated as nondetect or as estimated (J -qualified) detections because of toluene detected in associated trip blanks. Toluene was nondetect in drinking water supply well samples collected from these two wells between May and December 2016. The sample collected from KAFB-015 in September 2016 had an estimated concentration of total xylenes that was likely due to well repairs that were completed shortly prior to sampling. Subsequent samples collected from KAFB-015 in October and December 2016 were nondetect for total xylene concentrations.

In April and October 2016, samples were collected from KAFB-003 and ST106-VA-2 and analyzed for inorganic constituents. In October 2016, a drinking water supply well sample was collected from KAFB-015, after it was put back into operation, and was analyzed for inorganic constituents. There were detections of organic compounds; however, the detected concentrations were below the corresponding PSLs.

ES-4 Groundwater Treatment System Operation

ES-4.1 Operation Q4 Summary

The GWTS was 77% operational from October 1 to December 31, 2016 and treated 30,070,100 gallons of groundwater during the expansion construction. Of the treated water, 12,598,910 gallons were discharged to the Tijeras Arroyo Golf Course main pond, and 17,471,190 gallons were discharged to a gravity-fed injection well KAFB-7. Concentrations for all compounds analyzed in the effluent samples collected

during Q4 2016 were below their respective limits of detection and below the New Mexico Water Quality Control Commission (NMWQCC) standards and EPA Maximum Contaminant Levels (MCLs). No non-routine maintenance was performed at the GWTS during Q4 2016. However, several unscheduled shutdowns occurred due to leak detection alarms in the vaults during rain events, GWTS expansion, and associated troubleshooting activities; high water level alarms at the golf course main pond; and interference with KAFB-7 radio communications between the GWTS and KAFB-7 primary logic controller. Run time for both pumps in extraction wells KAFB-106228 and KAFB-106234 was 77%. The pump in extraction well KAFB-106233 remained off-line for the entirety of Q4 2016 and has a corresponding run time of 0%.

Expansion efforts to install a second 400-gpm treatment train began at the GWTS during Q3 2016 and continued in Q4 2016. Work performed included installation of a fourth extraction well (KAFB-106239) and installation of flowmeters, electrical conduit, building conveyance piping and manifolds, and pressure transmitters at each of the extraction wells.

ES-4.2 Operation Annual Summary

For the whole of 2016, the GWTS was operational 83% of the time and treated a total of 120,806,300 gallons of groundwater. Of the treated water, 101,339,890 gallons were discharged to the Tijeras Arroyo Golf Course main pond, and 19,466,410 gallons were discharged to a gravity-fed injection well KAFB-7. Concentrations for all compounds analyzed in the effluent samples collected during the entire year of 2016 were below their respective limits of detection and below the NMWQCC standards and EPA MCLs. Run time for pumps in extraction wells KAFB-106228, KAFB-106233, and KAFB-106234 were 58, 28, and 74%, respectively.

The 2016 annual GWTS Performance Assessment provided a first look at how the aquifer has responded to the interim measure extraction system. The Target Capture Zone, defined at an EDB concentration of 0.05 µg/L, has been delineated from water chemistry sample analyses. Analyses have been performed on measured groundwater head data to delineate both the horizontal and the vertical hydraulic containment (capture) associated with the extraction wells. Water level pairs analyses have been performed to define the direction of flow from gradient control points. Simple 2-dimensional horizontal capture calculations have been performed to analyze if the interim measure extraction rates are appropriate for plume capture with respect to aquifer transmissivity estimates, and a concentration trends monitoring program has been presented that will be used to support capture assessment.

The initial assessment of horizontal capture between Q2 and Q4 2016, within the interim measure objective zone, shows the extraction system has been able to capture (horizontally) between 92 and 97% of the plume volume. Similarly, horizontal capture produced by the extraction system has contained 93-99% of the plume mass. The initial assessment of vertical capture within the interim measure objective zone shows that the extraction system is less effective at producing vertical plume containment. However, a cursory review of historical groundwater head data from the nested well network suggests that the vertical gradients in the plume area are controlled by variations in the regional aquifer flow system. Between Q2 and Q4 2016, the extraction system was able to capture (vertically) between 68 and 85% of the plume volume and between 67 and 87% of the plume mass.

The initial analysis of plume changes due to interim measure extraction shows that the mass is moving and the plume volume is changing. Within the interim measure objective zone, plume volume and mass are collecting (increasing) around the extraction wells. In addition, plume volume and mass are decreasing south of the KAFB-106228 and KAFB-106233 extraction wells and between these wells and KAFB-106234 to the north. Both of these observations suggest that the plume mass is starting to migrate toward the extraction points. This performance assessment will be conducted every second and fourth

quarter moving forward so that continued plume comparisons can be performed, plume reduction can be analyzed, and how capture changes with the regional hydrogeologic variation can be quantified. An assessment of the interim measure effectiveness should be postponed until the extraction network (all four extraction wells) is operational for at least one year. This includes activation of the fourth extraction well (KAFB-106239) and re-activation of extraction well KAFB-106233.

ES-5 Projected Activities

Planned activities for Q1 2017 include the following:

- There will be no vadose zone monitoring event in Q1 2017. In a November 9, 2016 meeting, the Vadose Zone Working Group identified the need to evaluate and optimize the current vadose zone monitoring and reporting practices with the goal of achieving a more effective monitoring and reporting program that aligns with New Mexico Environment Department (NMED) guidance requirements and industry standards. The decision was made to optimize the SVM program to remove the unnecessary analytical methods and reduce the sampling frequency to semi-annual (NMED, 2017). Therefore, the next SVM event will be performed in Q2 2017.

- GWM will be performed from January 9 to February 3, 2017.

- Vertical gradient evaluation with PDB samplers in a subset of GWM wells will continue to determine if vertical chemical gradients exist within the source area well screened intervals and evaluate where in the screens the PDBs/DMSs should be deployed to optimize data collection.

- Drinking water supply wells will be sampled monthly and analyzed for organic compounds.

- Operation of the GWTS and extraction wells KAFB-106228 and KAFB-106234 will continue.

- Rehabilitation of extraction well KAFB-106233 will be initiated in Q1 2017.

- Construction is anticipated for completion for the GWTS second treatment train, as well as integration of programming, and shakedown testing.

- Design of conveyance lines, electrical lines, and communication lines between extraction well KAFB-106239 and the GWTS will continue in anticipation of going on-line in Q3 2017.

- Removal of the remaining dedicated Bennett pump sampling systems north of Ridgecrest Drive, SE will begin as part of the transition to passive sampling in the distal portion of the EDB plume.

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1. INTRODUCTION

This Quarterly and Annual Report for Q4 2016 summarizes the activities performed from October 3 through December 31, 2016, as part of the interim measures for soil and groundwater remediation at SWMU ST-106/SS-111, the BFF site, at Kirtland AFB, pursuant to the Hazardous Waste Treatment Facility Operating Permit Number (No.) NM9570024423 (Resource Conservation and Recovery Act [RCRA] Permit) (NMED, 2010). In addition to the quarterly summary, this Report provides an annual summary of the SVM and GWM data obtained through 2016, along with evaluating the performance of the GWTS. 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). 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.

GWM, SVM, and interim measures for SWMU ST-106/SS-111 were conducted concurrently. The monitoring program was performed in accordance with multiple work plans: (1) soil vapor (NMED, 2016c; USACE, 2016d), (2) groundwater (NMED, 2016d; USACE, 2016f), and (3) drinking water supply wells (NMED, 2016c; USACE, 2016d). GWTS operations, sampling, and treated effluent discharge were performed under the Operations and Maintenance Plan dated August 18, 2016 (USACE, 2016e) and approved by NMED on December 12, 2016. Appendix A contains key regulatory correspondence. This Q4 2016 Quarterly and Annual Report presents both non-cumulative data for Q4 2016 and a compilation of the data collected over the four quarters of 2016 with more in-depth data analysis, conclusions, and recommendations for the calendar year. Analytical data from all four quarters of 2016 are provided electronically in Appendix K.

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2. VADOSE ZONE MONITORING

This section describes the field activities, analyses, and results for the Q4 2016 monitoring of 56 SVM locations at Kirtland AFB (Figure 2-1). Quarterly soil vapor sampling is conducted to characterize and monitor fuel-related contaminant concentrations in the vadose zone. This section also discusses trends and summaries of the annual results from all four monitoring events in 2016. Sections 2.1 through 2.3 of this Report discuss field sampling and laboratory testing procedures, data usability, and the results of soil vapor data collected during Q4 2016. Section 2.4 provides a summary and statistical trend analysis of soil vapor data collected between Q1 and Q4 2016.

Each SVM location is comprised of up to six SVMPs, each screened at discrete intervals ranging from approximately 25- to 450-feet bgs. Each SVMP has a unique database ID. Included in the database ID are 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 is located at SVMW-04 and is screened at approximately 250-feet bgs). Table 2-1 lists each SVM location, its associated SVMPs, the screened intervals, and the pre-calculated purge volume.

Samples collected in Q4 2016 represent the vadose zone conditions without the influence of induced air flow. All SVMPs are sealed to atmospheric air, which minimizes exchanges with atmospheric "inhalation" and "exhalation" cycles that are driven by barometric pressure fluctuations. In addition, there is no SVE (SVE system currently operational at SWMU ST-106/SS-111).

2.1 Vadose Zone Data Collection

Field parameters and laboratory soil vapor samples were collected from all SVMPs during Q4 2016. The condition of the vault and the pneumatic quick connect fittings at each SVMP was documented on a purge log (Appendix C-1) to ensure sample representativeness.

2.1.1 Field Soil Vapor Data

Field parameters including HC concentration (ppmv), and 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 and recorded for pre-purging and post-purging conditions of each well using an electric manometer. SVMP data were recorded on purge logs (Appendix C-1) and the field data are presented in Table 2-2. Horiba calibration and sample system leak tests were performed and documented on calibration logs presented in Appendix C-2. Daily quality control (QC) reports are presented in Appendix C-2.

2.1.2 Laboratory Soil Vapor Analytical Data

Q4 2016 soil vapor samples were collected between October 3 and October 21, 2016. Two hundred and eighty-four SVMP field samples and 29 field duplicates were collected using certified pre-evacuated Bottle-Vac™ canisters fitted with a specialized female pneumatic connector that allowed only the vapor from the SVMP to enter the bottle. Sample information was recorded on sample collection logs that are presented in Appendix C-1. Chain-of-custody records are included in Appendix C-3. After collecting each SVMP sample, the bottle was immediately placed into protective packaging, and shipped to ALS Environmental in Simi Valley, California, for analysis of the following:

- VOCs by EPA Method TO-15
- Air-phase petroleum HCs by Method Massachusetts Department of Environmental Protection Air-Phase Petroleum Hydrocarbons 1.0
- Fixed gases (hydrogen, carbon monoxide, CO_2, nitrogen, methane, and O_2/argon) by Method E3C
- EDB by California Air Resources Board 422 method.

Three trip blanks were analyzed for VOCs by EPA Method TO-15 to monitor and assess sample preservation, packing, shipping, and storage conditions. The *Data Quality Assessment Report* is presented in Appendix D-1. Analytical results are reported in the ALS Environmental Laboratory Report (Appendix D-2). Soil vapor analytical data were validated by Laboratory Data Consultants, Inc., Carlsbad, California. Data validation reports are presented in Appendix D-2. Soil vapor analytical results are presented in Table 2-3.

2.2 Data Review and Usability

Laboratory Data Consultants, Inc. performed 100% Level III data validation of Q4 2016 soil vapor analytical data. All data were validated as usable, and no data were qualified as rejected. The technical data completeness was 100%. The data met data quality objectives and were appropriate for use in project decision-making. Some analytical results were flagged with an estimated (J) qualifier that denotes that the analyte was positively identified in the sample, but the associated numerical value is estimated. The results of the QC parameter and data quality indicator evaluation (precision, bias [accuracy], representativeness, comparability, completeness, and sensitivity) are provided in the Data Validation Reports presented in Appendix D-2, and the Data Quality Assessment Report presented in Appendix D 1. Validated soil vapor data are presented in Table 2-3.

2.3 Soil Vapor Data Evaluation

The Q4 2016 analytical results and field data from the 284 SVMPs were used to generate two-dimensional plan-view maps (Figures 2-2 through 2-8) that depict benzene, EDB, and HC concentrations at depths of 25-, 50-, 100-, 150-, 250-, 350-, and 450-feet bgs.

The SVM locations have been categorized into three AOIs: off-Base SVM locations, on-Base SVM locations outside the source area, and on-Base SVM locations inside the source area. Soil vapor analytical data are discussed in relation to each area. The source area (delineated by the black and white line on Figures 2-1 through 2-8) is defined as a 100-foot buffer zone around the original jet fuel underground pipelines that were the source of the BFF releases. These pipelines were removed in 2010.

EDB and benzene were evaluated based on the laboratory results; HC concentrations and O_2 concentrations were evaluated based on field-measured data as discussed in Section 2.3.4. The RCRA Permit does not specify cleanup screening values for soil vapor. All EDB, benzene, and HC concentrations are compared against 0.5, 1, and 1,000 ppmv, respectively. 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.

Of the three AOIs where Q4 2016 soil vapor concentrations were evaluated, the off-Base SVMPs had the highest percentage of samples that were nondetect for EDB and benzene (26 of 28 SVMPs [93%] and

21 of 28 SVMPs [75%], respectively. O_2 concentrations in these SVMPs were generally close to atmospheric levels (approximately 21%) (Berner et al., 2007), which suggests that O_2 concentrations are sufficient to support aerobic activity and allow native bacteria to degrade residual fuel-related constituents.

At SVMPs located on-Base but outside the source area samples containing analytes exceeding PSLs (EDB greater than 0.5 ppmv, benzene greater than 1 ppmv, and HC greater than 1,000 ppmv) were located at depths between approximately 100- and 450-feet bgs.

The highest soil vapor EDB, benzene, and HC concentrations for Q4 2016 were encountered within the source area AOI, with maximums of 17, 630, and 32,700 ppmv, respectively. This AOI had the highest percentage of detections for EDB and benzene, in 32 (100%) SVMPs and 31 (97%) SVMPs, respectively. Twenty of the total 284 SVMPs had O_2 concentrations less than 5%, suggesting conditions that would limit aerobic microbial activity (i.e., native bacteria need more O_2 to degrade residual fuel-related constituents).

2.3.1 Off-Base Soil Vapor Monitoring Points

Figures 2-2 through 2-8 show information for the off-Base SVMPs, which are all located north of the Kirtland AFB installation boundary. The five off-Base SVM locations consist of 28 SVMPs, which are screened at intervals from approximately 25- to 450-feet bgs.

Twenty-six of the 28 off-Base SVMPs (93%) had no detected EDB concentrations in Q4 2016 and there were no estimated detections reported. EDB was detected at concentrations of 0.0015 and 0.0014 ppmv at KAFB-106142-450 and KAFB-106028-450, respectively, which are both screened at approximately 450-feet bgs.

Twenty-one of the 28 off-Base SVMPs (75%) had no detected benzene concentrations in Q4 2016 and five off-Base SVMPs (18%) had estimated benzene detections. The two remaining off-Base SVMPs, which are screened at approximately 350- and 450-feet bgs, had detectable benzene concentrations. The highest benzene concentration detected was 0.006 ppmv at KAFB-106142-450.

HC concentrations in the 28 off-Base SVMPs ranged between 0 and 5 ppmv. O_2 levels were between 16.33 and 20.66%. CO_2 levels ranged from 0.12 to 4.66%.

Few samples collected at off-Base SVMPs had measurable amounts of EDB, benzene, and HC; and detections were at relatively low concentrations. O_2 levels were near atmospheric levels and conducive to aerobic microbial activity. The SVMPs off-Base are at background concentrations (HC less than 20 ppmv).

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

Figures 2-2 through 2-8 show the locations of the 40 SVM locations consisting of 224 SVMPs on Kirtland AFB property, but outside of the source area boundary. Those SVMPs are screened at intervals from approximately 25- to 450-feet bgs. SVM KAFB-106135 is located the furthest away from the source area, approximately 1,400-feet to the northeast.

EDB was not detected in 143 of the 224 SVMPs (64%), detected at estimated concentrations in 16 SVMPS (7%), and detected above the detection limit in 65 SVMPs (29%). EDB concentrations were

greater than or equal to 0.5 ppmv in four SVMPs (2%). The highest detection of EDB (1.8 ppmv) was collected from KAFB-106128-450, approximately 75-feet southeast of the source area.

Benzene was not detected in 52 of 224 SVMPs (23%), detected at estimated concentrations in 58 SVMPs (26%), and detected above the limit of quantitation in 114 SVMPs (51%). Benzene concentrations were greater than or equal to 1 ppmv at 23 SVMPs (10%). The highest benzene detection (120 ppmv) was measured in a sample collected at SVMW-06-252, located approximately 200-feet east of the source area.

Two hundred and twelve out of 224 SVMPs in this area (95%) had HC concentrations below 1,000 ppmv. The 12 SVMPs (5%) with concentrations greater than 1,000 ppmv were screened from approximately 100- to 450-feet bgs. The highest concentration of HC for these SVMPs was 6,650 ppmv at KAFB-106128-450, which is approximately 75-feet to the southeast of the source area.

O_2 ranged from 3.15 to 21.43%. O_2 levels greater than 15% were measured in 210 out of 224 SVMPs (94%). The lowest O_2 level (3.15%) was recorded at KAFB-106117-450, located approximately 100-feet east of the source area, which had an EDB concentration of 0.47 ppmv, a benzene concentration of 7.4 ppmv, and an HC concentration of 4,660 ppmv. CO_2 levels ranged from 0.16 to 11.02%. The maximum CO_2 level was recorded at KAFB-106117-350.

The highest concentrations of EDB (greater than 0.5 ppmv), benzene (greater than 1 ppmv), and HC (greater than 1,000 ppmv) were observed within 900-feet toward the southeast and northeast of the source area. SVMP screened intervals showing these concentrations ranged in depths between approximately 100- and 450-feet bgs. O_2 levels below 15% in 14 SVMPs with CO_2 concentrations between 2.66% and 11.02% suggested that aerobic microbial activity is occurring, and is not rate limited. At KAFB-106117-450, O_2 was below 5% and CO_2 was at 10.38%, which likely represented rate limiting conditions for aerobic microbial activity at this SVMP; although aerobic biodegradation may be occurring, the conditions are not optimal.

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

Figures 2-2 through 2-8 show the 32 source area SVMPs at 11 SVM locations on Kirtland AFB property, and inside of the source area boundary, which is within 100-feet of the original location of the underground jet fuel pipeline. These SVMPs are screened from approximately 25- to 450-feet bgs.

EDB was detected in all of the source area SVMPs, though one of the 32 detections (3%) was at an estimated concentration. The highest EDB concentration (17 ppmv) was detected in two samples collected from SVMW-10-100 and SVMW-10-050. EDB concentrations greater than 0.5 ppmv were detected at sampling locations between 50- and 300-feet bgs.

Benzene was not detected in one of 32 SVMPs (3%), and estimated in one SVMP (3%). The highest benzene concentration (630 ppmv) was detected at SVMW-11-100. Benzene concentrations greater than 1 ppmv were detected at sampling locations between 50- and 300-feet bgs.

Ten out of 32 of the source area SVMPs (31%) had HC concentrations less than 1,000 ppmv. The highest HC concentration was 32,700 ppmv at SVMW-11-100. HC concentrations above 1,000 ppmv were observed from sampling locations between 50- to 300-feet bgs.

The O_2 in the source area SVMPs ranged from 0.07 to 20.85. Twenty-seven SVMPs (84%) had O_2 levels below 15%, at depths ranging from approximately 50- to 300-feet bgs. Of those 27 SVMPs, 20 (63%) had O_2 levels below 5% at depths ranging from approximately 50- to 300-feet bgs. CO_2 levels ranged from 0.00 to 13.52%. The maximum CO_2 level was observed at SVEW-06-060.

EDB concentrations greater than 0.5 ppmv, benzene concentrations greater than 1 ppmv, and HC concentrations greater than 1,000 ppmv in the source area SVMPs were observed at depths ranging from approximately 50- to 300-feet bgs. In general, the higher concentrations coincided with the lower observed O_2 levels (< 5%) and elevated CO_2 levels (Table 2-2). This relationship suggests that microbial degradation of fuel-related compounds has been occurring and the low oxygen and high CO_2 concentrations are the result of high microbial activity. Note that continued aerobic microbial activity likely depletes the O_2 levels over time and effectively limits microbial activity and HC degradation rates.

2.3.4 Comparison of Field Parameters with Laboratory Analytical

The field-measured O_2 (presented in Table 2-2) was compared with the fixed-gas laboratory analyses for O_2. The comparisons showed that the laboratory O_2 measurements were, on average, 0.68% greater than field O_2 measurements. Laboratory O_2 measurements were higher than atmospheric O_2 in 31 of 284 (11%) samples. These relationships suggest that field-measured O_2 levels likely better represent vadose zone conditions than laboratory-measured O_2 levels.

HC data were used to assess total VOCs in Q4 2016. An evaluation of how HC concentrations compare to laboratory total petroleum hydrocarbon (TPH) concentrations was performed in the *Quarterly Pre-Remedy Monitoring and Site Investigation Report for October-December 2015 and Annual Report for 2015* (USACE, 2016a). That evaluation determined that HC data results were higher than comparable laboratory TPH data, and the HC data represented a more conservative estimate of total VOCs in soil vapor. It was determined that TPH data would only be used at locations where the HC results exceeded the Horiba's saturation limit of 32,760 ppmv. In Q4 2016, no HC results exceeded the Horiba's saturation limit and, as a result, no laboratory TPH data were used in this report to assess total VOC concentrations.

2.4 Annual Soil Vapor Concentrations

This section discusses variations of EDB, benzene, HC, and O_2 concentrations throughout 2016. Data collected from Q1 through Q4 2016 were evaluated to discern whether variations are random, or represent trends in analyte concentrations. Data collected from Q1 2015 through Q4 2016 were evaluated to assess post-SVE-shutdown trends.

2.4.1 Annual Trend Analysis

An analysis was performed to identify SVMPs at background HC concentrations (i.e., SVMPs that have had HC concentrations consistently below 20 ppmv since shutdown). In Q4 2016, 214 out of 284 SVMPs (75%) were identified as background SVMPs. The Mann-Kendall trend analysis was performed on the remaining 70 SVMPs to determine whether there was a statistically significant trend at a 95% confidence interval. The results of the Mann-Kendall analysis are included in Appendix K. Although soil vapor data were variable through calendar year 2016, none of the 70 SVMPs evaluated had a statistically significant increasing or decreasing trend in concentrations of EDB, benzene, or HC at a 95% confidence interval.

2.4.2 Annual Concentration Summary

Variations in EDB, benzene, HC, and O_2 concentrations were observed in all SVMPs for 2016. This section summarizes and compares the results of each parameter throughout the previous four quarters. In SVMPs located off-Base and on-Base outside of the source area, variations in EDB, benzene, and HC concentrations in Q1 through Q4 2016 were minor as compared to variations observed in the source area. The aerial extent and concentrations of benzene and HC observed in the source area decreased from Q1 through Q4 2016. In addition, the percentage of SVMPs in the source area with O_2 levels less than 5% increased progressively each quarter from 47 to 63% from Q1 to Q4 2016.

The lower variation of EDB, benzene, and HC concentrations over 2016, in SVMPs located outside of the source area, may be attributable to seasonal or diurnal barometric pressure changes (Pirkle et al., 1992). In addition, SVMPs that displayed larger variations over 2016 may indicate influence related to the post-SVE shutdown rebound and respiration in the vadose zone as discussed in Section 2.4.2.

2.4.2.1 Off-Base Soil Vapor Monitoring Points

Concentrations of EDB, benzene, and HC in SVMPs located off-Base varied over a narrow range throughout 2016. All SVMPs off-Base were at background concentrations during 2016.

The number and percentage of SVMPs that were nondetect for EDB varied from 25 (89%) to 22 (79%), to 25 (89%), and to 26 (93%) from Q1 through Q4 2016, respectively. EDB concentrations did not exceed 0.5 ppmv in any off-Base SVMP samples collected in 2016. The highest EDB concentration (0.0019 ppmv) was detected in Q2 2016 at KAFB-106028-450.

The number and percentage of SVMPs that were nondetect for benzene varied from 20 (71%) to 23 (82%), to 25 (89%), and to 21 (75%) from Q1 through Q4 2016, respectively. Benzene concentrations did not exceed 1.0 ppmv in any SVMPs during any of the 2016 quarterly sampling events. The highest detected benzene concentration was 0.018 ppmv at KAFB-106142-450 in Q3 2016.

HC was not detected in concentrations above 1,000 ppmv in any off-Base SVMPs during any of the 2016 quarterly sampling events. The highest HC concentration detected in 2016 was 7 ppmv, which was observed at KAFB-106028-250 in both Q1 and Q2 2016. The highest HC detections observed in Q3 and Q4 2016 were 5 ppmv at KAFB-106141-250 (Q3), KAFB-106141-450 (Q4), and KAFB-106138-250 (Q4).

O_2 measured in off-Base SVMPs varied between 16.33 and 20.86% throughout 2016. O_2 was not detected at levels below 15% at any of the off-Base SVMPs during 2016. CO_2 concentrations varied throughout 2016 between from 0.08 to 4.66%.

2.4.2.2 On-Base Outside Source Area Soil Vapor Monitoring Points

Concentrations of EDB, benzene, and HC in SVMPs varied over a narrow range throughout 2016. The Mann-Kendall trend analysis was performed at 40 out of 224 SVMPs on-Base outside the source area. No SVMPs showed a statistically significant trend in the 2016 EDB, benzene, or HC concentrations at the 95% confidence interval.

EDB concentrations exceeding 0.5 ppmv were observed in the following rare instances: one of 224 (0.4%), three of 224 (1.3%), two of 224 (0.9%), four of 224 (1.8%), in Q1 through Q4 2016, respectively. The highest EDB concentration in this area in 2016 (2 ppmv) was detected in Q2 2016 at

KAFB-106128-450. The maximum EDB concentration in Q4 2016 was 1.8 ppmv detected at KAFB-106128-450.

Benzene was detected at concentrations above 1.0 ppmv at 27 SVMPs (12%) in Q1, 24 SVMPs (11%) in Q2, 21 SVMPS (9%) in Q3, and 23 SVMPs (10%) in Q4 2016. The maximum benzene concentration observed over the four 2016 sampling events varied between 110 and 130 ppmv.

HC was detected at concentrations above 1,000 ppmv at nine SVMPs (4%) in Q1, nine SVMPs (4%) in Q2, eight SVMPs (4%) in Q3, and 12 SVMPs (5%) in Q4 2016. The maximum HC detections were observed in KAFB-106128-450 in all four quarters. HC concentrations fluctuated in this AOI throughout the year. The maximum HC concentrations observed in Q1, Q2, Q3, and Q4 2016 sampling events were 5,230, 6,100, 5,870, and 6,650 ppmv, respectively.

Between Q1 and Q4 2016, O_2 levels were below 15% in nine SVMPs (4%) in Q1, 11 SVMPs (5%) in Q2, 14 SVMPs (6%) in Q3, and 14 SVMPs (6%) in Q4 2016. No SVMPs had O_2 levels below 5% in Q1 and Q2 2016. However, in Q3 and Q4 2016, O_2 levels below 5% were observed in one SVMP (KAFB-106117-450). The maximum CO_2 level varied from 9.00, 9.66, and 9.46 to 11.02% in Q1 through Q4 2016, respectively. In Q1, Q2, and Q4 2016, the maximum CO_2 level was detected in KAFB-106117-350; and, in Q3 2016, the maximum level was detected in KAFB-106117-450.

2.4.2.3 On-Base Inside Source Area Soil Vapor Monitoring Points

Concentrations of EDB in SVMPs located on-Base in the source area varied over a narrow range throughout 2016. The Mann-Kendall trend analysis was performed at 30 out of 32 SVMPs within the source area. No SVMPs showed a statistically significant trend in 2016 EDB, benzene, and HC concentrations at the 95% confidence interval. However, the percentage of SVMPs with benzene concentrations greater than 1.0 ppmv and HC concentrations greater than 1,000 ppmv decreased over the four quarters. In addition, the percentage of SVMPs with less than 5% O_2 increased, from 47% in Q1 2016 to 63% by Q4 2016.

The percentage of SVMPs with EDB concentrations greater than 0.5 ppmv varied within a very narrow range from 17 SVMPs (53%) to 18 SVMPs (56%) over 2016. The maximum EDB concentrations each quarter were detected in SVM locations SVMW-10 or SVMW-11. The highest EDB concentrations observed in 2016 were 9.9 ppmv (SVMW-10-100) in Q1, 31 ppmv (SVMW-10-050) in Q2, 21 ppmv (SVMW-11-100) in Q3, and 17 ppmv in Q4 2016 (SVMW-10-100 and SVMW-10-050).

Benzene was detected in the source area at concentrations greater than 1.0 ppmv in 27 SVMPs (84%) in Q1, 27 SVMPs (84%) in Q2, 23 SVMPs (72%) in Q3, and 23 SVMPs (72%) in Q4 2016. Benzene concentrations greater than 1.0 ppmv were observed in samples collected between 50- and 450-feet bgs during the Q1 and Q2 2016 sample events. Benzene concentrations greater than 1.0 ppmv were restricted to a shorter vertical range of 50-300-feet bgs in the Q3 and Q4 2016 sample events. The maximum benzene concentration detected in the source area SVMPs was at SVMW-11-100 for all for quarters. Benzene concentrations varied from 770 ppmv in Q1, to 790 ppmv in Q2, to 660 ppmv in Q3, and to 630 ppmv in Q4 2016.

HC concentrations greater than 1,000 ppmv were detected in 24 SVMPs (75%) in Q1, 25 SVMPs (78%) in Q2, 22 SVMPs (69%) in Q3, and 22 SVMPs (69%) in Q4 2016. HC concentrations greater than 1,000 ppmv were observed at depths between 50- and 300-feet bgs during all four quarters. The maximum observed HC concentration was always measured in SVMW-11-100 and showed consistent decreases from 47,995 ppmv in Q1, to 35,668 ppmv in Q2, to 32,760 ppmv in Q3, and to 32,700 ppmv in Q4 2016.

O_2 showed a decrease in the source area SVMPs over the 2016 quarterly sampling events. The number of SVMPs with less than 5% O_2 increased each quarter from 15 SVMPs (47%) in Q1, to 16 SVMPs (50%) in Q2, to 19 SVMPs (59%) in Q3, and to 20 SVMPs (63%) by Q4 2016. This trend indicates that aerobic bacteria have been breaking down fuel constituents in the source area and that biodegradation is continuing. The maximum CO_2 level varied from 14.12, 14.40, 13.64, to 13.52% in Q1 through Q4 2016, respectively. In Q1, Q2, and Q3 2016, the maximum CO_2 level was detected in SVMW-03-100 and in Q4 2016 the maximum level was detected in SVEW-06-060. The elevated CO_2 concentrations coincided with the depressed O_2 concentrations provided additional support to the conclusion that biodegradation of the fuel constituents was occurring.

2.4.3 Post Shutdown Concentration Summary

The *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (USACE, 2016b) evaluated the results of the SVE shutdown testing performed in Q2 2015 by examining baseline data from Q1 2015, shutdown test sampling data, and data collected from Q3 and Q4 2015. This section incorporates the 2016 soil vapor data to revisit the conclusions from the shutdown test after an additional year of sampling. Time series graphs of selected SVMPs comparing baseline (Q1 2015 pre-shutdown) concentrations to post-shutdown trends are included in Appendix K. The 2016 soil vapor analytical results continue to support the conclusions of the *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (USACE, 2016b) as described below:

- Shutdown test data indicated that shallow SVMPs (25-feet bgs or shallower) have low HC concentrations. The highest HC concentration in the shallow SVMPs (70 ppmv) was collected in Q1 2015 (pre-shutdown) at KAFB-106125-025. This conclusion is supported by the analytical data from 2016. The highest HC concentration at KAFB-106125-025 in 2016 was 5 ppmv in Q4 2016. In 2016, all shallow SVMPs (15-30-feet bgs) had stable, low-level HC concentrations that ranged from 0 to 6 ppmv. These SVMPs are considered to be at background concentrations for HC.

- The *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (USACE, 2016b) concluded that SVMPs with significant O_2 decreasing trends (greater than 3% decrease in O_2) were located in areas of residual fuel contamination—primarily the source area at depths ranging from approximately 50- to 250-feet bgs, and in the area of the benzene groundwater plume at depths ranging from approximately 350- to 450-feet bgs (USACE, 2016b). Analytical data collected in 2016 continued to support this conclusion. As discussed in Section 2.3, in Q4 2016, SVMPs with O_2 levels less than 5% were located in the areas identified as containing residual fuel contamination in the shutdown test report.

- The *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (USACE, 2016b) concluded that rebound was nearing completion in the majority of the vadose zone six months following the SVE shutdown. However, continued HC concentration increases at nine on-Base SVMPs (SVMW-08-050, SVMW-01-100, SVMW-09-100, SVMW-04-250, SVMW-11-260, SVEW-01-260, SVMW-09-266, KAFB-106119-350, and KAFB-106128-350) indicated that equilibrium conditions had not been completely established throughout the BFF area (USACE, 2016b). Results of the 2016 sampling events indicate that rebound was nearing completion in all SVMPs, 1.5 years following the SVE shutdown. The Mann-Kendall analysis was performed on all the SVMPs listed above and the results are provided in Appendix K. There are no statistically significant trends in HC concentrations at the 95% confidence interval for all nine of the SVMPs mentioned above. These SVMPs are at or approaching equilibrium conditions.

- The vadose zone remained biologically active following SVE shutdown in Q2 2015, and biodegradation appears to have continued to play a substantial role in remediating the residual fuel HCs (USACE, 2016b). In 2016, O_2 levels continued to decrease in SVMPS with HC concentrations greater than 1,000 ppmv, and O_2 levels were less than 5% in 20 SVMPs in Q4 2016. This indicates that biodegradation continues to play a substantial role in remediating HCs in 2016.

- The *Kirtland AFB BFF Pilot SVE Shutdown Test Report* (USACE, 2016b) concluded that concentration trends provided lines of evidence that EDB was degrading in the vadose zone under very low O_2 conditions. Lines of evidence included low O_2, (less than 4.5% at the 250-feet deep SVMP listed below and less than 1.5% at the other two) accompanied by decreasing or stable EDB concentrations and increasing or stable benzene and HC concentrations, as observed at SVMW-03-100, SVMW-03-250, and SVMW-03-300. Anaerobic biological reductive debromination, abiotic reductive debromination, and/or hydrolysis were the more likely degradative processes (USACE, 2016b). The trend of decreasing or stable EDB concentrations and increasing or stable benzene and HC concentrations was not observed in 2016 as it was in 2015 at the SVMPs listed above (Appendix K). This indicates these SVMPs are at or approaching equilibrium conditions. However, the concentration of O_2 at these SVMPs was still below 5% throughout 2016. Anaerobic degradation processes may still be ongoing at these SVMPs; however, other factors such as barometric fluctuations may be interfering with the visibility of this process.

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3. GROUNDWATER MONITORING NETWORK GAUGING AND SAMPLING

The GWM well network for the Kirtland AFB BFF jet fuel dissolved-phase contamination is screened near the top of the saturated interval of the Santa Fe Group aquifer system. Historically, this aquifer system was the sole water supply for the Albuquerque metropolitan area and the groundwater flow was from north-northeast to south-southwest toward the Rio Grande (Bexfield and Anderholm, 2000). As population increased, water demand also increased and the Santa Fe aquifer system experienced significant stress resulting in water level declines in excess of 100-feet near Kirtland AFB (Powell and McKean, 2014). Furthermore, the groundwater flow changed direction from south-southwest (toward the Rio Grande) to an easterly and northeasterly direction away from the Rio Grande and toward the city and its drinking water supply wells (Powell and McKean, 2014). It is important to note the predominant groundwater flow direction was north-northeast for the dissolved-phase constituents migration. To reduce the use of groundwater while maintaining municipal supply, in 2008, the Albuquerque Bernalillo County Water Utility Authority (Water Authority) began diverting water from the San Juan-Chama Drinking Water Project. As a result, this surface water diversion has relieved the pumping stress of the Santa Fe aquifer system and water levels are rebounding approximately 2-feet per year (Beman, 2013). A more detailed discussion of the conceptual site model can be found in Section 7 of the RCRA Facility Investigation Report (USACE, 2016j).

Quarterly GWM was conducted as part of the interim measures implemented at the BFF to assess system performance of the GWTS and determine contaminant plume changes over time. At the beginning of Q4 2016, the BFF GWM well network was comprised of 134 GWM wells; all of these wells were sampled during the quarter with the exception of two (KAFB-106026 and KAFB-106230), which were not accessible due to safety concerns. In addition, during Q4 2016, two nested well clusters were installed, each consisting of three active and one contingency well, thus bringing the total number of active wells in the GWM network to 140. Therefore, only 138 wells were considered to be active within this network at this time. GWM activities include measuring depths to groundwater, gauging LNAPL thickness, and collecting groundwater samples for field parameter measurements and laboratory analyses. The GWM network wells as of the end of Q4 2016 are presented in Table 3-1 and shown on Figure 3-1.

In previous reports, the distribution of groundwater contamination had been described in terms of shallow, intermediate, and deep intervals within the EDB plume. These intervals were broadly defined by permeable zones in which EDB migration had been identified, and these intervals have been used to guide the vertical design of monitoring wells. However, with the implementation of the GWTS interim measure north of Ridgecrest Drive, SE, combined with the anticipated continuing water table rebound of approximately 2-feet per year for the next decade, these definitions of shallow, intermediate, and deep become problematic. Not all contamination will move upward with the rising water table; therefore, the base of the deep zone is expected to remain somewhat fixed. In addition, as the water table rises, the plume is expected to increase in thickness over time and impact a shallower layer of the aquifer that is not present today. For these reasons, the continued use of shallow, intermediate, and deep nomenclature will be inadequate to accurately describe changing vertical plume concentrations and changes in the plume related to the GWTS operation.

To assess performance of the GWTS, particularly regarding plume capture and plume collapse, several methods of analysis that compare variations in groundwater flow paths and contaminant concentration trends will be employed both horizontally and vertically. Horizontally, visualizing how concentrations vary in map view, from upgradient to downgradient, around Bullhead Park and the VA Medical Center, has not changed as these features are fixed. However, in the vertical dimension, shallow, intermediate, and deep are changing with time and are not fixed. Therefore, to fix these layers to accommodate

consistent performance analysis in the vertical dimension, and to provide for future addition of new layers (i.e., a shallower zone) as the water table rises, the concept of reference elevation interval (REI) is introduced in this Report. In concept, what were once the deep, intermediate, or shallow zones will now be represented as layers in cake (e.g., with a bottom elevation and a top elevation). Because of the nature of the permeable zones, the bottom and top undulate somewhat rather than being perfectly flat; however, the plume can still be visualized in terms of these layers. As the water table rises, layers can be added to the top. Because these fixed layers are defined, vertical water levels and vertical contaminant concentrations can be compared over time and always to the same references. This will allow meaningful analysis of trends that demonstrate plume capture and collapse with consistent reference points. The three REIs are 4857, 4838, and 4814, corresponding to the historically identified shallow, intermediate, and deep zones, respectively. Table 3-4 includes the REI assignations for the GWM network.

The association of the former groundwater zones and REIs relative to the depth of well screen intervals within the GWM network is summarized below:

- ***REI 4857*** is currently the uppermost interval so named because the GWM wells comprising this dataset are screened across the elevation of 4,857-feet above mean sea level (amsl). Data collected or measured from these GWM wells are representative of the hydrogeologic conditions of this zone that is bounded on top by the water table surface and bounded on the bottom by a surface that intercepts the bottom of the REI 4857 well screens. The screen elevations for the GWM wells within this dataset range from 4,879-feet amsl down to 4,827-feet amsl, and include all wells formerly categorized as shallow, and two new GWM wells completed in December 2016 (KAFB-106235-463 and KAFB-106236-461). These two new wells were not sampled in Q4 2016. A total of 62 wells comprise this dataset, eight of which are included in both the REI 4857 and REI 4838 datasets: KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, and KAFB-106025. The reason for this double assignation is due to well screen construction lengths (25-30-ft) and, thus, overlapping screen intervals in REI 4838 by more than 5-feet. This means that samples collected from these eight wells are representative of REI 4857, and are also representative of at least a third of REI 4838. Of note, a majority of the REI 4857 wells were designed to be water table wells with partially submerged screens, having relatively long screen lengths ranging from 20- to 30-feet. However, due to rising groundwater elevations, only 14 GWM wells included in REI 4857 remained with partially submerged screens as of Q4 2016.

- ***REI 4838*** directly underlies REI 4857 and is so named because all but one of the screens of the GWM wells comprising this dataset are screened across the elevation of 4,838-feet amsl. Data collected or measured from these GWM wells are representative of the hydrogeologic conditions of this zone that is bounded on top by the bottom surface of REI 4857 and bounded on the bottom by a surface that intercepts the mid-point between the REI 4838 screens and the underlying REI 4814 screens. The screen elevations for the GWM wells within this dataset range from 4,848-feet amsl down to 4,800-feet amsl, and includes all but two of the wells previously categorized as intermediate; the exceptions are GWM wells KAFB-106230 and KAFB-106232, which are now included in the REI 4814 dataset due to the depth of their screens. Eight wells are included in both in REI 4857 and REI 4838 datasets, as discussed above. The REI 4838 GWM well dataset contains one anomalous well assignment (KAFB-106037). This well, having a screened elevation between 4,815 and 4,800-feet amsl, was previously assigned as a deep well. However, it is part of the only clustered well group having four wells (all other have either two or three). Having three REIs meant excluding one well from this system in the capture analyses. KAFB-106037 was chosen over KAFB-106036 because analysis of historical groundwater level measurements from this clustered well group showed that it was in better communication with the nearby interim measure extraction well KAFB-106228. KAFB-106037 was placed in REI 4838

because the deepest well in the clustered well group (KAFB-106212) is screened below extraction well KAFB-106228, which necessitated its inclusion in the underlying REI 4814. A total of 46 GWM wells are included in REI 4838.

- ***REI 4814*** directly underlies REI 4838 and currently represents the lowest elevation dataset. This dataset includes all but one well (KAFB-106037) previously designated as deep, as well as the two previously designated intermediate wells (KAFB-106230 and KAFB-106232), as described above. The screened intervals for GWM wells within this dataset cover a large vertical extent of the aquifer ranging from an elevation of 4,824-feet amsl down to an elevation of 4,720-feet amsl. Not all of the screened intervals overlap, prohibiting the assignment of a reference elevation common to all wells. There are 16 wells with screen elevations ranging from 4,824- to 4,798-feet amsl, while 20 well screens fall within the 4,781-4,753-feet amsl range, and three well screens from 4,740- to 4,720-feet amsl. A reference elevation of 4,814-feet amsl was chosen as an identifier for this interval because it passes through the screens of the uppermost group of wells in the dataset allowing for the addition of a deeper REI if required in the future. Data collected or measured from these GWM wells are representative of the hydrogeologic conditions of this zone that is bounded on top by the bottom surface of REI 4838 and bounded on the bottom by a surface that intercepts the bottom of the REI 4814 well screens. There are 39 GWM wells installed in REI 4814.

Two new nested GWM well clusters (KAFB-106235 and KAFB-106236) were installed in October and November 2016, each with four GWM wells in each cluster. The nested wells consisted of three GWM wells screened at various depths in the groundwater and a fourth 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 in a new REI 4890, which will directly overly REI 4857. The new wells were installed northwest of the current EDB plume to define the plume boundaries and will be sampled using a combination of PDBs and DMSs starting in Q1 2017.

Appendices pertinent to GWM are listed below:

- E-1 – Passive Sampling Evaluation
- E-2 – Daily QC Reports – Groundwater Sampling
- E-3 – Groundwater and LNAPL Measurements
- E-4 – Groundwater Purge Logs and Sample Collection Logs
- E-5 – Groundwater Sample Chain-of-Custody Forms
- F-1 – Data Quality Evaluation Report – Groundwater Samples
- F-2 – Data Packages – Groundwater Samples.

3.1 New Groundwater Monitoring Activities

During Q4 2016, in addition to the standard GWM activities, an evaluation was performed in seven groundwater monitoring wells to identify if vertical contaminant gradients were present in the EDB and benzene plumes that might impact implementation of discrete passive samplers. A review of the evaluation is provided in Section 3.7.6 and Appendix E-1. Based on the data, passive sampling is an appropriate replacement sampling method for the currently utilized low-flow sampling technique (Bennett pumps) north of Ridgecrest Drive SE. For wells in the source area, initial data indicate possible vertical gradients in the screened intervals, and additional evaluation will be performed in Q1 2017.

Two new nested GWM wells were installed in Q4 2016 (KAFB-106235 and KAFB-106236), each consists of three active monitoring wells (one in each established REI) and one shallower contingency well that is anticipated for future use as the water table continues to rise. These new wells were installed in October and November 2016 to the northwest of the current EDB plume, and will be sampled using passive sampling equipment (e.g., PDB/DMS) starting in Q1 2017. The addition of the three active wells in each of the two nested well clusters brings the total number of active GWM wells in the network to 138.

3.2 Groundwater Monitoring Network Optimization

Per the revised Work Plan submitted in advance of Q4 2016, a modified sampling methodology was instated based on achieving field parameter stabilization of three consecutive readings within 10% of one another; readings were collected in five-minute intervals from the beginning of the purge. If the stabilization of all required parameters was not reached within an hour, the sample was collected nonetheless. Prior to Q4 2016, groundwater sampling requirements included purging each well of one well casing volume before field parameter stabilization was verified prior to sample collection. Section 3.4 presents a review of the sampling methodology change.

Additionally, in preparation for future optimization, the second event in a two-phase passive sampler evaluation began in Q4 2016; the second event will continue through Q1 2017. The purpose of this second event was to determine if vertical EDB or benzene concentration gradients are present in the contaminant plume that would be critical to depth selection of discrete passive samplers within the GWM network. The wells included in this evaluation were in both REI 4857 and 4838 and included KAFB-106014, KAFB-106063, and KAFB-106064 in the source area, and KAFB-106035, KAFB-106036, KAFB-106037, and KAFB-106226 in the GWM network (Figure 3-22). More discussion of the passive sampler evaluation is provided in Section 3.7.6.

3.3 Groundwater and Light Non-Aqueous Phase Liquid Level Measurement

Depths to LNAPL and groundwater were measured in 132 wells between October 3 and 6, 2016, and newly installed wells KAFB-106235 and KAFB-106236 on December 15, 2016. Solinst Model 122 oil-water interface probes were used to measure the depth to LNAPL and depth to groundwater at all locations. Prior to each use, the probes were checked for proper operation and cable integrity as well as being decontaminated before and after each well. If LNAPL was detected using the interface probe, a plastic bailer was used to confirm the presence and thickness of the LNAPL. Depths to LNAPL and groundwater were recorded in the field on Well Gauging Forms (Appendix E-3). The measurement dates, measured depths to LNAPL and groundwater, calculated LNAPL thickness, and groundwater elevations are provided in Table 3-2. Potentiometric surface maps for the three REIs (4857, 4838, and 4814) are provided on Figures 3-3, 3-4, and 3-5, respectively.

Out of the 61 wells gauged in REI 4857 in Q4 2016, only 13 spanned the current water table while the remaining 48 wells were submerged (Table 3-3). The screen in KAFB-106052 became submerged at some time between the Q3 and Q4 2016 gauging events. Although not coincident with gauging of the other wells, the gauging data from the two new nested wells were utilized to fill the data gap in the northwest portion of the GWM network. Groundwater levels continued to rise during 2016 throughout the GWM network. The average increase in groundwater level from Q3 to Q4 2016 was 0.62-feet, while the average annual increase in the GWM network in 2016 was 2.39-feet (Appendix L-2).

All 138 GWM wells gauged (including the newly installed nested well locations) were evaluated for floating fuel on the water table (i.e., LNAPL). Only one GWM well (KAFB-106008) had measurable

LNAPL with a thickness of 0.03-feet in Q4 2016 (Table 3-2). LNAPL thickness decreased by 0.01-feet (from 0.04-feet) in this well since Q3 2016 (Table 3-3); this well has historically exhibited elevated concentrations of EDB and BTEX.

3.4 Quarterly Groundwater Sampling

Quarterly groundwater samples were collected from 132 wells in the GWM network between October 3 and December 15, 2016 using dedicated or portable Bennett pump systems (Table 3-4); well locations are shown on Figure 3-1. In addition, samples were collected from seven GWM network wells using PDBs for EDB and VOC analysis as part of the vertical profile evaluation (Section 3.7.6). All groundwater samples collected for the Q4 monitoring event, except those samples collected from passive samplers, were analyzed for the same analytical suites, VOCs, EDB, select metals, anions, and alkalinity (Table 3-4) by Eurofins Lancaster Laboratories Environmental, LLC (ELLE) in Lancaster, Pennsylvania. ELLE maintains current Department of Defense Environmental Laboratory Accreditation Program certification. The groundwater purge and sampling forms are provided in Appendix E-4 and the chain-of-custody forms are provided in Appendix E-5.

Samples were collected using the optimized sampling methodology; well water was purged continuously at a flow rate between 0.5 and 1-liter per minute while field parameters (turbidity, temperature, DO, specific conductivity, pH, and ORP) were measured every five minutes. Purging continued until stabilization of three consecutive readings within 10% of one another was achieved, at which point a sample was collected. If stabilization did not occur for all required field parameters within one hour, a sample was collected. Field parameters were recorded on the field forms (Appendix E-4) and are summarized in Table 3-5.

Consistent with previous quarterly sampling events, wells that did not have a dedicated Bennett pump sampling system were designated based on historical analytical data as either clean, intermediate, or hazardous. For wells designated clean, decontaminated non-dedicated tubing was used in conjunction with a portable Bennett pump and decontaminated again after sampling each well. Conversely, each well designated as intermediate or hazardous had dedicated tubing that was specific to that well. The dedicated tubing length was measured for each well based on screen depth.

Purging and sampling conformed to the Work Plan (USACE, 2016f) requirements, with the following noted conditions.

- Though still in accordance with the new sampling requirements, stabilization of the required water quality parameters within 1-hour of purging was not achieved at 19 wells prior to sample collection, as follows:

  — The DO measurements at 15 wells did not achieve stabilization (i.e., four consecutive readings with 10% was not achieved). For 10 of these, the DO concentrations were less than 1.0 mg/L and the DO values were too small to obtain four consecutive readings within 10% within the 1-hour maximum purge period. An additional five wells did not achieve stabilization and had DO readings greater than 1.0 mg/L. The DO measurement at KAFB-106226 was erroneous due to an improperly installed probe membrane.

  — The turbidity measurements at four wells did not achieve stabilization within the 1-hour maximum purge period.

— The specific conductance measurement from KAFB-106019 did not achieve stabilization within the 1-hour maximum purge period.

Field parameter measurements for the samples collected during Q4 2016 ranged as follows: temperature from 16.4 to 23.1 °C, pH from 6.77 to 8.32 standard units, specific conductivity from 307.3 to 4547.0 µS/cm, DO from 0.0 to >10 mg/L (DO values >10 mg/L were considered anomalous), ORP from -213.0 to 250.0 millivolts, and turbidity from 0.14 to 91.0 NTUs. DO and ORP measurements indicated aerobic conditions in the majority of wells, while wells in the REI 4857 located in the source area generally had lower DO and ORP measurements than those outside of the source area.

3.5 Data Review and Usability Results

The Q4 2016 groundwater analytical data underwent EPA Stage 3 data validation by an independent third party subcontractor. Subsequent to validation, 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 project data quality objectives. Professional judgement was used to qualify the BTEX results for KAFB-106091, collected on October 13, 2016, as rejected data based on a fuel leak from a parked car at the wellhead. KAFB-106091 was resampled on December 15, 2016, including a field duplicate sample after the wellhead tubing had been purged. Analytical results from the December sample event were nondetect, confirming the original BTEX results were associated with fuel contamination that infiltrated the well vault. The rejected data have no impact on achieving project objectives, as the well was resampled. All groundwater data presented and discussed in this Report are final validated data. The Environmental Resources Program Information Management System data deliverable is scheduled for submittal on March 7, 2016. The Data Quality Evaluation Report for groundwater samples collected in Q4 2016 is provided in Appendix F-1, and the final laboratory data reports are included in Appendix F-2.

3.6 Project Screening Levels

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

1. NMWQCC standards per the New Mexico Administrative Code, Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (New Mexico Administrative Code, 2004). For metals, the NMWQCC standard applies to dissolved metals and total mercury.

2. EPA National Primary Drinking Water Regulations; MCLs and Secondary MCLs; and Title 40 Code of Federal Regulations (CFR) Part 141, 143 (EPA, 2015).

If no MCL or NMWQCC standard existed for an analyte, the PSL used was the EPA Tapwater Regional Screening Level (EPA, 2015).

The analytical method utilized to analyze for total nitrate/nitrite nitrogen concentrations 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 PSLs for all analytes are provided in all groundwater analytical data tables included in this Report.

3.7 Groundwater Quality Data

All groundwater samples collected in Q4 2016 were analyzed for EDB, VOCs, total metals (arsenic, lead, calcium, magnesium, potassium, and sodium), dissolved metals (iron, manganese), anions (ammonia nitrogen, bromide, chloride, sulfate, nitrate/nitrite nitrogen, sulfide), and alkalinity (Table 3-4). Organic analytes included EDB and VOCs, while inorganic analytes consisted of total and dissolved metals, anions, and alkalinity. Alkalinity, sulfate, bromide, dissolved iron, and dissolved manganese concentrations provide direct and indirect evidence of anaerobic conditions and thus are important indictors of bioremediation (Section 3.7.5). Removal of ammonia nitrogen and sulfide was recommended by the Hydrogeology Working Group Meeting on November 8, 2016, and future events will not include those analyses. Contaminant concentrations were compared to their respective PSLs, and the results of this comparison are discussed in the sections below. The analytical results for field duplicate samples are presented in the tables, and are used to assess field and laboratory analytical precision; however, they are not discussed in this text for comparison unless otherwise noted and are not provided on figures. The results for the duplicate sample analyses are included in the Data Quality Evaluation Report (Appendix F-1).

Data tables are provided in each section for the wells based on their status within in the optimized monitoring program. Concentrations for various compounds are depicted on figures, organized by REI, as listed below. Concentrations are shown for all analytes in samples representative of REI where the wells are screened. With the exception of EDB concentrations that are shown for all three REIs, all other concentrations are presented for wells screened within the 4857 REI, as follows:

- EDB on Figures 3-6, 3-7, and 3-8 for REIs 4857, 4838, and 4814, respectively
- Benzene on Figure 3-9
- Toluene on Figure 3-10
- Ethylbenzene on Figure 3-11
- Total xylenes on Figure 3-12
- Total alkalinity on Figure 3-13
- Nitrate/nitrite nitrogen on Figure 3-14
- Sulfate on Figure 3-15
- Bromide on Figure 3-16
- Dissolved iron on Figure 3-17
- Dissolved manganese on Figure 3-18
- Acetone on Figure 3-21.

Field parameters are also depicted on figures for REI 4857:

- DO on Figure 3-19
- ORP on Figure 3-20.

3.7.1 Sample Results for Downgradient Proximal, Veterans Affairs Proximal, and Signal Wells

The purpose of sampling the 26 downgradient and nine VA proximal wells is to ensure protectiveness of downgradient drinking water supply wells. The three signal wells, which were placed just south of

Ridgecrest Drive SE, were sampled to provide data to act as a warning indicator of possible contaminant (primarily BTEX constituents) migration from the source area into the capture zone created by the groundwater extraction wells. Data from all these wells serve to trigger actions in the event that constituents exceed pre-determined concentrations (either MCLs or NMWQCC standards for the proximal wells or GWTS influent limits for the signal wells). Q4 2016 EDB concentrations in groundwater are presented for the three REIs on Figures 3-6, 3-7, and 3-8, while benzene concentrations in groundwater for REI 4857 are presented on Figure 3-9.

There were no EDB or VOC detections for any of the proximal wells in any of the REIs with the exception of an estimated toluene concentration of 0.5 µg/L in KAFB-106217, far below the 750 µg/L PSL. Two of the three samples collected from the signal wells (KAFB-106017 and KAFB-106018) had detectable EDB, but only the sample from KAFB-106017 had a concentration (0.42 µg/L) above the PSL, a concentration similar to previous sampling events. An estimated benzene concentration of 0.6 µg/L was detected in KAFB-106017; however, no other BTEX constituents were detected in any of the three signal wells. Analytical data for these wells are presented in Tables 3-6, 3-7, and 3-8.

3.7.1.1 Organic Compound Analytical Results

Of the 38 combined downgradient proximal, VA proximal, and signal wells, only two signal wells (KAFB-106017 and KAFB-106018) and one proximal well (KAFB-106217) had any detections of organic compounds, as discussed below. All detections are associated with fuel constituents and breakdown products, with the exception of an estimated 0.5 µg/L tetrachloroethene in KAFB-106017 (below the 5.0 µg/L MCL).

- KAFB-106017 had several detections, including EDB (0.42 µg/L), 1,2-dichloroethane (1.0 µg/L), benzene (0.6 µg/L), isopropylbenzene (11 µg/L), N-propylbenzene (3 µg/L), sec-butylbenzene (1.0 µg/L), and tetrachloroethene (0.5 µg/L). None of these detections in KAFB-106017 exceeded the respective PSL, except for EDB (PSL of 0.05 µg/L).

- EDB was also detected in KAFB-106018 at 0.034 µg/L, below the PSL of 0.05 µg/L.

- Toluene was detected in KAFB-106217 at 0.5 µg/L, below the PSL of 750 µg/L.

3.7.1.2 Inorganic Compounds Analytical Results

PSL exceedances from the downgradient proximal, VA proximal, and signal wells were noted as follows:

- Dissolved manganese was reported in two signal wells above the PSL (0.2 mg/L): KAFB-106017 at 0.212 mg/L and KAFB-106018 at 0.905 mg/L. Dissolved manganese concentrations are presented for the wells located within REI 4857 on Figure 3-18.

3.7.2 Sample Results for Newly-Installed Wells

All newly installed GWM wells require four consecutive quarters of baseline sampling following installation. During Q4 2016, six new GWM wells were installed: KAFB-106235-463, KAFB-106235-492, KAFB-106235-521, KAFB-106236-461, KAFB-106236-490, and KAFB-106236-519. Beginning in Q1 2017, these wells will be included in the four-quarter baseline sampling required by NMED. Table 3-9 provides the status of these newly installed wells.

3.7.3 Sample Results for Source Area Wells

All 26 GWM wells located in the source area (Figure 3-1) were sampled during Q4 2016. Sample analytical results are provided in Table 3-10 and are summarized below.

3.7.3.1 Organic Compounds Analytical Results

Organic compounds, including EDB and BTEX compounds, were detected in over 75% (20 wells) of the samples collected from source area GWM wells. In addition to the fuel-related compounds, acetone was detected in five source area wells and is discussed in more detail in Section 3.7.5. Organic compound detections are noted as follows:

- EDB was detected in groundwater samples collected from 14 source area wells; 10 exceeded the 0.05 µg/L PSL. The highest two EDB concentrations were detected in samples collected from KAFB-106028 (42 µg/L) and KAFB-106006 (36 µg/L). EDB concentrations for the three REIs are presented on Figures 3-6, 3-7, and 3-8.

- Benzene was detected in groundwater samples collected from 14 source area wells; 11 exceeded the 5.0 µg/L PSL. The highest benzene concentration was 15,000 µg/L detected in KAFB-106059. Benzene concentrations for the source area wells located within REI 4857 are presented on Figure 3-9.

- Toluene was detected in groundwater samples collected from 11 source area wells: five (KAFB-106006, KAFB-106010, KAFB-106028, KAFB-106059, and KAFB-106064) exceeded the 750 µg/L PSL. The highest toluene concentration was 13,000 µg/L, detected in KAFB-106059. Toluene concentrations for the source area wells located within REI 4857 are presented on Figure 3-10.

- Ethylbenzene was detected in groundwater samples collected from 12 source area wells. The only PSL exceedance was detected in KAFB-106010 (760 µg/L); the ethylbenzene PSL is 700 µg/L. Ethylbenzene concentrations for the source area wells located within REI 4857 are presented on Figure 3-11.

- Total xylenes were detected in groundwater samples collected from 12 source area wells, with four of these samples (KAFB-106006, KAFB-106010, KAFB-106028, KAFB-106059) exceeding the 620 µg/L PSL. The highest total xylenes concentration of 1,900 µg/L was detected in KAFB-106028. Total xylenes concentrations for the source area wells located within REI 4857 are presented on Figure 3-12.

- Acetone was detected in five of the source area wells, all below the PSL of 14,000 µg/L. Acetone concentrations for the source area wells located within REI 4857 are presented on Figure 3-21.

- 1,2,4-Trimethylbenzene was detected in groundwater samples collected from 10 source area wells; eight exceeded the 15 µg/L PSL. The highest concentration of 140 µg/L was detected in KAFB-106028 (Table 3-10).

- 1,2-Dichloroethane was detected in groundwater samples collected from nine source area wells; two exceeded the 5 µg/L PSL (KAFB-106028 and KAFB-106059). The highest concentration of 14 µg/L was detected in KAFB-106059 (Table 3-10).

- 2-Hexanone was detected in groundwater samples from five source area wells; four (KAFB-106006, KAFB-106028, KAFB-106059, and KAFB-106064) exceeded the 38 µg/L PSL. The highest concentration (770 µg/L) was detected in KAFB-106006 (Table 3-10).

- Naphthalene was detected in groundwater samples collected from 11 source area wells; four samples (KAFB-106006, KAFB-106010, KAFB-106028, and KAFB-106059) exceeded the 30 µg/L PSL. The highest naphthalene concentration (76 µg/L) was detected in KAFB-106006 (Table 3-10).

- Methyl tert-butyl ether was detected in four source area wells; all concentrations were below the PSL of 140 µg/L.

- The VOCs (1,3,5-trimethylbenzene, 2-butanone, 4-Isopropyltoluene, 4-methyl-2-pentanone, isopropylbenzene, m,p-xylene, n-butylbenzene, N-propylbenzene, o-xylene, and sec-butylbenzene) were detected in various source area wells; however, none exceeded their respective PSL. Detections of m,p-xylene and o-xylene are included in the discussion above as total xylenes.

3.7.3.2 Inorganic Compounds Analytical Results

These analytes/parameters were detected in most of the samples as presented in Table 3-10. Inorganic analytes that exceeded their respective PSLs for the source area wells are noted as follows:

- Chloride was detected in groundwater samples collected from all 26 source area wells. Chloride in one sample (KAFB-106009) was detected at a concentration (411 mg/L) that exceeded the 250 mg/L PSL.

- Nitrate/nitrite nitrogen was detected in groundwater samples collected from 13 of 26 of the source area wells. One sample (KAFB-106009) was detected at a concentration (19.9 mg/L) that exceeded the 10 mg/L PSL for nitrate. Nitrate/nitrite nitrogen concentrations for the source area wells located within REI 4857 are presented on Figure 3-14.

- Sulfate was detected in groundwater samples collected from 13 of the 26 source area wells; three exceeded the 250 mg/L PSL. The highest concentration was 428 mg/L, measured in the sample from KAFB-106009. Sulfate concentrations for the source area wells located within REI 4857 are presented on Figure 3-15.

- Bromide was detected in several source area groundwater samples; however, there is no PSL for bromide. Bromide concentrations for the wells located within REI 4857 are presented on Figure 3-16.

- Dissolved iron was detected in 14 source area groundwater samples; eight exceeded the 1 mg/L PSL. The highest dissolved iron concentration was 6.6 mg/L in the groundwater sample collected from KAFB-106006. Dissolved iron concentrations for the source area wells located within REI 4857 are presented on Figure 3-17.

- Dissolved manganese was detected in 19 source area groundwater samples; 14 exceeded the 0.2 mg/L PSL. The highest dissolved manganese concentration was 6.93 mg/L in the groundwater sample collected from KAFB-106006. Dissolved manganese concentrations for the source area wells located within REI 4857 are presented on Figure 3-18.

Analytical results for groundwater samples collected from source area wells did not vary significantly from the previous quarters. Of particular note were benzene concentrations detected in two source area wells (KAFB-106006 and KAFB-106014). Benzene concentrations in KAFB-106006 increased from 140 µg/L (non-hazardous [<500 µg/L]) to 2,300 µg/L (hazardous [>500 µg/L]) in 2016. The opposite trend was observed in KAFB-106014 with the benzene concentrations decreasing from 560 to 220 µg/L from Q2 to Q4 2016.

3.7.4 Sample Results for Groundwater Monitoring Network Wells

All 68 GWM wells were sampled in Q4 2016. Analytical results for these samples are provided in Table 3-11 and PSL exceedances are summarized below.

3.7.4.1 Organic Compounds Analytical Results

Organic compounds, including EDB and BTEX constituents, were detected in 22 of the groundwater samples collected from GWM network wells. Of note, during sampling activities on October 6, 2016, a dilapidated car was observed parked over KAFB-106091 and a sheen of petroleum fluid was observed on top of the well vault. Later that day, after the car was moved, sampling technicians opened the well vault and found petroleum-based liquid inside the vault. The vault was cleaned using paper towels, a wet/dry vacuum, and cat litter. Sampling of the well was rescheduled for October 13; when the well was revisited, there was a minimal sheen of petroleum-based liquid within the vault. The vault was cleaned and a sample was collected, including a field blank to assess potential impacts from the release into the vault. The analytical results indicated the presence of several organic compounds, including benzene at relatively high concentrations. These compounds were not present in historical samples collected from this well. The day following the receipt of the analytical results (December 12), the sampling team returned to resample the well (December 15). The well and dedicated tubing were purged of 150 gallons over three hours, and a sample was then collected for BTEX and EDB analysis. In this second sample event, the detected EDB concentration was similar to historical values and BTEX constituents were all nondetect. Based on the absence of BTEX constituents in the groundwater after the extended purging, petroleum contamination at the top of the wellhead dedicated tubing was considered resolved. As such, the BTEX data from the October 13 sampling of KAFB-106091 were rejected for use and the December 15 sampling data are considered valid data to achieve project objectives.

PSL exceedances for organic compounds in the GWM wells are noted as follows:

- EDB was detected in groundwater samples from 12 GWM wells above the 0.05 µg/L PSL. The highest EDB concentration of 0.70 µg/L was detected in KAFB-106225. EDB concentrations for the three REIs are presented on Figures 3-6, 3-7, and 3-8.

- No benzene detections exceeded the 5.0 µg/L PSL. However, benzene was detected in groundwater samples collected from three GWM network wells (KAFB-106037, KAFB-106225, and KAFB-106226). Two of these wells (KAFB-106225 and KAFB-106226) are located in the distal part of the GWM network and are far removed from the benzene plume at the source area (Figure 3-9).

- Toluene (750 µg/L PSL), total xylenes (620 µg/L PSL), isopropylbenzene (450 µg/L PSL), n-propylbenzene (660 µg/L PSL), 1,2-dichloroethane (5 µg/L PSL), and sec-butylbenzene (2,000 µg/L PSL) were detected sporadically in the GWM network wells, all at concentrations below their respective PSLs (Table 3-11). There were no detections of ethylbenzene. Figures 3-10, 3-11, and 3-12 display analytical data for toluene, ethylbenzene, and total xylenes for REI 4857, respectively.

3.7.4.2 Inorganic Compounds Analytical Results

PSL exceedances for GWM wells are noted as follows:

- Chloride concentrations (254 mg/L) in one sample (KAFB-106019) exceeded the 250 mg/L PSL (Table 3-11).

- As expected, total alkalinity was detected in all samples; however, there is no PSL. Alkalinity concentrations are provided for REI 4857 on Figure 3-13.

- Nitrate/nitrite nitrogen concentrations did not exceed the 10 mg/L PSL for nitrate in any samples. Nitrate/nitrite nitrogen concentrations are presented for the wells located within REI 4857 on Figure 3-14.

- Sulfate concentrations did not exceed the 250 mg/L PSL in any samples. Sulfate concentrations are presented for REI 4857 on Figure 3-15.

- Bromide was detected at its highest concentration in KAFB-106009 (5 mg/L); however, there is no PSL for bromide. Bromide concentrations are provided for REI 4857 on Figure 3-16.

- Dissolved iron concentrations did not exceed the 1 mg/L PSL in any samples (Figure 3-17).

- Dissolved manganese concentrations exceeded the 0.2 mg/L PSL in seven samples. The highest concentration was 0.879 mg/L in the sample collected from KAFB-106075 (Figure 3-18).

3.7.5 Bioremediation Indicators

Higher alkalinity and dissolved metals concentrations are often associated with microbial activity as increased microbial activity can dissolve minerals in the saturated subsurface. The dissolution of minerals is associated with excess respiration of CO_2 and a subsequent drop in pH caused by high rates of microbial activity. The highest total alkalinity measurements are present within the benzene plume in samples collected from in KAFB-106028, KAFB-106059, and KAFB-106079. Wells situated outside of the benzene plume had total alkalinity concentrations more similar to one another as compared to those within the plume (Figure 3-13).

Anaerobic degradation of EDB can lead to increased concentrations of bromide. Elevated concentrations of bromide have been detected in and around KAFB-106009, which is immediately downgradient of the source area. The highest concentrations of bromide were detected in KAFB-106009 over the last four quarters.

Decreased concentrations of nitrate/nitrite nitrogen and sulfate are often associated with microbial activity. Nitrogen is incorporated into microbial biomass and sulfate can be used as an energy source by some microorganisms. The highest nitrate/nitrite nitrogen and sulfate concentrations were observed in

source area well KAFB-106009 (Figures 3-14 and 3-15, respectively). The high concentrations of nitrate/nitrite nitrogen are undergoing a separate investigation related to a suspected sanitary sewer line leak, and microbial activity/inactivity should not be inferred from this location.

In REI 4857, the six PSL exceedances for dissolved iron and 18 PSL exceedances for dissolved manganese were clustered in the vicinity of the benzene plume (Figures 3-17 and 3-18, 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 in a subsurface environment as increased microbial activity can result in anaerobic conditions. These conditions are often associated with microbial growth, which is preceded by the degradation of organic compounds in an environment. Field DO and ORP measurements at wells screened within REI 4857 (Figures 3-19 and 3-20, respectively) were generally higher outside of the distal EDB plume area and become progressively lower with proximity to the EDB plume and the source area. This indicates that aerobic microbial degradation of the fuel constituents is occurring within the downgradient portion of the source area while DO levels are sufficient to support aerobic hydrocarbon metabolism, after which anaerobic biodegradation occurs once DO levels are depleted (e.g., source area).

Acetone was detected in groundwater samples collected from five source area wells, ranging from 12 to 1,100 µg/L. Transient production of acetone is generally correlative to anoxic to methanogenic environments. It is assumed that acetone production transpires before the system becomes fully anaerobic (Mueller, 2011). The presence of acetone generally coincides with the DO and ORP trends that are observed in source area of the plume (Figure 3-21). Acetone detection data from Q4 2013, Q4 2014, and Q4 2015 were reviewed (USACE, 2014, 2015, and 2016a), and the acetone footprint has been persistent in the source area, although somewhat variable in particular wells (i.e., concentrations were not detected consistently in specific wells). Due to the reported half-life of acetone of 19-197 days (Mueller, 2011), the persistence of the compound would indicate an active, continuing bioremediation signature.

3.7.6 Passive Sampler Evaluation

A two-phase passive sampler evaluation was begun in Q2 2016 to assess a proposed transition from grab sample collection using a low-flow methodology (Bennett pump sampling systems) to a passive sampling technique (e.g., PDB/DMS). Each event consists of two quarters of analytical comparison between low-flow sample results and passive sample results. The first phase of this evaluation occurred in Q2 and Q3 2016, the results of which are reported in detail in the Q3 2016 Quarterly Report (USACE, 2016i), and are summarized below.

The analytical results from the first phase of this evaluation were comparable (less than 20% relative percent differences) between samples collected using passive samplers and grab samples collected using low-flow Bennett pumps for the majority of the wells with only a few exceptions of those that are installed in the source area with higher contaminant concentrations. These results provided evidence that passive samplers can be used in lieu of the Bennett pump low-flow methodology to achieve the data quality objectives. However, because there were some wells with high relative percent differences between the two methods, and there is little historical data on vertical contaminant gradients in the plume, a second phase of this evaluation (vertical profile evaluation, event 2) was begun on seven wells located along the longitudinal axis of the EDB plume (Figure 3-22). In addition, the vertical evaluation was designed to assess whether specific passive sampling depth placements produced better comparisons to the low-flow sampling results.

The second phase of this evaluation was initiated in Q4 2016; the wells included in the evaluation were in both REI 4857 and 4838 and included source area wells KAFB-106014, KAFB-106063, and KAFB-106064, and GWM network wells KAFB-106035, KAFB-106036, KAFB-106037, and KAFB-106226 (Figure 3-22). These wells were chosen as representative locations along the longitudinal axis of the EDB plume. Depending on the length of the saturated screen, between six and 11 PDBs were deployed in each well and were left to equilibrate for a minimum of three weeks prior to sampling. On the same day that the PDB samples were collected, a grab sample was also collected from 2-feet below the top of the screen using low-flow methodology (Bennett pump). The exception was in KAFB-106035, which did not have a fully submerged screen; the sample from this well was collected from 2-feet above the bottom of the screened interval. All samples were analyzed for VOCs and EDB, with each individual PDB sample being analyzed independently to represent the depth of deployment.

Lithologic cross-sections for each of the vertical evaluation locations are provided in Appendix E-1 with sample results indicated at each depth for both PDBs and low-flow samples. The analytical results from the PDB samples and the associated grab samples are presented in Table 3-13. There was no observed gradient in four of the seven wells (KAFB-106035, KAFB-106036, KAFB-106063, and KAFB-106226); the highest and lowest concentrations from the passive sampling within each of these wells demonstrated a relative percent difference less than 35% indicating that the values are within acceptable variation (USACE, 2016i). However, there was an observed vertical contaminant gradient generally increasing with screen depth in KAFB-106037 (for EDB only, not benzene), KAFB-106014, and KAFB-106064, the latter two of which are located in source area with higher concentrations in the plume. For these two wells with the vertical gradient, the benzene concentrations from the low-flow samples correlated with the higher concentrations in the PDB samplers. In general, the stratigraphic variation within each screened interval did not result in significant differences in the PDB sample results in any of the wells evaluated with the exception of the wells in the source area.

The second quarter (Q1 2017) of phase two of the evaluation will include additional data collection in the source area to determine if vertical gradients are significant within individual screened intervals in the higher concentration portion of the contaminant plume. In a few cases, the comparison between PDB samples and low-flow samples demonstrated variable results. In wells KAFB-106037 and KAFB-106226, the PDB samples had nondetect to barely detectable benzene (at the 1.0 µg/L limit of detection) while the grab samples collected using low-flow sampling (Bennett pump) had detectable benzene concentrations (3.0 µg/L). Therefore, the results are within the method reporting error and are considered as comparable (Table 3-13). In KAFB-106063, the benzene concentrations observed in the PDB samples were higher than the low-flow samples. However, as explained above, the results were within the method reporting error. In summary, minor differences in analytical results were observed between the two sampling methods, both results were within the method reporting error and consistent when compared to the PSL (i.e., concentrations always exceeded, or were less than the PSL, in both samples).

For wells located downgradient of the source area, the vertical profile evaluation revealed little or no vertical gradation of the contaminants within the screened intervals and that passive samplers provide comparable data to the low-flow sampling method. Based on the data, passive sampling is an appropriate replacement sampling method for the currently utilized low-flow sampling technique (Bennett pumps) north of Ridgecrest Drive SE. Passive samplers for organic analyses will be placed near the mid-point of well screen intervals for future sampling events. For wells in the source area, initial data indicate possible vertical gradients in the screened intervals, and additional evaluation will be performed in Q1 2017.

3.8 Annual Groundwater Gauging and Monitoring Summary

3.8.1 Annual Time-Series Analysis of Groundwater Elevations and Light Non-Aqueous Phase Liquid Thicknesses

In Q4 2016, the depth to groundwater and LNAPL thickness was measured in all 138 of the active GWM wells. Groundwater samples were collected from 132 GWM wells (the two newly-installed nested well locations [KAFB-106235 and KAFB-106236] with a total of six available wells were not sampled in Q4 2016), and the samples were analyzed for field parameters and submitted for laboratory analysis. The following discussion includes the findings of the field sampling event.

Groundwater levels continued to rise an average of 2.39-feet across the GWM network during 2016 due to groundwater conservation measures within the basin (i.e., reduced pumping from production wells), rising an average of 1.12-feet from Q1 to Q2 2016, 0.72-feet from Q2 to Q3 2016 and 0.62-feet from Q3 to Q4 2016. The greatest single increase from Q3 to Q4 2016 was 1.95-feet in KAFB-106203, located in the northeastern portion of the GWM network. Additionally, the increasing water level caused the screen of one additional well (KAFB-106052) to become submerged in 2016.

All 138 GWM wells gauged (including the newly-installed nested well locations) were evaluated for floating fuel on the water table (i.e., LNAPL). Only one GWM well (KAFB-106008) had measurable LNAPL with a thickness of 0.03-feet in Q4 2016. A clear bailer was used to sample the groundwater interface and confirmed LNAPL present in KAFB-106008. As compared to previous sampling events, LNAPL was measurable in one well in Q1 2016 (KAFB-106005) and three wells in both Q2 and Q3 2016 (KAFB-106005, KAFB-106008, and KAFB-106076).

3.8.2 Annual Time-Series Analysis of Analytes in Groundwater

This section discusses general trends of organic and inorganic compounds throughout the groundwater monitoring network in 2016, as well as inorganic constituents and field parameters at three select source area wells chosen due to the presence of increasing nitrate concentrations in that area. A detailed analysis, and subsequent discussion, of the trends regarding the extent of the EDB plume were conducted through the use of extensive modeling analysis comparing Q2 and Q4 2016; Section 5.3 presents the results of those analyses.

The extent and configuration of the EDB plume changed notably in the distal part of the plume between Q2 and Q4 2016 due to decreasing EDB concentration in wells KAFB-106055 and KAFB-106057. Those wells are positioned approximately equidistant from extraction wells KAFB-106234 and KAFB-106228. Both KAFB-106055 and KAFB-106057 had EDB concentrations near or above the 0.05 µg/L PSL in Q2 2016, but decreased to concentrations below the PSL in Q4 2016 resulting in the EDB plume dividing into two distinct parts. For details about the changes in the extent and configuration of the EDB plume, see Section 5.3 and Figures 5-2 through 5-14.

Although some intra-well concentrations of benzene and toluene showed fluctuation from Q2 to Q4 2016, these plume boundaries remained consistent in 2016. Ethylbenzene was detected in two wells above the PSL of 700 µg/L (KAFB-106010 and KAFB-106059) in Q2, but was detected above the PSL in only KAFB-106010 in Q4. These wells are within the source area. Total xylenes were detected in two wells above the PSL of 620 µg/L (KAFB-106010 and KAFB-106059) in Q2, but were detected above the PSL in four wells (KAFB-1060006, KAFB-106010, KAFB-10628, and KAFB-106059) in Q4. These wells are within the source area.

The inorganic analyte concentrations and iso-contours were relatively consistent throughout 2016 with the exception of bromide, which demonstrated a variable distribution among the GWM network. Throughout the year, the highest bromide concentrations have been consistently found downgradient of the source area in KAFB-106009. This is a line of evidence for the anaerobic degradation of EDB within the source area.

Increasing nitrate concentrations were observed at three on-Base source area wells screened in the REI 4857 (KAFB-106005, KAFB-106009, and KAFB-106012R). Due to the increasing concentration trends, these three source area wells are sampled on a quarterly basis for all analytes; whereas all other source area wells are only sampled twice per year for the full suite (Table 3-1). The anions of most concern are chloride, sulfate, and nitrate/nitrite nitrogen and the cations include calcium and sodium. Water quality parameters, including ORP, were measured in the field prior to sample collection; chloride, sulfate, nitrate/nitrite nitrogen, calcium, and sodium were analyzed in samples sent to the off-Site laboratory. Table 3-12 presents the ORP and laboratory results for samples collected from these three wells. Time series plots for these parameters for the past five quarterly sampling events are provided in Appendix L-3. Data for all the analytes mentioned were assessed statistically using a Mann-Kendall analysis to determine if there were statistically significant trends as provided in Appendix L-3.

The results of a Mann-Kendall analysis for inorganic analytes in KAFB-106005, KAFB-106009, and KAFB-1060012R indicated that calcium and sodium concentration trends were increasing and statistically significant in all three monitoring wells. Chloride and sulfate concentrations in KAFB-106009 and KAFB-106012R showed statistically significant increasing trends. Nitrate concentration trends were increasing and statistically significant only in KAFB-106009. These trends are shown graphically in Appendix L-3.

The groundwater analytical results for all three wells were consistent with impact from a sanitary sewer source. Investigation by Kirtland AFB indicated that while the sewer lines are intact, the junction manhole may be a source of sanitary waste. Final results from that investigation were not available at the time that this report was written.

3.9 Groundwater Monitoring Well Network Operation and Maintenance

The GWM wells were inspected between November 22 and December 14, 2016 for integrity and security. These inspections were performed to ensure that the condition of all protective covers and wellheads met the intended requirements for performance and security. Following the inspections, GWM wells requiring maintenance were serviced accordingly.

Twenty dedicated sampling systems were removed during Q4 2016 from the following wells: KAFB-106012R, KAFB-106023, KAFB-106042, KAFB-106073, KAFB-106074, KAFB-106077, KAFB-106086, KAFB-106087, KAFB-106215, KAFB-106217, KAFB-3411, KAFB-106100, KAFB-106003, KAFB-106101, KAFB-106032, KAFB-106049, KAFB-106201, KAFB-106204, KAFB-106029, and KAFB-106208 (Figure 3-23). The Bennett pump systems were removed because the pumps failed or were near failure, or they needed to be removed for the vertical profile evaluation in Q4 2016. A combination of portable Bennett pump systems and passive sampling equipment will be used to sample these wells in the future. As of the end of Q4 2016, of the 132 wells designed to be sampled using either portable of dedicated Bennett pumps systems, 63 wells no longer have dedicated Bennett pump systems installed. The age of the pump at failure and the locations of the failed pumps vary widely from six months to five years and across the well network from source area to distal end.

Additional details on GWM network maintenance are provided in the GWM Well Network Maintenance Report (USACE, 2016g).

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4. DRINKING WATER SUPPLY WELL MONITORING

Four drinking water supply wells (KAFB-003, KAFB-015, KAFB-016, and ST106-VA-2) provide drinking water to Kirtland AFB employees and tenants, and VA Medical Center patients, employees, and visitors. 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 dissolved-phase EDB and benzene plumes. In 2016, Kirtland AFB well KAFB-016 was not operational due to ongoing maintenance, and was not sampled.

4.1 Drinking Water Supply Well Sampling and Analysis Procedures

All field measurements, sample collection, packaging, shipping, and analyses were performed in accordance with the SVM and Drinking Water Monitoring Work Plan with the Quality Assurance Project Plan (USACE, 2016d).

Field DO, pH, ORP, conductivity, turbidity, and temperature measurements were made using a Yellow Springs Instrument 556 multi-probe system. Instrument calibration was performed daily for QC to ensure accurate readings. The sample port at each drinking water wellhead was opened for 30 seconds prior to sampling to purge any entrained sediment. Volatile organic analysis samples were collected first. Upon filling, the sample containers were immediately sealed, checked for head-space bubbles, labeled, and put into a cooler. Daily field activity logs and calibration logs are included in Appendix G-1. Completed sample collection logs and chain-of-custody forms are included in Appendix G-2.

Drinking water supply samples were collected for the following analyses:

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

Samples were submitted to ALS Environmental in Kelso, Washington, for analytical testing. Analytical results were validated by Laboratory Data Consultants, Inc. The Data Quality Evaluation Reports are included in Appendix H-1. ALS Environmental Laboratory Reports for October, November, and December 2016 are included in Appendix H-2.

In addition, semi-annual water samples were collected in October 2016, and analyzed for the following inorganic parameters:

- Total metals (calcium, magnesium, potassium, sodium) using EPA Method 6010C
- Dissolved metals (iron, manganese) using EPA Method 6010C
- Total metals (arsenic, lead) using EPA Method 6020A
- Anions (bromide, chloride, 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.

Inorganic parameter samples collected in Q4 2016 were submitted to ELLE for analytical testing. The Data Quality Evaluation Reports and data packages are included in Appendices F-1 and F-2, respectively.

4.2 Data Review and Usability

Laboratory Data Consultants, Inc. performed a 100% Level 3 data validation for Q4 2016 organic compound analytical data. All data complied with necessary criteria that determined the data valid, with no data qualified as rejected. The technical data completeness was 100%. The data met data quality objectives and were appropriate for use in project decision-making. The QC parameter and data quality indicators (precision, bias [accuracy], representativeness, comparability, completeness, and sensitivity) evaluation results are provided in the Data Quality Assessment Report and Data Validation Report included in Appendix H-1 for organic compounds and Appendix F-1 for inorganic parameters. Final validated data are presented in Table 4-1.

4.3 Drinking Water Supply Well Water Quality for Q4 2016

Analytical results for October, November, and December 2016 are presented in Table 4-1 and Appendix H-2, and presented in Figure 4-1. PSLs for drinking water supply wells were the lower of either the EPA or NMWQCC screening levels, as discussed in Section 3.6. All inorganic compounds detected in drinking water supply wells KAFB-003, KAFB-015, and ST106-VA-2 were below PSLs. No EDB or BTEX concentrations were above the limit of detection for drinking water supply wells KAFB-003, ST106-VA-2, or KAFB-015 sampled in October, November, and December 2016. This indicates that all three wells had no detectable concentrations of EDB and BTEX in the drinking water that is supplied to Kirtland AFB employees and tenants, and VA Medical Center patients, employees, and visitors.

4.4 Annual Drinking Water Supply Well Sampling Results

This section discusses the organic compound analytical results from sampling of the drinking water supply wells KAFB-003, KAFB-015, KAFB-016, and ST106-VA-2 during calendar year 2016.

- KAFB-003 and ST106-VA-2 were sampled monthly from February through December 2016 for organic compounds and sampled semi-annually in Q2 and Q4 2016 for inorganic compounds. All organic compounds were nondetect from February through December 2016, with the exceptions of low level toluene detections in February, March, and April 2016. These detections were validated as J-qualified detections or nondetects because of trip blank contamination and do not represent toluene in these drinking water supply wells. In Q2 and Q4 2016, all inorganic compounds were below PSLs.

- KAFB-015 was not sampled in February through August 2016 due to ongoing repairs; however, KAFB-015 was sampled monthly from September through December 2016 for organic compounds, and in Q4 2016 for inorganic compounds. Results were nondetect for all organic compounds, except for total xylenes in the September sampling event. This detection was most likely attributed to the repairs that were also completed in September; no xylenes were detected in Q4 2016 at KAFB-015. In Q4 2016, all inorganic compounds were below PSLs.

- KAFB-016 was not sampled due to ongoing repairs in 2016.

5. GROUNDWATER CAPTURE AND TREATMENT SYSTEM OPERATION

This section presents Q4 2016 and annual summaries of the plume capture evaluation, GWTS evaluation metrics, and issues encountered during GWTS operation.

5.1 Groundwater Treatment System Operation

The GWTS was operated during Q4 2016 to treat groundwater extracted from the distal portion of the EDB plume. The GWTS is currently comprised of three extraction wells (KAFB-106228, KAFB-106233, and KAFB-106234), conveyance piping, and a 400-gpm capacity carbon treatment system located within the GWTS building (Figure 5-1). During Q4 2016, a fourth extraction well (KAFB-106239) was installed, and construction was initiated on a second 400-gpm capacity treatment train. The pump in KAFB-106233 remained off-line for the entirety of Q4 2016 to prevent biofouling and clogging of the GWTS. During Q4 2016, the GWTS treated 30,070,100 gallons of groundwater with 12,598,910 gallons of treated water discharged to the Tijeras Arroyo Golf Course main pond and 17,471,190 gallons of treated water discharged to gravity injection well KAFB-7 (Figure 5-1). Table 5-1 provides a summary of groundwater quantities extracted, treated, and discharged. Supporting documentation for GWTS performance is located in Appendix I-1. New Mexico 811 line-location tickets are provided in Appendix I-2 for third party construction activity in the vicinity of the off-Base conveyance lines (Section 5.2.2).

5.1.1 System Operation and Percentage Run Time

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 subsequently treated and discharged.

5.1.1.1 Quarterly Run Time

From October 1 through December 31, 2016, the GWTS was operational 77% of the time, which is a 2% reduction relative to Q3 2016. This decrease in operational run time stems from planned and unplanned system shutdowns associated with construction as described in Section 5.2.3. Table 5-2 provides a summary of monthly extraction well performance.

5.1.1.2 Annual Run Time

From January 16 through December 31, 2016, the GWTS was operational 83% of the time and treated a total of 120,806,300 gallons of groundwater (Table 5-1). The operational run time percentages for Q1, Q2, Q3, and Q4 2016 were 59, 89, 79, and 77, respectively. Table 5-3 provides a summary of quarterly and annual extraction well performance.

5.1.2 Well Performance Metrics

Average operational extraction rates from each well do not include downtime. Monthly and annual performance of the extraction wells is provided in Tables 5-2 and 5-3, respectively.

5.1.2.1 Quarterly Extraction Rates

Water was extracted from KAFB-106228 during Q4 2016 (October 1 through December 31, 2016), at an average operational flow rate of 145 gpm with a run time of 77%.

Water was not extracted from KAFB-106233 for the entirety of Q4 2016 due to biofouling concerns determined by the USACE Engineer Research and Development Center in Q3 2016.

Water was extracted from KAFB-106234 during Q4 2016 at an average operational flow rate of 155 gpm with a run time of 77%.

5.1.2.2 Annual Extraction Rates

The pump in KAFB-106228 was shut off from April 18 through July 12, 2016 for pump replacement and rehabilitation. For the period January 16 through December 31, 2016, water was extracted from KAFB-106228 at an average operational flow rate of 130.3 gpm with a run time of 58%.

The pump in KAFB-106233 has been shut off since June 10, 2016. For the period of February 2 through December 31, water was extracted at an average operational flow rate of 160.7 gpm with a run time of 28%.

The pump in KAFB-106234 was in operation from February 2 through December 31, 2016 at an average operational flow rate of 159.3 gpm with a run time of 74%.

5.1.2.3 Quarterly Specific Capacity

The specific capacity calculations discussed here do not include pump downtime, which would in effect create zero values for specific capacity (i.e., calculations only include dates when pumps were running). All specific capacities are reported in gallons per minute per foot of drawdown.

The specific capacity range for KAFB-106228 was between 8.9 and 11.0 gpm per foot from October 1 through December 31, 2016. This well's average specific capacity was 9.6 gpm per foot over Q4 2016.

Extraction well KAFB-106233 was not pumped during Q4 2016 and, therefore, specific capacity could not be calculated.

The specific capacity range for KAFB-106234 was between 28.0 and 81.1 gpm per foot from October 1 through December 31, 2016. The average specific capacity of this well was 35.0 gpm per foot over Q4 2016.

5.1.2.4 Annual Specific Capacity

Annual average specific capacity of KAFB-106228 was 10.1 gpm per foot. Specific capacity values were relatively constant for KAFB-106228 for the year with minor variations (Appendix I-1).

The annual average specific capacity for KAFB-106233 when it was operational in 2016 was 16.3 gpm per foot.

The annual average specific capacity for KAFB-106234 was 35.6 gpm per foot. Specific capacity values were relatively constant for KAFB-106234 for the year with minor variations (Appendix I-1).

5.1.3 Analytical Metrics and Ethylene Dibromide Removal

Quarterly and annual GWTS analytical performance metrics and EDB mass removal are provided in the following sections.

5.1.3.1 Quarterly Analytical Metrics

GWTS performance sample collection logs are provided in Appendix I-3. GWTS samples were collected monthly from the untreated influent, from a port located after the granular activated carbon (GAC) 1 (post-GAC 1), and from the treated effluent (post-GAC 2). Samples were analyzed for EDB, BTEX, and dissolved metals (iron and manganese); the results from the analyses are included in Appendix I-4. GWTS effluent discharge limits are provided as PSLs in Table 5-4. All analyte concentrations for effluent samples collected during Q4 2016 were below their respective limits of detection.

The Q4 2016 GWTS analytical data underwent EPA Stage 3 data validation by an independent third party. Additionally, the data were assessed for accuracy, precision, representativeness, comparability, completeness, and sensitivity to determine if the project data quality objectives were achieved and usable for their intended purpose. No Q4 2016 GWTS data were rejected. The data validation results are included in the Data Quality Evaluation Report provided in Appendix I-4, and the final laboratory data reports are included in Appendix I-5.

From October 1 through December 30, 2016, an estimated 8,406 milligrams of EDB was captured in the lead GAC vessel. This quantity of mass was calculated by taking the sum of each monthly influent concentration multiplied by the respective total monthly treated volume (Table 5-5). Flow measurements were collected weekly and, therefore, measurement dates often did not correspond with the beginning and end dates of each month. Monthly treated volumes were calculated using weekly flow measurements and, in instances where weekly flow measurements included dates outside of the month, weekly treated volumes were interpolated to correspond with the monthly start and end dates.

5.1.3.2 Annual Analytical Metrics

All analyte concentrations for post-GAC 1 and effluent samples collected during 2016 were below their respective limits of detection indicating that there has not been breakthrough of the lead GAC vessel (Appendix K-5). For 2016 operations (defined as December 31, 2015 through January 3, 2017, based on weekly data collection), an estimated 36,547 milligrams of EDB was captured in the lead GAC vessel using the same calculation as above (Table 5-5).

5.2 Groundwater Treatment System Maintenance and Expansion

All GWTS maintenance and expansion activities are provided in the following sections.

5.2.1 Routine Maintenance Activities

Routine maintenance is any activity described as such in the GWTS Operations and Maintenance Plan (USACE 2016e). Quarterly and annual summaries of routine maintenance activities are provided in the following section.

5.2.1.1 Quarterly Routine Maintenance Activities

During Q4 2016, bag filters were only changed out on November 18 and December 30, 2016. Differential pressures in the lead GAC vessels showed only small increases (5.2-5.9 and 2.9-4 pounds per square inch, for drain and fill modes, respectively) throughout the quarter. No maintenance was required or performed on either GAC vessel.

The GWTS routine maintenance schedule is provided as Table 5-6. During Q4 2016, non-routine system operational issues were encountered and are discussed in Section 5.3.3.

5.2.1.2 Annual Routine Maintenance Activities

During 2016, the GWTS was intentionally shut down on several occasions for routine maintenance including changing bag filters, cleaning Y-strainers, changing pump oil, and greasing pump bearings.

Routine maintenance was performed as per the GWTS Operations and Maintenance Plan (USACE 2016e) throughout 2016.

5.2.2 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. Permits are required for all on-Base excavation projects.

5.2.2.1 Quarterly Conveyance Line Security

During Q4 2016, Kirtland AFB responded to 12 off-Base tickets requested through New Mexico 811 (Appendix I-2).

5.2.2.2 Annual Conveyance Line Security

Over the course of 2016, Kirtland AFB responded to 36 off-Base tickets requested through New Mexico 811. During 2016, there were no conveyance line breaches and all off-Base conveyance lines remained intact. See Appendix I-2 for details.

5.2.3 Non-Routine Maintenance Activities

Non-routine maintenance activities are defined as maintenance items that fall outside of the scope of the GWTS Operations and Maintenance Plan (USACE 2016e) but need to be addressed in order to maintain consistent GWTS operation.

5.2.3.1 Quarterly Non-Routine Maintenance Activities

During Q4 2016, multiple unscheduled system shutdowns occurred. On several occasions, the system shut down due to heavy rain that caused water to accumulate in the floor of the well vaults, which triggered leak detection alarms. The next day following leak-detection alarms, vaults were pumped of rainwater, cleaned, and inspected. The GWTS was also shut down multiple times for construction activities and troubleshooting of new system components during Q4 2016. High water level alarms in the golf course main pond also occurred several times during Q4 2016 in response to the pond reaching capacity. During times when discharge was permitted to KAFB-7, the system flow was directed to KAFB-7 instead of the golf course main pond. KAFB-7 experienced transducer interference on multiple occasions, which triggered shut down of the GWTS. During times of interference, the system remained off-line until communications to KAFB-7 were restored.

Several system components were upgraded to improve GWTS performance and in conjunction with the GWTS expansion during 2016:

- Wafer cone flow meters were installed on extraction wells KAFB-106233 and KAFB-106234 in January 2016, and V-cone flow meters were installed on the influent and effluent skids.

- A gate valve was replaced with a ball valve at the effluent skid discharge in May 2016, and the effluent pump was also replaced with a smaller flow model.

- Variable frequency drives (VFDs) were installed for extraction wells KAFB-106233 and KAFB-106234 in the Well Control House in July 2016, and air conditioning units were added to the Well Control House in September 2016 to control VFD over-heating.

- Pressure transmitters were installed in October 2016 at KAFB-106228, the Well Control House, the influent skids, and the effluent skids to automate the data to the HMI.

- Treatment train 2 GAC manifold piping was installed in October 2016.

- Magnetic flowmeters for the three existing extraction wells, the existing influent skid, and the existing effluent skid were installed in December 2016.

More details of the GWTS expansion activities in Q4 2016 are discussed in Section 5.2.4.

5.2.3.2 Annual Non-Routine Maintenance Activities

Repairs and maintenance were also performed during 2016 to comply with the GWTS Operations and Maintenance Plan (USACE 2016e):

- The pump motor failed on KAFB-106228 on April 19, 2016. Subsequently, KAFB-106228 was shut down for the remainder of Q2. Early in Q3, the motor in KAFB-106228 was replaced and the extraction well went back on-line on July 11, 2016.

- Bag filters were changed out every two to three days at the influent skid during April, May, and early June 2016 to accommodate the rapid fouling originating from KAFB-106233. This extraction well was taken off-line on June 10, 2016 and is scheduled for rehabilitation beginning in Q1 2017.

- The lead GAC vessel also experienced a high differential pressure response due to fouling and precipitation on the top of the GAC media (influent from KAFB-106233). In early June, it was serviced to remedy the problem by vacuuming the top of the vessel to remove the fouling and crust on the topmost layer of the GAC.

- Skid pumps required and received oil changes every 90 days and pump motors required and received greasing every 75 days. Annual Operations and Maintenance activities are summarized in Table 5-7.

5.2.4 Expansion Activities

Expansion efforts began at the GWTS during Q3 2016. Below is a summary of work performed as part of the GWTS expansion in Q4 2016:

- On October 4, 2016, an emergency stop button was installed on the dust suppression panel.

- On October 12, 2016, pressure transmitters were installed on influent bag filters, KAFB-106228 well head, and at the Well Control House.

- On October 24, 2016, the GAC manifold piping was installed.

- On November 3, 2016, drilling was initiated on a new extraction well (KAFB-106239) just south of Ridgecrest Drive SE and east of San Pedro Drive SE (Appendix B-2). Well installation was completed on December 9, 2016. A well completion report will be provided in Q2 2017; the well location and lithologic log are provided in Appendix B-2.

- On December 2, 2016, the two overhead lights removed for GAC vessel installation in Q3 were reinstalled.

- On December 16, 2016, installation of all magnetic flowmeters and piping was completed.

- On December 21, 2016, installation of all conduit and wiring for the second treatment train was completed.

5.3 Groundwater Treatment System Performance Assessment

The principal goals of this interim measure are to: (1) hydraulically capture the EDB plume via well pumping, thereby halting plume expansion, and providing protection to water supply wells; and (2) collapse the EDB plume, which includes reducing the plume volume and contaminant mass over time. The first goal, plume capture, provides short-term protectiveness. The second, plume collapse, achieves the longer-term cleanup goal, and permanent protectiveness. Measuring the attainment of these goals during corrective action is referred to as performance assessment. The subsections below describe the methods of performance assessment being utilized to measure the success of the interim corrective action.

A performance assessment was conducted using a series of two- and three-dimensional models in addition to spatial and non-spatial analyses to quantify the progress of the interim measure GWTS for collapsing the dissolved EDB plume. This section describes the systematic approach used for performing capture zone analysis. Capture zone refers to the three-dimensional region that supplies the groundwater extracted by the interim measure wells and is equivalent to the zone of hydraulic containment. If a contaminant plume is hydraulically contained, contaminants moving with the groundwater will not spread beyond an established Target Capture Zone established for the interim measure. The approach described in this section follows the EPA recommended approach for evaluating capture at GWTS (EPA, 2008).

There are three primary lines of evidence used to define capture: potentiometric surface mapping defining horizontal capture, water level difference mapping defining vertical capture, and water level pairs analysis defining gradient control points. The primary lines of evidence are based completely on analysis of collected data and utilize a varying degree of inference and interpolation between the data points. They do not solve flow equations or directly incorporate aquifer properties such as transmissivity or hydraulic conductivity, nor do they incorporate data about the interim measure such as extraction rates. In order to incorporate these other forms of data, EPA recommends developing secondary or supporting lines of evidence to the primary capture analyses. These lines of evidence can be simple two-dimensional flow calculations that incorporate extraction rates and aquifer transmissivity estimates in the equation, or they can be complex three-dimensional numerical models depending on the scale, budget, and needs of the project.

Monitoring concentration trends downgradient of an established Target Capture Zone can provide additional evidence of successful capture. EPA recommends monitoring of contaminant concentrations at two types of locations:

- Sentinel wells, which are located downgradient of the Target Capture Zone and are not currently impacted above background concentrations
- Downgradient performance monitoring wells, which are located downgradient of the Target Capture Zone and are currently impacted above background concentrations.

This section describes the methods and results for each line of evidence used to evaluate EDB plume capture at Kirtland AFB BFF.

5.3.1 EDB Plume Delineation

The 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 Target Capture Zone) is defined as the 0.05 µg/L iso-shell for EDB. The iso-shell is defined as the three-dimensional polygon with a periphery concentration of 0.05 µg/L. Water chemistry samples from vertically nested wells have shown that EDB in concentrations above the detection limit does not extend throughout the entire thickness of the impacted portion of the aquifer; therefore, a three-dimensional delineation of the Target Capture Zone is required.

Three-dimensional delineation of the Target Capture Zone was performed using C-Tech Mining Visualization System (MVS) software. EDB concentrations from 136 screen intervals were modeled using the Krig_3D module, which created a hexahedral finite-element grid with kriged nodal values of the EDB dissolved concentrations. The horizontal concentration grid had 69 grid nodes in the X direction and 87 grid nodes in the Y direction that establish a grid spacing of approximately 100-feet in both directions. The vertical concentration grid consisted of 36 nodes spaced approximately 5-feet apart. The X and Y grid spacing ensured that each measured concentration value had a unique grid node location as the minimum distance between screened intervals with similar elevations is 134.5-feet (e.g., wells KAFB-106083 and KAFB-106018). The grid spacing in the Z direction best articulated the open interval of each well screen. Vertical screened intervals ranged from 10- to 30-feet; thus, the 5-foot grid spacing allows the model to represent the top and bottom of each interval.

The other key parameter setting for the Krig_3D module is the Horizontal/Vertical (H/V) Anisotropy Ratio. This parameter allows the model to consider the effects of anisotropy in the hydraulic conductivity of soil matrices. In most cases, geologic materials are deposited with platy clay minerals oriented horizontally and, thus, flow of water in both the saturated and unsaturated zone can be slower in the vertical direction than in the horizontal direction. Chemical constituents being transported with flowing fluids may, therefore, show a larger degree of spreading in one versus the other direction. The H/V Anisotropy Ratio tells the kriging algorithm what multiplication factor should be used to weight data points located in horizontal and vertical directions away from a given model node. The conceptual model of the aquifer, based on AECOM produced stratigraphic cross sections (AECOM, 2016), represents the aquifer as being predominantly composed of fine- to coarse-grained sands with clay, silt and gravel lenses of varying extent. An H/V Anisotropy Ratio of 30 was used to represent preferential horizontal flow through coarse grain materials.

EDB concentrations were assigned along the entire screen interval for each well sampled. If the screen interval was completely submerged within the saturation zone, the measured concentration was assigned elevations representative of the top, bottom, and 5-foot intervals along the screen length. If the screen interval extended above the saturation zone, the measured concentration was assigned at the water table elevation instead of the top of screen elevation. The lowest reported concentration above detection that was included in the model was 0.011 µg/L. Therefore, a detection limit of 0.01 µg/L was assumed and nondetect samples were assigned a concentration of one-half of that value (0.005 µg/L) because the EDB detection limit was not consistent between all measurements.

Figure 5-2 shows the modeled Target Capture Zone from the last four synoptic measuring periods for EDB concentration. 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 5-2; it is only provided for graphical visualization. The Target Capture Zone is considered to be dynamic and will continue to be re-modeled with each subsequent measurement period to evaluate performance. Appendix I, Figure I-6-1 shows these four Target Capture Zones in relation to monitoring well screen intervals for graphical analysis of the dataset available for the production of the plume iso-shell.

5.3.2 Horizontal Capture Analysis

The horizontal capture analysis for the interim measure objective area north of Ridgecrest Drive SE for both Q2 and Q4 2016 is summarized in Table 5-8. An entire plume horizontal capture summary is provided in Appendix I (Table I-6-1). The capture zone analyses were conducted using groundwater head and EDB concentration data sets collected in 2016. The three synoptic groundwater head measuring events were from March 26 to 30 (Q2), from July 11 to 14 (Q3), and from October 3 to 6 (Q4 2016). EDB samples were collected from 132 wells in Q2 2016 and 138 wells in Q4 2016. Comprehensive EDB analysis was not performed during Q1 and Q3 2016 because only a subset of the GWM network is sampled in Q1 and Q3 as compared to the entire network in Q2 and Q4; therefore, the capture zone analyses were focused solely on Q2 and Q4 2016. Additionally, development water samples from the six newly installed wells (December 2016) showed EDB concentrations below the laboratory detection limit (Appendix B-1 includes analytical data). In order to have comparable EDB concentration datasets for plume iso-shell modeling, six nondetect data points were placed at the location of the six new wells within the Q2 dataset.

The first step in the horizontal capture analysis was to use ArcGIS Spatial Analyst to develop potentiometric surface maps for REIs 4857, 4838, and 4814 described previously in this report. The 4857 and 4838 REIs contain some portion of the plume iso-shell and, therefore, were used to analyze horizontal capture. The lowest REI (4814) does not incorporate any of the plume volume and, therefore, was not used for horizontal capture analysis. The natural neighbor technique was used to develop raster surfaces from assigned cell sizes of 20-feet that ensured each data point was represented by a unique raster cell during interpolation. Once the potentiometric raster surfaces were developed, spatial analyst was used to contour the head values at 0.1-foot iso-line intervals.

Each potentiometric surface included an estimated head value for active extraction wells. Using heads measured at extraction wells for constructing potentiometric surface maps can bias the interpretation of capture, since the heads at the extraction wells may be much lower than heads in the aquifer just outside the well bore. It can be equally problematic if no head value is assigned to the extraction wells. The measured drawdown in the active extraction wells ranged from 7- to 15-feet. To reduce bias, the assigned head in the extraction wells was estimated by multiple two-point regression analyses using wells adjacent to the extraction well. This resulted in an assigned head 0.1-foot lower than the lowest head in

monitoring wells adjacent to extraction wells KAFB-106228 and KAFB-106233 and an assigned head 0.6-feet lower than the lowest head in monitoring wells adjacent to extraction well KAFB-106234 when active. The lower head estimate for extraction well KAFB-106234 is due to the closest adjacent monitoring wellbeing located approximately 225-feet away while the closest adjacent monitoring wells to KAFB-106228 and KAFB-106233 were located less than 35-feet away. The estimated head was assumed to be uniform with depth through both REIs.

The hydraulic divides for each extraction well in each REI were developed in two steps using ArcGIS Spatial Analyst. First, a raster of flow direction from each cell in the potentiometric surface raster to its steepest downslope neighbor was created using the Flow Direction tool. Second, a raster delineating all drainage basins within the potentiometric surface was created using the Basin tool. The basin raster was converted into polygons, which could then be used for display of the capture zone boundaries and to crop segments of the plume volume for further analysis. Streamlines (particle tracks) showing the direction of flow along the potentiometric surface for each REI were developed using C-Tech MVS software. Each potentiometric raster surface was imported and converted into a gradient vector grid. Points assigned at the three-dimensional location of each screened interval in the dataset were assigned as seed points from which downgradient streamlines were created.

The capture analysis of the EDB plume for each interval was performed entirely in MVS using the exports from the processes described above. First, the EDB plume was cropped on top and bottom by the elevation grids that defined the aquifer extent represented by the interval dataset. Second, the remaining plume volume was segmented using the capture zone (basin) polygons for each extraction well. Lastly, the cropped and segmented plume volume was split by a line representing the location of Ridgecrest Drive SE so that plume volume and mass capture analyses could be performed for the portion of the plume within the interim measure objective area. All plume volume segments were then exported as polygon shapefiles for figure display.

Figure 5-3 shows the horizontal capture of the portion of the EDB plume within REI 4857 during Q2 2016. Plume capture is divided between the three active extraction wells (KAFB-106228, KAFB-106233, and KAFB-106234). With respect to the entire plume volume in REI 4857, the interim measure resulted in the horizontal capture of 69% of the plume volume and 29% of the plume mass. The discrepancy between plume volume and mass is due to the source area and, thus, the bulk of the EDB mass being located south of the extraction well capture zones. With respect to the objective area north of Ridgecrest Drive SE, the interim measure resulted in the horizontal capture of 99.3% of the plume volume and 99.7% of the plume mass (Table 5-8). A small portion of the plume was lost from capture due to flow to an unidentified sink defined by KAFB-106106 located in the northwestern portion of the plume, near Ross Avenue.

Figure 5-4 shows the horizontal capture of the portion of the EDB plume within REI 4838 during Q2 2016. With respect to the entire plume volume in REI 4838, the interim measure resulted in the horizontal capture of 42% of the plume volume and 12% of the plume mass. With respect to capture in the objective area, the interim measure resulted in the horizontal capture of 79% of the plume volume and 80% of the plume mass. A portion of the plume was lost from capture due to flow to an unidentified sink defined by KAFB-106089 located south of extraction well KAFB-106228. Additional capture loss is due to inadequate coverage by the dataset for this quarter as confirmed capture could not be established northwest of extraction well KAFB-106234. Inferred capture volume and mass are not included in the capture statistics (i.e., the percentages of plume capture would increase if the inferred capture was added).

Combining the two capture analyses of the entire plume volume and mass discussed above, the interim measure resulted in the horizontal capture of 59% of the plume volume and 25% of the plume mass. With respect to the objective area, the interim measure resulted in the horizontal capture of 92% of the plume volume and 93% of the plume mass in Q2 2016.

Figure 5-5 shows the horizontal capture of the portion of the EDB plume within REI 4857 during Q4 2016. Plume capture was divided between the two active extraction wells (KAFB-106228 and KAFB-106234) (NOTE: Extraction well KAFB-106233 was not operated from June 10 to December 31 due to biofouling issues). With respect to the entire plume volume, the interim measure resulted in the horizontal capture of 66% of the plume volume and 11% of the plume mass. With respect to the objective area north of Ridgecrest Drive SE, the interim measure resulted in the horizontal capture of 99% of the plume volume and 99.5% of the plume mass (Table 5-8). A small portion of the plume was lost from capture due to flow to an unidentified sink defined by KAFB-106235-463 located west of KAFB-106234.

Figure 5-6 shows the horizontal capture of the portion of the EDB plume within REI 4838 during Q4 2016 (NOTE: Extraction well KAFB-106233 was not operated from June 10 to December 31 due to biofouling issues). With respect to the entire plume volume, the interim measure resulted in the horizontal capture of 84% of the plume volume and 52% of the plume mass. With respect to capture in the objective area, the interim measure resulted in the horizontal capture of 95% of the plume volume and 97% of the plume mass. A portion of the plume was lost from capture due to flow to an unidentified sink defined by KAFB-106220 located southeast of extraction well KAFB-106234. The capture analysis method suggested the existence of a closed depression defined by KAFB-106089 located north of Ridgecrest Drive SE in the north-central portion of the EDB plume, which would have reduced the capture statistics. However, an analysis of the head in KAFB-106089 and the heads in the surrounding wells, including KAFB-106037 less than 35-feet from extraction well KAFB-106228, showed no data support for this interpretation (see Section 5.3.4 for more details) as the head in KAFB-106037 was 0.1-foot lower than in KAFB-106089.

Combining the two capture analyses for the entire plume as discussed above, the interim measure resulted in the horizontal capture of 73% of the plume volume and 19% of the plume mass. With respect to the objective area, the interim measure resulted in the horizontal capture of 97% of the plume volume and 99% of the plume mass in Q4 2016.

5.3.3 Vertical Capture Analysis

The vertical capture analysis for the interim measure objective area north of Ridgecrest Drive SE for both Q2 and Q4 2016 is summarized in Table 5-9. An entire plume vertical capture summary is provided in Appendix I-6 (Table I-6-2). A vertical capture analysis evaluates groundwater levels between adjacent hydrologic units to determine zones of upward versus downward flow. Capture 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.

As described in Section 5.3.2, potentiometric surface grids were developed for three vertically adjacent REIs covering the zones containing EDB concentrations above 0.05 µg/L. Vertical capture was evaluated in two hydrologic units using grid subtraction. Vertical flow directions across the upper unit, defined on top by the elevation of the water table and bounded on the bottom by an elevation plain that passes through the mid-point of all of the REI 4838 screened intervals, were defined by subtracting the REI 4838

potentiometric surface grid from the REI 4857 potentiometric surface grid. Vertical flow directions across the lower unit, defined on top by the REI 4838 mid-point elevation plain and bounded on the bottom by an elevation plain connecting the bottom of all of the REI 4814 screened intervals, were defined by subtracting the REI 4814 potentiometric surface grid from the REI 4838 potentiometric surface grid. Vertical capture zones, defined by regions in each elevation interval by head difference with negative difference values, were converted to polygons for use in plume capture analysis. Grid subtractions and conversions were performed using ArcGIS Spatial Analyst.

Vertical plume capture analysis was performed by first defining the plume volume in the upper (above REI 4838 mid-point) and lower (below REI 4838 mid-point) units. The entire plume volume delineated for both Q2 and Q4 2016 was sliced along the REI 4838 screened interval mid-point elevation plain. The portion of the plume above the slice represented the upper unit plume volume. The portion of the plume below the slice represented the lower unit plume volume.

The upper plume volume has two opportunities to be captured vertically. Initially, this plume volume can be captured by upward flow between REI 4838 and REI 4857. Portions of the plume not captured in this interval have the potential to move downward into the lower unit. Once in the lower unit, these portions can be captured by vertical upward flow between REI 4814 and REI 4838. The lower plume volume can only be captured by vertical upward flow between REI 4814 and REI 4838. Once the unit plume volumes have been delineated, they are segmented by the capture polygons developed from the head difference grids volume and mass capture analysis.

Figures 5-7 and 5-8 show the results of the vertical capture analysis for the upper (above REI 4838 mid-point) unit plume volume in Q2 2016. Figure 5-7 shows the portion of plume captured by upward vertical flow between REI 4838 and REI 4857. With respect to the entire plume, 43% of the plume volume and 20% of the plume mass were vertically captured in this unit. With respect to the plume within the interim measure objective area north of Ridgecrest Drive SE, 49% of the plume volume and mass was vertically captured in this unit. Figure 5-8 shows the portion of the upper plume vertically captured in both the upper and lower unit. With respect to the entire plume, an additional 38% of the plume volume and an additional 18% of the plume mass were captured by vertical upward flow between REI 4814 and REI 4838. With respect to the interim measure objective area, an additional 43% of the plume volume and an additional 45% of the plume mass were vertically captured in the lower unit. Combining the two analyses, 81% of the plume volume and 38% of the plume mass in the upper unit were vertically captured in Q2 2016. With respect to the interim measure objective area, 92% of the plume volume and 93% of the plume mass in the upper unit were vertically captured for this period.

Figure 5-9 shows the result of the vertical capture analysis for the lower plume volume in Q2 2016. With respect to the entire lower unit, 40% of the plume volume and 24% of the plume mass were vertically captured by upward flow between REI 4838 and REI 4814. With respect to the interim measure objective area, 58% of the plume volume and 56% of the plume mass were vertically captured. In total, 85% of the plume volume and 87% of the plume mass in the interim measure objective area were vertically captured in Q2 2016.

Figures 5-10 and 5-11 show the results of the vertical capture analysis for the upper (above REI 4838 mid-point) unit plume volume in Q4 2016. Figure 5-10 shows the portion of plume captured by upward vertical flow between REI 4838 and REI 4857. With respect to the entire plume, 42% of the plume volume and 7% of the plume mass were vertically captured in this unit. With respect to the plume within the interim measure objective area north of Ridgecrest Drive SE, 55% of the plume volume and mass were vertically captured in this unit. Figure 5-11 shows the portion of the upper plume vertically captured in both the upper and lower unit. With respect to the entire plume, an additional 30% of the plume volume and an additional 55% of the plume mass were captured by vertical upward flow between REI

4814 and REI 4838. With respect to the interim measure objective area, an additional 20% of the plume volume and an additional 16% of the plume mass were vertically captured in the lower unit. Combining the two analyses, 73% of the plume volume and 62% of the plume mass in the upper unit were vertically captured in Q4 2016. With respect to the interim measure objective area, 75% of the plume volume and 72% of the plume mass in the upper unit were vertically captured for this period.

Figure 5-12 shows the result of the vertical capture analysis for the lower (below REI 4838 mid-point) unit plume volume in Q4 2016. With respect to the entire lower unit plume, 41% of the plume volume and 36% of the plume mass were vertically captured by upward flow between REI 4814 and REI 4838. With respect to the interim measure objective area, 49% of the plume volume and 53% of the plume mass were vertically captured. In total, 68% of the plume volume and 67% of the plume mass in the interim measure objective area were vertically captured in Q4 2016.

5.3.4 Water Level Pairs Analysis

In support of the previously presented horizontal and vertical capture analyses, 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 capture analysis. Two types of water level pairs analysis were performed, as described below.

In support of the vertical capture analysis, heads in vertically nested well sets were compared in order to verify the vertical flow direction. The locations of the nested well pairs are shown on Figures 5-7 through 5-12. The values associated with these wells represent the head difference when the lower unit's head is subtracted from the upper unit's head. Similar too subtracting grids, a head difference of less than zero represents upward flow and, therefore, vertical capture. Results from this well pair analysis are shown on the figures to identify the location and magnitude of gradient control points for the vertical capture analysis.

In support of the horizontal capture analyses, a series of horizontal water level pairs analyses was performed. The first step in horizontal water level pairs analysis was to define which well heads to compare. In order to achieve this, Thiessen polygons were developed for the REI 4857 and REI 4838 datasets for both Q2 and Q4 2016. Thiessen polygons define the area that is closest to each point relative to all other points within a spatial dataset. In this case, each polygon defined the individual areas of influence around each of the interval group wells. Water levels were then compared between a well in the center of a polygon and all of the wells with neighboring polygons. The graphical representation of this process is shown in Appendix I-6, Figure I-6-2 (Q2 2016) and Figure I-6-3 (Q4 2016). The arrows on these figures show the potential directions of flow from each well based of the head comparison. Using the arrows, each polygon was then assigned an identifier representing all possible potential flow termination polygons. Termination polygons were defined as polygons for which the head comparisons resulted in only inward flow. The plume area for each interval was then split with the intersecting Thiessen polygons for the interval. The result delineated 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 results of the horizontal water level pairs analyses were used to verify the reasonableness of the capture zones defined in the horizontal capture analyses discussed in Section 5.3.2. An example of how these analyses were used can be found in the water level pairs analysis for REI 4838 in Q4 2016 (Appendix I-6, Figure I-6-3). This analysis shows that flow from monitoring well KAFB-106089 went only to monitoring well KAFB-106037 and then to extraction well KAFB-106228. This result was the

supporting line of evidence used to incorporate the method that generated KAFB-106089 sink into the KAFB-106228 capture zone during horizontal capture analysis.

5.3.5 Supporting Lines of Evidence

The primary lines of evidence are based on analysis of collected data and utilize a varying degree of inference and interpolation between the data points. They do not solve flow equations or directly incorporate aquifer properties such as transmissivity or hydraulic conductivity, nor do they incorporate data about the measure such as extraction rates. In order to incorporate these other forms of data, EPA recommends development of secondary or supporting lines of evidence for the primary capture analyses (EPA, 2008). The following sections detail the two support lines of evidence.

5.3.5.1 Simple Horizontal Analyses

In lieu of developing and calibrating a numerical flow and transport model that can accurately simulate the contaminated aquifer, a Capture Zone Width Calculation was performed to provide supporting capture evidence.

The Capture Zone Width Calculation provides an estimate of capture zone width for a specific pumping rate. The simplifying assumptions for this method are:

- Homogeneous, isotropic, confined aquifer of infinite extent
- Uniform aquifer thickness
- Fully penetrating extraction well(s)
- Uniform regional horizontal hydraulic gradient
- Steady-state flow
- Negligible vertical gradient
- No net recharge, or net recharge is accounted for in regional hydraulic gradient
- No other sources of water introduced to aquifer due to extraction.

EPA recommends that these simple horizontal analyses be performed, even though, in most cases, one or more of the assumptions will be violated and additional lines of evidence from more sophisticated capture zone evaluation techniques will likely be appropriate to more rigorously account for site-specific conditions. The equations used to calculate capture zone width based on a specific extraction rate are:

$$x = \frac{-y}{\tan(\frac{2\pi Ti}{Q} y)}$$

$$X_0 = -Q/2\pi Ti$$

$$Y_{MAX} = \pm Q/2Ti$$

$$Y_{WELL} = \pm Q/4Ti$$

where:

x	=	The centerline distance upgradient (negative) or downgradient (positive) from the extraction well.
y	=	The half width of the capture zone at any x.
Q	=	Extraction rate.
T	=	Transmissivity, $K \cdot b$.
K	=	Hydraulic conductivity.
b	=	Saturated thickness.

i	=	Regional (i.e., pre-interim measure-pumping) hydraulic gradient.
X_0	=	Distance from well to the downgradient end of the capture zone along the flow direction centerline.
Y_{MAX}	=	Maximum capture zone width from the central line of the plume.
Y_{WELL}	=	Capture zone width at the location of well from the central line of the plume.

Appendix I-6, Figure I-6-3 shows the result of the Capture Zone Width Calculation analysis with respect to the Q2 and Q4 2016 EDB plumes using the following values:

- Extraction well KAFB-106228 Q = 145 gpm (fully operational rate)
- Extraction wells KAFB-106233 and 106234 Q = 150 gpm (fully operational rate)
- Transmissivity = 41,000-square feet per day (median value derived from KAFB-106228 aquifer pump test)
- Regional gradient = 0.00022 (pre-interim measure-pumping gradient along the plume centerline from monitoring well KAFB-106027 northeast to monitoring well KAFB-106204)
  - The straight-line distance between the two wells is 7,333-feet.
  - The Q2 2015 head difference was measured at 1.6-feet.

The extraction rate at KAFB-106228 results in an X_0 of 497-feet downgradient, a Y_{WELL} of 1,560-feet, and a capture zone width at the southern end of the plume of approximately 2,800-feet. The extraction rate at KAFB-106233 results in an X_0 of 514-feet downgradient, a Y_{WELL} of 1,614-feet, and a capture zone width at the southern end of the plume of approximately 2,900-feet. The extraction rate at KAFB-106234 results in the same X_0 and Y_{WELL} values as for KAFB-106233; however, capture width at the southern end of the plume was not calculated. The results of the Capture Zone Width Calculation show that the operational extraction rates for the three interim measure wells should be sufficient to produce plume capture at the median aquifer T and estimate regional gradient values.

5.3.5.2 Concentration Trends

In addition to simple capture calculations, monitoring concentration trends downgradient of the plume provides 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 downgradient performance monitoring wells. EDB concentrations in the sentinel wells have remained below detection since monitoring began.

Downgradient performance monitoring well concentration trends are shown from the beginning of 2015 to present. Within this time period, water chemistry samples from KAFB-106205, located northeast of the distal end of the EDB plume, have mostly been below detection for EDB and have always been below the Target Capture Zone concentration of 0.05 µg/L. Within this time period, water chemistry samples from KAFB-106106, located on the western edge of the EDB plume, have always been above detection for EDB. Before interim measure extraction began in August of 2015, EDB concentrations in this well were above the Target Capture Zone concentration and the well was within the plume boundary. Since

interim measure extraction began, EDB concentrations in KAFB-106106 have continuously decreased and are currently below the 0.05 µg/L threshold. At the beginning of 2015, the EDB concentration in the three nested wells (KAFB-106055, KAFB-106057, and KAFB-106058) was above detection. EDB concentrations decreased with depth with concentrations above the Target Capture Zone value 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 all three wells have continuously decreased and are currently below the Target Capture Zone value in all three wells. Concentration trend analyses support the capture of the distal end of the EDB plume through Q4 2016.

5.3.6 Plume Volume and Mass Analysis

The goal of the interim measure is not only to contain the migration of the plume, but also to reduce the plume volume and mass. This section describes the analyses designed to quantify the distribution of plume mass and volume within the aquifer over the course of the interim measure. Plume collapse is the long-term goal; therefore, establishing a consistent method of measurement that allows comparison of plume volume and mass trends over the duration of cleanup activities is essential. This subsection provides the first assessment; as such, it focuses on methods of measurements and comparisons that will guide this activity going forward. Following the discussion of methodology, the performance to date will be discussed. Because the system has only operated a short period, and is yet to operate fully with all extraction wells pumping at design flow rates, the performance assessment indicates some shifting in the contaminant distribution in response to pumping, which was expected. This, in turn, has resulted in shifts in mass and volume within the plume body, which again is expected. However, overall, no significant change in total volume or mass was noted due to the fact the GWTS has only recently become fully operational.

The following discussion relates to the data provided in Figure 5-13 and Table 5-10. 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 plume volume and mass are expected to occur in response to this action. However, since contaminants are moving along shifted flow paths, concentration changes at individual wells are expected to change, and some wells may show decreases and some may show increases. Nonetheless, over a longer timeframe than this first reporting period (i.e. multiple quarters), this process will ultimately reduce concentrations in the objective area as contaminant mass is pumped out and treated.

In the aquifer region between the source area and the extraction wells, the expected response is an increase in plume mass and volume as groundwater extraction increases the groundwater flow rate toward the well. Mass may even move into previously “clean” areas in this region as new preferential flow paths are developed. The extraction wells closest to the source area, currently KAFB-106228 but soon to be KAFB-106239, will become cut-off wells that continually pull dissolved mass from the source area but prohibit mass migration further downgradient. Near the extraction wells, the expected initial response is an increase in plume mass and volume. If the extraction well is properly positioned and is performing as designed, radial migration of mass will occur increasing the mass around the well and possibly increasing the volume of the plume vertically along the screened interval of the well. Between extraction wells, the mass and volume of the plume are expected to decrease, eventually segmenting the plume as mass migrates to the wells. On the distal edge of the plume, mass and volume are also expected to decrease as migration of mass to this region has been stopped and natural attenuation continues.

While this is the general plume response expected, the migration of the plume toward the extraction wells will not be uniform. Coarse sand and gravel channels will have greater flow velocities and transfer mass

more quickly. Clays and silts will retard flow and slowly "leak" dissolved 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 addition of new wells, will change the flow field and may cause temporary flow stagnation areas or intermediate high concentration zones. In addition, the continually rising water table may expose the groundwater system to retain EDB in the current unsaturated zone, creating new source zones.

Figure 5-14 shows a cross-section of the EDB plume in both Q2 and Q4 2016. 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 (2008). This is done 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 considered to be more permeable and conductive and may provide pathways for plume movement. Since the interim measure is in the startup phase, it is premature to perform plume comparison analyses. Until data representing at least one year of a fully operational extraction system have been collected, plume analysis will be limited to quantifying the distribution of plume mass and volume within a measurement period.

Analysis of plume volume and mass for Q2 and Q4 2016 is performed within transect intervals that cut east-west across the entire area of the plume. There are 11 transect intervals (A-K) moving from south to north (Figure 5-14). The spacing of the transect intervals is defined by the Northing location of the REI 4814 (deep) monitoring wells upon which the transect was developed. Two of the transect interval breaks, between G and H and between J and K, are defined by the Northing location of the two interim measure extraction wells (KAFB-106228 and KAFB-106234, respectively) located on the transect line. The analysis was performed by cutting the plume by the two transect interval boundaries and exporting the plume volume and mass within C-Tech MVS software. The plume cross-sections were also cut along the T1A transect and exported for display in ArcGIS using MVS. Both Figure 5-14 and Table 5-10 list the volume and mass of each interval and summarize these for total plume characterization. The EDB mass values (in grams) shown in the figure and table assume a uniform total porosity of 25% for the contaminated thickness of the aquifer. While the porosity varies with stratigraphy, the porosity value used does not affect the percent values for mass.

In Q2, 82% of the plume mass was located in the B, C, D, and E intervals, which account for only 29% of the plume volume. Similarly, in Q4 2016, 85% of the plume mass was located in the A, B, C, D, and E intervals accounting for 28% of the plume volume. This means that the majority of the plume mass is located south of Ridgecrest Drive SE and outside of the interim measure objective area. As a northward gradient is maintained due to measure extraction, it should be expected that a portion of this mass will be drawn into the objective area toward the extraction wells. However, most of the mass should stay in the southern intervals as long as the localized unidentified closed-depression persists in this area.

Overall, the initial plume analysis reveals the general pattern of volume and mass response expected after the initiation of the extraction system. Mass is moving northward toward extraction wells KAFB-106228 and KAFB-106223. Mass and volume are increasing around the two most active wells KAFB-106228 and KAFB-106234. In addition, mass is increasing under the source area, most likely due to the rising water table. The plume has even been segmented between extraction wells KAFB-106228 and KAFB-106234. Plume 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 assuming linear concentration gradients between water chemistry data points. The expectation for the next plume comparison in Q2 of 2017 is to observe the same general movement of mass toward the extraction wells and possibly some reversals of preliminary trends as the system comes to equilibrium with the extraction flow field and continues to rise.

5.3.7 Performance Assessment Summary

The 2016 annual GWTS Performance Assessment provided an initial evaluation at how the aquifer has responded to the interim measure extraction system. The Target Capture Zone, defined at an EDB concentration of 0.05 µg/L, has been delineated from water chemistry sample analyses. Analyses have been performed on measured groundwater head data in order to delineate both the horizontal and the vertical hydraulic containment (capture) associated with the extraction wells. Water level pairs analyses have been performed to define the direction of flow from gradient control points. Simple 2-dimensional horizontal capture calculations have been performed to analyze if the interim measure extraction rates are appropriate for producing capture with respect to aquifer transmissivity estimates, and a concentration trends monitoring program has been presented that will be used to support capture assessment.

The initial assessment of horizontal capture between Q2 and Q4 2016 within the interim measure objective zone shows the extraction system has been able to capture (horizontally) between 92 and 97% of the plume volume. Similarly, horizontal capture produced by the extraction system has contained 93-99% of the plume mass. The initial assessment of vertical capture within the interim measure objective zone shows that the extraction system is less effective at producing vertical plume containment. Between Q2 and Q4 2016, the extraction system has been able to capture (vertically) between 68 and 85% of the plume volume and between 67 and 87% of the plume mass. However, a cursory review of historical groundwater head data from the nested well network suggests that the vertical gradients in the plume area are controlled by variations in the regional aquifer flow system.

Once enough data have been collected with the interim measure system in operation, a statistical analysis of the effect of the extraction system on vertical gradients should be performed. In addition, it should be noted that a synoptic period with all extraction system wells pumping at their design rate has not yet been available.

As would be expected, the initial analysis of plume changes due to interim measure extraction shows that the mass is moving and the plume volume is changing. Within the interim measure objective zone, plume volume and mass are collecting (increasing) around the extraction wells. In addition, plume volume and mass are decreasing south of the KAFB-106228 and KAFB-106233 extraction wells and between these wells and KAFB-106234 to the north. Both of these observations suggest that plume mass is starting to migrate toward the extraction points. This performance assessment will be conducted every second and fourth quarter moving forward so that continued plume comparisons can be performed, plume reduction can be analyzed, and how capture changes with the regional hydrogeologic variation can be quantified. An assessment of the effectiveness of the interim measure should be postponed until the extraction network has been fully operational for at least one year. This includes continued extraction at the design rate for extraction wells KAFB-106228 and KAFB-106234, activation of the fourth extraction well (KAFB-106239), and re-activation of extraction well KAFB-106233.

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6. INVESTIGATION-DERIVED WASTE

Liquid and non-liquid investigation-derived waste (IDW) was generated during Q4 2016 operations at the BFF site. IDW was separated into either non-hazardous or hazardous and stored accordingly. Some non-hazardous IDW generated during Q2 and Q3 2016 was held pending disposal during Q4 2016. Liquid IDW was associated with GWM activities; well development; equipment decontamination; Sundance Consulting, Inc. sampling activities; and GAC backwash. Non-liquid IDW consisted of soil cuttings from well installation kitty litter used in cleaning activities, passive and dedicated sampling equipment, and various disposable filters.

6.1 Liquid Investigation-Derived Waste

Disposal of liquid IDW to the GWTS was evaluated by comparing historical data to the discharge limitations of the system. Liquid IDW was not to be discharged if it would cause the GWTS effluent to exceed the following concentration limits: 0.05 µg/L EDB, 5 µg/L benzene, 750 µg/L toluene, 700 µg/L ethylbenzene, 620 µg/L total xylenes, 1 mg/L dissolved iron, and 0.2 mg/L dissolved manganese.

The distinction between hazardous and non-hazardous liquid IDW was made prior to sampling the GWM network in Q4 2016 based on historical analytical data available for each GWM well. Water from a GWM well was considered hazardous if the concentration of benzene exceeded 500 µg/L in any of the previous four sampling events; concentrations of benzene above 500 µg/L meet the criteria of a listed hazardous waste as DO018. Decontamination water was considered non-hazardous due to the low potential of residual contamination from the GWM water, and was combined with the GWM purge water. This ensured the decontamination water was handled and treated to the same extent as the purge water.

6.1.1 Non-Hazardous Liquid Investigation-Derived Waste

Non-hazardous liquid IDW was collected in 55-gallon plastic drums that were sealed with plastic covers with locking-ring steel collars labeled with vinyl non-hazardous waste labels, and transferred to the designated non-hazardous IDW storage yard located on Kirtland AFB.

A total of 113 drums containing approximately 1,799 gallons of historically non-hazardous liquid IDW was generated during Q4 2016. Non-hazardous purge water was batch fed through the GWTS on October 7 and December 5, 2016. Table J-1-1 (Appendix J-1) provides well-specific purge water details as well as disposal details of all liquid IDW for Q4 2016. All GWTS effluent had dissolved iron and manganese concentrations below their respective permit discharge limits. Appendix J-1 includes data for all the liquid IDW that was in storage pending analysis and disposal. All liquid IDW generated in 2016 has either been properly disposed or is pending analytical data.

Two new GWM wells (KAFB-106235 and KAFB-106236) and one extraction well (KAFB-106239) were developed during Q4 2016. The two GWM wells generated approximately 4,968 gallons of development water, of which approximately 4,000 gallons was stored in a roll-off bin and approximately 1,000 gallons were stored in 22 poly drums. Some development water from KAFB-106236 was emptied into the roll-off (KAFB-106235 E) containing development water from GWM well KAFB-106235. The development of the extraction well produced approximately 130,000 gallons of water; 120,000 gallons of which was transported by Advanced Chemical Transport to the IDW yard and stored in six Baker Tanks. The remaining 10,000 gallons were stored in three roll-off bins in the IDW yard. The development water from all three wells is being held pending receipt of analytical results to determine proper disposal. Development water that meets GWTS standards will be disposed of through the system. If the contaminant concentrations exceed standards, the water will be held until it can be disposed off-Site.

Sundance Consulting, Inc. is contracted to monitor water quality from drinking water supply and production wells. The IDW generated during these activities is labeled and stored in the nonhazardous IDW yard pending analysis to determine disposal.

On December 15, 2016, 10,000-gallons of water was backwashed through the GAC tanks and stored in a Baker tank located south of the GWTS building. This water was scheduled to be filtered into the sump and transferred to the effluent tank the first week of January 2017.

Non-hazardous liquid IDW generated in Q2 and Q3 2016 that contained concentrations of dissolved iron and manganese above the respective permit discharge limits was stored in the non-hazardous IDW yard pending off-Site disposal. Purge water from Q4 2016 from wells that historically exceeded the same criteria was stored in the IDW yard pending analysis and potential off-Site disposal.

A summary of all non-hazardous liquid IDW pending analysis and temporarily stored in the IDW yard is provided in Table J-1-2 (Appendix J-1).

6.1.2 Hazardous Liquid Investigation-Derived Waste

Hazardous purge water collected from KAFB-106005 and KAFB-106059 in Q3 2016 was removed from the 90-day accumulation area on August 27, 2016, by Advanced Chemical Transport for disposal (Table J-2-1). Q3 2016 hazardous IDW disposed of in Q4 2016 consisted of three drums containing approximately 125 gallons of hazardous (DO018) liquid IDW. Waste profiles and supporting analytical data are provided in Appendix J-2.

During the Q4 2016 sampling event, purge water from KAFB-106005, KAFB-106006, KAFB-106008, KAFB-106010, KAFB-106014, KAFB-106028, KAFB-106059, KAFB-106064, and KAFB-106076 was stored in steel drums in the 90-day accumulation area based on historical data showing samples from these GWM wells have contained benzene concentrations above the characteristic hazardous waste toxicity criteria (40 CFR Part 261.24). Purging these wells generated six drums and approximately 115 gallons of hazardous (DO18) liquid IDW. The drums were labeled as hazardous waste (DO018) and were initially placed in the Kirtland AFB 90-day accumulation area pending analytical results, as summarized in Appendix J-2. After receipt of analytical results, the drums containing purge water from wells KAFB-106008, KAFB-106014, and, KAFB-106076 were moved to the non-hazardous IDW yard as they contained benzene at concentrations below the hazardous waste criteria; these drums were pending treatment on December 31, 2016.

6.2 Non-Liquid Investigation-Derived Waste

The installation of wells KAFB-106235, KAFB-106236, and KAFB-106239 produced approximately 42, 37, and 72 cubic yards of soil cuttings, respectively. The soil cuttings were stored in 20-cubic yard roll-off bins in the non-hazardous IDW yard. Two roll-off bins for KAFB-106236 were sampled and the waste was disposed of before an accurate volume could be determined.

A 5-gallon bucket containing kitty litter that was used to clean up petroleum product inside the vault of GWM well KAFB-106091 was in the IDW yard, pending disposal based on analysis results. The passive and dedicated sampling equipment, various disposable filters, and personal protective equipment were disposed of as municipal solid waste.

Table J-3-1 (Appendix J-3) provides specific details on the solid waste being held in the pending analysis yard. The waste profiles and supporting analytical data for all solid waste managed this quarter are provided in Appendix J-3.

6.3 Special Investigation-Derived Waste

Two roll-off bins (KAFB-106235 D and KAFB-106235 F) were contaminated with oil during Q4 2016 and this was discovered by field personnel on November 10, 2016. This waste was characterized and excluded from disposal in the Kirtland construction landfill and was transported by Advanced Chemical Transport to the Rio Rancho Landfill on 20 January 2017 (Appendix J-4).

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7. PROJECTED ACTIVITIES

Q1 2017 will comprise the period between January 1 and March 31, 2017. Planned Q1 2017 activities are summarized below.

Vadose Zone Monitoring

- Vadose zone monitoring will not be performed in Q1 2017.

Groundwater Monitoring

- GWM will be performed between January 9 and February 3, 2017.
- GWM will include the two newly-installed data gap nested well clusters installed on the northwest portion of the EDB distal plume (KAFB-106235 and KAFB-106236).
- The vertical profiling evaluation with passive samplers, conducted predominantly in source area wells with higher concentrations, will continue through Q1 2017.

Drinking Water Supply Well Monitoring

- Drinking water supply well monitoring will be performed monthly for organic compound analysis.

Groundwater Treatment System Operation

- Development and initial step test will be completed for new extraction well KAFB-106239.
- Conveyance line, electrical, and communication design for extraction well KAFB-106239 will continue.
- Construction is anticipated for completion for the GWTS second treatment train, as well as integration of programming, and shakedown testing.
- GWTS operation and maintenance will continue.
- Rehabilitation of extraction well KAFB-106233 will be initiated in Q1 2017.

Reporting

A quarterly report will be prepared to detail the activities conducted during the quarter. The report will discuss data in support of performance monitoring and assessment.

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8. REFERENCES

AECOM. 2016. Plume and Water-Table Scale Cross Sections. Technical Memorandum, AECOM February 29, 2016. 39 pp.

Anderholm, Radell, and Richey. 1995. *Water-quality Assessment of the Rio Grande Valley Study Unit, Colorado, New Mexico, and Texas – Analysis of Selected Nutrient, Suspended-sediment, and Pesticide Data.* U.S. Geological Survey. 167 p.

Beman, J.E. 2013. *Water-level data for the Albuquerque Basin and adjacent areas, central New Mexico, period of record through September 30, 2012*. U.S. Geological Survey Data Series 790. 32 p.

Berner. R.A., J.M. VandenBrooks, and P.D. Ward. 2007. Science Vol. 316, Issue 2824, pp. 557-558. April.

Bexfield, L.M. and S.K. Anderholm. 2000. Predevelopment water-level map of the Santa Fe Group aquifer system in the Middle Rio Grande Basin between Cochiti Lake and San Acacia, New Mexico: U.S. Geological Survey Water-Resources Investigations Report 00-4249, 1 sheet.

EPA. 2008. A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems: Final Project Report. United States Environmental Protection Agency 600/R-08/003. January. pp. 166.

EPA. 2015. *Regional Screening Levels Master Table*. Available on-line at <www.epa.gov/...table/...Tables/...master_sl_table_run. December 10.

Langmuir. 1997. *Aqueous Environmental Geochemistry*. Prentice-Hall, Upper Saddle River, New Jersey. 600 p.

Longmire. 2016. *Application of PHREEQC for Evaluating Precipitation of Reactive Phases During Injection of Treated Effluent Water at Well KAFB-7, Kirtland Air Force Base, Albuquerque, New Mexico.* NMED. 9 p. February 2.

Mueller, J. 2011. The Generation of Acetones and Ketones – A Positive Process? Pollution Engineering. September.

New Mexico Administrative Code. 2004. State of New Mexico, Title 20.6.2 Ground and Surface Water Protection.

NMED. 2010. Hazardous Waste Treatment Facility Operating Permit, EPA ID No. NM9570024423, Issued to U.S. Air Force for the Open Detonation Unit Located at Kirtland Air Force Base, Bernalillo County, New Mexico, by the New Mexico Environment Department Hazardous Waste Bureau. July.

NMED. 2016a. Correspondence from Ms. Kathryn Roberts, Director, Resource Protection Division to Colonel Eric H. Froehlich, Base Commander, 377 ABW/CC, Kirtland AFB, NM and Mr. John Pike, Director, Environmental Management Services, 377 MSG, Kirtland AFB, NM, regarding Suspension of Sampling at Groundwater Monitoring Wells KAFB-106026 and 106230, Kirtland Air Force Base, Bulk Fuels Facility. August 24.

NMED. 2016b. Correspondence from Trais Kliphuis, Director, Water Protection Division to Mr. Wayne L. Bitner, Chief, Environmental Restoration, Kirtland AFB, NM, regarding DP-1770 Modification Application and Termination. April 4.

NMED. 2016c. Correspondence from Ms. Kathryn Roberts, Director, Resource Protection Division, to Colonel Eric H. Froehlich, Base Commander, 377 ABW/CC, Kirtland AFB, New Mexico and Mr. John Pike, Director, Environmental Management Services, 377 MSG, Kirtland AFB, New Mexico, re: Work Plan for Soil Vapor Monitoring and Drinking Water Monitoring, Solid Waste Management Unit ST-106/SS-111, Kirtland Air Force Base, New Mexico, EPA ID# NM9570024423, HWB-KAFB-13-MISC. June 30.

NMED. 2016d. Correspondence from Ms. Kathryn Roberts, Director, Resource Protection Division to Colonel Eric H. Froehlich, Base Commander, 377 ABW/CC, Kirtland AFB, NM and Mr. John Pike, Director, Environmental Management Services, 377 MSG, Kirtland AFB, NM, regarding Approval of the Work Plan for Dissolved-Phase Plume Groundwater Treatment Design, Kirtland Air Force Base, Bulk Fuels Facility. November 16.

NMED. 2017. Correspondence from Kathryn Roberts, Director, Resource Protection Division to Colonel Eric. H. Froelich, Base Commander, Kirtland AFB, NM, and Lieutenant Colonel Wayne J. Acosta, Civil Engineer Office, Kirtland AFB, NM, regarding Technical Memo Requesting the Optimization of Soil Vapor Monitoring, Bulk Fuels Facility Solid Waste Management Unit ST-106/SS-111, Kirtland Air Force Base, EPA ID# NM9570024423, HWB-KAFB-13-MISC. January 4.

Pirkle R.J., D.E. Wyatt, V. Price, and B.B. Looney. 1992. Barometric pumping: The connection between the vadose zone and the atmosphere. National Ground Water Association, Proceedings of the Focus Conference on Eastern Regional Ground Water Issues. October 13-15. Boston, pp 427–442.

Powell, R.I. and S.E. McKean. 2014. Estimated 2012 groundwater potentiometric surface and drawdown from predevelopment to 2012 in the Santa Fe Group aquifer system in the Albuquerque metropolitan area, central New Mexico: U.S. Geological Survey Scientific Investigations Map 3301.

USACE. 2014. Quarterly Pre-Remedy Monitoring and Site Investigation Report for October-December 2013. Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base, Albuquerque, New Mexico. Prepared by CB&I Federal Services, Inc. for the USACE Albuquerque District under USACE Contract No. W912DY-10-D-0014, Delivery Order 0002. March.

USACE. 2015. Quarterly Pre-Remedy Monitoring and Site Investigation Report for October-December 2014. Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base, Albuquerque, New Mexico. Prepared by CB&I Federal Services, Inc. for the USACE Albuquerque District under USACE Contract No. W912DY-10-D-0014, Delivery Order 0002. March.

USACE. 2016a. Quarterly Pre-Remedy Monitoring and Site Investigation Report for October-December 2015. Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base, Albuquerque, New Mexico. Prepared by CB&I Federal Services LLC for the USACE Albuquerque District under USACE Contract No. W912DY-10-D-0014, Delivery Order 0002. March.

USACE. 2016b. *Pilot Soil Vapor Extraction Shutdown Test Report*. Prepared by CB&I Federal Services LLC for the USACE Albuquerque District under USACE Contract No. W912DR-12-D-0006, Delivery Order 0002. May.

USACE. 2016c. *Work Plan for Soil Vapor Monitoring and Drinking Water Monitoring, Solid Waste Management Unit ST-106/SS-111*. Prepared by Sundance Consulting, Inc. for USACE–Albuquerque District. August 16.

USACE. 2016d. *Work Plan for the Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design Revision 1, Solid Waste Management Unit ST-106/SS-111*. Prepared by EA Engineering, Science, and Technology, Inc., PBC for USACE–Albuquerque District. September 20.

USACE. 2016e. *Operations and Maintenance Plan, Groundwater Treatment System, 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. August 22.

USACE. 2016f. *Quarterly Pre-Remedy Monitoring and Site Investigation Report for October – December 2015 and Annual Report for 2015, Bulk Fuels Facility, Solid Waste Management Unit ST-105/SS-111*. Prepared by CB&I Federal Services LLC for the USACE Albuquerque District under USACE Contract No. W912DR-12-D-0006. April 25.

USACE. 2016g. *Groundwater Monitoring Well Network Maintenance Report, 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. August 31.

USACE. 2016h. *Quarterly Report – April-June 2016, 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 30.

USACE. 2016i. *Quarterly Report – September-December 2016, 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. W912DR-12-D-0006. December 22.

USACE. 2016j. RCRA Facility Investigation Report, Bulk Fuels Facility Releases, Solid Waste Management Unit ST-106/SS-111. Prepared by Sundance Consulting, Inc. for the USACE Albuquerque District under USACE Contract No. W912PP-16-C-0002. December 31.

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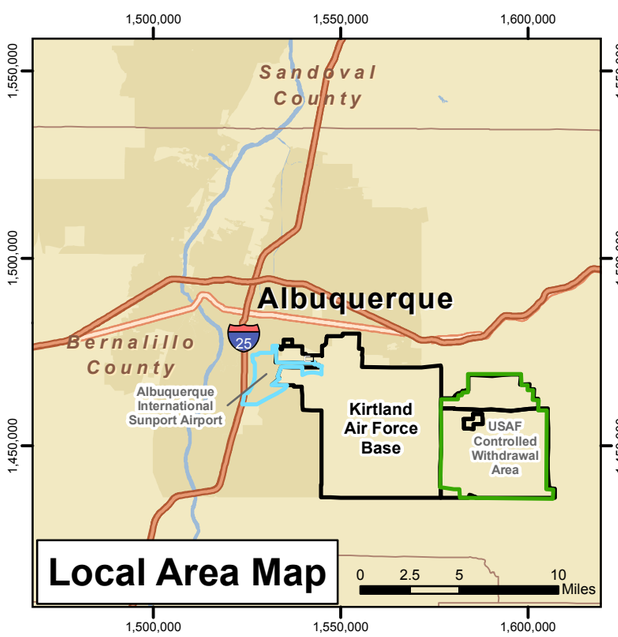
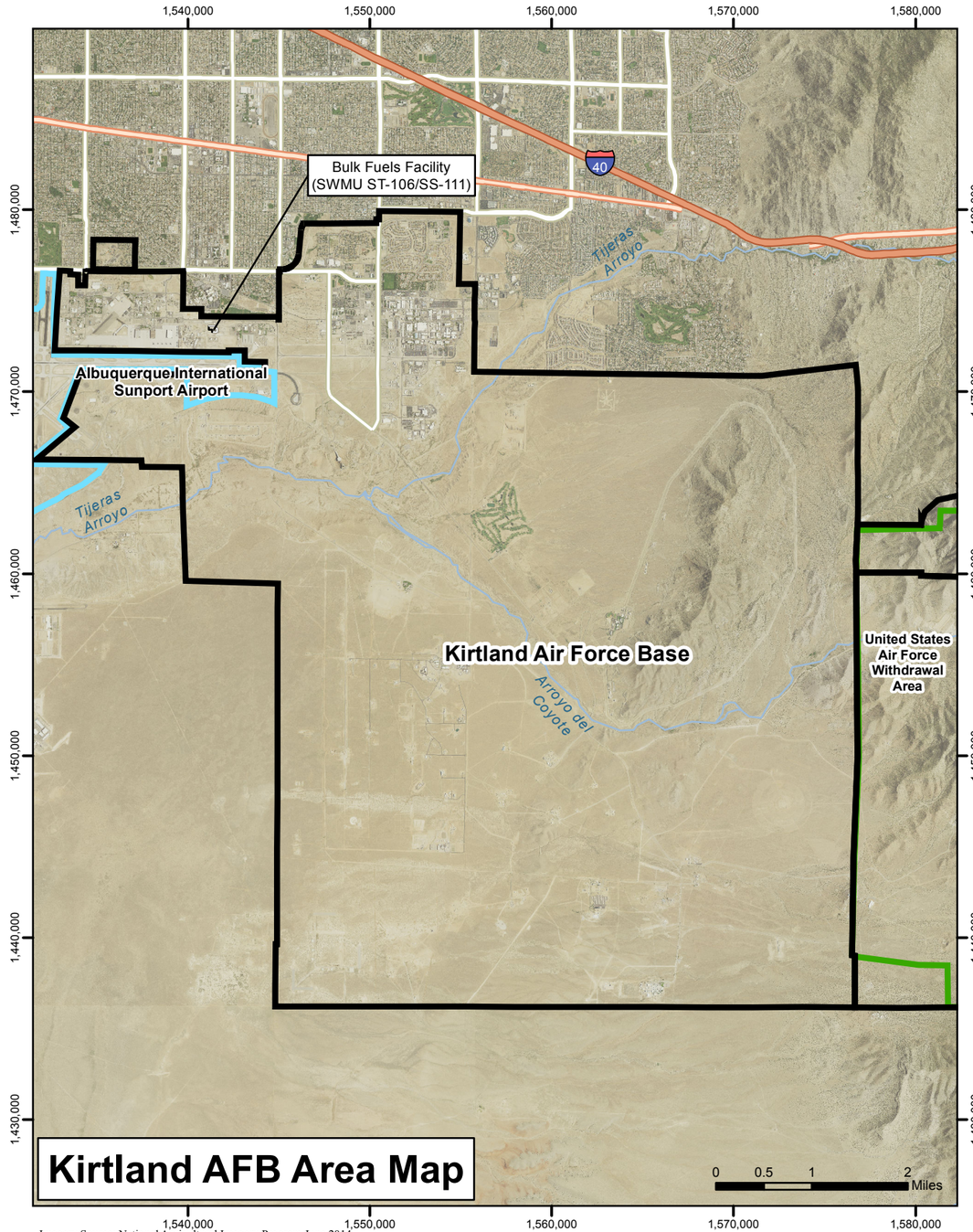
FIGURES





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

QUARTERLY AND ANNUAL REPORT
OCTOBER-DECEMBER 2016
BULK FUELS FACILITY
SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO

FIGURE 1-1

SITE LOCATION MAP

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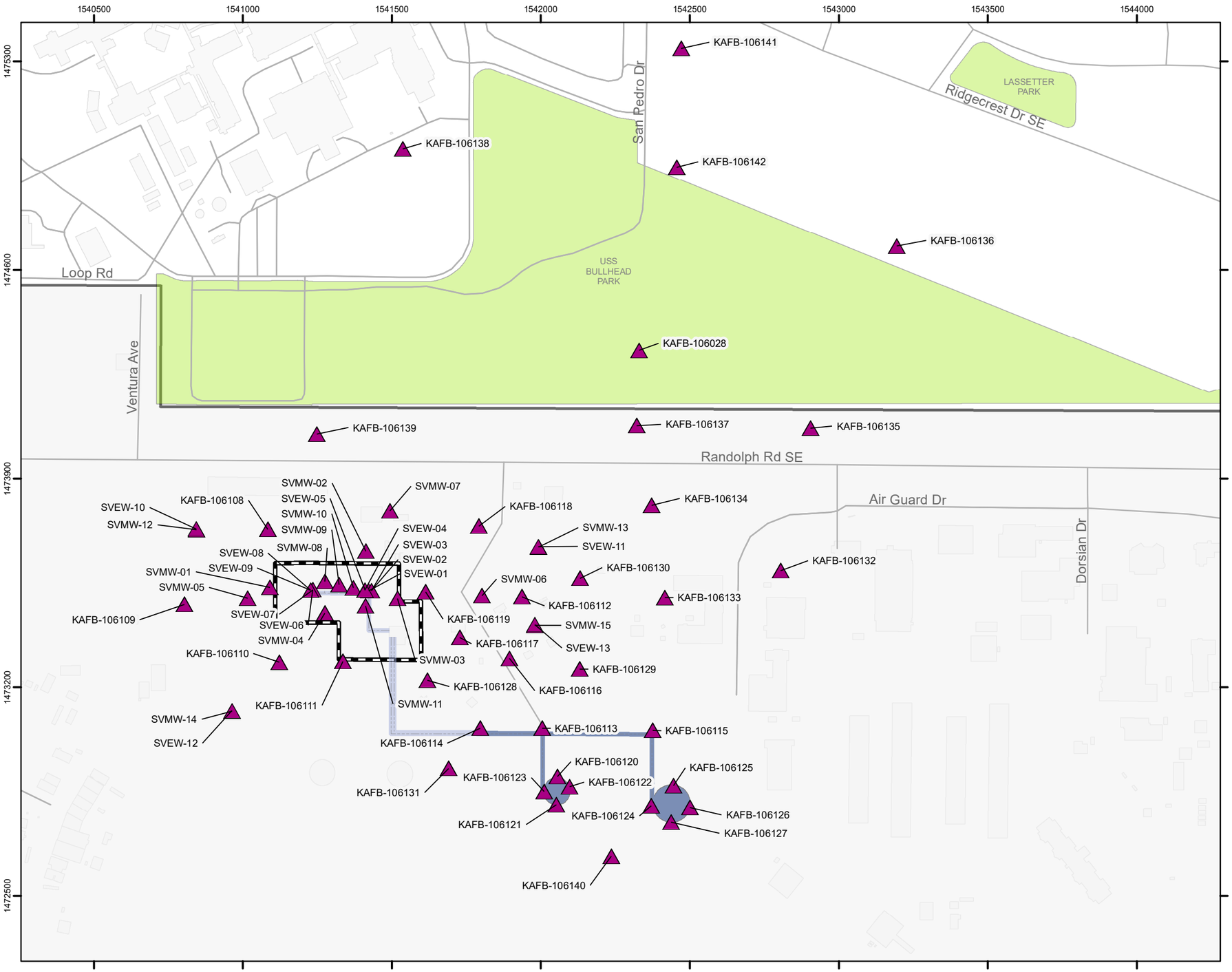
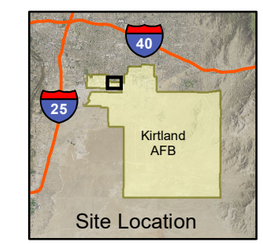


Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoing (SVM) Locations

Acronyms:
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



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Revision Date: 2/3/2017

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0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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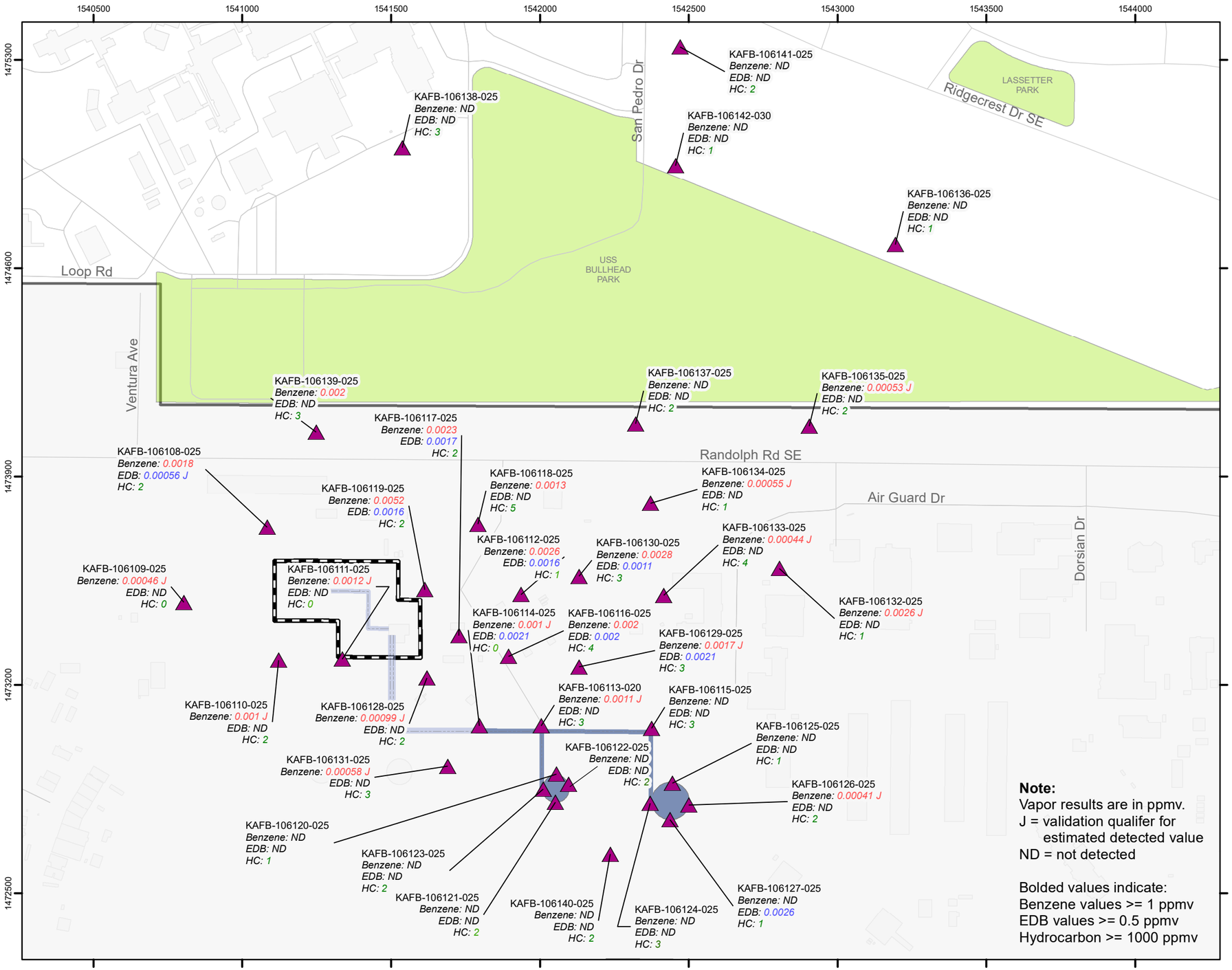
FIGURE 2-1

SOIL VAPOR MONITORING LOCATIONS

Document Path: N:\Kirtland\GIS\GIS_Projects\Q4_2016\02_01_MonitoringPoint_SVELocations.v1.mxd



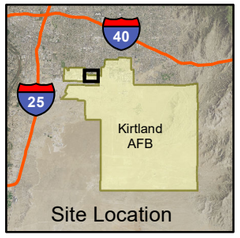
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

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

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 25 FT BGS, Q4 2016

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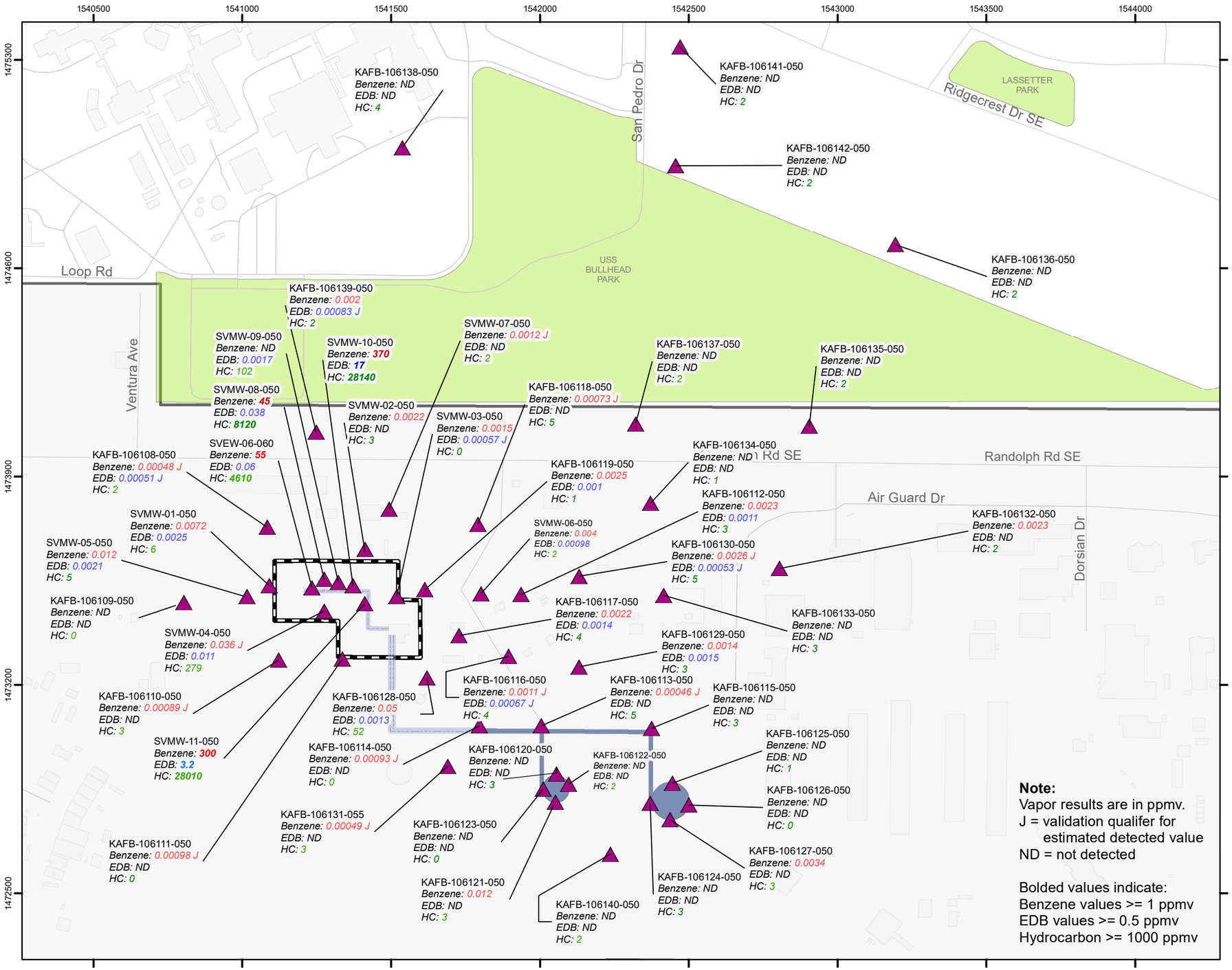


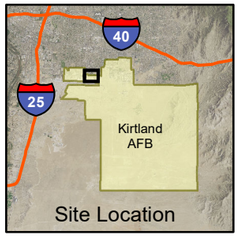
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-3

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 50 FT BGS, Q4 2016

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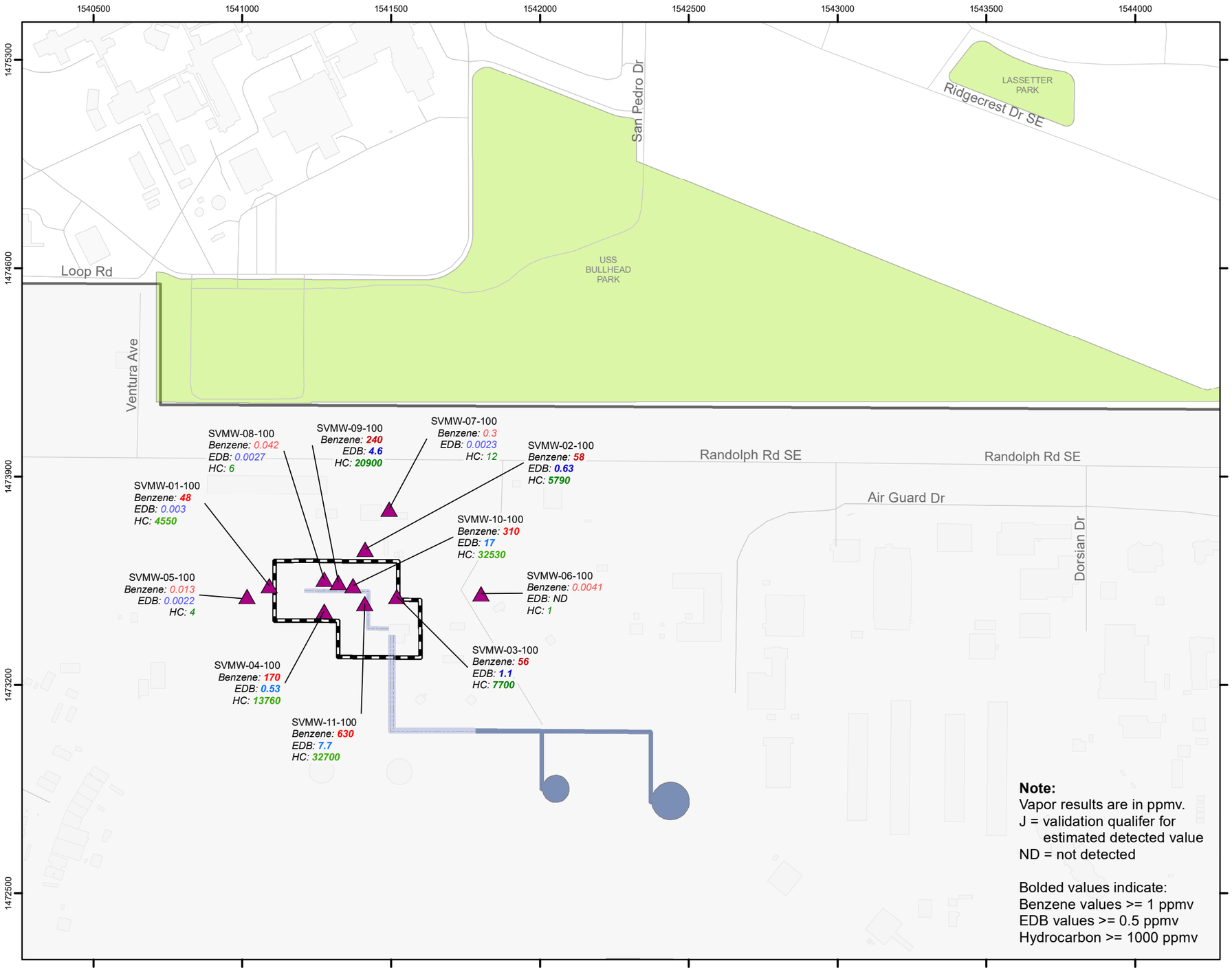


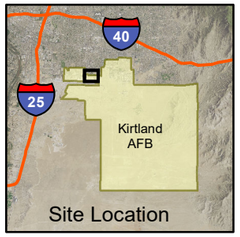
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-4

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 100 FT BGS, Q4 2016

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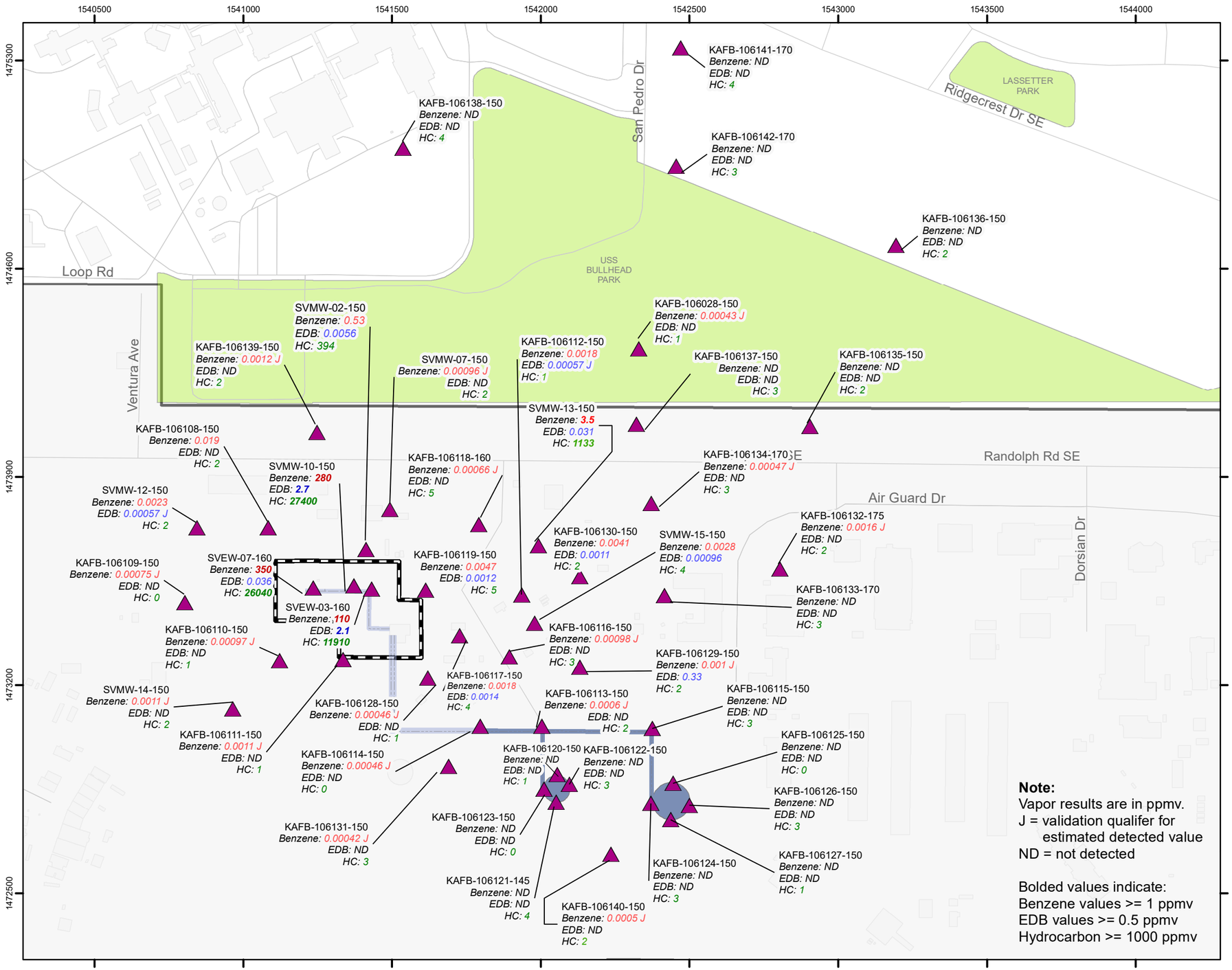


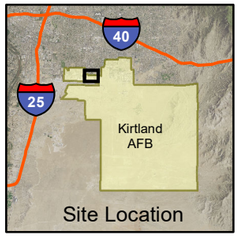
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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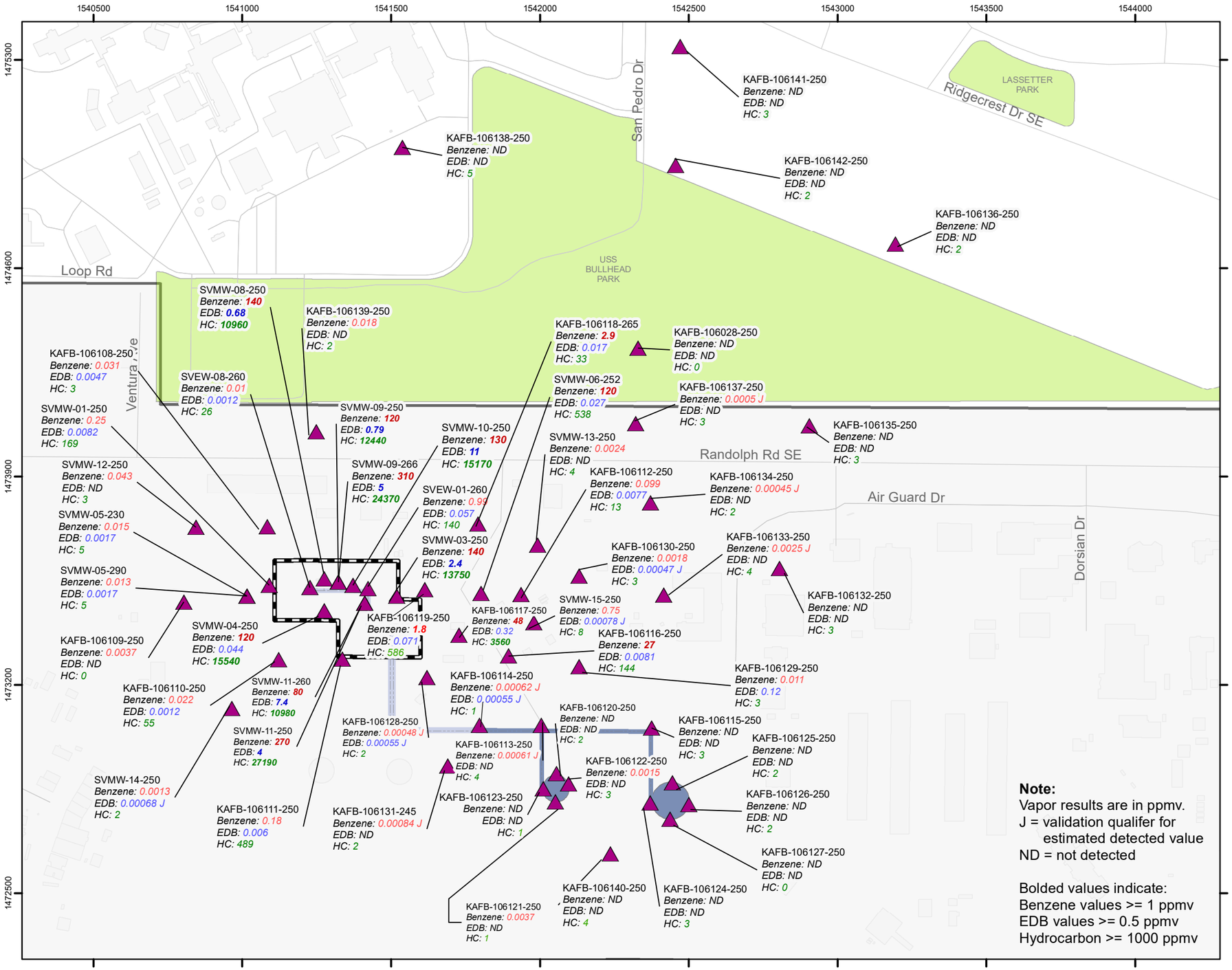
FIGURE 2-5

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 150 FT BGS, Q4 2016

Document Path: N:\Kirtland\GIS\GIS_Projects\Q4_2016\02_05_Benzene_EDB_HC_Conc_150ftQ42016.v1.mxd



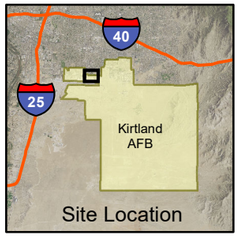
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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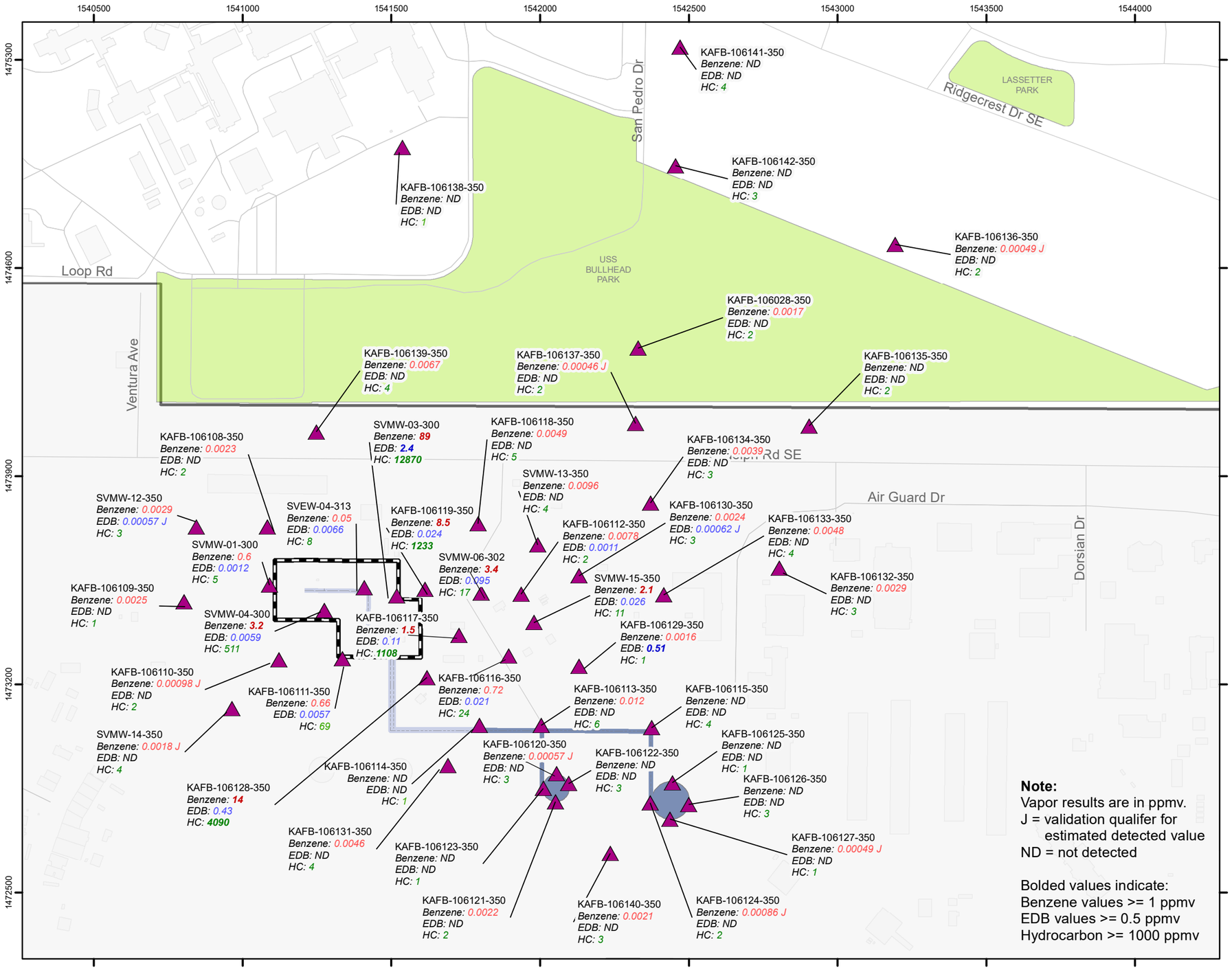
FIGURE 2-6

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 250 FT BGS, Q4 2016

Document Path: N:\Kirtland\GIS\GIS_Projects\Q4_2016\02_06_Benzedn_EDB_HC_Conc_250ftQ42016.v1.mxd



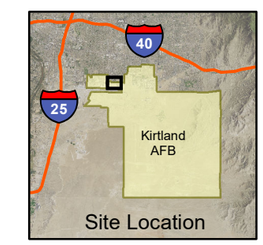
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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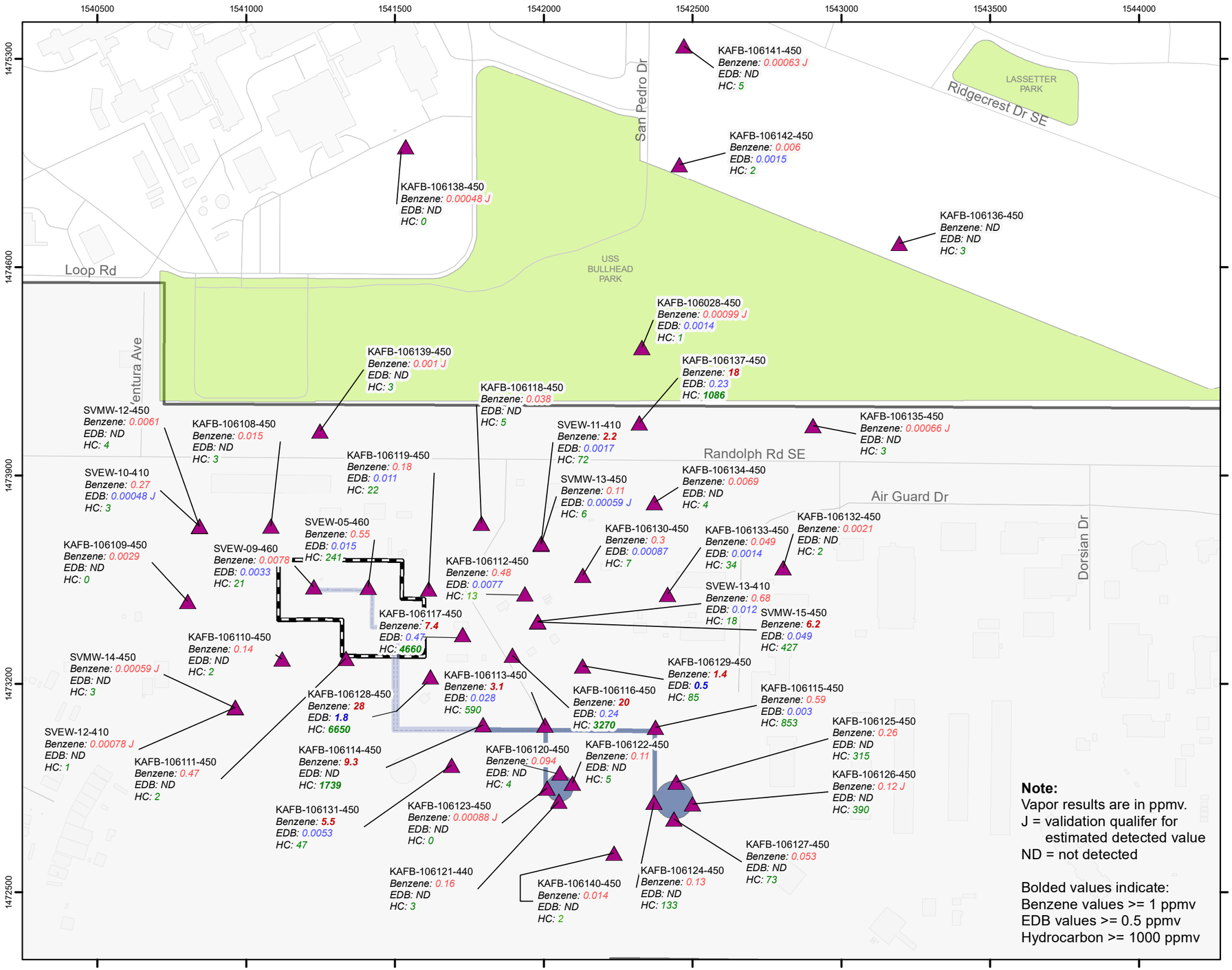
FIGURE 2-7

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 350 FT BGS, Q4 2016

Document Path: N:\Kirtland\GIS\GIS_Projects\Q4_2016\02_07_Benzene_EDB_HC_Conc_350ftQ42016.v1.mxd



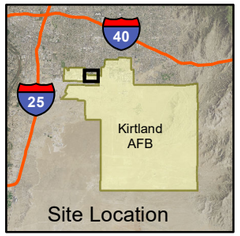
Note:
Vapor results are in ppmv.
J = validation qualifer for estimated detected value
ND = not detected

Bolded values indicate:
Benzene values >= 1 ppmv
EDB values >= 0.5 ppmv
Hydrocarbon >= 1000 ppmv

Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Source Area
- Roads
- Former Buried Fuel Transfer Lines
- Former Aboveground Fuel Transfer Lines
- Former Aboveground Storage Tanks
- Soil Vapor Monitoring Points (SVMPs)

Acronyms:
BGS: below ground surface
EDB: ethylene dibromide
FT: feet
HC: hydrocarbons
SVEW: soil vapor extraction well
SVMW: soil vapor monitoring well



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/3/2017

N

0 200 400 800
Feet
1 inch = 350 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE 2-8

BENZENE, EDB, AND HC CONCENTRATIONS IN SOIL VAPOR AT 450 FT BGS, Q4 2016

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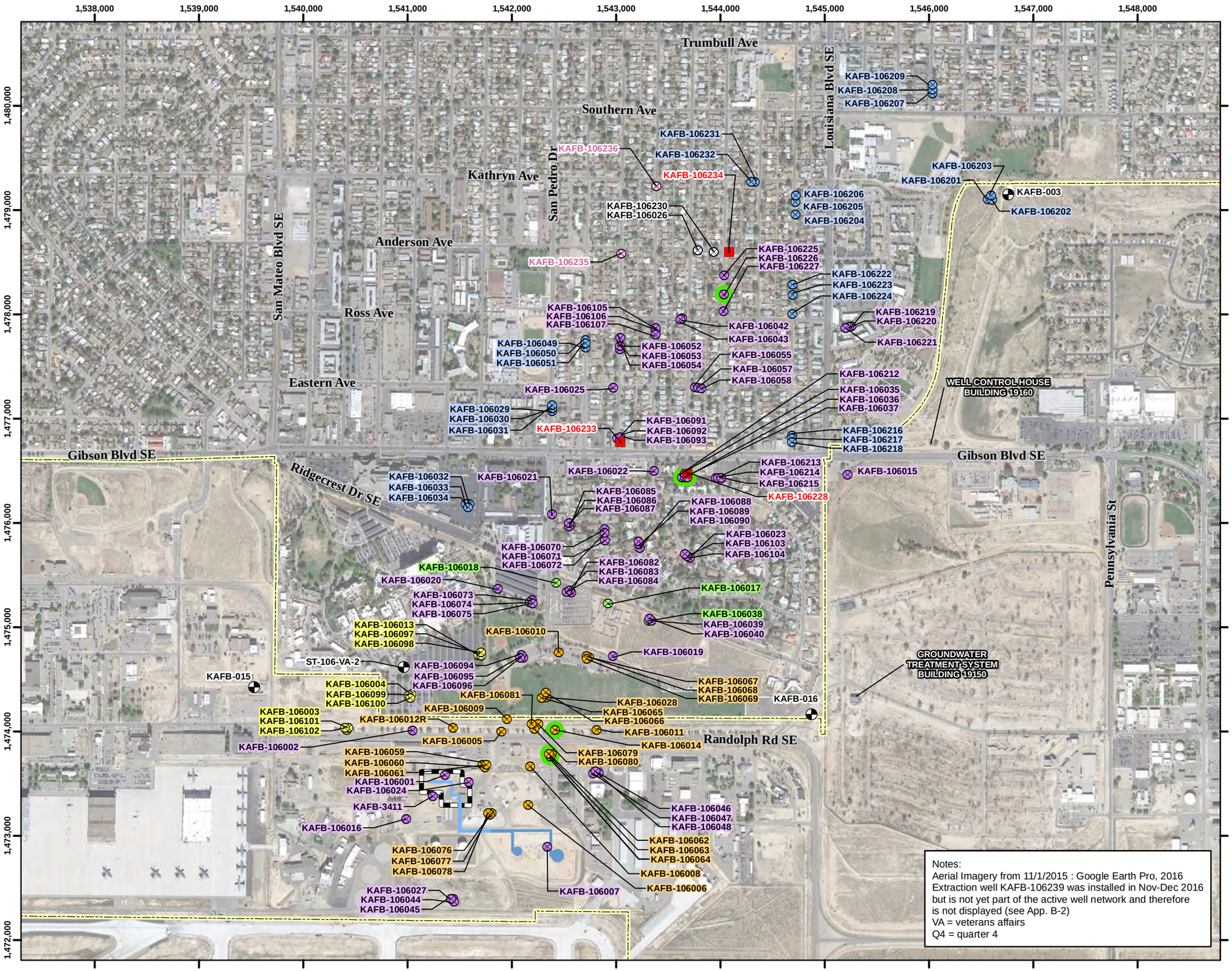
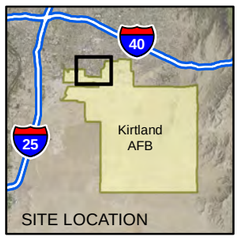


Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Extraction well KAFB-106239 was installed in Nov-Dec 2016 but is not yet part of the active well network and therefore is not displayed (see App. B-2)
VA = veterans affairs
Q4 = quarter 4

Legend

- Newly Installed Monitoring Well
- Groundwater Monitoring Well
- Signal Monitoring Well
- Source Area Monitoring Well
- VA Proximal Monitoring Well
- Downgradient Proximal Monitoring Well
- Groundwater Monitoring Well Used in Vertical Profile Study
- Groundwater Monitoring Well Not Sampled in Q4 2016
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation 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 WELLS, AND EXTRACTION WELL LOCATIONS

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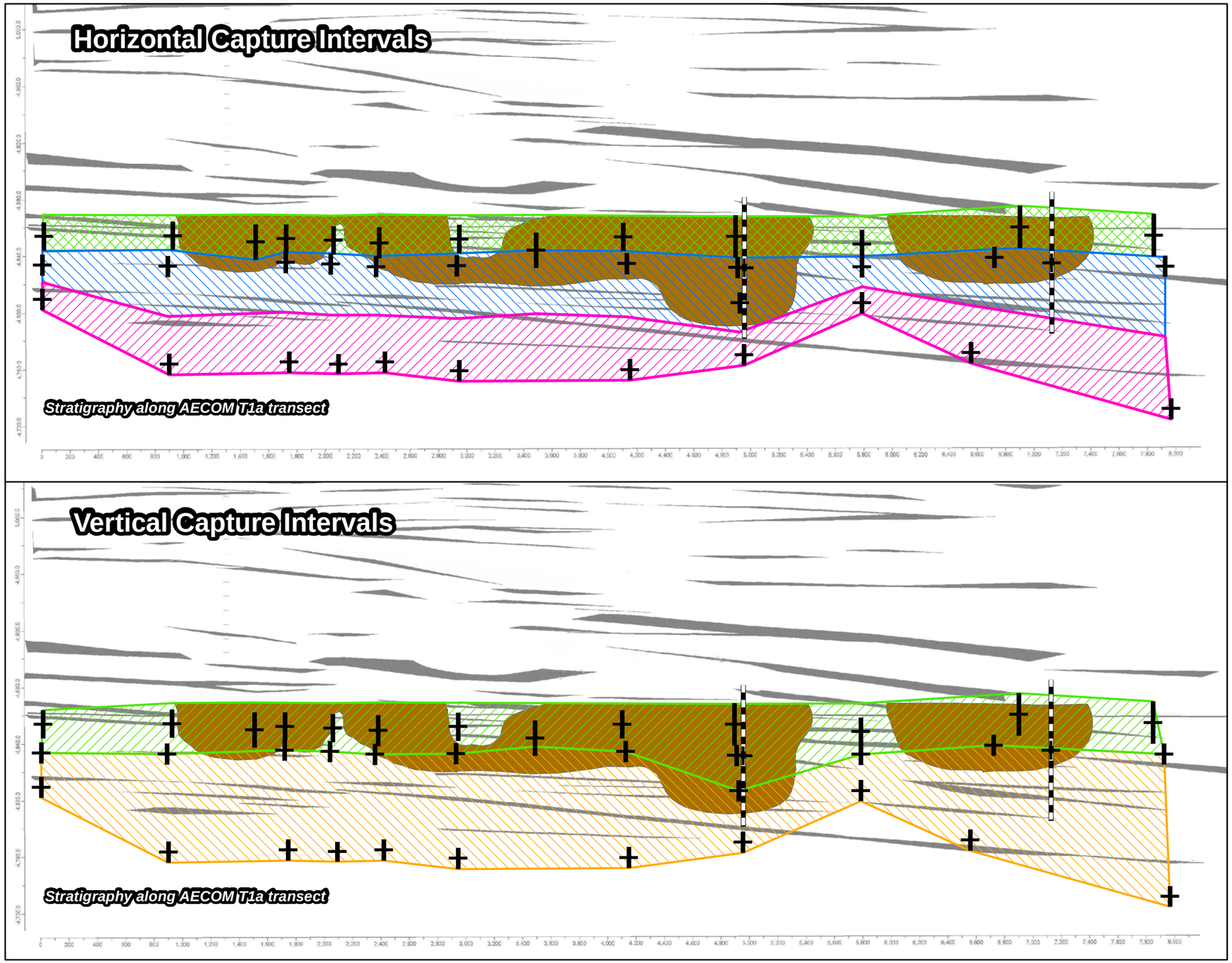

Legend

Groundwater Monitoring Well Screen (With Midpoint)

Extraction Well Screen

2016 Q4 EDB Plume (>0.05 µg/L)

Reference Elevation Interval For Horizontal Capture

4857 (ft AMSL)

4838 (ft AMSL)

4814 (ft AMSL)

Reference Elevation Interval For Vertical Capture

Above 4838 Midpoint (ft AMSL)

Below 4838 Midpoint (ft AMSL)

Notes:
EDB plume model generated with C-Tech MVS Premier Version 9.94
For full definition of reference elevation intervals, see section 3.
ft AMSL = feet above mean sea level
µg/L = micrograms per liter
EDB = ethylene dibromide
AECOM = Architecture, Engineering, Consulting, Operations, and Maintenance
Q4 = quarter 4

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FIGURE 3-2

REFERENCE ELEVATION CAPTURE INTERVALS
Q4 2016

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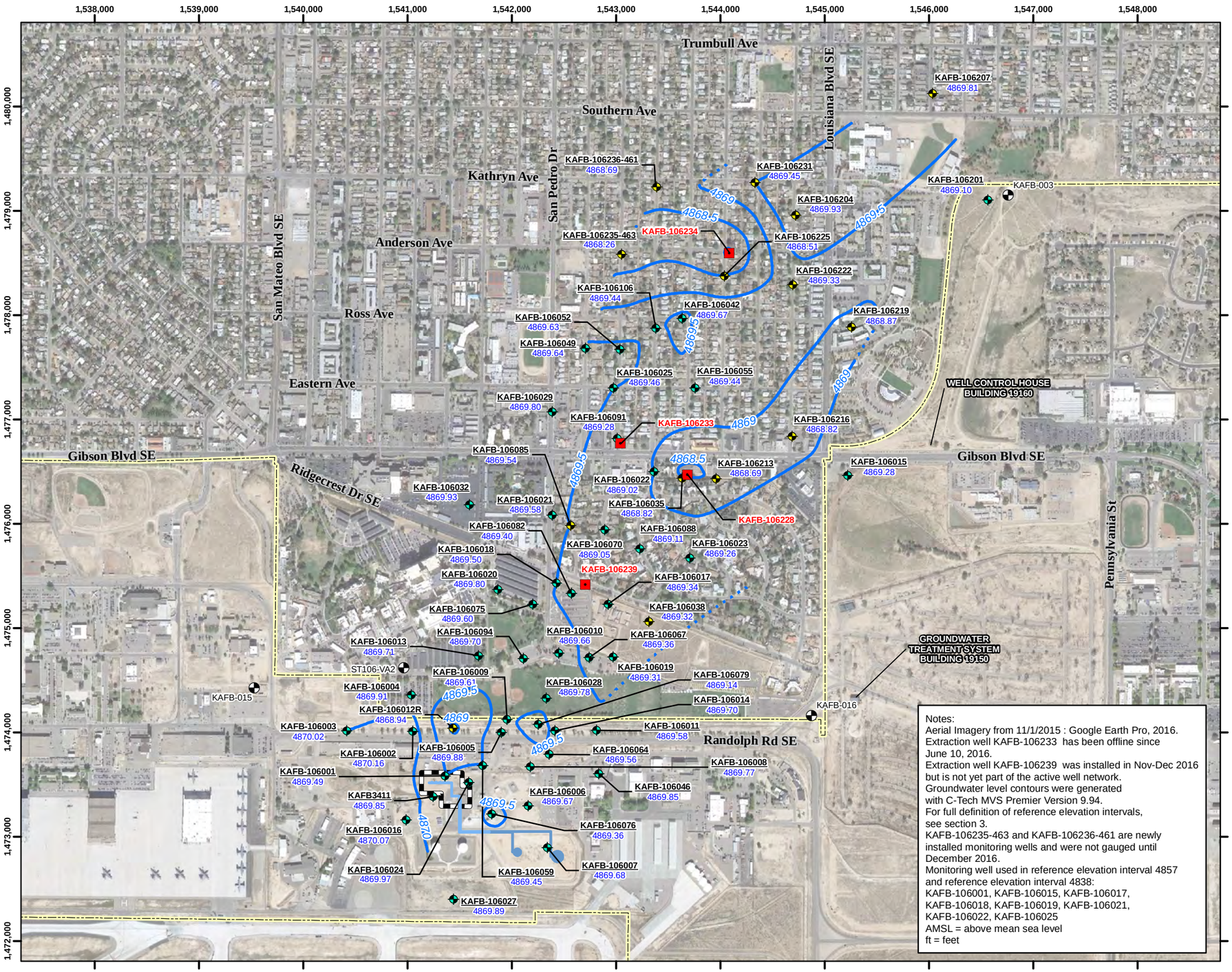
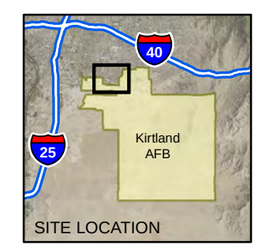


Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016.
Extraction well KAFB-106233 has been offline since June 10, 2016.
Extraction well KAFB-106239 was installed in Nov-Dec 2016 but is not yet part of the active well network.
Groundwater level contours were generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not gauged until December 2016.
Monitoring well used in reference elevation interval 4857 and reference elevation interval 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025
AMSL = above mean sea level
ft = feet

Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- Installation 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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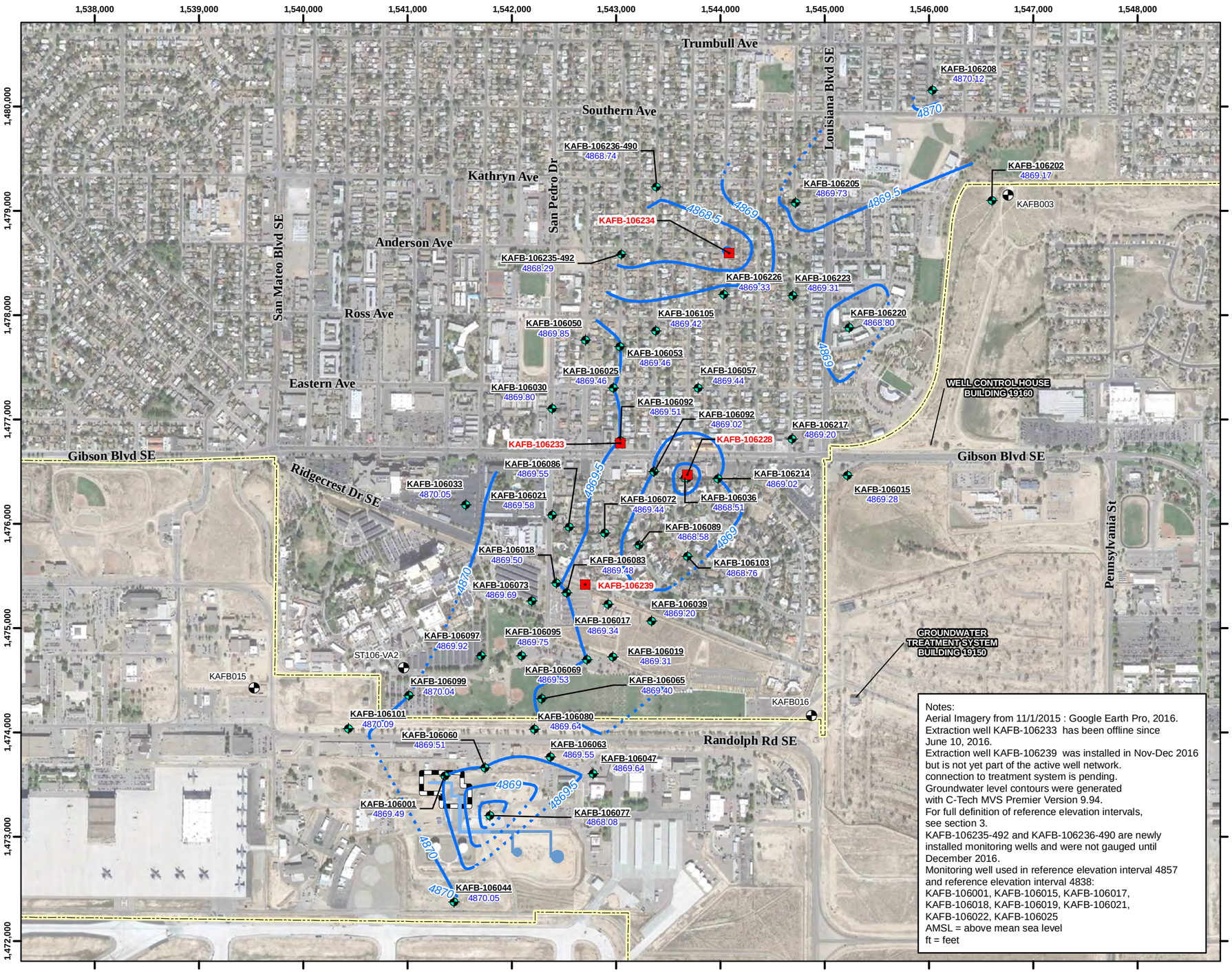
FIGURE 3-3

POTENTIOMETRIC SURFACE MAP OF REFERENCE ELEVATION INTERVAL 4857, OCTOBER 3-6, 2016

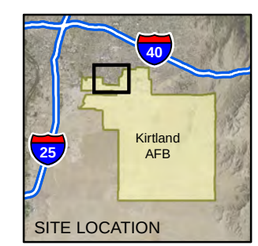
P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-3 Interval 4857 PotentiometricSurfaceQ4.mxd 2/14/2017 EA eomalia



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016.
Extraction well KAFB-106233 has been offline since June 10, 2016.
Extraction well KAFB-106239 was installed in Nov-Dec 2016 but is not yet part of the active well network. connection to treatment system is pending.
Groundwater level contours were generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-492 and KAFB-106236-490 are newly installed monitoring wells and were not gauged until December 2016.
Monitoring well used in reference elevation interval 4857 and reference elevation interval 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025
AMSL = above mean sea level
ft = feet

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 Boundary
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- 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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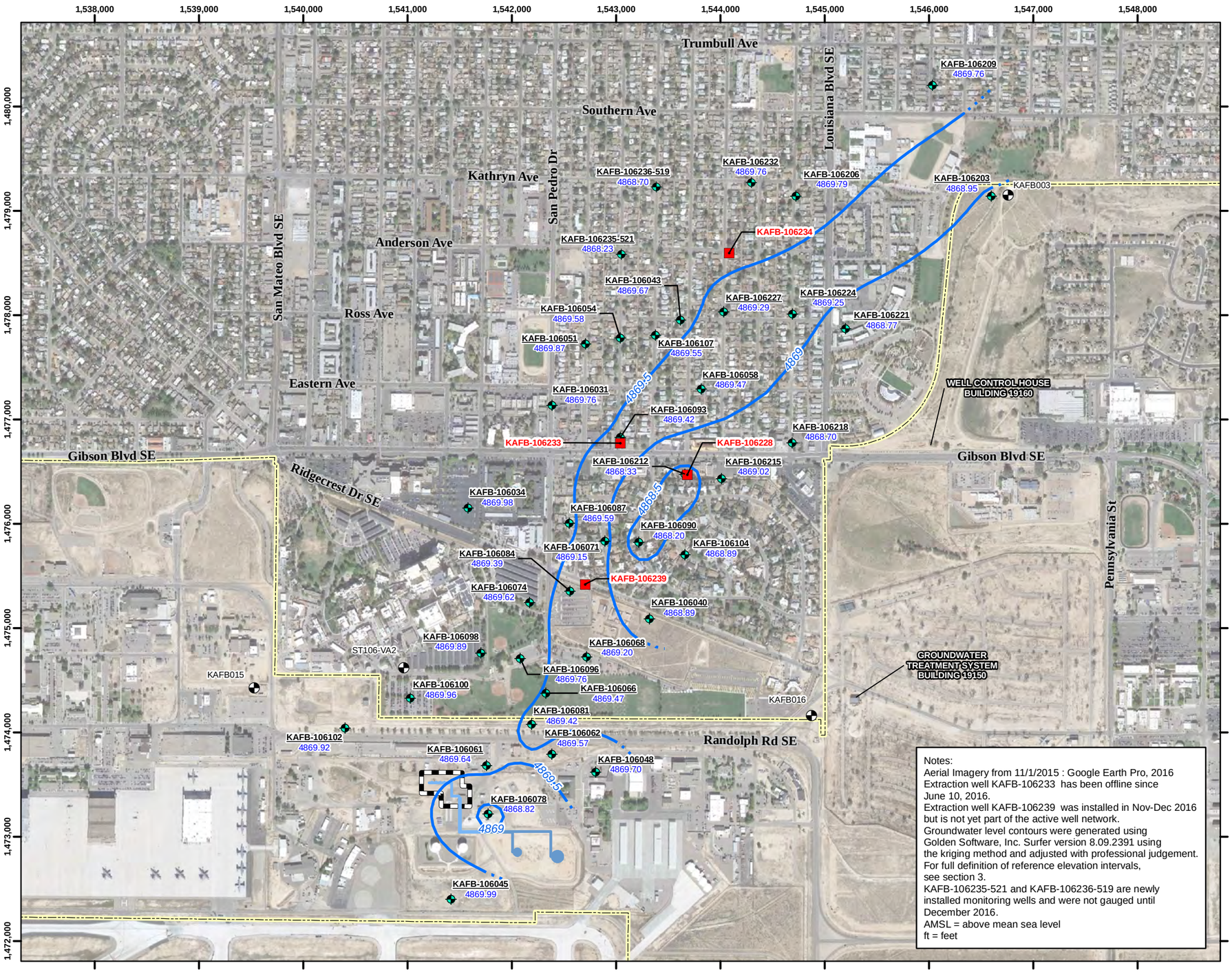
FIGURE 3-4

POTENTIOMETRIC SURFACE MAP OF REFERENCE ELEVATION INTERVAL 4838, OCTOBER 3-6, 2016

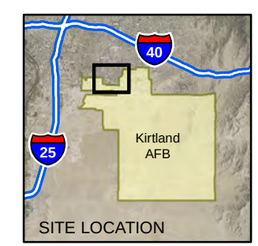
P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-4 Interval 4838 PotentiometricSurfaceQ4.mxd 2/14/2017 EA eomalia



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Extraction well KAFB-106233 has been offline since June 10, 2016.
Extraction well KAFB-106239 was installed in Nov-Dec 2016 but is not yet part of the active well network.
Groundwater level contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-521 and KAFB-106236-519 are newly installed monitoring wells and were not gauged until December 2016.
AMSL = above mean sea level
ft = feet

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 Boundary
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- 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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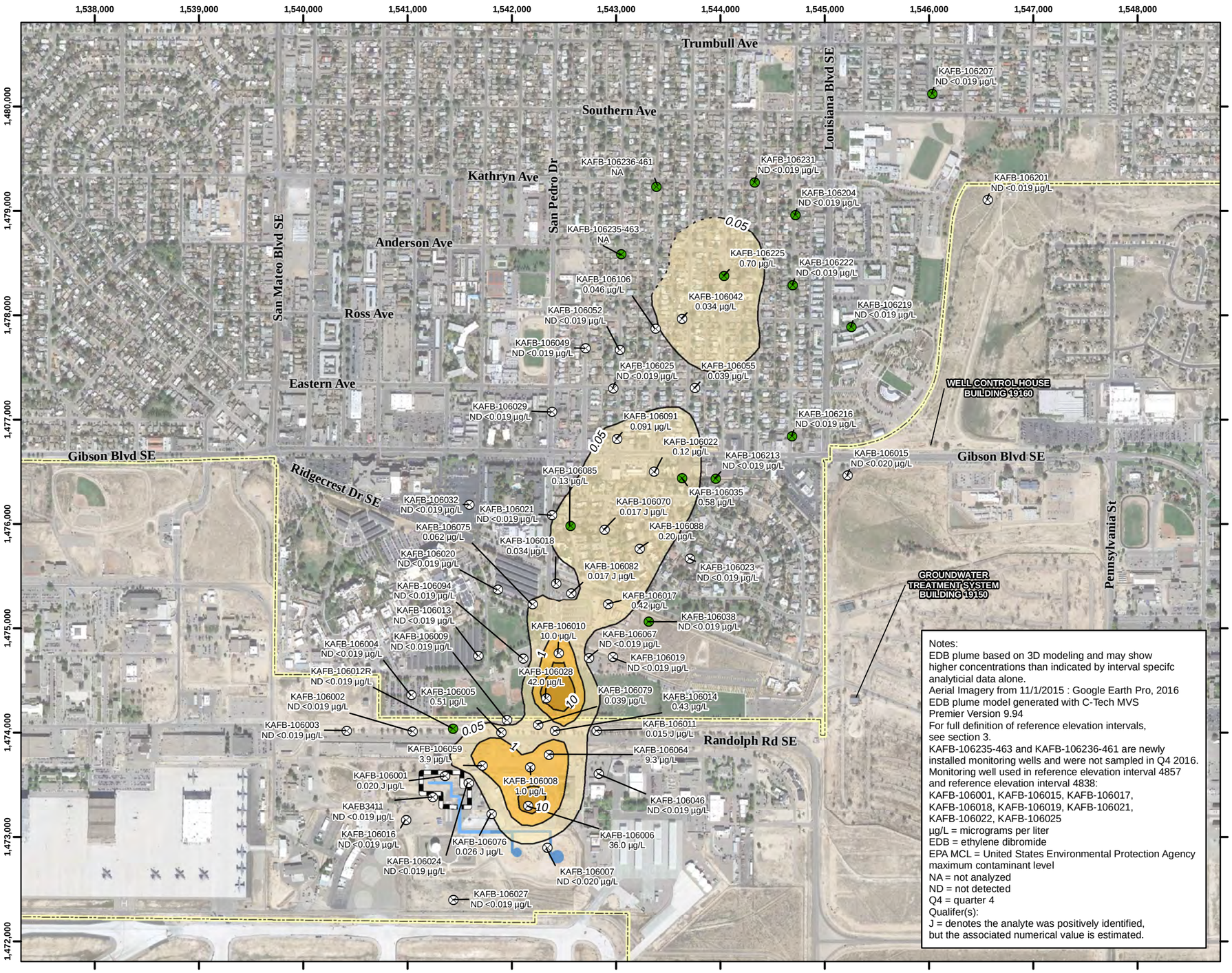
FIGURE 3-5

POTENTIOMETRIC SURFACE MAP OF REFERENCE ELEVATION INTERVAL 4814, OCTOBER 3-6, 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-5 Interval 4814 PotentiometricSurfaceQ4.mxd 2/14/2017 EA eomalia



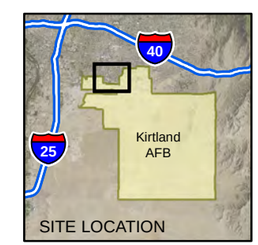
Notes:
EDB plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analyticial data alone.
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
Monitoring well used in reference elevation interval 4857 and reference elevation interval 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025
µg/L = micrograms per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = not detected
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- EDB Concentration Isocontour (µg/L)
- Inferred EDB Concentration Isocontour (µg/L)
- Source Area

EDB Concentration Range

- 0.05 (EPA MCL) - 1.0 µg/L
- 1.0 - 10 µg/L
- 10 - 50 µg/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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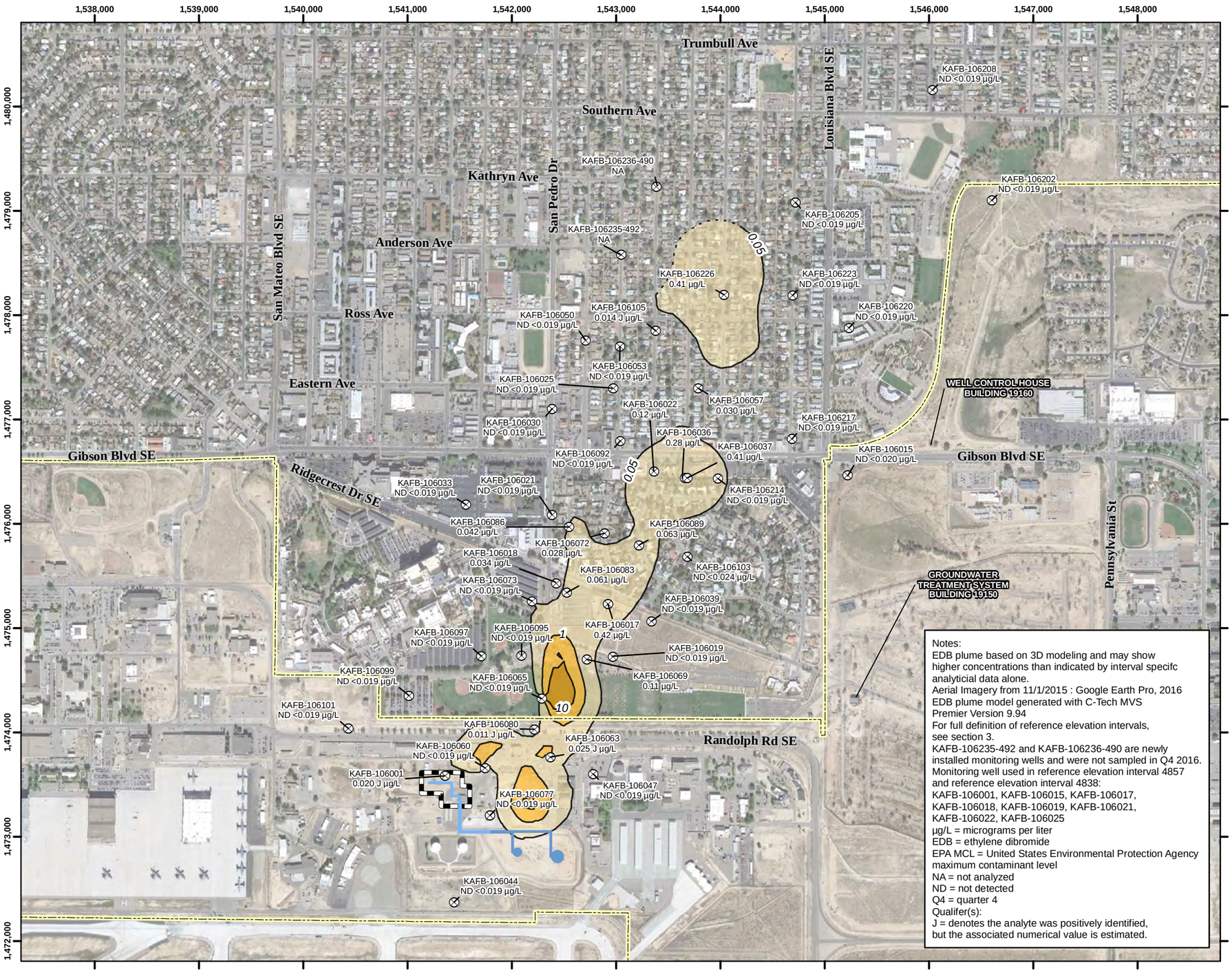
FIGURE 3-6

EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4857
Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-6 Interval 4857 EDB Q4.mxd 2/14/2017 EA eomalia



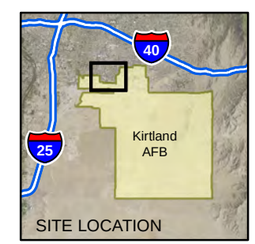
Notes:
EDB plume based on 3D modeling and may show higher concentrations than indicated by interval specifc analyticial data alone.
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94
For full definition of reference elevation intervals, see section 3.
KAFB-106235-492 and KAFB-106236-490 are newly installed monitoring wells and were not sampled in Q4 2016.
Monitoring well used in reference elevation interval 4857 and reference elevation interval 4838:
KAFB-106001, KAFB-106015, KAFB-106017, KAFB-106018, KAFB-106019, KAFB-106021, KAFB-106022, KAFB-106025
µg/L = micrograms per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = not detected
Q4 = quarter 4
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

Legend

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

EDB Concentration Range

- 0.05 (EPA MCL) - 1.0 µg/L
- 1.0 - 10 µg/L
- 10 - 50 µg/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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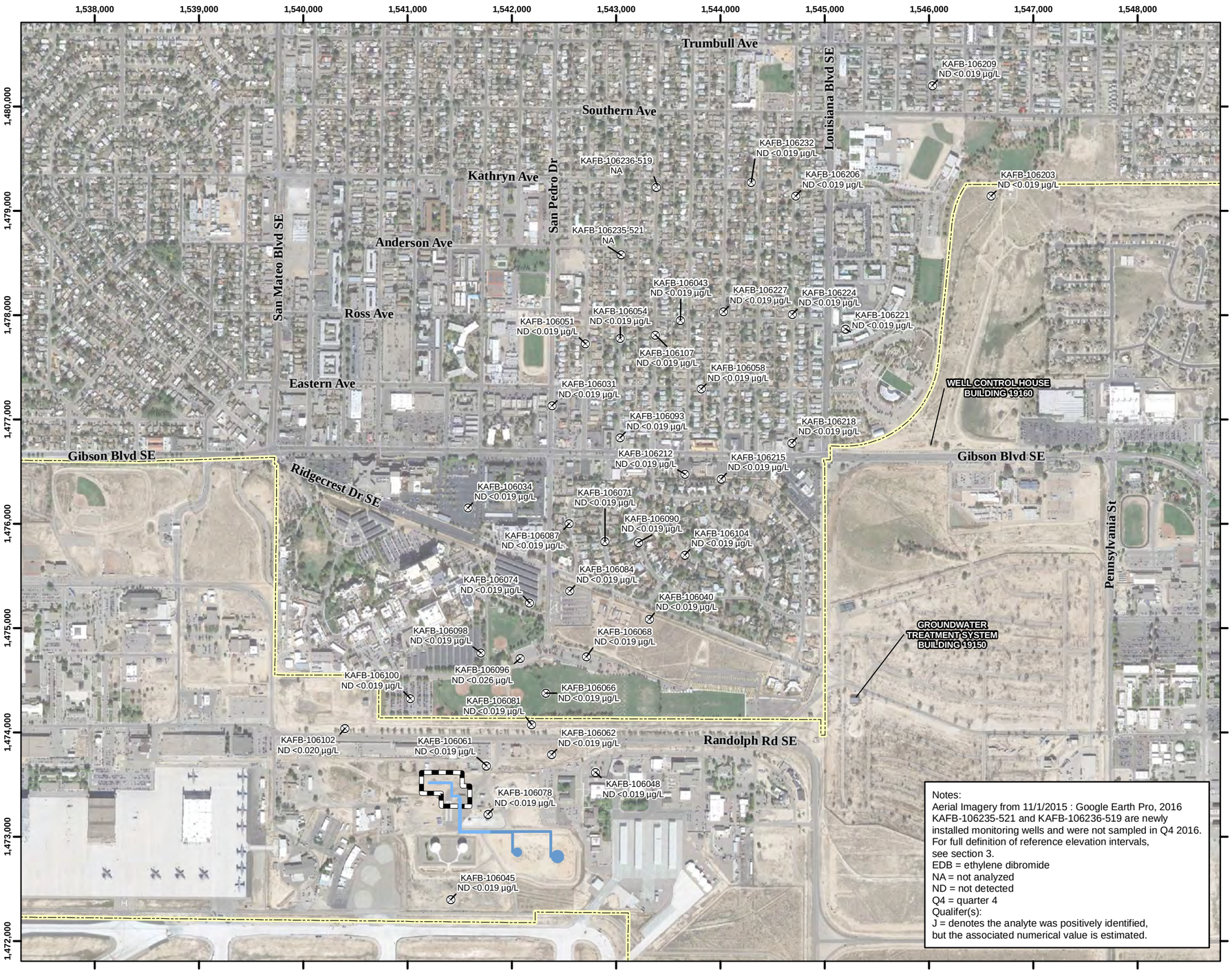
FIGURE 3-7

EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4838
Q4 2016

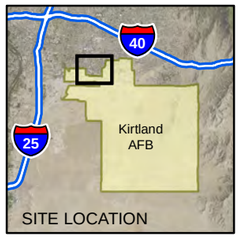
P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-7 Interval 4838 EDB Q4.mxd 2/14/2017 EA eomalia



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
KAFB-106235-521 and KAFB-106236-519 are newly installed monitoring wells and were not sampled in Q4 2016.
For full definition of reference elevation intervals, see section 3.
EDB = ethylene dibromide
NA = not analyzed
ND = not detected
Q4 = quarter 4
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

Legend

- Reference Elevation Interval 4814 Monitoring Well (Screen Submerged)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation 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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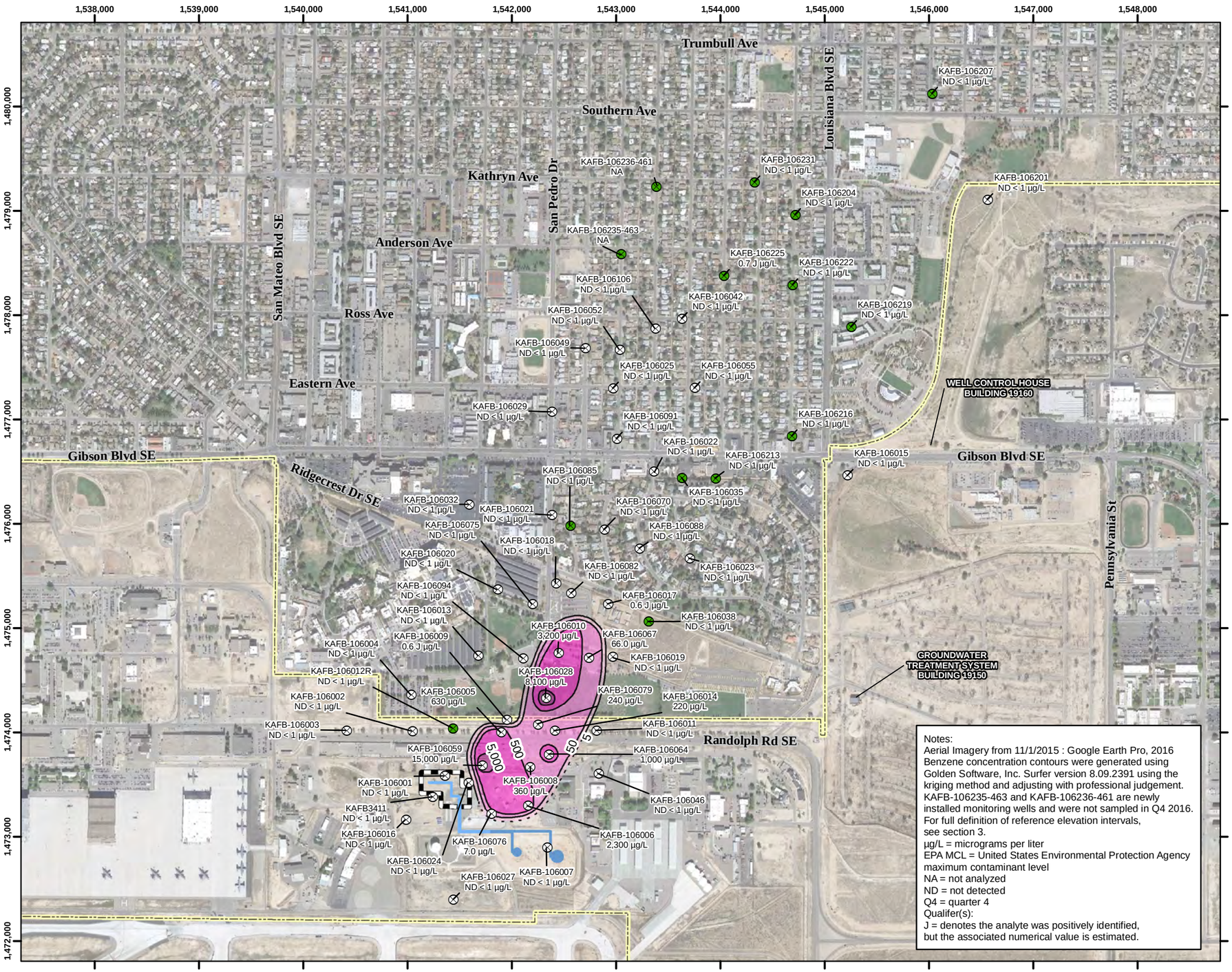
FIGURE 3-8

EDB CONCENTRATIONS IN GROUNDWATER
REFERENCE ELEVATION INTERVAL 4814
Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-8 Interval 4814 EDB Q4.mxd 2/14/2017 EA eomalia



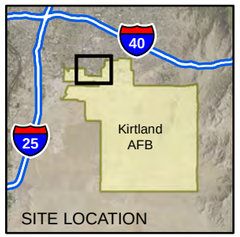
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Benzene concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusting with professional judgement.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
For full definition of reference elevation intervals, see section 3.
µg/L = micrograms per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = not detected
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Benzene Concentration Isocontour (µg/L)
- Inferred Isocontour (µg/L)
- Source Area

Benzene Concentration Range

- 5.0 (EPA MCL) - 50 µg/L
- 50 - 500 µg/L
- 500 - 5,000 µg/L
- 5,000 - 15,000 µg/L



N

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

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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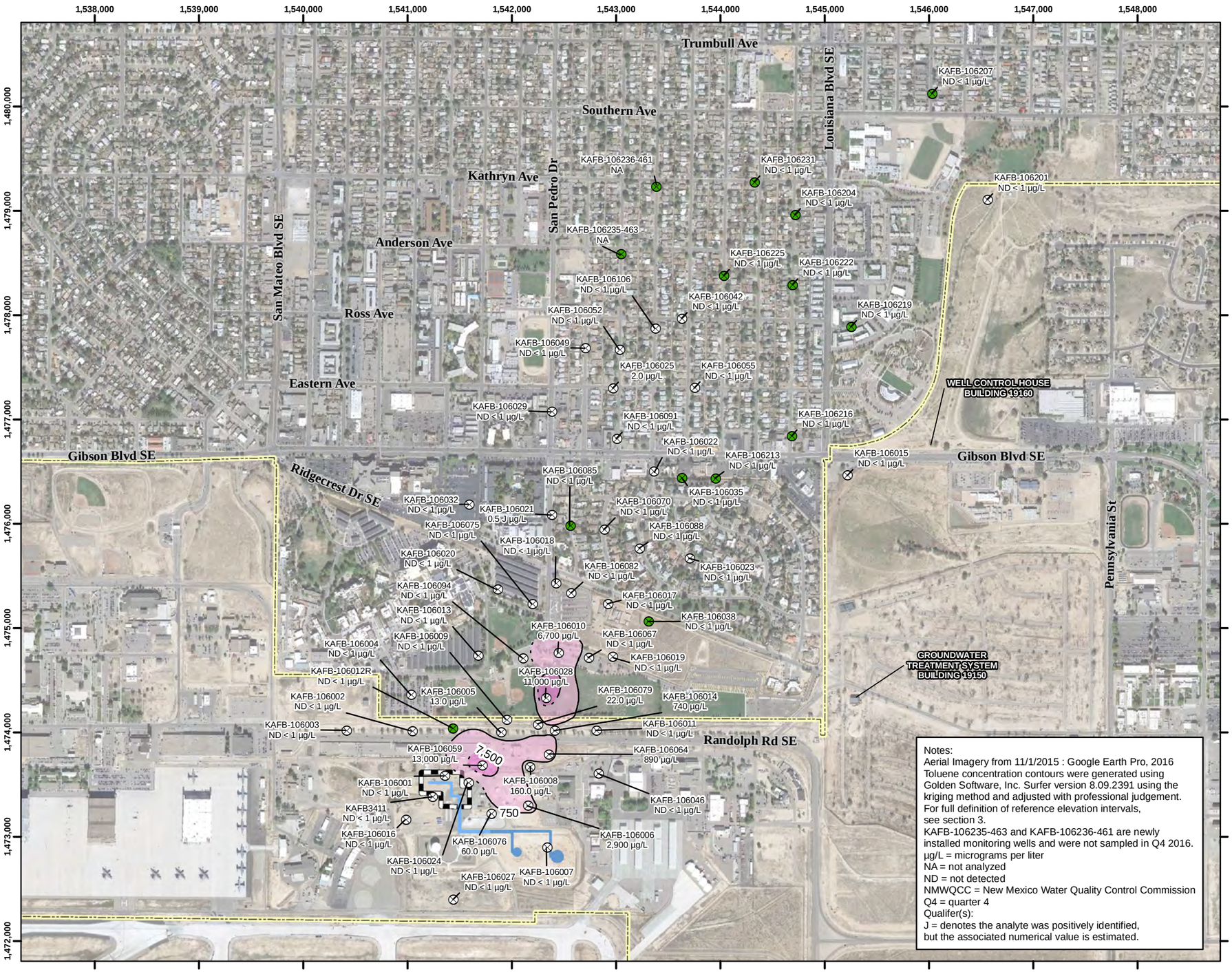
FIGURE 3-9

BENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-9 Interval 4857 Benzene Q4.mxd 2/14/2017 EA eomalia



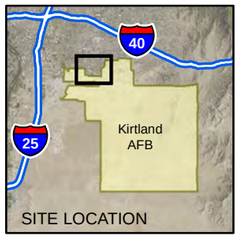
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Toluene concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
µg/L = micrograms per liter
NA = not analyzed
ND = not detected
NMWQCC = New Mexico Water Quality Control Commission
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Toluene Concentration Isocontour (µg/L)
- Inferred Isocontour (µg/L)
- Source Area

Toluene Concentration Range

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



N

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

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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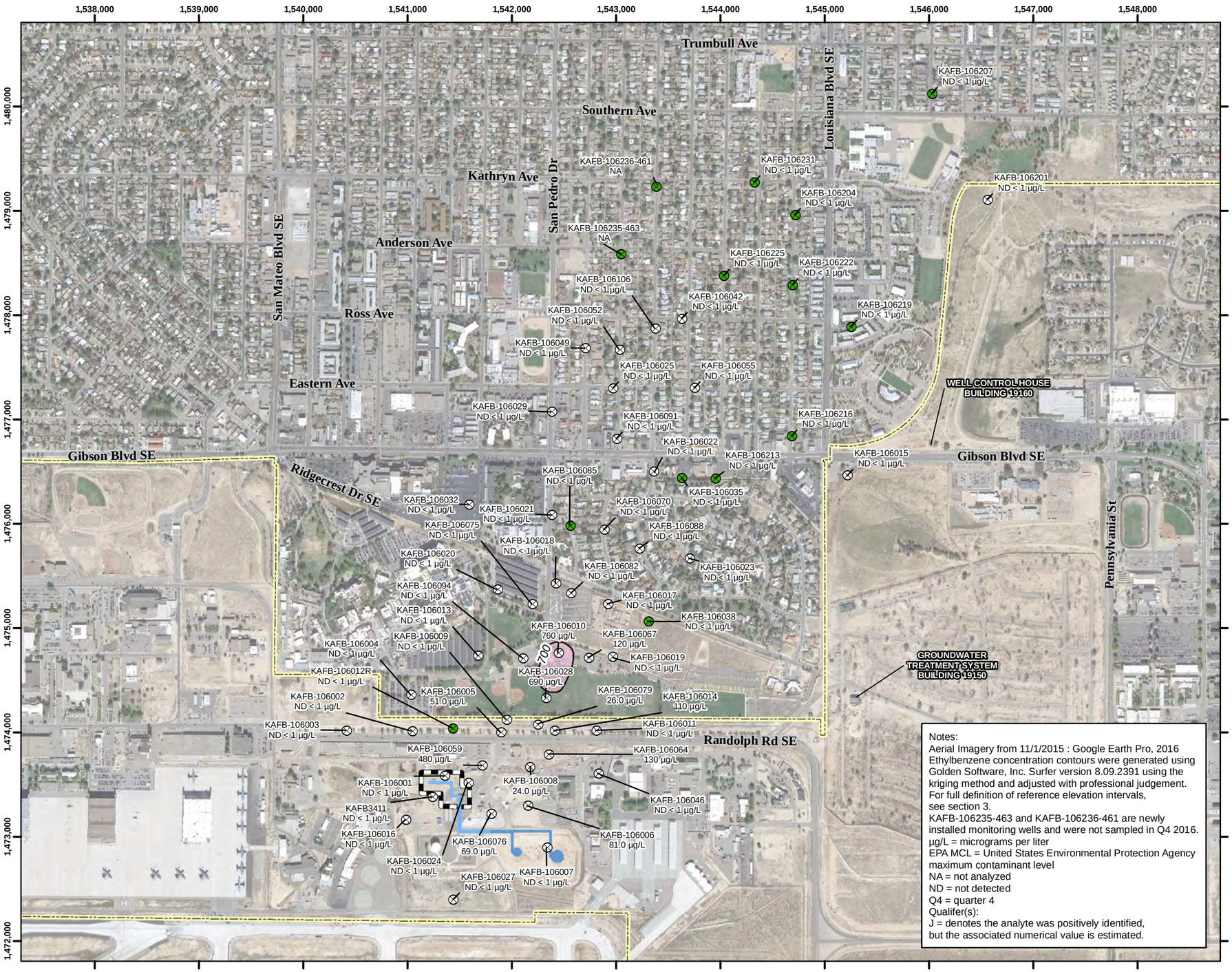
FIGURE 3-10

TOLUENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-10 Interval 4857 Toluene Q4.mxd 2/14/2017 EA eomalia



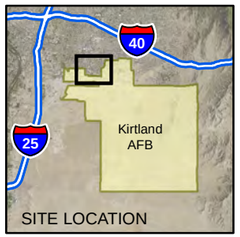
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Ethylbenzene concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
µg/L = micrograms per liter
EPA MCL = United States Environmental Protection Agency maximum contaminant level
NA = not analyzed
ND = not detected
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Ethylbenzene Concentration Isocontour (µg/L)
- Source Area

Ethylbenzene Concentration Range

700 (EPA MCL) - 1,000 µg/L



N

0 500 1,000 2,000

Feet

1 inch = 1,000 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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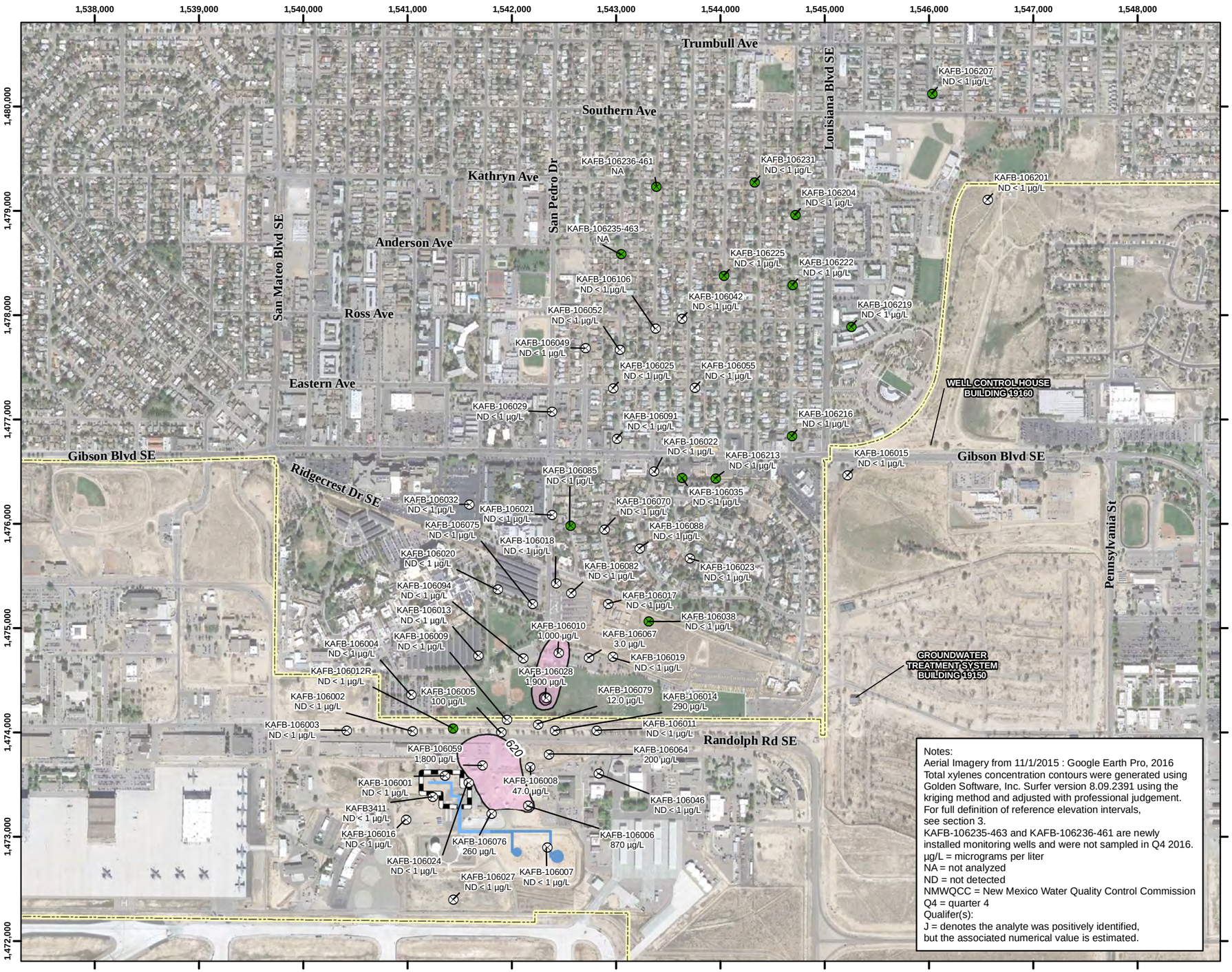
FIGURE 3-11

ETHYLBENZENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-11 Interval 4857 Ethylbenzene Q4.mxd 2/14/2017 EA eomalia



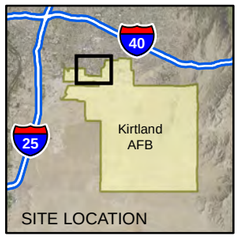
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Total xylenes concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
µg/L = micrograms per liter
NA = not analyzed
ND = not detected
NMWQCC = New Mexico Water Quality Control Commission
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Total Xylene Concentration Isocontour (µg/L)
- Source Area

Total Xylene Concentration Range

- 620 (NMWQCC standard) - 1,860 (µg/L)
- 1,860 - 3,100 (µg/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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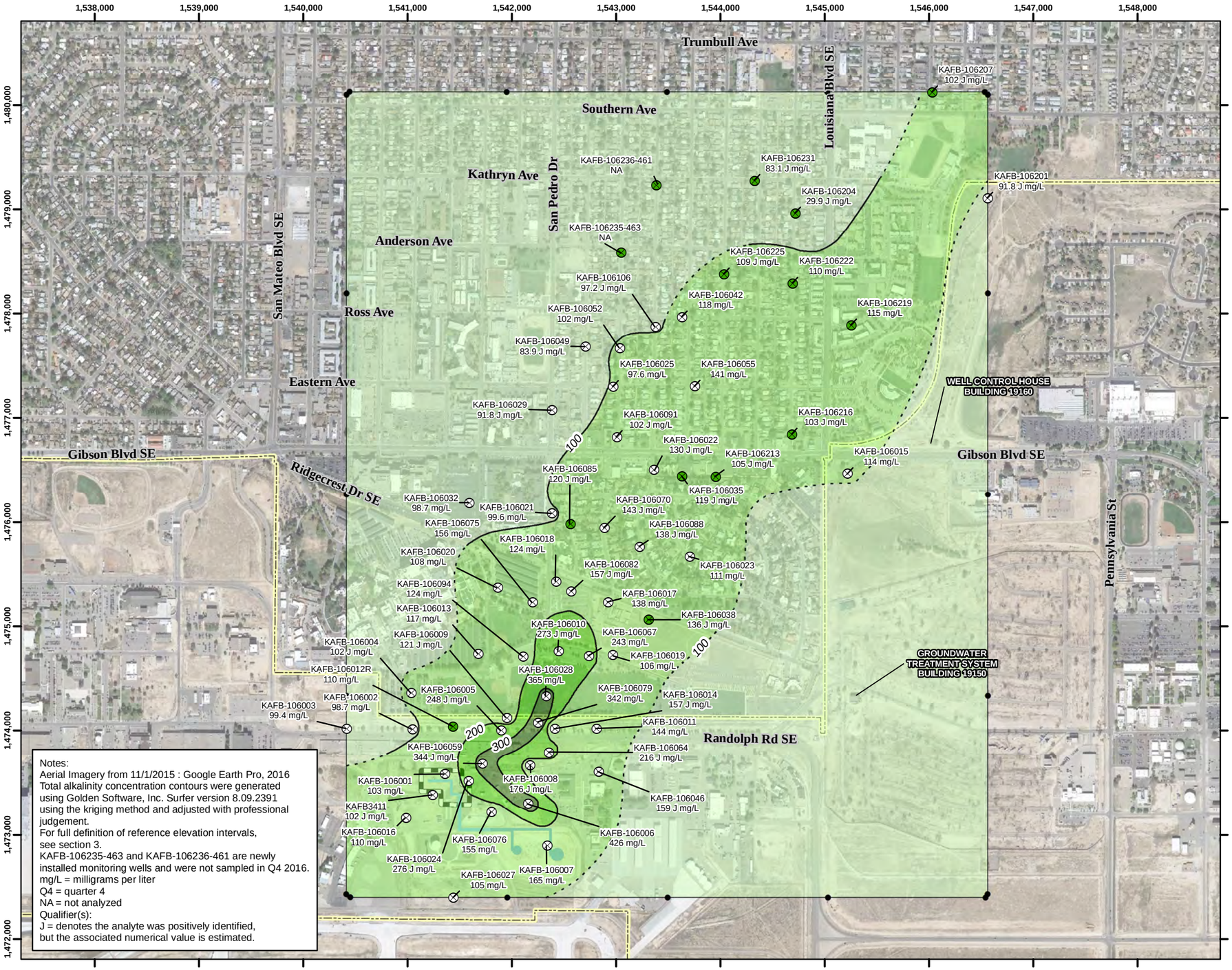
FIGURE 3-12

TOTAL XYLENE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-12 Interval 4857 Xylene Q4.mxd 2/14/2017 EA eomalia



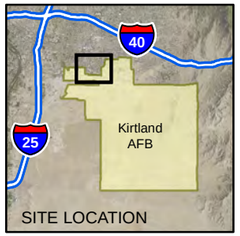
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Total alkalinity concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
mg/L = milligrams per liter
Q4 = quarter 4
NA = not analyzed
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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Total Alkalinity Concentration Isocontour (mg/L)
- Inferred Isocontour (mg/L)
- Model Extent
- Source Area

Total Alkalinity Concentration Range

- 0 - 100 mg/L
- 100 - 200 mg/L
- 200 - 300 mg/L
- 300 - 450 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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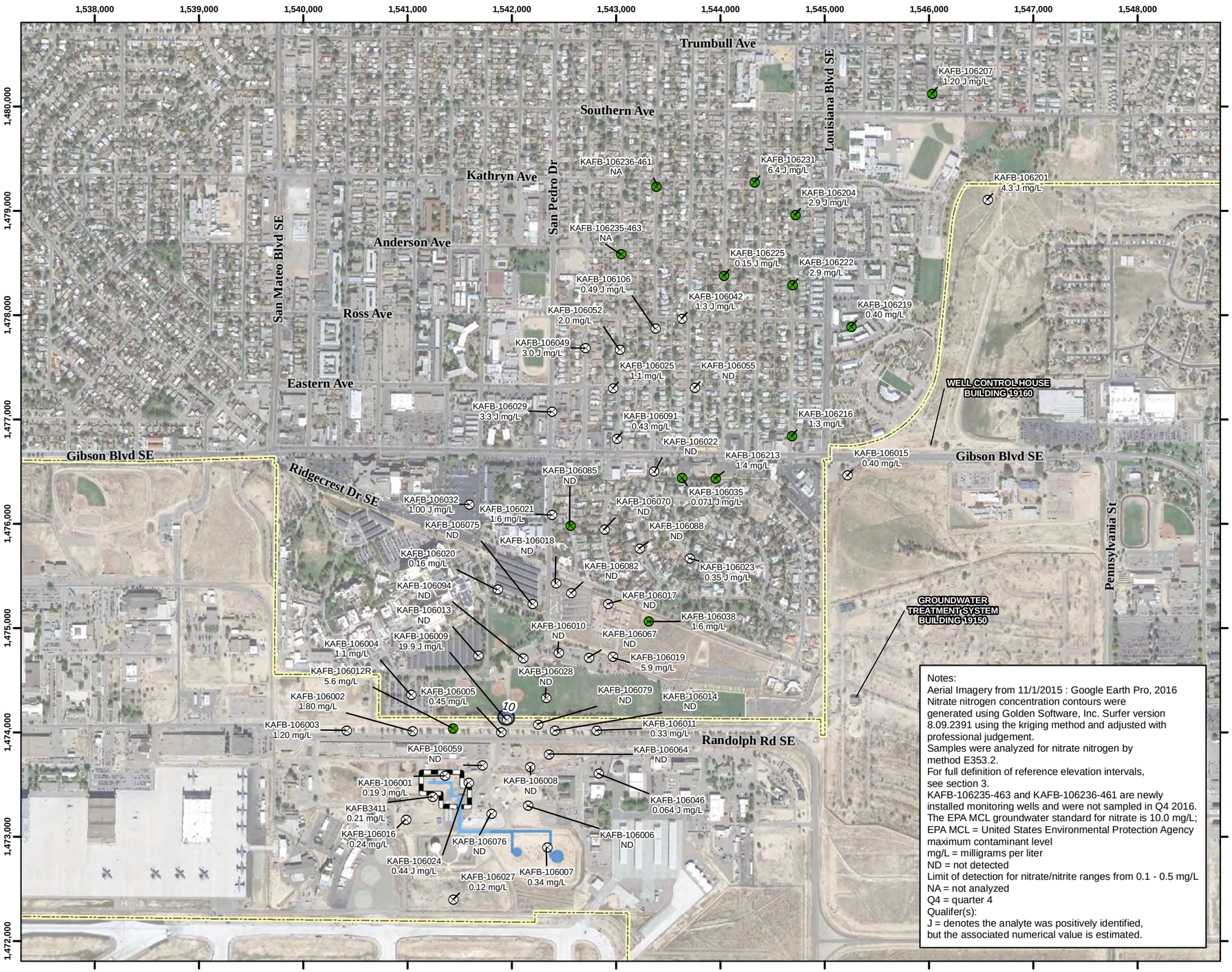
FIGURE 3-13

TOTAL ALKALINITY CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-13 Interval 4857 Alkalinity Q4.mxd 2/14/2017 EA eomalia



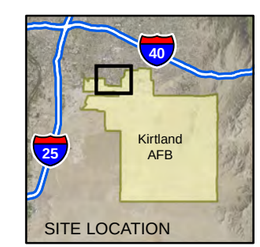
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Nitrate nitrogen concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
Samples were analyzed for nitrate nitrogen by method E353.2.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
The EPA MCL groundwater standard for nitrate is 10.0 mg/L;
EPA MCL = United States Environmental Protection Agency maximum contaminant level
mg/L = milligrams per liter
ND = not detected
Limit of detection for nitrate/nitrite ranges from 0.1 - 0.5 mg/L
NA = not analyzed
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Nitrate Nitrogen Concentration Isocontour (mg/L)
- Source Area

Nitrate/Nitrite Nitrogen Concentration Range

- 10.0 (EPA MCL for Nitrate) - 20.0 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 3-14

NITRATE/NITRITE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

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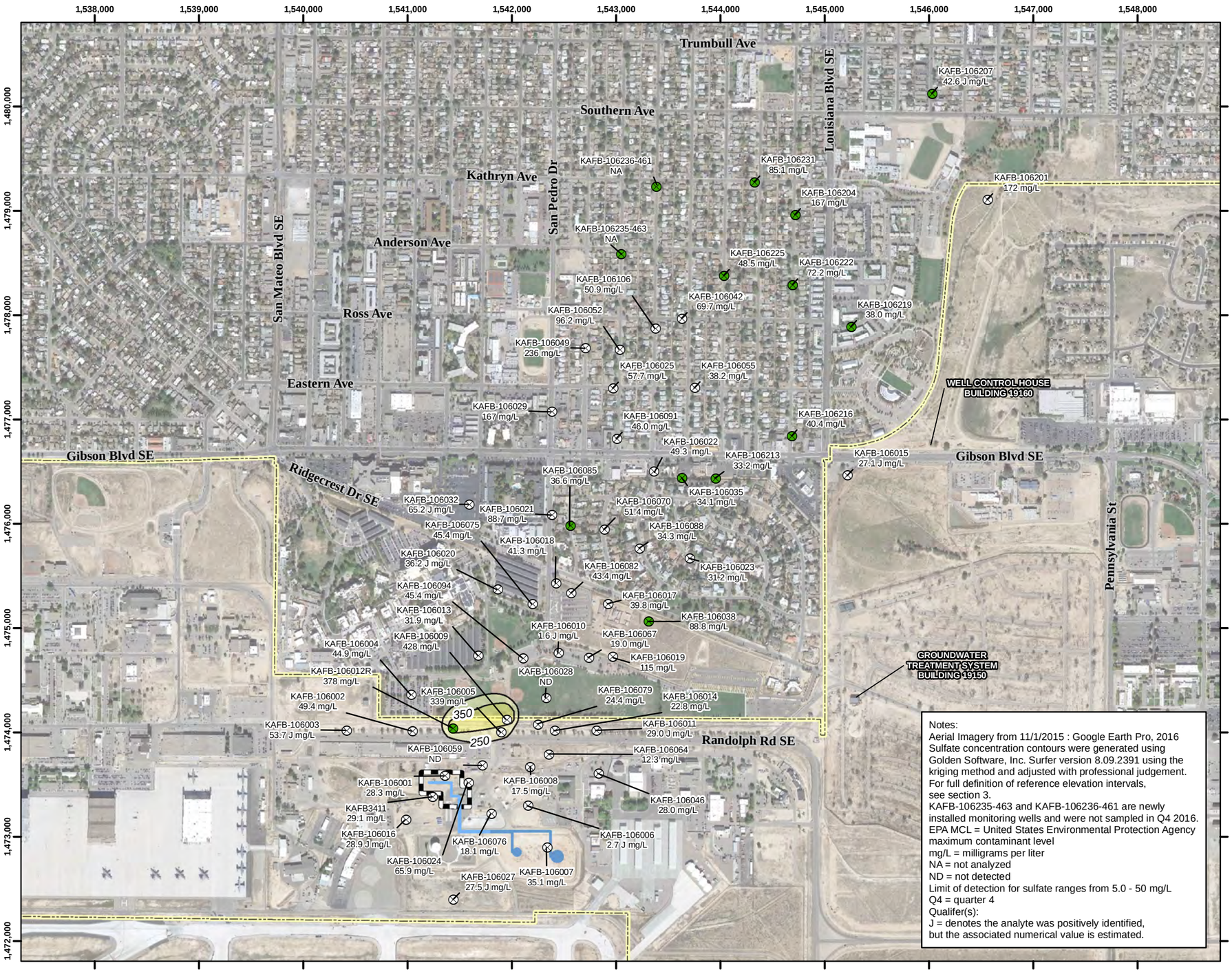
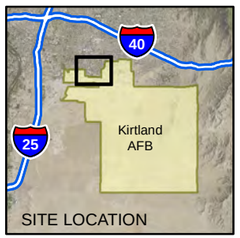


Legend

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

Sulfate Concentration Range

- 250 (EPA MCL) - 350 mg/L
- 350 - 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 11/1/2015 : Google Earth Pro, 2016
Sulfate concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
EPA MCL = United States Environmental Protection Agency maximum contaminant level
mg/L = milligrams per liter
NA = not analyzed
ND = not detected
Limit of detection for sulfate ranges from 5.0 - 50 mg/L
Q4 = quarter 4
Qualifer(s):
J = denotes the analyte was positively identified, but the associated numerical value is estimated.

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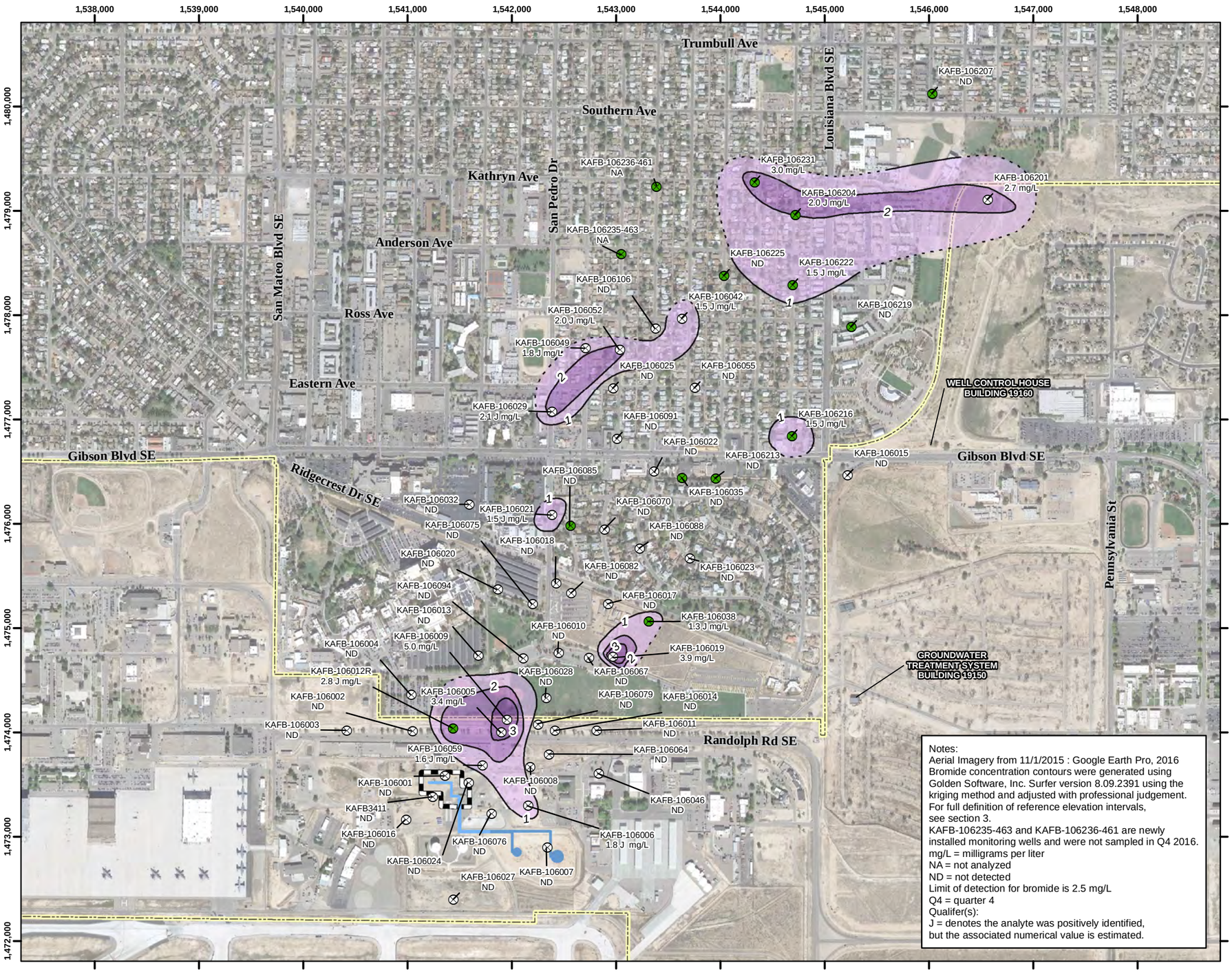
FIGURE 3-15

SULFATE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-15 Interval 4857 SO4 Q4.mxd 2/14/2017 EA eomalia



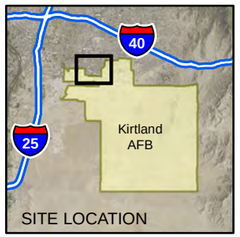
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Bromide concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
mg/L = milligrams per liter
NA = not analyzed
ND = not detected
Limit of detection for bromide is 2.5 mg/L
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Bromide Concentration Isocontour (mg/L)
- Inferred Isocontour (mg/L)
- Source Area

Bromide Concentration Range

- 1 - 2 mg/L
- 2 - 3 mg/L
- 3 - 5 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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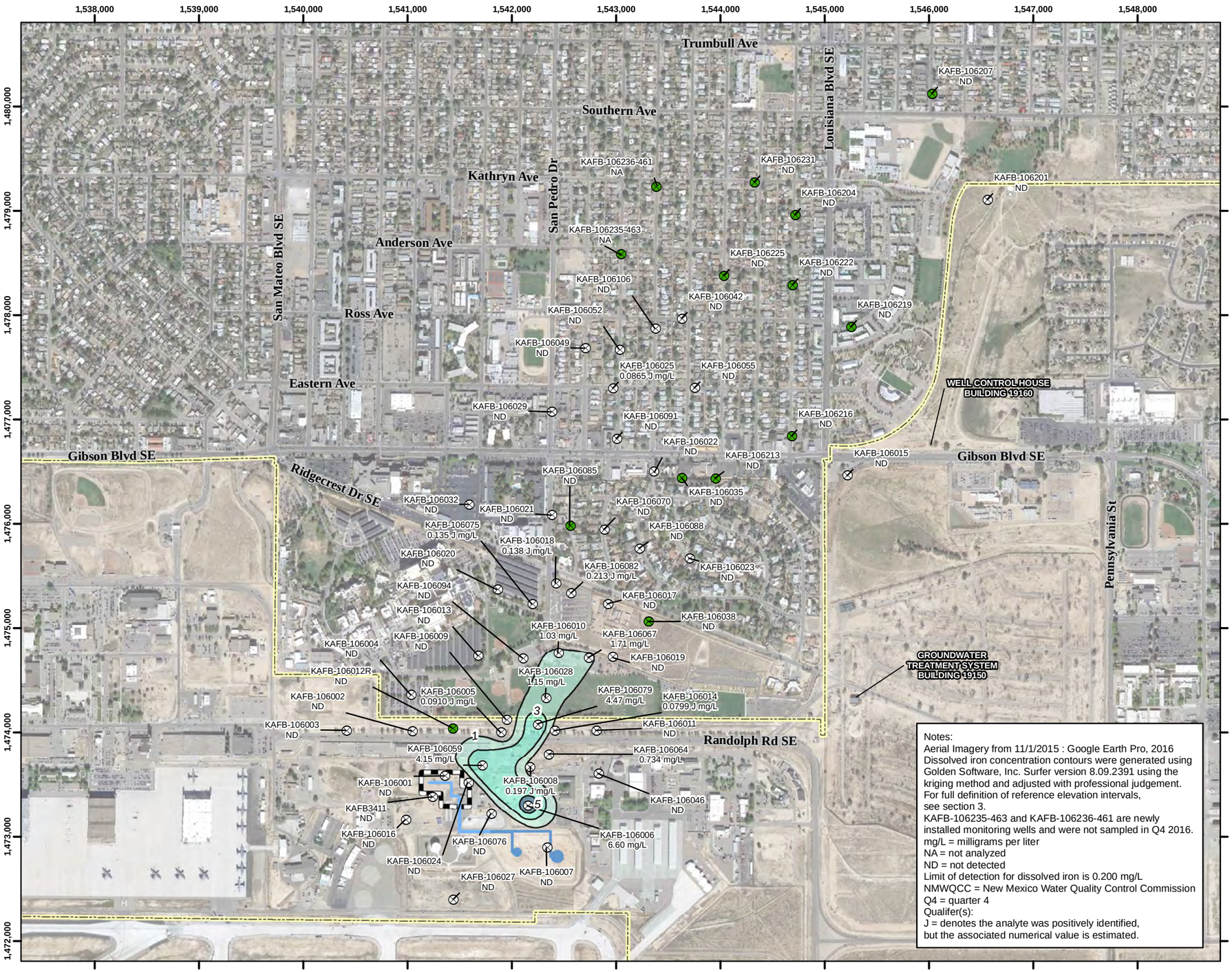
FIGURE 3-16

BROMIDE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-16 Interval 4857 Bromide Q4.mxd 2/14/2017 EA eomalia



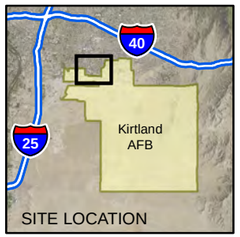
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Dissolved iron concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
mg/L = milligrams per liter
NA = not analyzed
ND = not detected
Limit of detection for dissolved iron is 0.200 mg/L
NMWQCC = New Mexico Water Quality Control Commission
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation 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



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

DISSOLVED IRON CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

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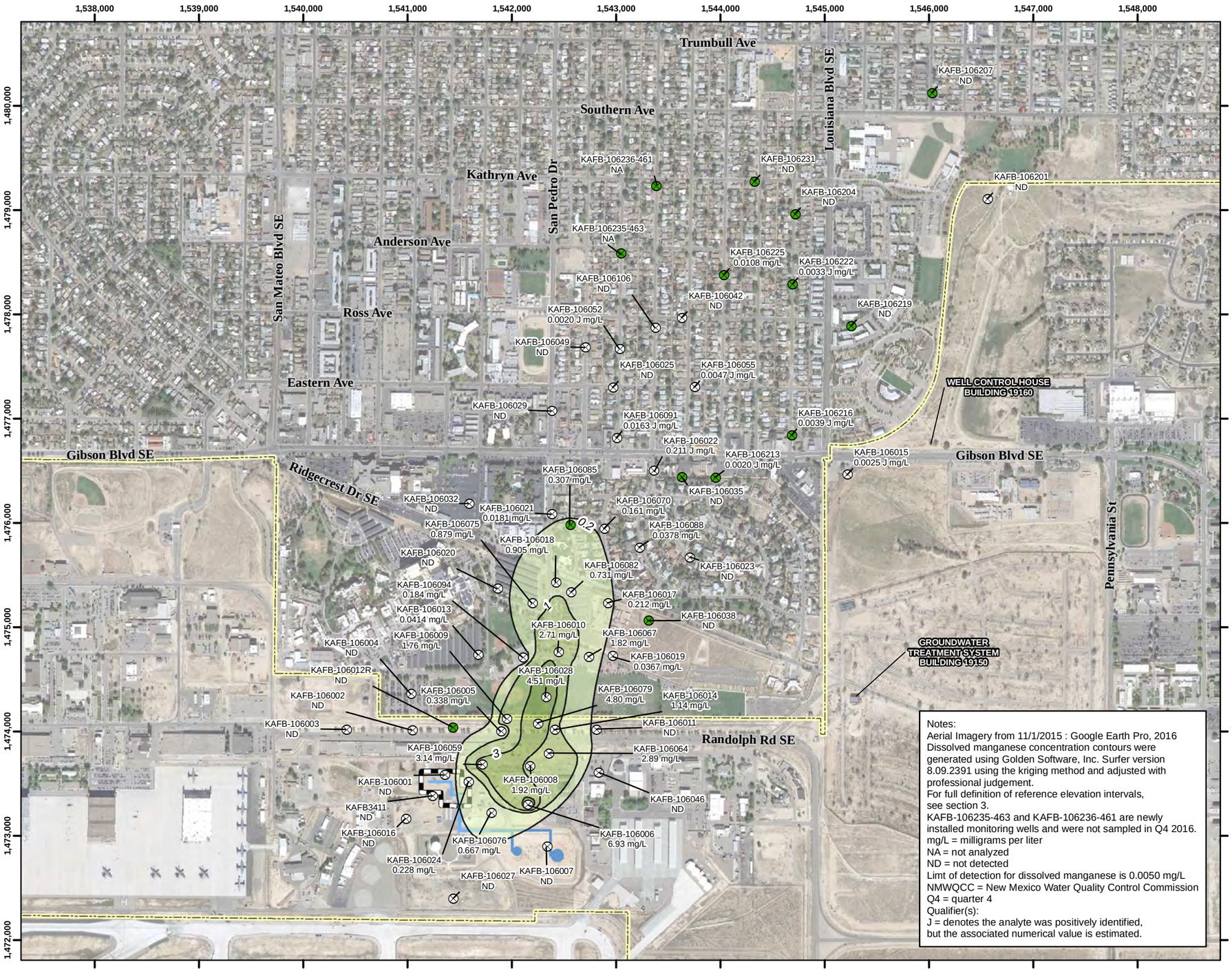


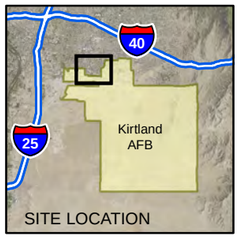
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Dissolved manganese concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
mg/L = milligrams per liter
NA = not analyzed
ND = not detected
Limt of detection for dissolved manganese is 0.0050 mg/L
NMWQCC = New Mexico Water Quality Control Commission
Q4 = quarter 4
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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Dissolved Manganese Concentration Isocontour (mg/L)
- 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

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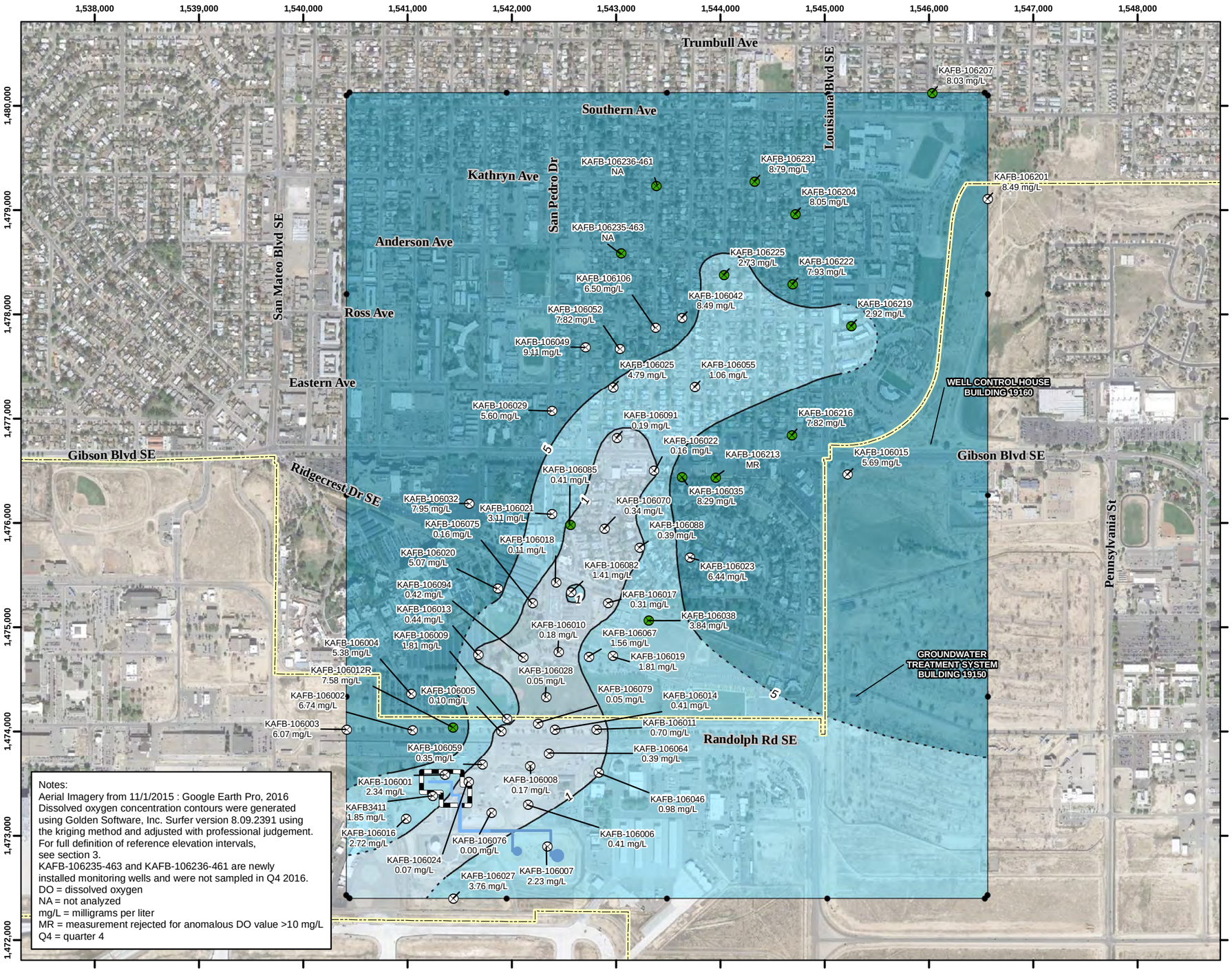
FIGURE 3-18

DISSOLVED MANGANESE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-18 Interval 4857 Dissolved Manganese Q4.mxd 2/14/2017 EA eomalia



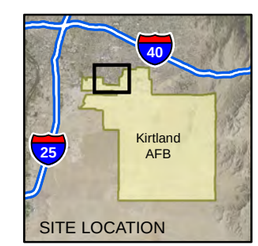
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Dissolved oxygen concentration contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
DO = dissolved oxygen
NA = not analyzed
mg/L = milligrams per liter
MR = measurement rejected for anomalous DO value >10 mg/L
Q4 = quarter 4

Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- DO Concentration Isocontour (mg/L)
- Inferred Isocontour (mg/L)
- Model Extent
- Installation 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

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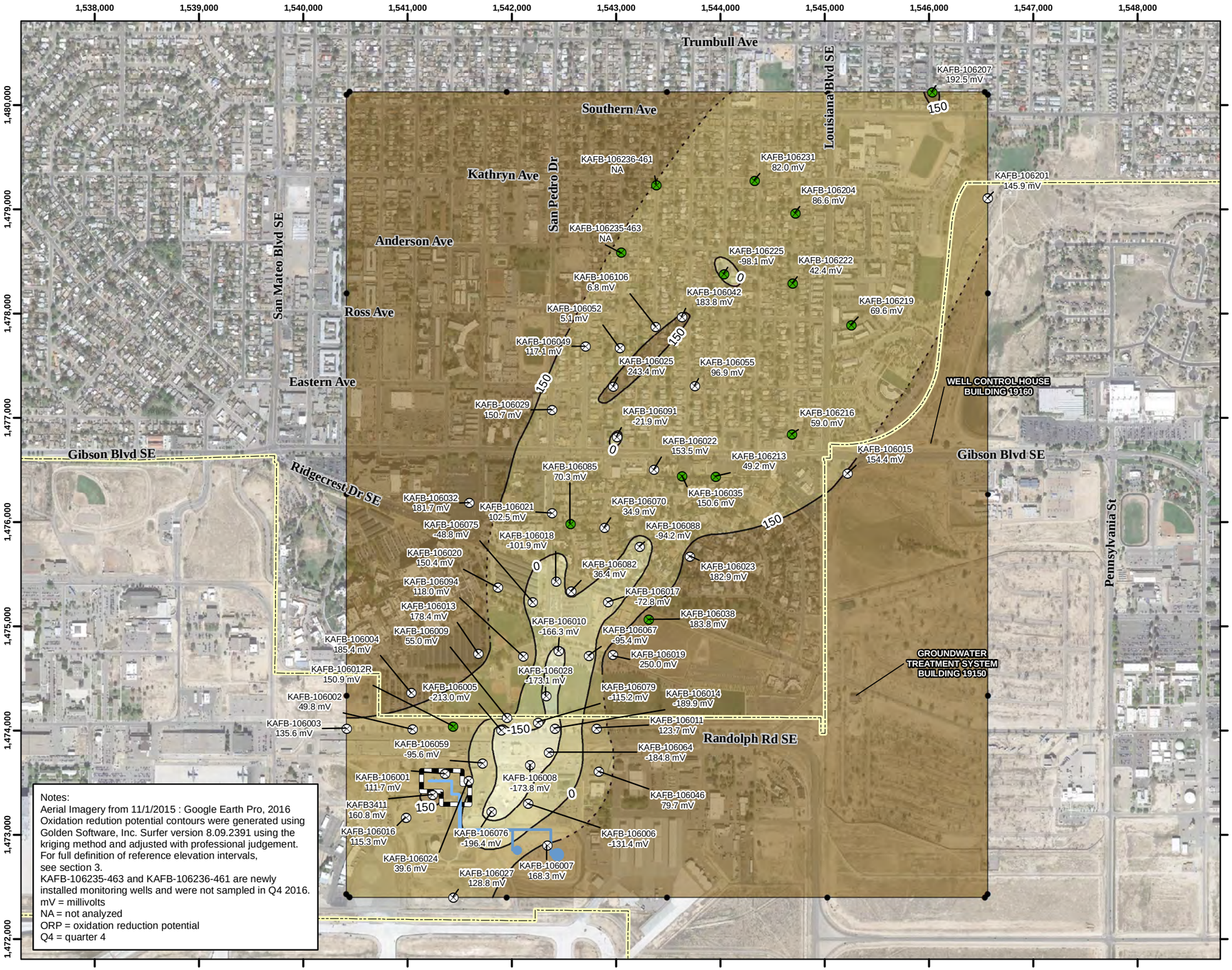
FIGURE 3-19

DISSOLVED OXYGEN CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-19 Interval 4857 DO Q4.mxd 2/14/2017 EA eomalia



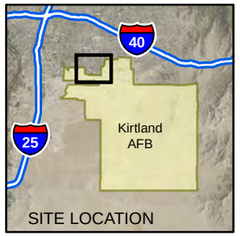
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Oxidation redution potential contours were generated using Golden Software, Inc. Surfer version 8.09.2391 using the kriging method and adjusted with professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
mV = millivolts
NA = not analyzed
ORP = oxidation reduction potential
Q4 = quarter 4

Legend

- Reference Elevation Interval 4857 Monitoring Well (Screen Not Submerged)
- Reference Elevation Interval 4857 Monitoring Well (Screen Submerged)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- ORP Isocontour (mV)
- Inferred Isocontour (mV)
- Model Extent
- Installation 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 3-20

OXIDATION REDUCTION POTENTIAL IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

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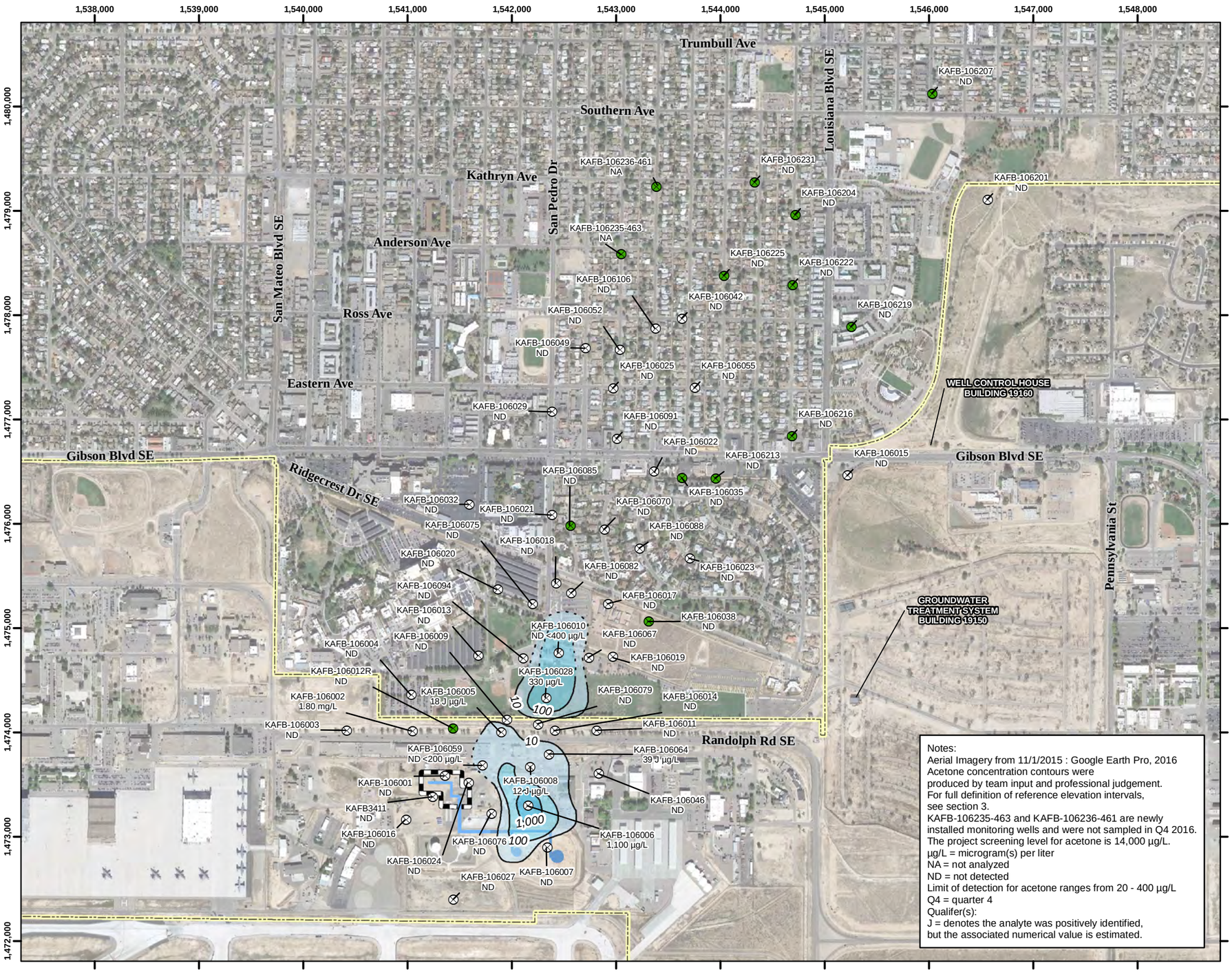


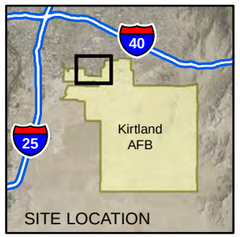
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
Acetone concentration contours were produced by team input and professional judgement.
For full definition of reference elevation intervals, see section 3.
KAFB-106235-463 and KAFB-106236-461 are newly installed monitoring wells and were not sampled in Q4 2016.
The project screening level for acetone is 14,000 µg/L.
µg/L = microgram(s) per liter
NA = not analyzed
ND = not detected
Limit of detection for acetone ranges from 20 - 400 µg/L
Q4 = quarter 4
Qualifer(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)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Acetone Concentration Isocontour (µg/L)
- Inferred Acetone Concentration Isocontour (µg/L)
- Source Area

Acetone Concentration Range

- 10 - 100 µg/L
- 100 - 1,000 µg/L
- 1,000 - 1,500 µg/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 3-21

ACETONE CONCENTRATIONS IN GROUNDWATER REFERENCE ELEVATION INTERVAL 4857, Q4 2016

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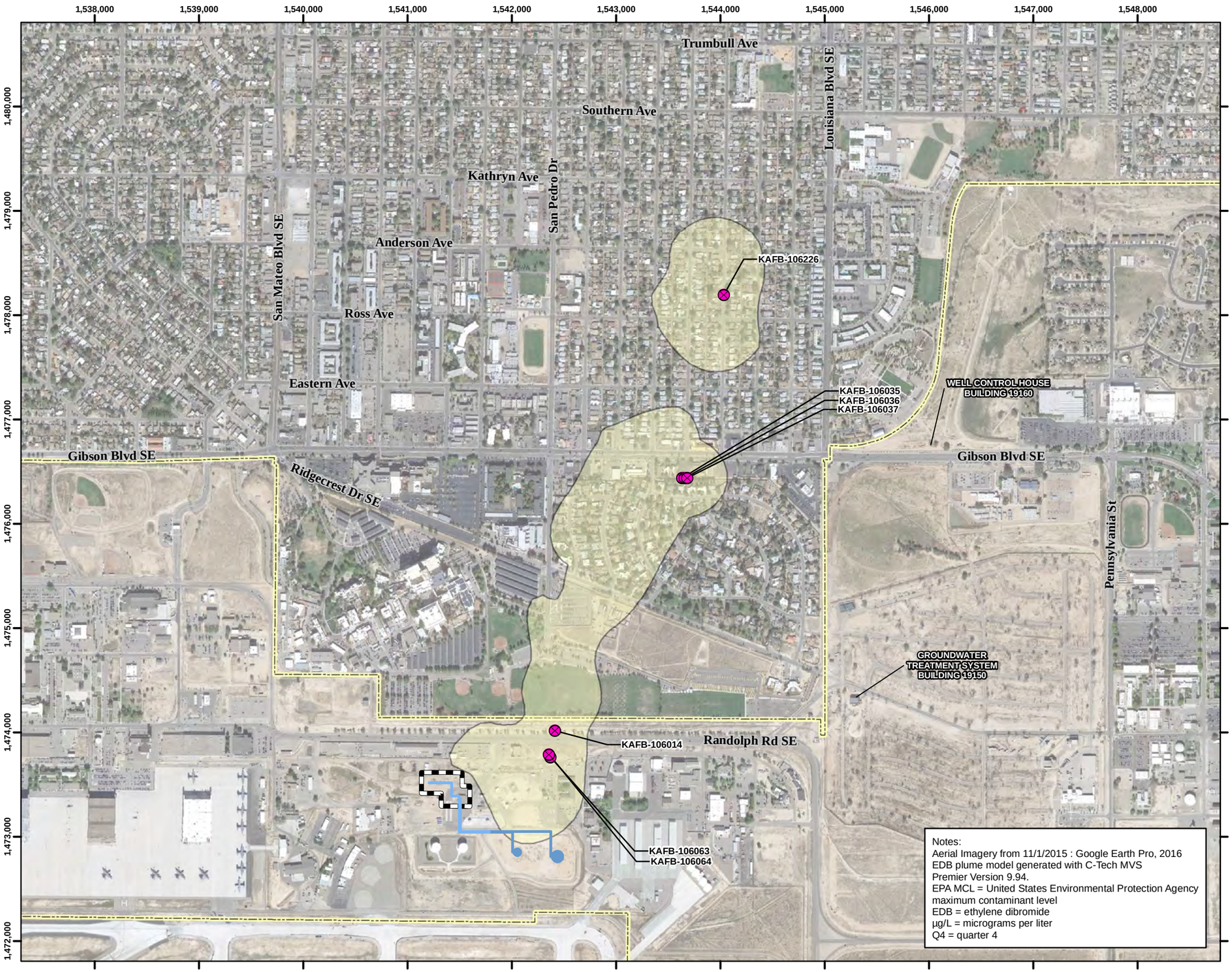
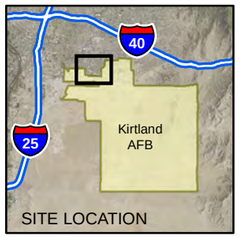


Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
EPA MCL = United States Environmental Protection Agency maximum contaminant level
EDB = ethylene dibromide
µg/L = micrograms per liter
Q4 = quarter 4

Legend

- Groundwater Monitoring Well Used in Vertical Profile Study
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Source Area
- EDB Plume, Q4 2016 >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

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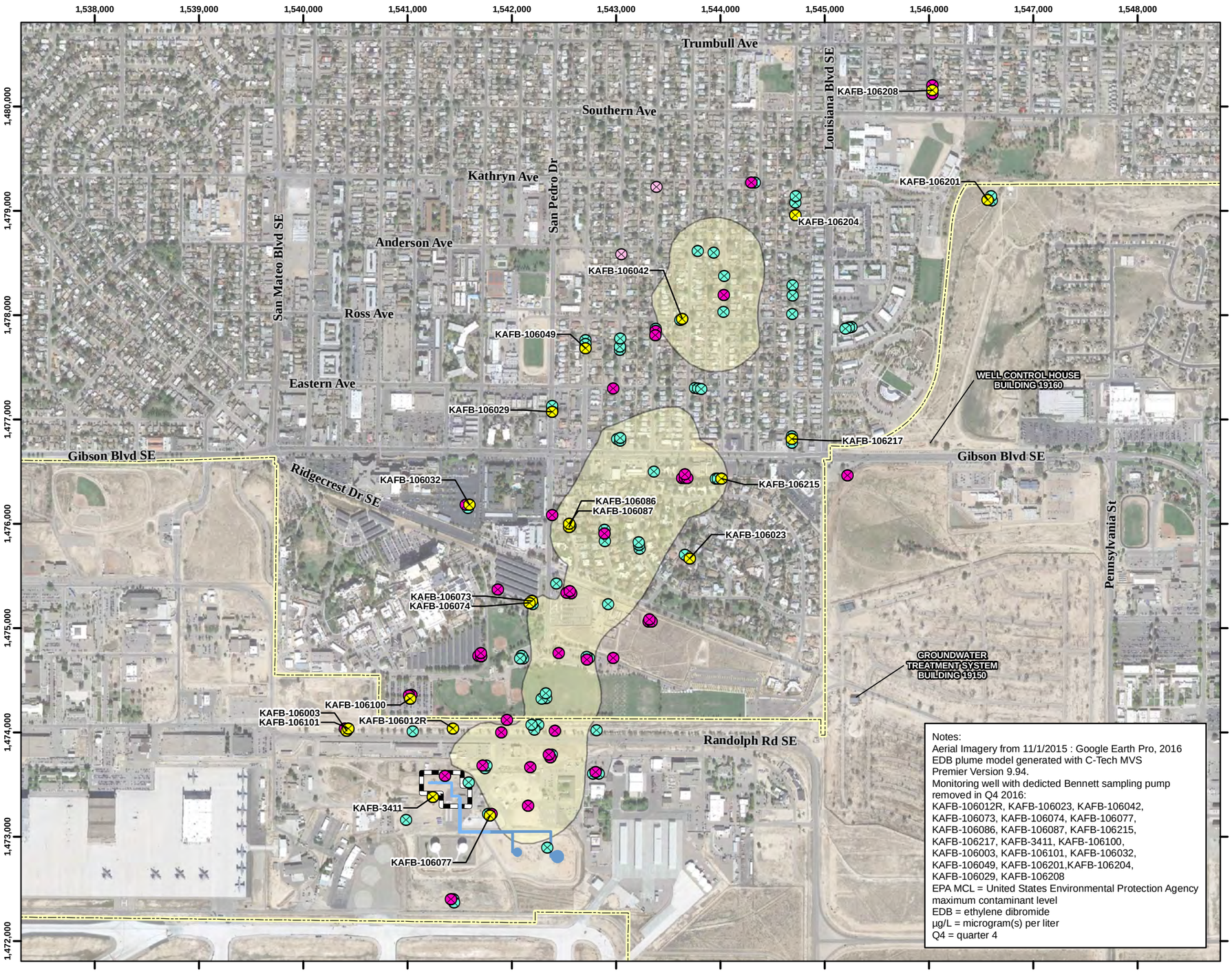
FIGURE 3-22

GROUNDWATER MONITORING WELLS EQUIPPED WITH PASSIVE SAMPLERS, Q4 2016

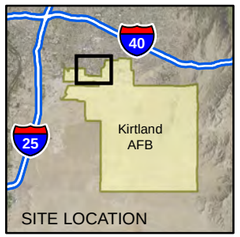
P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 3\3-22 Vertical Profile Wells Q4.mxd 2/14/2017 EA eomalia



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Monitoring well with dedicted Bennett sampling pump removed in Q4 2016:
KAFB-106012R, KAFB-106023, KAFB-106042, KAFB-106073, KAFB-106074, KAFB-106077, KAFB-106086, KAFB-106087, KAFB-106215, KAFB-106217, KAFB-3411, KAFB-106100, KAFB-106003, KAFB-106101, KAFB-106032, KAFB-106049, KAFB-106201,KAFB-106204, KAFB-106029, KAFB-106208
EPA MCL = United States Environmental Protection Agency maximum contaminant level
EDB = ethylene dibromide
µg/L = microgram(s) per liter
Q4 = quarter 4

Legend

- Monitoring Well with no Dedicated Bennett Pump System Q4 2016 (20 Wells)
- Monitoring Well with no Dedicated Bennett Pump System Pre-Q4 2016 (43 Wells)
- Newly Installed Monitoring Wells with no Dedicated Bennett Pump System (6 Wells)
- Monitoring Well with Dedicated Bennett Pump System (69 Wells)
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- EDB Plume, Q4 2016 >0.05 µg/L (EPA MCL)
- 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 3-23

GROUNDWATER MONITORING WELLS WITH DEDICATED BENNETT SAMPLING PUMPS REMOVED AS OF Q4 2016

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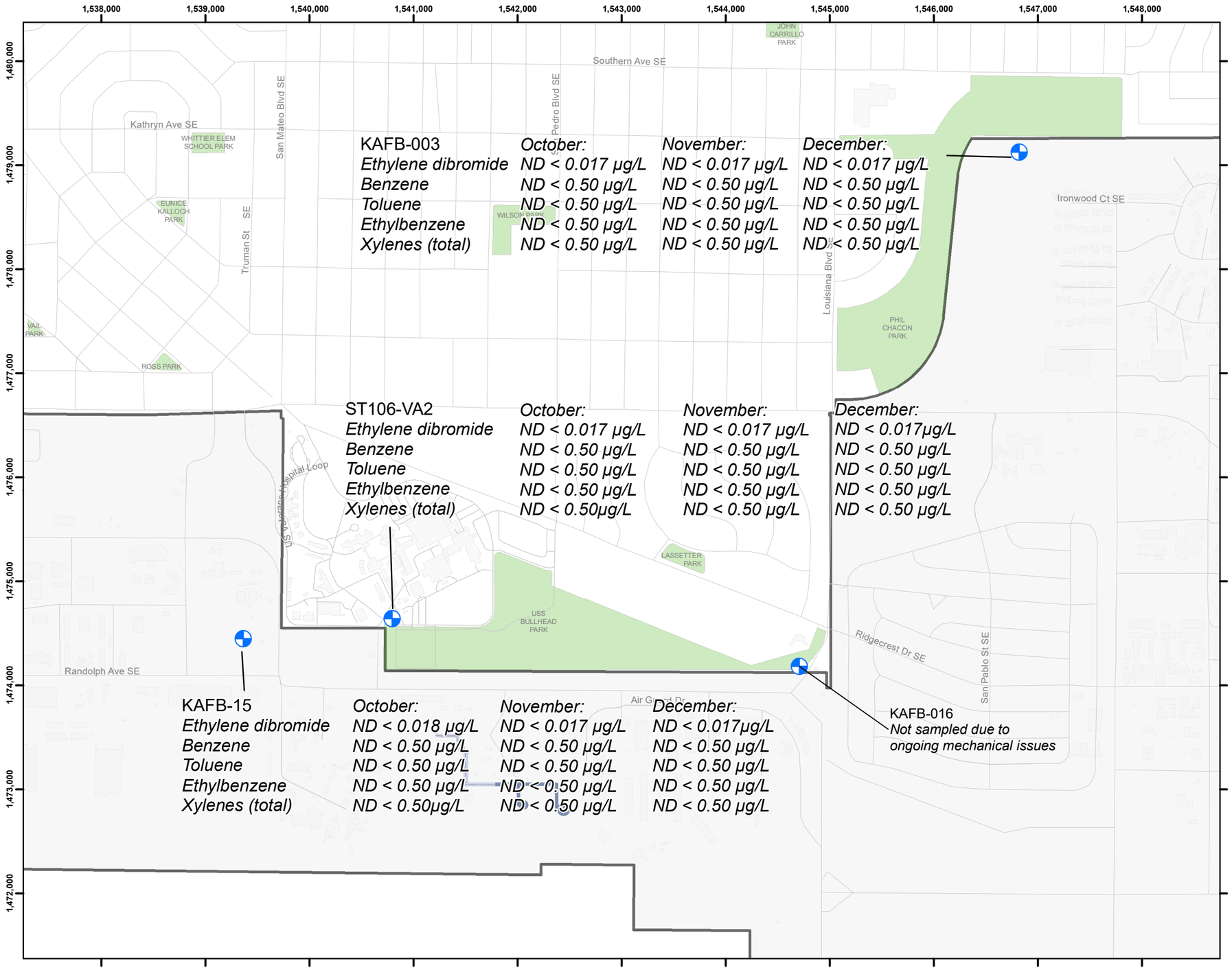
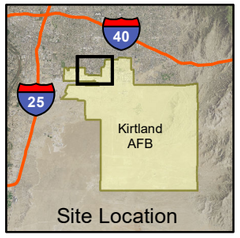


Legend

- Kirtland Air Force Base Installation Area
- City of Albuquerque Parks
- Roads
- Former Buried Fuel Transfer Lines
- Former Above Ground Fuel Transfer Lines
- Former Above Ground Storage
- Drinking Water Supply Well

Acronyms:
ND: nondetect
Q:Quarter
µg/L: micrograms per liter



Imagery Source: National Agricultural Imagery Program June 2014

Revision Date: 2/1/2017

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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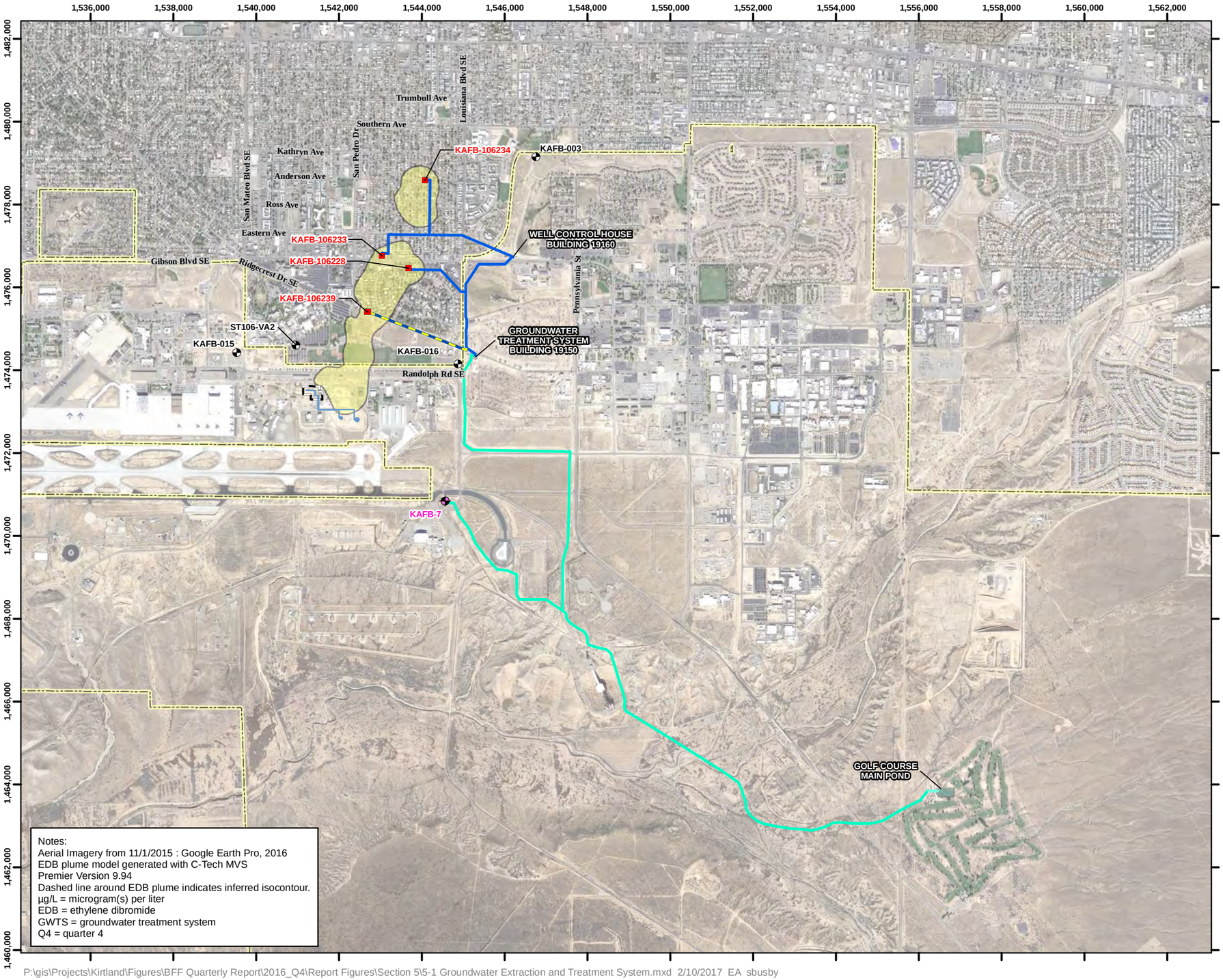
FIGURE 4-1

EDB AND BTEX RESULTS IN DRINKING WATER SUPPLY WELLS, Q4 2016

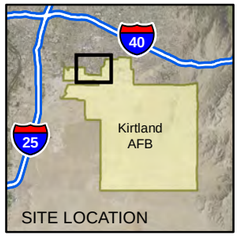
Document Path: N:\Kirtland\GIS\GIS_Projects\Q4_2016\04-1_EDB_BTEX_DrinkingWaterSupply_Q4_2016.v1.mxd



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS
Premier Version 9.94
Dashed line around EDB plume indicates inferred isocontour.
µg/L = microgram(s) per liter
EDB = ethylene dibromide
GWTS = groundwater treatment system
Q4 = quarter 4

Legend

- Extraction Well
- Proposed Extraction Well
- Injection Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Fuel Transfer Line
- GWTS Expansion Influent Piping
- GWTS Influent Piping
- GWTS Effluent Piping
- Installation Boundary
- EDB Plume Q4 2016 (> 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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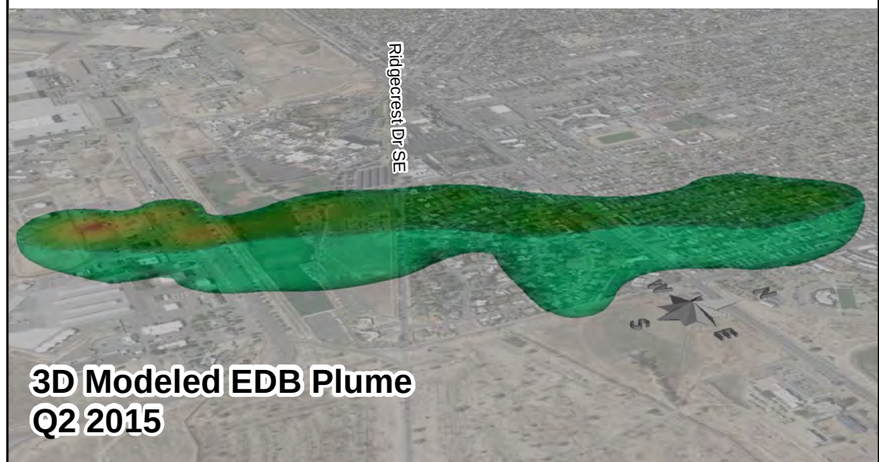
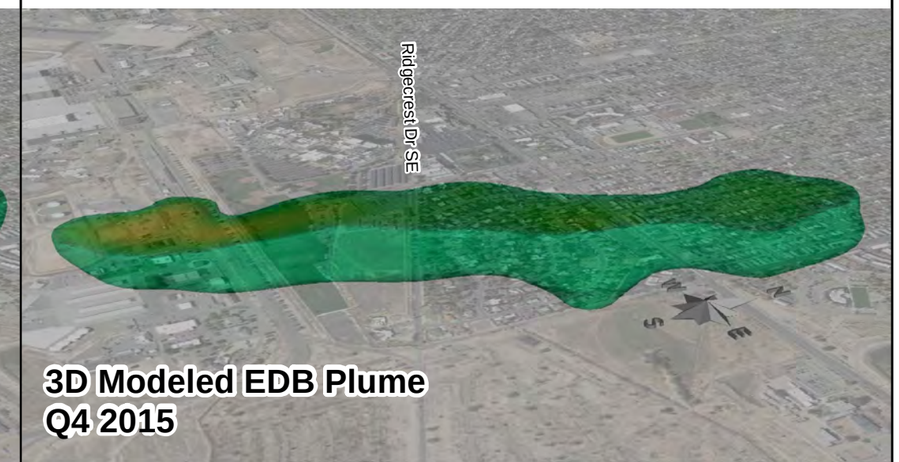
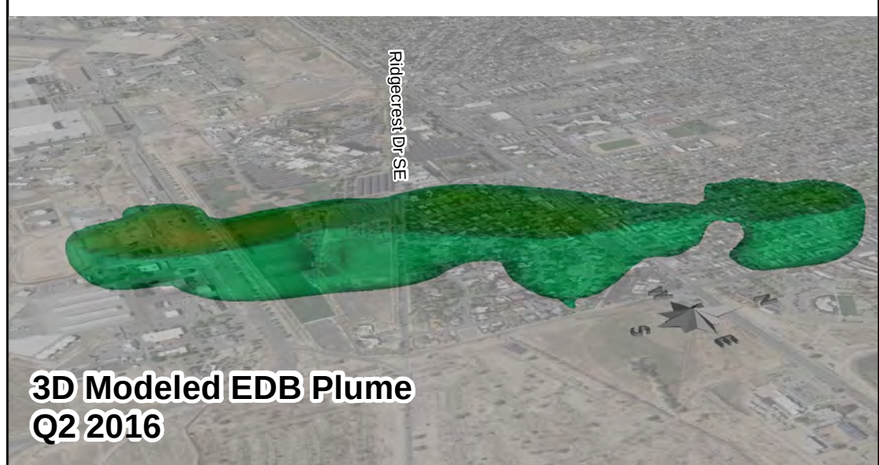
FIGURE 5-1

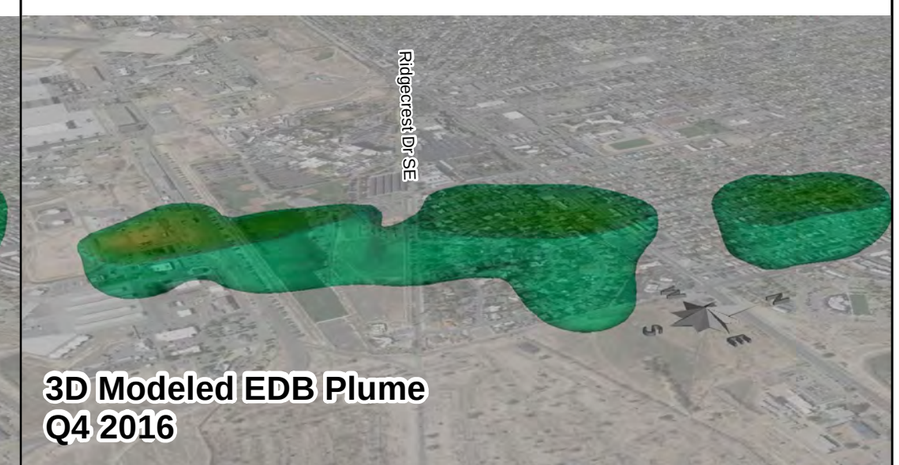
GROUNDWATER EXTRACTION
AND TREATMENT SYSTEM LOCATION

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-1 Groundwater Extraction and Treatment System.mxd 2/10/2017 EA sbusby









Legend

0.05 µg/L EDB Iso-shell

Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
3D models exaggerated by a factor of 10.
EDB = ethylene dibromide
µg/L = microgram(s) per liter
Q2 = quarter 2
Q4 = quarter 4

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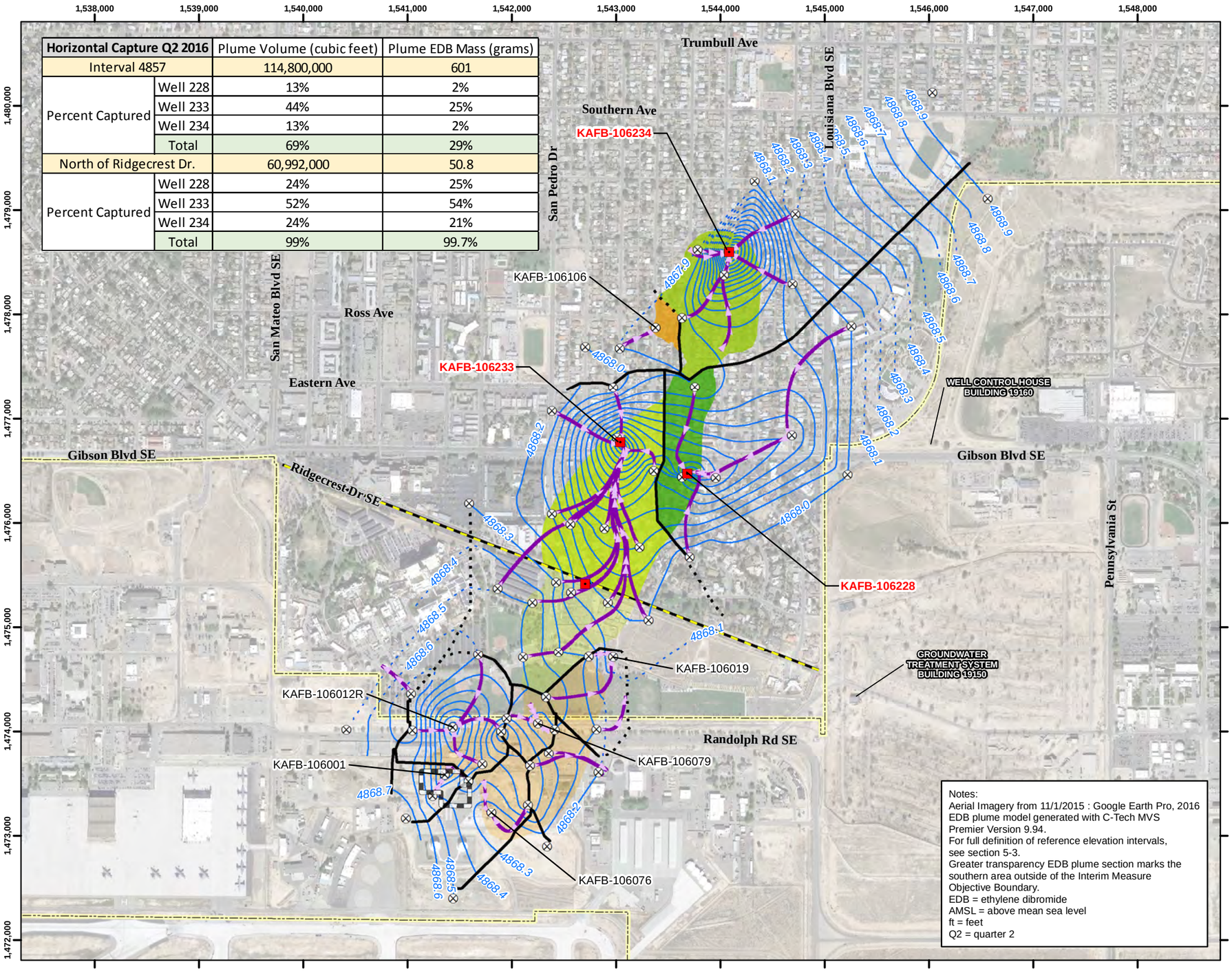
FIGURE 5-2

COMPARISON OF
TARGET CAPTURE ZONES
2015 - 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-2 Comparison of Target Capture Zones 2015&2016.mxd 2/7/2017 EA sbusby

Horizontal Capture Q2 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Interval 4857		114,800,000	601
Percent Captured	Well 228	13%	2%
	Well 233	44%	25%
	Well 234	13%	2%
	Total	69%	29%
North of Ridgecrest Dr.		60,992,000	50.8
Percent Captured	Well 228	24%	25%
	Well 233	52%	54%
	Well 234	24%	21%
	Total	99%	99.7%



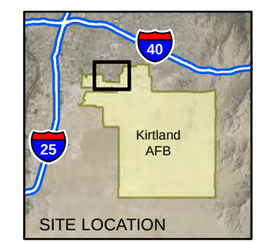
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 5-3.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
EDB = ethylene dibromide
AMSL = above mean sea level
ft = feet
Q2 = quarter 2

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- Particle Flow Line (Direction of Flow)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Installation Boundary
- Interim Measure Objective Boundary

Plume Area Horizontal Capture Analysis

- Captured by Extraction Well KAFB-106228
- Captured by Extraction Well KAFB-106234
- Captured by Extraction Well KAFB-106233
- Plume Not Captured
- 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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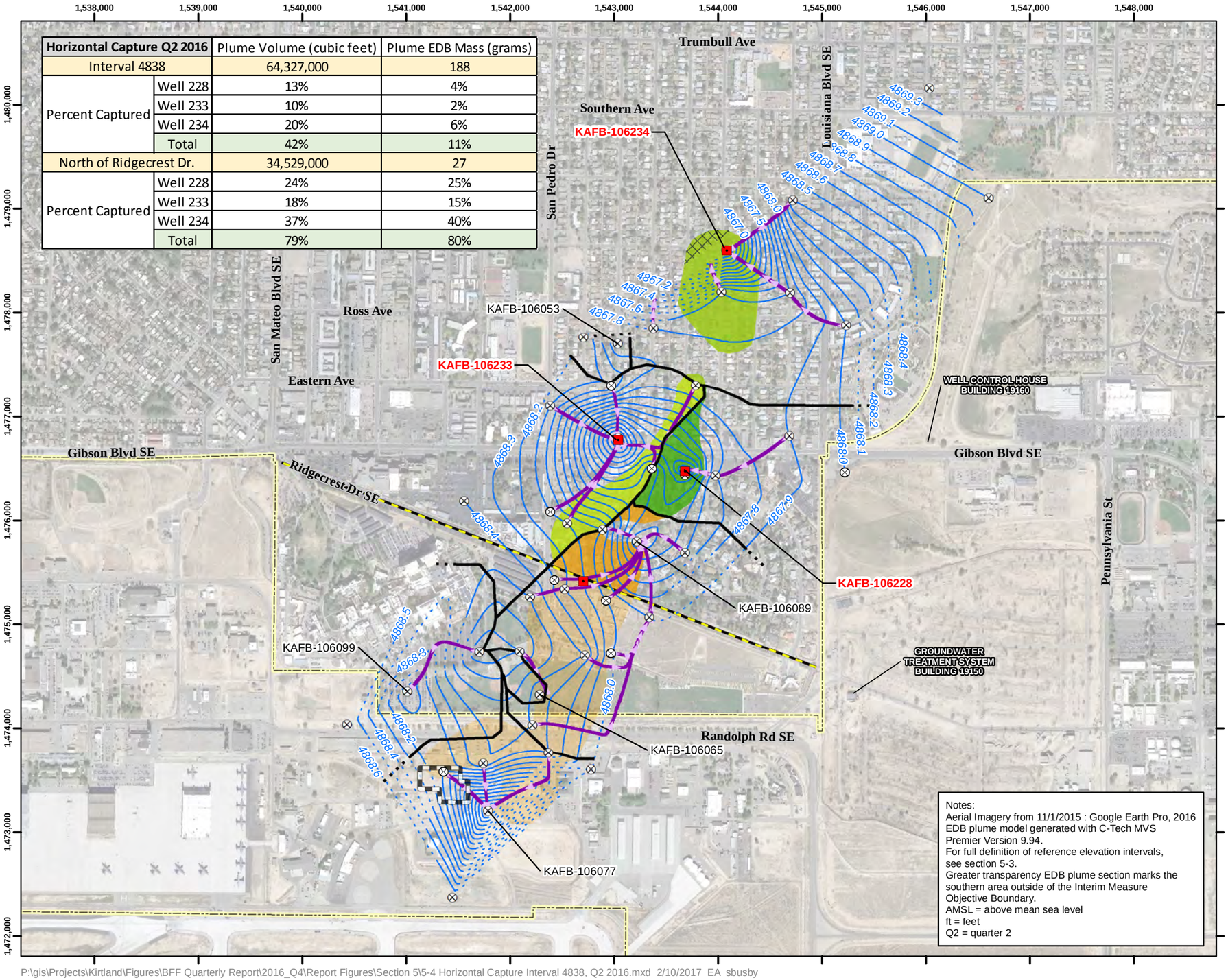
FIGURE 5-3

HORIZONTAL CAPTURE IN REFERENCE ELEVATION INTERVAL 4857 Q2 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-3 Horizontal Capture Interval 4857, Q2 2016.mxd 2/10/2017 EA sbusby

Horizontal Capture Q2 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Interval 4838		64,327,000	188
Percent Captured	Well 228	13%	4%
	Well 233	10%	2%
	Well 234	20%	6%
	Total	42%	11%
North of Ridgecrest Dr.		34,529,000	27
Percent Captured	Well 228	24%	25%
	Well 233	18%	15%
	Well 234	37%	40%
	Total	79%	80%



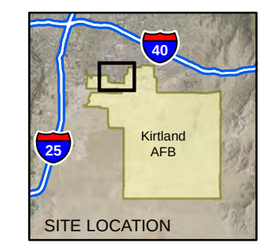
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 5-3.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
AMSL = above mean sea level
ft = feet
Q2 = quarter 2

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- Particle Flow Line (Direction of Flow)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Installation Boundary
- Interim Measure Objective Boundary

Plume Area Horizontal Capture Analysis

- Captured by Extraction Well KAFB-106228
- Captured by Extraction Well KAFB-106234
- Inferred Capture by Extraction Well KAFB-106234
- Captured by Extraction Well KAFB-106233
- Plume Not Captured
- 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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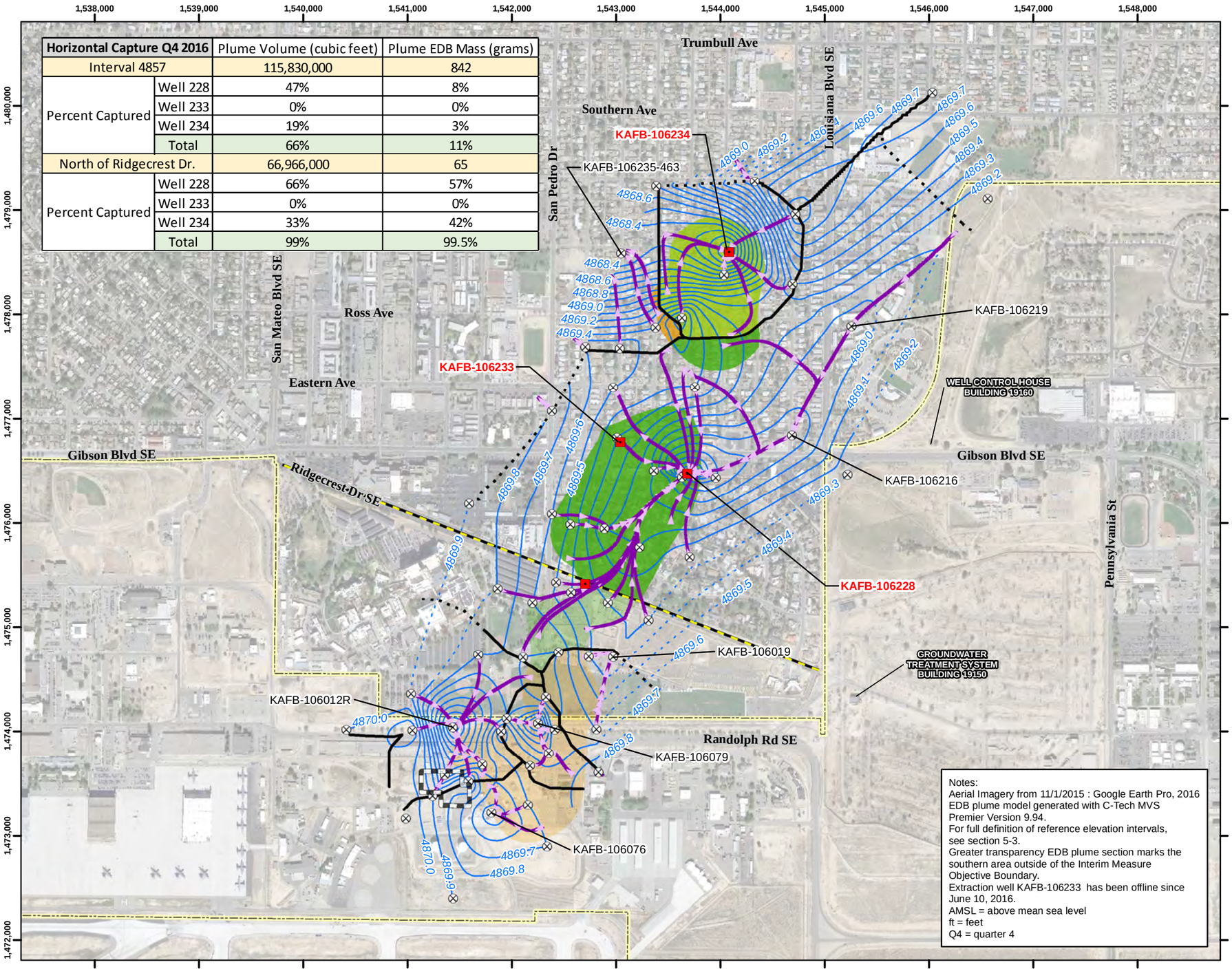
FIGURE 5-4

HORIZONTAL CAPTURE IN REFERENCE ELEVATION INTERVAL 4838 Q2 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-4 Horizontal Capture Interval 4838, Q2 2016.mxd 2/10/2017 EA sbusby

Horizontal Capture Q4 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Interval 4857		115,830,000	842
Percent Captured	Well 228	47%	8%
	Well 233	0%	0%
	Well 234	19%	3%
	Total	66%	11%
North of Ridgecrest Dr.		66,966,000	65
Percent Captured	Well 228	66%	57%
	Well 233	0%	0%
	Well 234	33%	42%
	Total	99%	99.5%



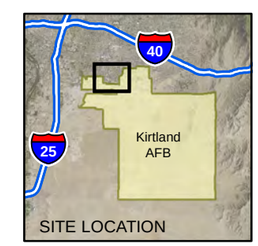
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 5-3.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Extraction well KAFB-106233 has been offline since June 10, 2016.
AMSL = above mean sea level
ft = feet
Q4 = quarter 4

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- Particle Flow Line (Direction of Flow)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Installation Boundary
- Interim Measure Objective Boundary

Plume Area Horizontal Capture Analysis

- Captured by Extraction Well KAFB-106228
- Captured by Extraction Well KAFB-106228
- Plume Not Captured
- 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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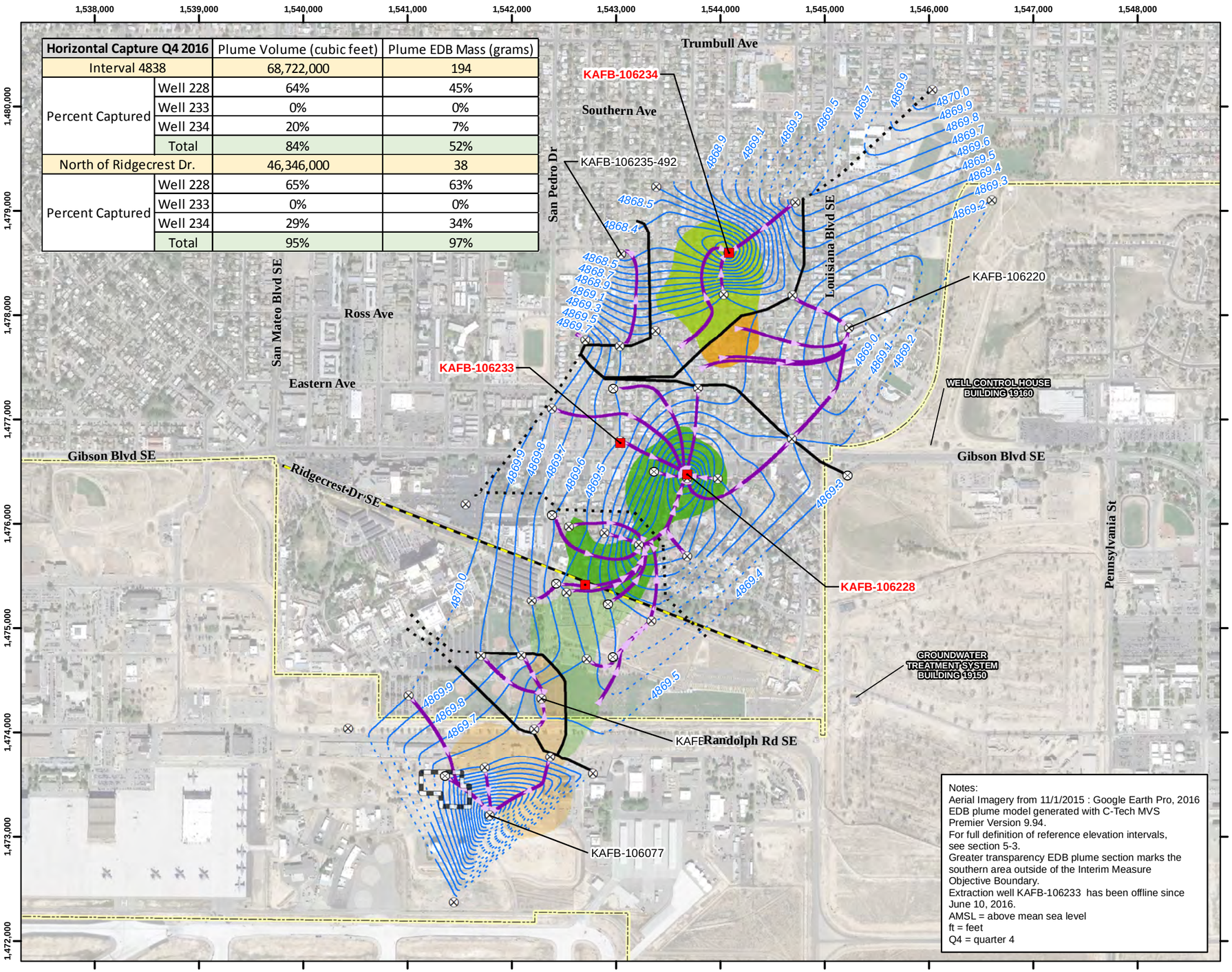
FIGURE 5-5

HORIZONTAL CAPTURE IN REFERENCE ELEVATION INTERVAL 4857 Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-5 Horizontal Capture Interval 4857, Q4 2016.mxd 2/10/2017 EA sbusby

Horizontal Capture Q4 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Interval 4838		68,722,000	194
Percent Captured	Well 228	64%	45%
	Well 233	0%	0%
	Well 234	20%	7%
	Total	84%	52%
North of Ridgecrest Dr.		46,346,000	38
Percent Captured	Well 228	65%	63%
	Well 233	0%	0%
	Well 234	29%	34%
	Total	95%	97%



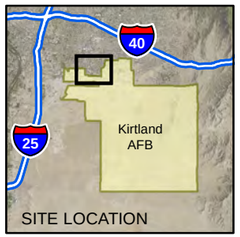
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 5-3.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Extraction well KAFB-106233 has been offline since June 10, 2016.
AMSL = above mean sea level
ft = feet
Q4 = quarter 4

Legend

- Extraction Well
- Groundwater Monitoring Well
- Groundwater Level Contour (ft AMSL)
- Inferred Groundwater Level Contour (ft AMSL)
- Particle Flow Line (Direction of Flow)
- Hydraulic Divide
- Inferred Hydraulic Divide
- Installation Boundary
- Interim Measure Objective Boundary

Plume Area Horizontal Capture Analysis

- Captured by Extraction Well KAFB-106228
- Captured by Extraction Well KAFB-106234
- Plume Not Captured
- 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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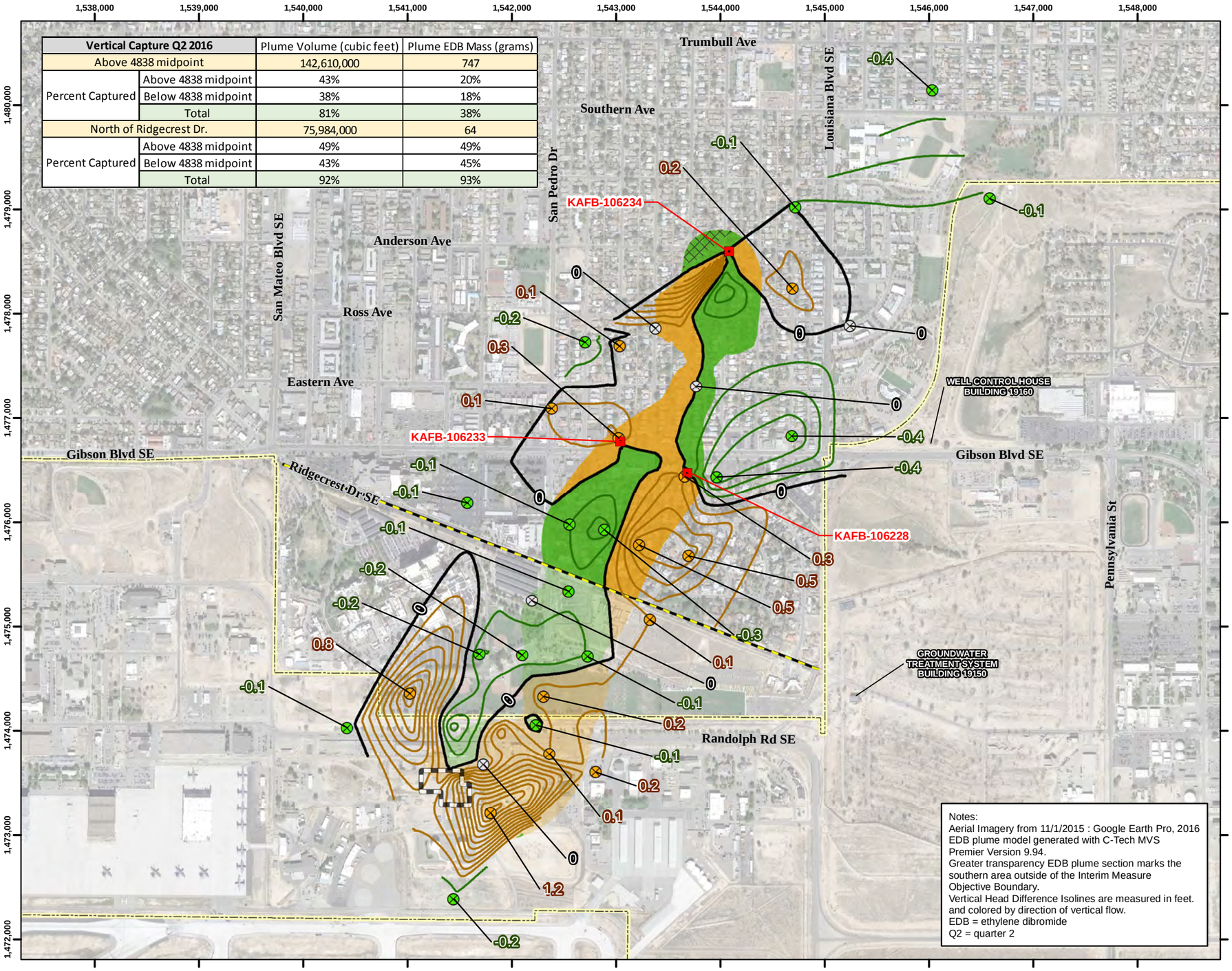
FIGURE 5-6

HORIZONTAL CAPTURE IN REFERENCE ELEVATION INTERVAL 4838 Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-6 Horizontal Capture Interval 4838, Q4 2016.mxd 2/10/2017 EA sbusby

Vertical Capture Q2 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Above 4838 midpoint		142,610,000	747
Percent Captured	Above 4838 midpoint	43%	20%
	Below 4838 midpoint	38%	18%
	Total	81%	38%
North of Ridgecrest Dr.		75,984,000	64
Percent Captured	Above 4838 midpoint	49%	49%
	Below 4838 midpoint	43%	45%
	Total	92%	93%



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q2 = quarter 2

Legend

Extraction Well

Nested Monitoring Wells

Monitoring Well Defining Upward Vertical Flow

Monitoring Well Defining Downward Vertical Flow

Monitoring Well Defining No Vertical Flow

Installation Boundary

Interim Measure Objective Boundary

Vertical Head Difference Isolines (Ft)

Upward Vertical Flow

Downward Vertical Flow

No Flow

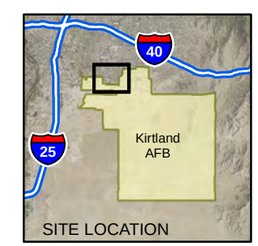
Plume Area Vertical Capture Anaylsis

Plume Captured

Inferred Capture

Plume Not Captured

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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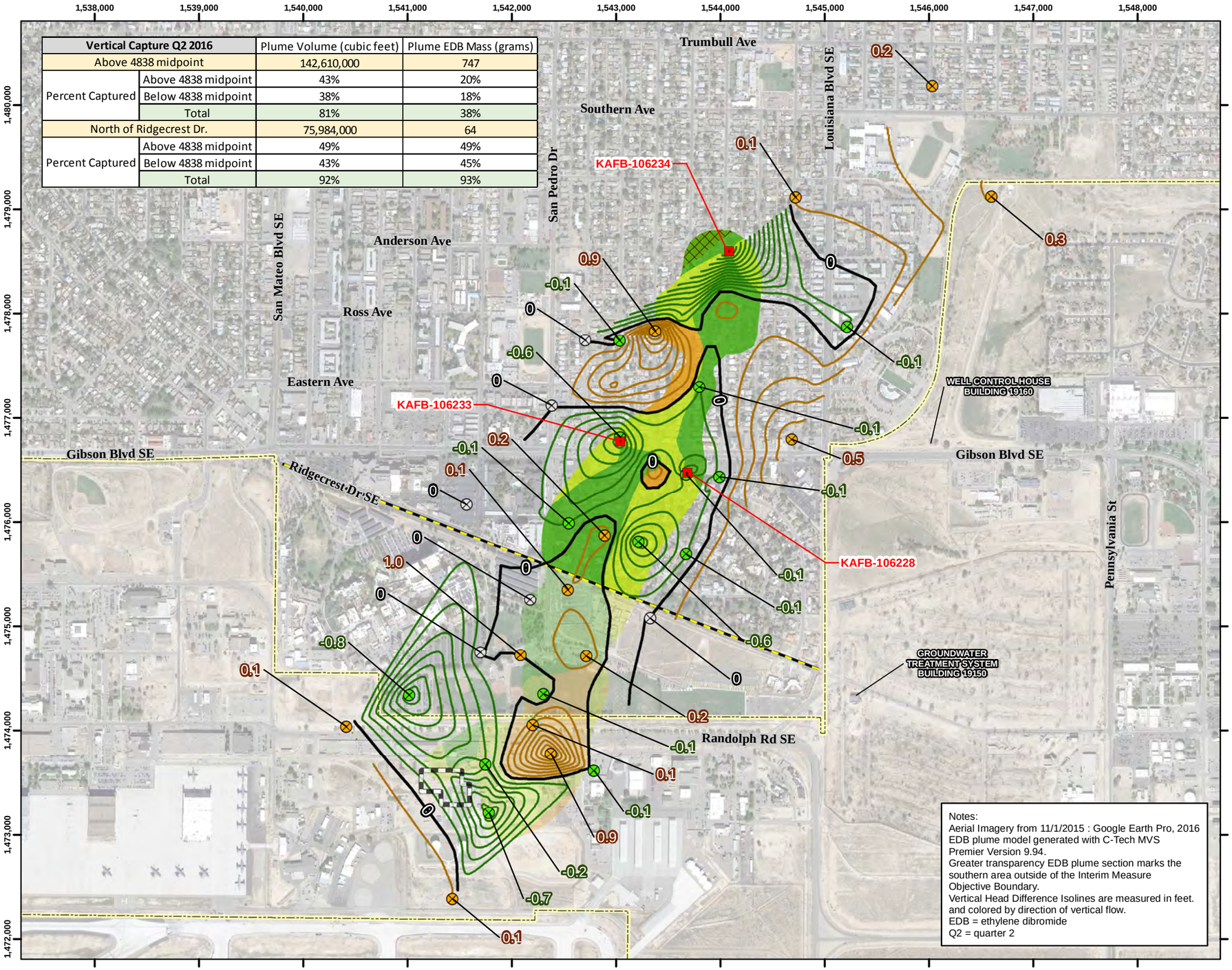
FIGURE 5-7

VERTICAL CAPTURE ABOVE REFERENCE ELEVATION INTERVAL 4838 MID POINT UPPER ANALYSIS, Q2 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-7 Vertical Capture Above 4838 Interval Mid Point Upper Analysis, Q2 2016.mxd 2/7/2017 EA sbusby

Vertical Capture Q2 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Above 4838 midpoint		142,610,000	747
Percent Captured	Above 4838 midpoint	43%	20%
	Below 4838 midpoint	38%	18%
	Total	81%	38%
North of Ridgecrest Dr.		75,984,000	64
Percent Captured	Above 4838 midpoint	49%	49%
	Below 4838 midpoint	43%	45%
	Total	92%	93%



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q2 = quarter 2

Legend

- Extraction Well

Nested Monitoring Wells

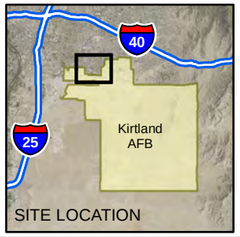
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

Total Plume Vertical Capture Analysis

- Upward Vertical Flow
- Downward Vertical Flow
- No Flow

Plume Area Vertical Capture Analysis

- Plume Captured Above Mid Point
- Inferred Capture
- Plume Captured Below Mid Point
- Plume Not Captured
- 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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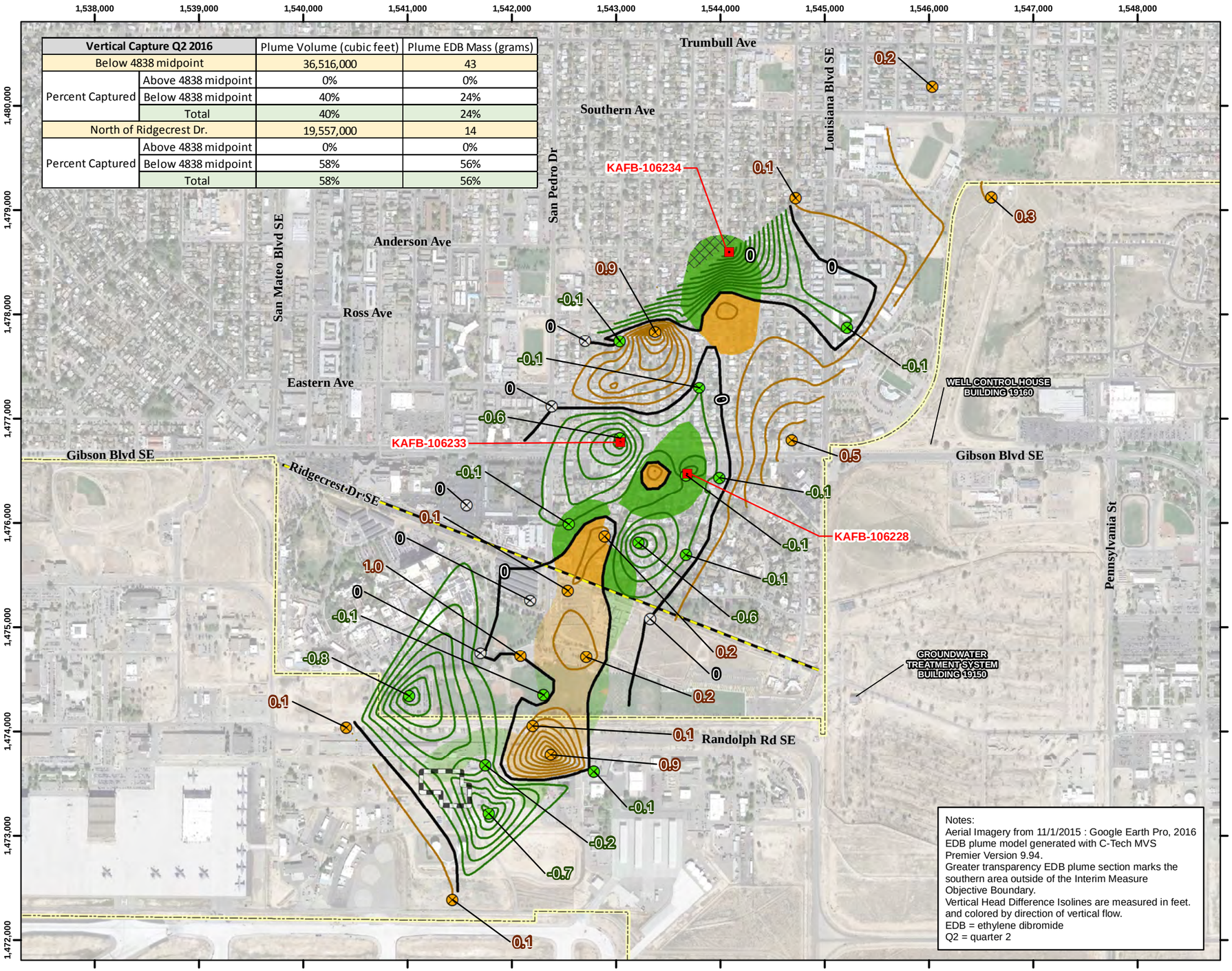
FIGURE 5-8

VERTICAL CAPTURE ABOVE REFERENCE ELEVATION INTERVAL 4838 MID POINT LOWER ANALYSIS, Q2 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-8 Vertical Capture Above 4838 Interval Mid Point Lower Analysis, Q2 2016.mxd 2/7/2017 EA sbusby



Vertical Capture Q2 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Below 4838 midpoint		36,516,000	43
Percent Captured	Above 4838 midpoint	0%	0%
	Below 4838 midpoint	40%	24%
	Total	40%	24%
North of Ridgecrest Dr.		19,557,000	14
Percent Captured	Above 4838 midpoint	0%	0%
	Below 4838 midpoint	58%	56%
	Total	58%	56%

Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q2 = quarter 2

Legend

Extraction Well

Nested Monitoring Wells

Monitoring Well Defining Upward Vertical Flow

Monitoring Well Defining Downward Vertical Flow

Monitoring Well Defining No Vertical Flow

Installation Boundary

Interim Measure Objective Boundary

Vertical Head Difference Isolines (Ft)

Upward Vertical Flow

Downward Vertical Flow

No Flow

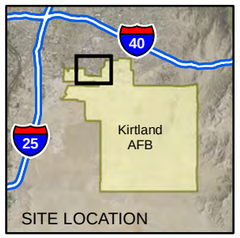
Plume Area Vertical Capture Analysis

Plume Captured

Inferred Capture

Plume Not Captured

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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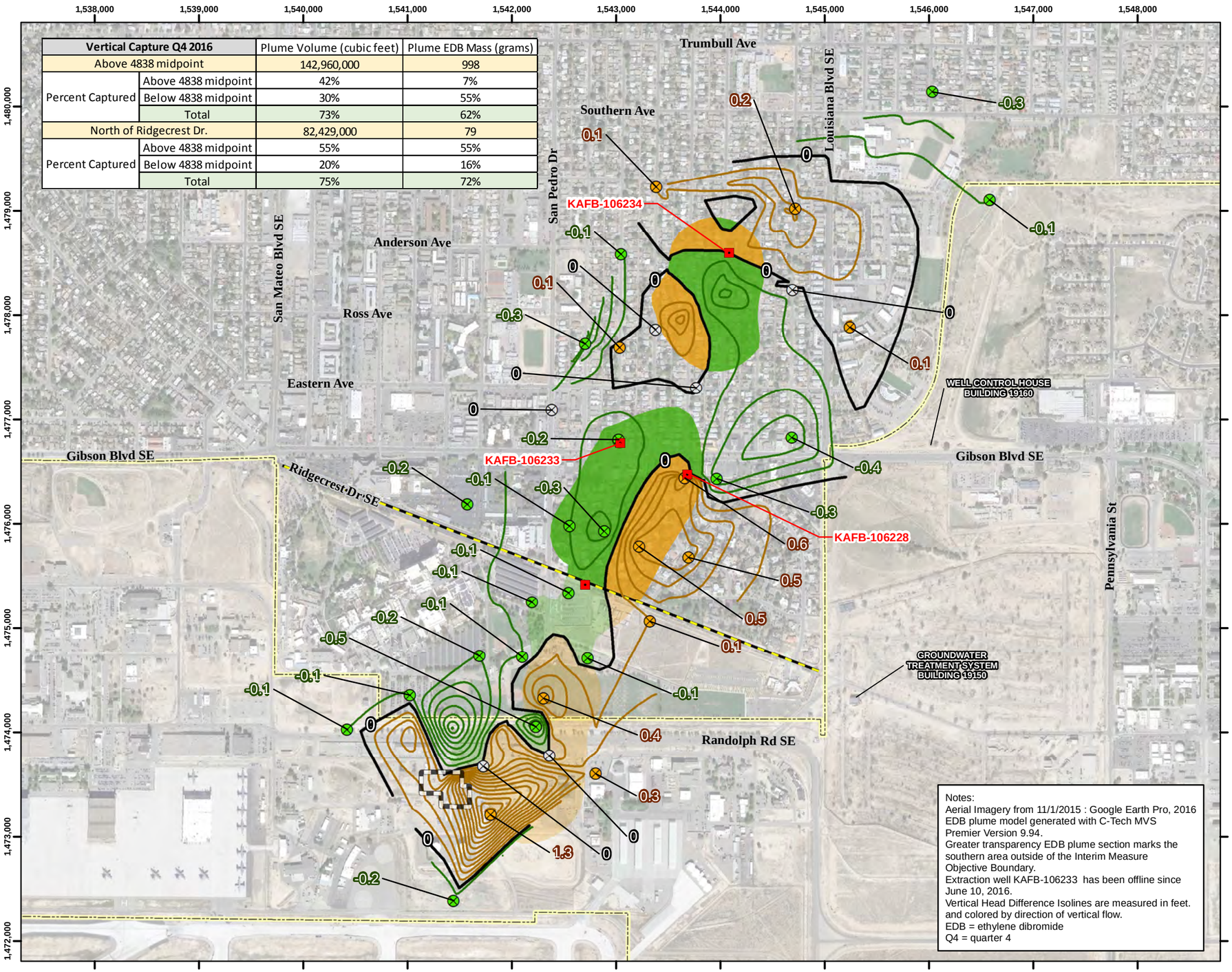
FIGURE 5-9

VERTICAL CAPTURE BELOW REFERENCE ELEVATION INTERVAL 4838 MID POINT Q2 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-9 Vertical Capture Below 4838 Interval Mid Point, Q2 2016.mxd 2/7/2017 EA sbusby

Vertical Capture Q4 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Above 4838 midpoint		142,960,000	998
Percent Captured	Above 4838 midpoint	42%	7%
	Below 4838 midpoint	30%	55%
	Total	73%	62%
North of Ridgecrest Dr.		82,429,000	79
Percent Captured	Above 4838 midpoint	55%	55%
	Below 4838 midpoint	20%	16%
	Total	75%	72%



Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Extraction well KAFB-106233 has been offline since June 10, 2016.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q4 = quarter 4

Legend

- Extraction Well

Nested Monitoring Wells

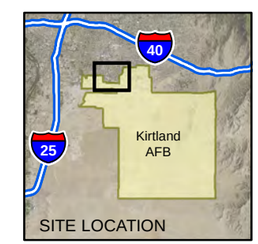
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

Vertical Head Difference Isolines (Ft)

- Upward Vertical Flow
- Downward Vertical Flow
- No Flow

Plume Area Vertical Capture Anaylsis

- Plume Captured
- Plume Not Captured
- 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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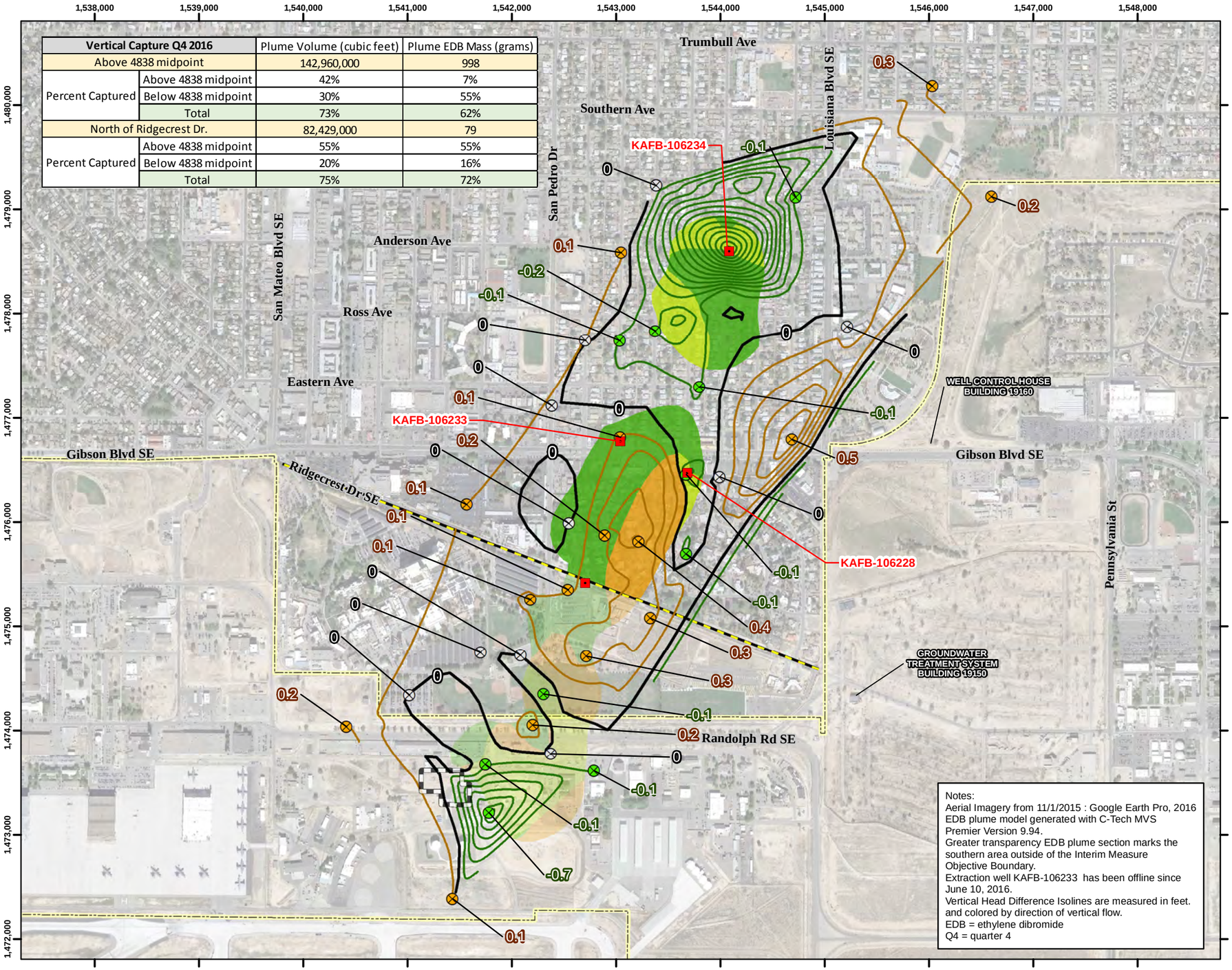
FIGURE 5-10

VERTICAL CAPTURE ABOVE REFERENCE ELEVATION INTERVAL 4838 MID POINT UPPER ANALYSIS, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-10 Vertical Capture Above 4838 Interval Mid Point Upper Analysis, Q4 2016.mxd 2/10/2017 EA sbusby



Vertical Capture Q4 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Above 4838 midpoint		142,960,000	998
Percent Captured	Above 4838 midpoint	42%	7%
	Below 4838 midpoint	30%	55%
	Total	73%	62%
North of Ridgecrest Dr.		82,429,000	79
Percent Captured	Above 4838 midpoint	55%	55%
	Below 4838 midpoint	20%	16%
	Total	75%	72%

Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Extraction well KAFB-106233 has been offline since June 10, 2016.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q4 = quarter 4

Legend

Extraction Well

Nested Monitoring Wells

Monitoring Well Defining Upward Vertical Flow

Monitoring Well Defining Downward Vertical Flow

Monitoring Well Defining No Vertical Flow

Installation Boundary

Interim Measure Objective Boundary

Vertical Head Difference Isolines (Ft)

Upward Vertical Flow

Downward Vertical Flow

No Flow

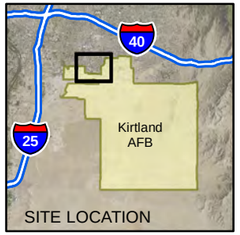
Plume Area Vertical Capture

Plume Captured Above Mid Point

Plume Captured Below Mid Point

Plume Not Captured

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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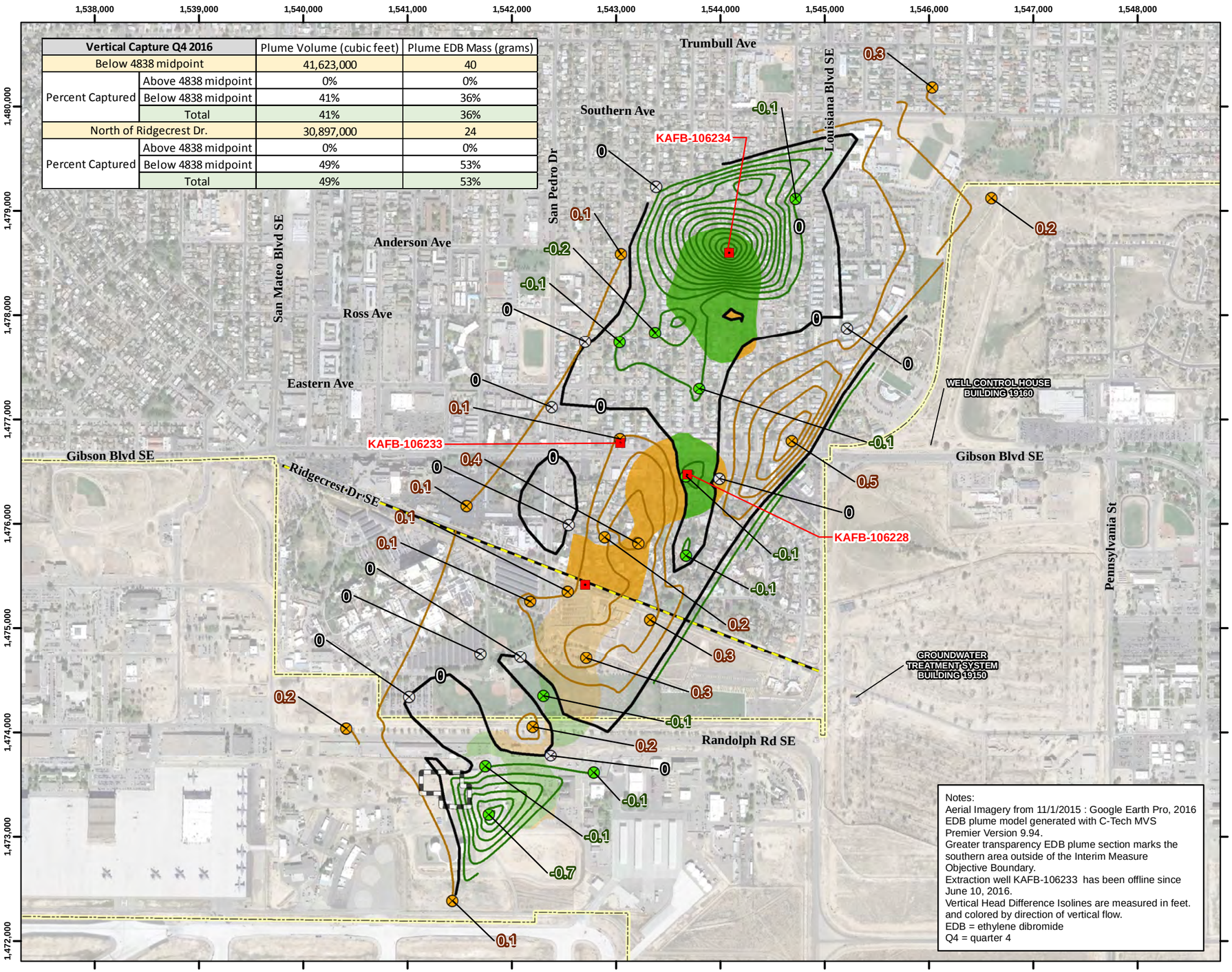
FIGURE 5-11

VERTICAL CAPTURE ABOVE REFERENCE ELEVATION INTERVAL 4838 MID POINT LOWER ANALYSIS, Q4 2016

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-11 Vertical Capture Above 4838 Interval Mid Point Lower Analysis, Q4 2016.mxd 2/10/2017 EA sbusby



Vertical Capture Q4 2016		Plume Volume (cubic feet)	Plume EDB Mass (grams)
Below 4838 midpoint		41,623,000	40
Percent Captured	Above 4838 midpoint	0%	0%
	Below 4838 midpoint	41%	36%
	Total	41%	36%
North of Ridgecrest Dr.		30,897,000	24
Percent Captured	Above 4838 midpoint	0%	0%
	Below 4838 midpoint	49%	53%
	Total	49%	53%

Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective Boundary.
Extraction well KAFB-106233 has been offline since June 10, 2016.
Vertical Head Difference Isolines are measured in feet. and colored by direction of vertical flow.
EDB = ethylene dibromide
Q4 = quarter 4

Legend

Extraction Well

Nested Monitoring Wells

Monitoring Well Defining Upward Vertical Flow

Monitoring Well Defining Downward Vertical Flow

Monitoring Well Defining No Vertical Flow

Installation Boundary

Interim Measure Objective Boundary

Vertical Head Difference Isolines (Ft)

Upward Vertical Flow

Downward Vertical Flow

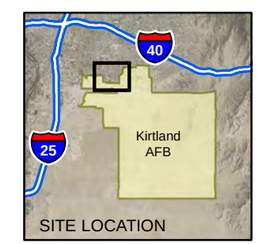
No Flow

Plume Area Vertical Capture Analysis

Plume Captured

Plume Not Captured

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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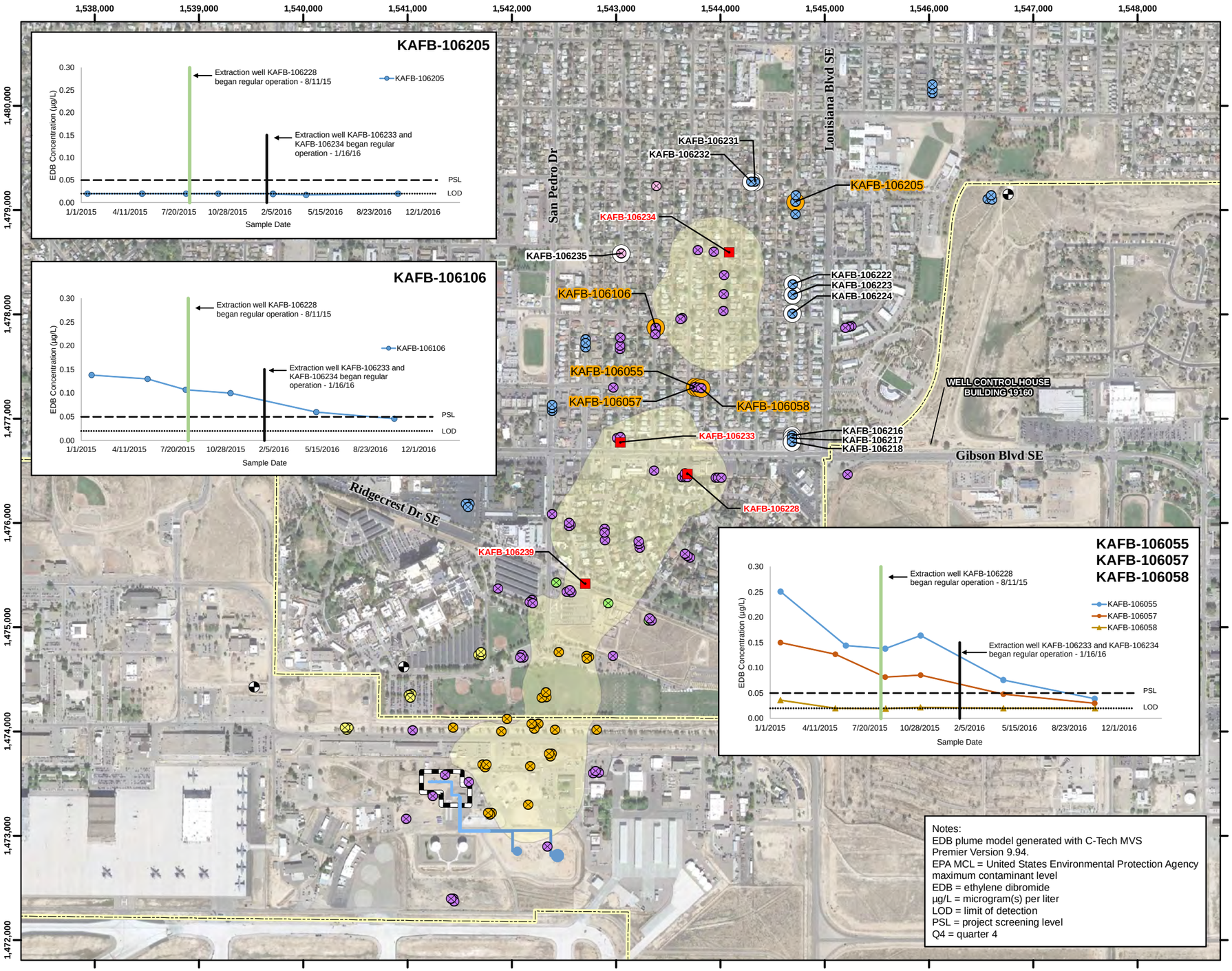
FIGURE 5-12

VERTICAL CAPTURE BELOW REFERENCE ELEVATION INTERVAL 4838 MID POINT Q4 2016

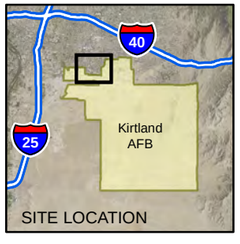
P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-12 Vertical Capture Below 4838 Interval Mid Point, Q4 2016.mxd 2/10/2017 EA sbusby



Notes:
EDB plume model generated with C-Tech MVS Premier Version 9.94.
EPA MCL = United States Environmental Protection Agency maximum contaminant level
EDB = ethylene dibromide
µg/L = microgram(s) per liter
LOD = limit of detection
PSL = project screening level
Q4 = quarter 4

Legend

- Performance Monitoring Well
- Sentinel Well
- Newly Installed Monitoring Well
- Groundwater Monitoring Well
- Signal Monitoring Well
- Source Area Monitoring Well
- VA Proximal Monitoring Well
- Downgradient Proximal 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
- Q4 2016 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

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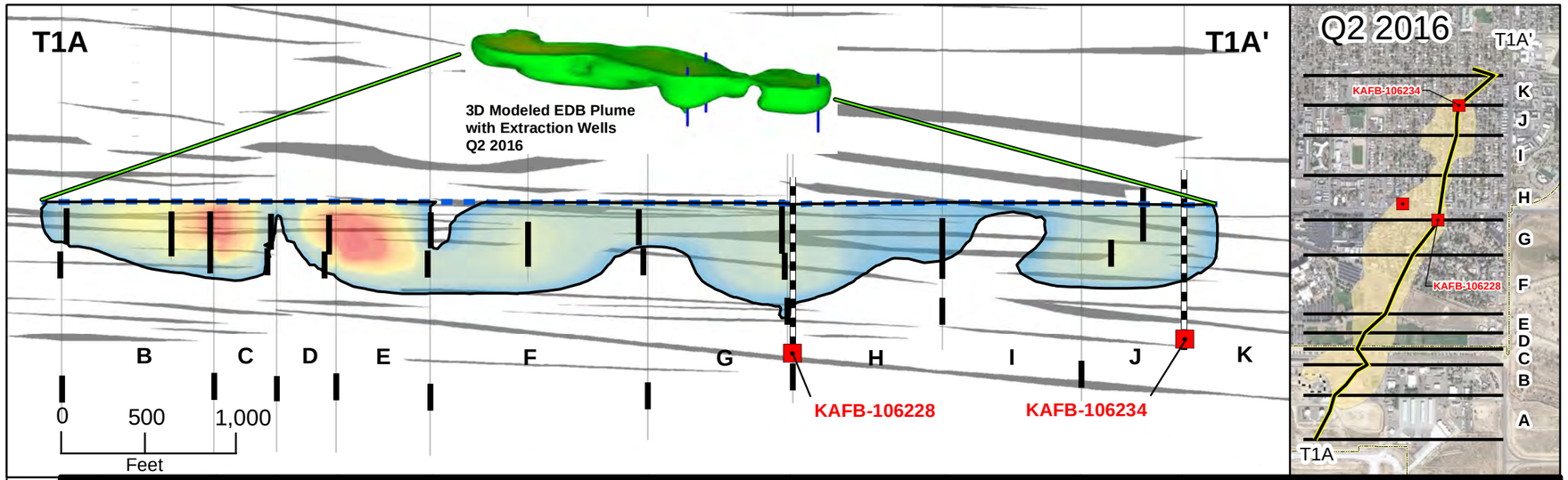
FIGURE 5-13

CONCENTRATION TRENDS IN PERFORMANCE MONITORING WELLS, 2015 AND 2016

\\abq\Projects\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2016_Q4\Report Figures\Section 5\5-13 Concentration Trends in Performance Monitoring Wells, 2015 and 2016.mxd 3/16/2017 EA eomalia



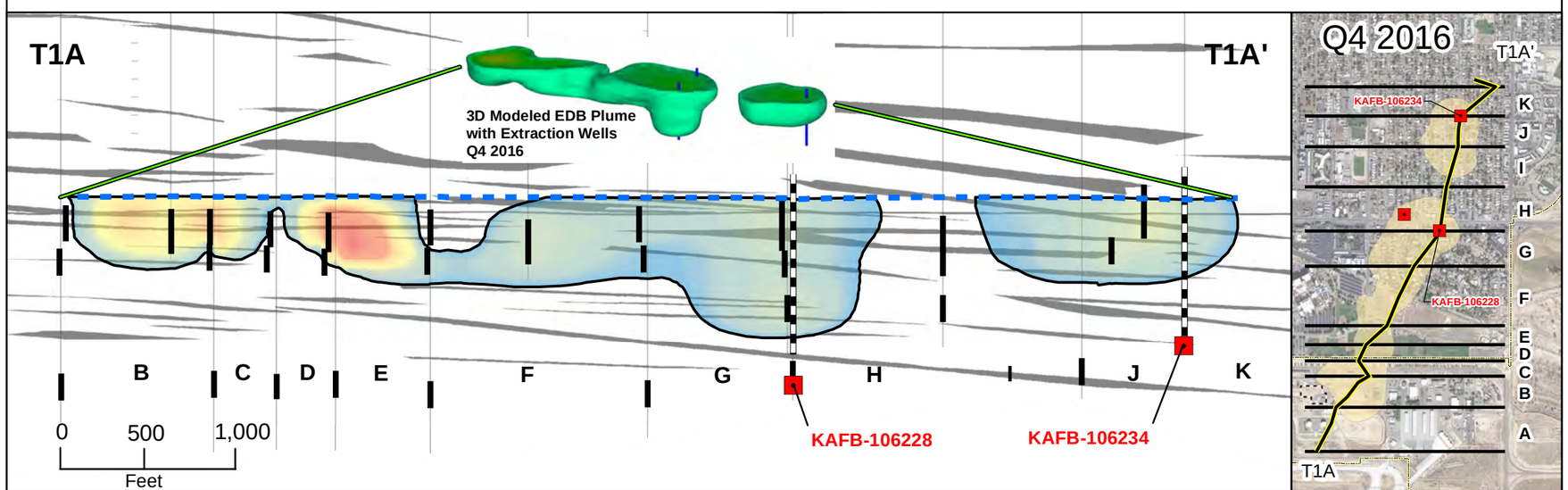
B	C	D	E	F	G	H	I	J	K
078 to 062	062 to 081	081 to 066	066 to 068	068 to 090	090 to 228	228 to 058	058 to 227	227 to 234	234 to 206
V 19,721,000 cf	V 13,852,000	V 8,963,000	V 11,531,000 cf	V 44,446,000 cf	V 28,257,000 cf	V 22,997,000 cf	V 10,035,000 cf	V 17,439,000 cf	V 3,355,700 cf
M 84.0 g	M 139.0 g	M 217.9 g	M 208.0 g	M 76.4 g	M 26.0 g	M 17.7 g	M 5.2 g	M 16.2 g	M 1.7 g

2016 Q2 Plume Totals

Iso-Shell Volume (V) = 184,230,000 cubic feet (cf)

EDB Mass (M) = 795.2 grams (g)

assuming a total porosity of 25%



B	C	D	E	F	G	H	I	J	K
V 19,875,000 cf +1%	V 11,337,000 -18%	V 7,465,000 -17%	V 9,224,000 cf -20%	V 35,778,000 cf -20%	V 29,795,000 cf +4%	V 25,300,000 cf +10%	V 14,311,000 cf +43%	V 23,142,000 cf +33%	V 7,622,000 cf +127%
M 341.3 g +306%	M 46.8 g -66%	M 196.0 g -10%	M 284.3 g +37%	M 56.0 g -27%	M 26.3 g +1%	M 22.5 g +27%	M 9.2 g +78%	M 30.4 g +88%	M 5.7 g +236%

2016 Q4 Plume Totals

Iso-Shell Volume (V) = 188,750,000 cubic feet (cf)

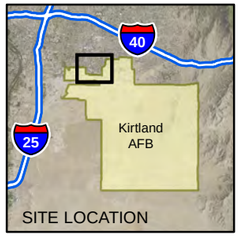
EDB Mass (M) = 1,043.2 grams (g) +31%

assuming a total porosity of 25%

Legend

- Extraction Well
- T1A Transect
- Volumetric Lines
- Installation Boundary
- EDB Plume with Concentration > 0.05 µg/L (EPA MCL)
- AECOM Defined Fine Grained Lithology
- Source Area
- 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 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
3D model exaggerated by a factor of 10.
Q2 = quarter 2
Q4 = quarter 4
µg/L = microgram(s) per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency Maximum Contaminant Level
EDB concentrations were screened against the EPA MCL (0.05 µg/L).
AECOM = Architecture, Engineering, Consulting, Operations, and Maintenance



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 5-14

T1A PLUME CROSS SECTION COMPARISON
Q2 - Q4, 2016

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TABLES

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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-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
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-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
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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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
SVMW-12	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
SVMW-13	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
SVMW-14	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
SVMW-15	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
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
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-02/03	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-04/05	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-06/07	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-08/09	SVEW-09-460	443	457	2	0.02182	2.2904	12.261
SVEW-10	SVEW-10-410	400	410	2	0.02182	1.636	10.581
SVEW-11	SVEW-11-410	400	410	2	0.02182	1.636	10.581
SVEW-12	SVEW-12-410	400	410	2	0.02182	1.636	10.581
SVEW-13	SVEW-13-410	400	410	2	0.02182	1.636	10.581

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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
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-106113-250	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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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
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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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-106121-440	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
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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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
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-106129-250	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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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
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-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-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

Table 2-1
Soil Vapor Well Construction Parameters and Pre-Calculated Purge Volumes

Sample Location	Location ID	Screened Interval (ft)		Well Diameter (in)	Casing Area (ft^2)	Filter Pack Volume[a] (ft^3)	Purge Volume (ft^3)
		Top	Bottom				
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-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
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
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

[a] Filter Pack Volume (V) was calculated using the following equation: $((\pi * d^2) / 4) * P * L = V$

[b] Measurements at SVMW-08-266 could not be obtained as SVMW-08-266 appears to be clogged.

$\pi \approx 3.14159$

d = diameter of the borehole casing (0.833 ft)

P = porosity of sand (assumed 0.3)

L = length of the screened interval (ft)

AFB = Air Force Base

ft = foot/feet

ft^2 = square feet

ft^3 = cubic feet

ID = identification

in = inches

SVMW = soil-vapor monitoring well

SWMU = solid Waste Management Unit

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
SVMW-01	SVMW-01-050	10/10/16	VA160941	0	5.34	14.42	6	0.500	2.0
	SVMW-01-100	10/10/16	VA160942	-0.1	8.40	10.90	4550	0.567	2.0
	SVMW-01-250	10/10/16	VA160943,VA160944	-1.2	0.58	17.86	169	0.767	2.0
	SVMW-01-300	10/10/16	VA160945	-1.3	0.34	20.13	5	0.700	2.0
SVMW-02	SVMW-02-050	10/11/16	VA160946	0.3	3.00	15.78	3	0.500	2.0
	SVMW-02-100	10/11/16	VA160947	0.5	5.18	13.19	5790	0.567	2.0
	SVMW-02-150	10/11/16	VA160948	1	1.80	16.09	394	0.633	2.0
SVMW-03	SVMW-03-050	10/10/16	VA160949	-0.4	10.20	3.57	0	0.833	2.0
	SVMW-03-100	10/10/16	VA160950	-0.7	13.34	0.55	7700	0.567	2.0
	SVMW-03-250	10/10/16	VA160951,VA160952	-1.3	12.02	1.70	13750	0.767	2.0
	SVMW-03-300	10/10/16	VA160953	-1.5	13.16	1.04	12870	0.833	2.0
SVMW-04	SVMW-04-050	10/10/16	VA160954	-0.3	7.38	9.62	279	0.500	2.0
	SVMW-04-100	10/10/16	VA160955	-0.4	8.54	7.84	13760	0.567	2.0
	SVMW-04-250	10/10/16	VA160956	-1.4	3.68	9.92	15540	0.767	2.0
	SVMW-04-300	10/10/16	VA160957	-1.5	0.56	19.05	511	0.833	2.0
SVMW-05	SVMW-05-050	10/10/16	VA160958	-0.1	3.44	18.03	5	0.500	2.0
	SVMW-05-100	10/10/16	VA160959,VA160960	-0.1	5.42	16.42	4	0.567	2.0
	SVMW-05-230	10/10/16	VA160961	-1.4	0.44	19.02	5	0.567	2.0
	SVMW-05-290	10/10/16	VA160962	-1.5	0.50	19.98	5	0.833	2.0
SVMW-06	SVMW-06-050	10/10/16	VA160963	0.1	0.70	19.73	2	0.500	2.0
	SVMW-06-100	10/10/16	VA160964	0	1.94	19.33	1	0.567	2.0
	SVMW-06-252	10/10/16	VA160965	-1	1.48	18.13	538	0.767	2.0
	SVMW-06-302	10/10/16	VA160966	-0.5	1.02	19.15	17	0.833	2.0
SVMW-07	SVMW-07-050	10/13/16	VA160967	-2.0	1.26	19.48	2	0.500	2.0
	SVMW-07-100	10/13/16	VA160968	-0.1	3.76	19.30	12	0.567	2.0
	SVMW-07-150	10/13/16	VA160969	-0.1	3.00	19.79	2	0.633	2.0
SVMW-08	SVMW-08-050	10/10/16	VA160970	-1.1	10.01	3.94	8120	0.500	2.0
	SVMW-08-100	10/10/16	VA160971	0.0	9.52	5.56	6	0.567	2.0
	SVMW-08-250	10/10/16	VA160972	0.0	10.44	4.47	10960	0.767	2.0
	SVMW-08-266[a]								
SVMW-09	SVMW-09-050	10/10/16	VA160973	0.2	9.42	4.18	102	0.500	2.0
	SVMW-09-100	10/10/16	VA160974	0.2	10.04	3.44	20900	0.567	2.0
	SVMW-09-250	10/10/16	VA160975	-0.3	6.52	5.81	12440	0.767	2.0
	SVMW-09-266	10/10/16	VA160976	-0.4	6.00	3.87	24370	0.800	2.0
SVMW-10	SVMW-10-050	10/10/16	VA160977	0.1	10.54	1.73	28140	0.500	2.0
	SVMW-10-100	10/10/16	VA160978	0.2	9.74	1.41	32530	0.567	2.0
	SVMW-10-150	10/10/16	VA160979	0	7.84	4.38	27400	0.633	2.0
	SVMW-10-250	10/10/16	VA160980	0	9.58	1.31	15170	0.767	2.0

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
SVMW-11	SVMW-11-050	10/10/16	VA160981	-1.6	11.26	0.54	28010	0.500	2.0
	SVMW-11-100	10/10/16	VA160982	-0.5	11.14	0.16	32700	0.567	2.0
	SVMW-11-250	10/10/16	VA160983	-1.5	11.22	0.15	27190	0.767	2.0
	SVMW-11-260	10/10/16	VA160984	-0.4	12.44	0.07	10980	0.800	2.0
SVMW-12	SVMW-12-150	10/12/16	VA160985	-0.6	0.18	19.55	2	0.633	2.0
	SVMW-12-250	10/12/16	VA160986,VA160987	-0.6	0.22	19.86	3	0.767	2.0
	SVMW-12-350	10/12/16	VA160988	-0.7	0.58	20.31	3	0.900	2.0
	SVMW-12-450	10/12/16	VA160989	-0.6	0.22	20.31	4	1.033	2.0
SVMW-13	SVMW-13-150	10/12/16	VA160990	-0.5	5.36	8.65	1133	0.633	2.0
	SVMW-13-250	10/12/16	VA160991	-0.4	0.56	19.89	4	0.767	2.0
	SVMW-13-350	10/12/16	VA160992	-0.5	0.60	19.72	4	0.900	2.0
	SVMW-13-450	10/12/16	VA160993	-0.6	0.62	19.53	6	1.033	2.0
SVMW-14	SVMW-14-150	10/12/16	VA160994	-0.4	0.16	19.90	2	0.633	2.0
	SVMW-14-250	10/12/16	VA160995	-0.5	0.16	20.02	2	0.767	2.0
	SVMW-14-350	10/12/16	VA160996	-0.5	0.16	20.35	4	0.933	2.0
	SVMW-14-450	10/12/16	VA160997	-0.6	0.88	20.38	3	1.033	2.0
SVMW-15	SVMW-15-150	10/11/16	VA160998,VA160999	0.8	0.46	19.78	4	0.633	2.0
	SVMW-15-250	10/11/16	VA161000	0.7	0.40	19.69	8	0.767	2.0
	SVMW-15-350	10/11/16	VA161001	0.6	0.68	19.65	11	0.900	2.0
	SVMW-15-450	10/11/16	VA161002	0.6	0.92	17.73	427	1.033	2.0
KAFB-106028	KAFB-106028-150	10/17/16	VA161003	2.6	0.12	19.44	1	0.633	2.0
	KAFB-106028-250	10/17/16	VA161004	3	0.24	20.16	0	0.767	2.0
	KAFB-106028-350	10/17/16	VA161005	3.1	0.30	20.34	2	0.900	2.0
	KAFB-106028-450	10/17/16	VA161006	3.2	0.84	19.79	1	1.033	2.0
SVEW-01	SVEW-01-260	10/11/16	VA161007	-0.6	6.20	14.50	140	8.200	4.2
SVEW-02/03	SVEW-02-060	10/11/16	VA161008	-0.2	12.28	0.14	15250	3.800	4.2
SVEW-02/03	SVEW-03-160	10/11/06	VA161009	-0.6	12.20	1.13	11910	5.950	4.2
SVEW-04/05	SVEW-04-313	10/10/16	VA161010	0	0.00	20.85	8	9.310	4.2
SVEW-04/05	SVEW-05-460	10/10/16	VA161011	0	1.48	18.44	241	12.530	4.2
SVEW-06/07	SVEW-06-060	10/11/16	VA161012	-0.3	13.52	1.47	4610	3.800	4.2
SVEW-06/07	SVEW-07-160	10/13/16	VA161013	-0.4	7.08	6.30	26040	5.950	4.2
SVEW-08/09	SVEW-08-260	10/11/16	VA161014	-0.6	0.84	19.77	26	8.200	4.2
SVEW-08/09	SVEW-09-460	10/11/16	VA161015	-0.7	0.82	19.83	21	12.230	4.2
SVEW-10	SVEW-10-410	10/12/16	VA161016	-0.6	0.22	20.42	3	10.430	4.2
SVEW-11	SVEW-11-410	10/12/16	VA161017	-0.3	0.76	19.23	72	11.130	4.2
SVEW-12	SVEW-12-410	10/12/16	VA161018	-0.5	0.70	20.28	1	10.430	
SVEW-13	SVEW-13-410	10/11/16	VA161019	0.7	0.58	19.84	18	10.570	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106108	KAFB-106108-025	10/12/16	VA161020,VA161021	0.0	0.82	20.06	2	1.750	4.2
	KAFB-106108-050	10/12/16	VA161022	0.0	2.28	19.11	2	1.820	4.2
	KAFB-106108-150	10/12/16	VA161023	-0.5	2.58	18.39	2	2.100	4.2
	KAFB-106108-250	10/12/16	VA161024	-0.5	0.52	19.28	3	2.450	4.2
	KAFB-106108-350	10/12/16	VA161025	-0.5	0.26	19.92	2	2.730	4.2
	KAFB-106108-450	10/11/16	VA161026	-0.6	0.48	20.28	3	23.730	4.2
KAFB-106109	KAFB-106109-025	10/12/16	VA161028	-0.1	0.70	20.41	0	1.750	4.2
	KAFB-106109-050	10/12/16	VA161029	-0.1	1.00	20.08	0	1.820	4.2
	KAFB-106109-150	10/12/16	VA161030,VA161031	-0.7	0.18	19.67	0	2.100	4.2
	KAFB-106109-250	10/12/16	VA161032	-0.6	0.30	19.88	0	2.450	4.2
	KAFB-106109-350	10/12/16	VA161033	-0.6	0.24	20.45	1	2.730	4.2
	KAFB-106109-450	10/12/16	VA161034	-0.6	0.82	20.19	0	23.730	4.2
KAFB-106110	KAFB-106110-025	10/14/16	VA161035	0.1	0.92	19.49	2	1.750	4.2
	KAFB-106110-050	10/14/16	VA161036,VA161037	0.2	1.26	19.22	3	1.820	4.2
	KAFB-106110-150	10/14/16	VA161038	0.5	0.94	18.83	1	2.100	4.2
	KAFB-106110-250	10/14/16	VA161039	0.6	0.40	18.90	55	2.450	4.2
	KAFB-106110-350	10/14/16	VA161040	0.6	0.26	19.80	2	2.730	4.2
	KAFB-106110-450	10/14/16	VA161041	0.6	0.50	20.03	2	23.730	4.2
KAFB-106111	KAFB-106111-025	10/14/16	VA161042	0.0	0.60	19.83	0	1.750	4.2
	KAFB-106111-050	10/14/16	VA161043	0.0	1.52	18.06	0	1.820	4.2
	KAFB-106111-150	10/14/16	VA161044	-0.1	2.32	16.82	1	2.100	4.2
	KAFB-106111-250	10/14/16	VA161045	-0.1	2.48	13.83	489	2.450	4.2
	KAFB-106111-350	10/14/16	VA161046	-0.1	0.68	18.96	69	2.730	4.2
	KAFB-106111-450	10/14/16	VA161047	-0.1	0.60	19.67	2	23.800	4.2
KAFB-106112	KAFB-106112-025	10/11/16	VA161048	0.2	0.22	20.17	1	1.750	4.2
	KAFB-106112-050	10/11/16	VA161049,VA161050	0.4	0.30	20.08	3	1.820	4.2
	KAFB-106112-150	10/11/16	VA161051	0.5	0.68	19.78	1	2.100	4.2
	KAFB-106112-250	10/11/16	VA161052	0.5	0.74	19.49	13	2.450	4.2
	KAFB-106112-350	10/11/16	VA161053	0.4	0.74	19.57	2	2.730	4.2
	KAFB-106112-450	10/11/16	VA161054	0.4	0.80	20.09	13	23.730	4.2
KAFB-106113	KAFB-106113-020	10/5/16	VA161055	-0.1	0.46	19.90	3	1.750	4.2
	KAFB-106113-050	10/5/16	VA161056	0	0.66	19.90	5	1.820	4.2
	KAFB-106113-150	10/5/16	VA161057	0.5	0.46	19.84	2	2.100	4.2
	KAFB-106113-250	10/5/16	VA161058	0.6	1.18	19.32	4	2.450	4.2
	KAFB-106113-350	10/5/16	VA161059	1	0.42	20.14	6	2.730	4.2
	KAFB-106113-450	10/5/16	VA161060	1.1	0.58	19.59	590	23.730	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106114	KAFB-106114-025	10/5/16	VA161061,VA161062	0.4	0.56	19.59	0	1.750	4.2
	KAFB-106114-050	10/5/16	VA161063	0.4	0.62	19.54	0	1.820	4.2
	KAFB-106114-150	10/5/16	VA161064	1.6	0.46	19.58	0	2.100	4.2
	KAFB-106114-250	10/5/16	VA161065	1.7	1.46	16.21	1	2.450	4.2
	KAFB-106114-350	10/5/16	VA161066	2.1	0.26	18.21	1	2.730	4.2
	KAFB-106114-450	10/5/16	VA161067	2	0.76	16.24	1739	23.730	4.2
KAFB-106115	KAFB-106115-025	10/5/16	VA161068	-0.1	0.56	20.16	3	1.750	4.2
	KAFB-106115-050	10/5/16	VA161069	-0.1	0.68	20.24	3	1.820	4.2
	KAFB-106115-150	10/5/16	VA161070	0.4	0.48	19.58	3	2.240	4.2
	KAFB-106115-250	10/5/16	VA161071,VA161072	0.7	0.30	19.88	3	2.450	4.2
	KAFB-106115-350	10/5/16	VA161073	1	0.26	20.44	4	2.730	4.2
	KAFB-106115-450	10/5/16	VA161074	1.1	0.98	19.58	853	23.730	4.2
KAFB-106116	KAFB-106116-025	10/5/16	VA161075	0.2	0.38	19.83	4	1.610	4.2
	KAFB-106116-050	10/5/16	VA161076	0.4	0.56	19.59	4	1.750	4.2
	KAFB-106116-150	10/5/16	VA161077	1.7	0.62	19.64	3	2.030	4.2
	KAFB-106116-250	10/5/16	VA161078	2.0	0.98	18.90	144	2.380	4.2
	KAFB-106116-350	10/5/16	VA161079	2.2	0.74	18.60	24	2.660	4.2
	KAFB-106116-450	10/5/16	VA161081	2.2	3.30	12.29	3270	23.520	4.2
KAFB-106117	KAFB-106117-025	10/6/16	VA161082	-0.2	1.20	18.53	2	1.750	4.2
	KAFB-106117-050	10/6/16	VA161083	-0.2	2.88	15.89	4	1.820	4.2
	KAFB-106117-150	10/6/16	VA161084	-0.3	2.90	16.24	4	2.100	4.2
	KAFB-106117-250	10/6/16	VA161085	-0.3	7.34	10.00	3560	2.450	4.2
	KAFB-106117-350	10/6/16	VA161086	-0.3	11.02	5.55	1108	2.730	4.2
	KAFB-106117-450	10/6/16	VA161087,VA161088	-0.2	10.38	3.15	4660	23.730	4.2
KAFB-106118	KAFB-106118-025	10/14/16	VA161089	0.3	0.48	20.06	5	1.750	4.2
	KAFB-106118-050	10/14/16	VA161090	0.3	0.74	19.95	5	1.820	4.2
	KAFB-106118-160	10/14/16	VA161091	0.9	0.98	19.61	5	2.170	4.2
	KAFB-106118-265	10/14/16	VA161092	0.8	0.96	19.47	33	2.450	4.2
	KAFB-106118-350	10/14/16	VA161093	0.9	0.62	19.75	5	2.730	4.2
	KAFB-106118-450	10/14/16	VA161094	0.9	0.88	19.10	5	23.730	4.2
KAFB-106119	KAFB-106119-025	10/11/16	VA161095,VA161096	0.0	0.46	20.07	2	1.750	4.2
	KAFB-106119-050	10/11/16	VA161097	0.0	1.06	17.89	1	1.820	4.2
	KAFB-106119-150	10/11/16	VA161098	-0.5	6.18	12.64	5	2.100	4.2
	KAFB-106119-250	10/11/16	VA161099	-0.7	5.32	11.78	586	2.450	4.2
	KAFB-106119-350	10/11/16	VA161100	-0.6	1.90	16.38	1233	2.730	4.2
	KAFB-106119-450	10/11/16	VA161101	-0.6	0.68	19.83	22	23.730	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106120	KAFB-106120-025	10/5/16	VA161102	-0.1	1.28	19.80	1	1.750	4.2
	KAFB-106120-050	10/5/16	VA161103,VA161104	-0.1	2.08	18.82	3	1.820	4.2
	KAFB-106120-150	10/5/16	VA161105	0.5	0.40	19.92	1	2.100	4.2
	KAFB-106120-250	10/5/16	VA161106	0.6	0.40	19.74	2	2.450	4.2
	KAFB-106120-350	10/5/16	VA161107	1	0.34	20.14	3	2.730	4.2
	KAFB-106120-450	10/5/16	VA161108	0.9	0.54	19.99	4	23.450	4.2
KAFB-106121	KAFB-106121-025	10/4/16	VA161109	0.1	1.32	19.32	2	1.750	4.2
	KAFB-106121-050	10/4/16	VA161110	0.2	1.24	19.37	3	1.820	4.2
	KAFB-106121-145	10/4/16	VA161111,VA161112	2.3	0.30	19.86	4	2.100	4.2
	KAFB-106121-250	10/4/16	VA161113	2.7	0.32	19.73	1	2.400	4.2
	KAFB-106121-350	10/4/16	VA161114	3.2	0.24	20.11	2	2.730	4.2
	KAFB-106121-440	10/4/16	VA161115	3.2	0.44	20.01	3	23.450	4.2
KAFB-106122	KAFB-106122-025	10/4/16	VA161116	0.1	2.00	18.59	2	1.820	4.2
	KAFB-106122-050	10/4/16	VA161117	0.3	1.48	19.34	2	1.820	4.2
	KAFB-106122-150	10/4/16	VA161118	2.6	0.30	19.95	3	2.100	4.2
	KAFB-106122-250	10/4/16	VA16119,VA161120	2.9	0.44	19.95	3	2.449	4.2
	KAFB-106122-350	10/4/16	VA161121	3.3	0.30	20.60	3	2.730	4.2
	KAFB-106122-450	10/4/16	VA161122	3.3	0.48	20.66	5	23.450	4.2
KAFB-106123	KAFB-106123-025	10/5/16	VA161123	-0.1	1.10	20.26	2	1.750	4.2
	KAFB-106123-050	10/5/16	VA161124	0.0	1.54	19.74	0	1.820	4.2
	KAFB-106123-150	10/5/16	VA161125	0.7	0.28	20.82	0	2.100	4.2
	KAFB-106123-250	10/5/16	VA161126	0.8	0.48	20.73	1	2.450	4.2
	KAFB-106123-350	10/5/16	VA161127,VA161128	1.2	0.34	21.43	1	2.730	4.2
	KAFB-106123-450	10/5/16	VA161129	1.2	0.50	21.34	0	23.380	4.2
KAFB-106124	KAFB-106124-025	10/4/16	VA161130	0.0	0.46	20.45	3	1.750	4.2
	KAFB-106124-050	10/4/16	VA161131	0.0	1.26	19.74	3	1.820	4.2
	KAFB-106124-150	10/4/16	VA161132	1.5	0.32	20.02	3	2.100	4.2
	KAFB-106124-250	10/4/16	VA161133	2.2	0.24	19.97	3	2.450	4.2
	KAFB-106124-350	10/4/16	VA161134	2.6	0.26	20.47	2	2.730	4.2
	KAFB-106124-450	10/4/16	VA161135,VA161136	2.6	0.56	20.17	133	23.730	4.2
KAFB-106125	KAFB-106125-025	10/4/16	VA161137	-0.2	1.76	19.87	1	1.680	4.2
	KAFB-106125-050	10/4/16	VA161138	-0.2	2.78	18.82	1	1.750	4.2
	KAFB-106125-150	10/4/16	VA161139	1.4	0.34	19.89	0	2.100	4.2
	KAFB-106125-250	10/4/16	VA161140	2.0	0.20	20.29	2	2.380	4.2
	KAFB-106125-350	10/4/16	VA161141	2.4	0.24	20.89	1	2.730	4.2
	KAFB-106125-450	10/4/16	VA161142	2.4	0.64	20.42	315	23.730	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106126	KAFB-106126-025	10/4/16	VA161143	0.0	1.54	19.35	2	1.700	4.2
	KAFB-106126-050	10/4/16	VA161144	-0.1	1.34	19.19	0	1.820	4.2
	KAFB-106126-150	10/4/16	VA161145	1.6	0.26	19.56	3	2.100	4.2
	KAFB-106126-250	10/4/16	VA161146	2.0	0.20	19.56	2	2.450	4.2
	KAFB-106126-350	10/4/16	VA161147	2.4	0.26	20.12	3	2.730	4.2
	KAFB-106126-450	10/4/16	VA161148,VA161149	2.4	0.60	19.75	390	23.800	4.2
KAFB-106127	KAFB-106127-025	10/4/16	VA161150	-0.1	0.90	19.80	1	1.750	4.2
	KAFB-106127-050	10/4/16	VA161151	0.0	0.74	19.79	3	1.820	4.2
	KAFB-106127-150	10/4/16	VA161152	1.6	0.24	19.65	1	2.100	4.2
	KAFB-106127-250	10/4/16	VA161153	2.0	0.18	19.71	0	2.450	4.2
	KAFB-106127-350	10/4/16	VA161154	2.5	0.24	20.31	1	2.730	4.2
	KAFB-106127-450	10/4/16	VA161155	2.6	0.50	20.05	73	23.730	4.2
KAFB-106128	KAFB-106128-025	10/6/16	VA161156,VA161157	-0.2	1.18	17.41	2	1.750	4.2
	KAFB-106128-050	10/6/16	VA161158	-0.2	2.28	15.94	52	1.820	4.2
	KAFB-106128-150	10/6/16	VA161159	0.0	1.52	17.03	1	2.100	4.2
	KAFB-106128-250	10/6/16	VA161160	0.0	4.66	9.98	2	2.450	4.2
	KAFB-106128-350	10/6/16	VA161161	0.1	2.66	13.58	4090	2.730	4.2
	KAFB-106128-450	10/6/16	VA161162	0.0	5.84	8.35	6650	23.730	4.2
KAFB-106129	KAFB-106129-025	10/6/16	VA161163	0.0	0.22	20.52	3	1.750	4.2
	KAFB-106129-050	10/6/16	VA161164,VA161165	-0.1	0.22	20.65	3	1.820	4.2
	KAFB-106129-150	10/6/16	VA161166	-0.1	0.24	20.20	2	2.100	4.2
	KAFB-106129-250	10/6/16	VA161167	0	0.58	19.94	3	2.450	4.2
	KAFB-106129-350	10/6/16	VA161168	0.1	0.66	20.29	1	2.730	4.2
	KAFB-106129-450	10/6/16	VA161169	0.0	1.02	18.96	85	23.800	4.2
KAFB-106130	KAFB-106130-025	10/11/16	VA161170	0.0	0.16	20.44	3	1.750	4.2
	KAFB-106130-050	10/11/16	VA161171	0.1	0.16	20.43	5	1.820	4.2
	KAFB-106130-150	10/11/16	VA161172,VA161173	0.2	0.32	19.98	2	2.170	4.2
	KAFB-106130-250	10/11/16	VA161174	0.2	0.58	19.64	3	2.450	4.2
	KAFB-106130-350	10/11/16	VA161175	0.1	0.64	19.97	3	2.730	4.2
	KAFB-106130-450	10/11/16	VA161176	0.1	0.68	19.35	7	23.730	4.2
KAFB-106131	KAFB-106131-025	10/5/16	VA161177	0.1	0.34	19.78	3	1.750	4.2
	KAFB-106131-055	10/5/16	VA161178	0.4	0.22	19.81	3	1.820	4.2
	KAFB-106131-150	10/5/16	VA161179	1.4	0.30	19.54	3	2.450	4.2
	KAFB-106131-245	10/5/16	VA161180,VA161181	1.4	0.56	19.24	2	2.450	4.2
	KAFB-106131-350	10/5/16	VA161182	1.7	0.18	17.68	4	2.730	4.2
	KAFB-106131-450	10/5/16	VA161183	1.9	0.40	17.23	47	23.240	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106132	KAFB-106132-025	10/14/16	VA161184	-0.1	2.30	18.25	1	1.750	4.2
	KAFB-106132-050	10/14/16	VA161185	0.0	1.84	18.45	2	1.820	4.2
	KAFB-106132-175	10/14/16	VA161186	-0.4	0.86	18.89	2	2.170	4.2
	KAFB-106132-250	10/14/16	VA161187	-0.4	0.44	19.65	3	2.450	4.2
	KAFB-106132-350	10/14/16	VA161188,VA161189	-0.4	0.58	20.15	3	2.730	4.2
	KAFB-106132-450	10/14/16	VA161190	-0.4	1.02	19.93	2	23.730	4.2
KAFB-106133	KAFB-106133-025	10/17/16	VA161191	0.1	1.70	18.86	4	1.750	4.2
	KAFB-106133-050	10/17/16	VA161192	0.1	1.42	19.17	3	1.820	4.2
	KAFB-106133-170	10/17/16	VA161193	1.4	0.46	18.93	3	2.170	4.2
	KAFB-106133-250	10/17/16	VA161194	1.6	0.64	19.39	4	2.450	4.2
	KAFB-106133-350	10/17/16	VA161195	1.8	0.78	20.23	4	2.730	4.2
	KAFB-106133-450	10/17/16	VA161196,VA161197	1.8	1.32	19.51	34	23.730	4.2
KAFB-106134	KAFB-106134-025	10/17/16	VA161198	0.0	0.24	20.54	1	1.750	4.2
	KAFB-106134-050	10/17/16	VA161199	0.0	0.22	20.51	1	1.820	4.2
	KAFB-106134-170	10/17/16	VA161200	1.3	0.28	19.97	3	2.170	4.2
	KAFB-106134-250	10/17/16	VA161201	1.3	0.34	19.93	2	2.450	4.2
	KAFB-106134-350	10/17/16	VA161202	1.6	0.52	20.31	3	2.730	4.2
	KAFB-106134-450	10/17/16	VA161203	1.6	0.74	20.11	4	23.730	4.2
KAFB-106135	KAFB-106135-025	10/17/16	VA161204	0.0	0.38	20.00	2	1.750	4.2
	KAFB-106135-050	10/17/16	VA161205	0.0	0.34	19.96	2	1.820	4.2
	KAFB-106135-150	10/17/16	VA161206	1.3	0.18	19.98	2	2.100	4.2
	KAFB-106135-250	10/17/16	VA161207	2.1	0.24	20.34	3	2.450	4.2
	KAFB-106135-350	10/17/16	VA161208	2.3	0.32	20.58	2	2.730	4.2
	KAFB-106135-450	10/17/16	VA161209	2.3	0.34	20.68	3	23.730	4.2
KAFB-106136	KAFB-106136-025	10/18/16	VA161210	0.0	0.32	20.28	1	1.750	4.2
	KAFB-106136-050	10/18/16	VA161211,VA161212	0.0	0.30	20.21	2	1.820	4.2
	KAFB-106136-150	10/18/16	VA161213	0.0	0.14	20.32	2	2.100	4.2
	KAFB-106136-250	10/18/16	VA161214	0.5	0.18	20.46	2	2.450	4.2
	KAFB-106136-350	10/18/16	VA161215	0.6	0.18	20.56	2	2.730	4.2
	KAFB-106136-450	10/18/16	VA161216	0.6	0.20	20.66	3	23.730	4.2
KAFB-106137	KAFB-106137-025	10/17/16	VA161217	0.1	0.36	19.96	2	1.750	4.2
	KAFB-106137-050	10/17/16	VA161218	0.4	0.32	19.99	2	1.820	4.2
	KAFB-106137-150	10/17/16	VA161219	2.0	0.24	20.04	3	2.100	4.2
	KAFB-106137-250	10/17/16	VA161220,VA161221	2.4	0.28	20.09	3	2.450	4.2
	KAFB-106137-350	10/17/16	VA161222	2.7	0.32	20.37	2	2.730	4.2
	KAFB-106137-450	10/17/16	VA161223	2.7	1.16	20.01	1086	23.730	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

Sample Location	Location ID	Date	Sample ID	Static Pressure (in WC)	CO_2 (%)	O_2 (%)	HC	Volume Purged	Purge Rate
KAFB-106138	KAFB-106138-025	10/18/16	VA161224	-0.2	4.66	16.33	3	1.750	4.2
	KAFB-106138-050	10/18/16	VA161225	-0.4	3.18	16.95	4	1.820	4.2
	KAFB-106138-150	10/18/16	VA161226	0	0.34	19.58	4	2.100	4.2
	KAFB-106138-250	10/18/16	VA161227	0	0.36	19.69	5	2.450	4.2
	KAFB-106138-350	10/18/16	VA161228	0.2	0.22	19.72	1	2.730	4.2
	KAFB-106138-450	10/18/16	VA161229	0.3	0.22	19.80	0	23.730	4.2
KAFB-106139	KAFB-106139-025	10/17/16	VA161230	0.0	0.74	19.99	3	1.750	4.2
	KAFB-106139-050	10/17/16	VA161231,VA161232	0.3	0.86	19.71	2	1.820	4.2
	KAFB-106139-150	10/17/16	VA161233	2.7	0.54	19.16	2	2.100	4.2
	KAFB-106139-250	10/17/16	VA161234	2.7	0.52	19.28	2	2.450	4.2
	KAFB-106139-350	10/17/16	VA161235	3.0	0.44	19.68	4	2.730	4.2
	KAFB-106139-450	10/17/16	VA161236	3.1	0.46	20.05	3	23.730	4.2
KAFB-106140	KAFB-106140-025	10/4/16	VA161237	0.1	0.18	20.47	2	1.750	4.2
	KAFB-106140-050	10/4/16	VA161238	0.1	0.18	21.23	2	1.960	4.2
	KAFB-106140-150	10/4/16	VA161239	2.0	0.16	20.44	2	2.170	4.2
	KAFB-106140-250	10/4/16	VA161240	2.4	0.18	19.98	4	2.450	4.2
	KAFB-106140-350	10/4/16	VA161241	2.8	0.22	20.50	3	2.730	4.2
	KAFB-106140-450	10/4/16	VA161242	3.0	0.24	19.57	2	23.730	4.2
KAFB-106141	KAFB-106141-025	10/18/16	VA161243	-0.3	0.82	19.33	2	1.750	4.2
	KAFB-106141-050	10/18/16	VA161244	-0.3	0.16	19.86	2	1.820	4.2
	KAFB-106141-170	10/18/16	VA161245	0.1	0.18	20.12	4	2.170	4.2
	KAFB-106141-250	10/18/16	VA161246	0.2	0.20	20.16	3	2.450	4.2
	KAFB-106141-350	10/18/16	VA161247,VA161248	0.2	0.20	20.39	4	2.730	4.2
	KAFB-106141-450	10/18/16	VA161249	0.2	0.28	20.52	5	23.730	4.2
KAFB-106142	KAFB-106142-030	10/18/16	VA161250	0.0	0.38	20.22	1	1.750	4.2
	KAFB-106142-050	10/18/16	VA161251	0.0	0.34	19.94	2	1.820	4.2
	KAFB-106142-170	10/18/16	VA161252	0.2	0.18	19.90	3	2.170	4.2
	KAFB-106142-250	10/18/16	VA161253	0.3	0.18	19.91	2	2.450	4.2
	KAFB-106142-350	10/18/16	VA161254	0.4	0.22	19.99	3	2.730	4.2
	KAFB-106142-450	10/18/16	VA161255	0.3	0.28	20.04	2	23.730	4.2

Table 2-2
Field Measurements for Soil Vapor Monitoring, Q4 2016

[a] Measurements at SVMW-08-266 could not be obtained as SVMW-08-266 appears to be clogged.
-- = Parameter or analyte not required for analysis in Q1
AFB = Air Force Base
cfm = cubic feet per minute
CO_2 = carbon dioxide
ft^3 = cubic feet
HC = hydrocarbon
ID = identification
in = inches
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
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-01-050			SVMW-01-100			SVMW-01-250			SVMW-01-250			SVMW-01-300			SVMW-02-050			SVMW-02-100			SVMW-02-150		
		Field Sample ID:	VA160941			VA160942			VA160943			VA160944			VA160945			VA160946			VA160947			VA160948		
		Sample Date:	10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
		Sample Type:	REG			REG			REG			Field Duplicate			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0025	--	0.0012	0.003	--	0.0011	0.0082	--	0.00081	0.0086	--	0.00082	0.0012	--	0.00082	ND	U	0.0011	0.63	--	0.00083	0.0056	--	0.00084
Fixed Gases (%) Method E3C	Carbon Dioxide	%	5.25	--	0.17	8.48	--	0.17	0.545	--	0.16	0.54	--	0.16	0.311	--	0.16	2.88	--	0.17	5.23	--	0.17	1.72	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	79.8	--	0.17	80.2	--	0.17	81.1	--	0.16	81.1	--	0.16	79.1	--	0.16	80.6	--	0.17	80.9	--	0.17	81.5	--	0.17
	Oxygen	%	15	--	0.17	11.3	--	0.17	18.3	--	0.16	18.3	--	0.16	20.6	--	0.16	16.5	--	0.17	13.9	--	0.17	16.8	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	510	--	170	8500000	--	67000	440000	--	5400	440000	--	5500	4200	--	470	490	--	170	2.3E+07	--	170000	1100000	--	13000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	130	--	21	14000	--	8400	ND	U	670	ND	U	680	120	--	58	32	--	21	ND	U	21000	ND	U	1700
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	440	--	83	320000	--	33000	43000	--	2700	42000	--	2700	710	--	230	320	--	83	510000	--	83000	46000	--	6700
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.31	ND	U	0.025	ND	U	0.025	ND	U	0.0021	ND	U	0.00076	ND	U	0.76	ND	U	0.062
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0006	ND	U	0.24	ND	U	0.02	ND	U	0.02	ND	U	0.0017	ND	U	0.0006	ND	U	0.6	ND	U	0.049
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.0036	--	0.00054	ND	U	0.22	0.013	J	0.018	0.013	J	0.018	0.094	--	0.0015	0.00059	--	0.00054	ND	U	0.54	0.12	--	0.044
	1,1,2-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.31	ND	U	0.025	ND	U	0.025	ND	U	0.0021	ND	U	0.00076	ND	U	0.76	ND	U	0.062
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.41	ND	U	0.033	ND	U	0.034	ND	U	0.0029	ND	U	0.001	ND	U	1	ND	U	0.083
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.42	ND	U	0.034	ND	U	0.034	ND	U	0.0029	ND	U	0.001	ND	U	1	ND	U	0.085
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00056	ND	U	0.23	ND	U	0.018	ND	U	0.018	ND	U	0.0016	ND	U	0.00056	ND	U	0.56	ND	U	0.045
	1,2,4-Trimethylbenzene	ppmv	0.0052	--	0.00084	0.51	--	0.34	0.02	J	0.027	0.021	J	0.028	0.0042	--	0.0024	0.0011	--	0.00084	ND	U	0.84	ND	U	0.068
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00068	--	0.00054	ND	U	0.22	ND	U	0.017	ND	U	0.018	ND	U	0.0015	ND	U	0.00054	0.29	J	0.54	ND	U	0.044
	1,2-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.28	ND	U	0.022	ND	U	0.023	ND	U	0.0019	ND	U	0.00069	ND	U	0.69	ND	U	0.056
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.41	ND	U	0.033	ND	U	0.034	0.003	--	0.0029	ND	U	0.001	1.3	--	1	ND	U	0.083
	1,2-Dichloropropane	ppmv	ND	U	0.00089	ND	U	0.36	ND	U	0.029	ND	U	0.03	ND	U	0.0025	ND	U	0.00089	ND	U	0.9	ND	U	0.073
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.0016	--	0.00084	0.36	--	0.34	0.011	J	0.027	0.01	J	0.028	0.0022	J	0.0024	0.00036	J	0.00084	ND	U	0.84	0.029	J	0.068
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.76	ND	U	0.061	ND	U	0.062	ND	U	0.0053	ND	U	0.0019	ND	U	1.9	ND	U	0.15
	1,3-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.28	ND	U	0.022	ND	U	0.023	ND	U	0.0019	0.00025	J	0.00069	ND	U	0.69	ND	U	0.056
	1,4-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.28	ND	U	0.022	ND	U	0.023	ND	U	0.0019	ND	U	0.00069	ND	U	0.69	ND	U	0.056
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.46	ND	U	0.037	ND	U	0.038	ND	U	0.0032	ND	U	0.0011	ND	U	1.2	ND	U	0.093
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.41	ND	U	0.033	ND	U	0.033	ND	U	0.0028	ND	U	0.001	ND	U	1	ND	U	0.082
	Acetone	ppmv	0.096	--	0.017	ND	U	7	ND	U	0.57	ND	U	0.58	0.29	--	0.049	0.031	--	0.017	ND	U	17	ND	U	1.4
	Benzene	ppmv	0.0072	--	0.0013	48	--	0.52	0.25	--	0.042	0.26	--	0.043	0.6	--	0.0036	0.0022	--	0.0013	58	--	1.3	0.53	--	0.11
	Benzyl Chloride	ppmv	ND	U	0.0008	ND	U	0.32	ND	U	0.026	ND	U	0.026	ND	U	0.0022	ND	U	0.0008	ND	U	0.8	ND	U	0.065
	Bromodichloromethane	ppmv	ND	U	0.00062	ND	U	0.25	ND	U	0.02	ND	U	0.02	ND	U	0.0017	ND	U	0.00062	ND	U	0.62	ND	U	0.05
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.16	ND	U	0.013	ND	U	0.013	ND	U	0.0011	ND	U	0.0004	ND	U	0.4	ND	U	0.033
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.43	ND	U	0.035	ND	U	0.035	ND	U	0.003	ND	U	0.0011	ND	U	1.1	ND	U	0.087
	Carbon Disulfide	ppmv	ND	U	0.013	ND	U	5.4	ND	U	0.43	ND	U	0.44	ND	U	0.037	ND	U	0.013	ND	U	13	ND	U	1.1
	Carbon Tetrachloride	ppmv	ND	U	0.00066	ND	U	0.27	ND	U	0.021	ND	U	0.022	0.0027	--	0.0019	ND	U	0.00066	ND	U	0.66	0.046	J	0.053
	Chlorobenzene	ppmv	ND	U	0.0009	ND	U	0.36	ND	U	0.029	ND	U	0.03	ND	U	0.0025	ND	U	0.0009	ND	U	0.9	ND	U	0.073
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.63	ND	U	0.051	ND	U	0.052	ND	U	0.0044	ND	U	0.0016	ND	U	1.6	ND	U	0.13
	Chloroform	ppmv	ND	U	0.00085	ND	U	0.34	ND	U	0.027	ND	U	0.028	0.0033	--	0.0024	ND	U	0.00085	ND	U	0.85	ND	U	0.069
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.81	ND	UJ	0.065	ND	UJ	0.066	ND	UJ	0.0056	ND	U	0.002	ND	U	2	ND	U	0.16
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.42	ND	U	0.034	ND	U	0.034	ND	U	0.0029	ND	U	0.001	ND	U	1	ND	U	0.085
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.37	ND	U	0.03	ND	U	0.03	ND	U	0.0026	ND	U	0.00091	ND	U	0.91	ND	U	0.074
	Cyclohexane	ppmv	0.0023	J	0.0024	190	--	0.97	6.5	--	0.078	6.5	--	0.079	0.12	--	0.0068	0.0073	--	0.0024	320	--	2.4	4	--	0.2
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.2	ND	U	0.016	ND	U	0.016	ND	U	0.0014	ND	U	0.00048	ND	U	0.49	ND	U	0.039
	Dichlorodifluoromethane	ppmv	0.00058	J	0.00083	ND	U	0.34	0.019	J	0.027	0.021	J	0.028	0.0068	--	0.0024	0.00045	J	0.00083	ND	U	0.84	ND	U	0.068
	Ethanol	ppmv	ND	U	0.022	ND	U	8.9	ND	U	0.71	ND	U	0.73	ND	U	0.062	ND	U	0.022	ND	U	22	ND	U	1.8
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.93	ND	U	0.074	ND	U	0.076	ND	U	0.0065	ND	U	0.0023	ND	U	2.3	ND	U	0.19
	Ethylbenzene	ppmv	0.0058	--	0.00095	2.1	--	0.38	0.015	J	0.031	0.017	J	0.031	0.0035	--	0.0027	0.00079	J	0.00095	2.1	--	0.96	ND	U	0.077
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.16	ND	U	0.013	ND	U	0.013	ND	U	0.0011	ND	U	0.00039	ND	U	0.39	ND	U	0.032
	Isopropanol	ppmv	0.002	J	0.017	ND	U	6.8	ND	U	0.55	ND	U	0.56	ND	U	0.047	ND	U	0.017	ND	U	17	ND	U	1.4
	m,p-Xylene (Sum of Isomers)	ppmv	0.021	--	0.0019	7.5	--	0.77	0.057	J	0.062	0.066	--	0.063	0.019	--	0.0054	0.0029	--	0.0019	6.3	--	1.9	ND	U	0.15
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0058	J	0.014	ND	U	5.7	ND	U	0.46	ND	U	0.46	0.0062	J	0.039	0.0015	J	0.014	ND	U	14	ND	U	1.1
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.41	ND	U	0.033	ND	U	0.033	ND	U	0.0028	ND	U	0.001	ND	U	1	ND	U	0.082
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.48	ND	U	0.039	ND	U	0.039	ND	U	0.0034	ND	U	0.0012	ND	U	1.2	ND	U	0.097
	Naphthalene	ppmv	0.0023	--	0.00079	ND	U	0.32	ND	U	0.026	ND	U	0.026	0.0012	J	0.0022	0.0014	--	0.00079	ND	U	0.79	ND	U	0.064
	n-Heptane	ppmv	0.0036	--	0.001	130	--	2	4.8	--	0.033	4.8	--	0.033	0.01	--	0.0028	0.0039	--	0.001	170	--	1	0.67	--	0.082
	n-Hexane	ppmv	0.0014	--	0.0012	360	--	2.4	4.1	--	0.038	4.1	--	0.039	0.021	--	0.0033	0.0067	--	0.0012	250	--	1.2	1.8	--	0.095
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0075	--	0.00095	3	--	0.38	0.036	--	0.031	0.039	--	0.031	0.013	--	0.0027	0.0011	--	0.00095	2.2	--	0.96	0.05	J	0.077
	Propylene	ppmv	ND	U	0.0024	1.6	--	0.97	0.41	--	0.078	0.43	--	0.079	0.013	--	0.0068	ND	U	0.0024	4.8	--	2.4	ND	U	0.2
	Styrene	ppmv	ND	U	0.00097	ND	U	0.39	ND	U	0.032	ND	U	0.032	ND	U	0.0027	ND	U	0.00097	ND	U	0.98	ND	U	0.079
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.46	ND	U	0.037	ND	U	0.038	ND	U	0.0032	ND	U	0.0011	ND	U	1.2	ND	U	0.093
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00061	ND	U	0.25	ND	U	0.02	ND	U	0.02	0.0022	--	0.0017	ND	U	0.00061	ND	U	0.61	ND	U	0.05
	Tetrahydrofuran	ppmv	ND	U	0.0014	0.27	J	0.57	ND	U	0.046	ND	U	0.046	ND	U	0.0039	ND	U	0.0014	ND	U	1.4	ND	U	0.11
	Toluene	ppmv	0.053	--	0.0011	33	--	0.44	0.2	--	0.036	0.23	--	0.036	0.039	--	0.0031	0.0069	--	0.0011	67	--	1.1	0.071	J	0.089
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.42	ND	U	0.034	ND	U	0.034	ND	U	0.0029	ND	U	0.001	ND	U	1	ND	U	0.085
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.37	ND	U	0.03	ND	U	0.03	ND	U	0.0026	ND	U	0.00091	ND	U	0.91	ND	U	0.074
	Trichloroethylene (TCE)	ppmv	ND	U	0.00077	ND	U	0.31	0.012	J	0.025	0.012	J	0.025	0.011	--	0.0022	ND	U	0.00077	ND	U	0.77	ND	U	0.063
	Trichlorofluoromethane	ppmv	0.00044	J	0.00073	ND	U	0.3	ND	U	0.024	ND	U	0.024	ND	U	0.0021	ND	U	0.00073	ND	U	0.74	ND	U	0.06
	Vinyl Acetate	ppmv	0.0018	J	0.012	ND	U	4.7	ND	U	0.38	ND	U	0.39	ND	U	0.033	ND	U	0.012	ND	U	12	ND	U	0.95
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.65	ND	U	0.053	ND	U	0.053	ND	U	0.0046	ND	U	0.0016	ND	U	1.6	ND	U	0.13
	Xylenes, Total	ppmv	0.028	--	0.0019	10	--	0.77	0.093	--	0.062	0.1	--	0.063	0.032	--	0.0054	0.004	--	0.0019	8.5	--	1.9	0.05	J	0.15

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-03-050			SVMW-03-100			SVMW-03-250			SVMW-03-250			SVMW-03-300			SVMW-04-050			SVMW-04-100			SVMW-04-250		
		Field Sample ID:	VA160949			VA160950			VA160951			VA160952			VA160953			VA160954			VA160955			VA160956		
		Sample Date:	10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016		
		Sample Type:	REG			REG			REG			Field Duplicate			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00057	J	0.0008	1.1	--	0.008	2.4	--	0.008	2	--	0.0082	2.4	--	0.0081	0.011	--	0.00082	0.53	--	0.00083	0.044	--	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	10.1	--	0.16	13.4	--	0.16	12.6	--	0.16	12.6	--	0.16	12.7	--	0.16	7.35	--	0.16	8.92	--	0.17	3.84	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Nitrogen	%	86.1	--	0.16	85.1	--	0.16	85.3	--	0.16	85.2	--	0.16	84.6	--	0.16	82.7	--	0.16	82.8	--	0.17	85.8	--	0.16
	Oxygen	%	3.75	--	0.16	1.49	--	0.16	2.09	--	0.16	2.21	--	0.16	2.61	--	0.16	9.95	--	0.16	8.25	--	0.17	10.4	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	450	--	160	1.7E+07	--	160000	3.6E+07	--	450000	3.5E+07	--	470000	2.1E+07	--	220000	710000	--	13000	3.5E+07	--	550000	3.6E+07	--	650000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	40000	--	20000	150000	--	57000	130000	--	58000	120000	--	27000	ND	U	1600	210000	--	69000	ND	U	81000
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	440	--	80	780000	--	80000	2300000	--	230000	2100000	--	230000	970000	--	110000	140000	--	6600	2300000	--	280000	1300000	--	320000
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.73	ND	U	2.1	ND	U	2.1	ND	U	0.99	ND	U	0.06	ND	U	2.5	ND	U	3
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.58	ND	U	1.7	ND	U	1.7	ND	U	0.79	ND	U	0.048	ND	U	2	ND	U	2.4
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.025	--	0.00052	ND	U	0.52	ND	U	1.5	ND	U	1.5	ND	U	0.7	ND	U	0.043	ND	U	1.8	ND	U	2.1
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.73	ND	U	2.1	ND	U	2.1	ND	U	0.99	ND	U	0.06	ND	U	2.5	ND	U	3
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.98	ND	U	2.8	ND	U	2.9	ND	U	1.3	ND	U	0.081	ND	U	3.4	ND	U	4
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	1	ND	U	2.9	ND	U	2.9	ND	U	1.4	ND	U	0.083	ND	U	3.5	ND	U	4.1
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.54	ND	U	1.5	ND	U	1.6	ND	U	0.73	ND	U	0.044	ND	U	1.9	ND	U	2.2
	1,2,4-Trimethylbenzene	ppmv	0.00049	J	0.00081	0.99	--	0.81	4.9	--	2.3	4.3	--	2.4	4	--	1.1	0.038	J	0.067	8.6	--	2.8	ND	U	3.3
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	0.32	J	0.52	0.91	J	1.5	0.85	J	1.5	0.58	J	0.7	ND	U	0.043	ND	U	1.8	ND	U	2.1
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.66	ND	U	1.9	ND	U	1.9	ND	U	0.9	ND	U	0.055	ND	U	2.3	ND	U	2.7
	1,2-Dichloroethane	ppmv	ND	U	0.00099	1.1	--	0.98	2.2	J	2.8	2.1	J	2.9	1.2	J	1.3	ND	U	0.081	2.1	J	3.4	2	J	4
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.86	ND	U	2.5	ND	U	2.5	ND	U	1.2	ND	U	0.071	ND	U	3	ND	U	3.5
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	0.78	J	0.81	3.6	--	2.3	3.2	--	2.4	1.9	--	1.1	0.038	J	0.067	4.2	--	2.8	ND	U	3.3
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	1.8	ND	U	5.1	ND	U	5.3	ND	U	2.4	ND	U	0.15	ND	U	6.2	ND	U	7.3
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.66	ND	U	1.9	ND	U	1.9	ND	U	0.9	ND	U	0.055	ND	U	2.3	ND	U	2.7
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.66	ND	U	1.9	ND	U	1.9	ND	U	0.9	ND	U	0.055	ND	U	2.3	ND	U	2.7
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	1.1	ND	U	3.2	ND	U	3.2	ND	U	1.5	ND	U	0.091	ND	U	3.8	ND	U	4.5
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.97	ND	U	2.8	ND	U	2.8	ND	U	1.3	ND	U	0.08	ND	U	3.4	ND	U	4
	Acetone	ppmv	ND	U	0.017	ND	U	17	ND	U	48	ND	U	49	ND	U	23	ND	U	1.4	ND	U	58	ND	U	68
	Benzene	ppmv	0.0015	--	0.0013	56	--	1.2	140	--	3.6	130	--	3.6	89	--	1.7	0.036	J	0.1	170	--	4.3	120	--	5.1
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.77	ND	U	2.2	ND	U	2.2	ND	U	1	ND	U	0.063	ND	U	2.7	ND	U	3.1
	Bromodichloromethane	ppmv	ND	U	0.0006	ND	U	0.59	ND	U	1.7	ND	U	1.7	ND	U	0.81	ND	U	0.049	ND	U	2.1	ND	U	2.4
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.38	ND	U	1.1	ND	U	1.1	ND	U	0.52	ND	U	0.032	ND	U	1.3	ND	U	1.6
	Bromomethane	ppmv	ND	U	0.001	ND	U	1	ND	U	2.9	ND	U	3	ND	U	1.4	ND	U	0.085	ND	U	3.5	ND	U	4.2
	Carbon Disulfide	ppmv	ND	U	0.013	ND	U	13	ND	U	36	ND	U	37	ND	U	17	ND	U	1.1	ND	U	44	ND	U	52
	Carbon Tetrachloride	ppmv	0.00032	J	0.00064	ND	U	0.63	ND	U	1.8	ND	U	1.9	ND	U	0.86	ND	U	0.052	ND	U	2.2	ND	U	2.6
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.86	ND	U	2.5	ND	U	2.5	ND	U	1.2	ND	U	0.071	ND	U	3	ND	U	3.5
	Chloroethane	ppmv	ND	U	0.0015	ND	U	1.5	ND	U	4.3	ND	U	4.4	ND	U	2	ND	U	0.12	ND	U	5.2	ND	U	6.1
	Chloroform	ppmv	ND	U	0.00082	ND	U	0.81	ND	U	2.3	ND	U	2.4	ND	U	1.1	ND	U	0.067	ND	U	2.8	ND	U	3.3
	Chloromethane	ppmv	ND	UJ	0.0019	ND	UJ	1.9	ND	UJ	5.5	ND	UJ	5.6	ND	UJ	2.6	ND	U	0.16	ND	U	6.7	ND	U	7.8
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	1	ND	U	2.9	ND	U	2.9	ND	U	1.4	ND	U	0.083	ND	U	3.5	ND	U	4.1
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.88	ND	U	2.5	ND	U	2.6	ND	U	1.2	ND	U	0.072	ND	U	3	ND	U	3.6
	Cyclohexane	ppmv	0.0059	--	0.0023	280	--	2.3	560	--	6.6	540	--	6.8	320	--	3.1	ND	U	0.19	480	--	8	550	--	9.4
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.47	ND	U	1.3	ND	U	1.4	ND	U	0.63	ND	U	0.039	ND	U	1.6	ND	U	1.9
	Dichlorodifluoromethane	ppmv	0.0017	--	0.00081	ND	U	0.8	ND	U	2.3	ND	U	2.4	ND	U	1.1	ND	U	0.066	ND	U	2.8	ND	U	3.3
	Ethanol	ppmv	ND	U	0.021	ND	U	21	ND	U	60	ND	U	62	ND	U	29	ND	U	1.7	ND	U	73	ND	U	86
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	2.2	ND	U	6.3	ND	U	6.5	ND	U	3	ND	U	0.18	ND	U	7.6	ND	U	9
	Ethylbenzene	ppmv	ND	U	0.00092	10	--	0.92	32	--	2.6	30	--	2.7	22	--	1.2	0.032	J	0.076	19	--	3.2	3.6	J	3.7
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.37	ND	U	1.1	ND	U	1.1	ND	U	0.51	ND	U	0.031	ND	U	1.3	ND	U	1.5
	Isopropanol	ppmv	ND	U	0.016	ND	U	16	ND	U	46	ND	U	47	ND	U	22	ND	U	1.3	ND	U	56	ND	U	66
	m,p-Xylene (Sum of Isomers)	ppmv	0.00073	J	0.0018	23	--	1.8	85	--	5.2	79	--	5.4	58	--	2.5	0.11	J	0.15	68	--	6.3	14	--	7.5
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	0.014	ND	U	13	1.8	J	39	ND	U	39	ND	U	18	ND	U	1.1	ND	U	47	ND	U	55
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.97	ND	U	2.8	ND	U	2.8	ND	U	1.3	ND	U	0.08	ND	U	3.4	ND	U	4
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	1.1	ND	U	3.3	ND	U	3.4	ND	U	1.6	ND	U	0.094	ND	U	4	ND	U	4.7
	Naphthalene	ppmv	0.0003	J	0.00076	ND	U	0.76	ND	U	2.2	ND	U	2.2	ND	U	1	ND	U	0.063	ND	U	2.6	ND	U	3.1
	n-Heptane	ppmv	0.00042	J	0.00098	160	--	0.97	440	--	2.8	430	--	2.8	260	--	1.3	ND	U	0.08	340	--	3.4	540	--	4
	n-Hexane	ppmv	0.00045	J	0.0011	230	--	1.1	580	--	3.2	560	--	3.3	210	--	1.5	ND	U	0.093	530	--	3.9	600	--	4.6
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0003	J	0.00092	4.2	--	0.92	25	--	2.6	23	--	2.7	17	--	1.2	0.041	J	0.076	24	--	3.2	6.7	--	3.7
	Propylene	ppmv	0.0014	J	0.0023	3.8	--	2.3	15	--	6.6	15	--	6.8	5.4	--	3.1	ND	U	0.19	3.8	J	8	10	--	9.4
	Styrene	ppmv	ND	U	0.00094	ND	U	0.93	ND	U	2.7	ND	U	2.7	ND	U	1.3	ND	U	0.077	ND	U	3.2	ND	U	3.8
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	1.1	ND	U	3.2	ND	U	3.2	ND	U	1.5	ND	U	0.091	ND	U	3.8	ND	U	4.5
	Tetrachloroethylene (PCE)	ppmv	0.0003	J	0.00059	ND	U	0.59	ND	U	1.7	ND	U	1.7	ND	U	0.8	ND	U	0.048	ND	U	2	ND	U	2.4
	Tetrahydrofuran	ppmv	ND	U	0.0014	ND	U	1.3	ND	U	3.9	ND	U	3.9	ND	U	1.8	ND	U	0.11	ND	U	4.7	ND	U	5.5
	Toluene	ppmv	0.0016	--	0.0011	35	--	1.1	340	--	3	320	--	3.1	270	--	1.4	0.14	--	0.087	250	--	3.7	58	--	4.3
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	1	ND	U	2.9	ND	U	2.9	ND	U	1.4	ND	U	0.083	ND	U	3.5	ND	U	4.1
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.88	ND	U	2.5	ND	U	2.6	ND	U	1.2	ND	U	0.072	ND	U	3	ND	U	3.6
	Trichloroethylene (TCE)	ppmv	ND	U	0.00074	ND	U	0.74	ND	U	2.1	ND	U	2.2	ND	U	1	ND	U	0.061	ND	U	2.6	ND	U	3
	Trichlorofluoromethane	ppmv	0.00052	J	0.00071	ND	U	0.71	ND	U	2	ND	U	2.1	ND	U	0.96	ND	U	0.058	ND	U	2.4	ND	U	2.9
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	11	ND	U	32	ND	U	33	ND	U	15	ND	U	0.93	ND	U	39	ND	U	46
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	1.6	ND	U	4.4	ND	U	4.6	ND	U	2.1	ND	U	0.13	ND	U	5.4	ND	U	6.3
	Xylenes, Total	ppmv	0.001	J	0.0018	27	--	1.8	110	--	5.2	100	--	5.4	75	--	2.5	0.15	J	0.15	92	--	6.3	20	--	7.5

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-04-300			SVMW-05-050			SVMW-05-100			SVMW-05-100			SVMW-05-230			SVMW-05-290			SVMW-06-050			SVMW-06-100		
		Field Sample ID:	VA160957			VA160958			VA160959			VA160960			VA160961			VA160962			VA160963			VA160964		
		Sample Date:	10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016		
		Sample Type:	REG			REG			REG			Field Duplicate			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0059	--	0.00084	0.0021	--	0.00079	0.0022	--	0.00087	0.0016	--	0.0008	0.0017	--	0.00079	0.0017	--	0.0008	0.00098	--	0.00088	ND	U	0.0013
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.526	--	0.17	3.22	--	0.16	5.3	--	0.17	5.31	--	0.16	0.394	--	0.16	0.466	--	0.16	0.695	--	0.18	1.87	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.18	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.18	ND	U	0.17
	Nitrogen	%	80.1	--	0.17	78.1	--	0.16	77.8	--	0.17	77.8	--	0.16	80.1	--	0.16	79.1	--	0.16	78.8	--	0.18	78.2	--	0.17
	Oxygen	%	19.4	--	0.17	18.7	--	0.16	16.9	--	0.17	16.9	--	0.16	19.5	--	0.16	20.4	--	0.16	20.5	--	0.18	19.9	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	1300000	--	13000	1000	--	160	2000	--	170	1800	--	160	4700	--	160	1100	--	160	300	--	180	610	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	1700	210	--	20	150	--	22	120	--	20	120	--	20	110	--	20	430	--	22	110	--	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	130000	--	6700	1500	--	79	570	--	87	510	--	80	800	--	79	360	--	80	3700	--	88	520	--	85
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.061	ND	U	0.00072	ND	U	0.00079	ND	U	0.00073	ND	U	0.00072	ND	U	0.00073	ND	U	0.00081	ND	U	0.00078
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.049	ND	U	0.00057	ND	U	0.00063	ND	U	0.00058	ND	U	0.00058	ND	U	0.00058	ND	U	0.00064	ND	U	0.00062
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.065	--	0.044	0.0028	--	0.00051	0.0076	--	0.00056	0.0075	--	0.00052	0.0091	--	0.00052	0.045	--	0.00052	0.0016	--	0.00057	0.0017	--	0.00055
	1,1,2-Trichloroethane	ppmv	ND	U	0.061	ND	U	0.00072	ND	U	0.00079	ND	U	0.00073	ND	U	0.00072	ND	U	0.00073	ND	U	0.00081	ND	U	0.00078
	1,1-Dichloroethane	ppmv	ND	U	0.083	ND	U	0.00097	ND	U	0.0011	ND	U	0.00099	ND	U	0.00098	ND	U	0.00099	ND	U	0.0011	ND	U	0.0011
	1,1-Dichloroethene	ppmv	ND	U	0.084	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.045	ND	U	0.00053	ND	U	0.00058	ND	U	0.00054	ND	U	0.00053	ND	U	0.00054	ND	U	0.00059	ND	U	0.00057
	1,2,4-Trimethylbenzene	ppmv	0.037	J	0.068	0.0078	--	0.0008	0.0061	--	0.00088	0.0047	--	0.00081	0.0047	--	0.0008	0.0042	--	0.00081	0.0068	--	0.0009	0.0027	--	0.00086
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.043	0.00076	--	0.00051	0.00079	--	0.00056	0.00056	--	0.00052	0.00063	--	0.00051	0.00059	--	0.00052	0.00025	J	0.00057	ND	U	0.00055
	1,2-Dichlorobenzene	ppmv	ND	U	0.056	ND	U	0.00065	ND	U	0.00072	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00073	ND	U	0.00071
	1,2-Dichloroethane	ppmv	0.064	J	0.083	ND	U	0.00097	ND	U	0.0011	ND	U	0.00099	0.00041	J	0.00098	0.00041	J	0.00099	ND	U	0.0011	ND	U	0.0011
	1,2-Dichloropropane	ppmv	ND	U	0.072	ND	U	0.00085	ND	U	0.00094	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00095	ND	U	0.00092
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.041	J	0.068	0.0028	--	0.0008	0.0021	--	0.00088	0.0017	--	0.00081	0.0017	--	0.0008	0.0016	--	0.00081	0.0018	--	0.0009	0.00073	J	0.00086
	1,3-Butadiene	ppmv	ND	U	0.15	ND	U	0.0018	ND	U	0.002	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.002	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.056	ND	U	0.00065	ND	U	0.00072	ND	U	0.00067	0.00021	J	0.00066	0.00022	J	0.00067	0.00026	J	0.00073	0.00026	J	0.00071
	1,4-Dichlorobenzene	ppmv	ND	U	0.056	ND	U	0.00065	ND	U	0.00072	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00073	ND	U	0.00071
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.093	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.082	ND	U	0.00096	ND	U	0.0011	ND	U	0.00098	ND	U	0.00096	ND	U	0.00098	ND	U	0.0011	ND	U	0.001
	Acetone	ppmv	ND	U	1.4	0.16	--	0.017	0.078	--	0.018	0.055	--	0.017	0.33	--	0.017	0.24	--	0.017	0.12	--	0.019	0.34	--	0.018
	Benzene	ppmv	3.2	--	0.1	0.012	--	0.0012	0.013	--	0.0014	0.0095	--	0.0013	0.015	--	0.0012	0.013	--	0.0013	0.004	--	0.0014	0.0041	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.065	ND	U	0.00076	ND	U	0.00084	ND	U	0.00077	ND	U	0.00076	ND	U	0.00077	ND	U	0.00085	ND	U	0.00082
	Bromodichloromethane	ppmv	ND	U	0.05	ND	U	0.00059	ND	U	0.00065	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.00066	ND	U	0.00063
	Bromoform	ppmv	ND	U	0.032	ND	U	0.00038	ND	U	0.00042	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00043	ND	U	0.00041
	Bromomethane	ppmv	ND	U	0.086	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	ND	U	1.1	0.00072	J	0.013	ND	U	0.014	ND	U	0.013	0.00048	J	0.013	0.00057	J	0.013	ND	U	0.014	ND	U	0.014
	Carbon Tetrachloride	ppmv	ND	U	0.053	ND	U	0.00062	ND	U	0.00069	ND	U	0.00064	0.0031	--	0.00063	0.0044	--	0.00064	0.001	--	0.0007	0.0011	--	0.00068
	Chlorobenzene	ppmv	ND	U	0.073	ND	U	0.00085	ND	U	0.00094	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00096	ND	U	0.00092
	Chloroethane	ppmv	ND	U	0.13	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0017	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.068	ND	U	0.0008	ND	U	0.00089	ND	U	0.00082	ND	U	0.00081	0.00069	J	0.00082	ND	U	0.0009	0.00092	--	0.00087
	Chloromethane	ppmv	ND	U	0.16	ND	UJ	0.0019	ND	UJ	0.0021	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	U	0.0021	ND	UJ	0.0021
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.084	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.074	ND	U	0.00086	ND	U	0.00095	ND	U	0.00088	ND	U	0.00087	ND	U	0.00088	ND	U	0.00097	ND	U	0.00094
	Cyclohexane	ppmv	18	--	0.19	0.007	--	0.0023	0.082	--	0.0025	0.077	--	0.0023	0.12	--	0.0023	0.019	--	0.0023	0.0014	J	0.0026	0.0013	J	0.0025
	Dibromochloromethane	ppmv	ND	U	0.039	ND	U	0.00046	ND	U	0.00051	ND	U	0.00047	ND	U	0.00046	ND	U	0.00047	ND	U	0.00052	ND	U	0.0005
	Dichlorodifluoromethane	ppmv	ND	U	0.068	0.00056	J	0.00079	0.0007	J	0.00088	0.00071	J	0.00081	0.014	--	0.0008	0.0073	--	0.00081	0.0014	--	0.00089	0.0021	--	0.00086
	Ethanol	ppmv	ND	U	1.8	0.0042	J	0.021	ND	U	0.023	ND	U	0.021	ND	U	0.021	ND	U	0.021	ND	U	0.023	ND	U	0.023
	Ethyl Acetate	ppmv	ND	U	0.19	0.0036	--	0.0022	ND	U	0.0024	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0024	ND	U	0.0024
	Ethylbenzene	ppmv	0.038	J	0.077	0.0079	--	0.0009	0.0084	--	0.001	0.0061	--	0.00092	0.0067	--	0.00091	0.0062	--	0.00092	0.0033	--	0.001	0.0021	--	0.00098
	Hexachlorobutadiene	ppmv	ND	U	0.031	ND	U	0.00037	ND	U	0.00041	ND	U	0.00038	ND	U	0.00037	ND	U	0.00038	ND	U	0.00041	ND	U	0.0004
	Isopropanol	ppmv	ND	U	1.4	0.0042	J	0.016	0.002	J	0.018	0.0018	J	0.016	0.0028	J	0.016	0.0019	J	0.016	ND	U	0.018	0.0015	J	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.34	--	0.15	0.027	--	0.0018	0.028	--	0.002	0.021	--	0.0018	0.023	--	0.0018	0.021	--	0.0018	0.011	--	0.002	0.007	--	0.002
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	1.1	0.045	--	0.013	0.0069	J	0.015	0.0056	J	0.014	0.18	--	0.013	0.0083	J	0.014	0.004	J	0.015	0.0085	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.082	0.00039	J	0.00096	ND	U	0.0011	ND	U	0.00098	ND	U	0.00096	ND	U	0.00098	ND	U	0.0011	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.096	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.064	0.0037	--	0.00075	0.0023	--	0.00083	0.0021	--	0.00076	0.0016	--	0.00075	0.0014	--	0.00076	0.0033	--	0.00084	0.0013	--	0.00081
	n-Heptane	ppmv	7.9	--	0.082	0.011	--	0.00096	0.011	--	0.0011	0.0083	--	0.00098	0.012	--	0.00096	0.0079	--	0.00098	0.0012	--	0.0011	0.0014	--	0.001
	n-Hexane	ppmv	12	--	0.095	0.0041	--	0.0011	0.0072	--	0.0012	0.0059	--	0.0011	0.026	--	0.0011	0.0038	--	0.0011	0.00059	J	0.0012	0.00095	J	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.15	--	0.077	0.011	--	0.0009	0.01	--	0.001	0.0076	--	0.00092	0.0087	--	0.00091	0.008	--	0.00092	0.0043	--	0.001	0.0026	--	0.00098
	Propylene	ppmv	0.79	--	0.19	ND	U	0.0023	0.0011	J	0.0025	0.0012	J	0.0023	0.028	--	0.0023	ND	U	0.0023	ND	U	0.0026	ND	U	0.0025
	Styrene	ppmv	ND	U	0.078	ND	U	0.00092	ND	U	0.001	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094	ND	U	0.001	ND	U	0.001
	tert-Butyl Methyl Ether	ppmv	ND	U	0.093	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.049	0.00024	J	0.00058	0.0003	J	0.00064	0.00029	J	0.00059	0.0028	--	0.00058	0.0023	--	0.00059	ND	U	0.00065	ND	U	0.00063
	Tetrahydrofuran	ppmv	ND	U	0.11	0.34	J	0.0013	0.0023	--	0.0015	0.0022	--	0.0014	0.062	--	0.0013	0.023	--	0.0014	0.0051	--	0.0015	0.0011	J	0.0014
	Toluene	ppmv	0.73	--	0.089	0.078	--	0.001	0.086	--	0.0011	0.063	--	0.0011	0.074	--	0.001	0.067	--	0.0011	0.022	--	0.0012	0.018	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.084	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.074	ND	U	0.00086	ND	U	0.00095	ND	U	0.00088	ND	U	0.00087	ND	U	0.00088	ND	U	0.00097	ND	U	0.00094
	Trichloroethylene (TCE)	ppmv	ND	U	0.062	ND	U	0.00073	ND	U	0.00081	ND	U	0.00074	0.03	--	0.00074	0.012	--	0.00074	ND	U	0.00082	ND	U	0.00079
	Trichlorofluoromethane	ppmv	ND	U	0.059	ND	U	0.0007	ND	U	0.00077	0.00025	J	0.00071	0.00075	--	0.0007	0.00064	J	0.00071	0.00031	J	0.00078	0.00038	J	0.00076
	Vinyl Acetate	ppmv	ND	U	0.95	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.013	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.13	ND	U	0.0015	ND	U	0.0017	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0017	ND	U	0.0017
	Xylenes, Total	ppmv	0.49	--	0.15	0.038	--	0.0018	0.039	--	0.002	0.028	--	0.0018	0.032	--	0.0018	0.029	--	0.0018	0.015	--	0.002	0.0096	--	0.002

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-06-252			SVMW-06-302			SVMW-07-050			SVMW-07-100			SVMW-07-150			SVMW-08-050			SVMW-08-100			SVMW-08-250		
		Field Sample ID:	VA160965			VA160966			VA160967			VA160968			VA160969			VA160970			VA160971			VA160972		
		Sample Date:	10-Oct-2016			10-Oct-2016			13-Oct-2016			13-Oct-2016			13-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.027	--	0.00086	0.095	--	0.00086	ND	U	0.0012	0.0023	--	0.0008	ND	U	0.00076	0.038	--	0.0008	0.0027	--	0.0011	0.68	--	0.00082
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.44	--	0.17	0.991	--	0.17	1.14	--	0.15	3.58	--	0.16	2.82	--	0.15	4	--	0.16	9.12	--	0.16	10.7	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.15	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.15	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.8	--	0.17	79.2	--	0.17	79.3	--	0.15	77.2	--	0.16	77.6	--	0.15	85.4	--	0.16	84.3	--	0.16	84.4	--	0.16
	Oxygen	%	18.8	--	0.17	19.8	--	0.17	19.5	--	0.15	19.2	--	0.16	19.6	--	0.15	10.6	--	0.16	6.59	--	0.16	4.87	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	1500000	--	98000	52000	--	2300	640	--	150	27000	--	210	ND	U	150	1.9E+07	--	210000	11000	--	160	2.1E+07	--	330000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	12000	ND	U	290	ND	U	19	120	--	27	ND	U	19	ND	U	27000	96	--	20	68000	--	41000
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	49000	1600	--	1100	ND	U	77	720	--	110	ND	U	76	500000	--	110000	2500	--	81	630000	--	160000
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.45	ND	U	0.01	ND	U	0.00071	ND	U	0.00097	ND	U	0.00069	ND	U	0.98	ND	U	0.00074	ND	U	1.5
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.36	ND	U	0.0083	ND	U	0.00056	ND	U	0.00077	ND	U	0.00055	ND	U	0.78	ND	U	0.00059	ND	U	1.2
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.32	0.0059	J	0.0074	0.016	--	0.0005	0.00087	--	0.00069	0.00044	J	0.00049	ND	U	0.7	0.0036	--	0.00053	ND	U	1.1
	1,1,2-Trichloroethane	ppmv	ND	U	0.45	ND	U	0.01	ND	U	0.00071	ND	U	0.00097	ND	U	0.00069	ND	U	0.98	ND	U	0.00074	ND	U	1.5
	1,1-Dichloroethane	ppmv	ND	U	0.61	ND	U	0.014	ND	U	0.00095	ND	U	0.0013	ND	U	0.00093	ND	U	1.3	ND	U	0.00099	ND	U	2
	1,1-Dichloroethene	ppmv	ND	U	0.62	ND	U	0.014	ND	U	0.00097	ND	U	0.0013	ND	U	0.00095	ND	U	1.3	ND	U	0.001	ND	U	2.1
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.33	ND	U	0.0077	ND	U	0.00052	ND	U	0.00071	ND	U	0.00051	ND	U	0.72	ND	U	0.00054	ND	U	1.1
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.5	0.0037	J	0.012	0.00043	J	0.00078	0.0069	--	0.0011	0.00033	J	0.00077	ND	U	1.1	0.0034	--	0.00082	2.3	--	1.7
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.32	0.049	--	0.0074	ND	U	0.0005	0.00055	J	0.00069	ND	U	0.00049	ND	U	0.69	0.00077	--	0.00052	ND	U	1.1
	1,2-Dichlorobenzene	ppmv	ND	U	0.41	ND	U	0.0095	ND	U	0.00064	ND	U	0.00088	ND	U	0.00063	ND	U	0.89	ND	U	0.00067	ND	U	1.4
	1,2-Dichloroethane	ppmv	ND	U	0.61	0.018	--	0.014	ND	U	0.00095	0.015	--	0.0013	ND	U	0.00093	1.3	J	1.3	0.00053	J	0.00099	1.9	J	2
	1,2-Dichloropropane	ppmv	ND	U	0.53	ND	U	0.012	ND	U	0.00083	ND	U	0.0011	ND	U	0.00082	ND	U	1.2	ND	U	0.00087	ND	U	1.8
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.5	0.0076	J	0.012	ND	U	0.00078	0.0027	--	0.0011	ND	U	0.00077	ND	U	1.1	0.0019	--	0.00082	1.1	J	1.7
	1,3-Butadiene	ppmv	ND	U	1.1	ND	U	0.026	ND	U	0.0017	ND	U	0.0024	ND	U	0.0017	ND	U	2.4	ND	U	0.0018	ND	U	3.7
	1,3-Dichlorobenzene	ppmv	ND	U	0.41	ND	U	0.0095	0.00026	J	0.00064	ND	U	0.00088	ND	U	0.00063	ND	U	0.89	0.00022	J	0.00067	ND	U	1.4
	1,4-Dichlorobenzene	ppmv	ND	U	0.41	ND	U	0.0095	ND	U	0.00064	ND	U	0.00088	ND	U	0.00063	ND	U	0.89	ND	U	0.00067	ND	U	1.4
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.68	ND	U	0.016	ND	U	0.0011	ND	U	0.0015	ND	U	0.001	ND	U	1.5	ND	U	0.0011	ND	U	2.3
	2-Hexanone	ppmv	ND	U	0.6	ND	U	0.014	ND	U	0.00094	ND	U	0.0013	ND	U	0.00092	ND	U	1.3	ND	U	0.00098	ND	U	2
	Acetone	ppmv	ND	U	10	ND	U	0.24	ND	U	0.016	0.014	U	0.022	0.02	--	0.016	ND	U	22	0.21	--	0.017	ND	U	34
	Benzene	ppmv	120	--	0.77	3.4	--	0.018	0.0012	J	0.0012	0.3	--	0.0017	0.00096	J	0.0012	45	--	1.7	0.042	--	0.0013	140	--	2.6
	Benzyl Chloride	ppmv	ND	U	0.47	ND	U	0.011	ND	U	0.00074	ND	U	0.001	ND	U	0.00073	ND	U	1	ND	U	0.00078	ND	U	1.6
	Bromodichloromethane	ppmv	ND	U	0.37	ND	U	0.0085	ND	U	0.00057	ND	U	0.00079	ND	U	0.00056	ND	U	0.8	ND	U	0.0006	ND	U	1.2
	Bromoform	ppmv	ND	U	0.24	ND	U	0.0055	ND	U	0.00037	ND	U	0.00051	ND	U	0.00037	ND	U	0.52	0.00015	J	0.00039	ND	U	0.79
	Bromomethane	ppmv	ND	U	0.63	ND	U	0.015	ND	U	0.00099	ND	U	0.0014	ND	U	0.00097	ND	U	1.4	ND	U	0.001	ND	U	2.1
	Carbon Disulfide	ppmv	ND	U	7.9	ND	U	0.18	ND	U	0.012	0.00068	J	0.017	ND	U	0.012	ND	U	17	0.00078	J	0.013	ND	U	26
	Carbon Tetrachloride	ppmv	ND	U	0.39	0.0085	J	0.0091	0.011	--	0.00061	0.00032	J	0.00084	ND	U	0.0006	ND	U	0.85	ND	U	0.00064	ND	U	1.3
	Chlorobenzene	ppmv	ND	U	0.53	ND	U	0.012	ND	U	0.00084	ND	U	0.0012	ND	U	0.00082	ND	U	1.2	ND	U	0.00087	ND	U	1.8
	Chloroethane	ppmv	ND	U	0.93	ND	U	0.022	ND	U	0.0015	ND	U	0.002	ND	U	0.0014	ND	U	2	ND	U	0.0015	ND	U	3.1
	Chloroform	ppmv	ND	U	0.5	ND	U	0.012	0.014	--	0.00079	ND	U	0.0011	ND	U	0.00077	ND	U	1.1	ND	U	0.00082	ND	U	1.7
	Chloromethane	ppmv	ND	U	1.2	ND	U	0.028	ND	UJ	0.0019	ND	UJ	0.0026	ND	UJ	0.0018	ND	U	2.6	ND	U	0.0019	ND	U	3.9
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.62	ND	U	0.014	ND	U	0.00097	ND	U	0.0013	ND	U	0.00095	ND	U	1.3	ND	U	0.001	ND	U	2.1
	cis-1,3-Dichloropropene	ppmv	ND	U	0.54	ND	U	0.013	ND	U	0.00085	ND	U	0.0012	ND	U	0.00083	ND	U	1.2	ND	U	0.00089	ND	U	1.8
	Cyclohexane	ppmv	24	--	1.4	1	--	0.033	0.0017	J	0.0022	0.56	--	0.0031	0.00078	J	0.0022	320	--	3.1	0.14	--	0.0023	370	--	4.7
	Dibromochloromethane	ppmv	ND	U	0.29	ND	U	0.0067	ND	U	0.00045	ND	U	0.00062	ND	U	0.00044	ND	U	0.63	ND	U	0.00047	ND	U	0.96
	Dichlorodifluoromethane	ppmv	ND	U	0.5	ND	U	0.012	0.00072	J	0.00078	0.00061	J	0.0011	0.00055	J	0.00076	ND	U	1.1	0.00048	J	0.00081	ND	U	1.6
	Ethanol	ppmv	ND	U	13	ND	U	0.3	0.0033	J	0.02	ND	U	0.028	ND	U	0.02	ND	U	28	ND	U	0.021	ND	U	43
	Ethyl Acetate	ppmv	ND	U	1.4	ND	U	0.032	ND	U	0.0021	ND	U	0.0029	ND	U	0.0021	ND	U	3	ND	U	0.0022	ND	U	4.5
	Ethylbenzene	ppmv	ND	U	0.57	0.0097	J	0.013	0.00035	J	0.00089	0.0007	J	0.0012	ND	U	0.00087	ND	U	1.2	0.0042	--	0.00093	9.2	--	1.9
	Hexachlorobutadiene	ppmv	ND	U	0.23	ND	U	0.0053	ND	U	0.00036	ND	U	0.0005	ND	U	0.00035	ND	U	0.5	ND	U	0.00038	ND	U	0.76
	Isopropanol	ppmv	ND	U	10	ND	U	0.23	0.0014	J	0.016	0.0061	J	0.022	0.0014	J	0.015	ND	U	22	0.0015	J	0.016	ND	U	33
	m,p-Xylene (Sum of Isomers)	ppmv	0.7	J	1.1	0.035	--	0.026	0.0013	J	0.0018	0.032	--	0.0024	0.0011	J	0.0017	ND	U	2.5	0.016	--	0.0019	20	--	3.8
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	8.3	ND	U	0.19	ND	U	0.013	0.0014	J	0.018	0.0014	J	0.013	ND	U	18	0.0054	J	0.014	ND	U	28
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.6	ND	U	0.014	ND	U	0.00094	ND	U	0.0013	ND	U	0.00092	ND	U	1.3	ND	U	0.00098	ND	U	2
	Methylene Chloride	ppmv	ND	U	0.71	ND	U	0.016	ND	U	0.0011	ND	U	0.0015	ND	U	0.0011	ND	U	1.5	ND	U	0.0012	ND	U	2.3
	Naphthalene	ppmv	ND	U	0.47	ND	U	0.011	0.00059	J	0.00073	0.00039	J	0.001	ND	U	0.00072	ND	U	1	0.0017	--	0.00077	ND	U	1.6
	n-Heptane	ppmv	ND	U	0.6	ND	U	0.014	ND	U	0.00094	ND	U	0.0013	ND	U	0.00092	160	--	1.3	0.091	--	0.00098	140	--	2
	n-Hexane	ppmv	5.8	--	0.7	0.16	--	0.016	0.0008	J	0.0011	0.29	--	0.0015	ND	U	0.0011	270	--	1.5	0.11	--	0.0011	340	--	2.3
	o-Xylene (1,2-Dimethylbenzene)	ppmv	1.3	--	0.57	0.069	--	0.013	0.00049	J	0.00089	0.024	--	0.0012	0.00049	J	0.00087	1	J	1.2	0.009	--	0.00093	6.3	--	1.9
	Propylene	ppmv	ND	U	1.4	0.027	J	0.033	0.0066	--	0.0022	ND	U	0.0031	ND	U	0.0022	7.4	--	3.1	0.0026	--	0.0023	5.2	--	4.7
	Styrene	ppmv	ND	U	0.58	ND	U	0.013	ND	U	0.0009	ND	U	0.0012	ND	U	0.00089	ND	U	1.3	ND	U	0.00095	ND	U	1.9
	tert-Butyl Methyl Ether	ppmv	ND	U	0.68	ND	U	0.016	ND	U	0.0011	ND	U	0.0015	ND	U	0.001	ND	U	1.5	ND	U	0.0011	ND	U	2.3
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.36	ND	U	0.0084	0.00019	J	0.00057	0.00027	J	0.00078	0.00017	J	0.00056	ND	U	0.79	0.00042	J	0.00059	ND	U	1.2
	Tetrahydrofuran	ppmv	ND	U	0.83	ND	U	0.019	ND	U	0.0013	0.051	--	0.0018	0.0013	J	0.0013	ND	U	1.8	0.027	--	0.0014	ND	U	2.8
	Toluene	ppmv	8	--	0.65	0.33	--	0.015	0.0028	--	0.001	0.047	--	0.0014	0.0024	--	0.001	8.5	--	1.4	0.052	--	0.0011	140	--	2.2
	trans-1,2-Dichloroethene	ppmv	ND	U	0.62	ND	U	0.014	ND	U	0.00097	ND	U	0.0013	ND	U	0.00095	ND	U	1.3	ND	U	0.001	ND	U	2.1
	trans-1,3-Dichloropropene	ppmv	ND	U	0.54	ND	U	0.013	ND	U	0.00085	ND	U	0.0012	ND	U	0.00083	ND	U	1.2	ND	U	0.00089	ND	U	1.8
	Trichloroethylene (TCE)	ppmv	ND	U	0.46	ND	U	0.011	ND	U	0.00072	ND	U	0.00099	ND	U	0.0007	ND	U	0.99	ND	U	0.00075	ND	U	1.5
	Trichlorofluoromethane	ppmv	ND	U	0.44	ND	U	0.01	0.0027	--	0.00069	ND	U	0.00094	0.00029	J	0.00067	ND	U	0.95	0.0012	--	0.00072	ND	U	1.5
	Vinyl Acetate	ppmv	ND	U	7	ND	U	0.16	ND	U	0.011	ND	U	0.015	ND	U	0.011	ND	U	15	ND	U	0.011	ND	U	23
	Vinyl chloride	ppmv	ND	U	0.96	ND	U	0.022	ND	U	0.0015	ND	U	0.0021	ND	U	0.0015	ND	U	2.1	ND	U	0.0016	ND	U	3.2
	Xylenes, Total	ppmv	2	--	1.1	0.1	--	0.026	0.0018	--	0.0018	0.056	--	0.0024	0.0016	J	0.0017	1	J	2.5	0.025	--	0.0019	26	--	3.8

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-09-050			SVMW-09-100			SVMW-09-250			SVMW-09-266			SVMW-10-050			SVMW-10-100			SVMW-10-150			SVMW-10-250		
		Field Sample ID:	VA160973			VA160974			VA160975			VA160976			VA160977			VA160978			VA160979			VA160980		
		Sample Date:	10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0017	--	0.00087	4.6	--	0.0084	0.79	--	0.00086	5	--	0.0086	17	--	0.17	17	--	0.17	2.7	--	0.17	11	--	0.17
Fixed Gases (%) Method E3C	Carbon Dioxide	%	9.34	--	0.17	10.4	--	0.17	6.79	--	0.17	6.56	--	0.17	11.6	--	0.17	10.8	--	0.17	8.69	--	0.17	10	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	86.2	--	0.17	85.3	--	0.17	87	--	0.17	89.1	--	0.17	86.1	--	0.17	86.9	--	0.17	86.4	--	0.17	88	--	0.17
	Oxygen	%	4.49	--	0.17	4.28	--	0.17	6.24	--	0.17	4.3	--	0.17	2.22	--	0.17	2.29	--	0.17	4.85	--	0.17	1.94	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	280000	--	6900	4.7E+07	--	560000	2.9E+07	--	430000	4.3E+07	--	860000	6.5E+07	--	560000	4.3E+07	--	850000	3.7E+07	--	950000	3.2E+07	--	340000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	870	96000	--	70000	ND	U	53000	200000	--	110000	190000	--	70000	ND	U	110000	ND	U	120000	220000	--	42000
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	23000	--	3500	1200000	--	280000	1400000	--	210000	1400000	--	430000	2600000	--	280000	620000	--	420000	880000	--	480000	4400000	--	170000
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.032	ND	U	2.6	ND	U	2	ND	U	3.9	ND	U	2.6	ND	U	3.9	ND	U	4.4	ND	U	1.5
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.025	ND	U	2	ND	U	1.6	ND	U	3.1	ND	U	2.1	ND	U	3.1	ND	U	3.5	ND	U	1.2
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.023	ND	U	1.8	ND	U	1.4	ND	U	2.8	ND	U	1.8	ND	U	2.8	ND	U	3.1	ND	U	1.1
	1,1,2-Trichloroethane	ppmv	ND	U	0.032	ND	U	2.6	ND	U	2	ND	U	3.9	ND	U	2.6	ND	U	3.9	ND	U	4.4	ND	U	1.5
	1,1-Dichloroethane	ppmv	ND	U	0.043	ND	U	3.5	ND	U	2.6	ND	U	5.3	ND	U	3.5	ND	U	5.2	ND	U	5.9	ND	U	2.1
	1,1-Dichloroethene	ppmv	ND	U	0.044	ND	U	3.5	ND	U	2.7	ND	U	5.4	ND	U	3.6	ND	U	5.3	ND	U	6	ND	U	2.1
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.023	ND	U	1.9	ND	U	1.4	ND	U	2.9	ND	U	1.9	ND	U	2.8	ND	U	3.2	ND	U	1.1
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.035	3.7	--	2.8	1.3	J	2.2	5.5	--	4.4	5.7	--	2.9	1.4	J	4.3	3.5	J	4.9	7.1	--	1.7
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.023	1.1	J	1.8	ND	U	1.4	1.1	J	2.8	7.4	--	1.8	2.8	--	2.7	ND	U	3.1	3.8	--	1.1
	1,2-Dichlorobenzene	ppmv	ND	U	0.029	ND	U	2.3	ND	U	1.8	ND	U	3.6	ND	U	2.3	ND	U	3.5	ND	U	4	ND	U	1.4
	1,2-Dichloroethane	ppmv	ND	U	0.043	2.6	J	3.5	1.5	J	2.6	2.8	J	5.3	3.1	J	3.5	ND	U	5.2	ND	U	5.9	1.2	J	2.1
	1,2-Dichloropropane	ppmv	ND	U	0.037	ND	U	3	ND	U	2.3	ND	U	4.7	ND	U	3	ND	U	4.6	ND	U	5.2	ND	U	1.8
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.035	1.9	J	2.8	0.98	J	2.2	2.8	J	4.4	3.1	--	2.9	ND	U	4.3	1.7	J	4.9	4.2	--	1.7
	1,3-Butadiene	ppmv	ND	U	0.078	ND	U	6.3	ND	U	4.8	ND	U	9.7	ND	U	6.4	ND	U	9.6	ND	U	11	ND	U	3.8
	1,3-Dichlorobenzene	ppmv	ND	U	0.029	ND	U	2.3	ND	U	1.8	ND	U	3.6	ND	U	2.3	ND	U	3.5	ND	U	4	ND	U	1.4
	1,4-Dichlorobenzene	ppmv	ND	U	0.029	ND	U	2.3	ND	U	1.8	ND	U	3.6	ND	U	2.3	ND	U	3.5	ND	U	4	ND	U	1.4
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.048	ND	U	3.9	ND	U	3	ND	U	6	ND	U	3.9	ND	U	5.9	ND	U	6.6	ND	U	2.3
	2-Hexanone	ppmv	ND	U	0.042	ND	U	3.4	ND	U	2.6	ND	U	5.3	ND	U	3.4	ND	U	5.2	ND	U	5.8	ND	U	2.1
	Acetone	ppmv	ND	U	0.73	ND	U	59	ND	U	45	ND	U	91	890	--	59	1200	--	89	560	--	100	410	--	36
	Benzene	ppmv	ND	U	0.054	240	--	4.4	120	--	3.3	310	--	6.7	370	--	4.4	310	--	6.6	280	--	7.5	130	--	2.6
	Benzyl Chloride	ppmv	ND	U	0.033	ND	U	2.7	ND	U	2.1	ND	U	4.2	ND	U	2.7	ND	U	4.1	ND	U	4.6	ND	U	1.6
	Bromodichloromethane	ppmv	ND	U	0.026	ND	U	2.1	ND	U	1.6	ND	U	3.2	ND	U	2.1	ND	U	3.2	ND	U	3.6	ND	U	1.3
	Bromoform	ppmv	ND	U	0.017	ND	U	1.4	ND	U	1	ND	U	2.1	ND	U	1.4	ND	U	2	ND	U	2.3	ND	U	0.82
	Bromomethane	ppmv	ND	U	0.045	ND	U	3.6	ND	U	2.8	ND	U	5.5	ND	U	3.6	ND	U	5.4	ND	U	6.1	ND	U	2.2
	Carbon Disulfide	ppmv	ND	U	0.56	ND	U	45	ND	U	34	ND	U	69	ND	U	45	5.1	J	68	ND	U	77	ND	U	27
	Carbon Tetrachloride	ppmv	ND	U	0.028	ND	U	2.2	ND	U	1.7	ND	U	3.4	ND	U	2.2	ND	U	3.4	ND	U	3.8	ND	U	1.3
	Chlorobenzene	ppmv	ND	U	0.038	ND	U	3	ND	U	2.3	ND	U	4.7	ND	U	3.1	ND	U	4.6	ND	U	5.2	ND	U	1.8
	Chloroethane	ppmv	ND	U	0.066	ND	U	5.3	ND	U	4.1	ND	U	8.2	ND	U	5.3	ND	U	8	ND	U	9	ND	U	3.2
	Chloroform	ppmv	ND	U	0.035	ND	U	2.9	ND	U	2.2	ND	U	4.4	ND	U	2.9	ND	U	4.3	ND	U	4.9	ND	U	1.7
	Chloromethane	ppmv	ND	U	0.084	ND	U	6.8	ND	U	5.2	ND	UJ	10	ND	UJ	6.8	ND	UJ	10	ND	UJ	12	ND	UJ	4.1
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.044	ND	U	3.5	ND	U	2.7	ND	U	5.4	ND	U	3.6	ND	U	5.3	ND	U	6	ND	U	2.1
	cis-1,3-Dichloropropene	ppmv	ND	U	0.038	ND	U	3.1	ND	U	2.4	ND	U	4.7	ND	U	3.1	ND	U	4.7	ND	U	5.3	ND	U	1.9
	Cyclohexane	ppmv	ND	U	0.1	670	--	8.1	400	--	6.2	700	--	12	1100	--	8.2	790	--	12	660	--	14	300	--	4.9
	Dibromochloromethane	ppmv	ND	U	0.02	ND	U	1.6	ND	U	1.3	ND	U	2.5	ND	U	1.7	ND	U	2.5	ND	U	2.8	ND	U	0.99
	Dichlorodifluoromethane	ppmv	ND	U	0.035	ND	U	2.8	ND	U	2.2	ND	U	4.3	ND	U	2.8	ND	U	4.3	ND	U	4.8	ND	U	1.7
	Ethanol	ppmv	ND	U	0.92	ND	U	74	ND	U	57	22	J	110	24	J	75	36	J	110	25	J	130	14	J	45
	Ethyl Acetate	ppmv	ND	U	0.096	ND	U	7.8	ND	U	5.9	ND	U	12	ND	U	7.8	ND	U	12	ND	U	13	ND	U	4.7
	Ethylbenzene	ppmv	ND	U	0.04	16	--	3.2	7.6	--	2.5	36	--	5	83	--	3.2	21	--	4.9	19	--	5.5	35	--	1.9
	Hexachlorobutadiene	ppmv	ND	U	0.016	ND	U	1.3	ND	U	1	ND	U	2	ND	U	1.3	ND	U	2	ND	U	2.2	ND	U	0.79
	Isopropanol	ppmv	ND	U	0.7	ND	U	57	ND	U	43	ND	U	88	70	--	57	64	J	86	45	J	97	21	J	34
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.08	43	--	6.4	39	--	4.9	70	--	9.9	190	--	6.5	53	--	9.7	43	--	11	150	--	3.9
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.057	J	0.59	ND	U	47	ND	U	36	ND	U	73	120	--	48	170	--	72	58	J	81	84	--	29
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.042	ND	U	3.4	ND	U	2.6	ND	U	5.2	6.5	--	3.4	5.7	--	5.2	ND	U	5.8	6.3	--	2.1
	Methylene Chloride	ppmv	ND	U	0.05	ND	U	4	ND	U	3.1	ND	U	6.2	ND	U	4.1	ND	U	6.1	ND	U	6.9	ND	U	2.4
	Naphthalene	ppmv	ND	U	0.033	ND	U	2.7	ND	U	2	1.8	J	4.1	ND	U	2.7	ND	U	4	ND	U	4.6	ND	U	1.6
	n-Heptane	ppmv	ND	U	0.042	390	--	3.4	350	--	2.6	510	--	5.2	1400	--	10	650	--	5.2	490	--	5.8	420	--	2.1
	n-Hexane	ppmv	ND	U	0.049	550	--	4	420	--	3	950	--	6.1	710	--	4	970	--	6	1200	--	6.8	400	--	2.4
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.04	15	--	3.2	12	--	2.5	21	--	5	51	--	3.2	13	--	4.9	12	--	5.5	45	--	1.9
	Propylene	ppmv	ND	U	0.1	6.8	J	8.1	17	--	6.2	35	--	12	8	J	8.2	13	--	12	14	J	14	41	--	4.9
	Styrene	ppmv	ND	U	0.041	ND	U	3.3	ND	U	2.5	ND	U	5.1	ND	U	3.3	ND	U	5	ND	U	5.6	ND	U	2
	tert-Butyl Methyl Ether	ppmv	ND	U	0.048	ND	U	3.9	ND	U	3	ND	U	6	ND	U	3.9	ND	U	5.9	ND	U	6.6	ND	U	2.3
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.026	ND	U	2.1	ND	U	1.6	ND	U	3.2	ND	U	2.1	ND	U	3.1	ND	U	3.5	ND	U	1.2
	Tetrahydrofuran	ppmv	0.026	J	0.059	ND	U	4.7	ND	U	3.6	ND	U	7.3	ND	U	4.8	ND	U	7.2	ND	U	8.1	ND	U	2.9
	Toluene	ppmv	ND	U	0.046	280	--	3.7	220	--	2.8	560	--	5.7	1400	--	11	610	--	5.6	340	--	6.3	460	--	2.2
	trans-1,2-Dichloroethene	ppmv	ND	U	0.044	ND	U	3.5	ND	U	2.7	ND	U	5.4	ND	U	3.6	ND	U	5.3	ND	U	6	ND	U	2.1
	trans-1,3-Dichloropropene	ppmv	ND	U	0.038	ND	U	3.1	ND	U	2.4	ND	U	4.7	ND	U	3.1	ND	U	4.7	ND	U	5.3	ND	U	1.9
	Trichloroethylene (TCE)	ppmv	ND	U	0.032	ND	U	2.6	ND	U	2	ND	U	4	ND	U	2.6	ND	U	3.9	ND	U	4.4	ND	U	1.6
	Trichlorofluoromethane	ppmv	ND	U	0.031	ND	U	2.5	ND	U	1.9	ND	U	3.8	ND	U	2.5	ND	U	3.8	ND	U	4.2	ND	U	1.5
	Vinyl Acetate	ppmv	ND	U	0.49	ND	U	40	ND	U	30	ND	U	61	ND	U	40	ND	U	60	ND	U	68	ND	U	24
	Vinyl chloride	ppmv	ND	U	0.068	ND	U	5.5	ND	U	4.2	ND	U	8.4	ND	U	5.5	ND	U	8.3	ND	U	9.3	ND	U	3.3
	Xylenes, Total	ppmv	ND	U	0.08	58	--	6.4	50	--	4.9	90	--	9.9	240	--	6.5	66	--	9.7	55	--	11	200	--	3.9

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-11-050			SVMW-11-100			SVMW-11-250			SVMW-11-260			SVMW-12-150			SVMW-12-250			SVMW-12-250			SVMW-12-350		
		Field Sample ID:	VA160981			VA160982			VA160983			VA160984			VA160985			VA160986			VA160987			VA160988		
		Sample Date:	10-Oct-2016			10-Oct-2016			10-Oct-2016			10-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	3.2	--	0.017	7.7	--	0.016	4	--	0.0081	7.4	--	0.0083	0.00057	J	0.0008	ND	U	0.00082	ND	U	0.0011	0.00057	J	0.0011
Fixed Gases (%) Method E3C	Carbon Dioxide	%	12.9	--	0.17	13	--	0.16	12.1	--	0.16	13	--	0.17	0.168	--	0.16	0.212	--	0.16	0.206	--	0.16	0.376	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	86.4	--	0.17	86.1	--	0.16	86.2	--	0.16	86.4	--	0.17	79.5	--	0.16	79.1	--	0.16	79.1	--	0.16	78.5	--	0.16
	Oxygen	%	0.772	J	0.17	0.875	--	0.16	1.57	--	0.16	0.635	--	0.17	20.4	--	0.16	20.6	--	0.16	20.7	--	0.16	21.1	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	7.6E+07	--	840000	9.8E+07	--	810000	6.9E+07	--	930000	3E+07	--	330000	400	--	160	480	--	160	650	--	220	730	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	190000	--	100000	200000	--	100000	250000	--	120000	130000	--	42000	ND	U	20	ND	U	20	ND	U	27	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	1500000	--	420000	1300000	--	410000	1700000	--	460000	1500000	--	170000	ND	U	80	89	--	82	ND	U	110	98	--	79
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	3.8	ND	U	3.7	ND	U	4.2	ND	U	1.5	ND	U	0.00073	ND	U	0.00075	ND	U	0.001	ND	U	0.00072
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	3	ND	U	3	ND	U	3.4	ND	U	1.2	ND	U	0.00058	ND	U	0.00059	ND	U	0.00079	ND	U	0.00058
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	2.7	ND	U	2.6	ND	U	3	ND	U	1.1	0.037	--	0.00052	0.16	--	0.0053	0.16	--	0.0035	0.0035	--	0.00052
	1,1,2-Trichloroethane	ppmv	ND	U	3.8	ND	U	3.7	ND	U	4.2	ND	U	1.5	ND	U	0.00073	ND	U	0.00075	ND	U	0.001	ND	U	0.00072
	1,1-Dichloroethane	ppmv	ND	U	5.2	ND	U	5	ND	U	5.7	ND	U	2.1	ND	U	0.00098	ND	U	0.001	ND	U	0.0013	ND	U	0.00098
	1,1-Dichloroethene	ppmv	ND	U	5.3	ND	U	5.1	ND	U	5.8	ND	U	2.1	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	2.8	ND	U	2.7	ND	U	3.1	ND	U	1.1	ND	U	0.00054	ND	U	0.00055	ND	U	0.00073	ND	U	0.00053
	1,2,4-Trimethylbenzene	ppmv	6.6	--	4.2	7.6	--	4.1	9.4	--	4.7	4.1	--	1.7	0.00057	J	0.00081	0.00034	J	0.00083	0.00074	J	0.0011	0.00029	J	0.0008
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	2.8	--	2.7	8.3	--	2.6	1.1	J	3	2	--	1.1	ND	U	0.00052	ND	U	0.00053	ND	U	0.00071	ND	U	0.00051
	1,2-Dichlorobenzene	ppmv	ND	U	3.5	ND	U	3.4	ND	U	3.9	ND	U	1.4	ND	U	0.00066	ND	U	0.00068	ND	U	0.0009	ND	U	0.00066
	1,2-Dichloroethane	ppmv	2.6	J	5.2	6.3	--	5	ND	U	5.7	0.68	J	2.1	ND	U	0.00098	ND	U	0.001	ND	U	0.0013	ND	U	0.00098
	1,2-Dichloropropane	ppmv	ND	U	4.5	ND	U	4.4	ND	U	5	ND	U	1.8	ND	U	0.00086	ND	U	0.00088	ND	U	0.0012	ND	U	0.00086
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	3	J	4.2	3.5	J	4.1	4.3	J	4.7	2.1	--	1.7	ND	U	0.00081	ND	U	0.00083	ND	U	0.0011	ND	U	0.0008
	1,3-Butadiene	ppmv	ND	U	9.4	ND	U	9.2	ND	U	10	ND	U	3.8	ND	U	0.0018	ND	U	0.0018	ND	U	0.0025	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	3.5	ND	U	3.4	ND	U	3.9	ND	U	1.4	ND	U	0.00066	ND	U	0.00068	ND	U	0.0009	ND	U	0.00066
	1,4-Dichlorobenzene	ppmv	ND	U	3.5	ND	U	3.4	ND	U	3.9	ND	U	1.4	ND	U	0.00066	ND	U	0.00068	ND	U	0.0009	ND	U	0.00066
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	5.8	ND	U	5.6	ND	U	6.4	ND	U	2.3	ND	U	0.0011	ND	U	0.0011	ND	U	0.0015	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	5.1	ND	U	4.9	ND	U	5.7	ND	U	2	ND	U	0.00097	ND	U	0.001	ND	U	0.0013	ND	U	0.00096
	Acetone	ppmv	920	--	88	940	--	85	690	--	97	170	--	35	0.013	J	0.017	0.038	--	0.017	ND	U	0.023	0.06	--	0.017
	Benzene	ppmv	300	--	6.5	630	--	6.3	270	--	7.2	80	--	2.6	0.0023	--	0.0012	0.043	--	0.0013	0.043	--	0.0017	0.0029	--	0.0012
	Benzyl Chloride	ppmv	ND	U	4	ND	U	3.9	ND	U	4.5	ND	U	1.6	ND	U	0.00077	ND	U	0.00079	ND	U	0.001	ND	U	0.00076
	Bromodichloromethane	ppmv	ND	U	3.1	ND	U	3	ND	U	3.5	ND	U	1.2	ND	U	0.00059	ND	U	0.00061	ND	U	0.00081	ND	U	0.00059
	Bromoform	ppmv	ND	U	2	ND	U	2	ND	U	2.2	ND	U	0.8	ND	U	0.00038	ND	U	0.00039	ND	U	0.00053	ND	U	0.00038
	Bromomethane	ppmv	ND	U	5.4	ND	U	5.2	ND	U	6	ND	U	2.1	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	67	ND	U	65	ND	U	74	ND	U	27	0.0006	J	0.013	0.00069	J	0.013	0.001	J	0.017	0.0026	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	3.3	ND	U	3.2	ND	U	3.7	ND	U	1.3	0.0021	--	0.00063	0.0026	--	0.00065	0.0026	--	0.00086	0.00045	J	0.00063
	Chlorobenzene	ppmv	ND	U	4.5	ND	U	4.4	ND	U	5	ND	U	1.8	ND	U	0.00086	ND	U	0.00089	ND	U	0.0012	ND	U	0.00086
	Chloroethane	ppmv	ND	U	7.9	ND	U	7.7	ND	U	8.8	ND	U	3.1	ND	U	0.0015	ND	U	0.0015	ND	U	0.0021	0.00067	J	0.0015
	Chloroform	ppmv	ND	U	4.3	ND	U	4.1	ND	U	4.7	ND	U	1.7	0.00098	--	0.00081	0.002	--	0.00083	0.002	--	0.0011	ND	U	0.00081
	Chloromethane	ppmv	ND	U	10	ND	U	9.8	ND	U	11	ND	U	4	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.0026	ND	UJ	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	5.3	ND	U	5.1	ND	U	5.8	ND	U	2.1	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	4.6	ND	U	4.5	ND	U	5.1	ND	U	1.8	ND	U	0.00088	ND	U	0.0009	ND	U	0.0012	ND	U	0.00087
	Cyclohexane	ppmv	830	--	12	1400	--	12	800	--	13	300	--	4.8	ND	U	0.0023	0.013	--	0.0024	0.013	--	0.0032	0.0014	J	0.0023
	Dibromochloromethane	ppmv	ND	U	2.5	ND	U	2.4	ND	U	2.7	ND	U	0.97	ND	U	0.00047	ND	U	0.00048	ND	U	0.00064	ND	U	0.00046
	Dichlorodifluoromethane	ppmv	ND	U	4.2	ND	U	4.1	ND	U	4.7	ND	U	1.7	0.0097	--	0.0008	0.0052	--	0.00082	0.0053	--	0.0011	ND	U	0.0008
	Ethanol	ppmv	ND	U	110	ND	U	110	ND	U	120	ND	U	44	ND	U	0.021	ND	U	0.022	0.007	J	0.029	ND	U	0.021
	Ethyl Acetate	ppmv	ND	U	12	ND	U	11	ND	U	13	ND	U	4.6	ND	U	0.0022	ND	U	0.0023	ND	U	0.003	ND	U	0.0022
	Ethylbenzene	ppmv	89	--	4.8	83	--	4.7	54	--	5.3	42	--	1.9	0.00045	J	0.00092	0.00037	J	0.00094	0.00071	J	0.0013	ND	U	0.00091
	Hexachlorobutadiene	ppmv	ND	U	2	ND	U	1.9	ND	U	2.2	ND	U	0.78	ND	U	0.00037	ND	U	0.00038	ND	U	0.00051	ND	U	0.00037
	Isopropanol	ppmv	19	J	85	15	J	82	ND	U	94	ND	U	34	ND	U	0.016	ND	U	0.017	ND	U	0.022	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	180	--	9.6	180	--	9.3	140	--	11	100	--	3.8	0.0017	J	0.0018	0.0013	J	0.0019	0.0026	--	0.0025	0.0012	J	0.0018
	Methyl Ethyl Ketone (2-Butanone)	ppmv	150	--	71	160	--	69	160	--	79	25	J	28	0.013	J	0.013	0.0012	J	0.014	0.0013	J	0.018	0.0025	J	0.013
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	5.1	8.4	--	4.9	ND	U	5.6	ND	U	2	ND	U	0.00097	ND	U	0.00099	ND	U	0.0013	ND	U	0.00096
	Methylene Chloride	ppmv	ND	U	6	ND	U	5.8	ND	U	6.7	ND	U	2.4	ND	U	0.0011	ND	U	0.0012	ND	U	0.0016	ND	U	0.0011
	Naphthalene	ppmv	ND	U	4	ND	U	3.9	ND	U	4.4	ND	U	1.6	0.00065	J	0.00076	0.00041	J	0.00078	0.00073	J	0.001	0.00035	J	0.00075
	n-Heptane	ppmv	1100	--	5.1	980	--	4.9	1400	--	9.9	310	--	2	ND	U	0.00097	ND	U	0.00099	ND	U	0.0013	ND	U	0.00096
	n-Hexane	ppmv	640	--	5.9	1200	--	5.7	390	--	6.6	120	--	2.4	ND	U	0.0011	0.0032	--	0.0012	0.0033	--	0.0015	0.0008	J	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	50	--	4.8	48	--	4.7	45	--	5.3	28	--	1.9	0.00058	J	0.00092	0.00084	J	0.00094	0.0013	--	0.0013	0.0004	J	0.00091
	Propylene	ppmv	25	--	12	10	J	12	30	--	13	1.6	J	4.8	ND	U	0.0023	0.0063	--	0.0024	0.0065	--	0.0032	0.0019	J	0.0023
	Styrene	ppmv	ND	U	4.9	ND	U	4.8	ND	U	5.4	ND	U	2	ND	U	0.00093	ND	U	0.00096	ND	U	0.0013	ND	U	0.00093
	tert-Butyl Methyl Ether	ppmv	ND	U	5.8	ND	U	5.6	ND	U	6.4	ND	U	2.3	ND	U	0.0011	ND	U	0.0011	ND	U	0.0015	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	3.1	ND	U	3	ND	U	3.4	ND	U	1.2	0.0035	--	0.00059	0.0025	--	0.0006	0.0025	--	0.0008	0.00042	J	0.00058
	Tetrahydrofuran	ppmv	ND	U	7.1	ND	U	6.9	ND	U	7.9	ND	U	2.8	0.0071	--	0.0013	0.002	--	0.0014	0.0031	--	0.0018	0.0021	--	0.0013
	Toluene	ppmv	1100	--	5.5	1400	--	11	1100	--	6.1	460	--	2.2	0.0047	--	0.0011	0.0096	--	0.0011	0.013	--	0.0014	0.003	--	0.001
	trans-1,2-Dichloroethene	ppmv	ND	U	5.3	ND	U	5.1	ND	U	5.8	ND	U	2.1	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	4.6	ND	U	4.5	ND	U	5.1	ND	U	1.8	ND	U	0.00088	ND	U	0.0009	ND	U	0.0012	ND	U	0.00087
	Trichloroethylene (TCE)	ppmv	ND	U	3.9	ND	U	3.8	ND	U	4.3	ND	U	1.5	0.078	--	0.00074	0.045	--	0.00076	0.045	--	0.001	0.00067	J	0.00074
	Trichlorofluoromethane	ppmv	ND	U	3.7	ND	U	3.6	ND	U	4.1	ND	U	1.5	0.0011	--	0.00071	0.001	--	0.00073	0.001	--	0.00097	ND	U	0.0007
	Vinyl Acetate	ppmv	ND	U	59	ND	U	58	ND	U	66	ND	U	24	ND	U	0.011	ND	U	0.012	ND	U	0.015	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	8.2	ND	U	7.9	ND	U	9.1	ND	U	3.2	0.0016	--	0.0016	0.002	--	0.0016	0.0026	--	0.0021	0.042	--	0.0015
	Xylenes, Total	ppmv	230	--	9.6	230	--	9.3	190	--	11	130	--	3.8	0.0023	--	0.0018	0.0021	--	0.0019	0.0039	--	0.0025	0.0016	J	0.0018

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-12-450			SVMW-13-150			SVMW-13-250			SVMW-13-350			SVMW-13-450			SVMW-14-150			SVMW-14-250			SVMW-14-350		
		Field Sample ID:	VA160989			VA160990			VA160991			VA160992			VA160993			VA160994			VA160995			VA160996		
		Sample Date:	12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0011	0.031	--	0.00087	ND	U	0.00086	ND	U	0.0014	0.00059	J	0.00087	ND	U	0.00077	0.00068	J	0.00077	ND	U	0.00077
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.209	--	0.16	5.3	--	0.17	0.543	--	0.17	0.553	--	0.17	0.58	--	0.17	0.215	J	0.15	0.219	J	0.15	0.197	J	0.15
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	UJ	0.15	ND	UJ	0.15	ND	UJ	0.15
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.15	ND	U	0.15	ND	U	0.15
	Nitrogen	%	78.8	--	0.16	85.5	--	0.17	78.8	--	0.17	79	--	0.17	79.2	--	0.17	79.6	J	0.15	79.6	J	0.15	79.3	J	0.15
	Oxygen	%	21	--	0.16	9.2	--	0.17	20.7	--	0.17	20.5	--	0.17	20.2	--	0.17	20.2	--	0.15	20.2	--	0.15	20.5	--	0.15
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	250	--	160	2000000	--	12000	640	--	170	1500	--	170	5300	--	170	430	--	150	500	--	150	ND	U	310
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	13000	--	1400	68	--	21	30	--	21	ND	U	22	37	--	19	39	--	19	ND	U	38
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	81	1000000	--	5800	2400	--	86	450	--	86	610	--	87	180	--	77	160	--	77	ND	U	150
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.053	ND	U	0.00078	ND	U	0.00078	ND	U	0.0008	0.0005	J	0.0007	0.00064	J	0.0007	ND	U	0.0014
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00059	0.89	--	0.042	ND	U	0.00062	ND	U	0.00062	ND	U	0.00063	ND	U	0.00056	ND	U	0.00056	ND	U	0.0011
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.12	--	0.0053	ND	U	0.038	0.00028	J	0.00056	ND	U	0.00056	ND	U	0.00057	0.023	--	0.0005	0.017	--	0.0005	0.0022	--	0.001
	1,1,2-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.053	ND	U	0.00078	ND	U	0.00078	ND	U	0.0008	ND	U	0.0007	ND	U	0.0007	ND	U	0.0014
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.071	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.0011	--	0.00095	0.0012	--	0.00095	0.00065	J	0.0019
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.073	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.00041	J	0.00097	ND	U	0.00097	ND	U	0.0019
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00055	ND	U	0.039	ND	U	0.00058	ND	U	0.00058	ND	U	0.00059	ND	U	0.00052	ND	U	0.00052	ND	U	0.001
	1,2,4-Trimethylbenzene	ppmv	0.00028	J	0.00082	0.34	--	0.059	0.0023	--	0.00087	0.0014	--	0.00087	0.00071	J	0.00089	0.0011	--	0.00078	0.0017	--	0.00078	0.00047	J	0.0016
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00053	ND	U	0.038	ND	U	0.00056	ND	U	0.00056	0.00018	J	0.00057	ND	U	0.0005	ND	U	0.0005	ND	U	0.001
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.048	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.00064	ND	U	0.00064	ND	U	0.0013
	1,2-Dichloroethane	ppmv	ND	U	0.001	0.03	J	0.071	ND	U	0.0011	ND	U	0.0011	0.00091	J	0.0011	ND	U	0.00095	ND	U	0.00095	ND	U	0.0019
	1,2-Dichloropropane	ppmv	ND	U	0.00088	ND	U	0.062	ND	U	0.00093	ND	U	0.00093	ND	U	0.00094	ND	U	0.00083	ND	U	0.00083	ND	U	0.0017
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00082	0.38	--	0.059	0.0016	--	0.00087	0.00081	J	0.00087	0.00068	J	0.00089	0.00033	J	0.00078	0.00049	J	0.00078	ND	U	0.0016
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.13	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	ND	U	0.0017	ND	U	0.0017	ND	U	0.0035
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.048	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.00064	ND	U	0.00064	ND	U	0.0013
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.048	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.00064	ND	U	0.00064	ND	U	0.0013
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.08	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0021
	2-Hexanone	ppmv	ND	U	0.00099	ND	U	0.07	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.00093	ND	U	0.00093	ND	U	0.0019
	Acetone	ppmv	0.032	--	0.017	ND	U	1.2	0.035	--	0.018	ND	U	0.018	ND	U	0.018	1.4	--	0.016	0.56	--	0.016	2.6	--	0.032
	Benzene	ppmv	0.0061	--	0.0013	3.5	--	0.09	0.0024	--	0.0013	0.0096	--	0.0013	0.11	--	0.0014	0.0011	J	0.0012	0.0013	--	0.0012	0.0018	J	0.0024
	Benzyl Chloride	ppmv	ND	U	0.00078	ND	U	0.056	ND	U	0.00083	ND	U	0.00083	ND	U	0.00084	ND	U	0.00074	ND	U	0.00074	ND	U	0.0015
	Bromodichloromethane	ppmv	ND	U	0.0006	ND	U	0.043	0.00022	J	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.00057	ND	U	0.00057	ND	U	0.0011
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.028	ND	U	0.00041	ND	U	0.00041	ND	U	0.00042	ND	U	0.00037	ND	U	0.00037	ND	U	0.00074
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.074	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00099	ND	U	0.00099	ND	U	0.002
	Carbon Disulfide	ppmv	0.0008	J	0.013	0.042	J	0.93	0.00082	J	0.014	0.00056	J	0.014	0.00051	J	0.014	0.0019	J	0.012	0.00065	J	0.012	0.00083	J	0.025
	Carbon Tetrachloride	ppmv	0.0016	--	0.00064	ND	U	0.046	ND	U	0.00068	0.00024	J	0.00068	0.00032	J	0.00069	0.032	--	0.00061	0.039	--	0.00061	0.0044	--	0.0012
	Chlorobenzene	ppmv	ND	U	0.00088	ND	U	0.063	ND	U	0.00093	ND	U	0.00093	ND	U	0.00094	ND	U	0.00083	ND	U	0.00083	ND	U	0.0017
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.11	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0029
	Chloroform	ppmv	0.0015	--	0.00083	ND	U	0.059	0.0006	J	0.00088	ND	U	0.00088	ND	U	0.00089	0.0023	--	0.00078	0.0031	--	0.00078	0.00081	J	0.0016
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.14	ND	UJ	0.0021	ND	U	0.0021	ND	U	0.0021	ND	U	0.0019	ND	U	0.0019	ND	U	0.0037
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.073	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.0012	--	0.00097	0.0013	--	0.00097	0.0025	--	0.0019
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.064	ND	U	0.00094	ND	U	0.00094	ND	U	0.00096	ND	U	0.00084	ND	U	0.00084	ND	U	0.0017
	Cyclohexane	ppmv	0.0011	J	0.0024	7.9	--	0.17	0.00086	J	0.0025	0.018	--	0.0025	0.12	--	0.0025	0.00075	J	0.0022	ND	U	0.0022	ND	U	0.0044
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.034	ND	U	0.0005	ND	U	0.0005	ND	U	0.00051	ND	U	0.00045	ND	U	0.00045	ND	U	0.0009
	Dichlorodifluoromethane	ppmv	0.0012	--	0.00082	ND	U	0.058	0.0052	--	0.00086	0.0011	--	0.00086	0.00073	J	0.00088	0.0019	--	0.00077	0.0061	--	0.00077	0.029	--	0.0015
	Ethanol	ppmv	ND	U	0.022	ND	U	1.5	ND	U	0.023	ND	U	0.023	ND	U	0.023	ND	U	0.02	ND	U	0.02	ND	U	0.041
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.16	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0021	ND	U	0.0021	ND	U	0.0042
	Ethylbenzene	ppmv	0.0003	J	0.00093	0.035	J	0.066	0.00047	J	0.00098	0.00057	J	0.00098	0.00052	J	0.001	0.00069	J	0.00088	0.0013	--	0.00088	ND	U	0.0018
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.027	ND	U	0.0004	ND	U	0.0004	ND	U	0.00041	ND	U	0.00036	ND	U	0.00036	ND	U	0.00072
	Isopropanol	ppmv	ND	U	0.016	ND	U	1.2	ND	U	0.017	ND	U	0.017	ND	U	0.018	ND	U	0.016	ND	U	0.016	0.016	J	0.031
	m,p-Xylene (Sum of Isomers)	ppmv	0.001	J	0.0019	1.5	--	0.13	0.0054	--	0.002	0.0038	--	0.002	0.003	--	0.002	0.0024	--	0.0018	0.0048	--	0.0018	0.0015	J	0.0035
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0011	J	0.014	ND	U	0.98	0.0018	J	0.015	ND	U	0.015	ND	U	0.015	0.23	--	0.013	0.43	J	0.013	1.2	J	0.026
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00099	ND	U	0.07	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.00093	ND	U	0.00093	ND	U	0.0019
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.083	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0011	ND	U	0.0011	ND	U	0.0022
	Naphthalene	ppmv	0.00031	J	0.00077	ND	U	0.055	0.001	--	0.00082	0.00096	--	0.00082	0.00061	J	0.00083	0.0012	--	0.00073	0.00072	J	0.00073	ND	U	0.0015
	n-Heptane	ppmv	ND	U	0.00099	6.3	--	0.07	0.0011	--	0.001	0.0005	J	0.001	0.00054	J	0.0011	0.00041	J	0.00093	0.00094	--	0.00093	ND	U	0.0019
	n-Hexane	ppmv	ND	U	0.0011	3.9	--	0.082	0.00044	J	0.0012	0.00038	J	0.0012	0.0073	--	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0022
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0004	J	0.00093	0.41	--	0.066	0.0015	--	0.00098	0.0012	--	0.00098	0.0019	--	0.001	0.00087	J	0.00088	0.0021	--	0.00088	0.0006	J	0.0018
	Propylene	ppmv	0.00078	J	0.0024	1.2	--	0.17	ND	U	0.0025	0.00096	J	0.0025	0.013	--	0.0025	ND	U	0.0022	ND	U	0.0022	ND	U	0.0044
	Styrene	ppmv	ND	U	0.00095	ND	U	0.068	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0009	ND	U	0.0009	ND	U	0.0018
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.08	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0021
	Tetrachloroethylene (PCE)	ppmv	0.0023	--	0.0006	ND	U	0.043	ND	U	0.00063	ND	U	0.00063	ND	U	0.00064	0.024	--	0.00056	0.027	--	0.00056	0.0087	--	0.0011
	Tetrahydrofuran	ppmv	0.00056	J	0.0014	0.59	--	0.098	0.0015	--	0.0015	0.022	--	0.0015	ND	U	0.0015	0.94	J	0.0013	0.26	--	0.0013	0.65	J	0.0026
	Toluene	ppmv	0.0032	--	0.0011	0.82	--	0.077	0.0051	--	0.0011	0.011	--	0.0011	0.01	--	0.0012	0.0057	--	0.001	0.011	--	0.001	0.0058	--	0.002
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.073	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00097	ND	U	0.00097	ND	U	0.0019
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.064	ND	U	0.00094	ND	U	0.00094	ND	U	0.00096	ND	U	0.00084	ND	U	0.00084	ND	U	0.0017
	Trichloroethylene (TCE)	ppmv	0.006	--	0.00075	ND	U	0.054	ND	U	0.0008	ND	U	0.0008	ND	U	0.00081	0.11	--	0.00071	0.13	--	0.00071	0.022	--	0.0014
	Trichlorofluoromethane	ppmv	0.00039	J	0.00072	ND	U	0.051	ND	U	0.00076	ND	U	0.00076	0.00059	J	0.00077	0.0018	--	0.00068	0.0017	--	0.00068	0.0011	J	0.0014
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.82	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.011	ND	U	0.022
	Vinyl chloride	ppmv	0.0019	--	0.0016	0.65	--	0.11	0.00085	J	0.0017	0.0011	J	0.0017	0.0007	J	0.0017	ND	U	0.0015	ND	U	0.0015	ND	U	0.003
	Xylenes, Total	ppmv	0.0014	J	0.0019	1.9	--	0.13	0.007	--	0.002	0.005	--	0.002	0.0049	--	0.002	0.0033	--	0.0018	0.0069	--	0.0018	0.0021	J	0.0035

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVMW-14-450			SVMW-15-150			SVMW-15-150			SVMW-15-250			SVMW-15-350			SVMW-15-450			KAFB-106028-150			KAFB-106028-250		
		Field Sample ID:	VA160997			VA160998			VA160999			VA161000			VA161001			VA161002			VA161003			VA161004		
		Sample Date:	12-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			17-Oct-2016			17-Oct-2016		
		Sample Type:	REG			REG			Field Duplicate			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	0.00096	--	0.00081	0.00085	J	0.0012	0.00078	J	0.00084	0.026	--	0.00084	0.049	--	0.00084	ND	U	0.00084	ND	U	0.00083
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.781	J	0.16	0.425	--	0.16	0.423	--	0.17	0.367	--	0.17	0.619	--	0.17	0.847	--	0.17	ND	U	0.17	0.24	--	0.17
	Carbon Monoxide	%	ND	UJ	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	78.6	J	0.16	78.8	--	0.16	78.8	--	0.17	79.2	--	0.17	78.9	--	0.17	80.6	--	0.17	79.8	--	0.17	78.9	--	0.17
	Oxygen	%	20.6	--	0.16	20.7	--	0.16	20.7	--	0.17	20.5	--	0.17	20.5	--	0.17	18.5	--	0.17	20.1	--	0.17	20.8	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	160	ND	U	170	17000	--	560	24000	--	1700	630000	--	9500	ND	U	170	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	65	--	20	54	--	21	ND	U	70	ND	U	210	14000	--	1200	25	--	21	ND	U	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	190	--	81	170	--	84	ND	U	280	1100	--	840	500000	--	4800	260	--	84	ND	U	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00074	ND	U	0.00077	ND	U	0.0026	ND	U	0.0077	ND	U	0.044	ND	U	0.00077	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00059	ND	U	0.00061	ND	U	0.002	ND	U	0.0061	ND	U	0.035	ND	U	0.00061	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	0.00093	--	0.00053	0.00096	--	0.00054	0.00077	J	0.0018	ND	U	0.0054	ND	U	0.031	ND	U	0.00055	ND	U	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00074	ND	U	0.00077	ND	U	0.0026	ND	U	0.0077	ND	U	0.044	ND	U	0.00077	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.0035	ND	U	0.01	ND	U	0.059	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0035	ND	U	0.011	ND	U	0.06	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00055	ND	U	0.00056	ND	U	0.0019	ND	U	0.0056	ND	U	0.032	ND	U	0.00057	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	0.00038	J	0.00081	0.0021	--	0.00082	0.0018	--	0.00085	0.001	J	0.0028	ND	U	0.0085	0.26	--	0.049	0.00067	J	0.00085	0.00039	J	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	0.00025	J	0.00053	0.00021	J	0.00054	ND	U	0.0018	0.012	--	0.0054	0.019	J	0.031	ND	U	0.00055	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.0023	ND	U	0.0069	ND	U	0.04	ND	U	0.0007	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.0035	0.011	--	0.01	ND	U	0.059	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00086	ND	U	0.00088	ND	U	0.0009	ND	U	0.003	ND	U	0.009	ND	U	0.052	ND	U	0.00091	ND	U	0.0009
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	0.00056	J	0.00082	0.00048	J	0.00085	ND	U	0.0028	ND	U	0.0085	0.24	--	0.049	ND	U	0.00085	ND	U	0.00084
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0063	ND	U	0.019	ND	U	0.11	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.0023	ND	U	0.0069	ND	U	0.04	ND	U	0.0007	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.0023	ND	U	0.0069	ND	U	0.04	ND	U	0.0007	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0039	ND	U	0.012	ND	U	0.066	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.00097	ND	U	0.00099	ND	U	0.001	ND	U	0.0034	ND	U	0.01	ND	U	0.058	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	0.045	--	0.017	0.26	--	0.017	0.17	--	0.018	ND	U	0.059	ND	U	0.18	ND	U	1	0.058	--	0.018	0.15	--	0.017
	Benzene	ppmv	0.00059	J	0.0012	0.0028	--	0.0013	0.0022	--	0.0013	0.75	--	0.0044	2.1	--	0.013	6.2	--	0.075	0.00043	J	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00078	ND	U	0.00081	ND	U	0.0027	ND	U	0.0081	ND	U	0.046	ND	U	0.00081	ND	U	0.0008
	Bromodichloromethane	ppmv	ND	U	0.00059	ND	U	0.0006	ND	U	0.00062	ND	U	0.0021	ND	U	0.0062	ND	U	0.036	ND	U	0.00063	ND	U	0.00062
	Bromoform	ppmv	ND	U	0.00038	ND	U	0.00039	ND	U	0.0004	ND	U	0.0014	ND	U	0.004	ND	U	0.023	ND	U	0.00041	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0036	ND	U	0.011	ND	U	0.061	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0005	J	0.013	0.00082	J	0.013	0.00057	J	0.013	ND	U	0.045	ND	U	0.13	ND	U	0.77	0.00053	J	0.013	0.0005	J	0.013
	Carbon Tetrachloride	ppmv	0.00031	J	0.00063	ND	U	0.00064	ND	U	0.00066	ND	U	0.0022	ND	U	0.0066	ND	U	0.038	ND	U	0.00067	ND	U	0.00066
	Chlorobenzene	ppmv	ND	U	0.00086	ND	U	0.00088	ND	U	0.00091	ND	U	0.003	ND	U	0.0091	ND	U	0.052	ND	U	0.00091	ND	U	0.0009
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0016	ND	U	0.0053	ND	U	0.016	ND	U	0.09	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00081	ND	U	0.00083	ND	U	0.00086	ND	U	0.0029	ND	U	0.0086	ND	U	0.049	ND	U	0.00086	ND	U	0.00085
	Chloromethane	ppmv	ND	U	0.0019	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0068	ND	UJ	0.02	ND	UJ	0.12	ND	UJ	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0035	ND	U	0.011	ND	U	0.06	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00089	ND	U	0.00092	ND	U	0.0031	ND	U	0.0092	ND	U	0.053	ND	U	0.00093	ND	U	0.00091
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	0.76	--	0.0081	0.52	--	0.024	9.3	--	0.14	ND	U	0.0024	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00048	ND	U	0.00049	ND	U	0.0016	ND	U	0.0049	ND	U	0.028	ND	U	0.00049	ND	U	0.00049
	Dichlorodifluoromethane	ppmv	0.00074	J	0.0008	0.0011	--	0.00082	0.0011	--	0.00084	ND	U	0.0028	ND	U	0.0084	ND	U	0.048	0.00095	--	0.00085	0.0035	--	0.00084
	Ethanol	ppmv	0.01	U	0.021	0.0043	J	0.022	0.0047	J	0.022	ND	U	0.074	ND	U	0.22	ND	U	1.3	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	0.0095	--	0.0022	ND	U	0.0022	ND	U	0.0023	ND	U	0.0078	ND	U	0.023	ND	U	0.13	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	0.00044	J	0.00092	0.0017	--	0.00093	0.0013	--	0.00096	0.0011	J	0.0032	ND	U	0.0096	0.44	--	0.055	0.00038	J	0.00097	ND	U	0.00096
	Hexachlorobutadiene	ppmv	ND	U	0.00037	ND	U	0.00038	ND	U	0.00039	ND	U	0.0013	ND	U	0.0039	ND	U	0.022	ND	U	0.00039	ND	U	0.00039
	Isopropanol	ppmv	0.0017	J	0.016	0.0022	J	0.016	ND	U	0.017	ND	U	0.057	ND	U	0.17	ND	U	0.97	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.0013	J	0.0018	0.0061	--	0.0019	0.0049	--	0.0019	0.0084	--	0.0064	0.025	--	0.019	1.4	--	0.11	0.0031	--	0.0019	0.0023	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.02	--	0.013	0.031	--	0.014	0.024	--	0.014	ND	U	0.047	ND	U	0.14	0.062	J	0.81	0.0093	J	0.014	0.023	--	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00097	0.00037	J	0.00099	ND	U	0.001	ND	U	0.0034	ND	U	0.01	ND	U	0.058	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.004	ND	U	0.012	ND	U	0.069	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00042	J	0.00076	0.0026	--	0.00077	0.0021	--	0.0008	0.0011	J	0.0027	ND	U	0.008	ND	U	0.046	0.00041	J	0.0008	ND	U	0.00079
	n-Heptane	ppmv	ND	U	0.00097	0.00059	J	0.00099	0.00045	J	0.001	0.004	--	0.0034	0.0053	J	0.01	5.5	--	0.058	ND	U	0.001	ND	U	0.001
	n-Hexane	ppmv	ND	U	0.0011	0.00041	J	0.0011	ND	U	0.0012	0.12	--	0.004	0.17	--	0.012	11	--	0.068	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00046	J	0.00092	0.0022	--	0.00093	0.0018	--	0.00096	0.0049	--	0.0032	0.016	--	0.0096	0.54	--	0.055	0.0014	--	0.00097	0.001	--	0.00096
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	0.02	--	0.0081	0.087	--	0.024	1.3	--	0.14	ND	U	0.0024	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00093	ND	U	0.00095	ND	U	0.00098	ND	U	0.0033	ND	U	0.0098	ND	U	0.056	ND	U	0.00099	ND	U	0.00098
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0039	ND	U	0.012	ND	U	0.066	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	0.00055	J	0.00059	0.00025	J	0.0006	0.00025	J	0.00062	ND	U	0.0021	ND	U	0.0062	ND	U	0.035	ND	U	0.00062	ND	U	0.00061
	Tetrahydrofuran	ppmv	0.029	--	0.0013	0.039	--	0.0014	0.03	--	0.0014	ND	U	0.0047	0.023	--	0.014	0.16	--	0.081	0.38	--	0.014	0.73	J	0.0014
	Toluene	ppmv	0.008	--	0.0011	0.016	--	0.0011	0.013	--	0.0011	0.047	--	0.0037	0.14	--	0.011	8.8	--	0.063	0.0022	--	0.0011	0.002	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0035	ND	U	0.011	ND	U	0.06	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00089	ND	U	0.00092	ND	U	0.0031	ND	U	0.0092	ND	U	0.053	ND	U	0.00093	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	0.0012	--	0.00074	ND	U	0.00075	ND	U	0.00078	ND	U	0.0026	0.029	--	0.0078	ND	U	0.044	ND	U	0.00078	ND	U	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.00071	ND	U	0.00072	ND	U	0.00074	ND	U	0.0025	ND	U	0.0074	ND	U	0.042	0.00028	J	0.00075	0.00088	--	0.00074
	Vinyl Acetate	ppmv	ND	U	0.011	0.0017	J	0.012	ND	U	0.012	ND	U	0.04	ND	U	0.12	ND	U	0.68	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0055	ND	U	0.016	ND	U	0.093	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	0.0018	J	0.0018	0.0083	--	0.0019	0.0067	--	0.0019	0.013	--	0.0064	0.041	--	0.019	1.9	--	0.11	0.0045	--	0.0019	0.0033	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106028-350			KAFB-106028-450			SVEW-01-260			SVEW-02-060			SVEW-03-160			SVEW-04-313			SVEW-05-460			SVEW-06-060		
		Field Sample ID:	VA161005			VA161006			VA161007			VA161008			VA161009			VA161010			VA161011			VA161012		
		Sample Date:	17-Oct-2016			17-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			10-Oct-2016			10-Oct-2016			11-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00085	0.0014	--	0.00086	0.057	--	0.00079	3.5	--	0.0078	2.1	--	0.011	0.0066	--	0.00084	0.015	--	0.00081	0.06	--	0.00078
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.294	--	0.17	0.77	--	0.17	6.19	--	0.16	12.9	--	0.16	11.3	--	0.16	ND	U	0.17	1.43	--	0.16	13.6	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16
	Nitrogen	%	78.8	--	0.17	78.8	--	0.17	78.6	--	0.16	86.3	--	0.16	84.8	--	0.16	78.5	--	0.17	79.2	--	0.16	84.3	--	0.16
	Oxygen	%	20.9	--	0.17	20.4	--	0.17	15.2	--	0.16	0.747	--	0.16	3.94	--	0.16	21.5	--	0.17	19.4	--	0.16	2.04	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	190	--	170	240	--	170	220000	--	4500	3.7E+07	--	450000	1.9E+07	--	260000	16000	--	210	310000	--	4000	7900000	--	160000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	21	36000	--	560	520000	--	56000	89000	--	33000	1600	--	26	52000	--	500	88000	--	19000
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	97	--	85	310	--	86	170000	--	2200	3200000	--	220000	590000	--	130000	21000	--	100	330000	--	2000	590000	--	78000
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00078	ND	U	0.00078	ND	U	0.021	ND	U	2	ND	U	1.2	ND	U	0.00096	ND	U	0.018	ND	U	0.71
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00062	ND	U	0.00062	ND	U	0.016	ND	U	1.6	ND	U	0.96	ND	U	0.00076	ND	U	0.015	ND	U	0.56
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00055	ND	U	0.00056	ND	U	0.015	ND	U	1.5	ND	U	0.86	ND	U	0.00068	ND	U	0.013	ND	U	0.51
	1,1,2-Trichloroethane	ppmv	ND	U	0.00078	ND	U	0.00078	ND	U	0.021	ND	U	2	ND	U	1.2	ND	U	0.00096	ND	U	0.018	ND	U	0.71
	1,1-Dichloroethane	ppmv	0.00096	J	0.0011	0.0012	--	0.0011	ND	U	0.028	ND	U	2.8	ND	U	1.6	ND	U	0.0013	ND	U	0.025	ND	U	0.96
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.028	ND	U	2.8	ND	U	1.7	ND	U	0.0013	ND	U	0.025	ND	U	0.98
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00057	ND	U	0.00058	ND	U	0.015	ND	U	1.5	ND	U	0.89	ND	U	0.0007	ND	U	0.014	ND	U	0.52
	1,2,4-Trimethylbenzene	ppmv	0.00036	J	0.00086	0.0003	J	0.00087	1.2	--	0.023	19	--	2.3	3.2	--	1.3	0.042	--	0.0011	1.4	--	0.02	2.6	--	0.79
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00055	0.00046	J	0.00056	0.023	--	0.015	1.1	J	1.5	0.3	J	0.86	0.0019	--	0.00068	0.0048	J	0.013	ND	U	0.5
	1,2-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.019	ND	U	1.9	ND	U	1.1	ND	U	0.00087	ND	U	0.017	ND	U	0.64
	1,2-Dichloroethane	ppmv	ND	U	0.0011	0.00039	J	0.0011	ND	U	0.028	2.3	J	2.8	1.4	J	1.6	ND	U	0.0013	0.01	J	0.025	0.86	J	0.96
	1,2-Dichloropropane	ppmv	ND	U	0.00092	ND	U	0.00093	ND	U	0.024	ND	U	2.4	ND	U	1.4	ND	U	0.0011	ND	U	0.022	ND	U	0.84
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00086	ND	U	0.00087	0.43	--	0.023	8.2	--	2.3	1.4	--	1.3	0.024	--	0.0011	0.73	--	0.02	1	--	0.79
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.051	ND	U	5	ND	U	3	ND	U	0.0024	ND	U	0.046	ND	U	1.8
	1,3-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.019	ND	U	1.9	ND	U	1.1	ND	U	0.00087	ND	U	0.017	ND	U	0.64
	1,4-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.019	ND	U	1.9	ND	U	1.1	ND	U	0.00087	ND	U	0.017	ND	U	0.64
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.031	ND	U	3.1	ND	U	1.8	ND	U	0.0014	ND	U	0.028	ND	U	1.1
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.027	ND	U	2.7	ND	U	1.6	ND	U	0.0013	ND	U	0.025	ND	U	0.95
	Acetone	ppmv	0.058	--	0.018	0.045	--	0.018	ND	U	0.47	210	--	47	80	--	28	0.058	--	0.022	0.41	J	0.42	98	--	16
	Benzene	ppmv	0.0017	--	0.0013	0.00099	J	0.0013	0.99	--	0.035	190	--	3.5	110	--	2.1	0.05	--	0.0016	0.55	--	0.032	55	--	1.2
	Benzyl Chloride	ppmv	ND	U	0.00082	ND	U	0.00083	ND	U	0.022	ND	U	2.2	ND	U	1.3	ND	U	0.001	ND	U	0.019	ND	U	0.75
	Bromodichloromethane	ppmv	ND	U	0.00063	ND	U	0.00064	ND	U	0.017	ND	U	1.7	ND	U	0.98	ND	U	0.00078	ND	U	0.015	ND	U	0.58
	Bromoform	ppmv	ND	U	0.00041	ND	U	0.00041	ND	U	0.011	ND	U	1.1	ND	U	0.64	ND	U	0.0005	ND	U	0.0097	ND	U	0.37
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.029	ND	U	2.9	ND	U	1.7	ND	U	0.0013	ND	U	0.026	ND	U	1
	Carbon Disulfide	ppmv	0.00084	J	0.014	0.00057	J	0.014	ND	U	0.36	ND	U	36	ND	U	21	ND	U	0.017	0.014	J	0.32	ND	U	12
	Carbon Tetrachloride	ppmv	0.00023	J	0.00068	ND	U	0.00068	ND	U	0.018	ND	U	1.8	ND	U	1	ND	U	0.00083	ND	U	0.016	ND	U	0.62
	Chlorobenzene	ppmv	ND	U	0.00092	ND	U	0.00093	ND	U	0.024	ND	U	2.4	ND	U	1.4	ND	U	0.0011	ND	U	0.022	ND	U	0.84
	Chloroethane	ppmv	0.0036	--	0.0016	0.0063	--	0.0016	ND	U	0.043	ND	U	4.2	ND	U	2.5	ND	U	0.002	0.036	J	0.038	ND	U	1.5
	Chloroform	ppmv	ND	U	0.00087	ND	U	0.00088	ND	U	0.023	ND	U	2.3	ND	U	1.3	ND	U	0.0011	ND	U	0.021	ND	U	0.79
	Chloromethane	ppmv	0.0025	J	0.0021	0.0058	J	0.0021	ND	UJ	0.054	ND	UJ	5.4	ND	UJ	3.2	ND	UJ	0.0025	ND	UJ	0.049	ND	UJ	1.9
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.028	ND	U	2.8	ND	U	1.7	ND	U	0.0013	ND	U	0.025	ND	U	0.98
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00094	ND	U	0.00094	ND	U	0.025	ND	U	2.5	ND	U	1.5	ND	U	0.0012	ND	U	0.022	ND	U	0.85
	Cyclohexane	ppmv	0.0027	--	0.0025	0.0052	--	0.0025	1.9	--	0.065	570	--	6.5	320	--	3.8	0.14	--	0.003	3.1	--	0.058	190	--	2.3
	Dibromochloromethane	ppmv	ND	U	0.0005	ND	U	0.0005	ND	U	0.013	ND	U	1.3	ND	U	0.77	ND	U	0.00061	ND	U	0.012	ND	U	0.46
	Dichlorodifluoromethane	ppmv	0.0013	--	0.00086	0.0008	J	0.00086	0.0082	J	0.023	ND	U	2.3	0.46	J	1.3	0.00055	J	0.0011	0.007	J	0.02	0.28	J	0.78
	Ethanol	ppmv	ND	U	0.023	ND	U	0.023	ND	U	0.6	ND	U	59	ND	U	35	0.0099	J	0.028	ND	U	0.53	14	J	21
	Ethyl Acetate	ppmv	ND	U	0.0024	ND	U	0.0024	ND	U	0.062	ND	U	6.2	ND	U	3.7	ND	U	0.0029	ND	U	0.056	ND	U	2.2
	Ethylbenzene	ppmv	0.00032	J	0.00098	0.00061	J	0.00098	0.91	--	0.026	64	--	2.6	18	--	1.5	0.028	--	0.0012	0.4	--	0.023	15	--	0.89
	Hexachlorobutadiene	ppmv	ND	U	0.0004	ND	U	0.0004	ND	U	0.011	ND	U	1	ND	U	0.62	ND	U	0.00049	ND	U	0.0094	ND	U	0.36
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.017	ND	U	0.46	ND	U	45	2.6	J	27	0.0097	J	0.021	ND	U	0.41	3.7	J	16
	m,p-Xylene (Sum of Isomers)	ppmv	0.0024	--	0.002	0.0022	--	0.002	3	--	0.052	130	--	5.1	35	--	3	0.11	--	0.0024	2.3	--	0.046	15	--	1.8
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.023	--	0.014	0.0015	J	0.015	0.032	J	0.38	20	J	38	7	J	22	0.011	J	0.018	0.028	J	0.34	16	--	13
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	0.0012	--	0.001	0.014	J	0.027	1.4	J	2.7	0.59	J	1.6	0.00081	J	0.0013	ND	U	0.025	ND	U	0.95
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.032	ND	U	3.2	ND	U	1.9	ND	U	0.0015	ND	U	0.029	ND	U	1.1
	Naphthalene	ppmv	ND	U	0.00081	ND	U	0.00082	0.15	--	0.021	ND	U	2.1	ND	U	1.3	0.011	--	0.001	0.072	--	0.019	ND	U	0.74
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.001	3.6	--	0.027	510	--	2.7	260	--	1.6	0.13	--	0.0013	1.7	--	0.025	140	--	0.95
	n-Hexane	ppmv	0.0024	--	0.0012	0.0013	--	0.0012	1.8	--	0.032	660	--	3.2	530	--	3.7	0.071	--	0.0015	2.3	--	0.029	220	--	1.1
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0011	--	0.00098	0.0012	--	0.00098	1.1	--	0.026	50	--	2.6	12	--	1.5	0.046	--	0.0012	1.1	--	0.023	5.3	--	0.89
	Propylene	ppmv	0.0017	J	0.0025	0.004	--	0.0025	0.067	--	0.065	12	--	6.5	8.9	--	3.8	0.0012	J	0.003	0.075	--	0.058	4.9	--	2.3
	Styrene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.026	ND	U	2.6	ND	U	1.5	ND	U	0.0012	ND	U	0.024	ND	U	0.91
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.031	ND	U	3.1	ND	U	1.8	ND	U	0.0014	ND	U	0.028	ND	U	1.1
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00063	0.00034	J	0.00063	ND	U	0.017	ND	U	1.6	ND	U	0.97	ND	U	0.00077	ND	U	0.015	ND	U	0.57
	Tetrahydrofuran	ppmv	0.18	--	0.0014	0.0074	--	0.0015	ND	U	0.038	ND	U	3.8	ND	U	2.2	ND	U	0.0018	ND	U	0.034	ND	U	1.3
	Toluene	ppmv	0.0023	--	0.0011	0.0028	--	0.0011	5.8	--	0.03	480	--	3	200	--	1.7	0.2	--	0.0014	1.7	--	0.027	86	--	1
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.028	ND	U	2.8	ND	U	1.7	ND	U	0.0013	ND	U	0.025	ND	U	0.98
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00094	ND	U	0.00094	ND	U	0.025	ND	U	2.5	ND	U	1.5	ND	U	0.0012	ND	U	0.022	ND	U	0.85
	Trichloroethylene (TCE)	ppmv	ND	U	0.00079	ND	U	0.0008	ND	U	0.021	ND	U	2.1	ND	U	1.2	ND	U	0.00097	ND	U	0.019	ND	U	0.72
	Trichlorofluoromethane	ppmv	0.0012	--	0.00076	0.00064	J	0.00076	ND	U	0.02	ND	U	2	ND	U	1.2	ND	U	0.00093	ND	U	0.018	ND	U	0.69
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.32	ND	U	32	ND	U	19	ND	U	0.015	ND	U	0.29	ND	U	11
	Vinyl chloride	ppmv	0.0021	--	0.0017	0.0032	--	0.0017	ND	U	0.044	ND	U	4.4	ND	U	2.6	ND	U	0.002	ND	U	0.039	ND	U	1.5
	Xylenes, Total	ppmv	0.0035	--	0.002	0.0034	--	0.002	4.1	--	0.052	180	--	5.1	46	--	3	0.16	--	0.0024	3.4	--	0.046	20	--	1.8

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	SVEW-07-160			SVEW-08-260			SVEW-09-460			SVEW-10-410			SVEW-11-410			SVEW-12-410			SVEW-13-410			KAFB-106108-025		
		Field Sample ID:	VA161013			VA161014			VA161015			VA161016			VA161017			VA161018			VA161019			VA161020		
		Sample Date:	13-Oct-2016			11-Oct-2016			11-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.036	--	0.00079	0.0012	--	0.00084	0.0033	--	0.00085	0.00048	J	0.00081	0.0017	--	0.00087	ND	U	0.00079	0.012	--	0.0012	0.00056	J	0.00087
Fixed Gases (%) Method E3C	Carbon Dioxide	%	7.93	--	0.16	0.556	--	0.17	0.376	--	0.17	0.202	--	0.16	0.696	--	0.17	0.679	J	0.16	0.517	--	0.17	0.782	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	UJ	0.16	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.17
	Nitrogen	%	85.4	--	0.16	78.7	--	0.17	78.6	--	0.17	78.8	--	0.16	79.4	--	0.17	78.8	J	0.16	78.8	--	0.17	78.3	--	0.17
	Oxygen	%	6.7	--	0.16	20.8	--	0.17	21	--	0.17	21	--	0.16	19.9	--	0.17	20.5	--	0.16	20.7	--	0.17	20.9	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	6.7E+07	--	2400000	13000	--	280	7200	--	170	1900	--	460	200000	--	2300	ND	U	160	48000	--	480	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	300000	1700	--	35	420	--	21	ND	U	58	960	--	290	ND	U	20	230	--	60	24	--	22
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	1800000	--	1200000	42000	--	140	22000	--	85	ND	U	230	48000	--	1200	ND	U	79	13000	--	240	ND	U	87
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	11	ND	U	0.0013	ND	U	0.00077	ND	U	0.0021	ND	U	0.011	ND	U	0.00072	ND	U	0.0022	ND	U	0.00079
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	8.8	ND	U	0.001	ND	U	0.00062	ND	U	0.0017	ND	U	0.0084	ND	U	0.00057	ND	U	0.0017	ND	U	0.00063
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	7.9	0.00036	J	0.00091	0.00024	J	0.00055	0.087	--	0.0015	ND	U	0.0075	0.0058	--	0.00051	ND	U	0.0016	0.0045	--	0.00056
	1,1,2-Trichloroethane	ppmv	ND	U	11	ND	U	0.0013	ND	U	0.00077	ND	U	0.0021	ND	U	0.011	ND	U	0.00072	ND	U	0.0022	ND	U	0.00079
	1,1-Dichloroethane	ppmv	ND	U	15	ND	U	0.0017	ND	U	0.001	ND	U	0.0029	ND	U	0.014	ND	U	0.00097	ND	U	0.0029	ND	U	0.0011
	1,1-Dichloroethene	ppmv	ND	U	15	ND	U	0.0018	ND	U	0.0011	ND	U	0.0029	ND	U	0.015	ND	U	0.00099	ND	U	0.003	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	8.1	ND	U	0.00094	ND	U	0.00057	ND	U	0.0016	ND	U	0.0078	ND	U	0.00053	ND	U	0.0016	ND	U	0.00058
	1,2,4-Trimethylbenzene	ppmv	7.9	J	12	0.033	--	0.0014	0.0092	--	0.00086	0.0014	J	0.0024	0.018	--	0.012	0.00036	J	0.0008	0.003	--	0.0024	0.00094	--	0.00088
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	7.9	ND	U	0.00091	0.00026	J	0.00055	ND	U	0.0015	ND	U	0.0075	ND	U	0.00051	0.0028	--	0.0016	ND	U	0.00056
	1,2-Dichlorobenzene	ppmv	ND	U	10	ND	U	0.0012	ND	U	0.0007	ND	U	0.0019	ND	U	0.0096	ND	U	0.00065	ND	U	0.002	ND	U	0.00072
	1,2-Dichloroethane	ppmv	7.7	J	15	ND	U	0.0017	ND	U	0.001	ND	U	0.0029	ND	U	0.014	ND	U	0.00097	0.0032	--	0.0029	ND	U	0.0011
	1,2-Dichloropropane	ppmv	ND	U	13	ND	U	0.0015	ND	U	0.00091	ND	U	0.0025	ND	U	0.012	ND	U	0.00085	ND	U	0.0026	ND	U	0.00094
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	12	0.0093	--	0.0014	0.0028	--	0.00086	0.0013	J	0.0024	0.027	--	0.012	ND	U	0.0008	0.0049	--	0.0024	ND	U	0.00088
	1,3-Butadiene	ppmv	ND	U	27	ND	U	0.0031	ND	U	0.0019	ND	U	0.0052	ND	U	0.026	ND	U	0.0018	ND	U	0.0054	ND	U	0.002
	1,3-Dichlorobenzene	ppmv	ND	U	10	ND	U	0.0012	ND	U	0.0007	ND	U	0.0019	ND	U	0.0096	ND	U	0.00065	ND	U	0.002	ND	U	0.00072
	1,4-Dichlorobenzene	ppmv	ND	U	10	ND	U	0.0012	ND	U	0.0007	ND	U	0.0019	ND	U	0.0096	ND	U	0.00065	ND	U	0.002	ND	U	0.00072
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	17	ND	U	0.0019	ND	U	0.0012	ND	U	0.0032	ND	U	0.016	ND	U	0.0011	ND	U	0.0033	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	15	ND	U	0.0017	ND	U	0.001	ND	U	0.0028	ND	U	0.014	ND	U	0.00096	ND	U	0.0029	ND	U	0.0011
	Acetone	ppmv	ND	U	250	0.15	--	0.029	0.064	--	0.018	1.8	--	0.049	0.4	--	0.24	0.0034	J	0.017	ND	U	0.05	0.021	--	0.018
	Benzene	ppmv	350	--	19	0.01	--	0.0022	0.0078	--	0.0013	0.27	--	0.0036	2.2	--	0.018	0.00078	J	0.0012	0.68	--	0.0037	0.0018	--	0.0014
	Benzyl Chloride	ppmv	ND	U	12	ND	U	0.0013	ND	U	0.00082	ND	U	0.0022	ND	U	0.011	ND	U	0.00076	ND	U	0.0023	ND	U	0.00084
	Bromodichloromethane	ppmv	ND	U	9	ND	U	0.001	ND	U	0.00063	ND	U	0.0017	ND	U	0.0086	ND	U	0.00059	ND	U	0.0018	ND	U	0.00065
	Bromoform	ppmv	ND	U	5.8	ND	U	0.00067	ND	U	0.00041	ND	U	0.0011	ND	U	0.0056	ND	U	0.00038	ND	U	0.0012	ND	U	0.00042
	Bromomethane	ppmv	ND	U	16	ND	U	0.0018	ND	U	0.0011	ND	U	0.003	ND	U	0.015	ND	U	0.001	ND	U	0.0031	ND	U	0.0011
	Carbon Disulfide	ppmv	ND	U	190	ND	U	0.022	ND	U	0.014	0.01	J	0.037	0.01	J	0.19	0.00046	J	0.013	0.0019	J	0.038	ND	U	0.014
	Carbon Tetrachloride	ppmv	ND	U	9.6	ND	U	0.0011	ND	U	0.00067	0.0015	J	0.0018	ND	U	0.0092	0.0038	--	0.00062	ND	U	0.0019	0.00034	J	0.00069
	Chlorobenzene	ppmv	ND	U	13	ND	U	0.0015	ND	U	0.00092	ND	U	0.0025	ND	U	0.013	ND	U	0.00085	ND	U	0.0026	ND	U	0.00094
	Chloroethane	ppmv	ND	U	23	ND	U	0.0026	ND	U	0.0016	ND	U	0.0044	ND	U	0.022	ND	U	0.0015	ND	U	0.0045	ND	U	0.0016
	Chloroform	ppmv	ND	U	12	ND	U	0.0014	ND	U	0.00087	0.0015	J	0.0024	ND	U	0.012	0.00032	J	0.0008	ND	U	0.0024	ND	U	0.00089
	Chloromethane	ppmv	ND	UJ	29	ND	UJ	0.0034	ND	UJ	0.002	0.019	J	0.0056	0.018	J	0.028	ND	U	0.0019	0.0027	J	0.0058	ND	U	0.0021
	cis-1,2-Dichloroethylene	ppmv	ND	U	15	ND	U	0.0018	ND	U	0.0011	ND	U	0.0029	ND	U	0.015	ND	U	0.00099	ND	U	0.003	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	13	ND	U	0.0015	ND	U	0.00093	ND	U	0.0025	ND	U	0.013	ND	U	0.00086	ND	U	0.0026	ND	U	0.00095
	Cyclohexane	ppmv	1200	--	35	0.13	--	0.004	0.07	--	0.0025	0.016	--	0.0067	0.83	--	0.034	ND	U	0.0023	0.56	--	0.0069	ND	U	0.0025
	Dibromochloromethane	ppmv	ND	U	7.1	ND	U	0.00082	ND	U	0.0005	ND	U	0.0014	ND	U	0.0068	ND	U	0.00046	ND	U	0.0014	ND	U	0.00051
	Dichlorodifluoromethane	ppmv	ND	U	12	0.00056	J	0.0014	0.00056	J	0.00085	0.00089	J	0.0023	ND	U	0.012	0.0036	--	0.00079	ND	U	0.0024	0.00051	J	0.00088
	Ethanol	ppmv	ND	U	320	ND	U	0.037	0.0047	J	0.022	0.024	J	0.061	ND	U	0.31	ND	U	0.021	ND	U	0.063	ND	U	0.023
	Ethyl Acetate	ppmv	ND	U	34	ND	U	0.0039	ND	U	0.0023	ND	U	0.0064	ND	U	0.032	ND	U	0.0022	ND	U	0.0066	ND	U	0.0024
	Ethylbenzene	ppmv	32	--	14	0.0096	--	0.0016	0.0057	--	0.00097	0.012	--	0.0027	0.18	--	0.013	0.00033	J	0.0009	0.026	--	0.0027	0.00082	J	0.001
	Hexachlorobutadiene	ppmv	ND	U	5.7	ND	U	0.00065	ND	U	0.0004	ND	U	0.0011	ND	U	0.0054	ND	U	0.00037	ND	U	0.0011	ND	U	0.00041
	Isopropanol	ppmv	ND	U	250	ND	U	0.028	0.0021	J	0.017	ND	U	0.047	ND	U	0.23	ND	U	0.016	ND	U	0.049	ND	U	0.018
	m,p-Xylene (Sum of Isomers)	ppmv	63	--	28	0.025	--	0.0032	0.015	--	0.0019	0.044	--	0.0053	0.63	--	0.027	0.0012	J	0.0018	0.056	--	0.0055	0.003	--	0.002
	Methyl Ethyl Ketone (2-Butanone)	ppmv	47	J	200	0.0074	J	0.024	0.0048	J	0.014	0.58	--	0.039	0.077	J	0.2	0.003	J	0.013	0.004	J	0.04	0.0011	J	0.015
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	15	ND	U	0.0017	ND	U	0.001	ND	U	0.0028	ND	U	0.014	ND	U	0.00096	ND	U	0.0029	ND	U	0.0011
	Methylene Chloride	ppmv	ND	U	17	ND	U	0.002	ND	U	0.0012	ND	U	0.0033	ND	U	0.017	ND	U	0.0011	ND	U	0.0034	ND	U	0.0012
	Naphthalene	ppmv	ND	U	12	0.014	--	0.0013	0.0059	--	0.00081	ND	U	0.0022	ND	U	0.011	0.00039	J	0.00075	0.0014	J	0.0023	0.0013	--	0.00083
	n-Heptane	ppmv	740	--	15	0.0065	--	0.0017	0.0039	--	0.001	0.015	--	0.0028	0.63	--	0.014	ND	U	0.00096	0.27	--	0.0029	0.00045	J	0.0011
	n-Hexane	ppmv	2700	--	17	0.012	--	0.002	0.0071	--	0.0012	0.046	--	0.0033	0.36	--	0.016	0.00038	J	0.0011	0.39	--	0.0034	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	20	--	14	0.012	--	0.0016	0.0061	--	0.00097	0.015	--	0.0027	0.18	--	0.013	0.00042	J	0.0009	0.028	--	0.0027	0.00096	J	0.001
	Propylene	ppmv	40	--	35	0.0059	--	0.004	0.004	--	0.0025	0.0098	--	0.0067	0.11	--	0.034	ND	U	0.0023	0.072	--	0.0069	ND	U	0.0025
	Styrene	ppmv	ND	U	14	ND	U	0.0016	ND	U	0.00099	ND	U	0.0027	ND	U	0.014	ND	U	0.00092	ND	U	0.0028	ND	U	0.001
	tert-Butyl Methyl Ether	ppmv	ND	U	17	ND	U	0.0019	ND	U	0.0012	ND	U	0.0032	ND	U	0.016	ND	U	0.0011	ND	U	0.0033	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	8.9	ND	U	0.001	ND	U	0.00062	0.0018	--	0.0017	ND	U	0.0085	0.0029	--	0.00058	ND	U	0.0018	ND	U	0.00064
	Tetrahydrofuran	ppmv	ND	U	20	ND	U	0.0024	ND	U	0.0014	0.24	--	0.0039	0.14	--	0.02	0.0013	J	0.0013	0.0041	--	0.004	ND	U	0.0015
	Toluene	ppmv	340	--	16	0.038	--	0.0018	0.033	--	0.0011	0.57	--	0.0031	3	--	0.015	0.003	--	0.001	0.78	--	0.0063	0.0083	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	15	ND	U	0.0018	ND	U	0.0011	ND	U	0.0029	ND	U	0.015	ND	U	0.00099	ND	U	0.003	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	13	ND	U	0.0015	ND	U	0.00093	ND	U	0.0025	ND	U	0.013	ND	U	0.00086	ND	U	0.0026	ND	U	0.00095
	Trichloroethylene (TCE)	ppmv	ND	U	11	ND	U	0.0013	ND	U	0.00079	0.0061	--	0.0022	ND	U	0.011	0.0079	--	0.00073	0.0091	--	0.0022	ND	U	0.00081
	Trichlorofluoromethane	ppmv	ND	U	11	0.0014	--	0.0012	0.001	--	0.00075	ND	U	0.0021	ND	U	0.01	0.0029	--	0.0007	ND	U	0.0021	ND	U	0.00077
	Vinyl Acetate	ppmv	ND	U	170	ND	U	0.02	ND	U	0.012	ND	U	0.033	ND	U	0.16	ND	U	0.011	ND	U	0.034	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	24	ND	U	0.0027	ND	U	0.0017	ND	U	0.0045	ND	U	0.023	ND	U	0.0015	ND	U	0.0047	ND	U	0.0017
	Xylenes, Total	ppmv	83	--	28	0.037	--	0.0032	0.021	--	0.0019	0.058	--	0.0053	0.81	--	0.027	0.0016	J	0.0018	0.084	--	0.0055	0.0039	--	0.002

Table 2-3
Soil Vapor Analytical Results, Q4 2016

	Well Location ID:		KAFB-106108-025			KAFB-106108-050			KAFB-106108-150			KAFB-106108-250			KAFB-106108-350			KAFB-106108-450			KAFB-106109-025			KAFB-106109-050		
	Field Sample ID:		VA161021			VA161022			VA161023			VA161024			VA161025			VA161026			VA161028			VA161029		
	Sample Date:		12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016		
	Sample Type:		Field Duplicate			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00044	J	0.00085	0.00051	J	0.00084	ND	U	0.00086	0.0047	--	0.00083	ND	U	0.0012	ND	U	0.00084	ND	U	0.00079	ND	U	0.00079
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.782	--	0.17	2.19	--	0.17	2.47	--	0.17	0.495	--	0.17	0.265	--	0.17	0.445	--	0.17	0.627	J	0.16	0.913	J	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	UJ	0.16	ND	UJ	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16
	Nitrogen	%	78.3	--	0.17	78	--	0.17	78.4	--	0.17	79.4	--	0.17	79.1	--	0.17	78.6	--	0.17	78.3	J	0.16	78.4	J	0.16
	Oxygen	%	20.9	--	0.17	19.9	--	0.17	19.1	--	0.17	20	--	0.17	20.7	--	0.17	20.9	--	0.17	21	--	0.16	20.6	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	ND	U	170	370	--	170	310	--	170	ND	U	170	270	--	170	ND	U	160	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	21	ND	U	21	ND	U	21	ND	U	21	ND	U	21	ND	U	20	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	85	ND	U	84	110	--	86	ND	U	83	ND	U	86	ND	U	84	ND	U	79	ND	U	79
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00078	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077	ND	U	0.00072	ND	U	0.00072
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00062	ND	U	0.00061	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	ND	U	0.00061	ND	U	0.00058	ND	U	0.00058
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.0044	--	0.00055	0.016	--	0.00054	0.045	--	0.00056	0.2	--	0.0054	0.38	--	0.0056	0.049	--	0.00054	0.0011	--	0.00052	0.0036	--	0.00052
	1,1,2-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00078	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077	ND	U	0.00072	ND	U	0.00072
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	0.00066	J	0.001	ND	U	0.00098	ND	U	0.00098
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00057	ND	U	0.00056	ND	U	0.00058	ND	U	0.00056	ND	U	0.00058	ND	U	0.00056	ND	U	0.00053	ND	U	0.00053
	1,2,4-Trimethylbenzene	ppmv	0.00072	J	0.00086	0.00038	J	0.00085	0.00039	J	0.00087	0.00046	J	0.00084	0.00053	J	0.00087	0.00049	J	0.00085	0.00046	J	0.0008	0.00034	J	0.0008
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00055	ND	U	0.00054	ND	U	0.00056	0.0019	--	0.00054	ND	U	0.00056	ND	U	0.00054	ND	U	0.00051	ND	U	0.00051
	1,2-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00066	ND	U	0.00066
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	0.0066	--	0.001	ND	U	0.0011	0.00033	J	0.001	ND	U	0.00098	ND	U	0.00098
	1,2-Dichloropropane	ppmv	ND	U	0.00091	ND	U	0.0009	ND	U	0.00093	ND	U	0.0009	ND	U	0.00093	ND	U	0.0009	ND	U	0.00086	ND	U	0.00086
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00086	ND	U	0.00085	ND	U	0.00087	ND	U	0.00084	ND	U	0.00087	ND	U	0.00085	ND	U	0.0008	ND	U	0.0008
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00066	ND	U	0.00066
	1,4-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00071	ND	U	0.00069	ND	U	0.00066	ND	U	0.00066
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00096	ND	U	0.00096
	Acetone	ppmv	0.016	J	0.018	0.024	--	0.018	0.087	--	0.018	ND	U	0.017	0.065	--	0.018	0.083	--	0.018	0.0031	J	0.017	0.006	J	0.017
	Benzene	ppmv	0.00074	J	0.0013	0.00048	J	0.0013	0.019	--	0.0013	0.031	--	0.0013	0.0023	--	0.0013	0.015	--	0.0013	0.00046	J	0.0012	ND	U	0.0012
	Benzyl Chloride	ppmv	ND	U	0.00082	ND	U	0.00081	ND	U	0.00083	ND	U	0.0008	ND	U	0.00083	ND	U	0.00081	ND	U	0.00076	ND	U	0.00076
	Bromodichloromethane	ppmv	ND	U	0.00063	ND	U	0.00062	ND	U	0.00064	ND	U	0.00062	ND	U	0.00064	ND	U	0.00062	ND	U	0.00059	ND	U	0.00059
	Bromoform	ppmv	ND	U	0.00041	ND	U	0.0004	ND	U	0.00041	ND	U	0.0004	ND	U	0.00041	ND	U	0.0004	ND	U	0.00038	ND	U	0.00038
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	0.014	ND	U	0.013	0.002	J	0.014	0.0011	J	0.013	0.0037	J	0.014	0.015	--	0.013	ND	U	0.013	ND	U	0.013
	Carbon Tetrachloride	ppmv	0.00032	J	0.00067	0.0018	--	0.00066	0.0058	--	0.00068	0.047	--	0.00066	0.0077	--	0.00068	0.0022	--	0.00066	ND	U	0.00063	ND	U	0.00063
	Chlorobenzene	ppmv	ND	U	0.00092	ND	U	0.00091	ND	U	0.00093	ND	U	0.0009	ND	U	0.00093	ND	U	0.00091	ND	U	0.00086	ND	U	0.00086
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	0.0012	J	0.0016	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	ND	U	0.00087	0.0004	J	0.00086	0.0017	--	0.00088	0.0063	--	0.00085	0.0015	--	0.00088	0.00033	J	0.00086	ND	U	0.00081	ND	U	0.00081
	Chloromethane	ppmv	ND	U	0.002	ND	U	0.002	ND	U	0.0021	ND	U	0.002	ND	U	0.0021	0.0077	--	0.002	ND	U	0.0019	ND	U	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.00092	ND	U	0.00094	ND	U	0.00091	ND	U	0.00094	ND	U	0.00092	ND	U	0.00087	ND	U	0.00087
	Cyclohexane	ppmv	ND	U	0.0025	ND	U	0.0024	0.0057	--	0.0025	0.0015	J	0.0024	ND	U	0.0025	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023
	Dibromochloromethane	ppmv	ND	U	0.0005	ND	U	0.00049	ND	U	0.0005	ND	U	0.00049	ND	U	0.0005	ND	U	0.00049	ND	U	0.00046	ND	U	0.00046
	Dichlorodifluoromethane	ppmv	0.00051	J	0.00085	0.00089	--	0.00084	0.0021	--	0.00086	0.0045	--	0.00084	0.0016	--	0.00086	0.0004	J	0.00084	0.00044	J	0.0008	0.00048	J	0.0008
	Ethanol	ppmv	ND	U	0.022	ND	U	0.022	ND	U	0.023	ND	U	0.022	ND	U	0.023	ND	U	0.022	ND	U	0.021	ND	U	0.021
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0022	ND	U	0.0022
	Ethylbenzene	ppmv	0.00054	J	0.00097	0.00032	J	0.00096	0.00032	J	0.00098	0.00043	J	0.00096	0.00038	J	0.00098	0.00095	J	0.00096	0.00035	J	0.00091	0.00032	J	0.00091
	Hexachlorobutadiene	ppmv	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.00037	ND	U	0.00037
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.016	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.002	--	0.0019	0.0011	J	0.0019	0.0012	J	0.002	0.002	--	0.0019	0.0017	J	0.002	0.0045	--	0.0019	0.0013	J	0.0018	0.0011	J	0.0018
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.00077	J	0.014	0.00092	J	0.014	0.004	J	0.015	0.0043	J	0.014	0.0042	J	0.015	0.024	--	0.014	ND	U	0.013	ND	U	0.013
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	0.0044	--	0.001	ND	U	0.00096	ND	U	0.00096
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	Naphthalene	ppmv	0.00099	--	0.00081	0.00056	J	0.0008	0.00049	J	0.00082	0.00051	J	0.00079	0.00047	J	0.00082	0.00033	J	0.0008	0.00063	J	0.00075	0.00045	J	0.00075
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00096	ND	U	0.00096
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	0.00039	J	0.0012	ND	U	0.0012	0.00054	J	0.0012	ND	U	0.0011	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00068	J	0.00097	0.00039	J	0.00096	0.0015	--	0.00098	0.0055	--	0.00096	0.00097	J	0.00098	0.0026	--	0.00096	0.00042	J	0.00091	0.00038	J	0.00091
	Propylene	ppmv	ND	U	0.0025	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023
	Styrene	ppmv	ND	U	0.00099	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00093	ND	U	0.00093
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00062	0.00034	J	0.00062	0.00095	--	0.00063	0.0017	--	0.00061	0.0038	--	0.00063	0.0013	--	0.00062	ND	U	0.00058	ND	U	0.00058
	Tetrahydrofuran	ppmv	ND	U	0.0014	ND	U	0.0014	0.0018	--	0.0015	0.096	--	0.0014	0.018	--	0.0015	0.019	--	0.0014	0.025	--	0.0013	ND	U	0.0013
	Toluene	ppmv	0.0048	--	0.0011	0.0029	--	0.0011	0.0033	--	0.0011	0.0078	--	0.0011	0.0057	--	0.0011	0.057	--	0.0011	0.0029	--	0.001	0.0026	--	0.001
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.00092	ND	U	0.00094	ND	U	0.00091	ND	U	0.00094	ND	U	0.00092	ND	U	0.00087	ND	U	0.00087
	Trichloroethylene (TCE)	ppmv	ND	U	0.00079	0.00026	J	0.00078	0.0019	--	0.0008	0.0029	--	0.00077	0.0034	--	0.0008	0.0003	J	0.00078	ND	U	0.00074	ND	U	0.00074
	Trichlorofluoromethane	ppmv	ND	U	0.00075	0.00027	J	0.00074	0.00045	J	0.00076	0.0012	--	0.00074	0.0012	--	0.00076	ND	U	0.00074	ND	U	0.0007	ND	U	0.0007
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.0017	ND	U	0.0016	ND	U	0.0017	ND	U	0.0016	ND	U	0.0017	0.0014	J	0.0016	ND	U	0.0015	ND	U	0.0015
	Xylenes, Total	ppmv	0.0027	--	0.0019	0.0015	J	0.0019	0.0027	--	0.002	0.0075	--	0.0019	0.0027	--	0.002	0.0071	--	0.0019	0.0017	J	0.0018	0.0015	J	0.0018

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106109-150			KAFB-106109-150			KAFB-106109-250			KAFB-106109-350			KAFB-106109-450			KAFB-106110-025			KAFB-106110-050			KAFB-106110-050		
		Field Sample ID:	VA161030			VA161031			VA161032			VA161033			VA161034			VA161035			VA161036			VA161037		
		Sample Date:	12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			Field Duplicate		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	ND	U	0.0008	ND	U	0.001	ND	U	0.00081	ND	U	0.001	ND	U	0.00083	ND	U	0.00085	ND	U	0.00085
Fixed Gases (%) Method E3C	Carbon Dioxide	%	ND	UJ	0.16	ND	UJ	0.16	0.258	--	0.16	0.214	--	0.16	0.687	--	0.16	0.892	--	0.17	1.18	--	0.17	1.19	--	0.17
	Carbon Monoxide	%	ND	UJ	0.16	ND	UJ	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	79.5	J	0.16	79.6	J	0.16	79.4	--	0.16	78.8	--	0.16	78.6	--	0.16	78.8	--	0.17	78.8	--	0.17	78.8	--	0.17
	Oxygen	%	20.3	--	0.16	20.3	--	0.16	20.4	--	0.16	20.9	--	0.16	20.7	--	0.16	20.3	--	0.17	20	--	0.17	20	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	160	1300	--	160	220	--	160	ND	U	160	500	--	170	ND	U	170	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	20	ND	U	19	ND	U	20	ND	U	20	500	--	21	130	--	21	75	--	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	ND	U	80	ND	U	78	ND	U	81	ND	U	78	4500	--	83	930	--	85	400	--	85
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00071	ND	U	0.00074	ND	U	0.00072	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00058	ND	U	0.00056	ND	U	0.00059	ND	U	0.00057	ND	U	0.0006	ND	U	0.00062	ND	U	0.00062
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.005	--	0.00052	0.0051	--	0.00052	0.017	--	0.00051	0.0061	--	0.00053	0.00038	J	0.00051	0.0028	--	0.00054	0.0035	--	0.00055	0.0035	--	0.00055
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00071	ND	U	0.00074	ND	U	0.00072	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077
	1,1-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00096	ND	U	0.00099	0.00074	J	0.00096	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00052	ND	U	0.00054	ND	U	0.00053	ND	U	0.00056	ND	U	0.00057	ND	U	0.00057
	1,2,4-Trimethylbenzene	ppmv	0.00046	J	0.00081	0.0003	J	0.00081	ND	U	0.00079	0.00026	J	0.00082	0.00032	J	0.00079	0.0082	--	0.00084	0.0025	--	0.00086	0.002	--	0.00086
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.0005	ND	U	0.00052	ND	U	0.00051	ND	U	0.00054	ND	U	0.00055	ND	U	0.00055
	1,2-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00064	ND	U	0.00067	ND	U	0.00065	ND	U	0.00069	ND	U	0.00071	ND	U	0.0007
	1,2-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00096	ND	U	0.00099	0.00045	J	0.00096	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00086	ND	U	0.00086	ND	U	0.00084	ND	U	0.00087	ND	U	0.00084	ND	U	0.00089	ND	U	0.00092	ND	U	0.00091
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00079	ND	U	0.00082	ND	U	0.00079	0.002	--	0.00084	0.0006	J	0.00086	0.00047	J	0.00086
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00064	ND	U	0.00067	ND	U	0.00065	ND	U	0.00069	ND	U	0.00071	ND	U	0.0007
	1,4-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00064	ND	U	0.00067	ND	U	0.00065	ND	U	0.00069	ND	U	0.00071	ND	U	0.0007
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.00097	ND	U	0.00097	ND	U	0.00095	ND	U	0.00098	ND	U	0.00095	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	0.035	--	0.017	0.014	J	0.017	ND	U	0.016	0.036	--	0.017	0.037	--	0.016	0.13	--	0.017	0.011	U	0.018	0.027	--	0.018
	Benzene	ppmv	0.00075	J	0.0012	0.00058	J	0.0012	0.0037	--	0.0012	0.0025	--	0.0013	0.0029	--	0.0012	0.001	J	0.0013	0.00089	J	0.0013	0.0013	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00075	ND	U	0.00078	ND	U	0.00075	ND	U	0.0008	ND	U	0.00082	ND	U	0.00082
	Bromodichloromethane	ppmv	ND	U	0.00059	ND	U	0.00059	ND	U	0.00058	ND	U	0.0006	ND	U	0.00058	ND	U	0.00062	ND	U	0.00063	ND	U	0.00063
	Bromoform	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.00037	ND	U	0.00039	ND	U	0.00038	ND	U	0.0004	ND	U	0.00041	ND	U	0.00041
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0015	J	0.013	0.0012	J	0.013	0.0014	J	0.012	0.0028	J	0.013	0.028	--	0.013	0.00041	J	0.013	0.0022	J	0.014	0.0021	J	0.014
	Carbon Tetrachloride	ppmv	0.0023	--	0.00063	0.0024	--	0.00063	0.002	--	0.00062	0.00025	J	0.00064	ND	U	0.00062	0.00073	--	0.00066	0.00096	--	0.00068	0.00098	--	0.00067
	Chlorobenzene	ppmv	ND	U	0.00086	ND	U	0.00086	ND	U	0.00084	ND	U	0.00087	ND	U	0.00085	ND	U	0.0009	ND	U	0.00092	ND	U	0.00092
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	0.0013	J	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00081	ND	U	0.00081	0.00037	J	0.00079	ND	U	0.00082	ND	U	0.0008	ND	U	0.00085	ND	U	0.00087	ND	U	0.00087
	Chloromethane	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	0.0086	--	0.0019	ND	UJ	0.002	ND	UJ	0.0021	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00085	ND	U	0.00089	ND	U	0.00086	ND	U	0.00091	ND	U	0.00094	ND	U	0.00093
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0023	0.022	--	0.0023	0.0025	--	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0025	0.00088	J	0.0025
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00047	ND	U	0.00046	ND	U	0.00047	ND	U	0.00046	ND	U	0.00048	ND	U	0.0005	ND	U	0.0005
	Dichlorodifluoromethane	ppmv	0.014	--	0.0008	0.014	--	0.0008	0.0055	--	0.00078	0.00057	J	0.00081	0.00032	J	0.00079	0.00066	J	0.00083	0.00065	J	0.00086	0.00067	J	0.00085
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.021	ND	U	0.021	ND	U	0.021	0.0042	J	0.022	ND	U	0.023	0.0045	J	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	0.0039	--	0.0022	ND	U	0.0023	ND	U	0.0024	0.0018	J	0.0023
	Ethylbenzene	ppmv	0.0004	J	0.00092	ND	U	0.00092	ND	U	0.00089	ND	U	0.00093	0.0004	J	0.0009	0.0017	--	0.00095	0.00091	J	0.00098	0.0012	--	0.00097
	Hexachlorobutadiene	ppmv	ND	U	0.00037	ND	U	0.00037	ND	U	0.00036	ND	U	0.00038	ND	U	0.00037	ND	U	0.00039	ND	U	0.0004	ND	U	0.0004
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.017	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.0015	J	0.0018	0.00098	J	0.0018	0.0008	J	0.0018	0.00087	J	0.0019	0.0013	J	0.0018	0.0054	--	0.0019	0.0028	--	0.002	0.0037	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0052	J	0.013	0.0026	J	0.013	0.0072	J	0.013	0.0063	J	0.014	0.009	J	0.013	0.0024	J	0.014	0.0066	J	0.014	0.0076	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00097	ND	U	0.00097	ND	U	0.00095	ND	U	0.00098	ND	U	0.00095	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00058	J	0.00076	0.00037	J	0.00076	0.0003	J	0.00074	0.00029	J	0.00077	ND	U	0.00074	0.0045	--	0.00079	0.0018	--	0.00081	0.0017	--	0.00081
	n-Heptane	ppmv	ND	U	0.00097	ND	U	0.00097	0.011	--	0.00095	0.00091	J	0.00098	ND	U	0.00095	0.00096	J	0.001	0.00064	J	0.001	0.00097	J	0.001
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	0.021	--	0.0011	0.0019	--	0.0011	0.00042	J	0.0011	0.0013	--	0.0012	0.001	J	0.0012	0.0019	--	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00052	J	0.00092	0.00032	J	0.00092	0.00032	J	0.00089	0.00033	J	0.00093	0.00044	J	0.0009	0.0023	--	0.00095	0.0011	--	0.00098	0.0013	--	0.00097
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0025	ND	U	0.0025
	Styrene	ppmv	ND	U	0.00093	ND	U	0.00093	ND	U	0.00091	ND	U	0.00095	ND	U	0.00092	ND	U	0.00097	ND	U	0.001	ND	U	0.00099
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	0.003	--	0.00059	0.0029	--	0.00059	0.0032	--	0.00057	0.00049	J	0.00059	0.00017	J	0.00058	ND	U	0.00061	0.0002	J	0.00063	0.00023	J	0.00062
	Tetrahydrofuran	ppmv	0.0027	--	0.0013	0.0023	--	0.0013	0.0089	--	0.0013	0.032	--	0.0014	0.017	--	0.0013	0.00075	J	0.0014	0.083	--	0.0014	0.086	--	0.0014
	Toluene	ppmv	0.0035	--	0.0011	0.0025	--	0.0011	0.0027	--	0.001	0.0026	--	0.0011	0.01	--	0.001	0.0062	--	0.0011	0.0045	--	0.0011	0.0068	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00085	ND	U	0.00089	ND	U	0.00086	ND	U	0.00091	ND	U	0.00094	ND	U	0.00093
	Trichloroethylene (TCE)	ppmv	0.063	--	0.00074	0.064	--	0.00074	0.051	--	0.00072	0.068	--	0.00075	0.0042	--	0.00073	ND	U	0.00077	ND	U	0.00079	0.00023	J	0.00079
	Trichlorofluoromethane	ppmv	0.00063	J	0.00071	0.00065	J	0.00071	0.00069	J	0.00069	ND	U	0.00072	ND	U	0.00069	0.00025	J	0.00073	0.00026	J	0.00076	0.00026	J	0.00075
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	0.0017	--	0.0015	ND	U	0.0016	ND	U	0.0017	ND	U	0.0017
	Xylenes, Total	ppmv	0.002	--	0.0018	0.0013	J	0.0018	0.0011	J	0.0018	0.0012	J	0.0019	0.0018	J	0.0018	0.0077	--	0.0019	0.0039	--	0.002	0.005	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106110-150			KAFB-106110-250			KAFB-106110-350			KAFB-106110-450			KAFB-106111-025			KAFB-106111-050			KAFB-106111-150			KAFB-106111-250		
		Field Sample ID:	VA161038			VA161039			VA161040			VA161041			VA161042			VA161043			VA161044			VA161045		
		Sample Date:	14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00084	0.0012	--	0.00085	ND	U	0.00084	ND	U	0.0011	ND	U	0.00081	ND	U	0.00081	ND	U	0.00082	0.006	--	0.0008
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.875	--	0.17	0.376	--	0.17	0.247	--	0.17	0.453	--	0.16	0.574	--	0.16	1.43	--	0.16	2.19	--	0.16	2.36	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.5	--	0.17	79.9	--	0.17	79.1	--	0.17	78.8	--	0.16	79	--	0.16	79.9	--	0.16	80.4	--	0.16	83.2	--	0.16
	Oxygen	%	19.6	--	0.17	19.7	--	0.17	20.6	--	0.17	20.7	--	0.16	20.4	--	0.16	18.6	--	0.16	17.4	--	0.16	14.4	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	170	--	170	180000	--	2300	430	--	170	2100	--	160	530	--	160	200	--	160	210	--	160	1200000	--	13000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	76	--	21	ND	U	280	63	--	21	140	--	20	420	--	20	120	--	20	91	--	20	ND	U	1700
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	520	--	84	6000	--	1100	510	--	84	840	--	82	4000	--	81	910	--	81	760	--	82	82000	--	6600
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.01	ND	U	0.00077	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074	ND	U	0.00075	ND	U	0.061
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00061	ND	U	0.0082	ND	U	0.00061	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.048
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.015	--	0.00054	0.015	--	0.0074	0.0037	--	0.00055	0.00022	J	0.00053	0.0027	--	0.00053	0.0066	--	0.00053	0.013	--	0.00053	ND	U	0.043
	1,1,2-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.01	ND	U	0.00077	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074	ND	U	0.00075	ND	U	0.061
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.014	ND	U	0.001	0.0012	--	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.082
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.014	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.084
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00056	ND	U	0.0076	ND	U	0.00057	ND	U	0.00055	ND	U	0.00054	ND	U	0.00055	ND	U	0.00055	ND	U	0.045
	1,2,4-Trimethylbenzene	ppmv	0.0015	--	0.00085	ND	U	0.011	0.0014	--	0.00085	0.0028	--	0.00083	0.009	--	0.00082	0.0028	--	0.00082	0.002	--	0.00083	ND	U	0.067
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00054	ND	U	0.0073	ND	U	0.00055	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053	ND	U	0.00053	ND	U	0.043
	1,2-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.0094	ND	U	0.0007	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.055
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.014	ND	U	0.001	0.00068	J	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.082
	1,2-Dichloropropane	ppmv	ND	U	0.0009	ND	U	0.012	ND	U	0.00091	ND	U	0.00088	ND	U	0.00087	ND	U	0.00088	ND	U	0.00088	ND	U	0.072
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.00038	J	0.00085	ND	U	0.011	0.00037	J	0.00085	0.0018	--	0.00083	0.0024	--	0.00082	0.00072	J	0.00082	0.00054	J	0.00083	ND	U	0.067
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.025	ND	U	0.0019	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.15
	1,3-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.0094	ND	U	0.0007	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.055
	1,4-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.0094	ND	U	0.0007	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.055
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.016	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.092
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.014	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.081
	Acetone	ppmv	0.0094	U	0.018	ND	U	0.24	0.099	--	0.018	0.67	--	0.017	0.0067	J	0.017	0.017	J	0.017	0.015	J	0.017	ND	U	1.4
	Benzene	ppmv	0.00097	J	0.0013	0.022	--	0.018	0.00098	J	0.0013	0.14	--	0.0013	0.0012	J	0.0013	0.00098	J	0.0013	0.0011	J	0.0013	0.18	--	0.1
	Benzyl Chloride	ppmv	ND	U	0.00081	ND	U	0.011	ND	U	0.00081	ND	U	0.00079	ND	U	0.00078	ND	U	0.00078	ND	U	0.00079	ND	U	0.064
	Bromodichloromethane	ppmv	ND	U	0.00062	ND	U	0.0084	ND	U	0.00063	ND	U	0.00061	ND	U	0.0006	ND	U	0.0006	ND	U	0.00061	ND	U	0.049
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.0055	ND	U	0.00041	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039	ND	U	0.032
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.015	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.085
	Carbon Disulfide	ppmv	0.0024	J	0.013	ND	U	0.18	0.0025	J	0.013	0.049	--	0.013	0.00042	J	0.013	0.0017	J	0.013	ND	U	0.013	ND	U	1.1
	Carbon Tetrachloride	ppmv	0.014	--	0.00066	0.034	--	0.009	0.006	--	0.00067	0.00056	J	0.00065	0.0028	--	0.00064	0.0078	--	0.00064	0.018	--	0.00065	0.044	J	0.053
	Chlorobenzene	ppmv	ND	U	0.00091	ND	U	0.012	ND	U	0.00091	ND	U	0.00089	ND	U	0.00087	ND	U	0.00088	ND	U	0.00089	ND	U	0.072
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.021	ND	U	0.0016	0.0021	--	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.13
	Chloroform	ppmv	0.002	--	0.00086	ND	U	0.012	0.00061	J	0.00086	ND	U	0.00083	ND	U	0.00082	ND	U	0.00083	0.0014	--	0.00083	ND	U	0.068
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.027	ND	UJ	0.002	0.011	J	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.16
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.014	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.084
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00092	ND	U	0.012	ND	U	0.00093	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.073
	Cyclohexane	ppmv	ND	U	0.0024	4.2	--	0.033	0.0043	--	0.0024	0.021	--	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	24	--	0.19
	Dibromochloromethane	ppmv	ND	U	0.00049	ND	U	0.0066	ND	U	0.00049	ND	U	0.00048	ND	U	0.00047	ND	U	0.00048	ND	U	0.00048	ND	U	0.039
	Dichlorodifluoromethane	ppmv	0.0028	--	0.00084	0.0056	J	0.011	0.0046	--	0.00085	0.00051	J	0.00082	0.001	--	0.00081	0.0019	--	0.00082	0.0039	--	0.00082	ND	U	0.067
	Ethanol	ppmv	ND	U	0.022	ND	U	0.3	0.021	J	0.022	ND	U	0.022	0.0045	J	0.021	ND	U	0.022	ND	U	0.022	ND	U	1.8
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.031	ND	U	0.0023	ND	U	0.0023	ND	U	0.0022	ND	U	0.0022	ND	U	0.0023	ND	U	0.18
	Ethylbenzene	ppmv	0.00065	J	0.00096	ND	U	0.013	0.00068	J	0.00097	0.013	--	0.00094	0.0027	--	0.00093	0.0012	--	0.00093	0.00094	--	0.00094	ND	U	0.076
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.0053	ND	U	0.00039	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.031
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.23	ND	U	0.017	0.0072	J	0.017	ND	U	0.016	ND	U	0.016	ND	U	0.017	ND	U	1.3
	m,p-Xylene (Sum of Isomers)	ppmv	0.002	--	0.0019	0.0082	J	0.026	0.0021	--	0.0019	0.033	--	0.0019	0.0074	--	0.0019	0.0032	--	0.0019	0.0026	--	0.0019	ND	U	0.15
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0027	J	0.014	ND	U	0.19	0.0064	J	0.014	0.2	--	0.014	0.00097	J	0.014	0.0012	J	0.014	0.001	J	0.014	ND	U	1.1
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.014	ND	U	0.001	0.00084	J	0.00099	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099	0.051	J	0.081
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.016	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.095
	Naphthalene	ppmv	0.00098	--	0.0008	ND	U	0.011	0.00096	--	0.0008	0.00093	--	0.00078	0.0026	--	0.00077	0.0011	--	0.00077	0.00078	--	0.00078	ND	U	0.063
	n-Heptane	ppmv	0.0006	J	0.001	0.12	--	0.014	0.00064	J	0.001	0.0098	--	0.00099	0.0024	--	0.00098	0.001	--	0.00099	0.00087	J	0.00099	ND	U	0.081
	n-Hexane	ppmv	0.001	J	0.0012	2.2	--	0.016	0.0026	--	0.0012	0.028	--	0.0012	0.00047	J	0.0011	ND	U	0.0011	ND	U	0.0012	3.9	--	0.094
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00077	J	0.00096	0.011	J	0.013	0.00082	J	0.00097	0.01	--	0.00094	0.0031	--	0.00093	0.0012	--	0.00093	0.00099	--	0.00094	0.13	--	0.076
	Propylene	ppmv	0.0046	--	0.0024	0.28	--	0.033	0.00099	J	0.0024	0.0052	--	0.0024	ND	U	0.0023	ND	U	0.0024	0.0014	J	0.0024	0.69	--	0.19
	Styrene	ppmv	ND	U	0.00098	ND	U	0.013	ND	U	0.00099	ND	U	0.00096	ND	U	0.00095	ND	U	0.00095	ND	U	0.00096	ND	U	0.078
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.016	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.092
	Tetrachloroethylene (PCE)	ppmv	0.0023	--	0.00062	0.0055	J	0.0083	0.0017	--	0.00062	ND	U	0.0006	0.00024	J	0.00059	0.00059	J	0.0006	0.00092	--	0.0006	ND	U	0.049
	Tetrahydrofuran	ppmv	0.002	--	0.0014	0.03	--	0.019	0.002	--	0.0014	0.06	--	0.0014	ND	U	0.0014	0.027	--	0.0014	0.0042	--	0.0014	0.11	J	0.11
	Toluene	ppmv	0.0033	--	0.0011	0.13	--	0.015	0.004	--	0.0011	0.32	--	0.011	0.0072	--	0.0011	0.0047	--	0.0011	0.0039	--	0.0011	0.036	J	0.088
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.014	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.084
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00092	ND	U	0.012	ND	U	0.00093	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.073
	Trichloroethylene (TCE)	ppmv	0.012	--	0.00078	0.048	--	0.01	0.02	--	0.00078	0.001	--	0.00076	0.00043	J	0.00075	0.00049	J	0.00075	0.002	--	0.00076	ND	U	0.062
	Trichlorofluoromethane	ppmv	0.00081	--	0.00074	ND	U	0.01	0.00034	J	0.00075	ND	U	0.00073	0.00028	J	0.00072	0.00041	J	0.00072	0.00057	J	0.00073	ND	U	0.059
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.16	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.94
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.022	ND	U	0.0016	0.0027	--	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.13
	Xylenes, Total	ppmv	0.0028	--	0.0019	0.019	J	0.026	0.0029	--	0.0019	0.044	--	0.0019	0.011	--	0.0019	0.0044	--	0.0019	0.0036	--	0.0019	0.13	J	0.15

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106111-350			KAFB-106111-450			KAFB-106112-025			KAFB-106112-050			KAFB-106112-050			KAFB-106112-150			KAFB-106112-250			KAFB-106112-350		
		Field Sample ID:	VA161046			VA161047			VA161048			VA161049			VA161050			VA161051			VA161052			VA161053		
		Sample Date:	14-Oct-2016			14-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			12-Oct-2016			11-Oct-2016			11-Oct-2016		
		Sample Type:	REG			REG			REG			REG			Field Duplicate			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0057	--	0.00082	ND	U	0.00083	0.0016	--	0.0011	0.0011	--	0.0011	0.0018	--	0.0011	0.00057	J	0.00083	0.0077	--	0.00087	0.0011	--	0.00086
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.622	--	0.16	0.533	--	0.17	0.227	--	0.16	0.278	--	0.16	0.277	--	0.17	0.626	--	0.17	0.663	--	0.17	0.68	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	79.7	--	0.16	79.1	--	0.17	78.6	--	0.16	78.7	--	0.16	78.7	--	0.17	78.7	--	0.17	79	--	0.17	78.9	--	0.17
	Oxygen	%	19.6	--	0.16	20.3	--	0.17	21.1	--	0.16	21	--	0.16	21	--	0.17	20.6	--	0.17	20.3	--	0.17	20.4	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	230000	--	2200	4100	--	950	240	--	160	ND	U	160	220	--	170	ND	U	170	26000	--	170	420	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	270	210	--	120	59	--	20	56	--	20	100	--	21	42	--	21	66	--	22	47	--	22
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	27000	--	1100	1500	--	470	190	--	82	200	--	81	290	--	85	160	--	83	1600	--	87	150	--	86
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.01	ND	U	0.0043	ND	U	0.00075	ND	U	0.00074	ND	U	0.00078	ND	U	0.00076	ND	U	0.00079	ND	U	0.00079
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0079	ND	U	0.0035	ND	U	0.00059	ND	U	0.00059	ND	U	0.00062	ND	U	0.0006	ND	U	0.00063	ND	U	0.00063
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.013	--	0.0071	0.0015	J	0.0031	0.00082	--	0.00053	0.001	--	0.00053	0.001	--	0.00055	0.0013	--	0.00054	0.0017	--	0.00056	0.0011	--	0.00056
	1,1,2-Trichloroethane	ppmv	ND	U	0.01	ND	U	0.0043	ND	U	0.00075	ND	U	0.00074	ND	U	0.00078	ND	U	0.00076	ND	U	0.00079	ND	U	0.00079
	1,1-Dichloroethane	ppmv	ND	U	0.013	ND	U	0.0059	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	1,1-Dichloroethene	ppmv	ND	U	0.014	ND	U	0.006	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.0073	ND	U	0.0032	ND	U	0.00055	ND	U	0.00055	ND	U	0.00057	ND	U	0.00056	ND	U	0.00058	ND	U	0.00058
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.011	0.0054	--	0.0048	0.0022	--	0.00083	0.002	--	0.00082	0.0036	--	0.00086	0.0016	--	0.00084	0.0017	--	0.00088	0.0018	--	0.00088
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0071	ND	U	0.0031	0.00022	J	0.00053	0.00022	J	0.00053	0.00041	J	0.00055	ND	U	0.00054	0.0027	--	0.00056	0.00034	J	0.00056
	1,2-Dichlorobenzene	ppmv	ND	U	0.009	ND	U	0.0039	ND	U	0.00068	ND	U	0.00067	ND	U	0.00071	ND	U	0.00069	ND	U	0.00072	ND	U	0.00072
	1,2-Dichloroethane	ppmv	ND	U	0.013	ND	U	0.0059	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	0.0053	--	0.0011	ND	U	0.0011
	1,2-Dichloropropane	ppmv	ND	U	0.012	ND	U	0.0051	ND	U	0.00088	ND	U	0.00088	ND	U	0.00092	ND	U	0.00089	ND	U	0.00094	ND	U	0.00093
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.01	J	0.011	0.0025	J	0.0048	0.00057	J	0.00083	0.00053	J	0.00082	0.00096	--	0.00086	0.00043	J	0.00084	0.002	--	0.00088	0.00056	J	0.00088
	1,3-Butadiene	ppmv	ND	U	0.025	ND	U	0.011	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.009	ND	U	0.0039	0.00024	J	0.00068	0.00025	J	0.00067	0.00027	J	0.00071	0.00025	J	0.00069	0.00023	J	0.00072	0.00024	J	0.00072
	1,4-Dichlorobenzene	ppmv	ND	U	0.009	ND	U	0.0039	ND	U	0.00068	ND	U	0.00067	ND	U	0.00071	ND	U	0.00069	ND	U	0.00072	ND	U	0.00072
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.015	ND	U	0.0066	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.013	ND	U	0.0058	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	Acetone	ppmv	ND	U	0.23	0.32	--	0.1	0.044	--	0.017	0.27	--	0.017	0.099	--	0.018	0.056	--	0.017	0.052	--	0.018	0.039	--	0.018
	Benzene	ppmv	0.66	--	0.017	0.47	--	0.0074	0.0026	--	0.0013	0.0023	--	0.0013	0.0039	--	0.0013	0.0018	--	0.0013	0.099	--	0.0014	0.0078	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.01	ND	U	0.0046	ND	U	0.00079	ND	U	0.00078	ND	U	0.00082	ND	U	0.0008	ND	U	0.00084	ND	U	0.00083
	Bromodichloromethane	ppmv	ND	U	0.0081	ND	U	0.0035	ND	U	0.00061	ND	U	0.0006	ND	U	0.00063	ND	U	0.00062	ND	U	0.00065	ND	U	0.00064
	Bromoform	ppmv	ND	U	0.0053	ND	U	0.0023	ND	U	0.00039	ND	U	0.00039	ND	U	0.00041	ND	U	0.0004	ND	U	0.00042	ND	U	0.00042
	Bromomethane	ppmv	ND	U	0.014	ND	U	0.0061	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0058	J	0.17	0.059	J	0.076	ND	U	0.013	0.0015	J	0.013	0.0022	J	0.014	0.0024	J	0.013	0.0027	J	0.014	0.0021	J	0.014
	Carbon Tetrachloride	ppmv	0.017	--	0.0086	0.0023	J	0.0038	0.00059	J	0.00065	0.00082	--	0.00064	0.00084	--	0.00068	0.00034	J	0.00066	0.0012	--	0.00069	0.0011	--	0.00068
	Chlorobenzene	ppmv	ND	U	0.012	ND	U	0.0052	ND	U	0.00089	ND	U	0.00088	ND	U	0.00092	ND	U	0.0009	ND	U	0.00094	ND	U	0.00093
	Chloroethane	ppmv	ND	U	0.021	ND	U	0.009	ND	U	0.0015	ND	U	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	0.004	J	0.011	ND	U	0.0049	0.00092	--	0.00083	0.0017	--	0.00083	0.0018	--	0.00087	0.0003	J	0.00085	ND	U	0.00089	ND	U	0.00088
	Chloromethane	ppmv	ND	UJ	0.026	0.022	J	0.011	ND	U	0.002	ND	U	0.002	ND	U	0.0021	ND	U	0.002	ND	U	0.0021	ND	U	0.0021
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.014	ND	U	0.006	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.012	ND	U	0.0052	ND	U	0.0009	ND	U	0.00089	ND	U	0.00094	ND	U	0.00091	ND	U	0.00095	ND	U	0.00095
	Cyclohexane	ppmv	3.1	--	0.032	0.046	--	0.014	0.0028	--	0.0024	0.00074	J	0.0024	0.00097	J	0.0025	ND	U	0.0024	0.33	--	0.0025	0.0027	--	0.0025
	Dibromochloromethane	ppmv	ND	U	0.0064	ND	U	0.0028	ND	U	0.00048	ND	U	0.00048	ND	U	0.0005	ND	U	0.00048	ND	U	0.00051	ND	U	0.0005
	Dichlorodifluoromethane	ppmv	0.014	--	0.011	0.0038	J	0.0048	0.00093	--	0.00082	0.0011	--	0.00082	0.0011	--	0.00086	0.0022	--	0.00083	0.0011	--	0.00088	0.00098	--	0.00087
	Ethanol	ppmv	ND	U	0.29	0.03	J	0.13	ND	U	0.022	ND	U	0.022	ND	U	0.023	ND	U	0.022	0.0049	J	0.023	ND	U	0.023
	Ethyl Acetate	ppmv	ND	U	0.03	ND	U	0.013	ND	U	0.0023	ND	U	0.0022	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024
	Ethylbenzene	ppmv	ND	U	0.013	0.025	--	0.0055	0.0015	--	0.00094	0.0016	--	0.00093	0.0028	--	0.00098	0.0013	--	0.00095	0.0029	--	0.001	0.0021	--	0.00099
	Hexachlorobutadiene	ppmv	ND	U	0.0051	ND	U	0.0022	ND	U	0.00038	ND	U	0.00038	ND	U	0.0004	ND	U	0.00039	ND	U	0.00041	ND	U	0.0004
	Isopropanol	ppmv	ND	U	0.22	ND	U	0.097	ND	U	0.017	ND	U	0.016	0.0015	J	0.017	ND	U	0.017	0.0033	J	0.018	ND	U	0.018
	m,p-Xylene (Sum of Isomers)	ppmv	0.008	J	0.025	0.075	--	0.011	0.0054	--	0.0019	0.0055	--	0.0019	0.0099	--	0.002	0.0045	--	0.0019	0.013	--	0.002	0.0068	--	0.002
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	0.18	0.19	--	0.08	0.003	J	0.014	0.066	--	0.014	0.068	--	0.014	0.028	--	0.014	0.01	J	0.015	0.0058	J	0.015
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.013	0.0097	--	0.0058	ND	U	0.00099	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.016	ND	U	0.0068	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.01	0.0019	J	0.0045	0.0033	--	0.00078	0.0026	--	0.00077	0.0044	--	0.00081	0.002	--	0.00079	0.0017	--	0.00083	0.0015	--	0.00082
	n-Heptane	ppmv	ND	U	0.013	0.024	--	0.0058	0.0012	--	0.00099	0.00071	J	0.00099	0.0011	--	0.001	0.00053	J	0.001	0.0006	J	0.0011	0.00049	J	0.001
	n-Hexane	ppmv	0.45	--	0.015	0.035	--	0.0067	0.0019	--	0.0012	0.00054	J	0.0011	0.00066	J	0.0012	0.00037	J	0.0012	0.079	--	0.0012	0.00057	J	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.031	--	0.013	0.022	--	0.0055	0.0019	--	0.00094	0.0019	--	0.00093	0.0034	--	0.00098	0.0015	--	0.00095	0.015	--	0.001	0.0027	--	0.00099
	Propylene	ppmv	0.15	--	0.032	0.011	J	0.014	ND	U	0.0024	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024	0.0023	J	0.0025	ND	U	0.0025
	Styrene	ppmv	ND	U	0.013	ND	U	0.0056	ND	U	0.00096	ND	U	0.00095	ND	U	0.001	ND	U	0.00097	ND	U	0.001	ND	U	0.001
	tert-Butyl Methyl Ether	ppmv	ND	U	0.015	ND	U	0.0066	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.008	ND	U	0.0035	ND	U	0.0006	ND	U	0.0006	ND	U	0.00063	0.00031	J	0.00061	0.00055	J	0.00064	0.00036	J	0.00063
	Tetrahydrofuran	ppmv	ND	U	0.018	0.032	--	0.008	0.0067	--	0.0014	0.045	--	0.0014	0.052	--	0.0014	0.0089	--	0.0014	0.004	--	0.0015	0.0041	--	0.0015
	Toluene	ppmv	0.021	--	0.014	0.91	--	0.0063	0.012	--	0.0011	0.013	--	0.0011	0.024	--	0.0011	0.011	--	0.0011	0.043	--	0.0011	0.029	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.014	ND	U	0.006	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.012	ND	U	0.0052	ND	U	0.0009	ND	U	0.00089	ND	U	0.00094	ND	U	0.00091	ND	U	0.00095	ND	U	0.00095
	Trichloroethylene (TCE)	ppmv	0.023	--	0.01	0.0018	J	0.0044	ND	U	0.00076	ND	U	0.00075	ND	U	0.00079	ND	U	0.00077	ND	U	0.00081	0.00067	J	0.0008
	Trichlorofluoromethane	ppmv	ND	U	0.0097	ND	U	0.0042	0.00026	J	0.00073	0.00028	J	0.00072	0.00029	J	0.00076	ND	U	0.00073	0.00028	J	0.00077	0.00038	J	0.00077
	Vinyl Acetate	ppmv	ND	U	0.15	ND	U	0.067	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.021	ND	U	0.0093	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017	ND	U	0.0016	ND	U	0.0017	ND	U	0.0017
	Xylenes, Total	ppmv	0.039	--	0.025	0.097	--	0.011	0.0073	--	0.0019	0.0074	--	0.0019	0.013	--	0.002	0.006	--	0.0019	0.028	--	0.002	0.0095	--	0.002

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106112-450			KAFB-106113-020			KAFB-106113-050			KAFB-106113-150			KAFB-106113-250			KAFB-106113-350			KAFB-106113-450			KAFB-106114-025		
		Field Sample ID:	VA161054			VA161055			VA161056			VA161057			VA161058			VA161059			VA161060			VA161061		
		Sample Date:	11-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0077	--	0.00086	ND	U	0.00084	ND	U	0.00081	ND	U	0.00083	ND	U	0.00081	ND	U	0.00083	0.028	--	0.00081	0.0021	--	0.00084
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.708	--	0.17	0.424	J	0.17	0.597	J	0.16	0.431	J	0.17	1.1	J	0.16	0.391	J	0.17	0.541	--	0.16	0.529	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	UJ	0.17	ND	UJ	0.16	ND	UJ	0.17	ND	UJ	0.16	ND	UJ	0.17	ND	U	0.16	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.17
	Nitrogen	%	78.6	--	0.17	78.7	J	0.17	78.8	J	0.16	79.2	J	0.17	79	J	0.16	78.9	J	0.17	79.5	--	0.16	78.2	--	0.17
	Oxygen	%	20.7	--	0.17	20.8	--	0.17	20.6	--	0.16	20.4	--	0.17	19.9	--	0.16	20.7	--	0.17	20	--	0.16	21.3	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	31000	--	490	1100	--	170	170	--	160	ND	U	170	960	--	160	5000	--	170	520000	--	4000	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	560	--	61	ND	U	21	ND	U	20	ND	U	21	ND	U	20	ND	U	21	15000	--	500	ND	U	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	10000	--	250	94	--	84	ND	U	81	ND	U	83	99	--	81	84	--	83	660000	--	2000	230	--	84
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.0023	ND	U	0.00077	ND	U	0.00074	ND	U	0.00076	ND	U	0.00074	ND	U	0.00076	ND	U	0.018	ND	U	0.00077
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0018	ND	U	0.00061	ND	U	0.00059	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.015	ND	U	0.00061
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.0011	J	0.0016	ND	U	0.00054	ND	U	0.00053	0.00026	J	0.00054	0.00072	--	0.00053	0.00027	J	0.00054	ND	U	0.013	0.0029	--	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.0023	ND	U	0.00077	ND	U	0.00074	ND	U	0.00076	ND	U	0.00074	ND	U	0.00076	ND	U	0.018	ND	U	0.00077
	1,1-Dichloroethane	ppmv	ND	U	0.003	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.025	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.0031	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.025	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.0017	ND	U	0.00056	ND	U	0.00054	ND	U	0.00056	ND	U	0.00054	ND	U	0.00056	ND	U	0.014	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	0.021	--	0.0025	ND	U	0.00085	ND	U	0.00082	ND	U	0.00084	ND	U	0.00082	ND	U	0.00084	0.3	--	0.02	0.00027	J	0.00085
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0031	--	0.0016	ND	U	0.00054	ND	U	0.00052	ND	U	0.00054	ND	U	0.00052	ND	U	0.00054	0.0092	J	0.013	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.002	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.017	ND	U	0.00069
	1,2-Dichloroethane	ppmv	0.0018	J	0.003	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.025	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.0027	ND	U	0.0009	ND	U	0.00087	ND	U	0.0009	ND	U	0.00087	ND	U	0.00089	ND	U	0.022	ND	U	0.0009
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.017	--	0.0025	ND	U	0.00085	ND	U	0.00082	ND	U	0.00084	ND	U	0.00082	ND	U	0.00084	0.31	--	0.02	ND	U	0.00085
	1,3-Butadiene	ppmv	ND	U	0.0056	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.046	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.002	0.0003	J	0.00069	0.00027	J	0.00067	ND	U	0.00069	0.00029	J	0.00067	0.00026	J	0.00069	ND	U	0.017	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.002	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.017	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0034	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.028	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.003	ND	U	0.001	ND	U	0.00098	0.00056	J	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.025	ND	U	0.001
	Acetone	ppmv	ND	U	0.052	0.53	--	0.018	0.085	--	0.017	0.12	--	0.017	0.2	--	0.017	0.07	--	0.017	ND	U	0.42	0.0056	J	0.018
	Benzene	ppmv	0.48	--	0.0038	0.0011	J	0.0013	0.00046	J	0.0013	0.0006	J	0.0013	0.00061	J	0.0013	0.012	--	0.0013	3.1	--	0.032	0.001	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.0024	ND	U	0.00081	ND	U	0.00078	ND	U	0.0008	ND	U	0.00078	ND	U	0.0008	ND	U	0.019	ND	U	0.00081
	Bromodichloromethane	ppmv	ND	U	0.0018	ND	U	0.00062	0.00054	J	0.0006	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	ND	U	0.015	ND	U	0.00062
	Bromoform	ppmv	ND	U	0.0012	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.0097	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.0032	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.026	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0037	J	0.039	ND	U	0.013	ND	U	0.013	0.0037	J	0.013	0.0044	J	0.013	0.0045	J	0.013	0.048	J	0.32	ND	U	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.002	ND	U	0.00066	0.0027	--	0.00064	0.0053	--	0.00066	0.0091	--	0.00064	0.00038	J	0.00066	ND	U	0.016	0.0027	--	0.00066
	Chlorobenzene	ppmv	ND	U	0.0027	ND	U	0.00091	ND	U	0.00087	ND	U	0.0009	ND	U	0.00087	ND	U	0.0009	ND	U	0.022	ND	U	0.00091
	Chloroethane	ppmv	ND	U	0.0047	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.038	ND	U	0.0016
	Chloroform	ppmv	0.0009	J	0.0025	ND	U	0.00086	0.0093	--	0.00082	0.0015	--	0.00085	0.00065	J	0.00082	ND	U	0.00085	ND	U	0.021	ND	U	0.00086
	Chloromethane	ppmv	ND	U	0.006	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.049	ND	U	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0031	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.025	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.0027	ND	U	0.00092	ND	U	0.00089	ND	U	0.00091	ND	U	0.00089	ND	U	0.00091	ND	U	0.022	ND	U	0.00092
	Cyclohexane	ppmv	0.28	--	0.0071	0.00096	J	0.0024	ND	U	0.0023	ND	U	0.0024	0.0031	--	0.0023	0.015	--	0.0024	1.8	--	0.058	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.0014	ND	U	0.00049	ND	U	0.00047	ND	U	0.00049	ND	U	0.00047	ND	U	0.00048	ND	U	0.012	ND	U	0.00049
	Dichlorodifluoromethane	ppmv	0.0017	J	0.0025	0.00054	J	0.00084	0.00056	J	0.00081	0.00088	--	0.00084	0.016	--	0.00081	0.013	--	0.00083	0.017	J	0.02	0.02	--	0.00084
	Ethanol	ppmv	ND	U	0.065	ND	U	0.022	ND	U	0.021	0.014	J	0.022	ND	U	0.021	ND	U	0.022	ND	U	0.53	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0068	ND	U	0.0023	ND	U	0.0022	0.0018	J	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.056	ND	U	0.0023
	Ethylbenzene	ppmv	0.048	--	0.0028	ND	U	0.00096	ND	U	0.00093	ND	U	0.00096	ND	U	0.00093	ND	U	0.00095	0.48	--	0.023	ND	U	0.00096
	Hexachlorobutadiene	ppmv	ND	U	0.0012	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.0094	ND	U	0.00039
	Isopropanol	ppmv	ND	U	0.05	0.0027	J	0.017	0.0015	J	0.016	0.0026	J	0.017	0.0017	J	0.016	0.0015	J	0.017	ND	U	0.41	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.22	--	0.0057	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	2.4	--	0.046	0.00077	J	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0074	J	0.042	0.0089	J	0.014	0.0051	J	0.014	0.051	--	0.014	0.068	--	0.014	0.0063	J	0.014	0.32	J	0.34	ND	U	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.003	ND	U	0.001	ND	U	0.00098	0.00057	J	0.001	ND	U	0.00098	ND	U	0.001	0.0093	J	0.025	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0035	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.029	ND	U	0.0012
	Naphthalene	ppmv	0.0019	J	0.0023	0.00053	J	0.0008	0.00037	J	0.00077	0.00033	J	0.00079	0.00028	J	0.00077	0.00028	J	0.00079	ND	U	0.019	0.00044	J	0.0008
	n-Heptane	ppmv	0.07	--	0.003	0.00038	J	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	1	--	0.025	ND	U	0.001
	n-Hexane	ppmv	0.11	--	0.0035	0.00062	J	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	1.6	--	0.029	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.11	--	0.0028	ND	U	0.00096	ND	U	0.00093	ND	U	0.00096	ND	U	0.00093	0.00032	J	0.00095	1.2	--	0.023	0.00038	J	0.00096
	Propylene	ppmv	0.019	--	0.0071	0.00087	J	0.0024	ND	U	0.0023	ND	U	0.0024	0.00091	J	0.0023	0.0063	--	0.0024	0.91	--	0.058	ND	U	0.0024
	Styrene	ppmv	ND	U	0.0029	ND	U	0.00098	ND	U	0.00095	ND	U	0.00098	ND	U	0.00095	ND	U	0.00097	ND	U	0.024	ND	U	0.00098
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0034	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.028	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.0018	ND	U	0.00062	0.00051	J	0.00059	0.00063	--	0.00061	ND	U	0.00059	ND	U	0.00061	ND	U	0.015	ND	U	0.00062
	Tetrahydrofuran	ppmv	ND	U	0.0042	0.0048	--	0.0014	0.0018	--	0.0014	0.029	--	0.0014	0.015	--	0.0014	0.005	--	0.0014	0.11	--	0.034	0.0045	--	0.0014
	Toluene	ppmv	0.52	--	0.0033	0.0019	U	0.0011	ND	U	0.0011	0.0022	--	0.0011	0.001	U	0.0011	0.0035	--	0.0011	4.9	--	0.027	0.0014	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0031	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.025	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.0027	ND	U	0.00092	ND	U	0.00089	ND	U	0.00091	ND	U	0.00089	ND	U	0.00091	ND	U	0.022	ND	U	0.00092
	Trichloroethylene (TCE)	ppmv	ND	U	0.0023	ND	U	0.00078	ND	U	0.00075	ND	U	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.019	ND	U	0.00078
	Trichlorofluoromethane	ppmv	ND	U	0.0022	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	0.00075	--	0.00072	0.0011	--	0.00073	ND	U	0.018	0.0022	--	0.00074
	Vinyl Acetate	ppmv	ND	U	0.035	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.29	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0048	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.039	ND	U	0.0016
	Xylenes, Total	ppmv	0.33	--	0.0057	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	3.6	--	0.046	0.0011	J	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106114-025			KAFB-106114-050			KAFB-106114-150			KAFB-106114-250			KAFB-106114-350			KAFB-106114-450			KAFB-106115-025			KAFB-106115-050		
		Field Sample ID:	VA161062			VA161063			VA161064			VA161065			VA161066			VA161067			VA161068			VA161069		
		Sample Date:	05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016		
		Sample Type:	Field Duplicate			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00083	ND	U	0.00082	ND	U	0.00092	0.00055	J	0.00083	ND	U	0.00082	ND	U	0.00082	ND	U	0.00083	ND	U	0.00082
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.54	--	0.17	0.585	--	0.16	0.435	--	0.18	1.36	--	0.17	0.266	--	0.16	0.711	--	0.16	0.544	--	0.17	0.635	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.18	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.18	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Nitrogen	%	78.9	--	0.17	78.9	--	0.16	79.2	--	0.18	81.8	--	0.17	80.7	--	0.16	82.3	--	0.16	77.8	--	0.17	77.8	--	0.16
	Oxygen	%	20.5	--	0.17	20.5	--	0.16	20.3	--	0.18	16.9	--	0.17	19	--	0.16	17	--	0.16	21.6	--	0.17	21.5	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	ND	U	160	ND	U	180	ND	U	170	ND	U	1600	2900000	--	33000	3300	--	170	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	20	ND	U	23	ND	U	21	ND	U	210	95000	--	4100	ND	U	21	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	110	--	83	93	--	82	ND	U	92	140	--	83	ND	U	820	1700000	--	16000	ND	U	83	ND	U	82
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.00075	ND	U	0.00084	ND	U	0.00076	ND	U	0.0075	ND	U	0.15	ND	U	0.00076	ND	U	0.00075
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0006	ND	U	0.00059	ND	U	0.00067	ND	U	0.0006	ND	U	0.006	ND	U	0.12	ND	U	0.0006	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.003	--	0.00054	0.0032	--	0.00053	0.0032	--	0.0006	0.0031	--	0.00054	0.044	--	0.0054	0.054	J	0.11	ND	U	0.00054	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.00075	ND	U	0.00084	ND	U	0.00076	ND	U	0.0075	ND	U	0.15	ND	U	0.00076	ND	U	0.00075
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.01	ND	U	0.2	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0012	ND	U	0.001	ND	U	0.01	ND	U	0.21	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00056	ND	U	0.00055	ND	U	0.00062	ND	U	0.00056	ND	U	0.0055	ND	U	0.11	ND	U	0.00056	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	0.00032	J	0.00084	ND	U	0.00083	ND	U	0.00094	ND	U	0.00084	ND	U	0.0083	2.7	--	0.17	ND	U	0.00084	ND	U	0.00083
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00054	ND	U	0.00053	ND	U	0.0006	ND	U	0.00054	ND	U	0.0053	0.13	--	0.11	ND	U	0.00054	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00068	ND	U	0.00077	ND	U	0.00069	ND	U	0.0068	ND	U	0.14	ND	U	0.00069	ND	U	0.00068
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.01	ND	U	0.2	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.0009	ND	U	0.00088	ND	U	0.001	ND	U	0.00089	ND	U	0.0089	ND	U	0.18	ND	U	0.0009	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00084	ND	U	0.00083	ND	U	0.00094	ND	U	0.00084	ND	U	0.0083	1.6	--	0.17	ND	U	0.00084	ND	U	0.00083
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0018	ND	U	0.0021	ND	U	0.0019	ND	U	0.019	ND	U	0.37	ND	U	0.0019	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00068	ND	U	0.00077	ND	U	0.00069	ND	U	0.0068	ND	U	0.14	0.00023	J	0.00069	0.00024	J	0.00068
	1,4-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00068	ND	U	0.00077	ND	U	0.00069	ND	U	0.0068	ND	U	0.14	ND	U	0.00069	ND	U	0.00068
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.0013	ND	U	0.0011	ND	U	0.011	ND	U	0.23	ND	U	0.0012	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.01	ND	U	0.2	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	0.012	J	0.017	0.65	--	0.017	0.1	--	0.019	0.023	--	0.017	ND	U	0.17	ND	U	3.5	0.046	--	0.017	0.23	--	0.017
	Benzene	ppmv	0.0014	--	0.0013	0.00093	J	0.0013	0.00046	J	0.0014	0.00062	J	0.0013	ND	U	0.013	9.3	--	0.26	ND	U	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.0008	ND	U	0.00079	ND	U	0.00089	ND	U	0.0008	ND	U	0.0079	ND	U	0.16	ND	U	0.0008	ND	U	0.00079
	Bromodichloromethane	ppmv	ND	U	0.00062	ND	U	0.00061	ND	U	0.00069	ND	U	0.00062	ND	U	0.0061	ND	U	0.12	ND	U	0.00062	ND	U	0.00061
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.00039	ND	U	0.00045	ND	U	0.0004	ND	U	0.004	ND	U	0.079	ND	U	0.0004	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.0012	ND	U	0.0011	ND	U	0.011	ND	U	0.21	ND	U	0.0011	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	0.013	0.0011	J	0.013	0.0026	J	0.015	0.0027	J	0.013	ND	U	0.13	ND	U	2.6	ND	U	0.013	0.00084	J	0.013
	Carbon Tetrachloride	ppmv	0.003	--	0.00066	0.0034	--	0.00065	0.0031	--	0.00073	0.038	--	0.00066	ND	U	0.0065	ND	U	0.13	0.00029	J	0.00066	0.00033	J	0.00065
	Chlorobenzene	ppmv	ND	U	0.0009	ND	U	0.00089	ND	U	0.001	ND	U	0.0009	ND	U	0.0089	ND	U	0.18	ND	U	0.0009	ND	U	0.00089
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0015	ND	U	0.0017	ND	U	0.0016	ND	U	0.016	ND	U	0.31	ND	U	0.0016	ND	U	0.0015
	Chloroform	ppmv	0.0003	J	0.00085	0.0003	J	0.00083	0.00041	J	0.00094	0.0058	--	0.00085	ND	U	0.0084	ND	U	0.17	ND	U	0.00085	0.00029	J	0.00083
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0022	ND	UJ	0.002	ND	UJ	0.02	ND	UJ	0.4	ND	U	0.002	ND	U	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0012	ND	U	0.001	ND	U	0.01	ND	U	0.21	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.0009	ND	U	0.001	ND	U	0.00091	ND	U	0.009	ND	U	0.18	ND	U	0.00091	ND	U	0.0009
	Cyclohexane	ppmv	ND	U	0.0024	ND	U	0.0024	ND	U	0.0027	ND	U	0.0024	ND	U	0.024	15	--	0.48	ND	U	0.0024	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00049	ND	U	0.00048	ND	U	0.00054	ND	U	0.00048	ND	U	0.0048	ND	U	0.096	ND	U	0.00049	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.027	--	0.00084	0.029	--	0.00082	0.041	--	0.00093	0.11	--	0.00083	1.4	--	0.0083	1.9	--	0.17	0.00041	J	0.00084	0.0004	J	0.00082
	Ethanol	ppmv	0.0039	J	0.022	ND	U	0.022	ND	U	0.024	ND	U	0.022	ND	U	0.22	ND	U	4.4	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0026	ND	U	0.0023	ND	U	0.023	ND	U	0.46	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	ND	U	0.00096	ND	U	0.00094	ND	U	0.0011	ND	U	0.00095	ND	U	0.0094	4.4	--	0.19	ND	U	0.00096	ND	U	0.00094
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.00038	ND	U	0.00043	ND	U	0.00039	ND	U	0.0038	ND	U	0.077	ND	U	0.00039	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.017	ND	U	0.019	ND	U	0.017	ND	U	0.17	ND	U	3.3	ND	U	0.017	0.0017	J	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.00097	J	0.0019	ND	U	0.0019	ND	U	0.0021	0.00059	J	0.0019	ND	U	0.019	15	--	0.38	ND	U	0.0019	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.00067	J	0.014	1	J	0.014	0.0049	J	0.016	0.0055	J	0.014	ND	U	0.14	0.23	J	2.8	0.0022	J	0.014	0.11	--	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.01	ND	U	0.2	ND	U	0.001	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.012	ND	U	0.24	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00048	J	0.00079	ND	U	0.00078	ND	U	0.00088	ND	U	0.00079	ND	U	0.0078	ND	U	0.16	0.00069	J	0.00079	0.0003	J	0.00078
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.01	31	--	0.2	ND	U	0.001	ND	U	0.00099
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.012	11	--	0.23	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00046	J	0.00096	ND	U	0.00094	ND	U	0.0011	ND	U	0.00095	ND	U	0.0094	6.8	--	0.19	ND	U	0.00096	ND	U	0.00094
	Propylene	ppmv	ND	U	0.0024	ND	U	0.0024	ND	U	0.0027	ND	U	0.0024	ND	U	0.024	1.1	--	0.48	ND	U	0.0024	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00098	ND	U	0.00096	ND	U	0.0011	ND	U	0.00097	ND	U	0.0096	ND	U	0.19	ND	U	0.00098	ND	U	0.00096
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.0013	ND	U	0.0011	ND	U	0.011	ND	U	0.23	ND	U	0.0012	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00061	ND	U	0.0006	ND	U	0.00068	ND	U	0.00061	ND	U	0.006	ND	U	0.12	ND	U	0.00061	ND	U	0.0006
	Tetrahydrofuran	ppmv	0.0088	--	0.0014	0.62	J	0.0014	0.0046	--	0.0016	0.0057	--	0.0014	ND	U	0.014	ND	U	0.28	0.00063	J	0.0014	0.12	--	0.0014
	Toluene	ppmv	0.0019	--	0.0011	0.0018	--	0.0011	0.00085	J	0.0012	0.0013	--	0.0011	ND	U	0.011	27	--	0.22	0.00057	J	0.0011	0.00051	J	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0012	ND	U	0.001	ND	U	0.01	ND	U	0.21	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.0009	ND	U	0.001	ND	U	0.00091	ND	U	0.009	ND	U	0.18	ND	U	0.00091	ND	U	0.0009
	Trichloroethylene (TCE)	ppmv	ND	U	0.00077	ND	U	0.00076	ND	U	0.00086	0.0013	--	0.00077	ND	U	0.0076	ND	U	0.15	ND	U	0.00077	ND	U	0.00076
	Trichlorofluoromethane	ppmv	0.0026	--	0.00074	0.0029	--	0.00073	0.0028	--	0.00082	0.0078	--	0.00073	0.19	--	0.0073	0.23	--	0.15	ND	U	0.00074	ND	U	0.00073
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.013	ND	U	0.012	ND	U	0.12	ND	U	2.3	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0018	ND	U	0.0016	ND	U	0.016	ND	U	0.32	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	0.0014	J	0.0019	ND	U	0.0019	ND	U	0.0021	0.00059	J	0.0019	ND	U	0.019	22	--	0.38	ND	U	0.0019	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106115-150			KAFB-106115-250			KAFB-106115-250			KAFB-106115-350			KAFB-106115-450			KAFB-106116-025			KAFB-106116-050			KAFB-106116-150		
		Field Sample ID:	VA161070			VA161071			VA161072			VA161073			VA161074			VA161075			VA161076			VA161077		
		Sample Date:	05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016		
		Sample Type:	REG			REG			Field Duplicate			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	0.003	--	0.00086	0.002	--	0.00084	0.00067	J	0.00084	ND	U	0.00088
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.473	--	0.16	0.305	--	0.17	0.3	--	0.17	0.271	--	0.17	0.936	--	0.17	0.358	--	0.17	0.508	--	0.17	0.56	--	0.18
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.18
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.18
	Nitrogen	%	78.7	--	0.16	78.7	--	0.17	78.7	--	0.17	78.2	--	0.17	78.6	--	0.17	78.9	--	0.17	79	--	0.17	79	--	0.18
	Oxygen	%	20.8	--	0.16	21	--	0.17	21	--	0.17	21.5	--	0.17	20.5	--	0.17	20.8	--	0.17	20.4	--	0.17	20.4	--	0.18
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	170	ND	U	170	2300	--	170	1700000	--	34000	560	--	170	ND	U	170	360	--	180
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	21	ND	U	21	ND	U	21	ND	U	4300	310	--	21	94	--	21	62	--	22
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	110	--	84	91	--	84	130	--	83	21000	--	17000	5200	--	84	980	--	84	530	--	88
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00077	ND	U	0.00077	ND	U	0.00076	ND	U	0.16	ND	U	0.00077	ND	U	0.00077	ND	U	0.00081
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00061	ND	U	0.00061	ND	U	0.0006	ND	U	0.12	ND	U	0.00061	ND	U	0.00061	ND	U	0.00064
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	0.00024	J	0.00054	0.00025	J	0.00054	ND	U	0.00054	ND	U	0.11	0.0006	--	0.00055	0.0017	--	0.00054	0.0011	--	0.00057
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00077	ND	U	0.00077	ND	U	0.00076	ND	U	0.16	ND	U	0.00077	ND	U	0.00077	ND	U	0.00081
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.0011
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.22	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.12	ND	U	0.00057	ND	U	0.00056	ND	U	0.00059
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00081	ND	U	0.00085	ND	U	0.00085	ND	U	0.00084	ND	U	0.17	0.0093	--	0.00085	0.0031	--	0.00085	0.0021	--	0.0009
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00054	ND	U	0.00054	ND	U	0.00054	ND	U	0.11	0.00018	J	0.00055	ND	U	0.00054	ND	U	0.00057
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.14	ND	U	0.0007	ND	U	0.00069	ND	U	0.00073
	1,2-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.0011
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.0009	ND	U	0.0009	ND	U	0.00089	ND	U	0.19	ND	U	0.00091	ND	U	0.0009	ND	U	0.00095
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	ND	U	0.00085	ND	U	0.00085	ND	U	0.00084	ND	U	0.17	0.0035	--	0.00085	0.0011	--	0.00085	0.00078	J	0.0009
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.39	ND	U	0.0019	ND	U	0.0019	ND	U	0.002
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.14	ND	U	0.0007	ND	U	0.00069	ND	U	0.00073
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.14	ND	U	0.0007	ND	U	0.00069	ND	U	0.00073
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.24	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.0011
	Acetone	ppmv	0.013	J	0.017	0.19	--	0.018	0.21	--	0.018	0.11	--	0.017	ND	U	3.6	0.011	J	0.018	0.062	--	0.018	0.018	J	0.019
	Benzene	ppmv	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	0.59	--	0.27	0.002	--	0.0013	0.0011	J	0.0013	0.00098	J	0.0014
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00081	ND	U	0.00081	ND	U	0.0008	ND	U	0.17	ND	U	0.00081	ND	U	0.00081	ND	U	0.00085
	Bromodichloromethane	ppmv	ND	U	0.0006	ND	U	0.00062	ND	U	0.00062	ND	U	0.00062	ND	U	0.13	ND	U	0.00063	ND	U	0.00062	ND	U	0.00066
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.0004	ND	U	0.0004	ND	U	0.0004	ND	U	0.083	ND	U	0.00041	ND	U	0.0004	ND	U	0.00043
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.22	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0025	J	0.013	0.0035	J	0.013	0.0042	J	0.013	0.0023	J	0.013	ND	U	2.7	ND	U	0.013	0.001	J	0.013	0.0032	J	0.014
	Carbon Tetrachloride	ppmv	0.0015	--	0.00064	ND	U	0.00066	ND	U	0.00066	ND	U	0.00066	ND	U	0.14	ND	U	0.00067	0.00062	J	0.00066	0.0016	--	0.0007
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.00091	ND	U	0.00091	ND	U	0.0009	ND	U	0.19	ND	U	0.00091	ND	U	0.00091	ND	U	0.00096
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.32	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017
	Chloroform	ppmv	0.00033	J	0.00082	ND	U	0.00086	ND	U	0.00086	ND	U	0.00085	ND	U	0.18	ND	U	0.00086	ND	U	0.00086	ND	U	0.0009
	Chloromethane	ppmv	ND	U	0.0019	ND	U	0.002	ND	U	0.002	ND	U	0.002	ND	U	0.41	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0021
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.22	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00092	ND	U	0.00092	ND	U	0.00091	ND	U	0.19	ND	U	0.00093	ND	U	0.00092	ND	U	0.00097
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	1.6	--	0.5	ND	U	0.0024	ND	U	0.0024	ND	U	0.0026
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00049	ND	U	0.00049	ND	U	0.00048	ND	U	0.1	ND	U	0.00049	ND	U	0.00049	ND	U	0.00052
	Dichlorodifluoromethane	ppmv	ND	U	0.00081	ND	U	0.00084	ND	U	0.00084	ND	U	0.00083	ND	U	0.17	0.0015	--	0.00085	0.0017	--	0.00084	0.0016	--	0.00089
	Ethanol	ppmv	ND	U	0.021	ND	U	0.022	ND	U	0.022	ND	U	0.022	ND	U	4.5	ND	U	0.022	ND	U	0.022	ND	U	0.023
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.47	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024
	Ethylbenzene	ppmv	ND	U	0.00092	ND	U	0.00096	ND	U	0.00096	ND	U	0.00095	ND	U	0.2	0.003	--	0.00097	0.0014	--	0.00096	0.001	--	0.001
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039	ND	U	0.08	ND	U	0.00039	ND	U	0.00039	ND	U	0.00041
	Isopropanol	ppmv	ND	U	0.016	0.0017	J	0.017	0.0018	J	0.017	ND	U	0.017	ND	U	3.5	ND	U	0.017	0.0015	J	0.017	ND	U	0.018
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.39	0.014	--	0.0019	0.006	--	0.0019	0.0047	--	0.002
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0014	J	0.014	0.059	--	0.014	0.071	--	0.014	0.061	--	0.014	ND	U	2.9	0.0034	J	0.014	0.05	--	0.014	0.0054	J	0.015
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.0011
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.25	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013
	Naphthalene	ppmv	0.00042	J	0.00076	ND	U	0.0008	0.0003	J	0.0008	ND	U	0.00079	ND	U	0.16	0.0026	--	0.0008	0.0013	--	0.0008	0.00084	--	0.00084
	n-Heptane	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.21	0.0014	--	0.001	0.0004	J	0.001	0.00043	J	0.0011
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	0.95	--	0.24	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00092	ND	U	0.00096	ND	U	0.00096	ND	U	0.00095	ND	U	0.2	0.0065	--	0.00097	0.0028	--	0.00096	0.002	--	0.001
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	0.29	J	0.5	0.00087	J	0.0024	ND	U	0.0024	ND	U	0.0026
	Styrene	ppmv	ND	U	0.00094	ND	U	0.00098	ND	U	0.00098	ND	U	0.00097	ND	U	0.2	ND	U	0.00099	ND	U	0.00098	ND	U	0.001
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.24	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	0.00026	J	0.00059	ND	U	0.00062	ND	U	0.00062	ND	U	0.00061	ND	U	0.13	ND	U	0.00062	ND	U	0.00062	0.00025	J	0.00065
	Tetrahydrofuran	ppmv	0.0088	--	0.0014	0.023	--	0.0014	0.026	--	0.0014	0.018	--	0.0014	ND	U	0.29	0.012	--	0.0014	0.55	J	0.0014	0.012	--	0.0015
	Toluene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.54	--	0.23	0.011	--	0.0011	0.0067	--	0.0011	0.0056	--	0.0012
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.22	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00092	ND	U	0.00092	ND	U	0.00091	ND	U	0.19	ND	U	0.00093	ND	U	0.00092	ND	U	0.00097
	Trichloroethylene (TCE)	ppmv	ND	U	0.00074	ND	U	0.00078	ND	U	0.00078	0.003	--	0.00077	ND	U	0.16	ND	U	0.00078	ND	U	0.00078	ND	U	0.00082
	Trichlorofluoromethane	ppmv	ND	U	0.00071	ND	U	0.00074	ND	U	0.00074	ND	U	0.00073	ND	U	0.15	0.00033	J	0.00075	0.00038	J	0.00074	ND	U	0.00078
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	2.4	ND	U	0.012	0.0031	J	0.012	ND	U	0.013
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.33	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.39	0.02	--	0.0019	0.0088	--	0.0019	0.0067	--	0.002

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106116-250			KAFB-106116-350			KAFB-106116-450			KAFB-106117-025			KAFB-106117-050			KAFB-106117-150			KAFB-106117-250			KAFB-106117-350		
		Field Sample ID:	VA161078			VA161079			VA161081			VA161082			VA161083			VA161084			VA161085			VA161086		
		Sample Date:	05-Oct-2016			05-Oct-2016			05-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0081	--	0.00081	0.021	--	0.00083	0.24	--	0.00081	0.0017	--	0.00082	0.0014	--	0.00079	0.0014	--	0.00081	0.32	--	0.00081	0.11	--	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.881	--	0.16	0.667	--	0.17	3.2	--	0.16	1.1	--	0.16	2.74	--	0.16	2.79	--	0.16	7.45	--	0.16	11.2	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.5	--	0.16	79.9	--	0.17	84	--	0.16	79.1	--	0.16	80.1	--	0.16	79.7	--	0.16	81.4	--	0.16	82.3	--	0.16
	Oxygen	%	19.6	--	0.16	19.5	--	0.17	12.8	--	0.16	19.7	--	0.16	17.1	--	0.16	17.5	--	0.16	11.1	--	0.16	6.49	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	400000	--	20000	64000	--	830	5900000	--	65000	1400	--	160	1500	--	160	490	--	160	7700000	--	54000	1700000	--	13000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	3600	--	2500	ND	U	100	46000	--	8100	350	--	20	150	--	20	120	--	20	32000	--	6800	130000	--	1600
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	84000	--	10000	4600	--	420	1300000	--	32000	15000	--	82	3600	--	79	1800	--	81	650000	--	27000	1000000	--	6400
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.092	ND	U	0.0038	ND	U	0.3	ND	U	0.00075	ND	U	0.00072	ND	U	0.00074	ND	U	0.25	ND	U	0.059
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.073	ND	U	0.003	ND	U	0.24	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059	ND	U	0.2	ND	U	0.047
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.066	0.0013	J	0.0027	ND	U	0.21	0.0067	--	0.00053	0.01	--	0.00052	0.0089	--	0.00053	ND	U	0.18	0.03	J	0.042
	1,1,2-Trichloroethane	ppmv	ND	U	0.092	ND	U	0.0038	ND	U	0.3	ND	U	0.00075	ND	U	0.00072	ND	U	0.00074	ND	U	0.25	ND	U	0.059
	1,1-Dichloroethane	ppmv	ND	U	0.12	ND	U	0.0051	ND	U	0.4	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.33	ND	U	0.08
	1,1-Dichloroethene	ppmv	ND	U	0.13	ND	U	0.0052	ND	U	0.41	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.34	ND	U	0.081
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.068	ND	U	0.0028	ND	U	0.22	ND	U	0.00055	ND	U	0.00053	ND	U	0.00055	ND	U	0.18	ND	U	0.043
	1,2,4-Trimethylbenzene	ppmv	0.092	J	0.1	0.0021	J	0.0042	1.3	--	0.33	0.0083	--	0.00083	0.003	--	0.0008	0.0029	--	0.00082	1.4	--	0.27	3.7	--	0.066
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.065	0.0077	--	0.0027	0.1	J	0.21	0.00048	J	0.00053	0.00037	J	0.00051	0.0003	J	0.00053	0.15	J	0.18	0.048	--	0.042
	1,2-Dichlorobenzene	ppmv	ND	U	0.084	ND	U	0.0035	ND	U	0.27	ND	U	0.00068	ND	U	0.00066	ND	U	0.00067	ND	U	0.22	ND	U	0.054
	1,2-Dichloroethane	ppmv	ND	U	0.12	0.0067	--	0.0051	ND	U	0.4	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.33	ND	U	0.08
	1,2-Dichloropropane	ppmv	ND	U	0.11	ND	U	0.0045	ND	U	0.35	ND	U	0.00088	ND	U	0.00086	ND	U	0.00088	ND	U	0.29	ND	U	0.07
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.17	--	0.1	0.0031	J	0.0042	1	--	0.33	0.0042	--	0.00083	0.0019	--	0.0008	0.0014	--	0.00082	1.2	--	0.27	1.7	--	0.066
	1,3-Butadiene	ppmv	ND	U	0.23	ND	U	0.0094	ND	U	0.73	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.61	ND	U	0.15
	1,3-Dichlorobenzene	ppmv	ND	U	0.084	ND	U	0.0035	ND	U	0.27	ND	U	0.00068	ND	U	0.00066	ND	U	0.00067	ND	U	0.22	ND	U	0.054
	1,4-Dichlorobenzene	ppmv	ND	U	0.084	ND	U	0.0035	ND	U	0.27	ND	U	0.00068	ND	U	0.00066	ND	U	0.00067	ND	U	0.22	ND	U	0.054
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.14	ND	U	0.0058	ND	U	0.45	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.37	ND	U	0.089
	2-Hexanone	ppmv	ND	U	0.12	ND	U	0.0051	ND	U	0.4	ND	U	0.001	ND	U	0.00096	ND	U	0.00099	ND	U	0.33	ND	U	0.079
	Acetone	ppmv	ND	U	2.1	ND	U	0.087	ND	U	6.8	0.0099	J	0.017	0.4	--	0.017	0.026	--	0.017	ND	U	5.7	ND	U	1.4
	Benzene	ppmv	27	--	0.16	0.72	--	0.0065	20	--	0.51	0.0023	--	0.0013	0.0022	--	0.0012	0.0018	--	0.0013	48	--	0.42	1.5	--	0.1
	Benzyl Chloride	ppmv	ND	U	0.097	ND	U	0.004	ND	U	0.31	ND	U	0.00079	ND	U	0.00076	ND	U	0.00078	ND	U	0.26	ND	U	0.062
	Bromodichloromethane	ppmv	ND	U	0.075	ND	U	0.0031	ND	U	0.24	ND	U	0.00061	ND	U	0.00059	ND	U	0.0006	ND	U	0.2	ND	U	0.048
	Bromoform	ppmv	ND	U	0.049	ND	U	0.002	ND	U	0.16	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.13	ND	U	0.031
	Bromomethane	ppmv	ND	U	0.13	ND	U	0.0053	ND	U	0.42	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.35	ND	U	0.083
	Carbon Disulfide	ppmv	ND	U	1.6	ND	U	0.067	ND	U	5.2	ND	U	0.013	0.00045	J	0.013	0.0035	J	0.013	ND	U	4.3	ND	U	1
	Carbon Tetrachloride	ppmv	ND	U	0.08	0.0017	J	0.0033	ND	U	0.26	0.0037	--	0.00065	0.0063	--	0.00063	0.0052	--	0.00064	ND	U	0.21	ND	U	0.051
	Chlorobenzene	ppmv	ND	U	0.11	ND	U	0.0045	ND	U	0.35	ND	U	0.00089	ND	U	0.00086	ND	U	0.00088	ND	U	0.29	ND	U	0.07
	Chloroethane	ppmv	ND	U	0.19	ND	U	0.0079	ND	U	0.61	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.51	ND	U	0.12
	Chloroform	ppmv	ND	U	0.1	ND	U	0.0043	ND	U	0.33	ND	U	0.00083	0.00031	J	0.00081	0.0017	--	0.00083	ND	U	0.28	ND	U	0.066
	Chloromethane	ppmv	ND	UJ	0.24	ND	UJ	0.01	ND	UJ	0.78	ND	U	0.002	ND	U	0.0019	ND	U	0.002	ND	UJ	0.65	ND	U	0.16
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.13	ND	U	0.0052	ND	U	0.41	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.34	ND	U	0.081
	cis-1,3-Dichloropropene	ppmv	ND	U	0.11	ND	U	0.0046	ND	U	0.36	ND	U	0.0009	ND	U	0.00087	ND	U	0.00089	ND	U	0.3	ND	U	0.071
	Cyclohexane	ppmv	5.7	--	0.29	0.93	--	0.012	87	--	0.94	0.0015	J	0.0024	0.0067	--	0.0023	0.00078	J	0.0024	110	--	0.78	18	--	0.19
	Dibromochloromethane	ppmv	ND	U	0.059	ND	U	0.0024	ND	U	0.19	ND	U	0.00048	ND	U	0.00046	ND	U	0.00048	ND	U	0.16	ND	U	0.038
	Dichlorodifluoromethane	ppmv	0.059	J	0.1	0.018	--	0.0042	0.29	J	0.33	0.004	--	0.00082	0.0066	--	0.0008	0.011	--	0.00082	0.11	J	0.27	0.04	J	0.065
	Ethanol	ppmv	ND	U	2.7	ND	U	0.11	ND	U	8.6	ND	U	0.022	ND	U	0.021	ND	U	0.022	ND	U	7.2	ND	U	1.7
	Ethyl Acetate	ppmv	ND	U	0.28	ND	U	0.012	ND	U	0.9	ND	U	0.0023	0.0031	--	0.0022	ND	U	0.0022	ND	U	0.75	ND	U	0.18
	Ethylbenzene	ppmv	0.091	J	0.12	ND	U	0.0048	2.7	--	0.37	0.0036	--	0.00094	0.0025	--	0.00091	0.002	--	0.00093	0.17	J	0.31	0.76	--	0.074
	Hexachlorobutadiene	ppmv	ND	U	0.047	ND	U	0.0019	ND	U	0.15	ND	U	0.00038	ND	U	0.00037	ND	U	0.00038	ND	U	0.13	ND	U	0.03
	Isopropanol	ppmv	ND	U	2	ND	U	0.084	ND	U	6.6	ND	U	0.017	ND	U	0.016	ND	U	0.016	ND	U	5.5	ND	U	1.3
	m,p-Xylene (Sum of Isomers)	ppmv	1.1	--	0.23	0.015	--	0.0096	13	--	0.75	0.031	--	0.0019	0.019	--	0.0018	0.015	--	0.0019	5.8	--	0.62	6.7	--	0.15
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	1.7	ND	U	0.07	ND	U	5.5	0.0015	J	0.014	0.32	J	0.013	0.0017	J	0.014	ND	U	4.6	ND	U	1.1
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.12	ND	U	0.0051	ND	U	0.4	ND	U	0.00099	ND	U	0.00096	ND	U	0.00099	ND	U	0.33	ND	U	0.079
	Methylene Chloride	ppmv	ND	U	0.14	ND	U	0.006	ND	U	0.47	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.39	ND	U	0.093
	Naphthalene	ppmv	ND	U	0.096	ND	U	0.004	ND	U	0.31	0.008	--	0.00078	0.0041	--	0.00075	0.0025	--	0.00077	ND	U	0.26	0.24	--	0.061
	n-Heptane	ppmv	0.39	--	0.12	ND	U	0.0051	100	--	0.79	0.0042	--	0.00099	0.0028	--	0.00096	0.002	--	0.00099	64	--	0.33	13	--	0.079
	n-Hexane	ppmv	1.7	--	0.14	0.14	--	0.0059	93	--	0.46	0.0006	J	0.0012	0.00064	J	0.0011	ND	U	0.0011	54	--	0.38	11	--	0.091
	o-Xylene (1,2-Dimethylbenzene)	ppmv	1.6	--	0.12	0.025	--	0.0048	5.3	--	0.37	0.0096	--	0.00094	0.0055	--	0.00091	0.0045	--	0.00093	3.4	--	0.31	3.5	--	0.074
	Propylene	ppmv	0.14	J	0.29	0.08	J	0.012	4.8	--	0.94	ND	U	0.0024	0.00067	J	0.0023	0.00066	J	0.0024	0.87	J	0.78	1.9	--	0.19
	Styrene	ppmv	ND	U	0.12	ND	U	0.0049	ND	U	0.38	ND	U	0.00096	ND	U	0.00093	ND	U	0.00095	ND	U	0.32	ND	U	0.076
	tert-Butyl Methyl Ether	ppmv	ND	U	0.14	ND	U	0.0058	ND	U	0.45	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.37	ND	U	0.089
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.074	ND	U	0.0031	ND	U	0.24	ND	U	0.0006	0.00027	J	0.00058	ND	U	0.0006	ND	U	0.2	ND	U	0.048
	Tetrahydrofuran	ppmv	ND	U	0.17	0.0036	J	0.007	ND	U	0.55	0.0021	--	0.0014	0.12	--	0.0013	0.0041	--	0.0014	ND	U	0.46	ND	U	0.11
	Toluene	ppmv	2.4	--	0.13	0.043	--	0.0055	33	--	0.43	0.028	--	0.0011	0.023	--	0.001	0.018	--	0.0011	5.7	--	0.36	3.3	--	0.085
	trans-1,2-Dichloroethene	ppmv	ND	U	0.13	ND	U	0.0052	ND	U	0.41	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.34	ND	U	0.081
	trans-1,3-Dichloropropene	ppmv	ND	U	0.11	ND	U	0.0046	ND	U	0.36	ND	U	0.0009	ND	U	0.00087	ND	U	0.00089	ND	U	0.3	ND	U	0.071
	Trichloroethylene (TCE)	ppmv	ND	U	0.094	0.0053	--	0.0039	ND	U	0.3	ND	U	0.00076	ND	U	0.00074	ND	U	0.00075	ND	U	0.25	ND	U	0.06
	Trichlorofluoromethane	ppmv	ND	U	0.09	0.0017	J	0.0037	ND	U	0.29	0.00082	--	0.00073	0.0012	--	0.0007	0.0013	--	0.00072	ND	U	0.24	ND	U	0.057
	Vinyl Acetate	ppmv	ND	U	1.4	ND	U	0.059	ND	U	4.6	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	3.8	ND	U	0.91
	Vinyl chloride	ppmv	ND	U	0.2	ND	U	0.0081	ND	U	0.63	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.53	ND	U	0.13
	Xylenes, Total	ppmv	2.8	--	0.23	0.039	--	0.0096	18	--	0.75	0.041	--	0.0019	0.025	--	0.0018	0.02	--	0.0019	9.2	--	0.62	10	--	0.15

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106117-450			KAFB-106117-450			KAFB-106118-025			KAFB-106118-050			KAFB-106118-160			KAFB-106118-265			KAFB-106118-350			KAFB-106118-450		
		Field Sample ID:	VA161087			VA161088			VA161089			VA161090			VA161091			VA161092			VA161093			VA161094		
		Sample Date:	06-Oct-2016			06-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.47	--	0.00081	0.47	--	0.00081	ND	U	0.00082	ND	U	0.00081	ND	U	0.00083	0.017	--	0.00084	ND	U	0.00085	ND	U	0.0011
Fixed Gases (%) Method E3C	Carbon Dioxide	%	10.7	--	0.16	10.7	--	0.16	0.456	--	0.16	0.687	--	0.16	0.917	--	0.17	0.87	--	0.17	0.573	--	0.17	0.799	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	85.2	--	0.16	85.3	--	0.16	78.6	--	0.16	78.5	--	0.16	78.6	--	0.17	78.9	--	0.17	78.9	--	0.17	79.5	--	0.17
	Oxygen	%	4.06	--	0.16	4.05	--	0.16	20.9	--	0.16	20.8	--	0.16	20.4	--	0.17	20.3	--	0.17	20.5	--	0.17	19.7	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	1E+07	--	160000	9000000	--	160000	220	--	160	ND	U	160	ND	U	170	74000	--	1300	230	--	170	320	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	110000	--	20000	110000	--	20000	270	--	21	69	--	20	61	--	21	ND	U	170	45	--	21	80	--	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	1400000	--	81000	1200000	--	81000	2400	--	82	440	--	81	450	--	83	830	--	670	330	--	85	680	--	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.74	ND	U	0.74	ND	U	0.00075	ND	U	0.00074	ND	U	0.00076	ND	U	0.0061	ND	U	0.00078	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.59	ND	U	0.59	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.0049	ND	U	0.00062	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.53	ND	U	0.53	0.00019	J	0.00054	0.00022	J	0.00053	0.00029	J	0.00054	0.0044	--	0.0044	0.00074	--	0.00055	0.0007	--	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.74	ND	U	0.74	ND	U	0.00075	ND	U	0.00074	ND	U	0.00076	ND	U	0.0061	ND	U	0.00078	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.99	ND	U	0.99	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0083	ND	U	0.0011	0.0011	--	0.001
	1,1-Dichloroethene	ppmv	ND	U	1	ND	U	1	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0084	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.54	ND	U	0.54	ND	U	0.00055	ND	U	0.00055	ND	U	0.00056	ND	U	0.0045	ND	U	0.00057	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	4.1	--	0.82	4.3	--	0.82	0.0052	--	0.00083	0.0014	--	0.00082	0.0013	--	0.00084	ND	U	0.0068	0.001	--	0.00086	0.0015	--	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.52	ND	U	0.52	ND	U	0.00053	ND	U	0.00053	ND	U	0.00054	0.008	--	0.0043	ND	U	0.00055	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.67	ND	U	0.67	ND	U	0.00068	ND	U	0.00067	ND	U	0.00069	ND	U	0.0056	ND	U	0.00071	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.99	ND	U	0.99	ND	U	0.001	ND	U	0.001	ND	U	0.001	0.031	--	0.0083	ND	U	0.0011	0.00061	J	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.87	ND	U	0.87	ND	U	0.00089	ND	U	0.00088	ND	U	0.0009	ND	U	0.0072	ND	U	0.00092	ND	U	0.0009
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	1.8	--	0.82	1.9	--	0.82	0.0013	--	0.00083	0.00035	J	0.00082	0.00032	J	0.00084	ND	U	0.0068	ND	U	0.00086	0.0004	J	0.00084
	1,3-Butadiene	ppmv	ND	U	1.8	ND	U	1.8	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.015	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.67	ND	U	0.67	ND	U	0.00068	ND	U	0.00067	ND	U	0.00069	ND	U	0.0056	ND	U	0.00071	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.67	ND	U	0.67	ND	U	0.00068	ND	U	0.00067	ND	U	0.00069	ND	U	0.0056	ND	U	0.00071	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	1.1	ND	U	1.1	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0093	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.98	ND	U	0.98	0.00034	J	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.0082	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	ND	U	17	ND	U	17	0.018	--	0.017	0.025	--	0.017	0.019	--	0.017	0.68	--	0.14	0.057	--	0.018	0.038	--	0.017
	Benzene	ppmv	7.4	--	1.3	7	--	1.3	0.0013	--	0.0013	0.00073	J	0.0013	0.00066	J	0.0013	2.9	--	0.052	0.0049	--	0.0013	0.038	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.78	ND	U	0.78	ND	U	0.00079	ND	U	0.00078	ND	U	0.0008	ND	U	0.0065	ND	U	0.00082	ND	U	0.0008
	Bromodichloromethane	ppmv	ND	U	0.6	ND	U	0.6	ND	U	0.00061	ND	U	0.0006	ND	U	0.00062	ND	U	0.005	ND	U	0.00063	ND	U	0.00062
	Bromoform	ppmv	ND	U	0.39	ND	U	0.39	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.0032	ND	U	0.00041	ND	U	0.0004
	Bromomethane	ppmv	ND	U	1	ND	U	1	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0086	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	ND	U	13	ND	U	13	0.00043	J	0.013	0.0015	J	0.013	ND	U	0.013	0.0047	J	0.11	0.0022	J	0.014	0.068	--	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.64	ND	U	0.64	ND	U	0.00065	0.00023	J	0.00064	0.00027	J	0.00066	0.011	--	0.0053	0.0039	--	0.00068	0.011	--	0.00066
	Chlorobenzene	ppmv	ND	U	0.87	ND	U	0.87	ND	U	0.00089	ND	U	0.00088	ND	U	0.0009	ND	U	0.0073	ND	U	0.00092	ND	U	0.0009
	Chloroethane	ppmv	ND	U	1.5	ND	U	1.5	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.013	ND	U	0.0016	0.0022	--	0.0016
	Chloroform	ppmv	ND	U	0.82	ND	U	0.82	ND	U	0.00084	0.00031	J	0.00083	0.00047	J	0.00085	ND	U	0.0068	0.0053	--	0.00087	0.0053	--	0.00085
	Chloromethane	ppmv	ND	U	1.9	ND	UJ	1.9	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.016	ND	UJ	0.0021	0.0077	J	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	1	ND	U	1	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0084	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.89	ND	U	0.89	ND	U	0.0009	ND	U	0.00089	ND	U	0.00091	ND	U	0.0074	ND	U	0.00094	ND	U	0.00091
	Cyclohexane	ppmv	100	--	2.3	91	--	2.3	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	1.4	--	0.019	0.0012	J	0.0025	0.0008	J	0.0024
	Dibromochloromethane	ppmv	ND	U	0.47	ND	U	0.47	ND	U	0.00048	ND	U	0.00048	ND	U	0.00049	ND	U	0.0039	ND	U	0.0005	ND	U	0.00049
	Dichlorodifluoromethane	ppmv	ND	U	0.81	ND	U	0.81	0.0044	--	0.00083	0.0054	--	0.00082	0.0048	--	0.00084	ND	U	0.0068	0.00055	J	0.00086	0.00036	J	0.00084
	Ethanol	ppmv	ND	U	21	ND	U	21	ND	U	0.022	ND	U	0.022	ND	U	0.022	ND	U	0.18	ND	U	0.023	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	2.2	ND	U	2.2	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.019	ND	U	0.0024	ND	U	0.0023
	Ethylbenzene	ppmv	8.8	--	0.93	8.5	--	0.93	0.0015	--	0.00094	0.00062	J	0.00093	0.0006	J	0.00096	0.0074	J	0.0077	0.00051	J	0.00098	0.0019	--	0.00096
	Hexachlorobutadiene	ppmv	ND	U	0.38	ND	U	0.38	ND	U	0.00038	ND	U	0.00038	ND	U	0.00039	ND	U	0.0031	ND	U	0.0004	ND	U	0.00039
	Isopropanol	ppmv	ND	U	16	ND	U	16	ND	U	0.017	ND	U	0.016	ND	U	0.017	ND	U	0.14	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	35	--	1.9	35	--	1.9	0.0048	--	0.0019	0.0019	--	0.0019	0.0018	J	0.0019	0.054	--	0.015	0.0017	J	0.002	0.0059	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	14	ND	U	14	0.0014	J	0.014	0.0095	J	0.014	0.00079	J	0.014	0.078	J	0.11	0.0013	J	0.014	0.011	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.98	ND	U	0.98	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.0082	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	1.2	ND	U	1.2	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0096	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.77	ND	U	0.77	0.0032	--	0.00078	0.001	--	0.00077	0.00086	--	0.00079	ND	U	0.0064	0.00065	J	0.00081	0.0007	J	0.00079
	n-Heptane	ppmv	120	--	0.98	110	--	0.98	0.00071	J	0.001	ND	U	0.00099	ND	U	0.001	0.0033	J	0.0082	ND	U	0.001	0.00056	J	0.001
	n-Hexane	ppmv	76	--	1.1	69	--	1.1	0.00043	J	0.0012	ND	U	0.0011	ND	U	0.0012	0.59	--	0.0095	0.00063	J	0.0012	0.0013	--	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	11	--	0.93	11	--	0.93	0.0019	--	0.00094	0.00071	J	0.00093	0.00067	J	0.00096	0.054	--	0.0077	0.00075	J	0.00098	0.0017	--	0.00096
	Propylene	ppmv	6.3	--	2.3	5.4	--	2.3	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	0.1	--	0.019	0.011	--	0.0025	0.0023	J	0.0024
	Styrene	ppmv	ND	U	0.95	ND	U	0.95	ND	U	0.00096	ND	U	0.00095	ND	U	0.00098	ND	U	0.0078	ND	U	0.001	ND	U	0.00098
	tert-Butyl Methyl Ether	ppmv	ND	U	1.1	ND	U	1.1	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0093	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.59	ND	U	0.59	ND	U	0.0006	ND	U	0.0006	ND	U	0.00061	ND	U	0.0049	ND	U	0.00063	ND	U	0.00061
	Tetrahydrofuran	ppmv	ND	U	1.4	ND	U	1.4	0.001	J	0.0014	0.41	J	0.0014	0.00069	J	0.0014	0.019	--	0.011	0.00064	J	0.0014	0.14	--	0.0014
	Toluene	ppmv	56	--	1.1	54	--	1.1	0.0072	--	0.0011	0.0036	--	0.0011	0.0031	--	0.0011	1.7	--	0.0089	0.007	--	0.0011	0.16	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	1	ND	U	1	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0084	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.89	ND	U	0.89	ND	U	0.0009	ND	U	0.00089	ND	U	0.00091	ND	U	0.0074	ND	U	0.00094	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	ND	U	0.75	ND	U	0.75	ND	U	0.00076	ND	U	0.00075	ND	U	0.00077	ND	U	0.0062	ND	U	0.00079	ND	U	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.72	ND	U	0.72	0.00037	J	0.00073	0.00042	J	0.00072	0.00047	J	0.00074	ND	U	0.0059	0.0022	--	0.00076	0.0013	--	0.00074
	Vinyl Acetate	ppmv	ND	U	11	ND	U	11	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.095	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	1.6	ND	U	1.6	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.013	ND	U	0.0017	0.0028	--	0.0016
	Xylenes, Total	ppmv	46	--	1.9	46	--	1.9	0.0067	--	0.0019	0.0026	--	0.0019	0.0025	--	0.0019	0.11	--	0.015	0.0024	--	0.002	0.0076	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

	Well Location ID:		KAFB-106119-025			KAFB-106119-025			KAFB-106119-050			KAFB-106119-150			KAFB-106119-250			KAFB-106119-350			KAFB-106119-450			KAFB-106120-025		
	Field Sample ID:		VA161095			VA161096			VA161097			VA161098			VA161099			VA161100			VA161101			VA161102		
	Sample Date:		11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			05-Oct-2016		
	Sample Type:		REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0016	--	0.00084	0.0013	--	0.00084	0.001	--	0.00082	0.0012	--	0.0012	0.071	--	0.00085	0.024	--	0.00083	0.011	--	0.00083	ND	U	0.0012
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.444	--	0.17	0.444	--	0.17	1	J	0.16	6.03	J	0.17	5.27	J	0.17	1.81	J	0.17	0.659	J	0.17	1.14	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	UJ	0.16	ND	UJ	0.17	ND	UJ	0.17	ND	UJ	0.17	ND	UJ	0.17	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	78.9	--	0.17	78.9	--	0.17	80.5	J	0.16	80.8	J	0.17	82.6	J	0.17	81.4	J	0.17	79.3	J	0.17	77.8	--	0.17
	Oxygen	%	20.7	--	0.17	20.6	--	0.17	18.5	--	0.16	13.2	--	0.17	12.1	--	0.17	16.7	--	0.17	20.1	--	0.17	21	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	320	--	170	250	--	170	170	--	160	8300	--	170	1700000	--	17000	3500000	--	22000	59000	--	330	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	260	--	21	280	--	21	130	--	21	160	--	21	ND	U	2100	11000	--	2800	160	--	42	ND	U	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	460	--	84	1300	--	84	340	--	82	700	--	83	76000	--	8500	240000	--	11000	11000	--	170	ND	U	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00075	ND	U	0.00076	ND	U	0.077	ND	U	0.1	ND	U	0.0015	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00061	ND	U	0.00061	ND	U	0.0006	0.00069	--	0.0006	ND	U	0.062	0.3	--	0.08	ND	U	0.0012	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.00064	--	0.00054	0.00064	--	0.00054	0.0029	--	0.00054	0.021	--	0.00054	0.067	--	0.055	0.15	--	0.072	0.017	--	0.0011	ND	U	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00075	ND	U	0.00076	ND	U	0.077	ND	U	0.1	ND	U	0.0015	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.1	ND	U	0.14	ND	U	0.0021	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.11	ND	U	0.14	ND	U	0.0021	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00056	ND	U	0.00056	ND	U	0.00055	ND	U	0.00056	ND	U	0.057	ND	U	0.074	ND	U	0.0011	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	0.0081	--	0.00085	0.0077	--	0.00085	0.0041	--	0.00083	0.0054	--	0.00084	ND	U	0.086	0.46	--	0.11	0.0044	--	0.0017	ND	U	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00054	--	0.00054	0.00038	J	0.00054	0.00029	J	0.00053	0.00041	J	0.00054	0.032	J	0.055	ND	U	0.072	0.0047	--	0.0011	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	ND	U	0.00068	ND	U	0.00069	ND	U	0.07	ND	U	0.092	ND	U	0.0014	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	0.00047	J	0.001	0.055	J	0.1	0.13	J	0.14	0.0034	--	0.0021	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.0009	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.091	ND	U	0.12	ND	U	0.0018	ND	U	0.00089
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.0021	--	0.00085	0.002	--	0.00085	0.0011	--	0.00083	0.0014	--	0.00084	0.057	J	0.086	0.29	--	0.11	0.0023	--	0.0017	ND	U	0.00084
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.19	ND	U	0.25	ND	U	0.0038	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	0.00022	J	0.00068	ND	U	0.00069	ND	U	0.07	ND	U	0.092	ND	U	0.0014	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	ND	U	0.00068	ND	U	0.00069	ND	U	0.07	ND	U	0.092	ND	U	0.0014	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.12	ND	U	0.15	ND	U	0.0023	ND	U	0.0011
	2-Hexanone	ppmv	0.00048	J	0.001	0.00051	J	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.1	ND	U	0.13	ND	U	0.002	ND	U	0.001
	Acetone	ppmv	0.0076	J	0.018	0.075	--	0.018	0.099	--	0.017	ND	U	0.017	ND	U	1.8	ND	U	2.3	ND	U	0.035	0.0062	J	0.017
	Benzene	ppmv	0.0052	--	0.0013	0.0038	--	0.0013	0.0025	--	0.0013	0.0047	--	0.0013	1.8	--	0.13	8.5	--	0.17	0.18	--	0.0026	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00079	ND	U	0.0008	ND	U	0.082	ND	U	0.11	ND	U	0.0016	ND	U	0.0008
	Bromodichloromethane	ppmv	ND	U	0.00062	ND	U	0.00062	ND	U	0.00061	ND	U	0.00062	ND	U	0.063	ND	U	0.082	ND	U	0.0012	0.0096	--	0.00062
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.0004	ND	U	0.0004	ND	U	0.0004	ND	U	0.041	ND	U	0.053	ND	U	0.0008	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.11	ND	U	0.14	ND	U	0.0021	ND	U	0.0011
	Carbon Disulfide	ppmv	0.00045	J	0.013	0.00044	J	0.013	0.00073	J	0.013	ND	U	0.013	ND	U	1.4	ND	U	1.8	0.0046	J	0.027	ND	U	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00066	ND	U	0.00066	0.00027	J	0.00065	0.0099	--	0.00066	0.043	J	0.067	0.028	J	0.087	0.0048	--	0.0013	0.00049	J	0.00066
	Chlorobenzene	ppmv	ND	U	0.00091	ND	U	0.00091	ND	U	0.00089	ND	U	0.0009	ND	U	0.092	ND	U	0.12	ND	U	0.0018	ND	U	0.0009
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.16	ND	U	0.21	ND	U	0.0031	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00086	ND	U	0.00086	ND	U	0.00084	0.002	--	0.00085	ND	U	0.087	ND	U	0.11	0.0027	--	0.0017	0.055	--	0.00085
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.002	ND	U	0.002	0.00093	J	0.002	ND	U	0.2	ND	U	0.27	ND	U	0.004	ND	U	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.11	ND	U	0.14	ND	U	0.0021	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.0009	ND	U	0.00091	ND	U	0.093	ND	U	0.12	ND	U	0.0018	ND	U	0.00091
	Cyclohexane	ppmv	0.0011	J	0.0024	0.00083	J	0.0024	ND	U	0.0024	0.0088	--	0.0024	21	--	0.25	42	--	0.32	0.65	--	0.0048	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00049	ND	U	0.00049	ND	U	0.00048	ND	U	0.00048	ND	U	0.05	ND	U	0.065	ND	U	0.00097	0.00039	J	0.00048
	Dichlorodifluoromethane	ppmv	0.00053	J	0.00084	0.00056	J	0.00084	0.00054	J	0.00083	0.00099	--	0.00083	ND	U	0.085	ND	U	0.11	ND	U	0.0017	0.00039	J	0.00083
	Ethanol	ppmv	0.0044	J	0.022	0.0037	J	0.022	ND	U	0.022	ND	U	0.022	ND	U	2.2	ND	U	2.9	ND	U	0.044	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.23	ND	U	0.31	ND	U	0.0046	ND	U	0.0023
	Ethylbenzene	ppmv	0.0054	--	0.00096	0.0044	--	0.00096	0.0028	--	0.00094	0.0038	--	0.00095	ND	U	0.097	ND	U	0.13	0.0084	--	0.0019	ND	U	0.00095
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.04	ND	U	0.052	ND	U	0.00078	ND	U	0.00039
	Isopropanol	ppmv	0.0015	J	0.017	0.0019	J	0.017	ND	U	0.017	ND	U	0.017	ND	U	1.7	ND	U	2.2	ND	U	0.034	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.017	--	0.0019	0.014	--	0.0019	0.0088	--	0.0019	0.012	--	0.0019	ND	U	0.19	0.73	--	0.25	0.043	--	0.0038	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.0015	J	0.014	0.004	J	0.014	0.0032	J	0.014	0.00079	J	0.014	ND	U	1.4	ND	U	1.9	0.0047	J	0.028	0.0075	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.1	ND	U	0.13	ND	U	0.002	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.12	ND	U	0.16	ND	U	0.0024	ND	U	0.0012
	Naphthalene	ppmv	0.0077	--	0.0008	0.0069	--	0.0008	0.0046	--	0.00078	0.005	--	0.00079	ND	U	0.081	ND	U	0.1	0.0019	--	0.0016	ND	U	0.00079
	n-Heptane	ppmv	0.0016	--	0.001	0.0013	--	0.001	0.00079	J	0.001	0.0014	--	0.001	0.15	--	0.1	15	--	0.13	0.16	--	0.002	ND	U	0.001
	n-Hexane	ppmv	0.00099	J	0.0012	0.00075	J	0.0012	0.00041	J	0.0012	0.0055	--	0.0012	4.9	--	0.12	18	--	0.16	0.25	--	0.0024	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0063	--	0.00096	0.0054	--	0.00096	0.0032	--	0.00094	0.0043	--	0.00095	0.3	--	0.097	1.3	--	0.13	0.021	--	0.0019	ND	U	0.00095
	Propylene	ppmv	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	0.0099	--	0.0024	0.27	--	0.25	0.47	--	0.32	0.023	--	0.0048	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00096	ND	U	0.00097	ND	U	0.099	ND	U	0.13	ND	U	0.002	ND	U	0.00097
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.12	ND	U	0.15	ND	U	0.0023	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00062	ND	U	0.00062	ND	U	0.0006	0.00032	J	0.00061	ND	U	0.062	ND	U	0.081	0.00037	J	0.0012	0.00058	J	0.00061
	Tetrahydrofuran	ppmv	ND	U	0.0014	ND	U	0.0014	ND	U	0.0014	ND	U	0.0014	ND	U	0.14	ND	U	0.19	0.003	--	0.0028	0.0017	--	0.0014
	Toluene	ppmv	0.034	--	0.0011	0.026	--	0.0011	0.017	--	0.0011	0.022	--	0.0011	0.15	--	0.11	0.43	--	0.15	0.17	--	0.0022	ND	U	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.11	ND	U	0.14	ND	U	0.0021	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.0009	ND	U	0.00091	ND	U	0.093	ND	U	0.12	ND	U	0.0018	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	ND	U	0.00078	ND	U	0.00078	ND	U	0.00076	ND	U	0.00077	ND	U	0.079	ND	U	0.1	ND	U	0.0015	0.00033	J	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.00074	ND	U	0.00074	ND	U	0.00073	0.00081	--	0.00073	ND	U	0.075	ND	U	0.098	0.00051	J	0.0015	ND	U	0.00073
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	1.2	ND	U	1.6	ND	U	0.024	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.17	ND	U	0.22	ND	U	0.0032	ND	U	0.0016
	Xylenes, Total	ppmv	0.023	--	0.0019	0.019	--	0.0019	0.012	--	0.0019	0.016	--	0.0019	0.3	--	0.19	2	--	0.25	0.064	--	0.0038	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106120-050			KAFB-106120-050			KAFB-106120-150			KAFB-106120-250			KAFB-106120-350			KAFB-106120-450			KAFB-106121-025			KAFB-106121-050		
		Field Sample ID:	VA161103			VA161104			VA161105			VA161106			VA161107			VA161108			VA161109			VA161110		
		Sample Date:	05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	ND	U	0.0011	ND	U	0.00081	ND	U	0.00079	ND	U	0.00081	ND	U	0.00084	ND	U	0.00081	ND	U	0.00083
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.89	--	0.16	1.86	--	0.16	0.341	--	0.16	0.332	--	0.16	0.28	--	0.16	0.448	--	0.17	1.22	--	0.16	1.14	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.17
	Nitrogen	%	78.1	--	0.16	78.1	--	0.16	78.5	--	0.16	78.5	--	0.16	78.1	--	0.16	78	--	0.17	78.7	--	0.16	78.7	--	0.17
	Oxygen	%	20	--	0.16	20	--	0.16	21.2	--	0.16	21.1	--	0.16	21.6	--	0.16	21.5	--	0.17	20.1	--	0.16	20.2	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	3700	--	170	ND	U	160	180	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	21	ND	U	20	ND	U	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	ND	U	80	ND	U	81	ND	U	79	110	--	81	140	--	84	290	--	81	ND	U	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	ND	U	0.00077	ND	U	0.00074	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00058	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059	ND	U	0.00061	ND	U	0.00059	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053	0.00023	J	0.00052	0.00029	J	0.00053	ND	U	0.00054	ND	U	0.00053	ND	U	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	ND	U	0.00077	ND	U	0.00074	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	0.00081	J	0.001	ND	U	0.00099	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00055	ND	U	0.00053	ND	U	0.00055	ND	U	0.00056	ND	U	0.00054	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00082	ND	U	0.0008	ND	U	0.00082	0.00067	J	0.00085	0.00041	J	0.00082	ND	U	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053	ND	U	0.00051	ND	U	0.00053	ND	U	0.00054	ND	U	0.00052	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.001	0.00056	J	0.001	ND	U	0.00099	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00086	ND	U	0.00086	ND	U	0.00088	ND	U	0.00086	ND	U	0.00088	ND	U	0.0009	ND	U	0.00087	ND	U	0.00089
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00082	ND	U	0.0008	ND	U	0.00082	0.00054	J	0.00085	ND	U	0.00082	ND	U	0.00084
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00097	ND	U	0.00097	ND	U	0.00099	ND	U	0.00096	ND	U	0.00099	ND	U	0.001	ND	U	0.00098	ND	U	0.001
	Acetone	ppmv	0.18	--	0.017	0.13	--	0.017	0.0062	J	0.017	0.0078	J	0.017	ND	U	0.017	ND	U	0.018	0.032	--	0.017	0.0074	J	0.017
	Benzene	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012	0.00057	J	0.0013	0.094	--	0.0013	ND	U	0.0013	0.012	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00078	ND	U	0.00076	ND	U	0.00078	ND	U	0.00081	ND	U	0.00078	ND	U	0.0008
	Bromodichloromethane	ppmv	0.069	--	0.00059	0.072	--	0.00059	0.00075	--	0.0006	ND	U	0.00059	ND	U	0.0006	0.00024	J	0.00062	0.0065	--	0.0006	0.007	--	0.00062
	Bromoform	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0017	J	0.013	0.0015	J	0.013	0.0019	J	0.013	0.001	J	0.013	0.0013	J	0.013	0.052	--	0.013	ND	U	0.013	0.0011	J	0.013
	Carbon Tetrachloride	ppmv	0.0039	--	0.00063	0.004	--	0.00063	0.004	--	0.00064	0.00066	--	0.00063	ND	U	0.00064	ND	U	0.00066	0.0036	--	0.00064	0.0041	--	0.00066
	Chlorobenzene	ppmv	ND	U	0.00086	ND	U	0.00086	ND	U	0.00088	ND	U	0.00086	ND	U	0.00088	ND	U	0.00091	ND	U	0.00087	ND	U	0.0009
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	0.0026	--	0.0016	ND	U	0.0015	ND	U	0.0016
	Chloroform	ppmv	0.24	--	0.0081	0.24	--	0.0081	0.01	--	0.00083	0.00053	J	0.00081	ND	U	0.00083	0.00043	J	0.00086	0.12	--	0.00082	0.11	--	0.00085
	Chloromethane	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	ND	U	0.0019	ND	U	0.002	0.011	--	0.002	ND	UJ	0.0019	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00092	ND	U	0.00089	ND	U	0.00091
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	0.0054	--	0.0024	ND	U	0.0023	0.0022	J	0.0024
	Dibromochloromethane	ppmv	0.0082	--	0.00047	0.0087	--	0.00047	ND	U	0.00048	ND	U	0.00046	ND	U	0.00048	ND	U	0.00049	0.00024	J	0.00047	0.00029	J	0.00048
	Dichlorodifluoromethane	ppmv	0.00041	J	0.0008	0.00041	J	0.0008	0.00068	J	0.00082	0.0028	--	0.0008	0.014	--	0.00082	0.0086	--	0.00084	0.00058	J	0.00081	0.00062	J	0.00083
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.022	ND	U	0.021	ND	U	0.022	ND	U	0.022	0.01	J	0.021	0.0037	J	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023
	Ethylbenzene	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.00093	ND	U	0.00091	ND	U	0.00093	0.0077	--	0.00096	ND	U	0.00093	ND	U	0.00095
	Hexachlorobutadiene	ppmv	ND	U	0.00037	ND	U	0.00037	ND	U	0.00038	ND	U	0.00037	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.017	ND	U	0.016	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	0.014	--	0.0019	0.00077	J	0.0019	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.45	--	0.13	0.29	--	0.13	0.0036	J	0.014	0.0018	J	0.013	0.00086	J	0.014	0.004	J	0.014	0.0018	J	0.014	ND	U	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00097	ND	U	0.00097	ND	U	0.00099	ND	U	0.00096	ND	U	0.00099	ND	U	0.001	0.0015	--	0.00098	ND	U	0.001
	Methylene Chloride	ppmv	0.0014	--	0.0011	0.0014	--	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.00076	ND	U	0.00076	ND	U	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.0008	0.00069	J	0.00077	0.00029	J	0.00079
	n-Heptane	ppmv	ND	U	0.00097	ND	U	0.00097	ND	U	0.00099	ND	U	0.00096	ND	U	0.00099	ND	U	0.001	0.00042	J	0.00098	ND	U	0.001
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.0052	--	0.0012	ND	U	0.0011	0.0007	J	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.00093	ND	U	0.00091	ND	U	0.00093	0.0058	--	0.00096	0.00034	J	0.00093	0.0004	J	0.00095
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	0.0038	J	0.0024	ND	U	0.0023	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00093	ND	U	0.00093	ND	U	0.00095	ND	U	0.00093	ND	U	0.00095	ND	U	0.00098	ND	U	0.00095	ND	U	0.00097
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.0019	--	0.00059	0.002	--	0.00059	0.00061	--	0.0006	ND	U	0.00058	ND	U	0.0006	0.00023	J	0.00062	0.00081	--	0.00059	0.00089	--	0.00061
	Tetrahydrofuran	ppmv	0.14	--	0.0013	0.097	--	0.0013	0.21	--	0.0014	0.0039	--	0.0013	0.0033	--	0.0014	0.035	--	0.0014	0.0078	--	0.0014	0.014	--	0.0014
	Toluene	ppmv	ND	U	0.0011	0.0006	J	0.0011	ND	U	0.0011	0.00044	J	0.001	0.00046	J	0.0011	0.18	--	0.0011	0.00097	J	0.0011	0.0012	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00092	ND	U	0.00089	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	0.00085	--	0.00074	0.00084	--	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00078	0.00023	J	0.00075	ND	U	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.0007	0.0013	--	0.00072	0.00083	--	0.00074	ND	U	0.00072	ND	U	0.00073
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	0.0026	--	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	0.02	--	0.0019	0.0011	J	0.0019	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106121-145			KAFB-106121-145			KAFB-106121-250			KAFB-106121-350			KAFB-106121-440			KAFB-106122-025			KAFB-106122-050			KAFB-106122-150		
		Field Sample ID:	VA161111			VA161112			VA161113			VA161114			VA161115			VA161116			VA161117			VA161118		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	ND	U	0.0009	ND	U	0.00082	ND	U	0.0008	ND	U	0.0013	ND	U	0.00082	ND	U	0.00081	ND	U	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.28	--	0.16	0.285	--	0.18	0.295	--	0.16	0.256	--	0.16	0.424	--	0.17	1.87	--	0.16	1.36	--	0.16	0.281	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.18	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.18	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.2	--	0.16	79.1	--	0.18	79.4	--	0.16	78.8	--	0.16	78.7	--	0.17	78.7	--	0.16	78.8	--	0.16	79.2	--	0.16
	Oxygen	%	20.6	--	0.16	20.6	--	0.18	20.3	--	0.16	20.9	--	0.16	20.9	--	0.17	19.4	--	0.16	19.9	--	0.16	20.5	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	180	ND	U	160	650	--	160	3700	--	270	ND	U	160	ND	U	160	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	23	ND	U	20	ND	U	20	39	--	33	ND	U	21	ND	U	20	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	ND	U	90	ND	U	82	87	--	80	290	--	130	ND	U	82	ND	U	81	ND	U	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00083	ND	U	0.00075	ND	U	0.00073	ND	U	0.0012	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00066	ND	U	0.00059	ND	U	0.00058	ND	U	0.00097	ND	U	0.0006	ND	U	0.00059	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	ND	U	0.00059	ND	U	0.00053	0.00051	J	0.00052	0.00033	J	0.00087	ND	U	0.00054	ND	U	0.00053	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00083	ND	U	0.00075	ND	U	0.00073	ND	U	0.0012	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.00098	0.0016	J	0.0016	ND	U	0.001	ND	U	0.00099	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00061	ND	U	0.00055	ND	U	0.00054	ND	U	0.0009	ND	U	0.00055	ND	U	0.00054	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00081	ND	U	0.00092	ND	U	0.00083	ND	U	0.00081	0.00086	J	0.0014	ND	U	0.00083	ND	U	0.00082	ND	U	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00059	ND	U	0.00053	ND	U	0.00052	ND	U	0.00087	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00075	ND	U	0.00068	ND	U	0.00066	ND	U	0.0011	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.0011	ND	U	0.001	ND	U	0.00098	0.00074	J	0.0016	ND	U	0.001	ND	U	0.00099	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.00097	ND	U	0.00088	ND	U	0.00086	ND	U	0.0014	ND	U	0.00089	ND	U	0.00087	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	0.00047	J	0.00092	ND	U	0.00083	ND	U	0.00081	ND	U	0.0014	ND	U	0.00083	ND	U	0.00082	ND	U	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.002	ND	U	0.0018	ND	U	0.0018	ND	U	0.003	ND	U	0.0019	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00075	ND	U	0.00068	ND	U	0.00066	ND	U	0.0011	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00075	ND	U	0.00068	ND	U	0.00066	ND	U	0.0011	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0019	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.0011	ND	U	0.001	ND	U	0.00097	ND	U	0.0016	ND	U	0.001	ND	U	0.00098	ND	U	0.00099
	Acetone	ppmv	0.96	--	0.017	0.91	--	0.019	0.021	--	0.017	ND	U	0.017	0.85	--	0.028	0.045	--	0.017	0.0049	J	0.017	0.08	--	0.017
	Benzene	ppmv	ND	U	0.0013	ND	U	0.0014	0.0037	--	0.0013	0.0022	--	0.0012	0.16	--	0.0021	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00087	ND	U	0.00079	ND	U	0.00077	ND	U	0.0013	ND	U	0.00079	ND	U	0.00078	ND	U	0.00078
	Bromodichloromethane	ppmv	0.00067	--	0.0006	0.00067	J	0.00067	ND	U	0.00061	ND	U	0.00059	ND	U	0.001	0.018	--	0.00061	0.0072	--	0.0006	0.00036	J	0.0006
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.00044	ND	U	0.00039	ND	U	0.00038	ND	U	0.00065	ND	U	0.0004	ND	U	0.00039	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.0012	ND	U	0.001	ND	U	0.001	ND	U	0.0017	ND	U	0.0011	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	0.0011	J	0.013	0.0008	J	0.014	0.0027	J	0.013	0.0034	J	0.013	0.056	--	0.021	0.00062	J	0.013	ND	U	0.013	0.0019	J	0.013
	Carbon Tetrachloride	ppmv	0.0055	--	0.00064	0.0054	--	0.00072	ND	U	0.00065	ND	U	0.00063	ND	U	0.0011	0.0033	--	0.00065	0.0039	--	0.00064	0.0033	--	0.00064
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.00098	ND	U	0.00089	ND	U	0.00086	ND	U	0.0015	ND	U	0.00089	ND	U	0.00087	ND	U	0.00088
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0017	ND	U	0.0015	ND	U	0.0015	0.0025	--	0.0025	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	0.015	--	0.00082	0.015	--	0.00092	0.00033	J	0.00083	ND	U	0.00081	ND	U	0.0014	0.35	--	0.0084	0.087	--	0.00082	0.0073	--	0.00083
	Chloromethane	ppmv	ND	UJ	0.0019	ND	UJ	0.0022	ND	UJ	0.002	ND	UJ	0.0019	0.014	J	0.0032	ND	UJ	0.002	ND	UJ	0.0019	ND	U	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00099	ND	U	0.0009	ND	U	0.00088	ND	U	0.0015	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089
	Cyclohexane	ppmv	ND	U	0.0023	0.00082	J	0.0026	ND	U	0.0024	0.0082	--	0.0023	0.028	--	0.0039	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00053	ND	U	0.00048	ND	U	0.00047	ND	U	0.00078	0.00067	--	0.00048	0.00025	J	0.00047	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.0014	--	0.00081	0.0013	--	0.00091	0.0033	--	0.00082	0.029	--	0.0008	0.022	--	0.0014	0.00056	J	0.00083	0.00059	J	0.00081	0.00055	J	0.00082
	Ethanol	ppmv	0.0076	J	0.021	0.0039	J	0.024	0.0062	J	0.022	0.004	J	0.021	0.0086	J	0.035	0.0041	J	0.022	ND	U	0.021	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0025	ND	U	0.0023	ND	U	0.0022	ND	U	0.0037	ND	U	0.0023	ND	U	0.0022	ND	U	0.0022
	Ethylbenzene	ppmv	ND	U	0.00092	ND	U	0.001	ND	U	0.00094	ND	U	0.00092	0.012	--	0.0015	ND	U	0.00094	ND	U	0.00093	ND	U	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00042	ND	U	0.00038	ND	U	0.00037	ND	U	0.00063	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038
	Isopropanol	ppmv	0.0017	J	0.016	0.0017	J	0.018	0.0015	J	0.017	ND	U	0.016	0.0038	J	0.027	ND	U	0.017	ND	U	0.016	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0021	ND	U	0.0019	0.00071	J	0.0018	0.018	--	0.0031	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.96	J	0.014	0.91	J	0.015	0.0079	J	0.014	0.0012	J	0.013	0.25	--	0.023	0.0041	J	0.014	ND	U	0.014	0.0059	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.0011	ND	U	0.00099	ND	U	0.00097	ND	U	0.0016	ND	U	0.001	ND	U	0.00098	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.0011	ND	U	0.0019	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00031	J	0.00076	ND	U	0.00086	ND	U	0.00078	ND	U	0.00076	ND	U	0.0013	ND	U	0.00078	ND	U	0.00077	ND	U	0.00077
	n-Heptane	ppmv	ND	U	0.00098	0.00077	J	0.0011	ND	U	0.00099	0.0072	--	0.00097	0.0018	--	0.0016	ND	U	0.001	ND	U	0.00098	ND	U	0.00099
	n-Hexane	ppmv	ND	U	0.0011	0.00099	J	0.0013	ND	U	0.0012	0.011	--	0.0011	0.0075	--	0.0019	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00092	ND	U	0.001	ND	U	0.00094	0.00031	J	0.00092	0.0066	--	0.0015	ND	U	0.00094	ND	U	0.00093	ND	U	0.00093
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0026	ND	U	0.0024	0.00093	J	0.0023	0.0067	--	0.0039	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00094	ND	U	0.0011	ND	U	0.00096	ND	U	0.00093	ND	U	0.0016	ND	U	0.00096	ND	U	0.00095	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0019	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.00057	J	0.00059	0.00057	J	0.00066	ND	U	0.0006	ND	U	0.00059	ND	U	0.00098	0.0012	--	0.0006	0.001	--	0.00059	0.00039	J	0.0006
	Tetrahydrofuran	ppmv	0.46	J	0.0014	0.42	J	0.0015	0.051	--	0.0014	0.0027	--	0.0013	0.074	--	0.0023	0.01	--	0.0014	ND	U	0.0014	0.0017	--	0.0014
	Toluene	ppmv	0.00066	J	0.0011	0.00052	J	0.0012	0.00095	J	0.0011	0.0025	--	0.0011	0.27	--	0.0018	0.001	J	0.0011	0.00037	J	0.0011	ND	U	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00099	ND	U	0.0009	ND	U	0.00088	ND	U	0.0015	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	ND	U	0.00074	ND	U	0.00084	ND	U	0.00076	ND	U	0.00074	ND	U	0.0012	0.0013	--	0.00076	ND	U	0.00075	ND	U	0.00075
	Trichlorofluoromethane	ppmv	ND	U	0.00071	ND	U	0.0008	ND	U	0.00073	0.0026	--	0.00071	0.002	--	0.0012	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.013	ND	U	0.012	ND	U	0.011	ND	U	0.019	0.0018	J	0.012	ND	U	0.011	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0018	ND	U	0.0016	ND	U	0.0016	0.003	--	0.0026	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0021	ND	U	0.0019	0.001	J	0.0018	0.024	--	0.0031	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106122-250			KAFB-106122-250			KAFB-106122-350			KAFB-106122-450			KAFB-106123-025			KAFB-106123-050			KAFB-106123-150			KAFB-106123-250		
		Field Sample ID:	VA161119			VA161120			VA161121			VA161122			VA161123			VA161124			VA161125			VA161126		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00081	ND	U	0.0008	ND	U	0.00082	ND	U	0.0012	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.406	--	0.16	0.406	--	0.16	0.283	--	0.16	0.44	--	0.16	0.886	--	0.14	1.39	--	0.16	0.259	--	0.16	0.436	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.14	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.14	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.2	--	0.16	79.3	--	0.16	78.8	--	0.16	78.6	--	0.16	78.6	--	0.14	78.2	--	0.16	78.5	--	0.16	78.7	--	0.16
	Oxygen	%	20.4	--	0.16	20.3	--	0.16	20.9	--	0.16	20.9	--	0.16	20.5	--	0.14	20.4	--	0.16	21.2	--	0.16	20.9	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	160	ND	U	160	6400	--	160	450	--	140	ND	U	160	ND	U	160	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	20	ND	U	21	31	--	20	31	--	18	ND	U	20	ND	U	20	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	81	ND	U	80	ND	U	82	120	--	81	4900	--	71	210	--	78	ND	U	78	ND	U	78
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.00073	ND	U	0.00075	ND	U	0.00074	ND	U	0.00065	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00059	ND	U	0.00058	ND	U	0.0006	ND	U	0.00059	ND	U	0.00051	ND	U	0.00057	ND	U	0.00057	ND	U	0.00057
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00053	ND	U	0.00052	ND	U	0.00054	ND	U	0.00053	ND	U	0.00046	0.00023	J	0.00051	ND	U	0.00051	0.00026	J	0.00051
	1,1,2-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.00073	ND	U	0.00075	ND	U	0.00074	ND	U	0.00065	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	ND	U	0.001	0.0011	--	0.00099	ND	U	0.00087	ND	U	0.00096	ND	U	0.00096	ND	U	0.00096
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00089	ND	U	0.00098	ND	U	0.00098	ND	U	0.00098
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00055	ND	U	0.00054	ND	U	0.00048	ND	U	0.00053	ND	U	0.00053	ND	U	0.00053
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00082	ND	U	0.00081	ND	U	0.00083	0.00091	--	0.00082	ND	U	0.00072	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053	ND	U	0.00052	ND	U	0.00046	ND	U	0.00051	ND	U	0.00051	ND	U	0.00051
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00059	ND	U	0.00065	ND	U	0.00065	ND	U	0.00065
	1,2-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	ND	U	0.001	0.00059	J	0.00099	ND	U	0.00087	ND	U	0.00096	ND	U	0.00096	ND	U	0.00096
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00089	ND	U	0.00087	ND	U	0.00076	ND	U	0.00084	ND	U	0.00084	ND	U	0.00084
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00082	ND	U	0.00081	ND	U	0.00083	0.00055	J	0.00082	0.001	--	0.00072	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0016	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00059	ND	U	0.00065	ND	U	0.00065	ND	U	0.00065
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00059	ND	U	0.00065	ND	U	0.00065	ND	U	0.00065
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00098	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.001	0.00071	J	0.00098	ND	U	0.00086	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095
	Acetone	ppmv	0.089	--	0.017	0.051	--	0.017	0.031	--	0.017	0.75	--	0.017	0.004	J	0.015	0.0036	J	0.016	0.0043	J	0.016	0.004	J	0.016
	Benzene	ppmv	0.0015	--	0.0013	0.0015	--	0.0013	ND	U	0.0013	0.11	--	0.0013	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Benzyl Chloride	ppmv	ND	U	0.00078	ND	U	0.00077	ND	U	0.00079	ND	U	0.00078	ND	U	0.00068	ND	U	0.00075	ND	U	0.00075	ND	U	0.00075
	Bromodichloromethane	ppmv	ND	U	0.0006	ND	U	0.0006	ND	U	0.00061	ND	U	0.0006	0.035	--	0.00053	0.054	--	0.00058	0.00042	J	0.00058	0.00022	J	0.00058
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	0.00012	J	0.00034	0.001	--	0.00038	ND	U	0.00038	ND	U	0.00038
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.00091	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	0.0031	J	0.013	0.0019	J	0.013	ND	U	0.013	0.044	--	0.013	ND	U	0.011	0.00075	J	0.013	0.00075	J	0.013	0.00047	J	0.013
	Carbon Tetrachloride	ppmv	0.00028	J	0.00064	0.0003	J	0.00064	ND	U	0.00065	ND	U	0.00064	0.00098	--	0.00056	0.0047	--	0.00062	0.0035	--	0.00062	0.00073	--	0.00062
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00089	ND	U	0.00087	ND	U	0.00077	ND	U	0.00085	ND	U	0.00085	ND	U	0.00085
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0016	0.0025	--	0.0015	ND	U	0.0013	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	ND	U	0.00082	ND	U	0.00082	ND	U	0.00084	0.00066	J	0.00082	0.075	--	0.00072	0.14	--	0.0008	0.0055	--	0.0008	0.00075	J	0.0008
	Chloromethane	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	0.013	--	0.0019	ND	UJ	0.0017	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00089	ND	U	0.00098	ND	U	0.00098	ND	U	0.00098
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00088	ND	U	0.0009	ND	U	0.00089	ND	U	0.00078	ND	U	0.00086	ND	U	0.00086	ND	U	0.00086
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	0.022	--	0.0023	ND	U	0.002	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00047	ND	U	0.00048	ND	U	0.00047	0.0071	--	0.00041	0.017	--	0.00046	ND	U	0.00046	ND	U	0.00046
	Dichlorodifluoromethane	ppmv	0.003	--	0.00081	0.003	--	0.00081	0.0082	--	0.00083	0.005	--	0.00081	ND	U	0.00071	0.0047	--	0.00079	0.0019	--	0.00079	0.0041	--	0.00079
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.022	ND	U	0.021	ND	U	0.019	ND	U	0.021	ND	U	0.021	ND	U	0.021
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	0.0023	0.0015	J	0.0022	ND	U	0.002	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022
	Ethylbenzene	ppmv	ND	U	0.00093	ND	U	0.00092	ND	U	0.00094	0.011	--	0.00093	ND	U	0.00081	ND	U	0.0009	ND	U	0.0009	ND	U	0.0009
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00033	ND	U	0.00037	ND	U	0.00037	ND	U	0.00037
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.016	ND	U	0.017	0.0051	J	0.016	ND	U	0.014	ND	U	0.016	ND	U	0.016	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	0.019	--	0.0019	ND	U	0.0016	0.00065	J	0.0018	ND	U	0.0018	ND	U	0.0018
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.023	--	0.014	0.013	J	0.014	0.001	J	0.014	0.84	--	0.14	ND	U	0.012	0.00068	J	0.013	ND	U	0.013	ND	U	0.013
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00086	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.001	0.00072	J	0.0011	ND	U	0.0011	ND	U	0.0011
	Naphthalene	ppmv	0.00028	J	0.00077	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077	ND	U	0.00067	ND	U	0.00074	ND	U	0.00074	ND	U	0.00074
	n-Heptane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.001	0.0016	--	0.00098	ND	U	0.00086	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	0.0071	--	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00093	ND	U	0.00092	ND	U	0.00094	0.0073	--	0.00093	ND	U	0.00081	0.00029	J	0.0009	ND	U	0.0009	ND	U	0.0009
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	0.0048	--	0.0023	0.011	--	0.002	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023
	Styrene	ppmv	ND	U	0.00095	ND	U	0.00094	ND	U	0.00096	ND	U	0.00095	ND	U	0.00083	ND	U	0.00092	ND	U	0.00092	ND	U	0.00092
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00098	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00059	ND	U	0.00059	ND	U	0.0006	0.00027	J	0.00059	0.00056	--	0.00052	0.0014	--	0.00058	0.00046	J	0.00058	ND	U	0.00058
	Tetrahydrofuran	ppmv	0.0062	--	0.0014	0.0038	--	0.0014	ND	U	0.0014	0.16	--	0.0014	0.0049	--	0.0012	0.00095	J	0.0013	0.0014	--	0.0013	0.0068	--	0.0013
	Toluene	ppmv	0.00069	J	0.0011	0.00047	J	0.0011	ND	U	0.0011	0.24	--	0.011	0.00043	J	0.00094	0.0012	--	0.001	ND	U	0.001	ND	U	0.001
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00089	ND	U	0.00098	ND	U	0.00098	ND	U	0.00098
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00088	ND	U	0.0009	ND	U	0.00089	ND	U	0.00078	ND	U	0.00086	ND	U	0.00086	ND	U	0.00086
	Trichloroethylene (TCE)	ppmv	ND	U	0.00075	ND	U	0.00074	ND	U	0.00076	ND	U	0.00075	ND	U	0.00066	0.00047	J	0.00073	ND	U	0.00073	ND	U	0.00073
	Trichlorofluoromethane	ppmv	ND	U	0.00072	ND	U	0.00071	0.00069	J	0.00073	0.00047	J	0.00072	0.00032	J	0.00063	0.00066	J	0.00069	ND	U	0.00069	ND	U	0.00069
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.01	ND	U	0.011	ND	U	0.011	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	0.0026	--	0.0016	ND	U	0.0014	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
	Xylenes, Total	ppmv	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	0.026	--	0.0019	ND	U	0.0016	0.00094	J	0.0018	ND	U	0.0018	ND	U	0.0018

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106123-350			KAFB-106123-350			KAFB-106123-450			KAFB-106124-025			KAFB-106124-050			KAFB-106124-150			KAFB-106124-250			KAFB-106124-350		
		Field Sample ID:	VA161127			VA161128			VA161129			VA161130			VA161131			VA161132			VA161133			VA161134		
		Sample Date:	05-Oct-2016			05-Oct-2016			05-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0011	ND	U	0.00077	ND	U	0.00078	ND	U	0.00079	ND	U	0.00082	ND	U	0.00081	ND	U	0.00081	ND	U	0.00082
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.302	--	0.16	0.316	--	0.15	0.42	--	0.16	0.438	--	0.16	1.15	--	0.16	0.288	--	0.16	0.212	--	0.16	0.232	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	78.2	--	0.16	78.2	--	0.15	78.2	--	0.16	78.5	--	0.16	78.7	--	0.16	79.3	--	0.16	79.3	--	0.16	78.7	--	0.16
	Oxygen	%	21.5	--	0.16	21.5	--	0.15	21.4	--	0.16	21	--	0.16	20.2	--	0.16	20.4	--	0.16	20.5	--	0.16	21.1	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	150	ND	U	160	ND	U	160	210	--	160	ND	U	160	ND	U	160	1400	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	19	ND	U	19	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	78	94	--	77	ND	U	78	ND	U	79	ND	U	82	ND	U	81	ND	U	81	ND	U	82
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.00072	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074	ND	U	0.00075
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00056	ND	U	0.00056	ND	U	0.00057	ND	U	0.00058	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.0012	--	0.00051	0.0012	--	0.0005	0.00098	--	0.00051	ND	U	0.00052	ND	U	0.00053	ND	U	0.00053	ND	U	0.00053	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.00072	ND	U	0.00075	ND	U	0.00074	ND	U	0.00074	ND	U	0.00075
	1,1-Dichloroethane	ppmv	ND	U	0.00096	ND	U	0.00095	ND	U	0.00096	ND	U	0.00098	ND	U	0.001	ND	U	0.00099	ND	U	0.00099	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053	ND	U	0.00053	ND	U	0.00055	ND	U	0.00054	ND	U	0.00054	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00079	ND	U	0.00078	ND	U	0.00079	ND	U	0.0008	ND	U	0.00083	ND	U	0.00082	ND	U	0.00082	ND	U	0.00083
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0005	ND	U	0.0005	ND	U	0.00051	ND	U	0.00051	ND	U	0.00053	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.00066	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068
	1,2-Dichloroethane	ppmv	ND	U	0.00096	ND	U	0.00095	ND	U	0.00096	ND	U	0.00098	ND	U	0.001	ND	U	0.00099	ND	U	0.00099	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00084	ND	U	0.00083	ND	U	0.00084	ND	U	0.00086	ND	U	0.00088	ND	U	0.00087	ND	U	0.00087	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00079	ND	U	0.00078	ND	U	0.00079	ND	U	0.0008	ND	U	0.00083	ND	U	0.00082	ND	U	0.00082	ND	U	0.00083
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0017	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00064	0.00023	J	0.00064	0.00023	J	0.00065	ND	U	0.00066	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068
	1,4-Dichlorobenzene	ppmv	ND	U	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.00066	ND	U	0.00068	ND	U	0.00067	ND	U	0.00067	ND	U	0.00068
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095	ND	U	0.00096	ND	U	0.001	ND	U	0.00098	ND	U	0.00098	ND	U	0.001
	Acetone	ppmv	0.047	--	0.016	0.11	--	0.016	0.059	--	0.016	0.37	--	0.017	0.48	--	0.017	0.018	--	0.017	0.17	--	0.017	0.073	--	0.017
	Benzene	ppmv	ND	U	0.0012	ND	U	0.0012	0.00088	J	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	0.00086	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00076	ND	U	0.00079	ND	U	0.00078	ND	U	0.00078	ND	U	0.00079
	Bromodichloromethane	ppmv	ND	U	0.00058	ND	U	0.00057	0.00041	J	0.00058	0.011	--	0.00059	0.064	--	0.00061	0.0023	--	0.0006	ND	U	0.0006	ND	U	0.00061
	Bromoform	ppmv	ND	U	0.00037	ND	U	0.00037	ND	U	0.00038	ND	U	0.00038	0.0041	--	0.00039	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	0.012	0.00053	J	0.012	0.0018	J	0.013	ND	U	0.013	0.0012	J	0.013	0.0019	J	0.013	0.0026	J	0.013	0.0023	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00062	ND	U	0.00061	ND	U	0.00062	0.00023	J	0.00063	0.0067	--	0.00065	0.0085	--	0.00064	0.00069	--	0.00064	ND	U	0.00065
	Chlorobenzene	ppmv	ND	U	0.00084	ND	U	0.00084	ND	U	0.00085	ND	U	0.00086	ND	U	0.00089	ND	U	0.00087	ND	U	0.00087	ND	U	0.00089
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	0.0014	--	0.00079	0.0012	--	0.00079	0.00053	J	0.0008	0.084	--	0.00081	0.46	--	0.0083	0.036	--	0.00082	0.00056	J	0.00082	ND	U	0.00083
	Chloromethane	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00085	ND	U	0.00085	ND	U	0.00086	ND	U	0.00087	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023	0.0011	J	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00046	ND	U	0.00045	0.00027	J	0.00046	0.0012	--	0.00046	0.017	--	0.00048	0.00017	J	0.00047	ND	U	0.00047	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.046	--	0.00078	0.046	--	0.00078	0.043	--	0.00079	0.00058	J	0.0008	0.00056	J	0.00082	0.00041	J	0.00081	ND	U	0.00081	ND	U	0.00082
	Ethanol	ppmv	ND	U	0.021	ND	U	0.02	ND	U	0.021	ND	U	0.021	ND	U	0.022	0.0062	J	0.021	0.0042	J	0.021	0.0043	J	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0021	ND	U	0.0022	ND	U	0.0022	ND	U	0.0023	0.0046	--	0.0022	ND	U	0.0022	0.0024	--	0.0023
	Ethylbenzene	ppmv	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.00091	ND	U	0.00094	ND	U	0.00093	ND	U	0.00093	ND	U	0.00094
	Hexachlorobutadiene	ppmv	ND	U	0.00036	ND	U	0.00036	ND	U	0.00037	ND	U	0.00037	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.016	0.0016	J	0.016	ND	U	0.016	0.0027	J	0.016	ND	U	0.017	0.0019	J	0.016	ND	U	0.016	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	0.0006	J	0.0019	ND	U	0.0019	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.02	--	0.013	0.028	--	0.013	0.0061	J	0.013	0.0057	J	0.013	1	--	0.14	0.0058	J	0.014	0.0085	J	0.014	0.0028	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095	ND	U	0.00096	ND	U	0.00099	ND	U	0.00098	ND	U	0.00098	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.00091	J	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074	ND	U	0.00075	ND	U	0.00078	ND	U	0.00077	ND	U	0.00077	ND	U	0.00078
	n-Heptane	ppmv	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095	ND	U	0.00096	ND	U	0.00099	ND	U	0.00098	ND	U	0.00098	ND	U	0.00099
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.00091	ND	U	0.00094	ND	U	0.00093	ND	U	0.00093	ND	U	0.00094
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023	0.0025	--	0.0024
	Styrene	ppmv	ND	U	0.00091	ND	U	0.0009	ND	U	0.00092	ND	U	0.00093	ND	U	0.00096	ND	U	0.00095	ND	U	0.00095	ND	U	0.00096
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00057	ND	U	0.00057	0.0003	J	0.00058	0.00033	J	0.00058	0.0033	--	0.0006	0.0014	--	0.00059	ND	U	0.00059	ND	U	0.0006
	Tetrahydrofuran	ppmv	0.022	--	0.0013	0.028	--	0.0013	0.0052	--	0.0013	0.015	--	0.0013	0.57	--	0.014	0.0052	--	0.0014	0.0072	--	0.0014	0.0073	--	0.0014
	Toluene	ppmv	ND	U	0.001	ND	U	0.001	0.0031	--	0.001	0.00059	J	0.001	0.0006	J	0.0011	0.0013	--	0.0011	0.00059	J	0.0011	0.00083	J	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00085	ND	U	0.00085	ND	U	0.00086	ND	U	0.00087	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009
	Trichloroethylene (TCE)	ppmv	ND	U	0.00072	ND	U	0.00072	ND	U	0.00073	ND	U	0.00074	0.0011	--	0.00076	ND	U	0.00075	ND	U	0.00075	ND	U	0.00076
	Trichlorofluoromethane	ppmv	0.0048	--	0.00069	0.0049	--	0.00069	0.0046	--	0.00069	ND	U	0.0007	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.00073
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	0.0018	J	0.011	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.011	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	0.0006	J	0.0019	ND	U	0.0019	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106124-450			KAFB-106124-450			KAFB-106125-025			KAFB-106125-050			KAFB-106125-150			KAFB-106125-250			KAFB-106125-350			KAFB-106125-450		
		Field Sample ID:	VA161135			VA161136			VA161137			VA161138			VA161139			VA161140			VA161141			VA161142		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	ND	U	0.00078	ND	U	0.0008	ND	U	0.00079	ND	U	0.00077	ND	U	0.00078	ND	U	0.00078	ND	U	0.00077
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.488	--	0.16	0.488	--	0.16	1.61	--	0.16	2.59	--	0.16	0.313	--	0.15	0.203	--	0.16	0.229	--	0.16	0.572	--	0.15
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.15
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16	ND	U	0.15
	Nitrogen	%	78.6	--	0.16	78.6	--	0.16	78.3	--	0.16	78.4	--	0.16	79.6	--	0.15	79.3	--	0.16	78.7	--	0.16	78.8	--	0.15
	Oxygen	%	20.9	--	0.16	20.9	--	0.16	20.1	--	0.16	19	--	0.16	20.1	--	0.15	20.4	--	0.16	21	--	0.16	20.6	--	0.15
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	290000	--	6400	280000	--	6200	ND	U	160	ND	U	160	ND	U	150	ND	U	160	220	--	160	810000	--	21000
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	800	ND	U	780	ND	U	20	ND	U	20	ND	U	19	ND	U	19	ND	U	20	ND	U	2600
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	3200	ND	U	3100	ND	U	80	ND	U	79	ND	U	77	ND	U	78	ND	U	78	ND	U	10000
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.029	ND	U	0.029	ND	U	0.00073	ND	U	0.00072	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.094
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.023	ND	U	0.023	ND	U	0.00058	ND	U	0.00057	ND	U	0.00056	ND	U	0.00056	ND	U	0.00057	ND	U	0.075
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.021	ND	U	0.02	ND	U	0.00052	ND	U	0.00051	ND	U	0.0005	ND	U	0.00051	ND	U	0.00051	ND	U	0.067
	1,1,2-Trichloroethane	ppmv	ND	U	0.029	ND	U	0.029	ND	U	0.00073	ND	U	0.00072	ND	U	0.00071	ND	U	0.00071	ND	U	0.00072	ND	U	0.094
	1,1-Dichloroethane	ppmv	ND	U	0.039	ND	U	0.039	ND	U	0.00098	ND	U	0.00097	ND	U	0.00095	ND	U	0.00096	ND	U	0.00096	ND	U	0.13
	1,1-Dichloroethene	ppmv	ND	U	0.04	ND	U	0.039	ND	U	0.001	ND	U	0.00099	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.13
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.00054	ND	U	0.00053	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053	ND	U	0.069
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.032	ND	U	0.032	0.00033	J	0.00081	ND	U	0.0008	ND	U	0.00078	ND	U	0.00079	ND	U	0.00079	ND	U	0.1
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.021	ND	U	0.02	ND	U	0.00052	ND	U	0.00051	ND	U	0.0005	ND	U	0.0005	ND	U	0.00051	ND	U	0.067
	1,2-Dichlorobenzene	ppmv	ND	U	0.026	ND	U	0.026	ND	U	0.00066	ND	U	0.00065	ND	U	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.085
	1,2-Dichloroethane	ppmv	ND	U	0.039	ND	U	0.039	ND	U	0.00098	ND	U	0.00097	ND	U	0.00095	ND	U	0.00096	ND	U	0.00096	ND	U	0.13
	1,2-Dichloropropane	ppmv	ND	U	0.034	ND	U	0.034	ND	U	0.00086	ND	U	0.00085	ND	U	0.00083	ND	U	0.00084	ND	U	0.00084	ND	U	0.11
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.032	ND	U	0.032	ND	U	0.00081	ND	U	0.0008	ND	U	0.00078	ND	U	0.00079	ND	U	0.00079	ND	U	0.1
	1,3-Butadiene	ppmv	ND	U	0.072	ND	U	0.071	ND	U	0.0018	ND	U	0.0018	ND	U	0.0017	ND	U	0.0018	ND	U	0.0018	ND	U	0.23
	1,3-Dichlorobenzene	ppmv	ND	U	0.026	ND	U	0.026	ND	U	0.00066	ND	U	0.00065	ND	U	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.085
	1,4-Dichlorobenzene	ppmv	ND	U	0.026	ND	U	0.026	ND	U	0.00066	ND	U	0.00065	ND	U	0.00064	ND	U	0.00064	ND	U	0.00065	ND	U	0.085
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.044	ND	U	0.043	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.14
	2-Hexanone	ppmv	ND	U	0.039	ND	U	0.038	ND	U	0.00097	ND	U	0.00096	ND	U	0.00094	ND	U	0.00095	ND	U	0.00095	ND	U	0.13
	Acetone	ppmv	ND	U	0.67	ND	U	0.66	0.39	--	0.017	0.12	--	0.017	0.012	J	0.016	0.28	--	0.016	0.18	--	0.016	ND	U	2.2
	Benzene	ppmv	0.13	--	0.05	0.13	--	0.049	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	0.26	--	0.16
	Benzyl Chloride	ppmv	ND	U	0.031	ND	U	0.03	ND	U	0.00077	ND	U	0.00076	ND	U	0.00074	ND	U	0.00075	ND	U	0.00075	ND	U	0.099
	Bromodichloromethane	ppmv	ND	U	0.024	ND	U	0.023	0.014	--	0.00059	0.043	--	0.00059	0.00026	J	0.00057	ND	U	0.00058	ND	U	0.00058	ND	U	0.077
	Bromoform	ppmv	ND	U	0.015	ND	U	0.015	ND	U	0.00038	ND	U	0.00038	ND	U	0.00037	ND	U	0.00037	ND	U	0.00038	ND	U	0.05
	Bromomethane	ppmv	ND	U	0.041	ND	U	0.04	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.13
	Carbon Disulfide	ppmv	ND	U	0.51	ND	U	0.5	ND	U	0.013	0.0012	J	0.013	0.0016	J	0.012	0.0017	J	0.012	0.0014	J	0.013	ND	U	1.6
	Carbon Tetrachloride	ppmv	ND	U	0.025	ND	U	0.025	0.00094	--	0.00063	0.0058	--	0.00062	0.0095	--	0.00061	0.00024	J	0.00062	ND	U	0.00062	ND	U	0.082
	Chlorobenzene	ppmv	ND	U	0.035	ND	U	0.034	ND	U	0.00086	ND	U	0.00085	ND	U	0.00084	ND	U	0.00084	ND	U	0.00085	ND	U	0.11
	Chloroethane	ppmv	ND	U	0.06	ND	U	0.059	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.19
	Chloroform	ppmv	0.011	J	0.033	0.011	J	0.032	0.13	--	0.00081	0.36	--	0.008	0.0089	--	0.00079	0.00049	J	0.00079	ND	U	0.0008	ND	U	0.11
	Chloromethane	ppmv	ND	UJ	0.077	ND	UJ	0.076	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.25
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.04	ND	U	0.039	ND	U	0.001	ND	U	0.00099	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.13
	cis-1,3-Dichloropropene	ppmv	ND	U	0.035	ND	U	0.034	ND	U	0.00088	ND	U	0.00086	ND	U	0.00085	ND	U	0.00085	ND	U	0.00086	ND	U	0.11
	Cyclohexane	ppmv	0.49	--	0.092	0.48	--	0.091	ND	U	0.0023	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023	0.4	--	0.3
	Dibromochloromethane	ppmv	ND	U	0.019	ND	U	0.018	0.00015	J	0.00047	0.00083	--	0.00046	ND	U	0.00045	ND	U	0.00046	ND	U	0.00046	ND	U	0.06
	Dichlorodifluoromethane	ppmv	0.023	J	0.032	0.021	J	0.032	0.00055	J	0.0008	0.00055	J	0.00079	0.00038	J	0.00078	ND	U	0.00078	ND	U	0.00079	0.069	J	0.1
	Ethanol	ppmv	ND	U	0.84	ND	U	0.83	ND	U	0.021	0.0054	J	0.021	0.0038	J	0.02	ND	U	0.021	0.0043	J	0.021	ND	U	2.7
	Ethyl Acetate	ppmv	ND	U	0.088	ND	U	0.087	ND	U	0.0022	ND	U	0.0022	ND	U	0.0021	ND	U	0.0022	ND	U	0.0022	ND	U	0.29
	Ethylbenzene	ppmv	ND	U	0.037	ND	U	0.036	ND	U	0.00092	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.12
	Hexachlorobutadiene	ppmv	ND	U	0.015	ND	U	0.015	ND	U	0.00037	ND	U	0.00037	ND	U	0.00036	ND	U	0.00036	ND	U	0.00037	ND	U	0.048
	Isopropanol	ppmv	ND	U	0.65	ND	U	0.63	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	2.1
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.073	ND	U	0.072	0.0011	J	0.0018	0.00069	J	0.0018	ND	U	0.0018	ND	U	0.0018	0.00056	J	0.0018	ND	U	0.24
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	0.54	ND	U	0.53	0.11	--	0.013	0.048	--	0.013	0.0029	J	0.013	0.047	--	0.013	0.016	--	0.013	ND	U	1.7
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.039	ND	U	0.038	ND	U	0.00097	ND	U	0.00096	ND	U	0.00094	ND	U	0.00095	ND	U	0.00095	ND	U	0.13
	Methylene Chloride	ppmv	ND	U	0.046	ND	U	0.045	ND	U	0.0011	0.0011	J	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.15
	Naphthalene	ppmv	ND	U	0.03	ND	U	0.03	0.00029	J	0.00076	ND	U	0.00075	ND	U	0.00073	ND	U	0.00074	ND	U	0.00074	ND	U	0.098
	n-Heptane	ppmv	ND	U	0.039	ND	U	0.038	ND	U	0.00097	ND	U	0.00096	ND	U	0.00094	ND	U	0.00095	ND	U	0.00095	ND	U	0.13
	n-Hexane	ppmv	0.15	--	0.045	0.15	--	0.044	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.28	--	0.15
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.037	ND	U	0.036	0.00035	J	0.00092	ND	U	0.0009	ND	U	0.00089	ND	U	0.00089	ND	U	0.0009	ND	U	0.12
	Propylene	ppmv	ND	U	0.092	ND	U	0.091	ND	U	0.0023	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023	ND	U	0.3
	Styrene	ppmv	ND	U	0.037	ND	U	0.037	ND	U	0.00093	ND	U	0.00092	ND	U	0.0009	ND	U	0.00091	ND	U	0.00092	ND	U	0.12
	tert-Butyl Methyl Ether	ppmv	ND	U	0.044	ND	U	0.043	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.14
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.023	ND	U	0.023	0.0013	--	0.00059	0.0031	--	0.00058	0.00098	--	0.00057	ND	U	0.00057	ND	U	0.00058	ND	U	0.076
	Tetrahydrofuran	ppmv	ND	U	0.054	ND	U	0.053	0.15	--	0.0013	0.17	--	0.0013	0.019	--	0.0013	0.011	--	0.0013	0.0081	--	0.0013	ND	U	0.17
	Toluene	ppmv	0.06	--	0.042	0.059	--	0.041	0.0015	--	0.0011	0.001	J	0.001	0.00076	J	0.001	0.00078	J	0.001	0.00094	J	0.001	0.2	--	0.14
	trans-1,2-Dichloroethene	ppmv	ND	U	0.04	ND	U	0.039	ND	U	0.001	ND	U	0.00099	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.13
	trans-1,3-Dichloropropene	ppmv	ND	U	0.035	ND	U	0.034	ND	U	0.00088	ND	U	0.00086	ND	U	0.00085	ND	U	0.00085	ND	U	0.00086	ND	U	0.11
	Trichloroethylene (TCE)	ppmv	ND	U	0.03	ND	U	0.029	ND	U	0.00074	0.00067	J	0.00073	ND	U	0.00072	ND	U	0.00072	0.00045	J	0.00073	ND	U	0.096
	Trichlorofluoromethane	ppmv	ND	U	0.028	ND	U	0.028	ND	U	0.00071	ND	U	0.0007	0.00026	J	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.091
	Vinyl Acetate	ppmv	ND	U	0.45	ND	U	0.44	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	1.5
	Vinyl chloride	ppmv	ND	U	0.062	ND	U	0.061	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.2
	Xylenes, Total	ppmv	ND	U	0.073	ND	U	0.072	0.0015	J	0.0018	0.00069	J	0.0018	ND	U	0.0018	ND	U	0.0018	0.00056	J	0.0018	ND	U	0.24

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106126-025			KAFB-106126-050			KAFB-106126-150			KAFB-106126-250			KAFB-106126-350			KAFB-106126-450			KAFB-106126-450			KAFB-106127-025		
		Field Sample ID:	VA161143			VA161144			VA161145			VA161146			VA161147			VA161148			VA161149			VA161150		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00078	ND	U	0.00082	ND	U	0.00078	ND	U	0.00079	ND	U	0.00079	ND	U	0.00077	ND	U	0.0011	0.0026	--	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.42	--	0.16	1.22	--	0.16	ND	U	0.16	0.196	--	0.16	0.223	--	0.16	0.531	--	0.15	0.533	--	0.16	0.832	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.15	ND	U	0.16	ND	U	0.16
	Nitrogen	%	78.6	--	0.16	78.9	--	0.16	78.6	--	0.16	79.3	--	0.16	78.7	--	0.16	78.6	--	0.15	78.7	--	0.16	78.7	--	0.16
	Oxygen	%	20	--	0.16	19.9	--	0.16	21.4	--	0.16	20.5	--	0.16	21.1	--	0.16	20.8	--	0.15	20.7	--	0.16	20.5	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	2100	--	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	850000	--	21000	870000	--	21000	420	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	19	ND	U	20	ND	U	19	ND	U	20	ND	U	20	ND	U	2600	ND	U	2600	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	78	ND	U	82	ND	U	78	ND	U	79	ND	U	79	ND	U	10000	ND	U	10000	ND	U	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00071	ND	U	0.00075	ND	U	0.00071	ND	U	0.00072	ND	U	0.00072	ND	U	0.094	ND	U	0.096	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00056	ND	U	0.00059	ND	U	0.00056	ND	U	0.00057	ND	U	0.00058	ND	U	0.075	ND	U	0.076	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00051	ND	U	0.00053	ND	U	0.00051	ND	U	0.00051	ND	U	0.00052	ND	U	0.067	ND	U	0.068	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00071	ND	U	0.00075	ND	U	0.00071	ND	U	0.00072	ND	U	0.00072	ND	U	0.094	ND	U	0.096	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.00096	ND	U	0.001	ND	U	0.00096	ND	U	0.00097	ND	U	0.00098	ND	U	0.13	ND	U	0.13	ND	U	0.00099
	1,1-Dichloroethene	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.13	ND	U	0.13	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00052	ND	U	0.00055	ND	U	0.00052	ND	U	0.00053	ND	U	0.00053	ND	U	0.069	ND	U	0.071	ND	U	0.00054
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00079	ND	U	0.00083	ND	U	0.00079	ND	U	0.0008	ND	U	0.0008	ND	U	0.1	ND	U	0.11	ND	U	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0005	ND	U	0.00053	ND	U	0.0005	ND	U	0.00051	ND	U	0.00051	ND	U	0.067	ND	U	0.068	ND	U	0.00052
	1,2-Dichlorobenzene	ppmv	ND	U	0.00064	ND	U	0.00068	ND	U	0.00064	ND	U	0.00065	ND	U	0.00066	ND	U	0.085	ND	U	0.087	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.00096	ND	U	0.001	ND	U	0.00096	ND	U	0.00097	ND	U	0.00098	ND	U	0.13	ND	U	0.13	ND	U	0.00099
	1,2-Dichloropropane	ppmv	ND	U	0.00084	ND	U	0.00088	ND	U	0.00084	ND	U	0.00085	ND	U	0.00086	ND	U	0.11	ND	U	0.11	ND	U	0.00087
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00079	ND	U	0.00083	ND	U	0.00079	ND	U	0.0008	ND	U	0.0008	ND	U	0.1	ND	U	0.11	ND	U	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.23	ND	U	0.24	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00064	ND	U	0.00068	ND	U	0.00064	ND	U	0.00065	ND	U	0.00066	ND	U	0.085	ND	U	0.087	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00064	ND	U	0.00068	ND	U	0.00064	ND	U	0.00065	ND	U	0.00066	ND	U	0.085	ND	U	0.087	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.14	ND	U	0.15	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00095	ND	U	0.001	ND	U	0.00095	ND	U	0.00096	ND	U	0.00096	ND	U	0.13	ND	U	0.13	ND	U	0.00098
	Acetone	ppmv	0.033	--	0.016	0.027	--	0.017	0.052	--	0.016	0.25	--	0.017	0.049	--	0.017	ND	U	2.2	ND	U	2.2	ND	U	0.017
	Benzene	ppmv	0.00041	J	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	0.12	J	0.16	0.12	J	0.16	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00075	ND	U	0.00079	ND	U	0.00075	ND	U	0.00076	ND	U	0.00076	ND	U	0.099	ND	U	0.1	ND	U	0.00078
	Bromodichloromethane	ppmv	0.0028	--	0.00058	0.0092	--	0.00061	ND	U	0.00058	ND	U	0.00059	ND	U	0.00059	ND	U	0.077	ND	U	0.078	0.026	--	0.0006
	Bromoform	ppmv	ND	U	0.00037	ND	U	0.00039	ND	U	0.00037	ND	U	0.00038	ND	U	0.00038	ND	U	0.05	ND	U	0.051	0.00058	--	0.00039
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.13	ND	U	0.13	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	0.012	0.0023	J	0.013	ND	U	0.012	0.0011	J	0.013	0.001	J	0.013	ND	U	1.6	ND	U	1.7	ND	U	0.013
	Carbon Tetrachloride	ppmv	0.0019	--	0.00062	0.0052	--	0.00065	ND	U	0.00062	0.00048	J	0.00062	ND	U	0.00063	ND	U	0.082	ND	U	0.083	0.0029	--	0.00064
	Chlorobenzene	ppmv	ND	U	0.00084	ND	U	0.00089	ND	U	0.00084	ND	U	0.00085	ND	U	0.00086	ND	U	0.11	ND	U	0.11	ND	U	0.00087
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.19	ND	U	0.2	ND	U	0.0015
	Chloroform	ppmv	0.041	--	0.00079	0.1	--	0.00083	ND	U	0.00079	ND	U	0.0008	ND	U	0.00081	ND	U	0.11	ND	U	0.11	0.2	--	0.0082
	Chloromethane	ppmv	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.25	ND	UJ	0.25	ND	U	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.13	ND	U	0.13	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00085	ND	U	0.0009	ND	U	0.00085	ND	U	0.00086	ND	U	0.00087	ND	U	0.11	ND	U	0.12	ND	U	0.00089
	Cyclohexane	ppmv	0.0022	J	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	1.5	--	0.3	1.5	--	0.3	ND	U	0.0023
	Dibromochloromethane	ppmv	ND	U	0.00046	0.00032	J	0.00048	ND	U	0.00046	ND	U	0.00046	ND	U	0.00046	ND	U	0.06	ND	U	0.061	0.0048	--	0.00047
	Dichlorodifluoromethane	ppmv	0.00054	J	0.00078	0.00054	J	0.00082	0.00059	J	0.00078	ND	U	0.00079	ND	U	0.0008	ND	U	0.1	ND	U	0.11	0.00059	J	0.00081
	Ethanol	ppmv	ND	U	0.021	ND	U	0.022	0.0045	J	0.021	ND	U	0.021	ND	U	0.021	ND	U	2.7	ND	U	2.8	ND	U	0.021
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0023	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.29	ND	U	0.29	ND	U	0.0022
	Ethylbenzene	ppmv	ND	U	0.00089	ND	U	0.00094	0.00049	J	0.00089	ND	U	0.0009	ND	U	0.00091	ND	U	0.12	ND	U	0.12	ND	U	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00036	ND	U	0.00038	ND	U	0.00036	ND	U	0.00037	ND	U	0.00037	ND	U	0.048	ND	U	0.049	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.017	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	2.1	ND	U	2.1	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0019	0.0018	--	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.24	ND	U	0.24	0.00065	J	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.00061	J	0.013	0.0012	J	0.014	0.0015	J	0.013	0.16	--	0.013	0.0016	J	0.013	ND	U	1.7	ND	U	1.8	0.00097	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00095	ND	U	0.00099	ND	U	0.00095	ND	U	0.00096	ND	U	0.00096	ND	U	0.13	ND	U	0.13	ND	U	0.00098
	Methylene Chloride	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.15	ND	U	0.15	0.00066	J	0.0012
	Naphthalene	ppmv	ND	U	0.00074	ND	U	0.00078	ND	U	0.00074	ND	U	0.00075	ND	U	0.00075	ND	U	0.098	ND	U	0.1	0.00039	J	0.00077
	n-Heptane	ppmv	ND	U	0.00095	ND	U	0.00099	ND	U	0.00095	ND	U	0.00096	ND	U	0.00096	ND	U	0.13	ND	U	0.13	ND	U	0.00098
	n-Hexane	ppmv	0.0012	--	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.79	--	0.15	0.79	--	0.15	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00089	ND	U	0.00094	0.00057	J	0.00089	ND	U	0.0009	ND	U	0.00091	ND	U	0.12	ND	U	0.12	ND	U	0.00093
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.3	ND	U	0.3	ND	U	0.0023
	Styrene	ppmv	ND	U	0.00091	ND	U	0.00096	ND	U	0.00091	ND	U	0.00092	ND	U	0.00093	ND	U	0.12	ND	U	0.12	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.14	ND	U	0.15	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.00045	J	0.00057	0.0011	--	0.0006	ND	U	0.00057	ND	U	0.00058	ND	U	0.00058	ND	U	0.076	ND	U	0.077	0.001	--	0.00059
	Tetrahydrofuran	ppmv	0.001	J	0.0013	0.076	--	0.0014	0.00078	J	0.0013	0.2	--	0.0013	0.0018	--	0.0013	ND	U	0.17	ND	U	0.18	0.021	--	0.0014
	Toluene	ppmv	0.00098	J	0.001	0.00074	J	0.0011	0.00043	J	0.001	0.00067	J	0.001	0.0006	J	0.001	0.19	--	0.14	0.19	--	0.14	0.0012	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.13	ND	U	0.13	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00085	ND	U	0.0009	ND	U	0.00085	ND	U	0.00086	ND	U	0.00087	ND	U	0.11	ND	U	0.12	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	ND	U	0.00072	0.00031	J	0.00076	ND	U	0.00072	ND	U	0.00073	ND	U	0.00074	ND	U	0.096	ND	U	0.097	0.0013	--	0.00075
	Trichlorofluoromethane	ppmv	ND	U	0.00069	ND	U	0.00073	0.00023	J	0.00069	ND	U	0.0007	ND	U	0.0007	ND	U	0.091	ND	U	0.093	ND	U	0.00072
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.012	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	1.5	ND	U	1.5	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.2	ND	U	0.2	ND	U	0.0016
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0019	0.0024	--	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.24	ND	U	0.24	0.00065	J	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106127-050			KAFB-106127-150			KAFB-106127-250			KAFB-106127-350			KAFB-106127-450			KAFB-106128-025			KAFB-106128-025			KAFB-106128-050		
		Field Sample ID:	VA161151			VA161152			VA161153			VA161154			VA161155			VA161156			VA161157			VA161158		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0008	ND	U	0.0008	ND	U	0.00078	ND	U	0.00079	ND	U	0.00079	ND	U	0.0011	0.00081	J	0.0011	0.0013	--	0.00078
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.679	--	0.16	0.232	J	0.16	0.194	J	0.16	0.226	J	0.16	0.456	J	0.16	1.09	--	0.16	1.11	--	0.16	2.15	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	UJ	0.16	ND	UJ	0.16	ND	UJ	0.16	ND	UJ	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	78.8	--	0.16	79.4	J	0.16	79.4	J	0.16	78.7	J	0.16	78.6	J	0.16	81.1	--	0.16	81	--	0.16	81.6	--	0.16
	Oxygen	%	20.5	--	0.16	20.4	--	0.16	20.4	--	0.16	21.1	--	0.16	21	--	0.16	17.8	--	0.16	17.8	--	0.16	16.2	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	4300	--	160	ND	U	160	ND	U	160	510	--	160	170000	--	2100	170	--	160	ND	U	160	200000	--	1600
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	260	95	--	19	77	--	20	390	--	190
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	80	ND	U	80	ND	U	78	ND	U	79	2800	--	1100	1100	--	78	2200	--	80	19000	--	780
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.0097	ND	U	0.00071	ND	U	0.00073	ND	U	0.0071
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00058	ND	U	0.00057	ND	U	0.00058	ND	U	0.0077	ND	U	0.00056	ND	U	0.00058	ND	U	0.0056
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00051	ND	U	0.00052	ND	U	0.0069	0.015	--	0.00051	0.015	--	0.00052	0.015	--	0.0051
	1,1,2-Trichloroethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.0097	ND	U	0.00071	ND	U	0.00073	ND	U	0.0071
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	ND	U	0.00096	ND	U	0.00098	ND	U	0.013	ND	U	0.00096	ND	U	0.00098	ND	U	0.0096
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.013	ND	U	0.00098	ND	U	0.001	ND	U	0.0098
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00053	ND	U	0.00053	ND	U	0.0071	ND	U	0.00052	ND	U	0.00054	ND	U	0.0052
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00079	ND	U	0.0008	ND	U	0.011	0.0033	--	0.00079	0.0023	--	0.00081	0.0076	J	0.0079
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00051	ND	U	0.00051	ND	U	0.0069	ND	U	0.0005	ND	U	0.00052	ND	U	0.005
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00065	ND	U	0.00066	ND	U	0.0088	ND	U	0.00064	ND	U	0.00066	ND	U	0.0064
	1,2-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	ND	U	0.00096	ND	U	0.00098	ND	U	0.013	ND	U	0.00096	ND	U	0.00098	ND	U	0.0096
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00084	ND	U	0.00086	ND	U	0.011	ND	U	0.00084	ND	U	0.00086	ND	U	0.0084
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00079	ND	U	0.0008	ND	U	0.011	0.0014	--	0.00079	0.001	--	0.00081	0.017	--	0.0079
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.024	ND	U	0.0018	ND	U	0.0018	ND	U	0.018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00065	ND	U	0.00066	ND	U	0.0088	ND	U	0.00064	ND	U	0.00066	ND	U	0.0064
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00065	ND	U	0.00066	ND	U	0.0088	ND	U	0.00064	ND	U	0.00066	ND	U	0.0064
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.015	ND	U	0.0011	ND	U	0.0011	ND	U	0.011
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00095	ND	U	0.00096	ND	U	0.013	ND	U	0.00095	ND	U	0.00097	ND	U	0.0095
	Acetone	ppmv	1.2	--	0.017	0.05	--	0.017	0.03	--	0.016	0.032	--	0.017	ND	U	0.22	0.022	--	0.016	0.022	--	0.017	ND	U	0.16
	Benzene	ppmv	0.0034	--	0.0013	ND	U	0.0013	ND	U	0.0012	0.00049	J	0.0012	0.053	--	0.016	0.00099	J	0.0012	0.00044	J	0.0012	0.05	--	0.012
	Benzyl Chloride	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00075	ND	U	0.00076	ND	U	0.01	ND	U	0.00075	ND	U	0.00077	ND	U	0.0075
	Bromodichloromethane	ppmv	0.019	--	0.0006	0.00089	--	0.0006	ND	U	0.00058	ND	U	0.00059	ND	U	0.0079	ND	U	0.00058	ND	U	0.00059	ND	U	0.0058
	Bromoform	ppmv	0.00092	--	0.00039	ND	U	0.00039	ND	U	0.00038	ND	U	0.00038	ND	U	0.0051	ND	U	0.00037	ND	U	0.00038	ND	U	0.0037
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.014	ND	U	0.001	ND	U	0.001	ND	U	0.01
	Carbon Disulfide	ppmv	0.0013	J	0.013	ND	U	0.013	0.00086	J	0.013	ND	U	0.013	ND	U	0.17	0.00062	J	0.012	ND	U	0.013	ND	U	0.12
	Carbon Tetrachloride	ppmv	0.0051	--	0.00064	0.0049	--	0.00064	0.00061	J	0.00062	ND	U	0.00063	ND	U	0.0084	0.026	--	0.00062	0.026	--	0.00063	0.029	--	0.0062
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00085	ND	U	0.00086	ND	U	0.011	ND	U	0.00084	ND	U	0.00086	ND	U	0.0084
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.02	ND	U	0.0015	ND	U	0.0015	ND	U	0.015
	Chloroform	ppmv	0.15	--	0.00082	0.016	--	0.00082	0.00039	J	0.0008	ND	U	0.00081	0.0038	J	0.011	0.0015	--	0.00079	0.0015	--	0.00081	ND	U	0.0079
	Chloromethane	ppmv	ND	U	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.026	ND	U	0.0019	ND	U	0.0019	ND	U	0.019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.013	ND	U	0.00098	ND	U	0.001	ND	U	0.0098
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00086	ND	U	0.00087	ND	U	0.012	ND	U	0.00085	ND	U	0.00088	ND	U	0.0085
	Cyclohexane	ppmv	0.004	--	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	0.23	--	0.031	ND	U	0.0023	ND	U	0.0023	1.3	--	0.023
	Dibromochloromethane	ppmv	0.0061	--	0.00047	ND	U	0.00047	ND	U	0.00046	ND	U	0.00046	ND	U	0.0062	ND	U	0.00046	ND	U	0.00047	ND	U	0.0046
	Dichlorodifluoromethane	ppmv	0.00046	J	0.00081	0.0003	J	0.00081	ND	U	0.00079	ND	U	0.0008	ND	U	0.011	0.2	--	0.0078	0.17	--	0.008	0.24	--	0.0078
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.021	0.01	J	0.021	ND	U	0.28	ND	U	0.021	ND	U	0.021	ND	U	0.21
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	ND	U	0.029	ND	U	0.0022	ND	U	0.0022	ND	U	0.022
	Ethylbenzene	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.0009	ND	U	0.00091	ND	U	0.012	0.0011	--	0.00089	0.00056	J	0.00092	0.043	--	0.0089
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.00037	ND	U	0.00037	ND	U	0.0049	ND	U	0.00036	ND	U	0.00037	ND	U	0.0036
	Isopropanol	ppmv	0.0026	J	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.21	ND	U	0.016	ND	U	0.016	ND	U	0.16
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.024	0.0065	--	0.0018	0.0034	--	0.0018	0.15	--	0.018
	Methyl Ethyl Ketone (2-Butanone)	ppmv	1.6	J	0.014	0.017	--	0.014	0.0033	J	0.013	0.001	J	0.013	ND	U	0.18	0.0015	J	0.013	0.00064	J	0.013	ND	U	0.13
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00095	ND	U	0.00096	ND	U	0.013	ND	U	0.00095	ND	U	0.00097	ND	U	0.0095
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.015	ND	U	0.0011	ND	U	0.0011	ND	U	0.011
	Naphthalene	ppmv	ND	U	0.00076	ND	U	0.00076	ND	U	0.00074	ND	U	0.00075	ND	U	0.01	0.0017	--	0.00074	0.0013	--	0.00076	ND	U	0.0074
	n-Heptane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00095	ND	U	0.00096	ND	U	0.013	0.00037	J	0.00095	ND	U	0.00097	1.4	--	0.0095
	n-Hexane	ppmv	0.00048	J	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.064	--	0.015	ND	U	0.0011	ND	U	0.0011	0.67	--	0.011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00092	ND	U	0.00092	ND	U	0.0009	ND	U	0.00091	ND	U	0.012	0.0031	--	0.00089	0.0017	--	0.00092	0.15	--	0.0089
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	0.0021	J	0.0023	0.009	J	0.031	0.001	J	0.0023	0.0011	J	0.0023	0.053	--	0.023
	Styrene	ppmv	ND	U	0.00094	ND	U	0.00094	ND	U	0.00092	ND	U	0.00093	ND	U	0.012	ND	U	0.00091	ND	U	0.00093	ND	U	0.0091
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.015	ND	U	0.0011	ND	U	0.0011	ND	U	0.011
	Tetrachloroethylene (PCE)	ppmv	0.0014	--	0.00059	0.00061	--	0.00059	ND	U	0.00058	ND	U	0.00058	ND	U	0.0078	0.00032	J	0.00057	0.00032	J	0.00059	ND	U	0.0057
	Tetrahydrofuran	ppmv	0.62	J	0.0014	0.005	--	0.0014	0.013	--	0.0013	ND	U	0.0013	ND	U	0.018	0.0016	--	0.0013	0.00071	J	0.0013	0.0098	J	0.013
	Toluene	ppmv	0.00099	J	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.014	0.0055	--	0.001	0.0025	--	0.0011	0.59	--	0.01
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.013	ND	U	0.00098	ND	U	0.001	ND	U	0.0098
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00088	ND	U	0.00088	ND	U	0.00086	ND	U	0.00087	ND	U	0.012	ND	U	0.00085	ND	U	0.00088	ND	U	0.0085
	Trichloroethylene (TCE)	ppmv	0.00062	J	0.00074	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074	ND	U	0.0098	0.00068	J	0.00072	0.00072	J	0.00074	ND	U	0.0072
	Trichlorofluoromethane	ppmv	ND	U	0.00071	ND	U	0.00071	ND	U	0.00069	ND	U	0.0007	ND	U	0.0094	0.026	--	0.00069	0.025	--	0.00071	0.028	--	0.0069
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.15	ND	U	0.011	ND	U	0.011	ND	U	0.11
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.021	ND	U	0.0015	ND	U	0.0016	ND	U	0.015
	Xylenes, Total	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.024	0.0097	--	0.0018	0.005	--	0.0018	0.29	--	0.018

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106128-150			KAFB-106128-250			KAFB-106128-350			KAFB-106128-450			KAFB-106129-025			KAFB-106129-050			KAFB-106129-050			KAFB-106129-150		
		Field Sample ID:	VA161159			VA161160			VA161161			VA161162			VA161163			VA161164			VA161165			VA161166		
		Sample Date:	06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016			06-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00081	0.00055	J	0.00079	0.43	--	0.00078	1.8	--	0.0008	0.0021	--	0.00079	0.0015	--	0.00081	0.0017	--	0.00081	0.33	--	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.42	--	0.16	4.52	--	0.16	2.59	--	0.16	5.95	--	0.16	0.205	--	0.16	0.196	--	0.16	0.194	--	0.16	0.233	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	81.2	--	0.16	85.2	--	0.16	83.4	--	0.16	85.3	--	0.16	78.7	--	0.16	78.7	--	0.16	78.8	--	0.16	79.4	--	0.16
	Oxygen	%	17.4	--	0.16	10.3	--	0.16	14	--	0.16	8.74	--	0.16	21.1	--	0.16	21	--	0.16	21	--	0.16	20.4	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	410	--	160	240	--	160	1.2E+07	--	100000	1.8E+07	--	110000	1000	--	260	390	--	160	430	--	160	200	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	25	--	20	23	--	20	47000	--	13000	33000	--	13000	910	--	33	260	--	20	220	--	20	100	--	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	320	--	81	350	--	79	1600000	--	52000	2200000	--	53000	9500	--	130	2000	--	81	1100	--	81	520	--	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00074	0.00026	J	0.00072	ND	U	0.47	ND	U	0.49	ND	U	0.0012	ND	U	0.00074	ND	U	0.00074	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00059	ND	U	0.00057	ND	U	0.38	ND	U	0.39	ND	U	0.00096	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.019	--	0.00053	0.019	--	0.00051	ND	U	0.34	ND	U	0.35	ND	U	0.00086	ND	U	0.00053	ND	U	0.00053	0.00065	--	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.00072	ND	U	0.47	ND	U	0.49	ND	U	0.0012	ND	U	0.00074	ND	U	0.00074	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.00097	ND	U	0.64	ND	U	0.66	ND	U	0.0016	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.65	ND	U	0.67	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00055	ND	U	0.00053	ND	U	0.35	ND	U	0.36	ND	U	0.00089	ND	U	0.00055	ND	U	0.00055	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	0.0009	--	0.00082	0.00087	--	0.0008	1.2	--	0.53	0.8	--	0.54	0.028	--	0.0013	0.0088	--	0.00082	0.0084	--	0.00082	0.004	--	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00053	ND	U	0.00051	0.18	J	0.34	0.76	--	0.35	0.00031	J	0.00086	0.00024	J	0.00053	0.0003	J	0.00053	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00065	ND	U	0.43	ND	U	0.44	ND	U	0.0011	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.00097	ND	U	0.64	ND	U	0.66	ND	U	0.0016	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00088	ND	U	0.00085	ND	U	0.56	ND	U	0.58	ND	U	0.0014	ND	U	0.00088	ND	U	0.00088	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.00051	J	0.00082	0.0004	J	0.0008	0.92	--	0.53	0.67	--	0.54	0.0092	--	0.0013	0.0027	--	0.00082	0.0026	--	0.00082	0.0012	--	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	1.2	ND	U	1.2	ND	U	0.003	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00065	ND	U	0.43	ND	U	0.44	ND	U	0.0011	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00065	ND	U	0.43	ND	U	0.44	ND	U	0.0011	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.72	ND	U	0.74	ND	U	0.0018	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00099	ND	U	0.00096	ND	U	0.63	ND	U	0.65	ND	U	0.0016	ND	U	0.00099	ND	U	0.00099	ND	U	0.00099
	Acetone	ppmv	0.04	--	0.017	0.012	J	0.017	ND	U	11	24	--	11	0.072	--	0.028	2.4	--	0.17	2.8	--	0.17	0.1	--	0.017
	Benzene	ppmv	0.00046	J	0.0013	0.00048	J	0.0012	14	--	0.81	28	--	0.84	0.0017	J	0.0021	0.0014	--	0.0013	0.0016	--	0.0013	0.001	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00078	ND	U	0.00076	ND	U	0.5	ND	U	0.52	ND	U	0.0013	ND	U	0.00078	ND	U	0.00078	ND	U	0.00078
	Bromodichloromethane	ppmv	ND	U	0.0006	ND	U	0.00059	ND	U	0.39	ND	U	0.4	ND	U	0.00098	ND	U	0.0006	ND	U	0.0006	ND	U	0.0006
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.00038	ND	U	0.25	ND	U	0.26	ND	U	0.00064	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.67	ND	U	0.69	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	0.0032	J	0.013	0.0047	J	0.013	ND	U	8.3	ND	U	8.6	ND	U	0.021	0.00097	J	0.013	0.0011	J	0.013	0.0016	J	0.013
	Carbon Tetrachloride	ppmv	0.088	--	0.00064	0.13	--	0.0062	ND	U	0.41	ND	U	0.42	ND	U	0.001	0.00026	J	0.00064	0.00027	J	0.00064	0.00043	J	0.00064
	Chlorobenzene	ppmv	ND	U	0.00088	ND	U	0.00085	ND	U	0.56	ND	U	0.58	ND	U	0.0014	ND	U	0.00088	ND	U	0.00088	ND	U	0.00088
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.98	ND	U	1	ND	U	0.0025	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	0.024	--	0.00083	0.042	--	0.0008	ND	U	0.53	ND	U	0.55	ND	U	0.0013	ND	U	0.00083	ND	U	0.00083	0.00039	J	0.00083
	Chloromethane	ppmv	ND	U	0.002	ND	U	0.0019	ND	U	1.3	ND	U	1.3	ND	UJ	0.0032	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.65	ND	U	0.67	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00086	ND	U	0.57	ND	U	0.59	ND	U	0.0015	ND	U	0.00089	ND	U	0.00089	ND	U	0.00089
	Cyclohexane	ppmv	0.0014	J	0.0024	ND	U	0.0023	47	--	1.5	110	--	1.6	0.0019	J	0.0038	0.00086	J	0.0024	0.00097	J	0.0024	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.00046	ND	U	0.3	ND	U	0.31	ND	U	0.00077	ND	U	0.00048	ND	U	0.00048	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.15	--	0.00082	0.16	--	0.0079	0.66	--	0.52	1.2	--	0.54	0.0012	J	0.0013	0.00057	J	0.00082	0.00053	J	0.00082	0.00051	J	0.00082
	Ethanol	ppmv	ND	U	0.022	ND	U	0.021	ND	U	14	ND	U	14	ND	U	0.035	ND	U	0.022	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	1.4	ND	U	1.5	ND	U	0.0037	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022
	Ethylbenzene	ppmv	0.00044	J	0.00093	0.00035	J	0.0009	13	--	0.59	6	--	0.61	0.0071	--	0.0015	0.0035	--	0.00093	0.004	--	0.00093	0.002	--	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00037	ND	U	0.24	ND	U	0.25	ND	U	0.00062	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.016	ND	U	11	ND	U	11	ND	U	0.027	0.012	J	0.016	0.015	J	0.016	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.0024	--	0.0019	0.0021	--	0.0018	46	--	1.2	45	--	1.2	0.04	--	0.003	0.02	--	0.0019	0.022	--	0.0019	0.011	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.095	--	0.014	0.0043	J	0.013	ND	U	8.8	5.4	J	9	0.0067	J	0.022	0.067	--	0.014	0.074	--	0.014	0.017	--	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00099	ND	U	0.00096	ND	U	0.63	2.1	--	0.65	ND	U	0.0016	0.0015	--	0.00099	0.0018	--	0.00099	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.74	ND	U	0.77	ND	U	0.0019	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00047	J	0.00077	0.00043	J	0.00075	ND	U	0.49	ND	U	0.51	0.0069	--	0.0013	0.0038	--	0.00077	0.0039	--	0.00077	0.0018	--	0.00077
	n-Heptane	ppmv	0.0019	--	0.00099	ND	U	0.00096	94	--	0.63	200	--	2	0.0045	--	0.0016	0.0019	--	0.00099	0.0022	--	0.00099	0.0011	--	0.00099
	n-Hexane	ppmv	0.00066	J	0.0011	ND	U	0.0011	32	--	0.73	91	--	0.76	0.00098	J	0.0019	0.00052	J	0.0011	0.00063	J	0.0011	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0015	--	0.00093	0.001	--	0.0009	11	--	0.59	9.8	--	0.61	0.015	--	0.0015	0.0069	--	0.00093	0.0077	--	0.00093	0.0037	--	0.00093
	Propylene	ppmv	0.00071	J	0.0024	0.0013	J	0.0023	5	--	1.5	7	--	1.6	ND	U	0.0038	0.0012	J	0.0024	0.00076	J	0.0024	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00095	ND	U	0.00092	ND	U	0.61	ND	U	0.63	ND	U	0.0015	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.72	ND	U	0.74	ND	U	0.0018	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.0003	J	0.0006	0.0006	--	0.00058	ND	U	0.38	ND	U	0.39	ND	U	0.00097	ND	U	0.0006	ND	U	0.0006	0.00018	J	0.0006
	Tetrahydrofuran	ppmv	0.013	--	0.0014	0.016	--	0.0013	ND	U	0.88	ND	U	0.9	0.06	--	0.0022	0.053	--	0.0014	0.058	--	0.0014	0.0067	--	0.0014
	Toluene	ppmv	0.0032	--	0.0011	0.0025	--	0.001	130	--	0.69	110	--	0.71	0.023	--	0.0017	0.016	--	0.0011	0.019	--	0.0011	0.0099	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.65	ND	U	0.67	ND	U	0.0017	ND	U	0.001	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00086	ND	U	0.57	ND	U	0.59	ND	U	0.0015	ND	U	0.00089	ND	U	0.00089	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	0.013	--	0.00075	0.024	--	0.00073	ND	U	0.48	ND	U	0.5	ND	U	0.0012	ND	U	0.00075	ND	U	0.00075	ND	U	0.00075
	Trichlorofluoromethane	ppmv	0.016	--	0.00072	0.02	--	0.0007	ND	U	0.46	0.2	J	0.47	ND	U	0.0012	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.011	ND	U	7.3	ND	U	7.6	ND	U	0.019	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0015	ND	U	1	ND	U	1	ND	U	0.0026	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	0.0039	--	0.0019	0.0031	--	0.0018	57	--	1.2	55	--	1.2	0.056	--	0.003	0.027	--	0.0019	0.03	--	0.0019	0.015	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106129-250			KAFB-106129-350			KAFB-106129-450			KAFB-106130-025			KAFB-106130-050			KAFB-106130-150			KAFB-106130-150			KAFB-106130-250		
		Field Sample ID:	VA161167			VA161168			VA161169			VA161170			VA161171			VA161172			VA161173			VA161174		
		Sample Date:	06-Oct-2016			06-Oct-2016			06-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016			11-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.12	--	0.00082	0.51	--	0.00082	0.5	--	0.0008	0.0011	--	0.00083	0.00053	J	0.00083	0.0011	--	0.00084	0.00051	J	0.00084	0.00047	J	0.00085
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.531	--	0.16	0.606	--	0.16	0.971	--	0.16	0.17	--	0.17	0.18	--	0.17	0.316	--	0.17	0.32	--	0.17	0.563	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	79.3	--	0.16	78.9	--	0.16	79.2	--	0.16	78.6	--	0.17	78.7	--	0.17	79.1	--	0.17	79.1	--	0.17	79.3	--	0.17
	Oxygen	%	20.2	--	0.16	20.5	--	0.16	19.8	--	0.16	21.2	--	0.17	21.2	--	0.17	20.6	--	0.17	20.6	--	0.17	20.1	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	1200	--	160	220	--	160	170000	--	2100	190	--	170	ND	U	550	190	--	170	ND	U	170	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	95	--	20	94	--	21	660	--	270	130	--	21	97	--	69	110	--	21	49	--	21	43	--	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	520	--	82	430	--	82	110000	--	1100	300	--	83	ND	U	280	160	--	84	120	--	84	120	--	85
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00075	ND	U	0.00075	ND	U	0.0097	ND	U	0.00076	ND	U	0.0025	ND	U	0.00077	ND	U	0.00077	ND	U	0.00077
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00059	ND	U	0.0006	ND	U	0.0077	ND	U	0.0006	ND	U	0.002	ND	U	0.00061	ND	U	0.00061	ND	U	0.00062
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.00098	--	0.00053	0.00025	J	0.00054	ND	U	0.0069	0.00021	J	0.00054	ND	U	0.0018	0.0009	--	0.00054	0.0009	--	0.00055	0.00082	--	0.00055
	1,1,2-Trichloroethane	ppmv	ND	U	0.00075	ND	U	0.00075	ND	U	0.0097	ND	U	0.00076	ND	U	0.0025	ND	U	0.00077	ND	U	0.00077	ND	U	0.00077
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	ND	U	0.001	ND	U	0.0034	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	ND	U	0.001	ND	U	0.0035	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00055	ND	U	0.00055	ND	U	0.0071	ND	U	0.00056	ND	U	0.0019	ND	U	0.00056	ND	U	0.00057	ND	U	0.00057
	1,2,4-Trimethylbenzene	ppmv	0.0037	--	0.00083	0.0037	--	0.00083	0.009	J	0.011	0.0042	--	0.00084	0.0028	J	0.0028	0.0037	--	0.00085	0.0015	--	0.00085	0.0014	--	0.00086
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00053	ND	U	0.00053	0.004	J	0.0069	0.00035	J	0.00054	ND	U	0.0018	0.00039	J	0.00054	ND	U	0.00055	ND	U	0.00055
	1,2-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00068	ND	U	0.0088	ND	U	0.00069	ND	U	0.0023	ND	U	0.00069	ND	U	0.0007	ND	U	0.0007
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	ND	U	0.001	ND	U	0.0034	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00088	ND	U	0.00089	ND	U	0.011	ND	U	0.0009	ND	U	0.003	ND	U	0.0009	ND	U	0.00091	ND	U	0.00091
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.0011	--	0.00083	0.0011	--	0.00083	0.026	--	0.011	0.0011	--	0.00084	ND	U	0.0028	0.001	--	0.00085	0.00042	J	0.00085	0.00039	J	0.00086
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0019	ND	U	0.024	ND	U	0.0019	ND	U	0.0063	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00068	ND	U	0.0088	ND	U	0.00069	ND	U	0.0023	ND	U	0.00069	ND	U	0.0007	ND	U	0.0007
	1,4-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00068	ND	U	0.0088	ND	U	0.00069	ND	U	0.0023	ND	U	0.00069	ND	U	0.0007	ND	U	0.0007
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.015	ND	U	0.0012	ND	U	0.0038	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	0.00037	J	0.001	ND	U	0.0034	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	ND	U	0.017	0.018	--	0.017	0.14	J	0.22	0.04	--	0.017	9.2	--	0.17	0.049	--	0.018	0.024	--	0.018	0.16	--	0.018
	Benzene	ppmv	0.011	--	0.0013	0.0016	--	0.0013	1.4	--	0.017	0.0028	--	0.0013	0.0026	J	0.0043	0.0041	--	0.0013	0.0016	--	0.0013	0.0018	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00079	ND	U	0.00079	ND	U	0.01	ND	U	0.0008	ND	U	0.0027	ND	U	0.00081	ND	U	0.00081	ND	U	0.00082
	Bromodichloromethane	ppmv	ND	U	0.00061	ND	U	0.00061	ND	U	0.0079	ND	U	0.00062	ND	U	0.0021	ND	U	0.00062	ND	U	0.00063	ND	U	0.00063
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.0004	ND	U	0.0051	ND	U	0.0004	ND	U	0.0013	ND	U	0.0004	ND	U	0.00041	ND	U	0.00041
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.014	ND	U	0.0011	ND	U	0.0036	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0018	J	0.013	0.0051	J	0.013	0.07	J	0.17	ND	U	0.013	ND	U	0.044	0.0041	J	0.013	0.0027	J	0.013	0.0036	J	0.014
	Carbon Tetrachloride	ppmv	0.00088	--	0.00065	0.00023	J	0.00065	ND	U	0.0084	ND	U	0.00066	ND	U	0.0022	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067
	Chlorobenzene	ppmv	ND	U	0.00089	ND	U	0.00089	ND	U	0.012	ND	U	0.0009	ND	U	0.003	ND	U	0.00091	ND	U	0.00091	ND	U	0.00092
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0016	ND	U	0.02	ND	U	0.0016	ND	U	0.0052	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00083	ND	U	0.00084	ND	U	0.011	ND	U	0.00085	ND	U	0.0028	ND	U	0.00086	ND	U	0.00086	ND	U	0.00087
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.002	0.018	J	0.026	ND	UJ	0.002	ND	UJ	0.0067	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	ND	U	0.001	ND	U	0.0035	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.0009	ND	U	0.0009	ND	U	0.012	ND	U	0.00091	ND	U	0.003	ND	U	0.00092	ND	U	0.00093	ND	U	0.00093
	Cyclohexane	ppmv	0.015	--	0.0024	ND	U	0.0024	0.23	--	0.031	0.00082	J	0.0024	ND	U	0.008	0.001	J	0.0024	ND	U	0.0024	ND	U	0.0025
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.00048	ND	U	0.0062	ND	U	0.00049	ND	U	0.0016	ND	U	0.00049	ND	U	0.00049	ND	U	0.0005
	Dichlorodifluoromethane	ppmv	0.0006	J	0.00082	ND	U	0.00083	ND	U	0.011	0.00057	J	0.00084	ND	U	0.0028	0.0016	--	0.00084	0.0016	--	0.00085	0.00063	J	0.00085
	Ethanol	ppmv	ND	U	0.022	ND	U	0.022	ND	U	0.28	ND	U	0.022	ND	U	0.073	0.0052	J	0.022	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.029	ND	U	0.0023	ND	U	0.0077	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	0.0018	--	0.00094	0.002	--	0.00094	0.052	--	0.012	0.0026	--	0.00096	0.002	J	0.0032	0.0029	--	0.00096	0.0012	--	0.00097	0.0011	--	0.00097
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.005	ND	U	0.00039	ND	U	0.0013	ND	U	0.00039	ND	U	0.00039	ND	U	0.0004
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.017	ND	U	0.22	ND	U	0.017	0.025	J	0.056	ND	U	0.017	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.01	--	0.0019	0.011	--	0.0019	0.14	--	0.024	0.0093	--	0.0019	0.0069	--	0.0064	0.01	--	0.0019	0.004	--	0.0019	0.0039	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.001	J	0.014	0.0009	J	0.014	0.12	J	0.18	0.0013	J	0.014	1.5	--	0.14	0.0084	J	0.014	0.005	J	0.014	0.0066	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00099	ND	U	0.001	0.0064	J	0.013	ND	U	0.001	0.0019	J	0.0034	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.015	ND	U	0.0012	ND	U	0.004	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.0016	--	0.00078	0.0015	--	0.00078	ND	U	0.01	0.005	--	0.00079	0.0034	--	0.0026	0.0036	--	0.0008	0.0017	--	0.0008	0.0015	--	0.00081
	n-Heptane	ppmv	0.0011	--	0.00099	0.0012	--	0.001	0.099	--	0.013	0.00097	J	0.001	ND	U	0.0034	0.0014	--	0.001	0.00055	J	0.001	0.00055	J	0.001
	n-Hexane	ppmv	0.00065	J	0.0012	0.00038	J	0.0012	0.18	--	0.015	0.00058	J	0.0012	ND	U	0.0039	0.00086	J	0.0012	ND	U	0.0012	0.00036	J	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0036	--	0.00094	0.0038	--	0.00094	0.092	--	0.012	0.0034	--	0.00096	0.0024	J	0.0032	0.0035	--	0.00096	0.0014	--	0.00097	0.0014	--	0.00097
	Propylene	ppmv	ND	U	0.0024	0.00082	J	0.0024	0.1	--	0.031	ND	U	0.0024	ND	U	0.008	ND	U	0.0024	ND	U	0.0024	ND	U	0.0025
	Styrene	ppmv	ND	U	0.00096	ND	U	0.00096	ND	U	0.012	ND	U	0.00098	ND	U	0.0033	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.015	ND	U	0.0012	ND	U	0.0038	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	0.00026	J	0.0006	0.00017	J	0.0006	ND	U	0.0078	ND	U	0.00061	ND	U	0.002	0.00054	J	0.00062	0.00054	J	0.00062	0.00095	--	0.00062
	Tetrahydrofuran	ppmv	0.0046	--	0.0014	0.0061	--	0.0014	0.069	--	0.018	0.00088	J	0.0014	0.45	--	0.0047	0.0067	--	0.0014	0.0042	--	0.0014	0.01	--	0.0014
	Toluene	ppmv	0.0098	--	0.0011	0.011	--	0.0011	1.2	--	0.014	0.019	--	0.0011	0.016	--	0.0037	0.024	--	0.0011	0.0097	--	0.0011	0.01	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.013	ND	U	0.001	ND	U	0.0035	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.0009	ND	U	0.0009	ND	U	0.012	ND	U	0.00091	ND	U	0.003	ND	U	0.00092	ND	U	0.00093	ND	U	0.00093
	Trichloroethylene (TCE)	ppmv	0.0024	--	0.00076	0.0074	--	0.00076	0.006	J	0.0099	ND	U	0.00077	ND	U	0.0026	0.00028	J	0.00078	0.00028	J	0.00078	0.01	--	0.00079
	Trichlorofluoromethane	ppmv	ND	U	0.00073	ND	U	0.00073	ND	U	0.0094	ND	U	0.00074	ND	U	0.0025	ND	U	0.00074	ND	U	0.00075	ND	U	0.00075
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.15	ND	U	0.012	ND	U	0.039	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.021	ND	U	0.0016	ND	U	0.0054	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017
	Xylenes, Total	ppmv	0.014	--	0.0019	0.015	--	0.0019	0.23	--	0.024	0.013	--	0.0019	0.0093	--	0.0064	0.013	--	0.0019	0.0055	--	0.0019	0.0053	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106130-350			KAFB-106130-450			KAFB-106131-025			KAFB-106131-055			KAFB-106131-150			KAFB-106131-245			KAFB-106131-245			KAFB-106131-350		
		Field Sample ID:	VA161175			VA161176			VA161177			VA161178			VA161179			VA161180			VA161181			VA161182		
		Sample Date:	11-Oct-2016			11-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016			05-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00062	J	0.00084	0.00087	--	0.00085	ND	U	0.00083	ND	U	0.00083	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.00082
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.608	--	0.17	0.664	--	0.17	0.328	--	0.17	0.232	--	0.17	0.314	--	0.17	0.528	--	0.16	0.529	--	0.17	0.194	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Nitrogen	%	78.9	--	0.17	79.5	--	0.17	78.9	--	0.17	79	--	0.17	79.2	--	0.17	79.3	--	0.16	79.3	--	0.17	81.2	--	0.16
	Oxygen	%	20.5	--	0.17	19.8	--	0.17	20.8	--	0.17	20.7	--	0.17	20.5	--	0.17	20.2	--	0.16	20.2	--	0.17	18.6	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	14000	--	240	180	--	170	ND	U	170	ND	U	170	ND	U	160	ND	U	170	470	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	49	--	21	99	--	30	54	--	21	22	--	21	ND	U	21	24	--	20	ND	U	21	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	120	--	84	3300	--	120	1900	--	83	470	--	83	280	--	84	340	--	81	230	--	84	180	--	82
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.0011	ND	U	0.00076	ND	U	0.00076	ND	U	0.00077	ND	U	0.00074	ND	U	0.00077	ND	U	0.00075
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00061	ND	U	0.00088	ND	U	0.0006	ND	U	0.0006	ND	U	0.00061	ND	U	0.00059	ND	U	0.00061	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.00022	J	0.00055	ND	U	0.00079	0.0023	--	0.00054	0.0029	--	0.00054	0.0062	--	0.00054	0.0062	--	0.00053	0.0061	--	0.00054	0.1	--	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.0011	ND	U	0.00076	ND	U	0.00076	ND	U	0.00077	ND	U	0.00074	ND	U	0.00077	ND	U	0.00075
	1,1-Dichloroethane	ppmv	ND	U	0.001	0.00092	J	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	0.00035	J	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00057	ND	U	0.00081	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.00055	ND	U	0.00056	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	0.0016	--	0.00085	0.0023	--	0.0012	0.0013	--	0.00084	0.0006	J	0.00084	0.00041	J	0.00085	0.00066	J	0.00082	0.00031	J	0.00085	ND	U	0.00083
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00018	J	0.00055	0.00027	J	0.00079	ND	U	0.00054	ND	U	0.00054	ND	U	0.00054	ND	U	0.00053	ND	U	0.00054	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.001	ND	U	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00068
	1,2-Dichloroethane	ppmv	ND	U	0.001	0.0007	J	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00091	ND	U	0.0013	ND	U	0.00089	ND	U	0.0009	ND	U	0.0009	ND	U	0.00088	ND	U	0.0009	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.00046	J	0.00085	0.0015	--	0.0012	0.00099	--	0.00084	0.0004	J	0.00084	0.00027	J	0.00085	0.00045	J	0.00082	ND	U	0.00085	ND	U	0.00083
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0027	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.001	0.00027	J	0.00069	0.00026	J	0.00069	0.00029	J	0.00069	0.00025	J	0.00067	ND	U	0.00069	ND	U	0.00068
	1,4-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.001	ND	U	0.00069	ND	U	0.00069	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00068
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0017	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	0.34	--	0.018	0.14	--	0.025	0.094	--	0.017	0.11	--	0.017	0.2	--	0.018	0.81	--	0.017	0.78	--	0.018	0.095	--	0.017
	Benzene	ppmv	0.0024	--	0.0013	0.3	--	0.0019	0.00058	J	0.0013	0.00049	J	0.0013	0.00042	J	0.0013	0.00084	J	0.0013	0.00046	J	0.0013	0.0046	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00081	ND	U	0.0012	ND	U	0.0008	ND	U	0.0008	ND	U	0.00081	ND	U	0.00078	ND	U	0.00081	ND	U	0.00079
	Bromodichloromethane	ppmv	ND	U	0.00063	ND	U	0.0009	ND	U	0.00062	ND	U	0.00062	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	ND	U	0.00061
	Bromoform	ppmv	ND	U	0.00041	ND	U	0.00058	ND	U	0.0004	ND	U	0.0004	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0016	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	Carbon Disulfide	ppmv	0.0058	J	0.013	0.037	--	0.019	ND	U	0.013	0.0014	J	0.013	0.0025	J	0.013	0.0044	J	0.013	0.0031	J	0.013	0.0032	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00067	ND	U	0.00096	0.00053	J	0.00066	0.00076	--	0.00066	0.0036	--	0.00066	0.01	--	0.00064	0.011	--	0.00066	0.0051	--	0.00065
	Chlorobenzene	ppmv	ND	U	0.00091	ND	U	0.0013	ND	U	0.0009	ND	U	0.0009	ND	U	0.00091	ND	U	0.00088	ND	U	0.00091	ND	U	0.00089
	Chloroethane	ppmv	ND	U	0.0016	0.0015	J	0.0023	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015
	Chloroform	ppmv	0.00029	J	0.00086	ND	U	0.0012	ND	U	0.00085	ND	U	0.00085	0.0016	--	0.00086	0.003	--	0.00083	0.0031	--	0.00086	0.0017	--	0.00083
	Chloromethane	ppmv	ND	UJ	0.002	0.0071	J	0.0029	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.0013	ND	U	0.00091	ND	U	0.00091	ND	U	0.00092	ND	U	0.00089	ND	U	0.00092	ND	U	0.0009
	Cyclohexane	ppmv	ND	U	0.0024	0.024	--	0.0035	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	0.0015	J	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00049	ND	U	0.00071	ND	U	0.00048	ND	U	0.00049	ND	U	0.00049	ND	U	0.00048	ND	U	0.00049	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.00045	J	0.00085	0.00051	J	0.0012	0.0047	--	0.00083	0.0059	--	0.00084	0.11	--	0.00084	0.18	--	0.0082	0.18	--	0.0084	2	--	0.016
	Ethanol	ppmv	ND	U	0.022	0.012	J	0.032	ND	U	0.022	ND	U	0.022	ND	U	0.022	ND	U	0.022	ND	U	0.022	0.0047	J	0.022
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0034	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	0.0014	--	0.00097	0.014	--	0.0014	0.00045	J	0.00095	ND	U	0.00096	ND	U	0.00096	0.00035	J	0.00093	ND	U	0.00096	ND	U	0.00094
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.00057	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.025	0.0019	J	0.017	0.002	J	0.017	0.002	J	0.017	0.0028	J	0.016	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.0048	--	0.0019	0.036	--	0.0028	0.0027	--	0.0019	0.0016	J	0.0019	0.0012	J	0.0019	0.0021	--	0.0019	0.00081	J	0.0019	0.0008	J	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.045	--	0.014	0.14	--	0.02	0.0039	J	0.014	0.011	J	0.014	0.026	--	0.014	0.17	--	0.014	0.18	--	0.014	0.0019	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	0.0067	--	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0017	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.0016	--	0.0008	0.00097	J	0.0012	0.00071	J	0.00079	0.00049	J	0.00079	0.00037	J	0.0008	0.00056	J	0.00077	0.00032	J	0.0008	ND	U	0.00078
	n-Heptane	ppmv	0.0007	J	0.001	0.011	--	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099
	n-Hexane	ppmv	0.00045	J	0.0012	0.021	--	0.0017	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0016	--	0.00097	0.01	--	0.0014	0.0014	--	0.00095	0.00077	J	0.00096	0.0006	J	0.00096	0.001	--	0.00093	0.00038	J	0.00096	0.0004	J	0.00094
	Propylene	ppmv	ND	U	0.0024	0.012	--	0.0035	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	0.01	--	0.0024
	Styrene	ppmv	ND	U	0.00099	ND	U	0.0014	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.00095	ND	U	0.00098	ND	U	0.00096
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0017	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.00023	J	0.00062	ND	U	0.00089	ND	U	0.00061	ND	U	0.00061	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	0.0052	--	0.0006
	Tetrahydrofuran	ppmv	0.013	--	0.0014	0.037	--	0.002	0.001	J	0.0014	0.027	--	0.0014	0.015	--	0.0014	0.26	--	0.014	0.28	--	0.014	0.0096	--	0.0014
	Toluene	ppmv	0.013	--	0.0011	0.49	--	0.011	0.0025	--	0.0011	0.0019	--	0.0011	0.0015	--	0.0011	0.0027	--	0.0011	0.0011	J	0.0011	0.0027	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0015	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.0013	ND	U	0.00091	ND	U	0.00091	ND	U	0.00092	ND	U	0.00089	ND	U	0.00092	ND	U	0.0009
	Trichloroethylene (TCE)	ppmv	0.0071	--	0.00078	0.00037	J	0.0011	ND	U	0.00077	ND	U	0.00077	ND	U	0.00078	ND	U	0.00075	ND	U	0.00078	0.00071	J	0.00076
	Trichlorofluoromethane	ppmv	ND	U	0.00075	ND	U	0.0011	0.00055	J	0.00073	0.00065	J	0.00074	0.0099	--	0.00074	0.017	--	0.00072	0.017	--	0.00074	0.28	--	0.015
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.017	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	0.0018	J	0.0024	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	0.0065	--	0.0019	0.047	--	0.0028	0.0042	--	0.0019	0.0024	--	0.0019	0.0018	J	0.0019	0.0031	--	0.0019	0.0012	J	0.0019	0.0012	J	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106131-450			KAFB-106132-025			KAFB-106132-050			KAFB-106132-175			KAFB-106132-250			KAFB-106132-350			KAFB-106132-350			KAFB-106132-450		
		Field Sample ID:	VA161183			VA161184			VA161185			VA161186			VA161187			VA161188			VA161189			VA161190		
		Sample Date:	05-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016			14-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.0053	--	0.00085	ND	U	0.00078	ND	U	0.0011	ND	U	0.0008	ND	U	0.0008	ND	U	0.00079	ND	U	0.00079	ND	U	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.392	--	0.17	2.16	--	0.16	1.71	--	0.16	0.78	--	0.16	0.384	--	0.16	0.523	--	0.16	0.523	--	0.16	0.897	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	81.5	--	0.17	79.1	--	0.16	79.3	--	0.16	79.7	--	0.16	79.3	--	0.16	78.6	--	0.16	78.6	--	0.16	78.5	--	0.16
	Oxygen	%	18.1	--	0.17	18.7	--	0.16	19	--	0.16	19.5	--	0.16	20.3	--	0.16	20.8	--	0.16	20.8	--	0.16	20.6	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	140000	--	4900	2100	--	520	520	--	160	500	--	240	ND	U	5300	390	--	320	580	--	290	500	--	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	610	2400	--	65	550	--	20	290	--	31	ND	U	660	120	--	40	160	--	36	200	--	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	11000	--	2400	23000	--	260	6100	--	79	3000	--	120	ND	U	2700	1500	--	160	2400	--	140	1900	--	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.022	ND	U	0.0024	ND	U	0.00072	ND	U	0.0011	ND	U	0.024	ND	U	0.0014	ND	U	0.0013	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.018	ND	U	0.0019	ND	U	0.00057	ND	U	0.00089	ND	U	0.019	ND	U	0.0012	ND	U	0.001	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.091	--	0.016	0.00084	J	0.0017	0.0012	--	0.00051	0.0039	--	0.0008	ND	U	0.017	ND	U	0.001	ND	U	0.00094	0.00018	J	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.022	ND	U	0.0024	ND	U	0.00072	ND	U	0.0011	ND	U	0.024	ND	U	0.0014	ND	U	0.0013	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.03	ND	U	0.0032	ND	U	0.00097	ND	U	0.0015	ND	U	0.033	ND	U	0.002	ND	U	0.0018	0.0011	--	0.00099
	1,1-Dichloroethene	ppmv	ND	U	0.031	ND	U	0.0033	ND	U	0.00099	ND	U	0.0015	ND	U	0.033	ND	U	0.002	ND	U	0.0018	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.016	ND	U	0.0018	ND	U	0.00053	ND	U	0.00082	ND	U	0.018	ND	U	0.0011	ND	U	0.00097	ND	U	0.00054
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.025	0.04	--	0.0026	0.0098	--	0.0008	0.005	--	0.0012	ND	U	0.027	0.0029	--	0.0016	0.0029	--	0.0015	0.0037	--	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.016	ND	U	0.0017	ND	U	0.00051	ND	U	0.0008	ND	U	0.017	ND	U	0.001	ND	U	0.00093	ND	U	0.00052
	1,2-Dichlorobenzene	ppmv	ND	U	0.02	ND	U	0.0022	ND	U	0.00065	ND	U	0.001	ND	U	0.022	ND	U	0.0013	ND	U	0.0012	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.03	ND	U	0.0032	ND	U	0.00097	ND	U	0.0015	ND	U	0.033	ND	U	0.002	ND	U	0.0018	0.00051	J	0.00099
	1,2-Dichloropropane	ppmv	ND	U	0.026	ND	U	0.0028	ND	U	0.00085	ND	U	0.0013	ND	U	0.029	ND	U	0.0017	ND	U	0.0016	ND	U	0.00087
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.025	0.011	--	0.0026	0.0026	--	0.0008	0.0013	--	0.0012	ND	U	0.027	0.00081	J	0.0016	0.00078	J	0.0015	0.00098	--	0.00082
	1,3-Butadiene	ppmv	ND	U	0.055	ND	U	0.0059	ND	U	0.0018	ND	U	0.0028	ND	U	0.06	ND	U	0.0036	ND	U	0.0032	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.02	ND	U	0.0022	ND	U	0.00065	ND	U	0.001	ND	U	0.022	ND	U	0.0013	ND	U	0.0012	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.02	ND	U	0.0022	ND	U	0.00065	ND	U	0.001	ND	U	0.022	ND	U	0.0013	ND	U	0.0012	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.034	ND	U	0.0036	ND	U	0.0011	ND	U	0.0017	ND	U	0.037	ND	U	0.0022	ND	U	0.002	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.03	ND	U	0.0032	ND	U	0.00096	ND	U	0.0015	ND	U	0.032	ND	U	0.0019	ND	U	0.0018	ND	U	0.00098
	Acetone	ppmv	ND	U	0.51	0.017	J	0.055	0.019	U	0.017	0.038	--	0.026	0.14	J	0.56	0.046	--	0.033	0.046	--	0.03	0.39	--	0.017
	Benzene	ppmv	5.5	--	0.038	0.0026	J	0.0041	0.0023	--	0.0012	0.0016	J	0.0019	ND	U	0.041	0.0029	--	0.0025	0.0018	J	0.0022	0.0021	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.023	ND	U	0.0025	ND	U	0.00076	ND	U	0.0012	ND	U	0.026	ND	U	0.0015	ND	U	0.0014	ND	U	0.00078
	Bromodichloromethane	ppmv	ND	U	0.018	ND	U	0.0019	ND	U	0.00059	ND	U	0.00091	ND	U	0.02	ND	U	0.0012	ND	U	0.0011	ND	U	0.0006
	Bromoform	ppmv	ND	U	0.012	ND	U	0.0013	ND	U	0.00038	ND	U	0.00059	ND	U	0.013	ND	U	0.00076	ND	U	0.00069	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.031	ND	U	0.0033	ND	U	0.001	ND	U	0.0016	ND	U	0.034	ND	U	0.002	ND	U	0.0019	ND	U	0.001
	Carbon Disulfide	ppmv	0.07	J	0.39	ND	U	0.042	0.0012	J	0.013	0.0035	J	0.02	ND	U	0.43	0.0044	J	0.025	0.0033	J	0.023	0.015	--	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.019	ND	U	0.0021	0.00046	J	0.00062	0.0025	--	0.00097	ND	U	0.021	0.00041	J	0.0013	0.00041	J	0.0011	ND	U	0.00064
	Chlorobenzene	ppmv	ND	U	0.026	ND	U	0.0028	ND	U	0.00085	ND	U	0.0013	ND	U	0.029	ND	U	0.0017	ND	U	0.0016	ND	U	0.00087
	Chloroethane	ppmv	ND	U	0.046	ND	U	0.0049	ND	U	0.0015	ND	U	0.0023	ND	U	0.05	ND	U	0.003	ND	U	0.0027	0.0016	--	0.0015
	Chloroform	ppmv	ND	U	0.025	0.002	J	0.0027	0.0037	--	0.0008	0.005	--	0.0013	ND	U	0.027	0.0018	--	0.0016	0.0018	--	0.0015	0.00046	J	0.00082
	Chloromethane	ppmv	ND	UJ	0.059	ND	UJ	0.0063	ND	UJ	0.0019	ND	UJ	0.003	ND	UJ	0.064	ND	UJ	0.0038	ND	UJ	0.0035	0.013	J	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.031	ND	U	0.0033	ND	U	0.00099	ND	U	0.0015	ND	U	0.033	ND	U	0.002	ND	U	0.0018	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.027	ND	U	0.0029	ND	U	0.00086	ND	U	0.0013	ND	U	0.029	ND	U	0.0017	ND	U	0.0016	ND	U	0.00089
	Cyclohexane	ppmv	0.57	--	0.071	ND	U	0.0076	0.00083	J	0.0023	ND	U	0.0036	ND	U	0.077	ND	U	0.0046	ND	U	0.0042	0.00071	J	0.0023
	Dibromochloromethane	ppmv	ND	U	0.014	ND	U	0.0015	ND	U	0.00046	ND	U	0.00072	ND	U	0.016	ND	U	0.00093	ND	U	0.00084	ND	U	0.00047
	Dichlorodifluoromethane	ppmv	3	--	0.025	ND	U	0.0026	0.00065	J	0.00079	0.0009	J	0.0012	ND	U	0.027	ND	U	0.0016	ND	U	0.0015	ND	U	0.00081
	Ethanol	ppmv	ND	U	0.64	0.017	J	0.069	0.0071	J	0.021	ND	U	0.032	ND	U	0.7	0.0078	J	0.042	0.0066	J	0.038	0.0097	J	0.021
	Ethyl Acetate	ppmv	ND	U	0.067	ND	U	0.0072	ND	U	0.0022	ND	U	0.0034	ND	U	0.074	ND	U	0.0044	ND	U	0.004	0.0017	J	0.0022
	Ethylbenzene	ppmv	0.041	--	0.028	0.0079	--	0.003	0.0028	--	0.0009	0.0018	--	0.0014	ND	U	0.031	0.0022	--	0.0018	0.0016	J	0.0017	0.0016	--	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.011	ND	U	0.0012	ND	U	0.00037	ND	U	0.00057	ND	U	0.012	ND	U	0.00074	ND	U	0.00067	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.49	ND	U	0.053	ND	U	0.016	ND	U	0.025	ND	U	0.54	ND	U	0.032	ND	U	0.029	0.0018	J	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.11	--	0.056	0.021	--	0.006	0.0077	--	0.0018	0.0049	--	0.0028	ND	U	0.061	0.006	--	0.0036	0.0042	--	0.0033	0.004	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.14	J	0.41	0.0026	J	0.044	0.0046	J	0.013	0.016	J	0.021	0.56	--	0.45	0.031	--	0.027	0.019	J	0.024	0.13	--	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.03	ND	U	0.0032	ND	U	0.00096	ND	U	0.0015	ND	U	0.032	ND	U	0.0019	ND	U	0.0018	0.0011	--	0.00098
	Methylene Chloride	ppmv	ND	U	0.035	ND	U	0.0037	ND	U	0.0011	ND	U	0.0018	ND	U	0.038	ND	U	0.0023	ND	U	0.0021	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.023	0.012	--	0.0025	0.0038	--	0.00075	0.0022	--	0.0012	ND	U	0.025	0.0014	J	0.0015	0.0014	--	0.0014	0.0014	--	0.00077
	n-Heptane	ppmv	0.11	--	0.03	0.0067	--	0.0032	0.0027	--	0.00096	0.0021	--	0.0015	ND	U	0.032	0.0017	J	0.0019	0.002	--	0.0018	0.002	--	0.00098
	n-Hexane	ppmv	0.2	--	0.034	0.0012	J	0.0037	0.0009	J	0.0011	0.00066	J	0.0017	0.016	J	0.038	0.0007	J	0.0022	0.00065	J	0.002	0.0011	J	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.053	--	0.028	0.0098	--	0.003	0.0032	--	0.0009	0.0019	--	0.0014	ND	U	0.031	0.0021	--	0.0018	0.0016	J	0.0017	0.0015	--	0.00093
	Propylene	ppmv	0.029	J	0.071	ND	U	0.0076	ND	U	0.0023	ND	U	0.0036	ND	U	0.077	ND	U	0.0046	ND	U	0.0042	0.0011	J	0.0023
	Styrene	ppmv	ND	U	0.029	ND	U	0.0031	ND	U	0.00092	ND	U	0.0014	ND	U	0.031	ND	U	0.0019	ND	U	0.0017	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.034	ND	U	0.0036	ND	U	0.0011	ND	U	0.0017	ND	U	0.037	ND	U	0.0022	ND	U	0.002	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.0061	J	0.018	0.0016	J	0.0019	0.0024	--	0.00058	0.008	--	0.0009	ND	U	0.02	0.00038	J	0.0012	0.00038	J	0.0011	0.00037	J	0.00059
	Tetrahydrofuran	ppmv	0.075	--	0.041	ND	U	0.0044	0.21	--	0.0013	0.011	--	0.0021	0.64	--	0.045	0.028	--	0.0027	0.019	--	0.0024	0.077	--	0.0014
	Toluene	ppmv	1.3	--	0.032	0.014	--	0.0035	0.011	--	0.001	0.0074	--	0.0016	ND	U	0.035	0.011	--	0.0021	0.0071	--	0.0019	0.011	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.031	ND	U	0.0033	ND	U	0.00099	ND	U	0.0015	ND	U	0.033	ND	U	0.002	ND	U	0.0018	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.027	ND	U	0.0029	ND	U	0.00086	ND	U	0.0013	ND	U	0.029	ND	U	0.0017	ND	U	0.0016	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	ND	U	0.023	0.16	--	0.0024	0.26	--	0.0073	1.8	--	0.023	3.8	--	0.025	0.25	--	0.0015	0.25	--	0.0013	0.15	--	0.00075
	Trichlorofluoromethane	ppmv	0.39	--	0.022	ND	U	0.0023	0.00025	J	0.0007	ND	U	0.0011	ND	U	0.024	ND	U	0.0014	ND	U	0.0013	ND	U	0.00072
	Vinyl Acetate	ppmv	ND	U	0.35	ND	U	0.037	ND	U	0.011	ND	U	0.017	ND	U	0.38	ND	U	0.022	ND	U	0.02	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.048	ND	U	0.0051	ND	U	0.0015	ND	U	0.0024	ND	U	0.052	ND	U	0.0031	ND	U	0.0028	0.0021	--	0.0016
	Xylenes, Total	ppmv	0.16	--	0.056	0.031	--	0.006	0.011	--	0.0018	0.0068	--	0.0028	ND	U	0.061	0.0081	--	0.0036	0.0058	--	0.0033	0.0056	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106133-025			KAFB-106133-050			KAFB-106133-170			KAFB-106133-250			KAFB-106133-350			KAFB-106133-450			KAFB-106133-450			KAFB-106134-025		
		Field Sample ID:	VA161191			VA161192			VA161193			VA161194			VA161195			VA161196			VA161197			VA161198		
		Sample Date:	17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0012	ND	U	0.00081	ND	U	0.00081	ND	U	0.00083	ND	U	0.00083	0.0014	--	0.00083	0.001	--	0.00083	ND	U	0.001
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.55	--	0.17	1.29	--	0.16	0.419	--	0.16	0.574	--	0.17	0.702	--	0.17	1.18	--	0.17	1.19	--	0.17	0.233	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16
	Nitrogen	%	78.9	--	0.17	78.9	--	0.16	80.1	--	0.16	79.6	--	0.17	78.6	--	0.17	78.9	--	0.17	78.9	--	0.17	78.7	--	0.16
	Oxygen	%	19.5	--	0.17	19.8	--	0.16	19.5	--	0.16	19.9	--	0.17	20.7	--	0.17	19.9	--	0.17	19.9	--	0.17	21.1	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	ND	U	160	ND	U	160	ND	U	330	320	--	240	33000	--	170	61000	--	660	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	39	--	21	ND	U	20	ND	U	20	ND	U	42	ND	U	29	32	--	21	ND	U	83	180	--	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	260	--	84	95	--	81	90	--	81	ND	U	170	ND	U	120	280	--	83	ND	U	330	1900	--	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00074	ND	U	0.00074	ND	U	0.0015	ND	U	0.0011	ND	U	0.00076	ND	U	0.003	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00061	ND	U	0.00059	ND	U	0.00059	ND	U	0.0012	ND	U	0.00086	ND	U	0.0006	ND	U	0.0024	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.00051	J	0.00055	0.00067	--	0.00053	0.0017	--	0.00053	0.0018	--	0.0011	0.00035	J	0.00077	ND	U	0.00054	ND	U	0.0022	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00077	ND	U	0.00074	ND	U	0.00074	ND	U	0.0015	ND	U	0.0011	ND	U	0.00076	ND	U	0.003	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	0.0012	--	0.001	ND	U	0.0041	ND	U	0.00099
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	ND	U	0.001	ND	U	0.0042	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00057	ND	U	0.00054	ND	U	0.00055	ND	U	0.0011	ND	U	0.00079	ND	U	0.00056	ND	U	0.0022	ND	U	0.00054
	1,2,4-Trimethylbenzene	ppmv	0.00089	--	0.00085	0.00048	J	0.00082	0.00043	J	0.00082	ND	U	0.0017	ND	U	0.0012	0.00098	--	0.00084	ND	U	0.0034	0.0029	--	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00055	ND	U	0.00052	ND	U	0.00053	ND	U	0.0011	ND	U	0.00077	0.00027	J	0.00054	ND	U	0.0022	ND	U	0.00052
	1,2-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00067	ND	U	0.00067	ND	U	0.0014	ND	U	0.00098	ND	U	0.00069	ND	U	0.0028	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	0.00069	J	0.001	ND	U	0.0041	ND	U	0.00099
	1,2-Dichloropropane	ppmv	ND	U	0.00091	ND	U	0.00087	ND	U	0.00088	ND	U	0.0018	ND	U	0.0013	ND	U	0.00089	ND	U	0.0036	ND	U	0.00087
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00085	ND	U	0.00082	ND	U	0.00082	ND	U	0.0017	ND	U	0.0012	ND	U	0.00084	ND	U	0.0034	0.00075	J	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0018	ND	U	0.0018	ND	U	0.0038	ND	U	0.0027	ND	U	0.0019	ND	U	0.0075	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00067	ND	U	0.00067	ND	U	0.0014	ND	U	0.00098	ND	U	0.00069	ND	U	0.0028	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.0007	ND	U	0.00067	ND	U	0.00067	ND	U	0.0014	ND	U	0.00098	ND	U	0.00069	ND	U	0.0028	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0023	ND	U	0.0016	ND	U	0.0011	ND	U	0.0046	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.002	ND	U	0.0014	ND	U	0.001	ND	U	0.0041	ND	U	0.00098
	Acetone	ppmv	1.2	--	0.018	0.035	--	0.017	0.02	--	0.017	0.081	--	0.035	0.045	--	0.025	0.65	--	0.017	0.72	--	0.07	0.021	--	0.017
	Benzene	ppmv	0.00044	J	0.0013	ND	U	0.0013	ND	U	0.0013	0.0025	J	0.0026	0.0048	--	0.0018	0.049	--	0.0013	0.054	--	0.0052	0.00055	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00081	ND	U	0.00078	ND	U	0.00078	ND	U	0.0016	ND	U	0.0011	ND	U	0.0008	ND	U	0.0032	ND	U	0.00078
	Bromodichloromethane	ppmv	ND	U	0.00063	ND	U	0.0006	ND	U	0.0006	ND	U	0.0012	ND	U	0.00088	ND	U	0.00062	ND	U	0.0025	ND	U	0.0006
	Bromoform	ppmv	ND	U	0.00041	ND	U	0.00039	ND	U	0.00039	ND	U	0.0008	ND	U	0.00057	ND	U	0.0004	ND	U	0.0016	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	ND	U	0.0011	ND	U	0.0043	ND	U	0.001
	Carbon Disulfide	ppmv	0.00063	J	0.013	0.0013	J	0.013	0.0041	J	0.013	0.0035	J	0.027	0.0046	J	0.019	0.047	--	0.013	0.045	J	0.053	0.00061	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00067	ND	U	0.00064	0.00049	J	0.00064	0.0011	J	0.0013	0.00045	J	0.00094	ND	U	0.00066	ND	U	0.0026	ND	U	0.00064
	Chlorobenzene	ppmv	ND	U	0.00091	ND	U	0.00087	ND	U	0.00088	ND	U	0.0018	ND	U	0.0013	ND	U	0.0009	ND	U	0.0036	ND	U	0.00087
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0031	ND	U	0.0022	0.002	--	0.0016	ND	U	0.0063	ND	U	0.0015
	Chloroform	ppmv	0.0003	J	0.00086	0.00042	J	0.00082	0.0003	J	0.00083	ND	U	0.0017	0.00092	J	0.0012	ND	U	0.00085	ND	U	0.0034	ND	U	0.00082
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.004	ND	UJ	0.0029	0.01	J	0.002	0.019	J	0.008	ND	UJ	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	ND	U	0.001	ND	U	0.0042	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.00089	ND	U	0.00089	ND	U	0.0018	ND	U	0.0013	ND	U	0.00091	ND	U	0.0037	ND	U	0.00089
	Cyclohexane	ppmv	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0048	ND	U	0.0034	0.077	--	0.0024	0.083	--	0.0096	ND	U	0.0023
	Dibromochloromethane	ppmv	ND	U	0.00049	ND	U	0.00047	ND	U	0.00048	ND	U	0.00097	ND	U	0.00069	ND	U	0.00048	ND	U	0.0019	ND	U	0.00047
	Dichlorodifluoromethane	ppmv	0.00063	J	0.00085	0.00069	J	0.00081	0.00086	--	0.00082	ND	U	0.0017	ND	U	0.0012	ND	U	0.00083	ND	U	0.0034	0.00057	J	0.00081
	Ethanol	ppmv	0.0064	J	0.022	0.0041	J	0.021	ND	U	0.022	ND	U	0.044	ND	U	0.031	0.017	J	0.022	0.017	J	0.088	ND	U	0.021
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0022	ND	U	0.0022	ND	U	0.0046	ND	U	0.0033	ND	U	0.0023	ND	U	0.0092	ND	U	0.0022
	Ethylbenzene	ppmv	0.00049	J	0.00097	0.00032	J	0.00093	0.00031	J	0.00093	ND	U	0.0019	ND	U	0.0014	0.0036	--	0.00095	0.0038	J	0.0038	0.00099	--	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.00038	ND	U	0.00038	ND	U	0.00078	ND	U	0.00055	ND	U	0.00039	ND	U	0.0016	ND	U	0.00038
	Isopropanol	ppmv	0.0016	J	0.017	ND	U	0.016	ND	U	0.016	ND	U	0.034	ND	U	0.024	0.0015	J	0.017	ND	U	0.068	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.0017	J	0.0019	0.0011	J	0.0019	0.001	J	0.0019	ND	U	0.0038	0.0011	J	0.0027	0.0063	--	0.0019	0.0066	J	0.0076	0.0031	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.042	--	0.014	0.00067	J	0.014	0.0069	J	0.014	0.019	J	0.028	0.0055	J	0.02	0.55	J	0.014	0.7	--	0.056	0.00063	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.002	ND	U	0.0014	0.0076	--	0.001	0.0088	--	0.0041	ND	U	0.00098
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0024	ND	U	0.0017	ND	U	0.0012	ND	U	0.0048	ND	U	0.0012
	Naphthalene	ppmv	0.00078	J	0.0008	0.00044	J	0.00077	0.00039	J	0.00077	ND	U	0.0016	ND	U	0.0011	0.00039	J	0.00079	ND	U	0.0032	0.0019	--	0.00077
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.002	ND	U	0.0014	0.00048	J	0.001	ND	U	0.0041	ND	U	0.00098
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0024	ND	U	0.0017	0.0019	--	0.0012	0.0021	J	0.0047	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00062	J	0.00097	0.00037	J	0.00093	0.00036	J	0.00093	ND	U	0.0019	ND	U	0.0014	0.0028	--	0.00095	0.0029	J	0.0038	0.0013	--	0.00093
	Propylene	ppmv	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0048	0.0036	--	0.0034	0.038	--	0.0024	0.041	--	0.0096	ND	U	0.0023
	Styrene	ppmv	ND	U	0.00099	ND	U	0.00095	ND	U	0.00095	ND	U	0.002	ND	U	0.0014	ND	U	0.00097	ND	U	0.0039	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0023	ND	U	0.0016	ND	U	0.0011	ND	U	0.0046	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	0.00065	--	0.00062	0.00092	--	0.00059	0.004	--	0.0006	0.0027	--	0.0012	0.00043	J	0.00087	ND	U	0.00061	ND	U	0.0024	ND	U	0.00059
	Tetrahydrofuran	ppmv	0.016	--	0.0014	0.0035	--	0.0014	0.16	--	0.0014	0.015	--	0.0028	0.0051	--	0.002	0.14	--	0.0014	0.15	--	0.0056	ND	U	0.0014
	Toluene	ppmv	0.0028	--	0.0011	0.002	--	0.0011	0.002	--	0.0011	0.0032	--	0.0022	0.0041	--	0.0016	0.062	--	0.0011	0.077	--	0.0044	0.0042	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0021	ND	U	0.0015	ND	U	0.001	ND	U	0.0042	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00093	ND	U	0.00089	ND	U	0.00089	ND	U	0.0018	ND	U	0.0013	ND	U	0.00091	ND	U	0.0037	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	0.0094	--	0.00078	0.015	--	0.00075	0.097	--	0.00075	0.3	--	0.0015	0.21	--	0.0011	0.02	--	0.00077	0.021	--	0.0031	ND	U	0.00075
	Trichlorofluoromethane	ppmv	ND	U	0.00075	0.00025	J	0.00072	0.0003	J	0.00072	ND	U	0.0015	ND	U	0.001	ND	U	0.00073	ND	U	0.003	ND	U	0.00072
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.024	ND	U	0.017	ND	U	0.012	ND	U	0.047	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0032	ND	U	0.0023	0.0022	--	0.0016	0.0024	J	0.0065	ND	U	0.0016
	Xylenes, Total	ppmv	0.0023	--	0.0019	0.0014	J	0.0019	0.0014	J	0.0019	ND	U	0.0038	0.0011	J	0.0027	0.009	--	0.0019	0.0095	--	0.0076	0.0044	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106134-050			KAFB-106134-170			KAFB-106134-250			KAFB-106134-350			KAFB-106134-450			KAFB-106135-025			KAFB-106135-050			KAFB-106135-150		
		Field Sample ID:	VA161199			VA161200			VA161201			VA161202			VA161203			VA161204			VA161205			VA161206		
		Sample Date:	17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00082	ND	U	0.00079	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.22	--	0.16	0.247	--	0.16	0.302	--	0.16	0.444	--	0.16	0.64	--	0.16	0.364	--	0.17	0.316	--	0.17	0.177	--	0.17
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17	ND	U	0.17
	Nitrogen	%	78.8	--	0.16	79.3	--	0.16	79.2	--	0.16	78.7	--	0.16	78.7	--	0.16	78.8	--	0.17	79	--	0.17	79.3	--	0.17
	Oxygen	%	21	--	0.16	20.5	--	0.16	20.5	--	0.16	20.8	--	0.16	20.6	--	0.16	20.8	--	0.17	20.7	--	0.17	20.6	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	300	--	160	ND	U	160	ND	U	220	490	--	160	ND	U	170	ND	U	170	330	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	44	--	20	30	--	20	25	--	20	ND	U	27	29	--	20	56	--	22	22	--	21	ND	U	22
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	410	--	79	250	--	80	170	--	81	150	--	110	360	--	79	340	--	87	100	--	86	120	--	87
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00072	ND	U	0.00073	ND	U	0.00074	ND	U	0.001	ND	U	0.00072	ND	U	0.00079	ND	U	0.00078	ND	U	0.00079
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00058	ND	U	0.00058	ND	U	0.00059	ND	U	0.0008	ND	U	0.00058	ND	U	0.00063	ND	U	0.00062	ND	U	0.00063
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00052	0.0002	J	0.00052	ND	U	0.00053	ND	U	0.00071	ND	U	0.00052	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056
	1,1,2-Trichloroethane	ppmv	ND	U	0.00072	ND	U	0.00073	ND	U	0.00074	ND	U	0.001	ND	U	0.00072	ND	U	0.00079	ND	U	0.00078	ND	U	0.00079
	1,1-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099	0.00066	J	0.0014	0.0011	--	0.00098	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00053	ND	U	0.00054	ND	U	0.00054	ND	U	0.00074	ND	U	0.00053	ND	U	0.00058	ND	U	0.00058	ND	U	0.00058
	1,2,4-Trimethylbenzene	ppmv	0.00083	--	0.0008	0.00065	J	0.00081	0.00052	J	0.00082	0.00045	J	0.0011	0.00063	J	0.0008	0.0011	--	0.00088	0.00049	J	0.00087	0.00043	J	0.00088
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00051	ND	U	0.00052	ND	U	0.00052	ND	U	0.00071	ND	U	0.00051	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056
	1,2-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067	ND	U	0.00091	ND	U	0.00066	ND	U	0.00072	ND	U	0.00071	ND	U	0.00072
	1,2-Dichloroethane	ppmv	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099	0.00055	J	0.0014	0.00056	J	0.00098	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	1,2-Dichloropropane	ppmv	ND	U	0.00086	ND	U	0.00087	ND	U	0.00087	ND	U	0.0012	ND	U	0.00086	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.0008	ND	U	0.00081	ND	U	0.00082	ND	U	0.0011	0.00039	J	0.0008	ND	U	0.00088	ND	U	0.00087	ND	U	0.00088
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0025	ND	U	0.0018	ND	U	0.002	ND	U	0.0019	ND	U	0.002
	1,3-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	0.00025	J	0.00067	ND	U	0.00091	ND	U	0.00066	ND	U	0.00072	ND	U	0.00071	ND	U	0.00072
	1,4-Dichlorobenzene	ppmv	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067	ND	U	0.00091	ND	U	0.00066	ND	U	0.00072	ND	U	0.00071	ND	U	0.00072
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0015	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.00096	ND	U	0.00098	ND	U	0.00098	0.00053	J	0.0013	ND	U	0.00096	ND	U	0.0011	ND	U	0.001	ND	U	0.0011
	Acetone	ppmv	0.0053	J	0.017	0.044	--	0.017	0.17	--	0.017	2.3	--	0.023	ND	U	0.017	0.055	--	0.018	0.45	--	0.018	0.65	--	0.018
	Benzene	ppmv	ND	U	0.0012	0.00047	J	0.0013	0.00045	J	0.0013	0.0039	--	0.0017	0.0069	--	0.0012	0.00053	J	0.0014	ND	U	0.0013	ND	U	0.0014
	Benzyl Chloride	ppmv	ND	U	0.00076	ND	U	0.00077	ND	U	0.00078	ND	U	0.0011	ND	U	0.00076	ND	U	0.00084	ND	U	0.00083	ND	U	0.00084
	Bromodichloromethane	ppmv	ND	U	0.00059	ND	U	0.0006	ND	U	0.0006	ND	U	0.00082	ND	U	0.00059	ND	U	0.00065	ND	U	0.00064	ND	U	0.00065
	Bromoform	ppmv	ND	U	0.00038	ND	U	0.00039	ND	U	0.00039	ND	U	0.00053	ND	U	0.00038	ND	U	0.00042	ND	U	0.00041	ND	U	0.00042
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	ND	U	0.013	0.0025	J	0.013	0.0038	J	0.013	0.17	--	0.018	0.067	--	0.013	ND	U	0.014	0.0016	J	0.014	0.0027	J	0.014
	Carbon Tetrachloride	ppmv	ND	U	0.00063	ND	U	0.00064	ND	U	0.00064	ND	U	0.00087	ND	U	0.00063	ND	U	0.00069	ND	U	0.00068	ND	U	0.00069
	Chlorobenzene	ppmv	ND	U	0.00086	ND	U	0.00087	ND	U	0.00087	ND	U	0.0012	ND	U	0.00086	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	0.0035	--	0.0021	0.0018	--	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00081	ND	U	0.00082	ND	U	0.00082	ND	U	0.0011	ND	U	0.00081	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089
	Chloromethane	ppmv	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	0.044	J	0.0026	0.0065	J	0.0019	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.0021
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00087	ND	U	0.00088	ND	U	0.00089	ND	U	0.0012	ND	U	0.00087	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0032	0.0025	--	0.0023	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025
	Dibromochloromethane	ppmv	ND	U	0.00046	ND	U	0.00047	ND	U	0.00047	ND	U	0.00064	ND	U	0.00046	ND	U	0.00051	ND	U	0.0005	ND	U	0.00051
	Dichlorodifluoromethane	ppmv	0.00056	J	0.0008	0.0006	J	0.00081	0.00048	J	0.00081	0.00053	J	0.0011	0.00048	J	0.0008	0.00054	J	0.00088	0.00052	J	0.00086	0.0005	J	0.00088
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	ND	U	0.021	ND	U	0.029	ND	U	0.021	0.005	J	0.023	ND	U	0.023	0.0082	J	0.023
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	ND	U	0.0022	0.0015	J	0.003	ND	U	0.0022	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024
	Ethylbenzene	ppmv	0.00042	J	0.00091	0.00037	J	0.00092	0.00038	J	0.00093	0.00044	J	0.0013	0.0009	J	0.00091	0.00049	J	0.001	ND	U	0.00098	ND	U	0.001
	Hexachlorobutadiene	ppmv	ND	U	0.00037	ND	U	0.00038	ND	U	0.00038	ND	U	0.00051	ND	U	0.00037	ND	U	0.00041	ND	U	0.0004	ND	U	0.00041
	Isopropanol	ppmv	ND	U	0.016	ND	U	0.016	0.0015	J	0.016	ND	U	0.022	ND	U	0.016	ND	UJ	0.018	0.0019	J	0.017	ND	UJ	0.018
	m,p-Xylene (Sum of Isomers)	ppmv	0.0014	J	0.0018	0.0012	J	0.0018	0.0012	J	0.0019	0.0013	J	0.0025	0.0035	--	0.0018	0.0017	J	0.002	0.00099	J	0.002	0.00092	J	0.002
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	0.013	0.0071	J	0.014	0.071	--	0.014	1.8	J	0.019	0.0069	J	0.013	0.0029	J	0.015	0.32	J	0.015	0.11	--	0.015
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00096	ND	U	0.00098	ND	U	0.00098	ND	U	0.0013	ND	U	0.00096	ND	U	0.0011	ND	U	0.001	ND	U	0.0011
	Methylene Chloride	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0016	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.0007	J	0.00075	0.00053	J	0.00076	0.00046	J	0.00077	0.00042	J	0.001	0.00035	J	0.00075	0.0013	--	0.00083	0.0007	J	0.00082	0.00054	J	0.00083
	n-Heptane	ppmv	ND	U	0.00096	ND	U	0.00098	ND	U	0.00098	ND	U	0.0013	ND	U	0.00096	ND	U	0.0011	ND	U	0.001	ND	U	0.0011
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0016	0.00075	J	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.00051	J	0.00091	0.00044	J	0.00092	0.00046	J	0.00093	0.00045	J	0.0013	0.0018	--	0.00091	0.00061	J	0.001	0.00038	J	0.00098	0.00031	J	0.001
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	0.0051	--	0.0032	0.0026	--	0.0023	0.00072	J	0.0025	ND	U	0.0025	ND	U	0.0025
	Styrene	ppmv	ND	U	0.00093	ND	U	0.00094	ND	U	0.00095	ND	U	0.0013	ND	U	0.00093	ND	U	0.001	ND	U	0.001	ND	U	0.001
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0015	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00058	0.0002	J	0.00059	ND	U	0.00059	ND	U	0.00081	ND	U	0.00058	ND	U	0.00064	ND	U	0.00063	ND	U	0.00064
	Tetrahydrofuran	ppmv	ND	U	0.0013	0.0035	--	0.0014	0.071	--	0.0014	1.3	J	0.0019	0.04	--	0.0013	0.00094	J	0.0015	0.24	--	0.0015	0.02	--	0.0015
	Toluene	ppmv	0.0025	--	0.001	0.0023	--	0.0011	0.0022	--	0.0011	0.014	--	0.0015	0.02	--	0.001	0.0027	--	0.0011	0.0018	--	0.0011	0.0017	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0014	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00087	ND	U	0.00088	ND	U	0.00089	ND	U	0.0012	ND	U	0.00087	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095
	Trichloroethylene (TCE)	ppmv	ND	U	0.00074	0.0071	--	0.00074	0.0062	--	0.00075	0.0042	--	0.001	0.0012	--	0.00074	0.014	--	0.00081	0.025	--	0.0008	0.055	--	0.00081
	Trichlorofluoromethane	ppmv	ND	U	0.0007	ND	U	0.00071	ND	U	0.00072	ND	U	0.00097	ND	U	0.0007	0.00027	J	0.00077	ND	U	0.00076	ND	U	0.00077
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.016	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0015	ND	U	0.0016	ND	U	0.0016	0.0056	--	0.0021	0.0025	--	0.0015	ND	U	0.0017	ND	U	0.0017	ND	U	0.0017
	Xylenes, Total	ppmv	0.0019	--	0.0018	0.0016	J	0.0018	0.0017	J	0.0019	0.0017	J	0.0025	0.0053	--	0.0018	0.0023	--	0.002	0.0014	J	0.002	0.0012	J	0.002

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106135-250			KAFB-106135-350			KAFB-106135-450			KAFB-106136-025			KAFB-106136-050			KAFB-106136-050			KAFB-106136-150			KAFB-106136-250		
		Field Sample ID:	VA161207			VA161208			VA161209			VA161210			VA161211			VA161212			VA161213			VA161214		
		Sample Date:	17-Oct-2016			17-Oct-2016			17-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			Field Duplicate			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.0012	ND	U	0.00088	ND	U	0.00088	ND	U	0.00085	ND	U	0.00084	ND	U	0.00082	ND	U	0.00085	ND	U	0.00083
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.222	--	0.17	0.293	--	0.18	0.302	--	0.18	0.314	--	0.17	0.295	--	0.17	0.288	--	0.16	ND	U	0.17	0.172	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.18	ND	U	0.18	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.18	ND	U	0.18	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.17
	Nitrogen	%	78.9	--	0.17	78.6	--	0.18	78.7	--	0.18	78.6	--	0.17	78.7	--	0.17	78.7	--	0.16	78.9	--	0.17	78.7	--	0.17
	Oxygen	%	20.9	--	0.17	21.1	--	0.18	21	--	0.18	21.1	--	0.17	21	--	0.17	21	--	0.16	21	--	0.17	21.1	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	250	--	180	410	--	180	ND	U	170	ND	U	170	ND	U	160	ND	U	170	ND	U	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	22	ND	U	22	ND	U	21	ND	U	21	ND	U	20	ND	U	21	ND	U	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	91	--	85	130	--	88	130	--	88	ND	U	85	ND	U	84	ND	U	82	ND	U	85	ND	U	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00078	ND	U	0.0008	ND	U	0.0008	ND	U	0.00078	ND	U	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00062	ND	U	0.00064	ND	U	0.00064	ND	U	0.00062	ND	U	0.00061	ND	U	0.00059	ND	U	0.00062	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00055	ND	U	0.00057	ND	U	0.00057	ND	U	0.00055	ND	U	0.00054	ND	U	0.00053	ND	U	0.00055	ND	U	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.00078	ND	U	0.0008	ND	U	0.0008	ND	U	0.00078	ND	U	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00057	ND	U	0.00059	ND	U	0.00059	ND	U	0.00057	ND	U	0.00056	ND	U	0.00055	ND	U	0.00057	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	0.00031	J	0.00086	0.00042	J	0.00089	0.00039	J	0.00089	ND	U	0.00086	0.00027	J	0.00085	ND	U	0.00083	ND	U	0.00086	ND	U	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00055	ND	U	0.00057	ND	U	0.00057	ND	U	0.00055	ND	U	0.00054	ND	U	0.00053	ND	U	0.00055	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00073	ND	U	0.00073	ND	U	0.00071	ND	U	0.00069	ND	U	0.00068	ND	U	0.0007	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.0011	ND	U	0.0011	0.00074	J	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00092	ND	U	0.00095	ND	U	0.00095	ND	U	0.00092	ND	U	0.0009	ND	U	0.00088	ND	U	0.00091	ND	U	0.00089
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00086	ND	U	0.00089	ND	U	0.00089	ND	U	0.00086	ND	U	0.00085	ND	U	0.00083	ND	U	0.00086	ND	U	0.00084
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.002	ND	U	0.002	ND	U	0.0019	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00073	ND	U	0.00073	ND	U	0.00071	ND	U	0.00069	ND	U	0.00068	ND	U	0.0007	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.00071	ND	U	0.00073	ND	U	0.00073	ND	U	0.00071	ND	U	0.00069	ND	U	0.00068	ND	U	0.0007	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	0.25	--	0.018	0.32	--	0.018	0.11	--	0.018	0.031	--	0.018	0.016	J	0.018	0.035	--	0.017	0.022	--	0.018	0.047	--	0.017
	Benzene	ppmv	ND	U	0.0013	ND	U	0.0014	0.00066	J	0.0014	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00082	ND	U	0.00085	ND	U	0.00085	ND	U	0.00082	ND	U	0.00081	ND	U	0.00079	ND	U	0.00082	ND	U	0.0008
	Bromodichloromethane	ppmv	ND	U	0.00063	ND	U	0.00065	ND	U	0.00065	0.00027	J	0.00063	0.00038	J	0.00062	0.00039	J	0.00061	ND	U	0.00063	ND	U	0.00062
	Bromoform	ppmv	ND	U	0.00041	ND	U	0.00042	ND	U	0.00042	ND	U	0.00041	ND	U	0.0004	ND	U	0.00039	ND	U	0.00041	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	0.0027	J	0.014	0.0034	J	0.014	0.046	--	0.014	ND	U	0.014	0.00061	J	0.013	0.00047	J	0.013	0.0011	J	0.014	0.0021	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00068	ND	U	0.0007	ND	U	0.0007	ND	U	0.00068	ND	U	0.00066	ND	U	0.00065	0.00034	J	0.00067	0.0006	J	0.00066
	Chlorobenzene	ppmv	ND	U	0.00092	ND	U	0.00095	ND	U	0.00095	ND	U	0.00092	ND	U	0.00091	ND	U	0.00089	ND	U	0.00092	ND	U	0.0009
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0017	0.0017	--	0.0017	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.00087	ND	U	0.0009	ND	U	0.0009	0.0028	--	0.00087	0.0038	--	0.00086	0.0039	--	0.00083	ND	U	0.00087	ND	U	0.00085
	Chloromethane	ppmv	ND	UJ	0.0021	ND	UJ	0.0021	0.0099	J	0.0021	ND	UJ	0.0021	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00094	ND	U	0.00096	ND	U	0.00096	ND	U	0.00094	ND	U	0.00092	ND	U	0.0009	ND	U	0.00093	ND	U	0.00091
	Cyclohexane	ppmv	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0024	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.0005	ND	U	0.00051	ND	U	0.00051	ND	U	0.0005	ND	U	0.00049	ND	U	0.00048	ND	U	0.0005	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	ND	U	0.00086	ND	U	0.00089	ND	U	0.00089	0.00056	J	0.00086	0.00057	J	0.00084	0.00058	J	0.00082	0.00093	--	0.00085	0.001	--	0.00083
	Ethanol	ppmv	0.012	J	0.023	0.012	J	0.023	0.0045	J	0.023	ND	U	0.023	0.0045	J	0.022	ND	U	0.022	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	ND	U	0.00098	ND	U	0.001	0.00039	J	0.001	ND	U	0.00098	ND	U	0.00096	ND	U	0.00094	ND	U	0.00097	ND	U	0.00095
	Hexachlorobutadiene	ppmv	ND	U	0.0004	ND	U	0.00041	ND	U	0.00041	ND	U	0.0004	ND	U	0.00039	ND	U	0.00038	ND	U	0.0004	ND	U	0.00039
	Isopropanol	ppmv	ND	UJ	0.017	0.0029	J	0.018	ND	UJ	0.018	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	0.00073	J	0.002	0.0009	J	0.002	0.0012	J	0.002	0.00082	J	0.002	0.00088	J	0.0019	0.00073	J	0.0019	0.00062	J	0.0019	0.0006	J	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.017	--	0.014	0.097	--	0.015	0.059	--	0.015	0.0013	J	0.014	ND	U	0.014	0.00097	J	0.014	0.0012	J	0.014	0.0031	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.0011	0.0051	--	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0013	ND	U	0.0013	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.0004	J	0.00081	0.00045	J	0.00083	0.00037	J	0.00083	ND	U	0.00081	0.00042	J	0.0008	0.00029	J	0.00078	ND	U	0.00081	ND	U	0.00079
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00098	0.0003	J	0.001	0.00036	J	0.001	0.00032	J	0.00098	0.00036	J	0.00096	ND	U	0.00094	ND	U	0.00097	ND	U	0.00095
	Propylene	ppmv	ND	U	0.0025	ND	U	0.0025	0.0018	J	0.0025	ND	U	0.0025	ND	U	0.0024	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024
	Styrene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.00096	ND	U	0.00099	ND	U	0.00097
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00063	ND	U	0.00065	ND	U	0.00065	ND	U	0.00063	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	0.00024	J	0.00061
	Tetrahydrofuran	ppmv	0.0073	--	0.0014	0.071	--	0.0015	0.027	--	0.0015	ND	U	0.0014	0.021	--	0.0014	0.019	--	0.0014	0.0088	--	0.0014	0.0097	--	0.0014
	Toluene	ppmv	0.0014	--	0.0011	0.0018	--	0.0012	0.002	--	0.0012	0.0011	J	0.0011	0.0013	--	0.0011	0.00096	J	0.0011	0.0009	J	0.0011	0.00082	J	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00094	ND	U	0.00096	ND	U	0.00096	ND	U	0.00094	ND	U	0.00092	ND	U	0.0009	ND	U	0.00093	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	0.019	--	0.00079	0.0011	--	0.00081	0.0074	--	0.00081	ND	U	0.00079	ND	U	0.00078	ND	U	0.00076	ND	U	0.00079	ND	U	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.00076	ND	U	0.00078	ND	U	0.00078	ND	U	0.00076	ND	U	0.00074	0.00025	J	0.00073	0.00056	J	0.00075	0.0008	--	0.00073
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0017	ND	U	0.0017	0.0014	J	0.0017	ND	U	0.0017	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017	ND	U	0.0016
	Xylenes, Total	ppmv	0.00073	J	0.002	0.0012	J	0.002	0.0016	J	0.002	0.0011	J	0.002	0.0012	J	0.0019	0.00073	J	0.0019	0.00062	J	0.0019	0.0006	J	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106136-350			KAFB-106136-450			KAFB-106137-025			KAFB-106137-050			KAFB-106137-150			KAFB-106137-250			KAFB-106137-250			KAFB-106137-350		
		Field Sample ID:	VA161215			VA161216			VA161217			VA161218			VA161219			VA161220			VA161221			VA161222		
		Sample Date:	18-Oct-2016			18-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			Field Duplicate			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00082	ND	U	0.00085	ND	U	0.00088	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00086	ND	U	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.188	--	0.16	0.198	--	0.17	0.351	--	0.18	0.313	--	0.17	0.253	--	0.17	0.282	--	0.17	0.28	--	0.17	0.314	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.17	ND	U	0.18	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.17	ND	U	0.18	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.16
	Nitrogen	%	78.7	--	0.16	78.6	--	0.17	78.9	--	0.18	79.1	--	0.17	79.1	--	0.17	79	--	0.17	79	--	0.17	78.6	--	0.16
	Oxygen	%	21.2	--	0.16	21.2	--	0.17	20.7	--	0.18	20.6	--	0.17	20.6	--	0.17	20.7	--	0.17	20.7	--	0.17	21	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	170	ND	U	180	ND	U	170	ND	U	170	190	--	170	ND	U	170	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	21	29	--	22	ND	U	22	ND	U	22	ND	U	22	ND	U	22	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	82	ND	U	85	170	--	88	ND	U	87	99	--	86	110	--	87	ND	U	86	ND	U	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00075	ND	U	0.00078	ND	U	0.00081	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0006	ND	U	0.00062	ND	U	0.00064	ND	U	0.00063	ND	U	0.00063	ND	U	0.00063	ND	U	0.00063	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00054	ND	U	0.00055	ND	U	0.00057	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00075	ND	U	0.00078	ND	U	0.00081	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079	ND	U	0.00079	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00055	ND	U	0.00057	ND	U	0.00059	ND	U	0.00058	ND	U	0.00058	ND	U	0.00058	ND	U	0.00058	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00083	ND	U	0.00086	0.00061	J	0.0009	0.00037	J	0.00088	0.00031	J	0.00088	0.00044	J	0.00088	ND	U	0.00088	0.00032	J	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00053	ND	U	0.00055	ND	U	0.00057	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.00056	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00089	ND	U	0.00092	ND	U	0.00095	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094	ND	U	0.00093	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00083	ND	U	0.00086	ND	U	0.0009	ND	U	0.00088	ND	U	0.00088	ND	U	0.00088	ND	U	0.00088	ND	U	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	ND	U	0.002	ND	U	0.0019	ND	U	0.002	ND	U	0.0019	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00068	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00072	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00099
	Acetone	ppmv	0.35	--	0.017	0.9	--	0.018	0.027	--	0.019	0.023	--	0.018	0.22	--	0.018	0.069	--	0.018	0.057	--	0.018	0.1	--	0.017
	Benzene	ppmv	0.00049	J	0.0013	ND	U	0.0013	ND	U	0.0014	ND	U	0.0014	ND	U	0.0013	0.0005	J	0.0014	ND	U	0.0013	0.00046	J	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00079	ND	U	0.00082	ND	U	0.00085	ND	U	0.00084	ND	U	0.00083	ND	U	0.00084	ND	U	0.00083	ND	U	0.00078
	Bromodichloromethane	ppmv	ND	U	0.00061	ND	U	0.00063	ND	U	0.00066	ND	U	0.00065	ND	U	0.00064	ND	U	0.00065	ND	U	0.00064	ND	U	0.0006
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.00041	ND	U	0.00043	ND	U	0.00042	ND	U	0.00042	ND	U	0.00042	ND	U	0.00042	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	Carbon Disulfide	ppmv	0.0024	J	0.013	0.043	--	0.014	ND	U	0.014	0.00081	J	0.014	ND	U	0.014	0.0014	J	0.014	0.001	J	0.014	0.0013	J	0.013
	Carbon Tetrachloride	ppmv	0.00036	J	0.00065	0.00021	J	0.00068	ND	U	0.0007	ND	U	0.00069	ND	U	0.00068	ND	U	0.00069	ND	U	0.00068	ND	U	0.00064
	Chlorobenzene	ppmv	ND	U	0.00089	ND	U	0.00092	ND	U	0.00096	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094	ND	U	0.00093	ND	U	0.00088
	Chloroethane	ppmv	ND	U	0.0016	0.0014	J	0.0016	ND	U	0.0017	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015
	Chloroform	ppmv	ND	U	0.00084	ND	U	0.00087	ND	U	0.0009	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089	ND	U	0.00088	ND	U	0.00083
	Chloromethane	ppmv	ND	UJ	0.002	0.011	J	0.0021	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.0009	ND	U	0.00094	ND	U	0.00097	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095	ND	U	0.00089
	Cyclohexane	ppmv	ND	U	0.0024	ND	U	0.0025	ND	U	0.0026	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.0005	ND	U	0.00052	ND	U	0.00051	ND	U	0.0005	ND	U	0.00051	ND	U	0.0005	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.00051	J	0.00083	ND	U	0.00086	0.00068	J	0.00089	0.00075	J	0.00088	0.00092	--	0.00087	0.0013	--	0.00088	0.0012	--	0.00087	0.0013	--	0.00082
	Ethanol	ppmv	0.01	J	0.022	0.007	J	0.023	ND	U	0.023	ND	U	0.023	0.012	J	0.023	0.0065	J	0.023	ND	U	0.023	0.0073	J	0.022
	Ethyl Acetate	ppmv	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0022
	Ethylbenzene	ppmv	0.0015	--	0.00094	ND	U	0.00098	ND	U	0.001	ND	U	0.001	ND	U	0.00099	0.00032	J	0.001	ND	U	0.00099	ND	U	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.0004	ND	U	0.00041	ND	U	0.00041	ND	U	0.0004	ND	U	0.00041	ND	U	0.0004	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.017	0.002	J	0.017	ND	UJ	0.018	ND	UJ	0.018	ND	UJ	0.018	ND	UJ	0.018	ND	UJ	0.018	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.0013	J	0.0019	ND	U	0.002	0.001	J	0.002	0.00085	J	0.002	0.00072	J	0.002	0.0011	J	0.002	ND	U	0.002	0.0007	J	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.066	--	0.014	0.24	--	0.014	0.0016	J	0.015	0.0015	J	0.015	0.0095	J	0.015	0.0095	J	0.015	0.0091	J	0.015	0.0045	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.00078	ND	U	0.00081	0.00071	J	0.00084	0.00047	J	0.00083	0.00037	J	0.00082	0.00051	J	0.00083	0.0003	J	0.00082	0.00033	J	0.00077
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.00099
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0005	J	0.00094	ND	U	0.00098	0.00037	J	0.001	0.00032	J	0.001	ND	U	0.00099	0.00036	J	0.001	ND	U	0.00099	ND	U	0.00093
	Propylene	ppmv	ND	U	0.0024	0.0023	J	0.0025	ND	U	0.0026	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0025	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00096	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.0006	ND	U	0.00063	ND	U	0.00065	ND	U	0.00064	ND	U	0.00063	ND	U	0.00064	ND	U	0.00063	ND	U	0.0006
	Tetrahydrofuran	ppmv	0.025	--	0.0014	0.084	--	0.0014	ND	U	0.0015	0.0048	--	0.0015	0.0008	J	0.0015	0.22	--	0.0015	0.21	--	0.0015	0.008	--	0.0014
	Toluene	ppmv	0.0024	--	0.0011	0.00086	J	0.0011	0.0018	--	0.0012	0.0017	--	0.0011	0.0014	--	0.0011	0.0023	--	0.0011	0.0011	J	0.0011	0.0015	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.0009	ND	U	0.00094	ND	U	0.00097	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095	ND	U	0.00095	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	ND	U	0.00076	ND	U	0.00079	ND	U	0.00082	ND	U	0.00081	ND	U	0.0008	ND	U	0.00081	ND	U	0.0008	ND	U	0.00075
	Trichlorofluoromethane	ppmv	0.00039	J	0.00073	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077	ND	U	0.00077	0.00029	J	0.00077	0.00029	J	0.00077	0.00064	J	0.00072
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.013	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	0.0031	--	0.0017	ND	U	0.0017	ND	U	0.0017	ND	U	0.0017	ND	U	0.0017	ND	U	0.0017	ND	U	0.0016
	Xylenes, Total	ppmv	0.0018	J	0.0019	ND	U	0.002	0.0014	J	0.002	0.0012	J	0.002	0.00072	J	0.002	0.0014	J	0.002	ND	U	0.002	0.0007	J	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106137-450			KAFB-106138-025			KAFB-106138-050			KAFB-106138-150			KAFB-106138-250			KAFB-106138-350			KAFB-106138-450			KAFB-106139-025		
		Field Sample ID:	VA161223			VA161224			VA161225			VA161226			VA161227			VA161228			VA161229			VA161230		
		Sample Date:	17-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			17-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.23	--	0.00086	ND	U	0.00081	ND	U	0.00082	ND	U	0.00081	ND	U	0.00082	ND	U	0.00081	ND	U	0.0013	ND	U	0.0011
Fixed Gases (%) Method E3C	Carbon Dioxide	%	1.1	--	0.17	4.48	--	0.16	2.99	--	0.16	0.283	--	0.16	0.304	--	0.16	0.271	--	0.16	0.242	--	0.17	0.694	--	0.17
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17
	Methane	%	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.17
	Nitrogen	%	78.4	--	0.17	78.6	--	0.16	79.5	--	0.16	79.6	--	0.16	79.4	--	0.16	79	--	0.16	79	--	0.17	78.7	--	0.17
	Oxygen	%	20.5	--	0.17	16.9	--	0.16	17.5	--	0.16	20.1	--	0.16	20.3	--	0.16	20.7	--	0.16	20.8	--	0.17	20.6	--	0.17
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	1100000	--	34000	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	170	480	--	170
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	63000	--	4300	ND	U	20	ND	U	21	ND	U	20	ND	U	21	ND	U	20	ND	U	21	240	--	21
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	1700000	--	17000	ND	U	81	ND	U	82	ND	U	81	82	--	82	ND	U	81	ND	U	85	6700	--	83
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.16	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00077	ND	U	0.00076
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.12	ND	U	0.00059	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.00059	ND	U	0.00062	ND	U	0.0006
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.11	ND	U	0.00053	ND	U	0.00054	0.0012	--	0.00053	0.0014	--	0.00054	0.00099	--	0.00053	0.00023	J	0.00055	0.0012	--	0.00054
	1,1,2-Trichloroethane	ppmv	ND	U	0.16	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00077	ND	U	0.00076
	1,1-Dichloroethane	ppmv	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	0.0012	--	0.001	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.22	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.12	ND	U	0.00055	ND	U	0.00055	ND	U	0.00054	ND	U	0.00055	ND	U	0.00055	ND	U	0.00057	ND	U	0.00056
	1,2,4-Trimethylbenzene	ppmv	1.6	--	0.17	0.00027	J	0.00082	0.00038	J	0.00083	ND	U	0.00082	ND	U	0.00083	ND	U	0.00082	ND	U	0.00086	0.0071	--	0.00084
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.1	J	0.11	ND	U	0.00053	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053	ND	U	0.00053	ND	U	0.00055	ND	U	0.00054
	1,2-Dichlorobenzene	ppmv	ND	U	0.14	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.0007	ND	U	0.00069
	1,2-Dichloroethane	ppmv	ND	U	0.21	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	0.00059	J	0.001	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.19	ND	U	0.00088	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00088	ND	U	0.00091	ND	U	0.0009
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	1.5	--	0.17	ND	U	0.00082	ND	U	0.00083	ND	U	0.00082	ND	U	0.00083	ND	U	0.00082	ND	U	0.00086	0.0042	--	0.00084
	1,3-Butadiene	ppmv	ND	U	0.39	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0019
	1,3-Dichlorobenzene	ppmv	ND	U	0.14	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.0007	ND	U	0.00069
	1,4-Dichlorobenzene	ppmv	ND	U	0.14	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.00068	ND	U	0.00067	ND	U	0.0007	ND	U	0.00069
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.24	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	2-Hexanone	ppmv	ND	U	0.21	ND	U	0.00099	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	Acetone	ppmv	ND	U	3.6	0.0086	J	0.017	0.038	--	0.017	0.0084	J	0.017	0.0084	J	0.017	0.0043	J	0.017	0.0087	J	0.018	0.037	--	0.017
	Benzene	ppmv	18	--	0.27	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	0.00048	J	0.0013	0.002	--	0.0013
	Benzyl Chloride	ppmv	ND	U	0.17	ND	U	0.00078	ND	U	0.00079	ND	U	0.00078	ND	U	0.00079	ND	U	0.00078	ND	U	0.00082	ND	U	0.0008
	Bromodichloromethane	ppmv	ND	U	0.13	ND	U	0.0006	ND	U	0.00061	0.0018	--	0.0006	0.0038	--	0.00061	0.0039	--	0.0006	0.0021	--	0.00063	ND	U	0.00062
	Bromoform	ppmv	ND	U	0.083	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.00041	ND	U	0.0004
	Bromomethane	ppmv	ND	U	0.22	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011
	Carbon Disulfide	ppmv	ND	U	2.7	0.00043	J	0.013	0.0013	J	0.013	0.0027	J	0.013	0.0018	J	0.013	0.0047	J	0.013	0.033	--	0.014	ND	U	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.14	ND	U	0.00064	ND	U	0.00065	0.00073	--	0.00064	0.00088	--	0.00065	0.00057	J	0.00064	0.00081	--	0.00067	0.0021	--	0.00066
	Chlorobenzene	ppmv	ND	U	0.19	ND	U	0.00088	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00088	ND	U	0.00092	ND	U	0.0009
	Chloroethane	ppmv	ND	U	0.32	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	0.0023	--	0.0016	ND	U	0.0016
	Chloroform	ppmv	ND	U	0.18	ND	U	0.00083	ND	U	0.00084	0.013	--	0.00082	0.024	--	0.00084	0.026	--	0.00083	0.0081	--	0.00087	0.001	--	0.00085
	Chloromethane	ppmv	ND	UJ	0.41	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.002	0.011	J	0.002	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.22	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.19	ND	U	0.00089	ND	U	0.0009	ND	U	0.00089	ND	U	0.0009	ND	U	0.00089	ND	U	0.00093	ND	U	0.00091
	Cyclohexane	ppmv	3.4	--	0.5	ND	U	0.0024	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0025	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.1	ND	U	0.00048	ND	U	0.00048	ND	U	0.00047	0.0004	J	0.00048	0.00029	J	0.00048	0.00024	J	0.0005	ND	U	0.00049
	Dichlorodifluoromethane	ppmv	ND	U	0.17	0.0006	J	0.00082	0.0007	J	0.00083	0.0018	--	0.00081	0.0017	--	0.00083	0.00094	--	0.00082	0.00045	J	0.00085	0.00057	J	0.00084
	Ethanol	ppmv	ND	U	4.5	ND	U	0.022	ND	U	0.022	ND	U	0.021	ND	U	0.022	0.0064	J	0.022	ND	U	0.022	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.47	ND	U	0.0022	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0022	ND	U	0.0023	ND	U	0.0023
	Ethylbenzene	ppmv	4.9	--	0.2	ND	U	0.00093	ND	U	0.00094	ND	U	0.00093	ND	U	0.00094	ND	U	0.00093	ND	U	0.00097	0.0035	--	0.00096
	Hexachlorobutadiene	ppmv	ND	U	0.08	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038	ND	U	0.0004	ND	U	0.00039
	Isopropanol	ppmv	ND	U	3.5	ND	U	0.016	ND	U	0.017	ND	U	0.016	ND	U	0.017	ND	U	0.016	ND	U	0.017	ND	U	0.017
	m,p-Xylene (Sum of Isomers)	ppmv	35	--	0.39	0.0012	J	0.0019	0.0015	J	0.0019	0.00094	J	0.0019	0.00099	J	0.0019	0.00087	J	0.0019	0.00091	J	0.0019	0.037	--	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	ND	U	2.9	0.0008	J	0.014	0.0038	J	0.014	0.0025	J	0.014	ND	U	0.014	0.0006	J	0.014	0.0011	J	0.014	0.0018	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.21	ND	U	0.00099	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	Methylene Chloride	ppmv	ND	U	0.25	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.075	J	0.16	ND	U	0.00077	ND	U	0.00078	ND	U	0.00077	ND	U	0.00078	ND	U	0.00077	ND	U	0.00081	0.00067	J	0.00079
	n-Heptane	ppmv	2.9	--	0.21	ND	U	0.00099	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001
	n-Hexane	ppmv	1.5	--	0.24	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	o-Xylene (1,2-Dimethylbenzene)	ppmv	18	--	0.2	0.00049	J	0.00093	0.00059	J	0.00094	0.00038	J	0.00093	0.00042	J	0.00094	0.00035	J	0.00093	0.00037	J	0.00097	0.019	--	0.00096
	Propylene	ppmv	0.26	J	0.5	ND	U	0.0024	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	0.0023	J	0.0025	ND	U	0.0024
	Styrene	ppmv	ND	U	0.2	ND	U	0.00095	ND	U	0.00096	ND	U	0.00095	ND	U	0.00096	ND	U	0.00095	ND	U	0.00099	ND	U	0.00098
	tert-Butyl Methyl Ether	ppmv	ND	U	0.24	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.13	ND	U	0.0006	ND	U	0.0006	0.00018	J	0.00059	ND	U	0.0006	ND	U	0.0006	ND	U	0.00062	ND	U	0.00061
	Tetrahydrofuran	ppmv	0.14	J	0.29	0.0018	--	0.0014	0.011	--	0.0014	0.014	--	0.0014	0.0041	--	0.0014	0.0027	--	0.0014	0.0017	--	0.0014	0.0044	--	0.0014
	Toluene	ppmv	40	--	0.23	0.0014	--	0.0011	0.0018	--	0.0011	0.0012	--	0.0011	0.0012	--	0.0011	0.0012	--	0.0011	0.0012	--	0.0011	0.014	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.22	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.19	ND	U	0.00089	ND	U	0.0009	ND	U	0.00089	ND	U	0.0009	ND	U	0.00089	ND	U	0.00093	ND	U	0.00091
	Trichloroethylene (TCE)	ppmv	ND	U	0.16	ND	U	0.00075	ND	U	0.00076	0.0011	--	0.00075	0.0017	--	0.00076	0.0012	--	0.00075	ND	U	0.00079	ND	U	0.00077
	Trichlorofluoromethane	ppmv	ND	U	0.15	0.0035	--	0.00072	0.0048	--	0.00073	0.0027	--	0.00072	0.0023	--	0.00073	0.00045	J	0.00072	ND	U	0.00075	0.00038	J	0.00074
	Vinyl Acetate	ppmv	ND	U	2.4	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.33	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	0.0029	--	0.0017	ND	U	0.0016
	Xylenes, Total	ppmv	53	--	0.39	0.0017	J	0.0019	0.002	--	0.0019	0.0013	J	0.0019	0.0014	J	0.0019	0.0012	J	0.0019	0.0013	J	0.0019	0.056	--	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106139-050			KAFB-106139-050			KAFB-106139-150			KAFB-106139-250			KAFB-106139-350			KAFB-106139-450			KAFB-106140-025			KAFB-106140-050		
		Field Sample ID:	VA161231			VA161232			VA161233			VA161234			VA161235			VA161236			VA161237			VA161238		
		Sample Date:	17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			17-Oct-2016			04-Oct-2016			04-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	0.00083	J	0.0013	0.00069	J	0.00084	ND	U	0.00085	ND	U	0.00088	ND	U	0.00087	ND	U	0.0013	ND	U	0.00081	ND	U	0.00072
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.802	--	0.17	0.803	--	0.17	0.517	--	0.17	0.47	--	0.18	0.397	--	0.17	0.418	--	0.18	0.181	--	0.16	0.163	--	0.14
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.18	ND	U	0.17	ND	U	0.18	ND	U	0.16	ND	U	0.14
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.17	ND	U	0.18	ND	U	0.17	ND	U	0.18	ND	U	0.16	ND	U	0.14
	Nitrogen	%	78.8	--	0.17	78.8	--	0.17	79.5	--	0.17	79.4	--	0.18	79.1	--	0.17	78.7	--	0.18	78.6	--	0.16	78.7	--	0.14
	Oxygen	%	20.4	--	0.17	20.4	--	0.17	19.9	--	0.17	20.1	--	0.18	20.5	--	0.17	20.8	--	0.18	21.2	--	0.16	21.1	--	0.14
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	210	--	170	200	--	170	ND	U	170	300	--	180	420	--	170	230	--	180	ND	U	160	ND	U	140
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	69	--	22	71	--	21	40	--	21	ND	U	22	23	--	22	ND	U	22	ND	U	20	ND	U	18
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	490	--	87	1200	--	84	400	--	85	310	--	88	200	--	87	280	--	88	98	--	81	ND	U	72
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00079	ND	U	0.00077	ND	U	0.00078	ND	U	0.0008	ND	U	0.0008	ND	U	0.00081	ND	U	0.00074	ND	U	0.00066
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00063	ND	U	0.00061	ND	U	0.00062	ND	U	0.00064	ND	U	0.00063	ND	U	0.00064	ND	U	0.00059	ND	U	0.00052
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	0.0013	--	0.00056	0.0014	--	0.00055	0.07	--	0.00055	0.099	--	0.00057	0.095	--	0.00057	0.0065	--	0.00057	ND	U	0.00053	ND	U	0.00047
	1,1,2-Trichloroethane	ppmv	ND	U	0.00079	ND	U	0.00077	ND	U	0.00078	ND	U	0.0008	ND	U	0.0008	ND	U	0.00081	ND	U	0.00074	ND	U	0.00066
	1,1-Dichloroethane	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00099	ND	U	0.00088
	1,1-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0009
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00058	ND	U	0.00057	ND	U	0.00057	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.00054	ND	U	0.00048
	1,2,4-Trimethylbenzene	ppmv	0.0025	--	0.00088	0.0023	--	0.00085	0.0013	--	0.00086	0.00077	J	0.00089	0.00089	--	0.00089	0.00061	J	0.0009	0.00036	J	0.00082	ND	U	0.00073
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00056	ND	U	0.00055	ND	U	0.00055	ND	U	0.00057	ND	U	0.00057	ND	U	0.00057	ND	U	0.00052	ND	U	0.00047
	1,2-Dichlorobenzene	ppmv	ND	U	0.00072	ND	U	0.0007	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00073	ND	U	0.00067	ND	U	0.00059
	1,2-Dichloroethane	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	0.00087	J	0.0011	ND	U	0.00099	ND	U	0.00088
	1,2-Dichloropropane	ppmv	ND	U	0.00094	ND	U	0.00091	ND	U	0.00092	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095	ND	U	0.00087	ND	U	0.00077
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	0.0012	--	0.00088	0.0012	--	0.00085	0.00069	J	0.00086	0.00044	J	0.00089	0.00046	J	0.00089	0.00032	J	0.0009	ND	U	0.00082	ND	U	0.00073
	1,3-Butadiene	ppmv	ND	U	0.002	ND	U	0.0019	ND	U	0.0019	ND	U	0.002	ND	U	0.002	ND	U	0.002	ND	U	0.0018	ND	U	0.0016
	1,3-Dichlorobenzene	ppmv	ND	U	0.00072	ND	U	0.0007	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00073	ND	U	0.00067	ND	U	0.00059
	1,4-Dichlorobenzene	ppmv	ND	U	0.00072	ND	U	0.0007	ND	U	0.00071	ND	U	0.00073	ND	U	0.00072	ND	U	0.00073	ND	U	0.00067	ND	U	0.00059
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.00099
	2-Hexanone	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00098	ND	U	0.00087
	Acetone	ppmv	0.093	--	0.018	0.17	--	0.018	0.35	--	0.018	0.1	--	0.018	0.11	--	0.018	0.25	--	0.019	0.02	U	0.017	0.36	--	0.015
	Benzene	ppmv	0.002	--	0.0014	0.0014	--	0.0013	0.0012	J	0.0013	0.018	--	0.0014	0.0067	--	0.0014	0.001	J	0.0014	ND	U	0.0013	ND	U	0.0011
	Benzyl Chloride	ppmv	ND	U	0.00084	ND	U	0.00081	ND	U	0.00082	ND	U	0.00085	ND	U	0.00084	ND	U	0.00085	ND	U	0.00078	ND	U	0.00069
	Bromodichloromethane	ppmv	ND	U	0.00065	ND	U	0.00063	0.00022	J	0.00063	0.00025	J	0.00065	0.0026	--	0.00065	0.0008	--	0.00066	ND	U	0.0006	ND	U	0.00053
	Bromoform	ppmv	ND	U	0.00042	ND	U	0.00041	ND	U	0.00041	ND	U	0.00042	ND	U	0.00042	ND	U	0.00043	ND	U	0.00039	ND	U	0.00035
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.00092
	Carbon Disulfide	ppmv	0.00098	J	0.014	0.00077	J	0.013	0.002	J	0.014	0.0023	J	0.014	0.0011	J	0.014	0.036	--	0.014	ND	U	0.013	0.00073	J	0.011
	Carbon Tetrachloride	ppmv	0.0026	--	0.00069	0.0027	--	0.00067	0.053	--	0.00068	0.048	--	0.0007	0.025	--	0.00069	0.058	--	0.0007	0.00084	--	0.00064	0.00085	--	0.00057
	Chlorobenzene	ppmv	ND	U	0.00094	ND	U	0.00091	ND	U	0.00092	ND	U	0.00095	ND	U	0.00094	ND	U	0.00096	ND	U	0.00087	ND	U	0.00078
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0017	ND	U	0.0016	0.0023	--	0.0017	ND	U	0.0015	ND	U	0.0014
	Chloroform	ppmv	0.00092	--	0.00089	0.0013	--	0.00086	0.072	--	0.00087	0.087	--	0.0009	0.21	--	0.0089	0.019	--	0.0009	0.00035	J	0.00082	0.00044	J	0.00073
	Chloromethane	ppmv	ND	UJ	0.0021	ND	UJ	0.002	ND	UJ	0.0021	ND	UJ	0.0021	ND	UJ	0.0021	0.015	J	0.0021	ND	UJ	0.0019	ND	UJ	0.0017
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0009
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00095	ND	U	0.00093	ND	U	0.00094	ND	U	0.00096	ND	U	0.00096	ND	U	0.00097	ND	U	0.00089	ND	U	0.00079
	Cyclohexane	ppmv	ND	U	0.0025	ND	U	0.0024	ND	U	0.0025	0.0024	J	0.0025	0.0031	--	0.0025	ND	U	0.0026	ND	U	0.0023	ND	U	0.0021
	Dibromochloromethane	ppmv	ND	U	0.00051	ND	U	0.00049	ND	U	0.0005	ND	U	0.00051	ND	U	0.00051	ND	U	0.00052	ND	U	0.00047	ND	U	0.00042
	Dichlorodifluoromethane	ppmv	0.00051	J	0.00088	0.00057	J	0.00085	0.00089	--	0.00086	0.001	--	0.00089	0.00083	J	0.00088	ND	U	0.00089	0.00055	J	0.00081	0.00054	J	0.00072
	Ethanol	ppmv	0.0066	J	0.023	0.0066	J	0.022	ND	U	0.023	ND	U	0.023	ND	U	0.023	ND	U	0.023	0.0081	J	0.021	0.0075	J	0.019
	Ethyl Acetate	ppmv	ND	U	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0024	ND	U	0.0022	ND	U	0.002
	Ethylbenzene	ppmv	0.002	--	0.001	0.0016	--	0.00097	0.0011	--	0.00098	0.00069	J	0.001	0.00077	J	0.001	0.0012	--	0.001	ND	U	0.00093	ND	U	0.00082
	Hexachlorobutadiene	ppmv	ND	U	0.00041	ND	U	0.00039	ND	U	0.0004	ND	U	0.00041	ND	U	0.00041	ND	U	0.00041	ND	U	0.00038	ND	U	0.00034
	Isopropanol	ppmv	ND	U	0.018	ND	U	0.017	ND	U	0.017	ND	UJ	0.018	ND	UJ	0.018	ND	UJ	0.018	ND	U	0.016	0.0026	J	0.015
	m,p-Xylene (Sum of Isomers)	ppmv	0.02	--	0.002	0.016	--	0.0019	0.011	--	0.002	0.0063	--	0.002	0.007	--	0.002	0.0066	--	0.002	0.0009	J	0.0019	0.00063	J	0.0016
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.017	--	0.015	0.021	--	0.014	0.15	--	0.014	0.046	--	0.015	0.014	J	0.015	0.032	--	0.015	0.00098	J	0.014	0.0039	J	0.012
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	0.0054	--	0.0011	ND	U	0.00098	0.00049	J	0.00087
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0012	ND	U	0.001
	Naphthalene	ppmv	0.00056	J	0.00083	0.00044	J	0.0008	0.00035	J	0.00081	ND	U	0.00083	0.0004	J	0.00083	ND	U	0.00084	0.00083	--	0.00077	0.00051	J	0.00068
	n-Heptane	ppmv	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.00098	ND	U	0.00087
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	0.00044	J	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.001
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0094	--	0.001	0.0075	--	0.00097	0.0048	--	0.00098	0.0029	--	0.001	0.0032	--	0.001	0.0024	--	0.001	0.00029	J	0.00093	ND	U	0.00082
	Propylene	ppmv	ND	U	0.0025	ND	U	0.0024	ND	U	0.0025	0.0042	--	0.0025	0.0028	--	0.0025	0.0028	--	0.0026	ND	U	0.0023	ND	U	0.0021
	Styrene	ppmv	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.00095	ND	U	0.00084
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.00099
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00064	ND	U	0.00062	0.00032	J	0.00063	0.00041	J	0.00065	0.00053	J	0.00064	0.00044	J	0.00065	ND	U	0.00059	ND	U	0.00053
	Tetrahydrofuran	ppmv	0.06	--	0.0015	0.061	--	0.0014	0.13	--	0.0014	0.016	--	0.0015	0.0051	--	0.0015	0.074	--	0.0015	0.0073	--	0.0014	0.025	--	0.0012
	Toluene	ppmv	0.012	--	0.0011	0.0088	--	0.0011	0.0065	--	0.0011	0.015	--	0.0012	0.011	--	0.0012	0.0034	--	0.0012	0.0012	U	0.0011	0.0031	--	0.00095
	trans-1,2-Dichloroethene	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0009
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00095	ND	U	0.00093	ND	U	0.00094	ND	U	0.00096	ND	U	0.00096	ND	U	0.00097	ND	U	0.00089	ND	U	0.00079
	Trichloroethylene (TCE)	ppmv	ND	U	0.00081	ND	U	0.00078	ND	U	0.00079	0.00033	J	0.00081	0.0012	--	0.00081	0.0013	--	0.00082	ND	U	0.00075	ND	U	0.00067
	Trichlorofluoromethane	ppmv	0.00038	J	0.00077	0.00041	J	0.00075	0.01	--	0.00076	0.017	--	0.00078	0.017	--	0.00077	0.00055	J	0.00078	ND	U	0.00072	0.00022	J	0.00064
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.012	ND	U	0.013	ND	U	0.011	ND	U	0.01
	Vinyl chloride	ppmv	ND	U	0.0017	ND	U	0.0016	ND	U	0.0017	ND	U	0.0017	ND	U	0.0017	0.0017	--	0.0017	ND	U	0.0016	ND	U	0.0014
	Xylenes, Total	ppmv	0.03	--	0.002	0.024	--	0.0019	0.016	--	0.002	0.0092	--	0.002	0.01	--	0.002	0.009	--	0.002	0.0012	J	0.0019	0.00063	J	0.0016

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106140-150			KAFB-106140-250			KAFB-106140-350			KAFB-106140-450			KAFB-106141-025			KAFB-106141-050			KAFB-106141-170			KAFB-106141-250		
		Field Sample ID:	VA161239			VA161240			VA161241			VA161242			VA161243			VA161244			VA161245			VA161246		
		Sample Date:	04-Oct-2016			04-Oct-2016			04-Oct-2016			04-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016		
		Sample Type:	REG			REG			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00083	ND	U	0.00083	ND	U	0.00081	ND	U	0.00083	ND	U	0.0008	ND	U	0.00081	ND	U	0.00084	ND	U	0.0008
Fixed Gases (%) Method E3C	Carbon Dioxide	%	ND	U	0.17	0.196	--	0.17	0.228	--	0.16	0.238	--	0.17	0.763	--	0.16	0.187	--	0.16	0.187	--	0.17	0.19	--	0.16
	Carbon Monoxide	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Methane	%	ND	U	0.17	ND	U	0.17	ND	U	0.16	ND	U	0.17	ND	U	0.16	ND	U	0.16	ND	U	0.17	ND	U	0.16
	Nitrogen	%	79.2	--	0.17	79.3	--	0.17	78.7	--	0.16	79.2	--	0.17	79.5	--	0.16	79.6	--	0.16	79.3	--	0.17	79.3	--	0.16
	Oxygen	%	20.6	--	0.17	20.5	--	0.17	21.1	--	0.16	20.5	--	0.17	19.8	--	0.16	20.2	--	0.16	20.5	--	0.17	20.5	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	170	190	--	170	1000	--	160	1700	--	170	ND	U	160	ND	U	160	ND	U	170	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	21	ND	U	21	ND	U	20	ND	U	21	22	--	20	ND	U	20	ND	U	21	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	83	ND	U	83	ND	U	81	ND	U	83	ND	U	80	ND	U	81	ND	U	84	ND	U	80
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.00076	ND	U	0.00074	ND	U	0.00076	ND	U	0.00073	ND	U	0.00074	ND	U	0.00077	ND	U	0.00073
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.0006	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.00058	ND	U	0.00059	ND	U	0.00061	ND	U	0.00058
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00053	ND	U	0.00054	ND	U	0.00052	ND	U	0.00053	ND	U	0.00054	0.00025	J	0.00052
	1,1,2-Trichloroethane	ppmv	ND	U	0.00076	ND	U	0.00076	ND	U	0.00074	ND	U	0.00076	ND	U	0.00073	ND	U	0.00074	ND	U	0.00077	ND	U	0.00073
	1,1-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.00099
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00056	ND	U	0.00056	ND	U	0.00054	ND	U	0.00056	ND	U	0.00054	ND	U	0.00055	ND	U	0.00056	ND	U	0.00054
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00084	ND	U	0.00084	ND	U	0.00082	ND	U	0.00084	0.00055	J	0.00081	0.00037	J	0.00082	0.00029	J	0.00085	0.00026	J	0.00081
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00052	ND	U	0.00054	ND	U	0.00052	ND	U	0.00053	ND	U	0.00054	ND	U	0.00052
	1,2-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.00099	ND	U	0.001	ND	U	0.001	ND	U	0.00099
	1,2-Dichloropropane	ppmv	ND	U	0.00089	ND	U	0.0009	ND	U	0.00087	ND	U	0.0009	ND	U	0.00087	ND	U	0.00088	ND	U	0.0009	ND	U	0.00087
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00084	ND	U	0.00084	ND	U	0.00082	ND	U	0.00084	ND	U	0.00081	ND	U	0.00082	ND	U	0.00085	ND	U	0.00081
	1,3-Butadiene	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018	ND	U	0.0018	ND	U	0.0019	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00069	ND	U	0.00069	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067	ND	U	0.00067	ND	U	0.00069	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	ND	U	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.00098
	Acetone	ppmv	0.012	U	0.017	0.22	--	0.017	0.38	--	0.017	0.2	--	0.017	0.023	--	0.017	0.072	--	0.017	0.029	--	0.018	0.79	--	0.017
	Benzene	ppmv	0.0005	J	0.0013	ND	U	0.0013	0.0021	--	0.0013	0.014	--	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.0008	ND	U	0.0008	ND	U	0.00078	ND	U	0.0008	ND	U	0.00077	ND	U	0.00078	ND	U	0.00081	ND	U	0.00077
	Bromodichloromethane	ppmv	ND	U	0.00062	ND	U	0.00062	ND	U	0.0006	ND	U	0.00062	ND	U	0.0006	0.0002	J	0.0006	0.00055	J	0.00062	0.0006	--	0.0006
	Bromoform	ppmv	ND	U	0.0004	ND	U	0.0004	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039	ND	U	0.00039	ND	U	0.0004	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.001	ND	U	0.0011	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	Carbon Disulfide	ppmv	ND	U	0.013	0.0023	J	0.013	0.0025	J	0.013	0.013	J	0.013	ND	U	0.013	ND	U	0.013	0.0011	J	0.013	0.0027	J	0.013
	Carbon Tetrachloride	ppmv	0.0017	--	0.00066	0.00048	J	0.00066	ND	U	0.00064	0.00058	J	0.00066	ND	U	0.00064	ND	U	0.00064	0.0002	J	0.00066	0.00024	J	0.00064
	Chlorobenzene	ppmv	ND	U	0.0009	ND	U	0.0009	ND	U	0.00087	ND	U	0.0009	ND	U	0.00087	ND	U	0.00088	ND	U	0.00091	ND	U	0.00087
	Chloroethane	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015	ND	U	0.0015	ND	U	0.0016	ND	U	0.0015
	Chloroform	ppmv	0.00047	J	0.00085	ND	U	0.00085	ND	U	0.00082	0.0003	J	0.00085	0.0011	--	0.00082	0.0025	--	0.00083	0.0062	--	0.00086	0.0068	--	0.00082
	Chloromethane	ppmv	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0019	0.0024	J	0.002	ND	UJ	0.0019	ND	UJ	0.002	ND	UJ	0.002	ND	UJ	0.0019
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.00091	ND	U	0.00089	ND	U	0.00091	ND	U	0.00088	ND	U	0.00089	ND	U	0.00092	ND	U	0.00088
	Cyclohexane	ppmv	ND	U	0.0024	ND	U	0.0024	0.0038	--	0.0023	0.0052	--	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0023
	Dibromochloromethane	ppmv	ND	U	0.00048	ND	U	0.00049	ND	U	0.00047	ND	U	0.00049	ND	U	0.00047	ND	U	0.00048	ND	U	0.00049	ND	U	0.00047
	Dichlorodifluoromethane	ppmv	0.00049	J	0.00083	0.003	--	0.00084	0.0022	--	0.00081	0.00087	--	0.00084	0.0022	--	0.00081	0.0039	--	0.00082	0.0048	--	0.00084	0.0028	--	0.00081
	Ethanol	ppmv	0.006	J	0.022	0.0069	J	0.022	0.005	J	0.021	0.0036	J	0.022	ND	U	0.021	ND	U	0.022	0.0044	J	0.022	0.0045	J	0.021
	Ethyl Acetate	ppmv	ND	U	0.0023	0.0015	J	0.0023	ND	U	0.0022	0.0012	J	0.0023	ND	U	0.0022	ND	U	0.0022	0.0015	J	0.0023	ND	U	0.0022
	Ethylbenzene	ppmv	ND	U	0.00095	ND	U	0.00096	ND	U	0.00093	0.00075	J	0.00096	0.00037	J	0.00092	ND	U	0.00093	ND	U	0.00096	ND	U	0.00092
	Hexachlorobutadiene	ppmv	ND	U	0.00039	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038
	Isopropanol	ppmv	ND	U	0.017	ND	U	0.017	0.0034	J	0.016	ND	U	0.017	ND	U	0.016	ND	U	0.016	ND	U	0.017	0.0051	J	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	0.0015	J	0.0019	0.0021	--	0.0018	0.0016	J	0.0019	0.0013	J	0.0019	0.0011	J	0.0018
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.00059	J	0.014	0.084	--	0.014	0.043	--	0.014	0.08	--	0.014	0.00077	J	0.014	0.0023	J	0.014	0.021	--	0.014	0.18	--	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	0.0014	--	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.00098
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	0.00038	J	0.00079	ND	U	0.00079	ND	U	0.00077	ND	U	0.00079	0.00055	J	0.00076	0.00043	J	0.00077	0.00029	J	0.0008	ND	U	0.00076
	n-Heptane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.00098	0.00038	J	0.001	ND	U	0.00098	ND	U	0.00099	ND	U	0.001	ND	U	0.00098
	n-Hexane	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	0.0017	--	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	ND	U	0.00095	ND	U	0.00096	ND	U	0.00093	0.00041	J	0.00096	0.00086	J	0.00092	0.00068	J	0.00093	0.00054	J	0.00096	0.00047	J	0.00092
	Propylene	ppmv	ND	U	0.0024	ND	U	0.0024	0.0011	J	0.0023	0.00073	J	0.0024	ND	U	0.0023	ND	U	0.0024	ND	U	0.0024	ND	U	0.0023
	Styrene	ppmv	ND	U	0.00097	ND	U	0.00098	ND	U	0.00095	ND	U	0.00098	ND	U	0.00094	ND	U	0.00095	ND	U	0.00098	ND	U	0.00094
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00061	ND	U	0.00061	ND	U	0.00059	ND	U	0.00061	ND	U	0.00059	0.00022	J	0.0006	0.00034	J	0.00062	0.00019	J	0.00059
	Tetrahydrofuran	ppmv	ND	U	0.0014	0.089	--	0.0014	0.092	--	0.0014	0.02	--	0.0014	0.012	--	0.0014	0.00063	J	0.0014	0.03	--	0.0014	0.065	--	0.0014
	Toluene	ppmv	0.0014	U	0.0011	ND	U	0.0011	0.0011	U	0.0011	0.02	--	0.0011	0.002	--	0.0011	0.0018	--	0.0011	0.0016	--	0.0011	0.0013	--	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.0011	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00091	ND	U	0.00091	ND	U	0.00089	ND	U	0.00091	ND	U	0.00088	ND	U	0.00089	ND	U	0.00092	ND	U	0.00088
	Trichloroethylene (TCE)	ppmv	ND	U	0.00077	ND	U	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.00074	ND	U	0.00075	ND	U	0.00078	ND	U	0.00074
	Trichlorofluoromethane	ppmv	ND	U	0.00073	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	0.0018	--	0.00071	0.0037	--	0.00072	0.0059	--	0.00074	0.0086	--	0.00071
	Vinyl Acetate	ppmv	ND	U	0.012	ND	U	0.012	ND	U	0.011	ND	U	0.012	ND	U	0.011	0.0015	J	0.012	ND	U	0.012	ND	U	0.011
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	ND	U	0.0019	ND	U	0.0019	ND	U	0.0019	0.0019	--	0.0019	0.003	--	0.0018	0.0023	--	0.0019	0.0019	J	0.0019	0.0016	J	0.0018

Table 2-3
Soil Vapor Analytical Results, Q4 2016

		Well Location ID:	KAFB-106141-350			KAFB-106141-350			KAFB-106141-450			KAFB-106142-030			KAFB-106142-050			KAFB-106142-170			KAFB-106142-250			KAFB-106142-350		
		Field Sample ID:	VA161247			VA161248			VA161249			VA161250			VA161251			VA161252			VA161253			VA161254		
		Sample Date:	18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016			18-Oct-2016		
		Sample Type:	REG			Field Duplicate			REG			REG			REG			REG			REG			REG		
Parameter/ Analytical Method	**Analyte**	**Unit**	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ	Result	VAL QUAL	LOQ
EDB (ppmv) Method CARB422Mod	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00081	ND	U	0.00081	ND	U	0.00079	ND	U	0.00081	ND	U	0.0008	ND	U	0.00081	ND	U	0.0008	ND	U	0.00081
Fixed Gases (%) Method E3C	Carbon Dioxide	%	0.179	--	0.16	0.179	--	0.16	0.234	--	0.16	0.338	--	0.16	0.313	--	0.16	0.165	--	0.16	ND	U	0.16	0.187	--	0.16
	Carbon Monoxide	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Methane	%	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16	ND	U	0.16
	Nitrogen	%	79.1	--	0.16	79.1	--	0.16	79	--	0.16	78.6	--	0.16	78.9	--	0.16	79	--	0.16	79	--	0.16	78.9	--	0.16
	Oxygen	%	20.7	--	0.16	20.7	--	0.16	20.8	--	0.16	21	--	0.16	20.8	--	0.16	20.8	--	0.16	20.9	--	0.16	20.9	--	0.16
TPH ($\mu g/m^3$) Method MA-APH 1.0	Volatile Petroleum Hydrocarbons C5-C8 Aliphatic	$\mu g/m^3$	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160	ND	U	160
	Volatile Petroleum Hydrocarbons C9-C10 Aromatic	$\mu g/m^3$	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20
	Volatile Petroleum Hydrocarbons C9-C12 Aliphatic	$\mu g/m^3$	ND	U	81	ND	U	81	ND	U	79	87	--	81	ND	U	80	ND	U	81	ND	U	80	ND	U	81
VOCs (ppmv) Method TO-15	1,1,1-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074
	1,1,2,2-Tetrachloroethane	ppmv	ND	U	0.00059	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059
	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppmv	ND	U	0.00053	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053	ND	U	0.00052	ND	U	0.00053
	1,1,2-Trichloroethane	ppmv	ND	U	0.00074	ND	U	0.00074	ND	U	0.00072	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074	ND	U	0.00073	ND	U	0.00074
	1,1-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	0.0012	--	0.00098	ND	U	0.00099	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099	ND	U	0.001
	1,1-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	1,2,4-Trichlorobenzene	ppmv	ND	U	0.00054	ND	U	0.00054	ND	U	0.00053	ND	U	0.00054	ND	U	0.00054	ND	U	0.00054	ND	U	0.00054	ND	U	0.00055
	1,2,4-Trimethylbenzene	ppmv	ND	U	0.00082	0.00035	J	0.00082	ND	U	0.0008	ND	U	0.00082	ND	U	0.00081	ND	U	0.00082	ND	U	0.00081	ND	U	0.00082
	1,2-Dibromoethane (Ethylene Dibromide)	ppmv	ND	U	0.00052	ND	U	0.00052	ND	U	0.00051	ND	U	0.00052	ND	U	0.00052	ND	U	0.00052	ND	U	0.00052	ND	U	0.00053
	1,2-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,2-Dichloroethane	ppmv	ND	U	0.00099	ND	U	0.00099	0.00054	J	0.00098	ND	U	0.00099	ND	U	0.00098	ND	U	0.00099	ND	U	0.00099	ND	U	0.001
	1,2-Dichloropropane	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00087	ND	U	0.00088
	1,3,5-Trimethylbenzene (Mesitylene)	ppmv	ND	U	0.00082	ND	U	0.00082	ND	U	0.0008	ND	U	0.00082	ND	U	0.00081	ND	U	0.00082	ND	U	0.00081	ND	U	0.00082
	1,3-Butadiene	ppmv	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018	ND	U	0.0018
	1,3-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,4-Dichlorobenzene	ppmv	ND	U	0.00067	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00066	ND	U	0.00067	ND	U	0.00067	ND	U	0.00067
	1,4-Dioxane (p-Dioxane)	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	2-Hexanone	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00096	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.00099
	Acetone	ppmv	0.25	--	0.017	0.29	--	0.017	1.2	--	0.017	ND	U	0.017	ND	U	0.017	0.061	--	0.017	0.071	--	0.017	0.061	--	0.017
	Benzene	ppmv	ND	U	0.0013	0.00042	J	0.0013	0.00063	J	0.0012	ND	U	0.0013	ND	U	0.0012	ND	U	0.0013	ND	U	0.0013	ND	U	0.0013
	Benzyl Chloride	ppmv	ND	U	0.00078	ND	U	0.00078	ND	U	0.00076	ND	U	0.00078	ND	U	0.00077	ND	U	0.00078	ND	U	0.00077	ND	U	0.00078
	Bromodichloromethane	ppmv	0.00036	J	0.0006	0.00036	J	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.00059	ND	U	0.0006	ND	U	0.0006	ND	U	0.0006
	Bromoform	ppmv	ND	U	0.00039	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00038	ND	U	0.00039	ND	U	0.00039	ND	U	0.00039
	Bromomethane	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	Carbon Disulfide	ppmv	0.0033	J	0.013	0.0046	J	0.013	0.038	--	0.013	ND	U	0.013	0.00082	J	0.013	0.0026	J	0.013	0.0027	J	0.013	0.0029	J	0.013
	Carbon Tetrachloride	ppmv	ND	U	0.00064	ND	U	0.00064	ND	U	0.00063	ND	U	0.00064	ND	U	0.00063	0.00029	J	0.00064	0.0003	J	0.00064	ND	U	0.00064
	Chlorobenzene	ppmv	ND	U	0.00087	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00086	ND	U	0.00087	ND	U	0.00087	ND	U	0.00088
	Chloroethane	ppmv	ND	U	0.0015	ND	U	0.0015	0.002	--	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
	Chloroform	ppmv	0.0022	--	0.00082	0.0022	--	0.00082	0.00046	J	0.00081	ND	U	0.00082	0.00032	J	0.00081	ND	U	0.00082	0.00045	J	0.00082	0.0019	--	0.00083
	Chloromethane	ppmv	ND	UJ	0.0019	ND	UJ	0.0019	0.011	J	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.0019	ND	UJ	0.002
	cis-1,2-Dichloroethylene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	cis-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089
	Cyclohexane	ppmv	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024
	Dibromochloromethane	ppmv	ND	U	0.00047	ND	U	0.00047	ND	U	0.00046	ND	U	0.00047	ND	U	0.00047	ND	U	0.00047	ND	U	0.00047	ND	U	0.00048
	Dichlorodifluoromethane	ppmv	0.0013	--	0.00081	0.0013	--	0.00081	0.00073	J	0.0008	0.00053	J	0.00081	0.00059	J	0.0008	0.0059	--	0.00081	0.005	--	0.00081	0.001	--	0.00082
	Ethanol	ppmv	ND	U	0.021	ND	U	0.021	0.0064	J	0.021	ND	U	0.021	ND	U	0.021	0.0058	J	0.021	0.016	J	0.021	ND	U	0.022
	Ethyl Acetate	ppmv	ND	U	0.0022	ND	U	0.0022	0.00097	J	0.0022	ND	U	0.0022	ND	U	0.0022	0.001	J	0.0022	0.011	--	0.0022	ND	U	0.0022
	Ethylbenzene	ppmv	ND	U	0.00093	ND	U	0.00093	ND	U	0.00091	ND	U	0.00093	ND	U	0.00092	ND	U	0.00093	ND	U	0.00092	ND	U	0.00093
	Hexachlorobutadiene	ppmv	ND	U	0.00038	ND	U	0.00038	ND	U	0.00037	ND	U	0.00038	ND	U	0.00037	ND	U	0.00038	ND	U	0.00038	ND	U	0.00038
	Isopropanol	ppmv	0.0022	J	0.016	0.0026	J	0.016	0.0076	J	0.016	ND	U	0.016	ND	U	0.016	ND	U	0.016	0.0022	J	0.016	ND	U	0.016
	m,p-Xylene (Sum of Isomers)	ppmv	0.00094	J	0.0019	0.0017	J	0.0019	0.00088	J	0.0018	0.0008	J	0.0019	ND	U	0.0018	ND	U	0.0019	0.00076	J	0.0018	ND	U	0.0019
	Methyl Ethyl Ketone (2-Butanone)	ppmv	0.076	--	0.014	0.12	--	0.014	0.4	J	0.013	ND	U	0.014	0.0013	J	0.013	0.012	J	0.014	0.013	J	0.014	0.0053	J	0.014
	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ppmv	ND	U	0.00098	ND	U	0.00098	0.0058	--	0.00096	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.00099
	Methylene Chloride	ppmv	ND	U	0.0012	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0011	ND	U	0.0012	ND	U	0.0012	ND	U	0.0012
	Naphthalene	ppmv	ND	U	0.00077	0.00032	J	0.00077	ND	U	0.00075	ND	U	0.00077	ND	U	0.00076	ND	U	0.00077	ND	U	0.00076	ND	U	0.00077
	n-Heptane	ppmv	ND	U	0.00098	ND	U	0.00098	ND	U	0.00096	ND	U	0.00098	ND	U	0.00097	ND	U	0.00098	ND	U	0.00098	ND	U	0.00099
	n-Hexane	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	o-Xylene (1,2-Dimethylbenzene)	ppmv	0.0004	J	0.00093	0.00068	J	0.00093	0.00036	J	0.00091	0.0003	J	0.00093	ND	U	0.00092	ND	U	0.00093	0.00029	J	0.00092	ND	U	0.00093
	Propylene	ppmv	ND	U	0.0023	ND	U	0.0023	0.0022	J	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0023	ND	U	0.0024
	Styrene	ppmv	ND	U	0.00095	ND	U	0.00095	ND	U	0.00093	ND	U	0.00095	ND	U	0.00093	ND	U	0.00095	ND	U	0.00094	ND	U	0.00095
	tert-Butyl Methyl Ether	ppmv	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011	ND	U	0.0011
	Tetrachloroethylene (PCE)	ppmv	ND	U	0.00059	ND	U	0.00059	ND	U	0.00058	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.00059	ND	U	0.0006
	Tetrahydrofuran	ppmv	0.02	--	0.0014	0.028	--	0.0014	0.23	--	0.0013	ND	U	0.0014	0.011	--	0.0013	0.024	--	0.0014	0.017	--	0.0014	0.013	--	0.0014
	Toluene	ppmv	0.0012	--	0.0011	0.002	--	0.0011	0.0012	--	0.001	0.00097	J	0.0011	0.0007	J	0.0011	0.0014	--	0.0011	0.0077	--	0.0011	0.00069	J	0.0011
	trans-1,2-Dichloroethene	ppmv	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001	ND	U	0.001
	trans-1,3-Dichloropropene	ppmv	ND	U	0.00089	ND	U	0.00089	ND	U	0.00087	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089	ND	U	0.00088	ND	U	0.00089
	Trichloroethylene (TCE)	ppmv	ND	U	0.00075	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075	ND	U	0.00074	ND	U	0.00075
	Trichlorofluoromethane	ppmv	0.0022	--	0.00072	0.0022	--	0.00072	0.0012	--	0.0007	0.00024	J	0.00072	0.00027	J	0.00071	0.0037	--	0.00072	0.0041	--	0.00071	0.0019	--	0.00072
	Vinyl Acetate	ppmv	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.011	ND	U	0.012
	Vinyl chloride	ppmv	ND	U	0.0016	ND	U	0.0016	0.0025	--	0.0015	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016
	Xylenes, Total	ppmv	0.0013	J	0.0019	0.0023	--	0.0019	0.0012	J	0.0018	0.0011	J	0.0019	ND	U	0.0018	ND	U	0.0019	0.0011	J	0.0018	ND	U	0.0019

Table 2-3
Soil Vapor Analytical Results, Q4 2016

-- = Parameter or analyte not required for analysis in Q1
AFB = Air force base
EDB = 1,2-Dibromoethane
$\mu g/m^3$ = Microgram per cubic meter
ID = Identification
LOQ = Limit of quantitation
ND = Not detected
ppmv = Part per million by volume
REG = Normal field sample
SWMU = Solid Waste Management Unit
TPH = Total Petroleum Hydrocarbons
VAL QUAL = Validation qualifier
VOC = Volatile organic compound
Shading = Reported concentrations are above the detection limit
Qualifiers:
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 low bias.
J+ = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated with a potential high bias.
U = Qualifier denotes the analyte was analyzed but not detected above the method detection limit.
UJ = Qualifier denotes the analyte was not detected above the reported sample limit of quantitation, which is an approximate value.

Table 3-1
Groundwater Monitoring Program

Well ID	1st Quarter (January-March)	2nd Quarter – Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter – Annual (October-December)
GROUNDWATER MONITORING WELLS[a]				
KAFB-3411	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106001	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106002	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106007	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106015	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106016	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106019	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106020	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106021	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106022	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106023	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106024	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106025	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106026[b] (no longer sampled due to safety concerns)	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106027	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106035	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106036	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106037	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106039	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106040	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106042	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106043	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106044	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106045	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106046	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106047	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106048	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106052	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106053	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106054	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106055	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106057	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106058	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106070	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106071	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106072	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP

Table 3-1
Groundwater Monitoring Program

Well ID	1st Quarter (January-March)	2nd Quarter – Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter – Annual (October-December)
GROUNDWATER MONITORING WELLS[a] (continued)				
KAFB-106073	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106074	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106075	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106082	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106083	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106084	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106085	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106086	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106087	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106088	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106089	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106090	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106091	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106092	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106093	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106094	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106095	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106096	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106103	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106104	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106105	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106106	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106107	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106212	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106213	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106214	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106215	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106219	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106220	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106221	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106225	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106226	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106227	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106230[b] (no longer sampled due to safety concerns)	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
NEWLY INSTALLED WELLS				
KAFB-106235-463[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP

Table 3-1
Groundwater Monitoring Program

Well ID	1st Quarter (January-March)	2nd Quarter – Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter – Annual (October-December)
NEWLY INSTALLED WELLS (continued)				
KAFB-106235-492[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106235-521[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106236-461[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106236-490[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106236-519[c]	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, metals anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
VA PROXIMAL WELLS				
KAFB-106003	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106004	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106013	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106097	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106098	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106099	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106100	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106101	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106102	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
DOWNGRADIENT PROXIMAL WELLS				
KAFB-106029	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106030	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106031	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106032	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106033	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106034	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106049	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106050	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106051	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106201	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106202	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106203	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106204	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106205	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106206	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106207	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106208	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106209	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106216	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106217	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106218	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106222	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP

Table 3-1
Groundwater Monitoring Program

Well ID	1st Quarter (January-March)	2nd Quarter – Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter – Annual (October-December)
DOWNGRADIENT PROXIMAL WELLS (continued)				
KAFB-106223	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106224	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106231	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106232	EDB, FP	EDB, metals, anions, alkalinity, FP	EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP
SOURCE AREA WELLS				
KAFB-106005	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106006	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106008	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106009	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106010	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106011	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
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
KAFB-106014	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106028	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106059	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106060	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106061	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106062	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106063	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106064	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106065	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106066	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106067	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106068	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106069	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106076	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106077	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106078	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106079	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106080	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106081	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
SIGNAL WELLS				
KAFB-106017	None	BTEX, naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106018	None	BTEX, naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP
KAFB-106038	None	BTEX, naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP

Table 3-1
Groundwater Monitoring Program

[a] The groundwater monitoring network consists of all 140 wells (138 wells sampled) that are currently sampled under Solid Waste Management Unit ST106/SS-111 and also includes all source area wells, proximal wells, newly installed wells, and signal wells. 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 (FP) include pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity.

[b]Well no longer sampled due to safety concerns.

[c]Newly installed groundwater monitoring wells that were not sampled in 2016; these wells will be sampled for a minimum of four consecutive quarters for full suite parameters, as indicated.

BTEX = benzene, toluene, ethylbenzene, and total xylenes
EDB = ethylene dibromide
FP = field parameters
ID = identification
VOC = volatile organic compound

Table 3-2
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q4 2016

Well 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	10/4/2016	5344.59	-	475.10	-	-	4869.49
KAFB-106002	4857	10/3/2016	5342.25	-	472.09	-	-	4870.16
KAFB-106003	4857	10/3/2016	5340.22	-	470.20	-	-	4870.02
KAFB-106004	4857	10/4/2016	5345.78	-	475.87	-	-	4869.91
KAFB-106005	4857	10/5/2016	5347.03	-	477.15	-	-	4869.88
KAFB-106006	4857	10/5/2016	5351.60	-	481.93	-	-	4869.67
KAFB-106007	4857	10/3/2016	5349.57	-	479.89	-	-	4869.68
KAFB-106008	4857	10/5/2016	5351.90	482.12	482.15	0.03	4869.78	4869.77
KAFB-106009	4857	10/5/2016	5348.49	-	478.88	-	-	4869.61
KAFB-106010	4857	10/5/2016	5343.29	-	473.63	-	-	4869.66
KAFB-106011	4857	10/5/2016	5353.19	-	483.61	-	-	4869.58
KAFB-106012R	4857	10/5/2016	5344.50	-	475.56	-	-	4868.94
KAFB-106013	4857	10/4/2016	5350.74	-	481.03	-	-	4869.71
KAFB-106014	4857	10/5/2016	5350.29	-	480.59	-	-	4869.70
KAFB-106015 [b]	4857/4838	10/3/2016	5342.58	-	473.30	-	-	4869.28
KAFB-106016	4857	10/3/2016	5342.51	-	472.44	-	-	4870.07
KAFB-106017 [b]	4857/4838	10/4/2016	5342.52	-	473.18	-	-	4869.34
KAFB-106018 [b]	4857/4838	10/4/2016	5336.28	-	466.78	-	-	4869.50
KAFB-106019 [b]	4857/4838	10/4/2016	5354.63	-	485.32	-	-	4869.31
KAFB-106020	4857	10/4/2016	5341.08	-	471.28	-	-	4869.80
KAFB-106021 [b]	4857/4838	10/5/2016	5314.40	-	444.82	-	-	4869.58
KAFB-106022 [b]	4857/4838	10/5/2016	5318.01	-	448.99	-	-	4869.02
KAFB-106023	4857	10/5/2016	5328.81	-	459.55	-	-	4869.26
KAFB-106024	4857	10/3/2016	5343.60	-	473.63	-	-	4869.97
KAFB-106025 [b]	4857/4838	10/5/2016	5317.30	-	447.84	-	-	4869.46
KAFB-106027	4857	10/3/2016	5348.54	-	478.65	-	-	4869.89
KAFB-106028	4857	10/5/2016	5349.06	-	479.28	-	-	4869.78
KAFB-106029	4857	10/4/2016	5310.96	-	441.16	-	-	4869.80
KAFB-106030	4838	10/4/2016	5311.02	-	441.22	-	-	4869.80
KAFB-106031	4814	10/4/2016	5311.06	-	441.30	-	-	4869.76
KAFB-106032	4857	10/3/2016	5317.59	-	447.66	-	-	4869.93
KAFB-106033	4838	10/3/2016	5317.84	-	447.79	-	-	4870.05
KAFB-106034	4814	10/3/2016	5318.64	-	448.66	-	-	4869.98
KAFB-106035	4857	10/3/2016	5321.64	-	452.82	-	-	4868.82
KAFB-106036	4838	10/3/2016	5321.80	-	453.29	-	-	4868.51
KAFB-106037	4838	10/3/2016	5322.16	-	453.97	-	-	4868.19
KAFB-106038	4857	10/5/2016	5351.65	-	482.33	-	-	4869.32
KAFB-106039	4838	10/5/2016	5351.34	-	482.14	-	-	4869.20
KAFB-106040	4814	10/5/2016	5350.29	-	481.40	-	-	4868.89
KAFB-106042	4857	10/3/2016	5324.14	-	454.47	-	-	4869.67

Table 3-2
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q4 2016

Well 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-106043	4814	10/3/2016	5324.38	-	454.71	-	-	4869.67
KAFB-106044	4838	10/3/2016	5348.84	-	478.79	-	-	4870.05
KAFB-106045	4814	10/3/2016	5348.48	-	478.49	-	-	4869.99
KAFB-106046	4857	10/4/2016	5352.92	-	483.07	-	-	4869.85
KAFB-106047	4838	10/3/2016	5352.82	-	483.18	-	-	4869.64
KAFB-106048	4814	10/3/2016	5352.59	-	482.89	-	-	4869.70
KAFB-106049	4857	10/4/2016	5316.15	-	446.51	-	-	4869.64
KAFB-106050	4838	10/4/2016	5315.58	-	445.73	-	-	4869.85
KAFB-106051	4814	10/4/2016	5315.88	-	446.01	-	-	4869.87
KAFB-106052	4857	10/4/2016	5318.94	-	449.31	-	-	4869.63
KAFB-106053	4838	10/4/2016	5318.71	-	449.25	-	-	4869.46
KAFB-106054	4814	10/4/2016	5318.43	-	448.85	-	-	4869.58
KAFB-106055	4857	10/4/2016	5325.16	-	455.72	-	-	4869.44
KAFB-106057	4838	10/4/2016	5325.53	-	456.09	-	-	4869.44
KAFB-106058	4814	10/4/2016	5326.10	-	456.63	-	-	4869.47
KAFB-106059	4857	10/5/2016	5347.70	-	478.25	-	-	4869.45
KAFB-106060	4838	10/5/2016	5345.35	-	475.84	-	-	4869.51
KAFB-106061	4814	10/5/2016	5345.46	-	475.82	-	-	4869.64
KAFB-106062	4814	10/5/2016	5351.21	-	481.64	-	-	4869.57
KAFB-106063	4838	10/5/2016	5351.88	-	482.33	-	-	4869.55
KAFB-106064	4857	10/5/2016	5351.08	-	481.52	-	-	4869.56
KAFB-106065	4838	10/5/2016	5348.82	-	479.42	-	-	4869.40
KAFB-106066	4814	10/5/2016	5349.13	-	479.66	-	-	4869.47
KAFB-106067	4857	10/4/2016	5347.53	-	478.17	-	-	4869.36
KAFB-106068	4814	10/4/2016	5347.23	-	478.03	-	-	4869.20
KAFB-106069	4838	10/4/2016	5347.28	-	477.75	-	-	4869.53
KAFB-106070	4857	10/5/2016	5318.49	-	449.44	-	-	4869.05
KAFB-106071	4814	10/5/2016	5320.85	-	451.70	-	-	4869.15
KAFB-106072	4838	10/5/2016	5319.31	-	449.87	-	-	4869.44
KAFB-106073	4838	10/5/2016	5339.93	-	470.24	-	-	4869.69
KAFB-106074	4814	10/5/2016	5340.64	-	471.02	-	-	4869.62
KAFB-106075	4857	10/5/2016	5340.54	-	470.94	-	-	4869.60
KAFB-106076 [c]	4857	10/6/2016	5344.96	-	475.60	-	-	4869.36
KAFB-106077	4838	10/5/2016	5344.73	-	476.65	-	-	4868.08
KAFB-106078	4814	10/5/2016	5344.62	-	475.80	-	-	4868.82
KAFB-106079 [c]	4857	10/5/2016	5349.66	-	480.52	-	-	4869.14
KAFB-106080	4838	10/5/2016	5348.45	-	478.81	-	-	4869.64
KAFB-106081	4814	10/5/2016	5349.47	-	480.05	-	-	4869.42
KAFB-106082	4857	10/4/2016	5335.16	-	465.76	-	-	4869.40
KAFB-106083	4838	10/4/2016	5334.95	-	465.47	-	-	4869.48
KAFB-106084	4814	10/4/2016	5337.72	-	468.33	-	-	4869.39
KAFB-106085	4857	10/5/2016	5317.34	-	447.80	-	-	4869.54

Table 3-2
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q4 2016

Well 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-106086	4838	10/5/2016	5317.76	-	448.21	-	-	4869.55
KAFB-106087	4814	10/5/2016	5317.00	-	447.41	-	-	4869.59
KAFB-106088	4857	10/5/2016	5324.27	-	455.16	-	-	4869.11
KAFB-106089	4838	10/5/2016	5323.46	-	454.88	-	-	4868.58
KAFB-106090	4814	10/5/2016	5322.94	-	454.74	-	-	4868.20
KAFB-106091	4857	10/6/2016	5314.35	-	445.07	-	-	4869.28
KAFB-106092	4838	10/4/2016	5314.51	-	445.00	-	-	4869.51
KAFB-106093	4814	10/4/2016	5314.49	-	445.07	-	-	4869.42
KAFB-106094	4857	10/4/2016	5345.18	-	475.48	-	-	4869.70
KAFB-106095	4838	10/4/2016	5344.76	-	475.01	-	-	4869.75
KAFB-106096	4814	10/4/2016	5345.40	-	475.64	-	-	4869.76
KAFB-106097	4838	10/4/2016	5347.87	-	477.95	-	-	4869.92
KAFB-106098	4814	10/4/2016	5347.93	-	478.04	-	-	4869.89
KAFB-106099	4838	10/4/2016	5342.90	-	472.86	-	-	4870.04
KAFB-106100	4814	10/4/2016	5342.84	-	472.88	-	-	4869.96
KAFB-106101	4838	10/3/2016	5340.33	-	470.24	-	-	4870.09
KAFB-106102	4814	10/3/2016	5340.28	-	470.36	-	-	4869.92
KAFB-106103	4838	10/5/2016	5328.59	-	459.83	-	-	4868.76
KAFB-106104	4814	10/5/2016	5328.14	-	459.25	-	-	4868.89
KAFB-106105	4838	10/3/2016	5322.01	-	452.59	-	-	4869.42
KAFB-106106	4857	10/3/2016	5321.91 [d]	-	452.47	-	-	4869.44
KAFB-106107	4814	10/3/2016	5322.21	-	452.66	-	-	4869.55
KAFB-106201	4857	10/3/2016	5357.34	-	488.24	-	-	4869.10
KAFB-106202	4838	10/3/2016	5358.13	-	488.96	-	-	4869.17
KAFB-106203	4814	10/3/2016	5357.89	-	488.94	-	-	4868.95
KAFB-106204	4857	10/3/2016	5333.08	-	463.15	-	-	4869.93
KAFB-106205	4838	10/3/2016	5333.29	-	463.56	-	-	4869.73
KAFB-106206	4814	10/3/2016	5333.55	-	463.76	-	-	4869.79
KAFB-106207	4857	10/3/2016	5344.45	-	474.64	-	-	4869.81
KAFB-106208	4838	10/3/2016	5344.48	-	474.36	-	-	4870.12
KAFB-106209	4814	10/3/2016	5343.68	-	473.92	-	-	4869.76
KAFB-106212	4814	10/3/2016	5321.79	-	453.46	-	-	4868.33
KAFB-106213	4857	10/4/2016	5325.14	-	456.45	-	-	4868.69
KAFB-106214	4838	10/4/2016	5325.36	-	456.34	-	-	4869.02
KAFB-106215	4814	10/4/2016	5325.58	-	456.56	-	-	4869.02
KAFB-106216	4857	10/4/2016	5333.73	-	464.91	-	-	4868.82
KAFB-106217	4838	10/4/2016	5333.74	-	464.54	-	-	4869.20
KAFB-106218	4814	10/4/2016	5333.41	-	464.71	-	-	4868.70
KAFB-106219	4857	10/6/2016	5340.21	-	471.34	-	-	4868.87

Table 3-2
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q4 2016

Well 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-106220	4838	10/6/2016	5340.04	-	471.24	-	-	4868.80
KAFB-106221	4814	10/6/2016	5339.85	-	471.08	-	-	4868.77
KAFB-106222	4857	10/3/2016	5333.36	-	464.03	-	-	4869.33
KAFB-106223	4838	10/3/2016	5333.83	-	464.52	-	-	4869.31
KAFB-106224	4814	10/3/2016	5334.90	-	465.65	-	-	4869.25
KAFB-106225	4857	10/3/2016	5326.03	-	457.52	-	-	4868.51
KAFB-106226	4838	10/3/2016	5327.29	-	457.96	-	-	4869.33
KAFB-106227	4814	10/3/2016	5327.98	-	458.69	-	-	4869.29
KAFB-106231	4857	10/3/2016	5327.53	-	458.08	-	-	4869.45
KAFB-106232	4814	10/3/2016	5327.18	-	457.42	-	-	4869.76
KAFB-106235-463	4857	12/15/2016	5315.00	-	446.74	-	-	4868.26
KAFB-106235-492	4838	12/15/2016	5314.95	-	446.66	-	-	4868.29
KAFB-106235-521	4814	12/15/2016	5314.93	-	446.70	-	-	4868.23
KAFB-106236-461	4857	12/15/2016	5315.25	-	446.56	-	-	4868.69
KAFB-106236-490	4838	12/15/2016	5315.25	-	446.51	-	-	4868.74
KAFB-106236-519	4814	12/15/2016	5315.27	-	446.57	-	-	4868.70
KAFB-3411	4857	10/3/2016	5343.66	-	473.81	-	-	4869.85

Table 3-2
Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness, Q4 2016

[a] Groundwater elevation corrected for LNAPL thickness was calculated by the following formula: MRP Elevation - Depth to LNAPL + (LNAPL Thickness * Specific Gravity of Weathered JP4/JP8 Fuel) where the specific gravity of JP4/JP8 fuel is 0.803.

[b] Well used in analyses for both REI 4857 and 4838.

[c] LNAPL was detected using an interface probe during the groundwater gauging event, but manual bailing confirmed the absence of LNAPL.

[d] MRP elevation from April 2016 resurvey; all other MRP from ERPIMS - 3/7/2016 -- High Mesa Consulting Group, Survey Diagram, 2016.

AFB = Air Force Base

AMSL = above mean sea level

ERPIMS = Environmental Restoration Program Information Management System

ft = foot/feet

ID = identification

JP = jet propellant

LNAPL = light non-aqueous phase liquid

MRP = measurement reference point

Q = quarter

REI = Reference Elevation Interval

SWMU = solid waste management unit

Table 3-3
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness between Q4 2016 and Q3 2016

Well Location ID	Q3 2016					Q4 2016					Change Compared to the Previous Quarter Gauged	
	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Difference between Q4 2016 and Q3 2016 LNAPL Thickness (ft)	Difference between Q4 2016 and Q3 2016 Groundwater Elevations (ft)
Reference Elevation Interval 4857 (ft AMSL) Groundwater Monitoring Wells												
KAFB-106001[a]	7/11/2016	475.71	-	4868.88	Yes	10/4/2016	475.10	-	4869.49	Yes	-	0.61
KAFB-106002	7/11/2016	472.82	-	4869.43	Yes	10/3/2016	472.09	-	4870.16	Yes	-	0.73
KAFB-106003	7/11/2016	470.96	-	4869.26	Yes	10/3/2016	470.20	-	4870.02	Yes	-	0.76
KAFB-106004	7/12/2016	476.54	-	4869.24	Yes	10/4/2016	475.87	-	4869.91	Yes	-	0.67
KAFB-106005	7/13/2016	477.82	0.01	4869.22	Yes	10/5/2016	477.15	-	4869.88	Yes	-0.01	0.66
KAFB-106006	7/13/2016	482.56	-	4869.04	Yes	10/5/2016	481.93	-	4869.67	Yes	-	0.63
KAFB-106007	7/11/2016	480.49	-	4869.08	Yes	10/3/2016	479.89	-	4869.68	Yes	-	0.60
KAFB-106008	7/13/2016	482.84	0.04	4869.09	Yes	10/5/2016	482.15	0.03	4869.77	Yes	-0.01	0.68
KAFB-106009	7/11/2016	479.35	-	4869.14	Yes	10/5/2016	478.88	-	4869.61	Yes	-	0.47
KAFB-106010	7/13/2016	474.39	-	4868.90	Yes	10/5/2016	473.63	-	4869.66	Yes	-	0.76
KAFB-106011	7/11/2016	484.10	-	4869.09	Yes	10/5/2016	483.61	-	4869.58	Yes	-	0.49
KAFB-106012R	7/11/2016	476.00	-	4868.50	No	10/5/2016	475.56	-	4868.94	No	-	0.44
KAFB-106013	7/12/2016	481.66	-	4869.08	Yes	10/4/2016	481.03	-	4869.71	Yes	-	0.63
KAFB-106014	7/13/2016	481.41	-	4868.88	Yes	10/5/2016	480.59	-	4869.70	Yes	-	0.82
KAFB-106015[a]	7/11/2016	473.92	-	4868.66	Yes	10/3/2016	473.30	-	4869.28	Yes	-	0.62
KAFB-106016	7/11/2016	473.08	-	4869.43	Yes	10/3/2016	472.44	-	4870.07	Yes	-	0.64
KAFB-106017[a]	7/11/2016	473.58	-	4868.94	Yes	10/4/2016	473.18	-	4869.34	Yes	-	0.40
KAFB-106018[a]	7/11/2016	467.21	-	4869.07	Yes	10/4/2016	466.78	-	4869.50	Yes	-	0.43
KAFB-106019[a]	7/11/2016	485.72	-	4868.91	Yes	10/4/2016	485.32	-	4869.31	Yes	-	0.40
KAFB-106020	7/12/2016	471.85	-	4869.23	Yes	10/4/2016	471.28	-	4869.80	Yes	-	0.57
KAFB-106021[a]	7/13/2016	445.35	-	4869.05	Yes	10/5/2016	444.82	-	4869.58	Yes	-	0.53
KAFB-106022[a]	7/13/2016	449.52	-	4868.49	Yes	10/5/2016	448.99	-	4869.02	Yes	-	0.53
KAFB-106023	7/14/2016	460.11	-	4868.70	Yes	10/5/2016	459.55	-	4869.26	Yes	-	0.56
KAFB-106024	7/11/2016	474.38	-	4869.22	Yes	10/3/2016	473.63	-	4869.97	Yes	-	0.75
KAFB-106025[a]	7/12/2016	448.31	-	4868.99	Yes	10/5/2016	447.84	-	4869.46	Yes	-	0.47
KAFB-106027	7/11/2016	479.26	-	4869.28	Yes	10/3/2016	478.65	-	4869.89	Yes	-	0.61
KAFB-106028	7/13/2016	480.05	-	4869.01	Yes	10/5/2016	479.28	-	4869.78	Yes	-	0.77
KAFB-106029	7/12/2016	441.62	-	4869.34	Yes	10/4/2016	441.16	-	4869.80	Yes	-	0.46
KAFB-106032	7/11/2016	448.31	-	4869.28	Yes	10/3/2016	447.66	-	4869.93	Yes	-	0.65
KAFB-106035	7/13/2016	453.51	-	4868.13	No	10/3/2016	452.82	-	4868.82	No	-	0.69
KAFB-106038	7/14/2016	482.72	-	4868.93	No	10/5/2016	482.33	-	4869.32	No	-	0.39
KAFB-106042	7/11/2016	455.18	-	4868.96	Yes	10/3/2016	454.47	-	4869.67	Yes	-	0.71
KAFB-106046	7/11/2016	483.80	-	4869.12	Yes	10/4/2016	483.07	-	4869.85	Yes	-	0.73
KAFB-106049	7/12/2016	447.12	-	4869.03	Yes	10/4/2016	446.51	-	4869.64	Yes	-	0.61
KAFB-106052	7/12/2016	449.97	-	4868.97	No	10/4/2016	449.31	-	4869.63	Yes	-	0.66
KAFB-106055	7/12/2016	456.31	-	4868.85	Yes	10/4/2016	455.72	-	4869.44	Yes	-	0.59
KAFB-106059	7/13/2016	478.90	-	4868.80	Yes	10/5/2016	478.25	-	4869.45	Yes	-	0.65
KAFB-106064	7/13/2016	482.20	-	4868.88	Yes	10/5/2016	481.52	-	4869.56	Yes	-	0.68
KAFB-106067	7/12/2016	478.76	-	4868.77	Yes	10/4/2016	478.17	-	4869.36	Yes	-	0.59
KAFB-106070	7/13/2016	449.94	-	4868.55	Yes	10/5/2016	449.44	-	4869.05	Yes	-	0.50
KAFB-106075	7/12/2016	471.43	-	4869.11	Yes	10/5/2016	470.94	-	4869.60	Yes	-	0.49
KAFB-106076	7/13/2016	476.17	0.01	4868.80	Yes	10/6/2016	475.60	-	4869.36	Yes	-0.01	0.56
KAFB-106079	7/13/2016	480.91	-	4868.75	Yes	10/5/2016	480.52	-	4869.14	Yes	-	0.39
KAFB-106082	7/11/2016	466.21	-	4868.95	Yes	10/4/2016	465.76	-	4869.40	Yes	-	0.45
KAFB-106085	7/13/2016	448.25	-	4869.09	No	10/5/2016	447.80	-	4869.54	No	-	0.45
KAFB-106088	7/13/2016	455.68	-	4868.59	Yes	10/5/2016	455.16	-	4869.11	Yes	-	0.52
KAFB-106091	7/12/2016	445.36	-	4868.99	Yes	10/6/2016	445.07	-	4869.28	Yes	-	0.29

Table 3-3
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness between Q4 2016 and Q3 2016

Well Location ID	Q3 2016					Q4 2016					Change Compared to the Previous Quarter Gauged	
	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Difference between Q4 2016 and Q3 2016 LNAPL Thickness (ft)	Difference between Q4 2016 and Q3 2016 Groundwater Elevations (ft)
KAFB-106094	7/12/2016	476.17	-	4869.01	Yes	10/4/2016	475.48	-	4869.70	Yes	-	0.69
KAFB-106106	7/11/2016	453.09	-	4868.82	Yes	10/3/2016	452.47	-	4869.44	Yes	-	0.62
KAFB-106201	7/11/2016	489.64	-	4867.70	Yes	10/3/2016	488.24	-	4869.10	Yes	-	1.40
KAFB-106204	7/12/2016	464.04	-	4869.04	No	10/3/2016	463.15	-	4869.93	No	-	0.89
KAFB-106207	7/11/2016	475.21	-	4869.24	No	10/3/2016	474.64	-	4869.81	No	-	0.57
KAFB-106213	7/13/2016	456.74	-	4868.40	No	10/4/2016	456.45	-	4868.69	No	-	0.29
KAFB-106216	7/13/2016	465.19	-	4868.54	No	10/4/2016	464.91	-	4868.82	No	-	0.28
KAFB-106219	7/11/2016	471.74	-	4868.47	No	10/6/2016	471.34	-	4868.87	No	-	0.40
KAFB-106222	7/11/2016	464.64	-	4868.72	No	10/3/2016	464.03	-	4869.33	No	-	0.61
KAFB-106225	7/12/2016	458.10	-	4867.93	No	10/3/2016	457.52	-	4868.51	No	-	0.58
KAFB-106231	7/11/2016	458.58	-	4868.95	No	10/3/2016	458.08	-	4869.45	No	-	0.50
KAFB-106235-463[b]	NA	NA	NA	NA	NA	12/15/2016	446.74	-	4868.26	No	-	NA
KAFB-106236-461[b]	NA	NA	NA	NA	NA	12/15/2016	446.56	-	4868.69	No	-	NA
KAFB-3411	7/11/2016	474.50	-	4869.16	No	10/3/2016	473.81	-	4869.85	Yes	-	0.69
Reference Elevation Interval 4838 (ft AMSL) Groundwater Monitoring Wells												
KAFB-106030	7/12/2016	441.78	-	4869.24	Yes	10/4/2016	441.22	-	4869.80	Yes	-	0.56
KAFB-106033	7/11/2016	448.48	-	4869.36	Yes	10/3/2016	447.79	-	4870.05	Yes	-	0.69
KAFB-106036	7/13/2016	454.04	-	4867.76	Yes	10/3/2016	453.29	-	4868.51	Yes	-	0.75
KAFB-106037	7/13/2016	454.72	-	4867.44	Yes	10/3/2016	453.97	-	4868.19	Yes	-	0.75
KAFB-106039	7/14/2016	482.71	-	4868.63	Yes	10/5/2016	482.14	-	4869.20	Yes	-	0.57
KAFB-106044	7/11/2016	479.43	-	4869.41	Yes	10/3/2016	478.79	-	4870.05	Yes	-	0.64
KAFB-106047	7/11/2016	483.87	-	4868.95	Yes	10/3/2016	483.18	-	4869.64	Yes	-	0.69
KAFB-106050	7/12/2016	446.36	-	4869.22	Yes	10/4/2016	445.73	-	4869.85	Yes	-	0.63
KAFB-106053	7/12/2016	449.90	-	4868.81	Yes	10/4/2016	449.25	-	4869.46	Yes	-	0.65
KAFB-106057	7/12/2016	456.70	-	4868.83	Yes	10/4/2016	456.09	-	4869.44	Yes	-	0.61
KAFB-106060	7/12/2016	476.35	-	4869.00	Yes	10/5/2016	475.84	-	4869.51	Yes	-	0.51
KAFB-106063	7/12/2016	482.91	-	4868.97	Yes	10/5/2016	482.33	-	4869.55	Yes	-	0.58
KAFB-106065	7/13/2016	480.00	-	4868.82	Yes	10/5/2016	479.42	-	4869.40	Yes	-	0.58
KAFB-106069	7/12/2016	478.36	-	4868.92	Yes	10/4/2016	477.75	-	4869.53	Yes	-	0.61
KAFB-106072	7/13/2016	450.43	-	4868.88	Yes	10/5/2016	449.87	-	4869.44	Yes	-	0.56
KAFB-106073	7/12/2016	470.70	-	4869.23	Yes	10/5/2016	470.24	-	4869.69	Yes	-	0.46
KAFB-106077	7/13/2016	477.28	-	4867.45	Yes	10/5/2016	476.65	-	4868.08	Yes	-	0.63
KAFB-106080	7/12/2016	479.36	-	4869.09	Yes	10/5/2016	478.81	-	4869.64	Yes	-	0.55
KAFB-106083	7/11/2016	465.93	-	4869.02	Yes	10/4/2016	465.47	-	4869.48	Yes	-	0.46
KAFB-106086	7/13/2016	448.72	-	4869.04	Yes	10/5/2016	448.21	-	4869.55	Yes	-	0.51
KAFB-106089	7/13/2016	455.39	-	4868.07	Yes	10/5/2016	454.88	-	4868.58	Yes	-	0.51
KAFB-106092	7/12/2016	445.52	-	4868.99	Yes	10/4/2016	445.00	-	4869.51	Yes	-	0.52
KAFB-106095	7/12/2016	475.63	-	4869.13	Yes	10/4/2016	475.01	-	4869.75	Yes	-	0.62
KAFB-106097	7/12/2016	478.56	-	4869.31	Yes	10/4/2016	477.95	-	4869.92	Yes	-	0.61
KAFB-106099	7/12/2016	473.53	-	4869.37	Yes	10/4/2016	472.86	-	4870.04	Yes	-	0.67
KAFB-106101	7/11/2016	471.00	-	4869.33	Yes	10/3/2016	470.24	-	4870.09	Yes	-	0.76
KAFB-106103	7/14/2016	460.35	-	4868.24	Yes	10/5/2016	459.83	-	4868.76	Yes	-	0.52
KAFB-106105	7/11/2016	453.18	-	4868.83	Yes	10/3/2016	452.59	-	4869.42	Yes	-	0.59
KAFB-106202	7/11/2016	490.61	-	4867.52	Yes	10/3/2016	488.96	-	4869.17	Yes	-	1.65
KAFB-106205	7/12/2016	465.43	-	4867.86	Yes	10/3/2016	463.56	-	4869.73	Yes	-	1.87
KAFB-106208	7/11/2016	474.87	-	4869.61	Yes	10/3/2016	474.36	-	4870.12	Yes	-	0.51
KAFB-106214	7/13/2016	457.08	-	4868.28	Yes	10/4/2016	456.34	-	4869.02	Yes	-	0.74
KAFB-106217	7/13/2016	465.30	-	4868.44	Yes	10/4/2016	464.54	-	4869.20	Yes	-	0.76
KAFB-106220	7/11/2016	471.63	-	4868.41	Yes	10/6/2016	471.24	-	4868.80	Yes	-	0.39
KAFB-106223	7/11/2016	465.24	-	4868.59	Yes	10/3/2016	464.52	-	4869.31	Yes	-	0.72

Table 3-3
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness between Q4 2016 and Q3 2016

Well Location ID	Q3 2016					Q4 2016					Change Compared to the Previous Quarter Gauged	
	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Date of Measurement	Depth to Water (ft MRP)	Measured LNAPL Thickness (ft)	Groundwater Elevation Corrected for LNAPL Thickness (ft AMSL)	Screen Submerged (Yes/No?)	Difference between Q4 2016 and Q3 2016 LNAPL Thickness (ft)	Difference between Q4 2016 and Q3 2016 Groundwater Elevations (ft)
KAFB-106226	7/12/2016	458.71	-	4868.58	Yes	10/3/2016	457.96	-	4869.33	Yes	-	0.75
KAFB-106235-492[b]	NA	NA	NA	NA	NA	12/15/2016	446.46	-	4868.29	Yes	-	NA
KAFB-106236-490[b]	NA	NA	NA	NA	NA	12/15/2016	446.51	-	4868.74	Yes	-	NA
Reference Elevation Interval 4814 (ft AMSL) Groundwater Monitoring Wells												
KAFB-106031	7/12/2016	441.87	-	4869.19	Yes	10/4/2016	441.30	-	4869.76	Yes	-	0.57
KAFB-106034	7/11/2016	449.31	-	4869.33	Yes	10/3/2016	448.66	-	4869.98	Yes	-	0.65
KAFB-106040	7/14/2016	481.61	-	4868.68	Yes	10/5/2016	481.40	-	4868.89	Yes	-	0.21
KAFB-106043	7/11/2016	455.41	-	4868.97	Yes	10/3/2016	454.71	-	4869.67	Yes	-	0.70
KAFB-106045	7/11/2016	479.13	-	4869.35	Yes	10/3/2016	478.49	-	4869.99	Yes	-	0.64
KAFB-106048	7/11/2016	483.56	-	4869.03	Yes	10/3/2016	482.89	-	4869.70	Yes	-	0.67
KAFB-106051	7/12/2016	446.64	-	4869.24	Yes	10/4/2016	446.01	-	4869.87	Yes	-	0.63
KAFB-106054	7/12/2016	449.52	-	4868.91	Yes	10/4/2016	448.85	-	4869.58	Yes	-	0.67
KAFB-106058	7/12/2016	457.24	-	4868.86	Yes	10/4/2016	456.63	-	4869.47	Yes	-	0.61
KAFB-106061	7/12/2016	476.32	-	4869.14	Yes	10/5/2016	475.82	-	4869.64	Yes	-	0.50
KAFB-106062	7/12/2016	482.17	-	4869.04	Yes	10/5/2016	481.64	-	4869.57	Yes	-	0.53
KAFB-106066	7/13/2016	480.21	-	4868.92	Yes	10/5/2016	479.66	-	4869.47	Yes	-	0.55
KAFB-106068	7/12/2016	478.63	-	4868.60	Yes	10/4/2016	478.03	-	4869.20	Yes	-	0.60
KAFB-106071	7/13/2016	452.16	-	4868.69	Yes	10/5/2016	451.70	-	4869.15	Yes	-	0.46
KAFB-106074	7/12/2016	471.44	-	4869.20	Yes	10/5/2016	471.02	-	4869.62	Yes	-	0.42
KAFB-106078	7/13/2016	476.43	-	4868.19	Yes	10/5/2016	475.80	-	4868.82	Yes	-	0.63
KAFB-106081	7/12/2016	480.54	-	4868.93	Yes	10/5/2016	480.05	-	4869.42	Yes	-	0.49
KAFB-106084	7/11/2016	468.77	-	4868.95	Yes	10/4/2016	468.33	-	4869.39	Yes	-	0.44
KAFB-106087	7/13/2016	447.95	-	4869.05	Yes	10/5/2016	447.41	-	4869.59	Yes	-	0.54
KAFB-106090	7/13/2016	454.23	-	4868.71	Yes	10/5/2016	454.74	-	4868.20	Yes	-	-0.51
KAFB-106093	7/12/2016	445.63	-	4868.86	Yes	10/4/2016	445.07	-	4869.42	Yes	-	0.56
KAFB-106096	7/12/2016	476.24	-	4869.16	Yes	10/4/2016	475.64	-	4869.76	Yes	-	0.60
KAFB-106098	7/12/2016	478.69	-	4869.24	Yes	10/4/2016	478.04	-	4869.89	Yes	-	0.65
KAFB-106100	7/12/2016	473.51	-	4869.33	Yes	10/4/2016	472.88	-	4869.96	Yes	-	0.63
KAFB-106102	7/11/2016	471.14	-	4869.14	Yes	10/3/2016	470.36	-	4869.92	Yes	-	0.78
KAFB-106104	7/14/2016	459.78	-	4868.36	Yes	10/5/2016	459.25	-	4868.89	Yes	-	0.53
KAFB-106107	7/11/2016	453.29	-	4868.92	Yes	10/3/2016	452.66	-	4869.55	Yes	-	0.63
KAFB-106203	7/11/2016	490.89	-	4867.00	Yes	10/3/2016	488.94	-	4868.95	Yes	-	1.95
KAFB-106206	7/12/2016	464.61	-	4868.94	Yes	10/3/2016	463.76	-	4869.79	Yes	-	0.85
KAFB-106209	7/11/2016	474.29	-	4869.39	Yes	10/3/2016	473.92	-	4869.76	Yes	-	0.37
KAFB-106212	7/13/2016	454.09	-	4867.70	Yes	10/3/2016	453.46	-	4868.33	Yes	-	0.63
KAFB-106215	7/13/2016	457.31	-	4868.27	Yes	10/4/2016	456.56	-	4869.02	Yes	-	0.75
KAFB-106218	7/13/2016	465.48	-	4867.93	Yes	10/4/2016	464.71	-	4868.70	Yes	-	0.77
KAFB-106221	7/11/2016	471.41	-	4868.44	Yes	10/6/2016	471.08	-	4868.77	Yes	-	0.33
KAFB-106224	7/11/2016	466.36	-	4868.54	Yes	10/3/2016	465.65	-	4869.25	Yes	-	0.71
KAFB-106227	7/12/2016	459.41	-	4868.57	Yes	10/3/2016	458.69	-	4869.29	Yes	-	0.72
KAFB-106232	7/11/2016	458.04	-	4869.14	Yes	10/3/2016	457.42	-	4869.76	Yes	-	0.62
KAFB-106235-521[b]	NA	NA	NA	NA	NA	12/15/2016	446.70	-	4868.23	Yes	-	NA
KAFB-106236-519[b]	NA	NA	NA	NA	NA	12/15/2016	446.57	-	4868.70	Yes	-	NA

Table 3-3
Changes in Groundwater Elevation and Light Non-Aqueous Phase Liquid Thickness between Q4 2016 and Q3 2016

[a] Well used in analyses for both REI 4857 and 4838.
[b] Newly installed monitoring wells not concurrently gauged with the rest of the GWM network - wells installed December 2016
AFB = Air Force Base
AMSL = above mean sea level
ID = identification
LNAPL = light non-aqueous phase liquid
MRP = measurement reference point
NA = not applicable
Q = quarter
REI = Reference Elevation Interval
SWMU = solid waste management unit

Table 3-4
Groundwater Monitoring Wells Included in Q4 2016 Monitoring Activities

Well Location ID	Reference Elevation Interval (ft AMSL)	Installation Date	Date Sampled	Screen Interval[a] (ft bgs)	Screen Interval[a] (AMSL)	Dedicated Sampling System (Yes/No)?	Screen Submerged (Yes/No)?	Estimated Pump Intake Depth (ft bags)[b]	Analytical Suite[c]
Groundwater Monitoring Wells									
KAFB-3411	4857	11/10/1999	11/16/2016	461-504	4879-4836	No	Yes	505.31	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106001	4857/4838	11/10/2000	11/10/2016	483-508	4859-4834	No	Yes	487.83	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106002	4857	3/26/2002	10/20/2016	479-504	4861-4836	Yes	Yes	503.99	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106007	4857	11/14/2007	10/31/2016	484-509	4860-4835	Yes	Yes	504.07	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106015	4857/4838	10/14/2008	10/25/2016	485-510	4855-4830	No	Yes	490.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106016	4857	10/17/2008	10/24/2016	475-500	4864-4839	Yes	Yes	494.73	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106019	4857/4838	12/9/2008	11/7/2016	493-518	4859-4834	No	Yes	497.95	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106020	4857	12/19/2008	10/25/2016	482-507	4859-4834	No	Yes	484.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106021	4857/4838	6/7/2009	10/5/2016	458-483	4856-4831	No	Yes	460.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106022	4857/4838	6/12/2009	10/13/2016	462-487	4856-4831	Yes	Yes	483.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106023	4857	6/27/2009	11/10/2016	473-498	4856-4831	No	Yes	475.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106024	4857	8/3/2009	11/2/2016	481-506	4862-4837	Yes	Yes	502.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106025	4857/4838	12/5/2010	10/5/2016	465-490	4852-4827	No	Yes	467.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106027	4857	5/1/2010	10/24/2016	481-501	4864-4844	Yes	Yes	490.59	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106035	4857	8/9/2011	10/27/2016	452-482	4869-4839	No	No	474.35	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106036	4838	8/5/2011	10/27/2016	481-496	4841-4826	No	Yes	483.80	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106037	4838	7/14/2011	11/8/2016	507-522	4815-4800	No	Yes	509.21	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106039	4838	7/26/2011	10/27/2016	508-523	4840-4825	No	Yes	513.50	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106040	4814	7/19/2011	10/29/2016	530-545	4817-4802	No	Yes	536.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106042	4857	5/31/2011	11/10/2016	469-484	4855-4840	No	Yes	471.06	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106043	4814	5/18/2011	10/10/2016	543-558	4781-4766	Yes	Yes	550.60	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106044	4838	1/7/2011	10/24/2016	504-519	4842-4827	Yes	Yes	511.70[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106045	4814	1/17/2011	11/14/2016	528-543	4817-4802	No	Yes	535.80[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106046	4857	4/8/2011	10/31/2016	490-510	4863-4843	Yes	Yes	504.95	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106047	4838	4/8/2011	10/31/2016	512-527	4841-4826	Yes	Yes	519.55	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106048	4814	4/8/2011	11/15/2016	535-550	4818-4803	No	Yes	537.50	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106052	4857	7/25/2011	10/12/2016	449-479	4870-4840	Yes	Yes	472.28	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106053	4838	7/11/2011	10/12/2016	478-493	4841-4826	Yes	Yes	486.10	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106054	4814	6/28/2011	10/12/2016	504-519	4814-4799	Yes	Yes	511.60	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106055	4857	6/24/2011	10/12/2016	465-485	4860-4840	Yes	Yes	479.90	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106057	4838	6/19/2011	10/12/2016	484-499	4841-4826	Yes	Yes	493.05	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106058	4814	6/14/2011	10/13/2016	511-526	4815-4800	Yes	Yes	518.07	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106070	4857	5/23/2011	10/17/2016	460-485	4858-4833	Yes	Yes	474.85	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106071	4814	5/13/2011	10/18/2016	548-563	4773-4758	Yes	Yes	555.43	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106072	4838	5/1/2011	11/3/2016	475-495	4844-4824	No	Yes	477.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106073	4838	5/5/2011	11/14/2016	499-514	4841-4826	No	Yes	501.74	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106074	4814	4/28/2011	11/14/2016	569-584	4772-4757	No	Yes	571.56	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106075	4857	4/17/2011	10/19/2016	480-500	4860-4840	Yes	Yes	494.90	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106082	4857	4/5/2011	11/1/2016	472-492	4863-4843	No	Yes	474.10	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106083	4838	4/15/2011	11/7/2016	495-510	4840-4825	No	Yes	497.62	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106084	4814	4/5/2011	11/1/2016	566-581	4768-4753	No	Yes	571.50	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106085	4857	7/8/2011	10/17/2016	446-476	4871-4841	Yes	No	468.96	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106086	4838	6/26/2011	11/8/2016	476-491	4842-4827	No	Yes	478.03	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106087	4814	6/19/2011	11/8/2016	546-561	4771-4756	No	Yes	548.01	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106088	4857	6/3/2011	10/17/2016	460-480	4864-4844	Yes	Yes	475.06	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106089	4838	5/23/2011	10/15/2016	481-496	4843-4828	Yes	Yes	488.99	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106090	4814	5/23/2011	10/18/2016	555-570	4768-4753	Yes	Yes	562.41	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106091[e]	4857	6/4/2011	10/13/2016 / 12/15/16	454-474	4860-4840	Yes	Yes	468.98	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106092	4838	5/24/2011	10/17/2016	474-489	4840-4825	Yes	Yes	480.35	VOCs, EDB, metals, anions, alkalinity, FP

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Groundwater Monitoring Wells Included in Q4 2016 Monitoring Activities

Well Location ID	Reference Elevation Interval (ft AMSL)	Installation Date	Date Sampled	Screen Interval[a] (ft bgs)	Screen Interval[a] (AMSL)	Dedicated Sampling System (Yes/No)?	Screen Submerged (Yes/No)?	Estimated Pump Intake Depth (ft bags)[b]	Analytical Suite[c]
KAFB-106093	4814	5/24/2011	10/13/2016	544-559	4770-4755	Yes	Yes	550.38	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106094	4857	6/26/2011	10/20/2016	484-504	4861-4841	Yes	Yes	499.11	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106095	4838	6/24/2011	10/19/2016	504-519	4841-4826	Yes	Yes	511.03	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106096	4814	6/7/2011	10/20/2016	576-591	4769-4754	Yes	Yes	583.75	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106103	4838	6/21/2011	10/18/2016	485-500	4844-4829	Yes	Yes	492.46	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106104	4814	6/15/2011	10/18/2016	510-525	4818-4803	Yes	Yes	517.41	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106105	4838	8/19/2011	11/2/2016	484-499	4838-4823	No	Yes	486.06	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106106	4857	8/10/2011	10/11/2016	454-484	4868-4838	Yes	Yes	476.17	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106107	4814	8/30/2011	11/10/2016	510-525	4812-4797	No	Yes	512.27	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106212	4814	2/17/2015	10/31/2016	543-558	4779-4764	No	Yes	453.97	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106213	4857	2/10/2015	10/13/2016	448-478	4877-4847	Yes	No	475.30	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106214	4838	3/9/2015	10/17/2016	478-493	4848-4833	Yes	Yes	490.08	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106215	4814	4/28/2015	11/7/2016	547-562	4779-4764	No	Yes	549.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106219	4857	3/12/2015	10/6/2016	463-493	4877-4847	Yes	No	475.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106220	4838	3/12/2015	10/6/2016	493-508	4847-4832	Yes	Yes	490.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106221	4814	6/5/2015	10/6/2016	561-576	4779-4764	Yes	Yes	554.40	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106225	4857	1/19/2015	10/11/2016	450-480	4876-4846	Yes	No	474.70	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106226	4838	2/3/2015	11/8/2016	480-495	4847-4832	No	Yes	482.14	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106227	4814	5/6/2015	10/11/2016	548-563	4780-4765	Yes	Yes	554.00	VOCs, EDB, metals, anions, alkalinity, FP
Downgradient Proximal Wells									
KAFB-106029	4857	6/4/2011	10/4/2016	451-471	4860-4840	No	Yes	465.35	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106030	4838	5/25/2011	10/4/2016	469-484	4842-4827	Yes	Yes	476.97	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106031	4814	5/25/2011	10/4/2016	496-510	4815-4801	Yes	Yes	502.49	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106032	4857	6/24/2011	10/26/2016	456-476	4862-4842	No	Yes	470.74	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106033	4838	6/24/2011	10/26/2016	477-492	4841-4826	No	Yes	480.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106034	4814	6/24/2011	10/26/2016	502-517	4817-4802	Yes	Yes	509.33	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106049	4857	5/13/2011	10/11/2016	457-477	4859-4839	No	Yes	471.50	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106050	4838	5/2/2011	10/11/2016	474-489	4842-4827	Yes	Yes	482.57	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106051	4814	4/26/2011	10/11/2016	500-515	4816-4801	Yes	Yes	508.87	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106201	4857	10/4/2012	10/10/2016	487-517	4868-4838	No	Yes	502.00[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106202	4838	9/23/2012	10/10/2016	517-532	4838-4823	Yes	Yes	521.77	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106203	4814	9/9/2012	10/10/2016	620-635	4735-4720	Yes	Yes	627.50[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106204	4857	8/29/2012	10/10/2016	462-492	4871-4841	No	No	477.55[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106205	4838	8/21/2012	10/10/2016	492-507	4841-4826	Yes	Yes	500.00[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106206	4814	8/9/2012	10/10/2016	593-608	4741-4726	Yes	Yes	600.85[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106207	4857	8/22/2012	10/25/2016	473-503	4872-4842	No	No	488.00[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106208	4838	8/16/2012	10/10/2016	503-518	4841-4826	No	Yes	510.50[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106209	4814	8/7/2012	10/25/2016	603-617	4741-4727	No	Yes	610.00[d]	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106216	4857	2/10/2015	10/13/2016	455-485	4879-4849	Yes	No	475.08	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106217	4838	2/17/2015	11/7/2016	485-500	4849-4834	No	Yes	487.06	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106218	4814	5/26/2015	10/13/2016	552-567	4781-4766	Yes	Yes	554.58	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106222	4857	1/15/2015	10/12/2016	458-488	4875-4845	Yes	No	475.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106223	4838	2/17/2015	10/12/2016	488-503	4846-4831	Yes	Yes	489.50	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106224	4814	5/15/2015	10/12/2016	555-570	4780-4765	Yes	Yes	554.58	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106231	4857	9/8/2015	10/3/2016	440-475	4887-4852	Yes	No	470.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106232	4814	9/1/2015	10/3/2016	503-518	4824-4809	No	Yes	503.00	VOCs, EDB, metals, anions, alkalinity, FP
Veterans Affairs Proximal Wells									
KAFB-106003	4857	1/25/2003	10/24/2016	476-501	4861-4836	No	Yes	501.70	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106004	4857	1/4/2006	11/15/2016	484-509	4859-4834	No	Yes	488.77	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106013	4857	9/19/2008	11/9/2016	486-511	4862-4837	No	Yes	491.72	VOCs, EDB, metals, anions, alkalinity, FP

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Groundwater Monitoring Wells Included in Q4 2016 Monitoring Activities

Well Location ID	Reference Elevation Interval (ft AMSL)	Installation Date	Date Sampled	Screen Interval[a] (ft bgs)	Screen Interval[a] (AMSL)	Dedicated Sampling System (Yes/No)?	Screen Submerged (Yes/No)?	Estimated Pump Intake Depth (ft bags)[b]	Analytical Suite[c]
KAFB-106097	4838	4/27/2011	11/9/2016	506-521	4842-4827	No	Yes	508.14	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106098	4814	4/17/2011	11/9/2016	531-546	4817-4802	No	Yes	533.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106099	4838	5/12/2011	11/2/2016	501-516	4842-4827	No	Yes	503.11	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106100	4814	5/3/2011	10/19/2016	526-541	4817-4802	No	Yes	533.47	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106101	4838	2/21/2011	10/24/2016	496-511	4841-4826	No	Yes	503.22	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106102	4814	3/3/2011	11/1/2016	521-534	4816-4803	No	Yes	526.00	VOCs, EDB, metals, anions, alkalinity, FP
Source Area Wells									
KAFB-106005	4857	1/22/2007	11/15/2016	479-504	4865-4840	No	Yes	484.04	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106006	4857	10/31/2007	11/8/2016	483-508	4866-4841	No	Yes	484.60	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106008	4857	11/21/2007	11/17/2016	486-511	4863-4838	No	Yes	491.10	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106009	4857	11/28/2007	11/3/2016	480-505	4865-4840	No	Yes	485.70	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106010	4857	12/6/2007	11/16/2016	483-508	4860-4835	No	Yes	485.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106011	4857	9/23/2008	10/24/2016	486-511	4864-4839	Yes	Yes	505.83	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106012R	4857	4/23/2014	11/8/2016	465-495	4877-4847	No	No	495.52	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106014	4857	10/3/2008	11/16/2016	486-511	4861-4836	No	Yes	491.17	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106028	4857	3/19/2012	10/19/2016	486-510	4863-4839	Yes	Yes	506.80	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106059	4857	4/7/2011	11/14/2016	483-503	4862-4842	No	Yes	488.60	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106060	4838	4/16/2011	10/20/2016	503-518	4842-4827	Yes	Yes	510.29	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106061	4814	4/8/2011	10/20/2016	573-588	4772-4757	Yes	Yes	580.20	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106062	4814	3/19/2011	10/24/2016	575-590	4773-4758	Yes	Yes	582.70	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106063	4838	4/8/2011	11/2/2016	505-520	4844-4829	No	Yes	510.38	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106064	4857	3/24/2011	11/15/2016	485-505	4863-4843	No	Yes	490.18	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106065	4838	5/17/2011	10/19/2016	508-523	4841-4826	Yes	Yes	515.35	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106066	4814	5/16/2011	10/19/2016	575-590	4774-4759	Yes	Yes	583.06	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106067	4857	5/11/2011	10/19/2016	485-505	4863-4843	Yes	Yes	499.99	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106068	4814	5/2/2011	10/17/2016	580-595	4767-4752	Yes	Yes	587.41	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106069	4838	5/1/2011	11/1/2016	506-521	4841-4826	No	Yes	508.08	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106076	4857	4/8/2011	11/21/2016	480-500	4865-4845	No	Yes	482.14	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106077	4838	4/8/2011	11/16/2016	504-519	4841-4826	No	Yes	506.00	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106078	4814	4/8/2011	11/16/2016	573-588	4772-4757	Yes	Yes	581.01	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106079	4857	3/22/2011	10/20/2016	483-503	4864-4844	Yes	Yes	498.78	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106080	4838	4/17/2011	10/20/2016	503-518	4843-4828	Yes	Yes	511.77	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106081	4814	4/16/2011	10/20/2016	574-589	4772-4757	Yes	Yes	582.34	VOCs, EDB, metals, anions, alkalinity, FP
Signal Wells									
KAFB-106017	4857/4838	11/19/2008	10/18/2016	482-507	4857-4832	Yes	Yes	501.56	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106018	4857/4838	11/24/2008	10/18/2016	476-501	4857-4832	Yes	Yes	495.70	VOCs, EDB, metals, anions, alkalinity, FP
KAFB-106038	4857	8/5/2011	11/15/2016	478-508	4870-4840	No	No	509.27	VOCs, EDB, metals, anions, alkalinity, FP

Table 3-4
Groundwater Monitoring Wells Included in Q4 2016 Monitoring Activities

[a] Screen interval is rounded to the nearest foot.
[b] Portable equipment sampling depths are estimated to the nearest half foot due to slight inaccuracies with the mechanism measuring the pump setting in the field
[c] 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 ammonia by method 4500NH3B/C, bromide by method 300.0A, chloride by method 300.0A, nitrate/nitrite nitrogen by method 353.2, sulfate by method 300.0A, and sulfide by method 4500 S2CF. FP include pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity.
[d] Pump setting estimated as half-way between top and bottom of screen.
[e] Due to fuel contamination at the location of well at KAFB-106091, the well was resampled for EDB, benzene, ethylbenzene, toluene, and total xylenes on December 15, 2016
AMSL = above mean sea level
bgs = below ground surface
EDB = ethylene dibromide
FP = field parameter
ft = foot/feet
ID = identification
Q = quarter
VOC = volatile organic compound

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q4 2016

Well Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106001	11/10/2016	18.9	7.79	645.0	2.34	111.7	2.07
KAFB-106002	10/20/2016	18.3	7.78	456.1	6.74	49.8	0.15
KAFB-106003	10/24/2016	18.4	7.83	472.0	6.07	135.6	0.34
KAFB-106004	11/15/2016	18.5	7.88	776.0	5.38	185.4	0.93
KAFB-106005	11/15/2016	18.4	7.56	3309.0	0.10 [a]	-213.0	8.48
KAFB-106006	11/8/2016	18.5	6.92	954.0	0.41 [a]	-131.4	1.94
KAFB-106007	10/31/2016	18.7	7.58	1039.0	2.23	168.3	0.18
KAFB-106008	11/17/2016	18.4	7.45	859.0	0.17 [a]	-173.8	4.09
KAFB-106009	11/3/2016	18.4	6.77	4547.0	1.81 [a]	55.0	0.49
KAFB-106010	11/16/2016	18.5	7.29	1368.0	0.18	-166.3	7.79
KAFB-106011	10/24/2016	18.8	7.74	479.2	0.70 [a]	123.7	1.64
KAFB-106012R	11/8/2016	19.2	7.39	3329.0	7.58	150.9	1.33
KAFB-106013	11/9/2016	19.0	7.73	507.4	0.44	178.4	0.58
KAFB-106014	11/16/2016	18.6	7.56	857.0	0.41	-189.9	41.70 [b]
KAFB-106015	10/25/2016	21.6	7.98	661.0	5.69	154.4	1.59
KAFB-106016	10/24/2016	18.5	8.06	361.3	2.72	115.3	1.98
KAFB-106017	10/18/2016	19.0	7.71	670.0	0.31	-72.8	0.95
KAFB-106018	10/18/2016	19.1	7.92	506.7	0.11	-101.9	1.15
KAFB-106019	11/7/2016	19.5	7.37	3024.0 [c]	1.81	250.0	1.89
KAFB-106020	10/25/2016	18.1	7.79	768.0	5.07	150.4	0.59
KAFB-106021	10/5/2016	21.2	7.68	556.0	3.11	102.5	10.90 [b]
KAFB-106022	10/13/2016	18.9	8.02	1048.0	0.16	153.5	0.22
KAFB-106023	11/10/2016	16.4	7.83	387.2	6.44	182.9	6.44
KAFB-106024	11/2/2016	20.1	7.14	1783.0	0.07 [a]	39.6	1.51
KAFB-106025	10/5/2016	20.0	7.79	467.2	4.79	243.4	0.20
KAFB-106027	10/24/2016	18.9	7.93	339.0	3.76	128.8	0.33
KAFB-106028	10/19/2016	17.7	7.09	1067.0	0.05	-173.1	0.99
KAFB-106029	10/4/2016	19.7	7.79	892.0	5.60	150.7	1.15
KAFB-106030	10/4/2016	20.2	7.95	570.0	6.01	149.9	2.64
KAFB-106031	10/4/2016	19.1	7.76	730.0	8.18	158.0	1.08
KAFB-106032	10/26/2016	19.1	7.80	483.7	7.95	181.7	0.57
KAFB-106033	10/26/2016	21.8	7.64	1087.0	5.80	185.0	0.76
KAFB-106034	10/26/2016	19.4	7.65	835.0	5.13	190.1	2.75
KAFB-106035	10/27/2016	19.8	7.93	563.0	8.29	150.6	2.33
KAFB-106036	10/27/2016	18.9	7.91	620.0	6.79	151.9	4.26
KAFB-106037	11/8/2016	18.5	7.91	347.8	7.62	5.9	1.66
KAFB-106038	11/15/2016	19.7	7.77	1392.0	3.84	183.8	6.01
KAFB-106039	10/27/2016	21.8	7.77	647.0	2.34	153.9	2.59
KAFB-106040	10/27/2016	21.1	7.76	425.0	1.88	145.6	2.10
KAFB-106042	11/10/2016	18.5	7.66	663.0	8.49	183.8	1.36
KAFB-106043	10/10/2016	18.8	7.99	347.1	3.73	83.4	1.47
KAFB-106044	10/24/2016	18.7	7.91	321.6	3.65	129.5	1.10
KAFB-106045	11/14/2016	19.2	7.99	588.0	2.82	152.6	0.32
KAFB-106046	10/31/2016	19.2	7.52	490.4	0.98	79.7	0.51
KAFB-106047	10/31/2016	19.2	7.84	375.6	4.15	84.8	2.25
KAFB-106048	11/15/2016	20.9	7.90	632.0	5.82	169.9	1.48

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q4 2016

Well Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106049	10/11/2016	18.7	8.24	2083.0	9.11	117.1	0.80
KAFB-106050	10/11/2016	18.6	7.34	1348.0	6.45	148.6	3.47
KAFB-106051	10/11/2016	19.4	8.17	1448.0	5.59	139.2	3.75
KAFB-106052	10/12/2016	18.5	8.17	585.0	7.82	5.1	5.30
KAFB-106053	10/12/2016	18.5	8.05	519.2	7.40	144.9	91.00 [b]
KAFB-106054	10/12/2016	18.0	6.98	526.0	6.60 [a]	152.6	0.62
KAFB-106055	10/12/2016	19.1	7.87	371.6	1.06	96.9	1.55
KAFB-106057	10/12/2016	19.3	8.32	367.0	0.32	-42.6	8.56
KAFB-106058	10/13/2016	19.1	8.08	723.0	5.10	94.4	0.98
KAFB-106059	11/14/2016	19.4	7.11	1429.0	0.35 [a]	-95.6	3.05
KAFB-106060	10/20/2016	19.3	7.72	648.0	1.93	116.1	0.32
KAFB-106061	10/20/2016	18.8	7.69	608.0	4.77	113.6	0.47
KAFB-106062	10/24/2016	18.7	7.75	346.5	6.67	119.8	1.19
KAFB-106063	11/2/2016	19.6	7.76	1011.0	1.31	-65.4	0.86
KAFB-106064	11/15/2016	19.4	7.16	920.0	0.39 [a]	-184.8	8.16
KAFB-106065	10/19/2016	16.8	6.97	979.0	0.26 [a]	-54.2	3.99
KAFB-106066	10/19/2016	17.1	7.87	345.6	4.26	-3.9	2.44
KAFB-106067	10/19/2016	19.2	7.37	621.0	1.56 [a]	-95.4	2.77
KAFB-106068	10/17/2016	18.4	7.58	360.6	6.71	94.9	0.19
KAFB-106069	11/1/2016	18.9	7.57	809.0	3.35	81.2	9.06
KAFB-106070	10/17/2016	19.2	7.49	568.0	0.34	34.9	2.77
KAFB-106071	10/18/2016	18.7	7.80	346.7	4.89	119.2	0.26
KAFB-106072	11/3/2016	18.2	7.51	989.0	4.00	103.8	5.90
KAFB-106073	11/14/2016	18.6	7.67	1081.0	2.62	164.3	3.38
KAFB-106074	11/14/2016	17.4	7.97	598.0	6.50	163.1	1.85
KAFB-106075	10/19/2016	18.6	7.52	614.0	0.16 [a]	-49.8	2.44
KAFB-106076	11/21/2016	19.2	7.78	736.0	0.00	-196.4	18.80
KAFB-106077	11/16/2016	20.5	7.84	338.2	3.34	184.7	1.45
KAFB-106078	11/16/2016	20.3	7.92	322.3	1.94	158.1	4.21
KAFB-106079	10/20/2016	19.0	6.94	1035.0	0.05 [a]	-115.2	10.10 [b]
KAFB-106080	10/20/2016	18.1	6.85	1159.0	0.13	-31.8	3.04
KAFB-106081	10/20/2016	18.8	7.87	343.7	3.70	5.7	1.46
KAFB-106082	11/1/2016	18.6	7.43	1058.0	1.41	36.4	0.54
KAFB-106083	11/7/2016	19.1	7.90	799.0	6.29	-44.1	2.45
KAFB-106084	11/1/2016	19.5	7.84	702.0	4.13	193.4	1.35
KAFB-106085	10/17/2016	18.8	7.67	471.6	0.41	70.3	1.75
KAFB-106086	11/8/2016	20.3	7.58	753.0	0.06	128.0	1.11
KAFB-106087	11/8/2016	19.5	7.77	668.0	5.85	170.7	3.39
KAFB-106088	10/17/2016	18.8	7.85	949.0	0.39	-94.2	1.07
KAFB-106089	10/18/2016	18.9	7.67	630.0	2.53	-0.3	0.51
KAFB-106090	10/18/2016	19.0	7.71	535.5	5.30	81.5	1.19
KAFB-106091	12/15/2016	21.6	7.76	413.6	0.15	169.8	2.16
KAFB-106092	10/17/2016	19.0	7.69	711.0	5.42	95.5	0.36
KAFB-106093	10/13/2016	19.7	8.04	725.0	2.78	4.5	5.01
KAFB-106094	10/20/2016	18.5	7.19	870.0	0.42	118.0	2.56
KAFB-106095	10/19/2016	18.7	7.82	420.7	5.13 [a]	66.6	1.96

Table 3-5
Water Quality Field Measurements for Groundwater Monitoring Well Samples, Q4 2016

Well Location ID	Sample Date	Temperature (°C)	pH (S.U.)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106096	10/20/2016	18.7	7.43	613.0	4.95	130.4	0.25
KAFB-106097	11/9/2016	19.5	7.75	425.3	1.77	162.3	0.25
KAFB-106098	11/9/2016	18.8	7.76	359.7	3.24	164.2	0.65
KAFB-106099	11/2/2016	17.0	7.91	1033.0	5.68	171.5	0.57
KAFB-106100	10/19/2016	18.7	7.26	337.7	6.26	145.0	0.63
KAFB-106101	10/24/2016	18.0	8.10	422.3	6.92	133.5	0.52
KAFB-106102	11/1/2016	19.5	7.90	745.0	4.61	179.8	5.56
KAFB-106103	10/18/2016	19.2	7.83	372.4	5.25	54.0	50.80
KAFB-106104	10/18/2016	18.6	7.87	360.4	6.92	120.5	0.17
KAFB-106105	11/2/2016	17.6	7.82	886.0	8.43	142.7	6.05
KAFB-106106	10/11/2016	18.9	8.02	870.0	6.50	6.8	1.29
KAFB-106107	11/10/2016	18.6	7.81	403.8	4.86	179.8	2.27
KAFB-106201	10/10/2016	18.0	7.84	902.0	8.49	145.9	0.46
KAFB-106202	10/10/2016	18.3	7.92	480.2	6.62	135.1	3.57
KAFB-106203	10/10/2016	18.6	8.06	334.5	3.81	87.8	0.25
KAFB-106204	10/10/2016	18.4	7.73	903.0	8.05	86.6	2.30
KAFB-106205	10/10/2016	18.6	7.85	441.6	5.75	42.0	2.35
KAFB-106206	10/10/2016	18.9	7.74	546.8	6.90	97.6	2.47
KAFB-106207	10/25/2016	18.2	7.84	878.0	8.03	192.5	0.36
KAFB-106208	10/10/2016	19.9	7.59	541.6	6.22	103.4	2.52
KAFB-106209	10/25/2016	19.1	7.84	750.0	4.25	155.9	0.14
KAFB-106212	10/31/2016	21.7	7.74	380.4	3.41	144.7	0.59
KAFB-106213	10/13/2016	18.7	8.01	983.0	10.14 [d]	49.2	4.96
KAFB-106214	10/17/2016	18.9	7.87	1033.0	9.17	13.0	2.64
KAFB-106215	11/7/2016	19.7	7.88	418.7	12.41 [d]	134.0	1.76
KAFB-106216	10/13/2016	19.0	7.89	1093.0	7.82	59.0	2.34
KAFB-106217	11/7/2016	19.5	7.47	683.0	6.26	114.8	2.07
KAFB-106218	10/13/2016	19.6	7.61	759.0	7.80	82.0	1.90
KAFB-106219	10/6/2016	19.1	7.92	361.0	2.92	69.6	1.15
KAFB-106220	10/6/2016	18.9	7.76	334.8	1.64	71.6	2.55
KAFB-106221	10/6/2016	18.9	7.74	327.4	6.00	114.2	1.77
KAFB-106222	10/12/2016	18.9	7.80	551.4	7.93	42.4	2.40
KAFB-106223	10/12/2016	18.9	7.76	541.8	10.37 [d]	89.6	6.63
KAFB-106224	10/12/2016	19.4	7.68	307.3	8.18	109.8	1.47
KAFB-106225	10/11/2016	19.3	7.76	962.0	2.73	-98.1	59.80
KAFB-106226	11/9/2016	18.8	7.97	1114.0	10.33 [a,d]	149.3	2.21
KAFB-106227	10/11/2016	18.7	8.01	687.0	10.15 [d]	122.8	3.53
KAFB-106231	10/3/2016	18.8	7.64	962.0	8.79	82.0	1.57
KAFB-106232	10/3/2016	23.1	7.71	554.0	9.92	204.7	0.87
KAFB-3411	11/16/2016	18.9	7.90	343.8	1.85	160.8	3.63

Table 3-5
Water-quality Field Measurements for Groundwater Monitoring Well Samples, Q4 2016

[a] DO measurements that were not stabilized within 10% of the three previous readings.
[b] Turbidity measurements (>10 NTU) that were not stabilized within 10% of the three previous readings.
[c] Specific conductivity measurements that were not stabilized within 10% of the three previous readings.
[d] Anomalous dissolved oxygen readings (> 10 mg/L) that occurred when instruments were properly calibrated.
°C = degrees Celsius
DO = dissolved oxygen
ID = identification
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter
mV = millivolt
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
Q = quarter
Spec Cond = specific conductivity
S.U. = standard unit

Table 3-6
Groundwater Analytical Results for Signal Wells, Q4 2016

						Well Location ID:	KAFB-106017			KAFB-106018			KAFB-106038		
						Field Sample ID:	GW017-164			GW018-164			GW038-164		
						Sample Date:	10/18/2016			10/18/2016			11/15/2016		
						Sample Type:	REG			REG			REG		
						Sample Depth (ft bgs):	501.56			495.7			506		
						Reference Elevation Interval (ft AMSL):	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**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.1	0.05	0.075	0.05	**0.42**	--	0.095	0.034	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	1	--	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	0.6	J	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1

Table 3-6
Groundwater Analytical Results for Signal Wells, Q4 2016

						Well Location ID:	KAFB-106017			KAFB-106018			KAFB-106038		
						Field Sample ID:	GW017-164			GW018-164			GW038-164		
						Sample Date:	10/18/2016			10/18/2016			11/15/2016		
						Sample Type:	REG			REG			REG		
						Sample Depth (ft bgs):	501.56			495.7			506		
						Reference Elevation Interval (ft AMSL):	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**
VOCs	Method SW8260C (µg/L)	cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	11	--	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	3	J	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	0.5	J	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	46.3	--	0.200	49.9	--	0.200	80.8	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	0.138	J	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.64	--	0.0500	7.70	--	0.0500	11.0	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.212**	--	0.0050	**0.905**	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.37	--	0.500	2.65	--	0.500	3.06	J	0.500
		Sodium	NS	NS	NS	NS	25.3	--	0.500	26.7	--	0.500	34.8	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00091	J	0.0020	ND	U	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	1.3	J	2.5
		Chloride	250	250	NS	250	13.8	--	2.0	28.9	--	2.0	69.2	--	20.0
		Sulfate	600	250	NS	250	39.8	--	5.0	41.3	--	5.0	88.8	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	1.6	--	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	138	--	5.0	124	--	5.0	136	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	138	--	5.0	124	--	5.0	136	J	5.0

Table 3-6
Groundwater Analytical Results for Signal Wells, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004).

[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2009).

[c] EPA Region 6 RSL for Tapwater (May 2016) 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.

[e] NMWQCC numeric standard for nitrate is 10 mg/L; NMWQCC numeric standard for nitrite is not specified.

µg/L = microgram per liter
AFB = Air Force Base
bgs = below ground surface
$CaCO_3$ = calcium carbonate
CFR = Code of Federal Regulations
EDB = ethylene dibromide
EPA = U.S. Environmental Protection Agency
ft = foot/feet
ID = identification
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
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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.
-- = Qualifier not assigned to the associated numerical value.

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106003			KAFB-106003			KAFB-106004			KAFB-106013		
						Field Sample ID:	GW003-164			GW003-564			GW004-164			GW013-164		
						Sample Date:	10/24/2016			10/24/2016			11/15/2016			11/9/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	501.7			501.7			476.01			460.11		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.020	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106003			KAFB-106003			KAFB-106004			KAFB-106013		
						Field Sample ID:	GW003-164			GW003-564			GW004-164			GW013-164		
						Sample Date:	10/24/2016			10/24/2016			11/15/2016			11/9/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	501.7			501.7			476.01			460.11		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	44.5	J	0.200	53.4	J	0.200	43.2	--	0.200	49.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.96	J	0.0500	8.40	J	0.0500	6.45	--	0.0500	7.33	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	0.0414	--	0.0050
		Potassium	NS	NS	NS	NS	2.64	--	0.500	2.77	--	0.500	2.60	J	0.500	2.52	--	0.500
		Sodium	NS	NS	NS	NS	24.3	--	0.500	27.7	--	0.500	23.0	--	0.500	24.8	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0014	J	0.0020	0.0020	J	0.0020	0.0012	J	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	26.3	--	2.0	26.8	--	2.0	22.9	--	2.0	35.6	--	4.0
		Sulfate	600	250	NS	250	53.7	J	5.0	54.4	J	5.0	44.9	--	5.0	31.9	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.2	--	0.10	1.5	--	0.10	1.1	--	0.10	ND	U	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	99.4	--	5.0	100	--	5.0	102	J	5.0	117	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	99.4	--	5.0	100	--	5.0	102	J	5.0	117	--	5.0

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106097			KAFB-106098			KAFB-106099			KAFB-106100		
						Field Sample ID:	GW097-164			GW098-164			GW099-164			GW100-164		
						Sample Date:	11/9/2016			11/9/2016			11/2/2016			10/19/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	508			533			508.41			533.47		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106097			KAFB-106098			KAFB-106099			KAFB-106100		
						Field Sample ID:	GW097-164			GW098-164			GW099-164			GW100-164		
						Sample Date:	11/9/2016			11/9/2016			11/2/2016			10/19/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	508			533			508.41			533.47		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	39.8	--	0.200	34.4	--	0.200	49.3	--	0.200	33.6	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	5.78	--	0.0500	4.97	--	0.0500	7.26	--	0.0500	5.01	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.23	--	0.500	2.26	--	0.500	2.65	--	0.500	2.24	--	0.500
		Sodium	NS	NS	NS	NS	22.1	--	0.500	21.1	--	0.500	23.8	--	0.500	19.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0011	J	0.0020	0.0011	J	0.0020	0.00092	J	0.0020	0.0016	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	15.7	J	2.0	8.4	J	2.0	42.1	--	20.0	3.4	--	2.0
		Sulfate	600	250	NS	250	37.5	J	5.0	28.5	J	5.0	54.6	--	5.0	5.8	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.13	J	0.10	0.14	J	0.10	1.8	J	0.10	0.37	J	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	110	--	5.0	98.5	--	5.0	103	J	5.0	103	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	110	--	5.0	98.5	--	5.0	103	J	5.0	103	--	5.0

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106101			KAFB-106102		
						Field Sample ID:	GW101-164			GW102-164		
						Sample Date:	10/24/2016			11/1/2016		
						Sample Type:	REG			REG		
						Sample Depth (ft bgs):	503.22			527.71		
						Reference Elevation Interval (ft AMSL):	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**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.020
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

						Well Location ID:	KAFB-106101			KAFB-106102		
						Field Sample ID:	GW101-164			GW102-164		
						Sample Date:	10/24/2016			11/1/2016		
						Sample Type:	REG			REG		
						Sample Depth (ft bgs):	503.22			527.71		
						Reference Elevation Interval (ft AMSL):	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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	41.3	J	0.200	34.3	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.47	J	0.0500	5.17	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.59	--	0.500	2.25	--	0.500
		Sodium	NS	NS	NS	NS	24.0	--	0.500	20.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00086	J	0.0020	0.00092	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	20.2	--	2.0	12.1	--	2.0
		Sulfate	600	250	NS	250	43.6	J	5.0	33.9	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.0	--	0.10	0.62	--	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	99.2	--	5.0	97.6	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	99.2	--	5.0	97.6	J	5.0

Table 3-7
Groundwater Analytical Results for Veterans Affairs Proximal Wells, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). 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 2009).
c EPA Region 6 RSL for Tapwater (May 2016) 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 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.
µg/L = microgram per liter
bgs = below-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
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
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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.
-- = Qualifier not assigned to the associated numerical value.

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106029			KAFB-106030			KAFB-106031			KAFB-106032		
			Field Sample ID:				GW029-164			GW030-164			GW031-164			GW032-164		
			Sample Date:				10/4/2016			10/4/2016			10/4/2016			10/26/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				465.35			476.97			502.49			470.74		
			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	UJ	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	UJ	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106029			KAFB-106030			KAFB-106031			KAFB-106032		
			Field Sample ID:				GW029-164			GW030-164			GW031-164			GW032-164		
			Sample Date:				10/4/2016			10/4/2016			10/4/2016			10/26/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				465.35			476.97			502.49			470.74		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	119	--	0.200	68.2	--	0.200	98.3	--	0.200	52.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	16.4	J	0.0500	9.60	J	0.0500	13.8	J	0.0500	7.65	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.47	--	0.500	2.98	--	0.500	3.59	--	0.500	2.66	--	0.500
		Sodium	NS	NS	NS	NS	32.0	--	0.500	26.8	--	0.500	32.4	--	0.500	24.2	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00090	J	0.0020	0.00098	J	0.0020	0.00094	J	0.0020	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2.1	J	2.5	1.5	J	2.5	1.6	J	2.5	ND	U	2.5
		Chloride	250	250	NS	250	108	--	8.0	61.0	--	8.0	71.3	--	8.0	28.8	J	2.0
		Sulfate	600	250	NS	250	167	--	20.0	80.5	--	20.0	154	--	20.0	65.2	J	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	3.3	J	0.50	1.6	J	0.20	2.2	J	0.20	1.0	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	91.8	J	5.0	98.2	--	5.0	95.5	--	5.0	98.7	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	91.8	J	5.0	98.2	--	5.0	95.5	--	5.0	98.7	--	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106032			KAFB-106033			KAFB-106034			KAFB-106049		
			Field Sample ID:				GW032-564			GW033-164			GW034-164			GW049-164		
			Sample Date:				10/26/2016			10/26/2016			10/26/2016			10/11/2016		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				470.74			479			509.33			471.5		
			Reference Elevation Interval (ft AMSL):				4838			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	0.1	0.05	0.075	0.05	ND	U	0.020	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	UJ	1	ND	UJ	1	ND	UJ	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	UJ	2	ND	UJ	2	ND	UJ	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106032			KAFB-106033			KAFB-106034			KAFB-106049		
			Field Sample ID:				GW032-564			GW033-164			GW034-164			GW049-164		
			Sample Date:				10/26/2016			10/26/2016			10/26/2016			10/11/2016		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				470.74			479			509.33			471.5		
			Reference Elevation Interval (ft AMSL):				4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	51.3	--	0.200	125	--	0.200	90.0	--	0.200	125	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	7.57	--	0.0500	18.1	--	0.0500	13.1	--	0.0500	17.5	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.60	--	0.500	3.96	--	0.500	3.54	--	0.500	3.91	--	0.500
		Sodium	NS	NS	NS	NS	23.8	--	0.500	36.5	--	0.500	31.2	--	0.500	33.1	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00085	J	0.0020	0.00070	J	0.0020	ND	U	0.0020	0.00092	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	1.8	J	2.5
		Chloride	250	250	NS	250	28.4	J	2.0	100	J	20.0	92.4	J	20.0	81.8	--	8.0
		Sulfate	600	250	NS	250	64.7	J	5.0	212	J	50.0	111	J	50.0	236	--	20.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.99	--	0.10	3.6	J	0.10	2.9	J	0.10	3.0	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	98.2	--	5.0	80.0	--	5.0	87.5	--	5.0	83.9	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	98.2	--	5.0	80.0	--	5.0	87.5	--	5.0	83.9	J	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

		Well Location ID:					KAFB-106050			KAFB-106051			KAFB-106201			KAFB-106202		
		Field Sample ID:					GW050-164			GW051-164			GW201-164			GW202-164		
		Sample Date:					10/11/2016			10/11/2016			10/10/2016			10/10/2016		
		Sample Type:					REG			REG			REG			REG		
		Sample Depth (ft bgs):					482.57			508.87			499.95			521.77		
		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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106050			KAFB-106051			KAFB-106201			KAFB-106202		
			Field Sample ID:				GW050-164			GW051-164			GW201-164			GW202-164		
			Sample Date:				10/11/2016			10/11/2016			10/10/2016			10/10/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				482.57			508.87			499.95			521.77		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	65.3	--	0.200	74.9	--	0.200	115	--	0.200	47.1	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	9.51	--	0.0500	10.8	--	0.0500	14.9	--	0.0500	6.34	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0032	J	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.17	--	0.500	3.27	--	0.500	3.55	--	0.500	2.44	--	0.500
		Sodium	NS	NS	NS	NS	27.9	--	0.500	29.6	--	0.500	38.9	--	0.500	34.2	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0012	J	0.0020	0.0010	J	0.0020	0.00069	J	0.0020	0.00080	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00018	J	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	1.5	J	2.5	1.5	J	2.5	2.7	--	2.5	ND	U	2.5
		Chloride	250	250	NS	250	60.5	--	8.0	67.5	--	20.0	103	J	20.0	22.8	J	2.0
		Sulfate	600	250	NS	250	82.5	--	20.0	107	--	50.0	172	--	50.0	76.6	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.8	J	0.10	2.4	J	0.10	4.3	J	0.50	0.56	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	ND	U	0.050	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	4.4	--	0.50	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	4.2	--	0.50	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	82.1	J	5.0	82.2	J	5.0	91.8	J	5.0	118	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	82.1	J	5.0	82.2	J	5.0	91.8	J	5.0	118	J	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106203			KAFB-106204			KAFB-106205			KAFB-106206		
			Field Sample ID:				GW203-164			GW204-164			GW205-164			GW206-164		
			Sample Date:				10/10/2016			10/10/2016			10/10/2016			10/10/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				625.09			478.56			500.62			601.77		
			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	UJ	8	ND	UJ	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	UJ	8	ND	UJ	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106203			KAFB-106204			KAFB-106205			KAFB-106206		
			Field Sample ID:				GW203-164			GW204-164			GW205-164			GW206-164		
			Sample Date:				10/10/2016			10/10/2016			10/10/2016			10/10/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				625.09			478.56			500.62			601.77		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.9	--	0.200	108	--	0.200	46.1	--	0.200	56.7	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	5.06	--	0.0500	14.7	--	0.0500	6.34	--	0.0500	7.71	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	0.0036	J	0.0050
		Potassium	NS	NS	NS	NS	2.28	--	0.500	4.03	--	0.500	3.05	--	0.500	3.09	--	0.500
		Sodium	NS	NS	NS	NS	21.4	--	0.500	42.4	--	0.500	30.0	--	0.500	33.5	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0011	J	0.0020	0.00089	J	0.0020	0.00076	J	0.0020	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	0.000091	J	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	2.0	J	2.5	ND	U	2.5	1.5	J	2.5
		Chloride	250	250	NS	250	9.5	J	2.0	113	J	20.0	36.4	J	20.0	58.9	J	20.0
		Sulfate	600	250	NS	250	31.2	--	5.0	167	--	50.0	51.5	--	5.0	78.5	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.067	J	0.10	2.9	J	0.10	0.80	J	0.10	1.5	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	111	J	5.0	29.9	J	5.0	37.6	J	5.0	90.7	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	111	J	5.0	29.9	J	5.0	37.6	J	5.0	90.7	J	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106207			KAFB-106208			KAFB-106209			KAFB-106216		
			Field Sample ID:				GW207-164			GW208-164			GW209-164			GW216-164		
			Sample Date:				10/25/2016			10/10/2016			10/25/2016			10/13/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				488.93			511.1			605			475.08		
			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	UJ	1	ND	U	1	ND	UJ	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	UJ	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	UJ	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	UJ	2	ND	U	2	ND	UJ	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106207			KAFB-106208			KAFB-106209			KAFB-106216		
			Field Sample ID:				GW207-164			GW208-164			GW209-164			GW216-164		
			Sample Date:				10/25/2016			10/10/2016			10/25/2016			10/13/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				488.93			511.1			605			475.08		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	51.4	--	0.200	62.9	--	0.200	43.2	--	0.200	54.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.90	--	0.0500	8.51	--	0.0500	5.86	--	0.0500	7.30	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	0.0040	J	0.0050	ND	U	0.0050	0.0039	J	0.0050
		Potassium	NS	NS	NS	NS	2.66	--	0.500	3.19	--	0.500	2.56	--	0.500	2.56	--	0.500
		Sodium	NS	NS	NS	NS	23.9	--	0.500	31.5	--	0.500	25.6	--	0.500	25.8	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.0011	J	0.0020	ND	U	0.0020	0.00075	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	1.6	J	2.5	ND	U	2.5	1.5	J	2.5
		Chloride	250	250	NS	250	44.0	J	8.0	61.9	J	20.0	33.0	J	4.0	56.2	--	20.0
		Sulfate	600	250	NS	250	42.6	J	5.0	61.2	--	5.0	33.9	J	5.0	40.4	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	0.77	J	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.2	J	0.10	1.5	J	0.10	0.68	J	0.10	1.3	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	102	J	5.0	91.3	J	5.0	105	J	5.0	103	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	102	J	5.0	91.3	J	5.0	105	J	5.0	103	J	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106217			KAFB-106218			KAFB-106222			KAFB-106223		
			Field Sample ID:				GW217-164			GW218-164			GW222-164			GW223-164		
			Sample Date:				11/7/2016			10/13/2016			10/12/2016			10/12/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				490			554.58			475			489.5		
			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	UJ	2	ND	UJ	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106217			KAFB-106218			KAFB-106222			KAFB-106223		
			Field Sample ID:				GW217-164			GW218-164			GW222-164			GW223-164		
			Sample Date:				11/7/2016			10/13/2016			10/12/2016			10/12/2016		
			Sample Type:				REG			REG			REG			REG		
			Sample Depth (ft bgs):				490			554.58			475			489.5		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	0.5	J	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	60.2	--	0.200	35.7	--	0.200	66.2	--	0.200	66.5	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	7.52	--	0.0500	4.64	--	0.0500	9.21	--	0.0500	9.28	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	0.0332	J	0.0050	0.0033	J	0.0050	0.0023	J	0.0050
		Potassium	NS	NS	NS	NS	2.72	--	0.500	2.05	--	0.500	3.27	--	0.500	3.11	--	0.500
		Sodium	NS	NS	NS	NS	27.6	--	0.500	24.6	--	0.500	35.6	--	0.500	34.6	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.00074	J	0.0020	0.00078	J	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	1.5	J	2.5	1.9	J	2.5
		Chloride	250	250	NS	250	44.7	--	8.0	8.9	--	2.0	61.0	--	20.0	61.4	--	20.0
		Sulfate	600	250	NS	250	55.2	--	5.0	30.9	--	5.0	72.2	--	5.0	72.4	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.84	--	0.10	0.045	J	0.10	2.9	--	0.10	2.7	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	ND	U	0.050	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	2.9	J	0.50	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	3.1	--	0.10	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	117	--	5.0	115	J	5.0	110	--	5.0	107	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	117	--	5.0	115	J	5.0	110	--	5.0	107	--	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106223			KAFB-106224			KAFB-106231			KAFB-106232		
			Field Sample ID:				GW223-564			GW224-164			GW231-164			GW232-164		
			Sample Date:				10/12/2016			10/12/2016			10/3/2016			10/3/2016		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				489.5			554.58			470			513		
			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	UJ	2	ND	UJ	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

			Well Location ID:				KAFB-106223			KAFB-106224			KAFB-106231			KAFB-106232		
			Field Sample ID:				GW223-564			GW224-164			GW231-164			GW232-164		
			Sample Date:				10/12/2016			10/12/2016			10/3/2016			10/3/2016		
			Sample Type:				Field Duplicate			REG			REG			REG		
			Sample Depth (ft bgs):				489.5			554.58			470			513		
			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	63.3	--	0.200	32.9	--	0.200	112	--	0.200	65.2	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	8.79	--	0.0500	4.45	--	0.0500	14.8	J	0.0500	8.92	J	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0025	J	0.0050	0.0543	--	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.97	--	0.500	2.29	--	0.500	4.39	--	0.500	3.23	--	0.500
		Sodium	NS	NS	NS	NS	33.0	--	0.500	26.4	--	0.500	39.8	--	0.500	29.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00073	J	0.0020	0.0010	J	0.0020	ND	U	0.0020	0.00075	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00027	J	0.00025	0.000098	J	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	1.9	J	2.5	ND	U	2.5	3.0	--	2.5	1.6	J	2.5
		Chloride	250	250	NS	250	61.3	--	20.0	8.9	--	2.0	184	--	20.0	63.6	--	8.0
		Sulfate	600	250	NS	250	71.3	--	5.0	30.8	--	5.0	85.1	--	50.0	58.2	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	2.7	--	0.10	ND	U	0.10	6.4	J	0.50	1.7	J	0.20
	Method E353.2 (mg/L)	Nitrogen as nitrite[f]	NS	1.0	NS	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	109	--	5.0	121	--	5.0	83.1	J	5.0	106	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	109	--	5.0	121	--	5.0	83.1	J	5.0	106	--	5.0

Table 3-8
Groundwater Analytical Results for Downgradient Proximal Wells, Q4 2016

[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 2004).

[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2009).

[c] EPA Region 6 RSL for Tapwater (May 2016) 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.

[e] 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
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
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
REG = normal field sample
RSL = regional screening level
Val Qual = validation qualifier
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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.

Table 3-9
Status of Quarterly Baseline Sampling Newly Installed Wells and Summary of Q4 2016 Analytical Results

Well Location ID	Reference Elevation Interval (ft AMSL)	Dates Newly-installed Wells Sampled	No. Quarters Sampled	Remaining Quarters to Complete Baseline	Quarter for Baseline Completion	Analytical Results for Samples Collected During Q4 2016
KAFB-106235-463	4857	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106235-492	4838	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106235-521	4814	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106236-461	4857	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106236-490	4838	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			
KAFB-106236-519	4814	TBD	1	4	0	Not sampled - First sampling will occur Q1 2017
		TBD	2			
		TBD	3			
		TBD	4			

ft AMSL = feet above mean sea level
ID = identification
No. = number
Q = quarter
TBD = to be determined

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106005			KAFB-106006			KAFB-106008			KAFB-106009		
						Field Sample ID:	GW005-164			GW006-164			GW008-164			GW009-164		
						Sample Date:	11/15/2016			11/8/2016			11/17/2016			11/3/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	477.44			485.5			481.78			479.02		
						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	0.1	0.05	0.075	0.05	**0.51**	--	0.19	**36**	--	9.5	**1.0**	--	0.19	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	**26**	--	2	**24**	J	10	5	J	4	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	20	ND	U	8	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.6	J	1	**46**	--	5	1	J	2	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	3	J	2	10	J	10	ND	U	4	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		2-butanone	NS	NS	5,600	5,600	37	--	8	250	--	40	ND	U	16	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		2-hexanone	NS	NS	38	38	14	--	8	**770**	--	40	ND	U	16	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	1	J	2	130	--	10	2	J	4	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	21	--	8	370	--	40	9	J	16	ND	U	8
		Acetone	NS	NS	14,000	14,000	18	J	20	1100	--	100	12	J	40	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	500	ND	U	200	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	50	ND	U	20	ND	U	10
		Benzene	10	5	4.5	5	**630**	--	5	**2300**	--	50	**360**	--	2	0.6	J	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	5	ND	U	2	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106005			KAFB-106006			KAFB-106008			KAFB-106009		
						Field Sample ID:	GW005-164			GW006-164			GW008-164			GW009-164		
						Sample Date:	11/15/2016			11/8/2016			11/17/2016			11/3/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	477.44			485.5			481.78			479.02		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Ethylbenzene	750	700	15	700	51	--	1	81	--	5	24	--	2	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	20	ND	U	8	ND	U	4
		Isopropylbenzene	NS	NS	450	450	4	J	2	34	--	10	9	J	4	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	9	--	1	550	--	5	31	--	2	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	20	ND	U	8	ND	U	4
		Naphthalene	30	NS	1.7	30	11	--	2	**76**	--	10	ND	U	4	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		N-propylbenzene	NS	NS	660	660	4	J	2	8	J	10	2	J	4	ND	U	2
		o-Xylene	NS	10,000	190	10,000	95	--	1	320	--	5	16	--	2	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	ND	U	10	ND	U	4	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	10	ND	U	4	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Toluene	750	1000	1,100	750	13	--	1	**2900**	--	50	160	--	2	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	20	ND	U	8	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	5	ND	U	2	ND	U	1
		Xylenes, Total	620	10,000	190	620	100	--	1	**870**	--	5	47	--	2	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	226	--	0.200	145	--	0.200	51.6	--	0.200	305	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	0.0910	J	0.200	**6.60**	--	0.200	0.197	J	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	36.1	--	0.0500	23.6	--	0.0500	8.27	--	0.0500	42.1	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.338**	--	0.0050	**6.93**	--	0.0050	**1.92**	--	0.0050	**1.76**	--	0.0050
		Potassium	NS	NS	NS	NS	5.32	J	0.500	3.38	--	0.500	2.36	--	0.500	6.01	--	0.500
		Sodium	NS	NS	NS	NS	88.0	--	0.500	39.0	--	0.500	25.3	J	0.500	62.8	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.0016	J	0.0020	ND	U	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	0.00033	J	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	3.4	--	2.5	1.8	J	2.5	ND	U	2.5	5.0	--	2.5
		Chloride	250	250	NS	250	225	--	20.0	13.4	--	2.0	9.5	--	2.0	**411**	--	200
		Sulfate	600	250	NS	250	**339**	--	50.0	2.7	J	5.0	17.5	--	5.0	**428**	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	23.3	--	2.0	ND	U	2.0	2.6	--	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	0.63	--	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.45	--	0.10	ND	U	0.10	ND	U	0.10	**19.9**	J	0.50
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	ND	U	0.050	--	--	--	--	--	--	0.10	--	0.050
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	0.45	J	0.50	--	--	--	--	--	--	13.6	J	0.50
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	0.37	J	0.10	--	--	--	--	--	--	15.5	--	0.50
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	248	J	5.0	426	--	5.0	176	J	5.0	121	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	248	J	5.0	426	--	5.0	176	J	5.0	121	J	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106010			KAFB-106010			KAFB-106011			KAFB-106012R		
						Field Sample ID:	GW010-164			GW010-564			GW011-164			GW012R-164		
						Sample Date:	11/16/2016			11/16/2016			10/24/2016			11/8/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	473.83			473.83			505.83			500.99		
						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	0.1	0.05	0.075	0.05	**10**	--	1.9	**8.5**	--	2.0	0.015	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	**67**	J	40	**76**	J	40	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	80	ND	U	80	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	27	J	40	29	J	40	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	160	ND	U	160	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	160	ND	U	160	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	40	21	J	40	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	160	ND	U	160	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	400	ND	U	400	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	2000	ND	U	2000	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	200	ND	U	200	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	**3200**	--	20	**3400**	--	20	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	20	ND	U	20	ND	U	1	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106010			KAFB-106010			KAFB-106011			KAFB-106012R		
						Field Sample ID:	GW010-164			GW010-564			GW011-164			GW012R-164		
						Sample Date:	11/16/2016			11/16/2016			10/24/2016			11/8/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	473.83			473.83			505.83			500.99		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	**760**	--	20	**810**	--	20	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	80	ND	U	80	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	120	--	40	130	--	40	3	J	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	450	--	20	490	--	20	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	80	ND	U	80	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	**53**	J	40	**59**	J	40	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	26	J	40	28	J	40	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	550	--	20	590	--	20	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	40	ND	U	40	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	**6700**	--	200	**6900**	--	200	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	80	ND	U	80	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	20	ND	U	20	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	**1000**	--	20	**1100**	--	20	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	93.5	--	0.200	93.0	--	0.200	54.4	J	0.200	200	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	**1.03**	--	0.200	**1.02**	--	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	14.6	--	0.0500	14.5	--	0.0500	7.51	J	0.0500	30.1	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**2.71**	--	0.0050	**2.65**	--	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.21	--	0.500	3.22	--	0.500	2.66	--	0.500	5.00	--	0.500
		Sodium	NS	NS	NS	NS	34.7	J	0.500	34.7	J	0.500	28.3	--	0.500	56.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	ND	U	0.0020	0.0011	J	0.0020	0.00075	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00039	J	0.00025	0.00028	J	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	2.8	J	2.5
		Chloride	250	250	NS	250	62.9	--	20.0	57.2	--	20.0	19.5	--	2.0	175	--	20.0
		Sulfate	600	250	NS	250	1.6	J	5.0	ND	U	5.0	29.0	J	5.0	**378**	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	0.33	--	0.10	5.6	--	0.50
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	ND	UJ	0.050
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	5.6	J	0.50
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	6.4	--	0.20
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	273	J	5.0	274	J	5.0	144	--	5.0	110	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	273	J	5.0	274	J	5.0	144	--	5.0	110	--	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106028			KAFB-106059			KAFB-106060		
						Field Sample ID:	GW014-164			GW028-164			GW059-164			GW060-164		
						Sample Date:	11/16/2016			10/19/2016			11/14/2016			10/20/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	480.51			506.8			485.4			510.29		
						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	0.1	0.05	0.075	0.05	**0.43**	--	0.095	**42**	--	19	**3.9**	--	0.96	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	**32**	--	4	**140**	--	20	**120**	--	20	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	8	ND	U	40	ND	U	40	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	2	**53**	--	10	ND	U	10	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	2	**8**	J	10	**14**	--	10	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	10	--	4	42	J	20	38	J	20	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	16	180	--	80	ND	U	80	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	16	**350**	--	80	**160**	--	80	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	2	J	4	60	--	20	ND	U	20	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	16	210	--	80	81	J	80	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	40	330	--	200	ND	U	200	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	200	ND	U	1000	ND	U	1000	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	20	ND	U	100	ND	U	100	ND	U	10
		Benzene	10	5	4.5	5	**220**	--	2	**8100**	--	100	**15000**	--	50	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Bromoform	NS	80	33	80	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	2	ND	U	10	ND	U	10	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106028			KAFB-106059			KAFB-106060		
						Field Sample ID:	GW014-164			GW028-164			GW059-164			GW060-164		
						Sample Date:	11/16/2016			10/19/2016			11/14/2016			10/20/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	480.51			506.8			485.4			510.29		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Ethylbenzene	750	700	15	700	110	--	2	690	--	10	480	--	10	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	8	ND	U	40	ND	U	40	ND	U	4
		Isopropylbenzene	NS	NS	450	450	13	--	4	75	--	20	23	J	20	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	200	--	2	1200	--	10	1100	--	10	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	8	ND	U	40	ND	U	40	ND	U	4
		Naphthalene	30	NS	1.7	30	9	J	4	**63**	--	20	**57**	--	20	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	3	J	4	ND	U	20	ND	U	20	ND	U	2
		N-propylbenzene	NS	NS	660	660	12	--	4	40	J	20	21	J	20	ND	U	2
		o-Xylene	NS	10,000	190	10,000	92	--	2	700	--	10	710	--	10	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	4	J	4	ND	U	20	ND	U	20	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	4	ND	U	20	ND	U	20	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Toluene	750	1000	1,100	750	740	--	20	**11000**	--	100	**13000**	--	50	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	8	ND	U	40	ND	U	40	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	2	ND	U	10	ND	U	10	ND	U	1
		Xylenes, Total	620	10,000	190	620	290	--	2	**1900**	--	10	**1800**	--	10	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	51.3	--	0.200	132	--	0.200	109	--	0.200	32.2	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	0.0799	J	0.200	**1.15**	--	0.200	**4.15**	--	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	7.81	--	0.0500	20.5	--	0.0500	18.3	--	0.0500	4.85	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**1.14**	--	0.0050	**4.51**	--	0.0050	**3.14**	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.33	--	0.500	3.74	--	0.500	3.49	J	0.500	2.08	--	0.500
		Sodium	NS	NS	NS	NS	26.0	J	0.500	42.0	--	0.500	35.0	--	0.500	20.4	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	ND	U	0.0020	0.0015	J	0.0020	0.0016	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00092	J	0.00025	0.00027	J	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	1.6	J	2.5	ND	U	2.5
		Chloride	250	250	NS	250	24.5	--	2.0	53.9	--	8.0	43.5	--	8.0	8.5	--	2.0
		Sulfate	600	250	NS	250	22.8	--	5.0	ND	U	5.0	ND	U	5.0	28.3	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	3.1	--	2.0	0.98	J	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	ND	U	0.10	0.090	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	157	J	5.0	365	--	5.0	344	J	5.0	107	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	157	J	5.0	365	--	5.0	344	J	5.0	107	--	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106061			KAFB-106062			KAFB-106063			KAFB-106064		
						Field Sample ID:	GW061-164			GW062-164			GW063-164			GW064-164		
						Sample Date:	10/20/2016			10/24/2016			11/2/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	580.2			582.7			512.04			487		
						Reference Elevation Interval (ft AMSL):	4814			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	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	0.025	J	0.019	**9.3**	--	1.9
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	10	--	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	**10**	--	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	2	--	1	3	--	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	2	J	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	19	--	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	**57**	--	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	4	J	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	32	--	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	39	--	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	0.6	J	1	**1000**	--	5
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106061			KAFB-106062			KAFB-106063			KAFB-106064		
						Field Sample ID:	GW061-164			GW062-164			GW063-164			GW064-164		
						Sample Date:	10/20/2016			10/24/2016			11/2/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	580.2			582.7			512.04			487		
						Reference Elevation Interval (ft AMSL):	4814			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	130	--	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	5	J	2	23	--	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	110	--	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	0.5	J	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	6	--	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	2	J	2	5	--	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	88	--	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	**890**	--	5
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	200	--	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	29.1	--	0.200	39.3	J	0.200	51.5	--	0.200	59.9	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	0.127	J	0.200	0.151	J	0.200	0.734	--	0.200
		Magnesium	NS	NS	NS	NS	4.25	--	0.0500	5.61	J	0.0500	7.35	--	0.0500	10.0	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0119	--	0.0050	ND	U	0.0050	0.107	--	0.0050	**2.89**	--	0.0050
		Potassium	NS	NS	NS	NS	1.86	--	0.500	2.21	--	0.500	2.51	--	0.500	2.36	J	0.500
		Sodium	NS	NS	NS	NS	19.6	--	0.500	25.0	--	0.500	27.9	--	0.500	28.7	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0018	J	0.0020	0.0011	J	0.0020	ND	U	0.0020	0.0012	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.0012	J	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	8.0	--	2.0	7.3	--	2.0	13.6	--	2.0	13.8	--	2.0
		Sulfate	600	250	NS	250	27.1	--	5.0	27.7	J	5.0	22.5	--	5.0	12.3	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	2.0	J	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.042	J	0.10	ND	U	0.10	0.054	J	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	102	--	5.0	106	--	5.0	179	J	5.0	216	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	102	--	5.0	106	--	5.0	179	J	5.0	216	J	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106065			KAFB-106066			KAFB-106067		
						Field Sample ID:	GW064-564			GW065-164			GW066-164			GW067-164		
						Sample Date:	11/15/2016			10/19/2016			10/19/2016			10/19/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	487			515.35			583.06			499.99		
						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	0.1	0.05	0.075	0.05	**8.4**	--	1.9	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	10	--	2	ND	U	2	ND	U	2	2	J	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	**10**	--	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	3	--	1	3	--	1	ND	U	1	2	--	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	2	J	2	ND	U	2	ND	U	2	8	--	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	21	--	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	**60**	--	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	4	J	2	ND	U	2	ND	U	2	12	--	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	34	--	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	33	--	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	**1000**	--	5	ND	U	1	ND	U	1	**66**	--	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106065			KAFB-106066			KAFB-106067		
						Field Sample ID:	GW064-564			GW065-164			GW066-164			GW067-164		
						Sample Date:	11/15/2016			10/19/2016			10/19/2016			10/19/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	487			515.35			583.06			499.99		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	130	--	1	ND	U	1	ND	U	1	120	--	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	23	--	2	3	J	2	ND	U	2	17	--	2
		m,p-Xylene	NS	10,000	190	10,000	110	--	1	ND	U	1	ND	U	1	3	--	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	0.9	J	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	6	--	2	ND	U	2	ND	U	2	8	--	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	5	--	2	ND	U	2	ND	U	2	6	--	2
		o-Xylene	NS	10,000	190	10,000	89	--	1	ND	U	1	ND	U	1	0.6	J	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	1	J	2	ND	U	2	2	J	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	**920**	--	5	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	200	--	1	ND	U	1	ND	U	1	3	--	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	59.8	--	0.200	110	--	0.200	32.4	--	0.200	70.3	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	0.726	--	0.200	**2.92**	--	0.200	ND	U	0.200	**1.71**	--	0.200
		Magnesium	NS	NS	NS	NS	10.0	--	0.0500	17.5	--	0.0500	4.54	--	0.0500	10.3	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**2.85**	--	0.0050	**4.09**	--	0.0050	0.0022	J	0.0050	**1.82**	--	0.0050
		Potassium	NS	NS	NS	NS	2.42	J	0.500	3.82	--	0.500	2.05	--	0.500	2.79	--	0.500
		Sodium	NS	NS	NS	NS	28.6	--	0.500	44.7	--	0.500	22.0	--	0.500	29.7	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00091	J	0.0020	0.00085	J	0.0020	0.0013	J	0.0020	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	13.6	--	2.0	54.9	--	20.0	8.4	--	2.0	18.9	--	2.0
		Sulfate	600	250	NS	250	12.4	--	5.0	41.5	--	5.0	27.4	--	5.0	19.0	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	1.8	J	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	0.15	J	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	216	J	5.0	326	--	5.0	110	--	5.0	243	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	216	J	5.0	326	--	5.0	110	--	5.0	243	--	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106068			KAFB-106069			KAFB-106076			KAFB-106077		
						Field Sample ID:	GW068-164			GW069-164			GW076-164			GW077-164		
						Sample Date:	10/17/2016			11/1/2016			11/21/2016			11/16/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	587.41			508			482			511.46		
						Reference Elevation Interval (ft AMSL):	4814			4838			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	0.1	0.05	0.075	0.05	ND	U	0.019	**0.11**	--	0.020	0.026	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	**75**	--	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	0.6	J	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	23	--	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	6	--	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	**7**	--	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106068			KAFB-106069			KAFB-106076			KAFB-106077		
						Field Sample ID:	GW068-164			GW069-164			GW076-164			GW077-164		
						Sample Date:	10/17/2016			11/1/2016			11/21/2016			11/16/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	587.41			508			482			511.46		
						Reference Elevation Interval (ft AMSL):	4814			4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	69	--	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	2	J	2	14	--	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	160	--	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	21	--	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	9	--	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	17	--	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	94	--	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	9	--	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	60	--	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	260	--	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	34.8	--	0.200	43.3	--	0.200	43.0	--	0.200	33.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.88	--	0.0500	5.86	--	0.0500	7.41	--	0.0500	4.81	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	0.0237	--	0.0050	**0.667**	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.04	--	0.500	2.41	--	0.500	2.46	--	0.500	2.06	--	0.500
		Sodium	NS	NS	NS	NS	22.3	--	0.500	23.0	--	0.500	25.3	--	0.500	21.5	J	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0014	J	0.0020	ND	U	0.0020	0.0012	J	0.0020	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	8.1	J	2.0	12.5	--	2.0	9.9	--	2.0	8.7	--	2.0
		Sulfate	600	250	NS	250	28.8	--	5.0	34.3	--	5.0	18.1	--	5.0	28.5	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	1.4	J	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.17	J	0.10	0.25	--	0.10	ND	U	0.10	0.52	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	108	J	5.0	122	J	5.0	155	--	5.0	97.1	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	108	J	5.0	122	J	5.0	155	--	5.0	97.1	J	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

					Well Location ID:		KAFB-106078			KAFB-106079			KAFB-106080			KAFB-106080		
					Field Sample ID:		GW078-164			GW079-164			GW080-164			GW080-564		
					Sample Date:		11/16/2016			10/20/2016			10/20/2016			10/20/2016		
					Sample Type:		REG			REG			REG			Field Duplicate		
					Sample Depth (ft bgs):		581.01			498.78			511.77			511.77		
					Reference Elevation Interval (ft AMSL):		4814			4857			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	0.1	0.05	0.075	0.05	ND	U	0.019	0.039	--	0.019	0.011	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	3	J	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	3	--	1	3	--	1	3	--	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	4	J	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	**240**	--	1	**46**	--	1	**46**	--	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106078			KAFB-106079			KAFB-106080			KAFB-106080		
						Field Sample ID:	GW078-164			GW079-164			GW080-164			GW080-564		
						Sample Date:	11/16/2016			10/20/2016			10/20/2016			10/20/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	581.01			498.78			511.77			511.77		
						Reference Elevation Interval (ft AMSL):	4814			4857			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	26	--	1	9	--	1	9	--	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	8	--	2	1	J	2	1	J	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	6	--	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	1	--	1	1	J	1	1	--	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	2	J	2	4	J	2	3	J	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	3	J	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	6	--	1	0.9	J	1	0.9	J	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	2	J	2	1	J	2	1	J	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	22	--	1	0.6	J	1	0.6	J	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	12	--	1	0.9	J	1	0.9	J	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	31.5	--	0.200	103	--	0.200	118	--	0.200	117	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	**4.47**	--	0.200	**1.46**	--	0.200	**1.50**	--	0.200
		Magnesium	NS	NS	NS	NS	4.24	--	0.0500	18.0	--	0.0500	20.5	--	0.0500	20.3	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	**4.80**	--	0.0050	**5.28**	--	0.0050	**5.42**	--	0.0050
		Potassium	NS	NS	NS	NS	1.88	--	0.500	3.46	--	0.500	3.40	--	0.500	3.43	--	0.500
		Sodium	NS	NS	NS	NS	20.6	J	0.500	44.2	--	0.500	42.0	--	0.500	41.7	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0013	J	0.0020	0.00094	J	0.0020	ND	U	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	0.00059	J	0.00025	0.00014	J	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	2.4	J	2.5	2.4	J	2.5
		Chloride	250	250	NS	250	7.3	--	2.0	69.7	--	20.0	84.2	--	20.0	83.4	--	20.0
		Sulfate	600	250	NS	250	27.9	--	5.0	24.4	--	5.0	18.8	--	5.0	18.3	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.070	J	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	96.0	J	5.0	342	--	5.0	378	--	5.0	367	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	96.0	J	5.0	342	--	5.0	378	--	5.0	367	--	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

						Well Location ID:	KAFB-106081		
						Field Sample ID:	GW081-164		
						Sample Date:	10/20/2016		
						Sample Type:	REG		
						Sample Depth (ft bgs):	582.34		
					Reference Elevation Interval (ft AMSL):		4814		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**EPA RSL[c]**	**Project Screening Level[d]**	**Result**	**Val Qual**	**LOD**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.1	0.05	0.075	0.05	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

Well Location ID:	KAFB-106081
Field Sample ID:	GW081-164
Sample Date:	10/20/2016
Sample Type:	REG
Sample Depth (ft bgs):	582.34
Reference Elevation Interval (ft AMSL):	4814

Parameter	Analytical Method	Analyte	NMAC NMWQCC[a]	EPA MCL[b]	EPA RSL[c]	Project Screening Level[d]	Result	Val Qual	LOD
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	29.2	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.37	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0027	J	0.0050
		Potassium	NS	NS	NS	NS	1.81	--	0.500
		Sodium	NS	NS	NS	NS	20.5	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0012	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5
		Chloride	250	250	NS	250	8.2	--	2.0
		Sulfate	600	250	NS	250	26.0	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0
	Method SM4500NH3BC (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]	0.15	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite [f]	NS	1	NS	1	--	--	--
	Method E300.0 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--
	Method E353.2 (mg/L)	Nitrate [f]	NS	NS	NS	NS	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	102	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	102	--	5.0

Table 3-10
Groundwater Analytical Results for Source Area Wells, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). 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 2009).

c EPA Region 6 RSL for Tapwater (May 2016) 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 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.

µg/L = microgram per liter
bgs = below-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
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
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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.
-- = Qualifier not assigned to the associated numerical value.

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Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106001			KAFB-106002			KAFB-106007			KAFB-106015		
						Field Sample ID:	GW001-164			GW002-164			GW007-164			GW015-164		
						Sample Date:	11/10/2016			10/20/2016			10/31/2016			10/25/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	474.74			503.99			480.08			487		
						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	0.1	0.05	0.075	0.05	0.020	J	0.019	ND	U	0.019	ND	U	0.020	ND	U	0.020
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	UJ	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	UJ	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106001			KAFB-106002			KAFB-106007			KAFB-106015		
						Field Sample ID:	GW001-164			GW002-164			GW007-164			GW015-164		
						Sample Date:	11/10/2016			10/20/2016			10/31/2016			10/25/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	474.74			503.99			480.08			487		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	33.0	--	0.200	46.1	--	0.200	53.1	--	0.200	40.7	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.94	--	0.0500	7.05	--	0.0500	7.35	--	0.0500	5.23	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	0.0025	J	0.0050
		Potassium	NS	NS	NS	NS	2.22	--	0.500	2.53	--	0.500	2.57	--	0.500	2.20	--	0.500
		Sodium	NS	NS	NS	NS	20.7	--	0.500	22.6	--	0.500	27.3	--	0.500	20.0	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0012	J	0.0020	0.0012	J	0.0020	0.00086	J	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	7.4	--	2.0	23.3	--	2.0	12.8	--	2.0	17.8	J	2.0
		Sulfate	600	250	NS	250	28.3	--	5.0	49.4	--	5.0	35.1	--	5.0	27.1	J	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.19	J	0.10	1.8	--	0.10	0.34	--	0.10	0.40	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	103	--	5.0	98.7	--	5.0	165	J	5.0	114	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	103	--	5.0	98.7	--	5.0	165	J	5.0	114	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106016			KAFB-106019			KAFB-106020			KAFB-106021		
						Field Sample ID:	GW016-164			GW019-164			GW020-164			GW021-164		
						Sample Date:	10/24/2016			11/7/2016			10/25/2016			10/5/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	494.73			495			484			444.83		
						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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	UJ	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	UJ	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106016			KAFB-106019			KAFB-106020			KAFB-106021		
						Field Sample ID:	GW016-164			GW019-164			GW020-164			GW021-164		
						Sample Date:	10/24/2016			11/7/2016			10/25/2016			10/5/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	494.73			495			484			444.83		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	0.5	J	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	40.3	J	0.200	161	--	0.200	40.1	--	0.200	64.3	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.17	J	0.0500	22.0	--	0.0500	5.81	--	0.0500	9.44	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	0.0367	--	0.0050	ND	U	0.0050	0.0181	--	0.0050
		Potassium	NS	NS	NS	NS	2.46	--	0.500	4.15	--	0.500	2.21	--	0.500	3.16	--	0.500
		Sodium	NS	NS	NS	NS	22.6	--	0.500	44.4	--	0.500	22.5	--	0.500	30.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0012	J	0.0020	ND	U	0.0020	0.00068	J	0.0020	0.00096	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	3.9	--	2.5	ND	U	2.5	1.5	J	2.5
		Chloride	250	250	NS	250	8.2	--	2.0	**254**	--	20.0	17.4	J	2.0	51.9	--	20.0
		Sulfate	600	250	NS	250	28.9	J	5.0	115	--	20.0	36.2	J	5.0	88.7	--	50.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.24	--	0.10	5.9	--	0.50	0.16	--	0.10	1.6	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	110	--	5.0	106	--	5.0	108	--	5.0	99.6	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	110	--	5.0	106	--	5.0	108	--	5.0	99.6	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106021			KAFB-106022			KAFB-106022			KAFB-106023		
						Field Sample ID:	GW021-564			GW022-164			GW022-564			GW023-164		
						Sample Date:	10/5/2016			10/13/2016			10/13/2016			11/10/2016		
						Sample Type:	Field Duplicate			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	444.83			449			449			481.55		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	**0.12**	--	0.019	**0.094**	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	1	--	1	1	--	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106021			KAFB-106022			KAFB-106022			KAFB-106023		
						Field Sample ID:	GW021-564			GW022-164			GW022-564			GW023-164		
						Sample Date:	10/5/2016			10/13/2016			10/13/2016			11/10/2016		
						Sample Type:	Field Duplicate			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	444.83			449			449			481.55		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	7	--	2	7	--	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	0.5	J	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	64.6	--	0.200	49.0	--	0.200	50.1	--	0.200	34.9	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	9.47	--	0.0500	7.03	--	0.0500	7.01	--	0.0500	4.75	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0171	--	0.0050	**0.211**	J	0.0050	**0.216**	J	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.14	--	0.500	2.28	--	0.500	2.56	--	0.500	2.19	--	0.500
		Sodium	NS	NS	NS	NS	31.0	--	0.500	26.0	--	0.500	26.5	--	0.500	25.4	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00091	J	0.0020	0.0012	J	0.0020	0.0010	J	0.0020	0.00098	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	0.00024	J	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	1.6	J	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	60.0	--	20.0	24.3	--	2.0	25.0	--	2.0	10.6	--	2.0
		Sulfate	600	250	NS	250	89.2	--	50.0	49.3	--	5.0	50.5	--	5.0	31.2	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.5	--	0.10	ND	U	0.10	ND	U	0.10	0.35	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	100	--	5.0	130	J	5.0	130	J	5.0	111	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	100	--	5.0	130	J	5.0	130	J	5.0	111	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106024			KAFB-106025			KAFB-106027			KAFB-106035		
						Field Sample ID:	GW024-164			GW025-164			GW027-164			GW035-164		
						Sample Date:	11/2/2016			10/5/2016			10/24/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	474.15			467			490.59			474.35		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	**0.58**	--	0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	0.5	J	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106024			KAFB-106025			KAFB-106027			KAFB-106035		
						Field Sample ID:	GW024-164			GW025-164			GW027-164			GW035-164		
						Sample Date:	11/2/2016			10/5/2016			10/24/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	474.15			467			490.59			474.35		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	2	--	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	99.0	--	0.200	51.5	--	0.200	36.6	J	0.200	40.9	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	0.0865	J	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	18.8	--	0.0500	7.23	--	0.0500	5.54	J	0.0500	5.70	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.228**	--	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.80	--	0.500	2.83	--	0.500	2.29	--	0.500	2.40	--	0.500
		Sodium	NS	NS	NS	NS	35.2	--	0.500	25.8	--	0.500	22.3	--	0.500	27.1	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.0010	J	0.0020	0.0013	J	0.0020	0.00095	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	40.8	--	20.0	41.7	--	8.0	7.1	--	2.0	19.0	J	2.0
		Sulfate	600	250	NS	250	65.9	--	5.0	57.7	--	5.0	27.5	J	5.0	34.1	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	0.73	J	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.44	J	0.10	1.1	--	0.10	0.12	--	0.10	0.071	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	276	J	5.0	97.6	--	5.0	105	--	5.0	119	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	276	J	5.0	97.6	--	5.0	105	--	5.0	119	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106036			KAFB-106037			KAFB-106039		
						Field Sample ID:	GW035-564			GW036-164			GW037-164			GW039-164		
						Sample Date:	10/27/2016			10/27/2016			11/8/2016			10/27/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	474.35			489.28			509			515.54		
						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	0.1	0.05	0.075	0.05	**0.31**	J	0.19	**0.28**	--	0.019	**0.41**	--	0.095	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.6	J	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	1	--	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106036			KAFB-106037			KAFB-106039		
						Field Sample ID:	GW035-564			GW036-164			GW037-164			GW039-164		
						Sample Date:	10/27/2016			10/27/2016			11/8/2016			10/27/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	474.35			489.28			509			515.54		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	2	--	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	40.3	--	0.200	46.7	--	0.200	40.0	--	0.200	63.5	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	5.51	--	0.0500	6.29	--	0.0500	5.50	--	0.0500	8.44	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.32	--	0.500	2.48	--	0.500	2.27	--	0.500	2.79	--	0.500
		Sodium	NS	NS	NS	NS	26.4	--	0.500	27.0	--	0.500	24.7	--	0.500	30.6	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00076	J	0.0020	0.0012	J	0.0020	0.0012	J	0.0020	0.00073	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	19.8	J	2.0	23.1	J	2.0	15.5	--	2.0	45.5	J	8.0
		Sulfate	600	250	NS	250	35.5	--	5.0	42.2	--	5.0	36.1	--	5.0	67.0	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.067	J	0.10	0.26	--	0.10	0.39	--	0.10	1.4	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	120	J	5.0	124	J	5.0	114	--	5.0	124	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	120	J	5.0	124	J	5.0	114	--	5.0	124	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106040			KAFB-106042			KAFB-106043			KAFB-106044		
						Field Sample ID:	GW040-164			GW042-164			GW043-164			GW044-164		
						Sample Date:	10/27/2016			11/10/2016			10/10/2016			10/24/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	537.85			476.3			550.6			511.7		
						Reference Elevation Interval (ft AMSL):	4838			4857			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	0.1	0.05	0.075	0.05	ND	U	0.019	0.034	--	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106040			KAFB-106042			KAFB-106043			KAFB-106044		
						Field Sample ID:	GW040-164			GW042-164			GW043-164			GW044-164		
						Sample Date:	10/27/2016			11/10/2016			10/10/2016			10/24/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	537.85			476.3			550.6			511.7		
						Reference Elevation Interval (ft AMSL):	4838			4857			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	39.5	--	0.200	68.6	--	0.200	38.0	--	0.200	29.7	J	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	5.19	--	0.0500	9.44	--	0.0500	5.38	--	0.0500	4.49	J	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.38	--	0.500	3.47	--	0.500	2.49	--	0.500	2.00	--	0.500
		Sodium	NS	NS	NS	NS	24.9	--	0.500	30.5	--	0.500	23.1	--	0.500	20.1	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.00092	J	0.0020	0.0011	J	0.0020	0.0017	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	1.5	J	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	14.6	J	2.0	56.9	--	4.0	10.5	J	2.0	6.8	--	2.0
		Sulfate	600	250	NS	250	35.7	--	5.0	69.7	--	5.0	39.7	--	5.0	27.6	J	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.36	--	0.10	1.3	J	0.10	0.12	J	0.10	0.081	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	114	J	5.0	118	--	5.0	110	J	5.0	98.9	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	114	J	5.0	118	--	5.0	110	J	5.0	98.9	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106045			KAFB-106046			KAFB-106047			KAFB-106048		
						Field Sample ID:	GW045-164			GW046-164			GW047-164			GW048-164		
						Sample Date:	11/14/2016			10/31/2016			10/31/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	530.3			504.95			519.55			537.5		
						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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106045			KAFB-106046			KAFB-106047			KAFB-106048		
						Field Sample ID:	GW045-164			GW046-164			GW047-164			GW048-164		
						Sample Date:	11/14/2016			10/31/2016			10/31/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	530.3			504.95			519.55			537.5		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	30.7	--	0.200	49.2	--	0.200	35.1	--	0.200	33.2	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.48	--	0.0500	7.01	--	0.0500	4.85	--	0.0500	4.73	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	1.95	J	0.500	2.50	--	0.500	2.14	--	0.500	1.92	J	0.500
		Sodium	NS	NS	NS	NS	20.4	--	0.500	27.7	--	0.500	22.9	--	0.500	22.2	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0014	J	0.0020	ND	U	0.0020	0.00078	J	0.0020	0.0010	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	6.9	--	2.0	9.2	--	2.0	9.4	--	2.0	8.3	--	2.0
		Sulfate	600	250	NS	250	28.5	--	5.0	28.0	--	5.0	31.6	--	5.0	29.7	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	0.064	J	0.10	0.49	--	0.10	0.25	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	103	J	5.0	159	J	5.0	106	J	5.0	108	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	103	J	5.0	159	J	5.0	106	J	5.0	108	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106052			KAFB-106053			KAFB-106054			KAFB-106055		
						Field Sample ID:	GW052-164			GW053-164			GW054-164			GW055-164		
						Sample Date:	10/12/2016			10/12/2016			10/12/2016			10/12/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	472.28			486.1			511.6			479.9		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	0.039	--	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	UJ	2	ND	UJ	2	ND	UJ	2	ND	UJ	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106052			KAFB-106053			KAFB-106054			KAFB-106055		
						Field Sample ID:	GW052-164			GW053-164			GW054-164			GW055-164		
						Sample Date:	10/12/2016			10/12/2016			10/12/2016			10/12/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	472.28			486.1			511.6			479.9		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	71.5	--	0.200	66.6	--	0.200	70.7	--	0.200	47.4	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	9.97	--	0.0500	9.31	--	0.0500	9.80	--	0.0500	6.61	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0020	J	0.0050	ND	U	0.0050	ND	U	0.0050	0.0047	J	0.0050
		Potassium	NS	NS	NS	NS	3.24	--	0.500	3.29	--	0.500	3.27	--	0.500	2.51	--	0.500
		Sodium	NS	NS	NS	NS	29.0	--	0.500	29.1	--	0.500	30.1	--	0.500	27.2	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00092	J	0.0020	0.0011	J	0.0020	0.0011	J	0.0020	0.0012	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00014	J	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2.0	J	2.5	ND	U	2.5	2.0	J	2.5	ND	U	2.5
		Chloride	250	250	NS	250	67.1	--	20.0	57.1	--	20.0	75.6	--	20.0	15.2	--	2.0
		Sulfate	600	250	NS	250	96.2	--	50.0	84.6	--	50.0	67.2	--	5.0	38.2	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	2.0	--	0.10	1.9	--	0.10	2.1	--	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	102	--	5.0	99.5	--	5.0	95.8	--	5.0	141	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	102	--	5.0	99.5	--	5.0	95.8	--	5.0	141	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106057			KAFB-106058			KAFB-106070			KAFB-106071		
						Field Sample ID:	GW057-164			GW058-164			GW070-164			GW071-164		
						Sample Date:	10/12/2016			10/13/2016			10/17/2016			10/18/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	493.05			518.07			474.85			555.43		
						Reference Elevation Interval (ft AMSL):	4838			4814			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	0.1	0.05	0.075	0.05	0.030	--	0.019	ND	U	0.019	0.017	J	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	0.6	J	1	ND	U	1	1	--	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	UJ	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106057			KAFB-106058			KAFB-106070			KAFB-106071		
						Field Sample ID:	GW057-164			GW058-164			GW070-164			GW071-164		
						Sample Date:	10/12/2016			10/13/2016			10/17/2016			10/18/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	493.05			518.07			474.85			555.43		
						Reference Elevation Interval (ft AMSL):	4838			4814			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	2	J	2	ND	U	2	2	J	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	45.8	--	0.200	34.3	--	0.200	58.8	--	0.200	33.3	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.36	--	0.0500	4.99	--	0.0500	8.08	--	0.0500	4.66	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0282	--	0.0050	ND	U	0.0050	0.161	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.55	--	0.500	1.96	--	0.500	2.85	--	0.500	2.20	--	0.500
		Sodium	NS	NS	NS	NS	25.7	--	0.500	22.8	--	0.500	27.8	--	0.500	21.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0015	J	0.0020	0.0012	J	0.0020	0.00098	J	0.0020	0.0012	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	16.1	--	2.0	9.7	--	2.0	29.6	J	2.0	8.1	--	2.0
		Sulfate	600	250	NS	250	39.1	--	5.0	34.3	--	5.0	51.4	--	5.0	27.6	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	0.10	--	0.10	ND	U	0.10	0.15	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	136	--	5.0	109	J	5.0	143	J	5.0	103	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	136	--	5.0	109	J	5.0	143	J	5.0	103	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106072			KAFB-106073			KAFB-106074			KAFB-106075		
						Field Sample ID:	GW072-164			GW073-164			GW074-164			GW075-164		
						Sample Date:	11/3/2016			11/14/2016			11/14/2016			10/19/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	477			507.21			577.19			494.9		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	0.05	0.075	0.05	0.028	--	0.019	ND	U	0.019	ND	U	0.019	**0.062**	--	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	1	--	1	ND	U	1	ND	U	1	1	--	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106072			KAFB-106073			KAFB-106074			KAFB-106075		
						Field Sample ID:	GW072-164			GW073-164			GW074-164			GW075-164		
						Sample Date:	11/3/2016			11/14/2016			11/14/2016			10/19/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	477			507.21			577.19			494.9		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	3	J	2	ND	U	2	13	--	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	1	J	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	1	J	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	51.6	--	0.200	62.1	--	0.200	30.7	--	0.200	68.9	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	0.135	J	0.200
		Magnesium	NS	NS	NS	NS	7.06	--	0.0500	8.99	--	0.0500	4.33	--	0.0500	10.3	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.656**	--	0.0050	ND	U	0.0050	ND	U	0.0050	**0.879**	--	0.0050
		Potassium	NS	NS	NS	NS	2.53	--	0.500	3.03	J	0.500	1.95	--	0.500	3.15	--	0.500
		Sodium	NS	NS	NS	NS	25.6	--	0.500	28.0	--	0.500	21.5	J	0.500	29.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0011	J	0.0020	ND	U	0.0020	0.0012	J	0.0020	0.00076	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	29.4	--	2.0	51.6	--	8.0	7.6	--	2.0	64.5	--	20.0
		Sulfate	600	250	NS	250	50.3	--	5.0	56.1	--	5.0	29.2	--	5.0	45.4	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	UJ	0.10	ND	U	0.10	0.040	J	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	128	J	5.0	125	J	5.0	106	J	5.0	156	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	128	J	5.0	125	J	5.0	106	J	5.0	156	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106075			KAFB-106082			KAFB-106083			KAFB-106084		
						Field Sample ID:	GW075-564			GW082-164			GW083-164			GW084-164		
						Sample Date:	10/19/2016			11/1/2016			11/7/2016			11/1/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	494.9			474			497.5			568		
						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	0.1	0.05	0.075	0.05	**0.066**	--	0.019	0.017	J	0.019	**0.061**	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	1	--	1	1	--	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106075			KAFB-106082			KAFB-106083			KAFB-106084		
						Field Sample ID:	GW075-564			GW082-164			GW083-164			GW084-164		
						Sample Date:	10/19/2016			11/1/2016			11/7/2016			11/1/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	494.9			474			497.5			568		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	14	--	2	1	J	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	1	J	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	69.3	--	0.200	57.7	--	0.200	38.2	--	0.200	32.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	0.129	J	0.200	0.213	J	0.200	0.0812	J	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	10.4	--	0.0500	8.24	--	0.0500	5.57	--	0.0500	4.47	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.886**	--	0.0050	**0.731**	--	0.0050	**0.679**	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	3.17	--	0.500	2.83	--	0.500	2.17	--	0.500	2.13	--	0.500
		Sodium	NS	NS	NS	NS	30.0	--	0.500	27.6	--	0.500	23.0	--	0.500	21.6	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00086	J	0.0020	ND	U	0.0020	ND	U	0.0020	0.00085	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	56.9	--	20.0	21.2	--	2.0	10.2	--	2.0	7.4	--	2.0
		Sulfate	600	250	NS	250	44.2	--	5.0	43.4	--	5.0	29.9	--	5.0	27.7	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	ND	U	0.10	0.090	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	159	--	5.0	157	J	5.0	125	--	5.0	100	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	159	--	5.0	157	J	5.0	125	--	5.0	100	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106085			KAFB-106086 [f]			KAFB-106086 [f]			KAFB-106087		
						Field Sample ID:	GW085-164			GW086-164			GW086-164			GW087-164		
						Sample Date:	10/17/2016			10/17/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	468.96			483.35			483.35			553.49		
						Reference Elevation Interval (ft AMSL):	4857			4838			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	0.1	0.05	0.075	0.05	**0.13**	--	0.019	0.039	--	0.019	0.042	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106085			KAFB-106086 [f]			KAFB-106086 [f]			KAFB-106087		
						Field Sample ID:	GW085-164			GW086-164			GW086-164			GW087-164		
						Sample Date:	10/17/2016			10/17/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	468.96			483.35			483.35			553.49		
						Reference Elevation Interval (ft AMSL):	4857			4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	1	J	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	47.5	--	0.200	--	--	--	37.0	--	0.200	31.6	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	--	--	--	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.88	--	0.0500	--	--	--	5.21	--	0.0500	4.46	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	**0.307**	--	0.0050	--	--	--	0.118	--	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.59	--	0.500	--	--	--	2.30	--	0.500	1.98	--	0.500
		Sodium	NS	NS	NS	NS	24.7	--	0.500	--	--	--	22.3	--	0.500	20.6	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00070	J	0.0020	--	--	--	0.00075	J	0.0020	0.0013	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	--	--	--	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	25.9	--	2.0	16.4	--	2.0	10.4	--	2.0	6.8	--	2.0
		Sulfate	600	250	NS	250	36.6	--	5.0	35.2	--	5.0	30.6	--	5.0	24.7	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	--	--	--	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	0.091	J	0.10	0.13	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	120	J	5.0	--	--	--	112	--	5.0	105	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	--	--	--	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	120	J	5.0	--	--	--	112	--	5.0	105	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106088			KAFB-106089			KAFB-106090			KAFB-106090		
						Field Sample ID:	GW088-164			GW089-164			GW090-164			GW090-564		
						Sample Date:	10/17/2016			10/18/2016			10/18/2016			10/18/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	475.06			488.99			562.41			562.41		
						Reference Elevation Interval (ft AMSL):	4857			4838			4814			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	0.1	0.05	0.075	0.05	**0.20**	--	0.019	**0.063**	--	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106088			KAFB-106089			KAFB-106090			KAFB-106090		
						Field Sample ID:	GW088-164			GW089-164			GW090-164			GW090-564		
						Sample Date:	10/17/2016			10/18/2016			10/18/2016			10/18/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	475.06			488.99			562.41			562.41		
						Reference Elevation Interval (ft AMSL):	4857			4838			4814			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	49.0	--	0.200	40.8	--	0.200	34.1	--	0.200	33.1	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.76	--	0.0500	5.70	--	0.0500	4.89	--	0.0500	4.75	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0378	--	0.0050	0.0020	J	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.46	--	0.500	2.28	--	0.500	2.14	--	0.500	1.98	--	0.500
		Sodium	NS	NS	NS	NS	26.0	--	0.500	23.7	--	0.500	22.8	--	0.500	22.1	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00089	J	0.0020	0.00086	J	0.0020	0.0011	J	0.0020	0.00099	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	0.00012	J	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	16.3	--	2.0	12.3	--	2.0	8.9	--	2.0	9.0	--	2.0
		Sulfate	600	250	NS	250	34.3	--	5.0	35.9	--	5.0	28.9	--	5.0	28.3	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	0.35	J	0.10	0.18	J	0.10	0.21	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	138	J	5.0	119	--	5.0	105	--	5.0	105	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	138	J	5.0	119	--	5.0	105	--	5.0	105	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106091 [g]			KAFB-106091 [g]			KAFB-106091 [g]			KAFB-106092		
						Field Sample ID:	GW091-164			GW091-164			GW091-564			GW092-164		
						Sample Date:	10/13/2016			12/15/2016			12/15/2016			10/17/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	468.98			468.98			468.98			480.35		
						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	0.1	0.05	0.075	0.05	**0.090**	--	0.019	**0.091**	--	0.019	**0.094**	--	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	--	--	--	--	--	--	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	--	--	--	--	--	--	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	--	--	--	--	--	--	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	--	--	--	--	--	--	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	--	--	--	--	--	--	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	--	--	--	--	--	--	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	--	--	--	--	--	--	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	--	--	--	--	--	--	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	--	--	--	--	--	--	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	--	--	--	--	--	--	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	--	--	--	--	--	--	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	--	--	--	--	--	--	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	--	--	--	--	--	--	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	--	--	--	--	--	--	ND	U	10
		Benzene	10	5	4.5	5	**29**	R	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	--	--	--	--	--	--	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	--	--	--	--	--	--	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	--	--	--	--	--	--	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	--	--	--	--	--	--	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	--	--	--	--	--	--	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	--	--	--	--	--	--	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	--	--	--	--	--	--	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	--	--	--	--	--	--	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	--	--	--	--	--	--	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	--	--	--	--	--	--	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	--	--	--	--	--	--	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	--	--	--	--	--	--	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106091 [g]			KAFB-106091 [g]			KAFB-106091 [g]			KAFB-106092		
						Field Sample ID:	GW091-164			GW091-164			GW091-564			GW092-164		
						Sample Date:	10/13/2016			12/15/2016			12/15/2016			10/17/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	468.98			468.98			468.98			480.35		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	--	--	--	--	--	--	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	--	--	--	--	--	--	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	--	--	--	--	--	--	ND	U	1
		Ethylbenzene	750	700	15	700	2	R	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	--	--	--	--	--	--	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	--	--	--	--	--	--	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	10	R	1	--	--	--	--	--	--	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	--	--	--	--	--	--	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	--	--	--	--	--	--	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	--	--	--	--	--	--	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	--	--	--	--	--	--	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	--	--	--	--	--	--	ND	U	2
		o-Xylene	NS	10,000	190	10,000	4	R	1	--	--	--	--	--	--	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	--	--	--	--	--	--	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	--	--	--	--	--	--	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	--	--	--	--	--	--	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		Toluene	750	1000	1,100	750	31	R	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	--	--	--	--	--	--	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	--	--	--	--	--	--	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	--	--	--	--	--	--	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	--	--	--	--	--	--	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	--	--	--	--	--	--	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	--	--	--	--	--	--	ND	U	1
		Xylenes, Total	620	10,000	190	620	13	R	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	43.4	--	0.200	--	--	--	--	--	--	35.4	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	--	--	--	--	--	--	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.14	--	0.0500	--	--	--	--	--	--	4.87	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0163	J	0.0050	--	--	--	--	--	--	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.36	--	0.500	--	--	--	--	--	--	2.25	--	0.500
		Sodium	NS	NS	NS	NS	24.1	--	0.500	--	--	--	--	--	--	21.9	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0010	J	0.0020	--	--	--	--	--	--	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	--	--	--	--	--	--	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	--	--	--	--	--	--	ND	U	2.5
		Chloride	250	250	NS	250	29.8	--	2.0	--	--	--	--	--	--	10.5	--	2.0
		Sulfate	600	250	NS	250	46.0	--	5.0	--	--	--	--	--	--	30.6	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	--	--	--	--	--	--	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	--	--	--	--	--	--	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.43	--	0.10	--	--	--	--	--	--	0.16	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	102	J	5.0	--	--	--	--	--	--	106	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	--	--	--	--	--	--	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	102	J	5.0	--	--	--	--	--	--	106	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106093			KAFB-106094			KAFB-106095			KAFB-106096		
						Field Sample ID:	GW093-164			GW094-164			GW095-164			GW096-164		
						Sample Date:	10/13/2016			10/20/2016			10/19/2016			10/20/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	550.38			499.11			511.03			583.75		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.026
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106093			KAFB-106094			KAFB-106095			KAFB-106096		
						Field Sample ID:	GW093-164			GW094-164			GW095-164			GW096-164		
						Sample Date:	10/13/2016			10/20/2016			10/19/2016			10/20/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	550.38			499.11			511.03			583.75		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	32.4	--	0.200	45.3	--	0.200	42.1	--	0.200	29.3	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.75	--	0.0500	6.76	--	0.0500	5.84	--	0.0500	4.33	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0037	J	0.0050	0.184	--	0.0050	ND	U	0.0050	0.0048	J	0.0050
		Potassium	NS	NS	NS	NS	2.00	--	0.500	2.48	--	0.500	2.65	--	0.500	1.88	--	0.500
		Sodium	NS	NS	NS	NS	22.7	--	0.500	23.6	--	0.500	26.8	--	0.500	21.2	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0013	J	0.0020	ND	U	0.0020	0.0010	J	0.0020	0.0015	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00046	J	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	8.6	--	2.0	19.8	--	2.0	20.6	--	2.0	8.1	--	2.0
		Sulfate	600	250	NS	250	30.8	--	5.0	45.4	--	5.0	44.9	--	5.0	27.0	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	ND	U	0.10	0.12	J	0.10	0.11	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	108	J	5.0	124	--	5.0	113	--	5.0	99.8	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	108	J	5.0	124	--	5.0	113	--	5.0	99.8	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106103			KAFB-106104			KAFB-106105			KAFB-106106		
						Field Sample ID:	GW103-164			GW104-164			GW105-164			GW106-164		
						Sample Date:	10/18/2016			10/18/2016			11/2/2016			10/11/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	492.46			517.41			486			476.17		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	0.05	0.075	0.05	ND	U	0.024	ND	U	0.019	0.014	J	0.019	0.046	--	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106103			KAFB-106104			KAFB-106105			KAFB-106106		
						Field Sample ID:	GW103-164			GW104-164			GW105-164			GW106-164		
						Sample Date:	10/18/2016			10/18/2016			11/2/2016			10/11/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	492.46			517.41			486			476.17		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	33.3	--	0.200	31.8	--	0.200	41.8	--	0.200	47.7	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.65	--	0.0500	4.45	--	0.0500	5.79	--	0.0500	6.66	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0051	J	0.0050	0.0025	J	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.03	--	0.500	2.10	--	0.500	2.34	--	0.500	2.88	--	0.500
		Sodium	NS	NS	NS	NS	24.8	--	0.500	24.5	--	0.500	23.5	--	0.500	26.1	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0018	J	0.0020	0.00087	J	0.0020	0.0013	J	0.0020	0.0012	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	10.6	--	2.0	9.6	--	2.0	21.3	--	2.0	23.4	--	2.0
		Sulfate	600	250	NS	250	29.3	--	5.0	27.6	--	5.0	48.1	--	5.0	50.9	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.26	J	0.10	0.059	J	0.10	0.55	J	0.10	0.49	J	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	109	--	5.0	108	--	5.0	107	J	5.0	97.2	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	109	--	5.0	108	--	5.0	107	J	5.0	97.2	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106107			KAFB-106107			KAFB-106212			KAFB-106213		
						Field Sample ID:	GW107-164			GW107-564			GW212-164			GW213-164		
						Sample Date:	11/10/2016			11/10/2016			10/31/2016			10/13/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	512			512			554.5			475.3		
						Reference Elevation Interval (ft AMSL):	4814			4814			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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106107			KAFB-106107			KAFB-106212			KAFB-106213		
						Field Sample ID:	GW107-164			GW107-564			GW212-164			GW213-164		
						Sample Date:	11/10/2016			11/10/2016			10/31/2016			10/13/2016		
						Sample Type:	REG			Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	512			512			554.5			475.3		
						Reference Elevation Interval (ft AMSL):	4814			4814			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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	38.9	--	0.200	39.7	--	0.200	34.5	--	0.200	44.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	5.49	--	0.0500	5.57	--	0.0500	4.83	--	0.0500	6.28	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	0.0020	J	0.0050
		Potassium	NS	NS	NS	NS	2.44	--	0.500	2.41	--	0.500	2.13	--	0.500	2.17	--	0.500
		Sodium	NS	NS	NS	NS	22.7	--	0.500	23.1	--	0.500	24.7	--	0.500	30.6	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.0012	J	0.0020	0.0012	J	0.0020	0.00077	J	0.0020	0.0011	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	0.00013	J	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	11.1	--	2.0	10.7	J	2.0	12.3	--	2.0	45.0	--	20.0
		Sulfate	600	250	NS	250	42.8	--	5.0	42.4	J	5.0	29.0	--	5.0	33.2	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.21	J	0.10	0.19	J	0.10	0.081	J	0.10	1.4	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	ND	U	0.050
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	1.2	--	0.50
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	1.4	--	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	105	--	5.0	106	--	5.0	109	J	5.0	105	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	105	--	5.0	106	--	5.0	109	J	5.0	105	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106214			KAFB-106215			KAFB-106219			KAFB-106220		
						Field Sample ID:	GW214-164			GW215-164			GW219-164			GW220-164		
						Sample Date:	10/17/2016			11/7/2016			10/6/2016			10/6/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	490.08			554.08			475			490		
						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	0.1	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)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106214			KAFB-106215			KAFB-106219			KAFB-106220		
						Field Sample ID:	GW214-164			GW215-164			GW219-164			GW220-164		
						Sample Date:	10/17/2016			11/7/2016			10/6/2016			10/6/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	490.08			554.08			475			490		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	47.1	--	0.200	31.6	--	0.200	41.4	--	0.200	40.5	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.54	--	0.0500	4.28	--	0.0500	5.53	--	0.0500	5.34	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	0.0239	--	0.0050
		Potassium	NS	NS	NS	NS	2.47	--	0.500	1.98	--	0.500	2.44	--	0.500	2.43	--	0.500
		Sodium	NS	NS	NS	NS	30.6	--	0.500	25.9	--	0.500	21.1	--	0.500	21.8	--	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00078	J	0.0020	0.0011	J	0.0020	0.00095	J	0.0020	ND	U	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	49.0	--	20.0	8.2	--	2.0	16.2	--	2.0	11.1	--	2.0
		Sulfate	600	250	NS	250	33.4	--	5.0	27.8	--	5.0	38.0	--	5.0	32.6	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	1.7	J	0.10	ND	U	0.10	0.40	--	0.10	0.17	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	103	J	5.0	113	--	5.0	115	--	5.0	116	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	103	J	5.0	113	--	5.0	115	--	5.0	116	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106221			KAFB-106225			KAFB-106225			KAFB-106226		
						Field Sample ID:	GW221-164			GW225-164			GW225-564			GW226-164		
						Sample Date:	10/6/2016			10/11/2016			10/11/2016			11/9/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	554.4			474.7			474.7			490.2		
						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	0.1	0.05	0.075	0.05	ND	U	0.019	**0.70**	--	0.19	**0.71**	--	0.19	**0.41**	--	0.097
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	0.7	J	1	0.9	J	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	0.7	J	1	0.8	J	1	3	--	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106221			KAFB-106225			KAFB-106225			KAFB-106226		
						Field Sample ID:	GW221-164			GW225-164			GW225-564			GW226-164		
						Sample Date:	10/6/2016			10/11/2016			10/11/2016			11/9/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	554.4			474.7			474.7			490.2		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	0.7	J	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	0.7	J	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	36.7	--	0.200	51.6	--	0.200	52.0	--	0.200	49.4	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	4.72	--	0.0500	7.44	--	0.0500	7.47	--	0.0500	7.02	J	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0050	0.0108	--	0.0050	0.0102	--	0.0050	0.0025	J	0.0050
		Potassium	NS	NS	NS	NS	2.29	--	0.500	2.88	--	0.500	2.91	--	0.500	2.64	--	0.500
		Sodium	NS	NS	NS	NS	22.8	--	0.500	27.6	--	0.500	27.8	--	0.500	27.3	J	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	0.00076	J	0.0020	0.0018	J	0.0020	0.0016	J	0.0020	0.00070	J	0.0020
		Lead	NS	0.015	0.015	0.015	ND	U	0.00025	ND	U	0.00025	ND	U	0.00025	0.000098	J	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	10.7	--	2.0	31.3	--	8.0	31.2	--	8.0	26.2	J	2.0
		Sulfate	600	250	NS	250	33.1	--	5.0	48.5	--	5.0	50.9	--	5.0	50.8	J	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	0.16	--	0.10	0.15	J	0.10	0.15	J	0.10	ND	U	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	115	--	5.0	109	J	5.0	110	J	5.0	127	--	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	115	--	5.0	109	J	5.0	110	J	5.0	127	--	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106227			KAFB-3411		
						Field Sample ID:	GW226-564			GW227-164			GW3411-164		
						Sample Date:	11/9/2016			10/11/2016			11/16/2016		
						Sample Type:	Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	490.2			554			502.00		
						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	0.1	0.05	0.075	0.05	**0.43**	--	0.094	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	3	--	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2
		Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106227			KAFB-3411		
						Field Sample ID:	GW226-564			GW227-164			GW3411-164		
						Sample Date:	11/9/2016			10/11/2016			11/16/2016		
						Sample Type:	Field Duplicate			REG			REG		
						Sample Depth (ft bgs):	490.2			554			502.00		
						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**
VOCs	Method SW8260C (µg/L)	Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	0.7	J	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	0.7	J	1	ND	U	1	ND	U	1
Total Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	49.2	--	0.200	35.7	--	0.200	35.0	--	0.200
		Iron, dissolved	1.0	NS	NS	1.0	0.0779	J	0.200	ND	U	0.200	ND	U	0.200
		Magnesium	NS	NS	NS	NS	6.98	J	0.0500	5.03	--	0.0500	5.14	--	0.0500
		Manganese, dissolved	0.2	NS	NS	0.2	0.0261	--	0.0050	ND	U	0.0050	ND	U	0.0050
		Potassium	NS	NS	NS	NS	2.57	--	0.500	2.35	--	0.500	2.12	--	0.500
		Sodium	NS	NS	NS	NS	27.3	J	0.500	23.4	--	0.500	20.0	J	0.500
	Method SW6020A (mg/L)	Arsenic	NS	0.01	0.00052	0.01	ND	U	0.0020	0.0010	J	0.0020	0.0010	J	0.0020
		Lead	NS	0.015	0.015	0.015	0.00011	J	0.00025	0.00011	J	0.00025	0.00017	J	0.00025
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	26.6	J	2.0	9.0	--	2.0	9.7	--	2.0
		Sulfate	600	250	NS	250	51.6	J	5.0	32.2	--	5.0	29.1	--	5.0
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.0	ND	U	2.0	ND	U	2.0
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.60	ND	U	0.60	ND	U	0.60
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	10[e]	NS	10[e]	ND	U	0.10	0.090	J	0.10	0.21	--	0.10
	Method E353.2 (mg/L)	Nitrogen as nitrite[h]	NS	1	NS	1	--	--	--	--	--	--	--	--	--
	Method E300.0 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--
	Method E353.2 (mg/L)	Nitrate[h]	NS	NS	NS	NS	--	--	--	--	--	--	--	--	--
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	127	--	5.0	106	J	5.0	102	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	127	--	5.0	106	J	5.0	102	J	5.0

Table 3-11
Groundwater Analytical Results for Groundwater Monitoring Network Wells, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). 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 2009).

c EPA Region 6 RSL for Tapwater (May 2016) 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 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.

[f] Due to pump failure, the required sample volume for well KAFB-106086 could not be collected on 17 Oct and the well was resampled on 8 Nov.

[g] Due to fuel contamination at the location of well KAFB-106091, the well was resampled for EDB, benzene, ethylbenzene, toluene, and total xylenes (BTEX) on 15 Dec. The BTEX results from 13 Oct were R-qualified (rejected).

h Nitrate and nitrite analysis was conducted to confirm nitrate as the primary form of nitrogen based on the nitrate/nitrogen analysis.

µg/L = microgram per liter
bgs = below-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
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
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
Val Quals based on independent data validation
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
R = Qualifier denotes rejected data.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Qualifier not assigned to the associated numerical value.

Table 3-12
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, Sodium, and Oxidation Reduction Potential Concentrations in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q4 2016

		Chemical Class	**Anions (mg/L)**									**Metals (mg/L)**						
		Parameter	Chloride			Sulfate			Nitrate/Nitrite Nitrogen			Calcium			Sodium			Field Parameter
		Analytical Method	Method E300.0			Method E300.0			Method E353.2			Method SW6010C			Method SW6010C			ORP (mV)
		NMAC NMWQCC[a]	250			600			10[e]			NS			NS			NS
		EPA MCLs[b]	250			250			10[e]			NS			NS			NS
		EPA RSLs[c]	NS			NS			NS			NS			NS			NS
		Project Screening Level[d]	250			250			10[e]			NS			NS			NS
Well Location ID	**Field Sample ID**	**Sample Date**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**
KAFB-106005	ST106-GW-P-1065-16062010	6/16/2010	133	--	10	173	--	10	--	--	--	128	--	0.1	64.4	--	0.3	94.1
	ST106-GW-P-1065-14072010	7/14/2010	145	--	10	181	--	10	--	--	--	122	--	0.1	64.7	--	0.3	288
	ST106-GW-P-1065-20102010	10/20/2010	161	--	10	164	--	10	--	--	--	118	--	0.1	65.9	--	0.3	145
	GW0005	2/21/2011	160	--	0.5	154	--	2.0	--	--	--	138	--	5.0	79.8	--	5.0	-61
	GW0045	6/10/2011	156	--	10	101	J-	25	--	--	--	117	--	5.0	67.2	--	5.0	-25
	GW0134	9/20/2011	151	--	20	20.3	J	40	ND	U	1.5	132	--	5.0	69.9	--	5.0	-114
	GW0259	12/12/2011	137	--	0.5	19.0	--	2.0	ND	U	1.5	137	--	5.0	71.7	--	5.0	-239
	GW0384	3/1/2012	130	--	2.5	33.3	--	10	ND	U	1.5	131	--	5.0	59.8	--	5.0	-290
	GW0508	5/9/2012	175	--	0.5	106	--	2.5	ND	U	1.5	147	--	5.0	73.9	--	5.0	-295
	GW0632	8/9/2012	19.3	--	0.5	8.73	--	2.5	ND	U	1.5	44.8	--	5.0	27.5	--	5.0	-293
	GW0756	11/12/2012	149	--	0.5	28.7	--	2.5	ND	U	1.5	136	--	5.0	64.9	--	5.0	-335
	GW0890	3/25/2013	154	--	0.5	114	--	2.5	1.01	J	1.5	146	--	5.0	67.6	--	5.0	-329
	GW1025	5/15/2013	149	--	2.5	99.6	--	2.5	0.67	J	1.5	138	--	5.0	65.1	--	5.0	-332
	GW1159	8/27/2013	141	--	0.5	69.3	--	2.5	0.934	J	1.5	131	--	5.0	62	--	5.0	-320
	GW1292	11/13/2013	101	--	0.5	ND	U	2.0	ND	U	1.5	125	--	5.0	54	--	5.0	-300
	GW1425	3/13/2014	183	--	0.5	101	--	2.0	0.734	J	1.5	143	--	5.0	71.6	--	5.0	-276
	GW1558	6/3/2014	173	--	0.5	91	--	2.5	0.704	J	1.5	153	--	5.0	75.4	--	5.0	-329
	GW1722	9/4/2014	167	--	0.5	88.7	--	2.5	1.51	--	1.5	141	--	5.0	72.3	--	5.0	-341
	GW1855	11/20/2014	174	--	0.5	97.3	--	2.5	1.12	--	0.2	136	--	5.0	69.2	--	5.0	-309
	GW1988	3/12/2015	208	--	0.5	184	--	2.5	1.85	--	0.2	176	--	5.0	83.1	--	5.0	-336
	GW2154	6/18/2015	185	--	0.5	123	--	2.5	1.11	--	0.2	164	J	5.0	67.6	--	5.0	-333
	GW2304	9/1/2015	159	--	0.5	108	--	2.5	1.62	--	0.2	150	--	10	73.4	--	5.0	-329
	GW2445	11/30/2015	171	--	0.5	147	--	2.5	2.12	--	0.2	138	--	10	62.7	--	5.0	0.01
	GW005-161	2/11/2016	147	--	20	130	--	50	2.3	J-	0.10	165	--	0.40	73.9	--	2.0	-303.5
	GW005-561	2/11/2016	144	--	20	129	--	50	2.2	J-	0.10	165	--	0.40	73.8	--	2.0	-303.5
	GW005-162	5/17/2016	155	--	20	158	--	20	2.3	--	0.10	157	--	0.40	69.6	--	2.0	-315.5
	GW005-163	8/3/2016	154	--	40	216	--	100	2.7	--	0.1	177	J	0.2	75.1	--	0.5	-313.9
	GW005-164	11/15/2016	225	--	20.0	**339**	--	50.0	0.45	--	0.10	226	--	0.200	88.0	--	0.500	-213

Table 3-12
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, Sodium, and Oxidation Reduction Potential Concentrations in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q4 2016

		Chemical Class	**Anions (mg/L)**									**Metals (mg/L)**						
		Parameter	Chloride			Sulfate			Nitrate/Nitrite Nitrogen			Calcium			Sodium			Field Parameter
		Analytical Method	Method E300.0			Method E300.0			Method E353.2			Method SW6010C			Method SW6010C			ORP (mV)
		NMAC NMWQCC[a]	250			600			10[e]			NS			NS			NS
		EPA MCLs[b]	250			250			10[e]			NS			NS			NS
		EPA RSLs[c]	NS			NS			NS			NS			NS			NS
		Project Screening Level[d]	250			250			10[e]			NS			NS			NS
Well Location ID	**Field Sample ID**	**Sample Date**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**
KAFB-106009	ST106-GW-1069-06052010	5/6/2010	26	--	1.0	25.3	--	1.0	--	--	--	67.9	--	0.1	30.6	--	0.3	NA
	ST106-GW-P-1069-16062010	6/16/2010	25.1	--	1.0	29.8	--	1.0	--	--	--	61.4	--	0.1	27.4	--	0.3	-215
	ST106-GW-P-1069-14072010	7/14/2010	39	--	1.0	28.7	--	1.0	--	--	--	76.7	--	0.1	30.2	--	0.3	0.2
	ST106-GW-P-1069-20102010	10/20/2010	47.1	--	2.0	17.4	--	1.0	--	--	--	89.1	--	0.1	34.8	--	0.3	-2.44
	GW0010	2/17/2011	50.2	--	0.5	14.9	--	2.0	--	--	--	110	--	5.0	37.7	--	5.0	-127
	GW0049	5/13/2011	52.2	--	1.0	7.58	--	2.5	--	--	--	124	--	5.0	38.3	--	5.0	-203
	GW0139	9/28/2011	74.5	--	20	15.2	J	40	ND	U	1.5	122	--	5.0	36.9	--	5.0	-207
	GW0263	11/22/2011	83.9	--	10	4.13	J	20	ND	U	1.5	120	--	5.0	34.5	--	5.0	-147
	GW0388	2/27/2012	107	--	2.5	ND	U	10	ND	U	1.5	163	--	5.0	44.0	--	5.0	-145
	GW0513	5/9/2012	118	--	0.5	ND	U	2.5	ND	U	1.5	174	--	5.0	46.3	--	5.0	-235
	GW0637	8/9/2012	124	--	0.5	ND	U	2.5	ND	U	1.5	172	--	5.0	46.6	--	5.0	-173
	GW0761	11/5/2012	129	--	0.5	ND	U	2.5	ND	U	1.5	169	--	5.0	46.3	--	5.0	-146
	GW0895	1/23/2013	129	--	0.5	ND	U	2.0	ND	U	1.5	170	--	5.0	48.1	--	5.0	-175
	GW1030	5/21/2013	118	--	2.5	12.2	--	2.5	0.421	J	1.5	149	--	5.0	50.3	--	5.0	-165
	GW1163	8/20/2013	135	--	0.5	7.95	--	2.5	ND	U	1.5	171	--	5.0	49.2	--	5.0	-306
	GW1296	11/19/2013	120	--	0.5	2.76	--	2.0	ND	U	1.5	153	--	5.0	42.9	--	5.0	-302
	GW1429	3/5/2014	129	--	0.5	52.6	--	2.0	ND	U	1.5	147	--	5.0	49.7	J+	5.0	-127
	GW1430	3/5/2014	129	--	0.5	52.4	--	2.0	ND	U	1.5	146	--	5.0	48.6	J+	5.0	-127
	GW1562	6/3/2014	186	--	0.5	135	--	2.5	5.64	--	1.5	164	--	5.0	49.7	--	5.0	-170
	GW1726	9/2/2014	205	--	0.5	129	--	2.5	8.18	--	1.5	191	--	5.0	53.7	--	5.0	86
	GW1727	9/2/2014	208	--	0.5	132	--	2.5	7.82	--	1.5	183	--	5.0	52.8	--	5.0	86
	GW1859	11/18/2014	248	--	0.5	165	--	2.5	**15.7**	--	1.2	184	--	5.0	51.3	--	5.0	-53
	GW1992	3/11/2015	**312**	--	1.0	**292**	--	5.0	**18.7**	--	1.0	242	--	5.0	59.9	--	5.0	89
	GW2158	6/18/2015	**312**	--	2.5	**273**	--	12.5	**14.2**	--	1.0	246	--	5.0	52.3	--	5.0	88
	GW2308	8/27/2015	**308**	--	2.5	**289**	--	12.5	**15.1**	--	2.0	244	--	25	54.7	--	5.0	79
	GW2459	11/3/2015	**330**	J-	2.5	**319**	J-	12.5	**16.3**	J-	2.0	266	--	25	55.4	--	5.0	NR
	GW009-161	2/9/2016	**421**	J+	200	**372**	--	50.0	**14.9**	--	0.5	285	--	0.40	55.4	--	2.0	115.7
	GW009-162	5/5/2016	**336**	--	40	**423**	--	100.0	**25.3**	--	1.0	302	--	0.40	59.7	--	2.0	14.1
	GW009-163	7/21/2016	**367**	--	40	**446**	--	100	**13.5**	J	0.5	329	--	0.2	65	--	0.5	80.7
	GW009-563	7/21/2016	**371**	--	40	**455**	--	100	**13.1**	J	0.5	315	--	0.2	62.3	--	0.5	80.7
	GW009-164	11/3/2016	**411**	--	200	**428**	--	50.0	**19.9**	J	0.50	305	--	0.200	62.8	--	0.500	55.0

Table 3-12
Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, Sodium, and Oxidation Reduction Potential Concentrations in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q4 2016

		Chemical Class	**Anions (mg/L)**									**Metals (mg/L)**						
		Parameter	Chloride			Sulfate			Nitrate/Nitrite Nitrogen			Calcium			Sodium			Field Parameter
		Analytical Method	Method E300.0			Method E300.0			Method E353.2			Method SW6010C			Method SW6010C			ORP (mV)
		NMAC NMWQCC[a]	250			600			10[e]			NS			NS			NS
		EPA MCLs[b]	250			250			10[e]			NS			NS			NS
		EPA RSLs[c]	NS			NS			NS			NS			NS			NS
		Project Screening Level[d]	250			250			10[e]			NS			NS			NS
Well Location ID	**Field Sample ID**	**Sample Date**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**	**Val Qual**	**LOQ**	**Result**
KAFB-106012R	GW1565	5/20/2014	95.4	--	0.5	128	--	2.5	2.37	--	1.5	101	--	5.0	35.8	--	5.0	103
	GW1730	8/12/2014	154	--	0.5	**262**	--	5.0	4.40	--	1.5	175	--	5.0	50.8	--	5.0	147
	GW1862	10/23/2014	170	--	1.0	**302**	--	5.0	2.22	--	0.2	165	--	5.0	47.7	--	5.0	136
	GW1863	10/23/2014	170	--	1.0	**302**	--	5.0	2.19	--	0.2	170	--	5.0	48.3	--	5.0	136
	GW1995	2/2/2015	162	--	0.5	**329**	--	5.0	4.75	--	0.4	165	--	5.0	50.6	--	5.0	128
	GW2161	5/27/2015	179	--	0.5	**330**	--	12.5	5.21	--	0.4	169	--	5.0	49.1	J-	5.0	132.2
	GW2311	7/27/2015	186	--	0.5	**336**	--	12.5	5.36	--	1.0	173	--	10	50.9	--	5.0	122
	GW2462	10/21/2015	189	--	0.5	**344**	--	12.5	5.92	--	1.0	189	--	25	52.8	--	5.0	181
	GW2463	10/21/2015	189	--	0.5	**346**	--	12.5	5.65	--	1.0	179	--	25	50.8	--	5.0	181
	GW012-R-161	2/8/2016	168	J+	20	**297**	--	50	5.7	--	0.5	186	--	0.40	53.7	--	2.0	164.4
	GW012-R-162	4/25/2016	200	--	40	**343**	--	25	ND	U	0.6	191	--	0.4	55.3	--	2.0	106.8
	GW012-R-562	4/25/2016	215	--	40	**337**	--	25	ND	U	0.6	193	--	0.4	56	--	2.0	106.8
	GW012-R-163	7/19/2016	194	--	40	**372**	--	25	5.8	--	0.5	214	--	0.2	59.3	--	0.5	179.2
	GW012R-164	11/8/2016	175	--	20.0	**378**	--	50.0	5.6	--	0.50	200	--	0.200	56.9	--	0.500	150.9

Table 3-12

Chloride, Sulfate, Nitrate/Nitrite Nitrogen, Calcium, Sodium, and Oxidation Reduction Potential Concentrations in Wells KAFB-106005, KAFB-106009, and KAFB-106012R, Q4 2016

[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 2004).

[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40 CFR Part 141, 143 (May 2009).

[c] EPA Region 6 RSL for Tapwater (June 2015) 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 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.

CFR = Code of Federal Regulations
EPA = U.S. Environmental Protection Agency
ERPIMS = Environmental Restoration Program Information Management System
LOQ = limit of quantitation
MCL = maximum contaminant level
mg/L = milligram per liter
mV = millivolt
NA = not available from ERPIMS
ND = not detected
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NR = not recorded
NS = not specified
ORP = oxidation reduction potential
RSL = regional screening level
Val Qual = validation qualifier
Shading = reported concentrations are above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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 low bias.
J+ = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated with a potential high bias.
U = Qualifier denotes the analyte is not detected above the detection limit.
-- = Qualifier not assigned to the associated numerical value.

Table 3-13
Comparison of Analytical Results between Bennett Pumps and Passive Vertical Profile Samplers Q4 2016

Well Location ID:	KAFB-106035			
Sample Date:	10/27/2016			
Reference Elevation Interval (ft AMSL):	4857			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW035-164			0.58	1U
(Dup) GW035-564			0.31	1U
GW035-454.84-164	0.51	1U		
GW035-457.44-164	0.6	1U		
GW035-460.04-164	0.7	1U		
GW035-462.64-164	0.62	1U		
GW035-465.24-164	0.64	1U		
GW035-467.24-164	0.72	1U		
GW035-469.84-164	0.63	1U		
GW035-472.44-164	0.6	1U		
GW035-475.04-164	0.66	1U		
GW035-477.64-164	0.6	1U		
GW035-480.24-164	0.63	1U		
PDB AVERAGE CONCENTRATION	**0.63**	**1U**		

KAFB-106036				
10/27/2016				
4838				
	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW036-164			0.28	1U
GW036-482.13-164	0.35	1U		
GW036-484.73-164	0.3	1U		
GW036-487.33-164	0.28	1U		
GW036-489.93-164	0.26	1U		
GW036-492.53-164	0.27	1U		
GW036-495.13-164	0.26	1U		
PDB AVERAGE CONCENTRATION	**0.29**	**1U**		

KAFB-106037				
11/8/2016				
4814				
	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW037-164			0.41	1
GW037-507.65-164	0.28	1U		
GW037-510.25-164	0.4	1U		
GW037-512.85-164	0.33	1U		
GW037-515.45-164	0.3	1U		
GW037-518.05-164	0.37	1U		
GW037-520.65-164	0.43	1U		
PDB AVERAGE CONCENTRATION	**0.35**	**1U**		

Well Location ID:	KAFB-106014			
Sample Date:	11/16/2016			
Reference Elevation Interval (ft AMSL):	4857			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW014-164			0.43	220
GW014-489.96-164	0.87	110		
(Dup) GW014-489.96-564	0.67	110		
GW014-492.56-164	0.81	110		
GW014-495.16-164	0.80	100		
GW014-497.76-164	0.80	110		
GW014-500.36-164	0.80	110		
GW014-502.96-164	0.64	100		
GW014-505.56-164	0.68	100		
GW014-508.16-164	0.67	110		
GW014-510.76-164	0.63	110		
GW014-513.36-164	0.66	290		
(Dup) GW014-513.36-564	0.62	280		
PDB AVERAGE CONCENTRATION	0.72	136.7		

Well Location ID:	KAFB-106063			
Sample Date:	11/2/2016			
Reference Elevation Interval (ft AMSL):	4838			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW063-164			0.025J	0.6J
GW063-508.70-164	0.026J	3		
GW063-511.30-164	0.026J	3		
GW063-513.90-164	0.025J	3		
GW063-516.50-164	0.026J	3		
GW063-519.10-164	0.025J	3		
GW063-521.70-164	0.022J	3		
PDB AVERAGE CONCENTRATION	0.025	3		

Well Location ID:	KAFB-106064			
Sample Date:	11/15/2016			
Reference Elevation Interval (ft AMSL):	4857			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW064-164			9.3	1000
(Dup) GW064-164			8.4	1000
GW064-488.60-164	7.00	580		
(Dup) GW064-488.60-164	6.30	640		
GW064-491.20-164	6.60	590		
GW064-493.80-164	8.30	670		
GW064-496.40-164	7.10	630		
GW064-499.00-164	6.90	620		
GW064-501.60-164	6.20	700		
GW064-504.20-164	11.00	960		
GW064-506.80-164	8.20	630		
PDB AVERAGE CONCENTRATION	7.50	669		

Well Location ID:	KAFB-106225			
Sample Date:	10/11/2016			
Reference Elevation Interval (ft AMSL):	4857			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW014-164			0.7	0.7J

Well Location ID:	KAFB-106226			
Sample Date:	11/9/2016			
Reference Elevation Interval (ft AMSL):	4838			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW226-164			0.41	3
(Dup) GW226-164			0.43	3
GW226-479.30-164	0.13	1U		
(Dup) GW226-479.30-564	0.13	1U		
GW226-479.30-164	0.14	1U		
GW226-481.90-164	0.14	1U		
GW226-484.50-164	0.14	1U		
GW226-487.10-164	0.14	1U		

Well Location ID:	KAFB-106227			
Sample Date:	10/11/2016			
Reference Elevation Interval (ft AMSL):	4814			
Sample Collection Method:	PDB		Bennett Pump	
Field Sample ID:	EDB (µg/L)	BENZENE (µg/L)	EDB (µg/L)	BENZENE (µg/L)
GW227-164			0.019U	1U

Table 3-13
Comparison of Analytical Results between Bennett Pumps and Passive Vertical Profile Samplers Q4 2016

AMSL = above mean sea level
EDB = ethylene dibromide (1,2-dibromoethane)
ft = feet
Dup = duplicate sample
LOD = limit of detection
LOQ = limit of quantitation
NA = not applicable
PDB = passive diffusion bag
RPD = relative percent difference
VOC = volatile organic compound
Qualifiers:
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte is not detected above the detection limit.

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-489.96-164			GW014-492.56-164			GW014-495.16-164			GW014-497.76-164		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	489.96			492.56			495.16			497.76		
						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	0.1	0.05	0.075	0.05	**0.87**		0.19	**0.81**		0.19	**0.80**		0.19	**0.80**		0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	**16**		2	15		2	**16**		2	**17**		2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.8	J	1	0.8	J	1	0.8	J	1	0.8	J	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	1		1	1		1	1	J	1	1		1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	2	J	2	2	J	2	2	J	2	3	J	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	1	J	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	9	J	20	ND	U	20	9	J	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	**110**		1	**110**		1	**100**		1	**110**		1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-489.96-164			GW014-492.56-164			GW014-495.16-164			GW014-497.76-164		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	489.96			492.56			495.16			497.76		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	51		1	52		1	50		1	53		1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	9		2	9		2	9		2	10		2
		m,p-Xylene	NS	10,000	190	10,000	1		1	1		1	1		1	1		1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	8		2	8		2	9		2	9		2
		o-Xylene	NS	10,000	190	10,000	0.9	J	1	0.8	J	1	1		1	1	J	1
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	1	J	2	2	J	2	2	J	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	2		1	2		1	2		1	2		1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	2		1	2		1	2		1	2		1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-500.36-164			GW014-502.96-164			GW014-502.96-564			GW014-505.56-164		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	500.36			502.96			502.96			505.56		
						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	0.1	0.05	0.075	0.05	**0.80**		0.19	**0.64**		0.19	**0.67**		0.19	**0.68**		0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	**16**		2	**16**		2	**16**		2	**16**		2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.8	J	1	0.8	J	1	0.8	J	1	0.8	J	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	1		1	1		1	1		1	1		1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	2	J	2	2	J	2	2	J	2	2	J	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	**110**		1	**100**		1	**110**		1	**100**		1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-500.36-164			GW014-502.96-164			GW014-502.96-564			GW014-505.56-164		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	500.36			502.96			502.96			505.56		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	52		1	51		1	53		1	51		1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	10		2	10		2	10		2	10		2
		m,p-Xylene	NS	10,000	190	10,000	1		1	1		1	1		1	1		1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	8		2	8		2	9		2	9		2
		o-Xylene	NS	10,000	190	10,000	0.8	J	1	0.7	J	1	1	J	1	0.9	J	1
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	1	J	2	2	J	2	2	J	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	2		1	2		1	2		1	2		1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	2		1	2		1	2		1	2		1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-508.16-164			GW014-510.76-164			GW014-513.36-164			GW014-513.36-564		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	508.16			510.76			513.36			513.36		
						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	0.1	0.05	0.075	0.05	**0.67**		0.19	**0.63**		0.19	**0.66**		0.19	**0.62**		0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,4-trimethylbenzene	NS	NS	15	15	15		2	**21**		2	**56**		4	**55**		4
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		1,2-dibromoethane	0.1	0.05	0.075	1	0.8	J	1	0.8	J	1	ND	U	2	ND	U	2
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2-dichloroethane	10	5	1.7	5	1	J	1	1		1	1	J	2	1	J	2
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,3,5-trimethylbenzene	NS	NS	120	120	3	J	2	5	J	2	17		4	16		4
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	16	ND	U	16
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	15	J	16	14	J	16
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	2	J	2	4	J	4	4	J	4
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	12	J	16	11	J	16
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	40	ND	U	40
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	200	ND	U	200
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	20	ND	U	20
		Benzene	10	5	4.5	5	**110**		1	**110**		1	**290**		2	**280**		2
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	4	ND	U	4

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106014			KAFB-106014			KAFB-106014			KAFB-106014		
						Field Sample ID:	GW014-508.16-164			GW014-510.76-164			GW014-513.36-164			GW014-513.36-564		
						Sample Date:	11/16/2016			11/16/2016			11/16/2016			11/16/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	508.16			510.76			513.36			513.36		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Ethylbenzene	750	700	15	700	51		1	55		1	140		2	140		2
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Isopropylbenzene	NS	NS	450	450	10		2	11		2	20		4	20		4
		m,p-Xylene	NS	10,000	190	10,000	2		1	12		1	210		2	200		2
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Naphthalene	30	NS	1.7	30	1	J	2	2	J	2	14		4	14		4
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		N-propylbenzene	NS	NS	660	660	8		2	10		2	20		4	19		4
		o-Xylene	NS	10,000	190	10,000	1		1	4		1	98		2	96		2
		Sec-butylbenzene	NS	NS	2,000	2,000	1	J	2	2	J	2	3	J	4	3	J	4
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Toluene	750	1000	1,100	750	2		1	6		1	510		2	490		2
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Xylenes, Total	620	10,000	190	620	3		1	16		1	300		2	290		2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106035		
						Field Sample ID:	GW035-454.84-164			GW035-457.44-164			GW035-460.04-164			GW035-462.64-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	454.84			457.44			460.04			462.64		
						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	0.1	0.05	0.075	0.05	**0.51**		0.19	**0.60**		0.19	**0.70**		0.19	**0.62**		0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.6	J	1	0.6	J	1	0.6	J	1	0.6	J	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106035		
						Field Sample ID:	GW035-454.84-164			GW035-457.44-164			GW035-460.04-164			GW035-462.64-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	454.84			457.44			460.04			462.64		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106035		
						Field Sample ID:	GW035-465.24-164			GW035-467.24-164			GW035-469.84-164			GW035-472.44-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	465.24			467.24			469.84			472.44		
						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	0.1	0.05	0.075	0.05	**0.64**		0.19	**0.72**		0.19	**0.63**		0.19	**0.60**		0.19
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.6	J	1	0.6	J	1	0.6	J	1	0.6	J	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	7	J	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106035		
						Field Sample ID:	GW035-465.24-164			GW035-467.24-164			GW035-469.84-164			GW035-472.44-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	465.24			467.24			469.84			472.44		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106036		
						Field Sample ID:	GW035-475.04-164			GW035-477.64-164			GW035-480.24-164			GW036-482.13-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	475.04			477.64			480.24			482.13		
						Reference Elevation Interval (ft AMSL):	4857			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	0.1	0.05	0.075	0.05	**0.66**		0.19	**0.60**		0.19	**0.63**		0.19	**0.35**		0.096
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	0.6	J	1	0.6	J	1	0.6	J	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	6	J	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106035			KAFB-106035			KAFB-106035			KAFB-106036		
						Field Sample ID:	GW035-475.04-164			GW035-477.64-164			GW035-480.24-164			GW036-482.13-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	475.04			477.64			480.24			482.13		
						Reference Elevation Interval (ft AMSL):	4857			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106036			KAFB-106036			KAFB-106036			KAFB-106036		
						Field Sample ID:	GW036-484.73-164			GW036-487.33-164			GW036-489.93-164			GW036-492.53-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	484.73			487.33			489.93			492.53		
						Reference Elevation Interval (ft AMSL):	4814			4814			4814			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	0.1	0.05	0.075	0.05	**0.31**		0.019	**0.28**		0.019	**0.26**		0.019	**0.27**		0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	7	J	20	7	J	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106036			KAFB-106036			KAFB-106036			KAFB-106036		
						Field Sample ID:	GW036-484.73-164			GW036-487.33-164			GW036-489.93-164			GW036-492.53-164		
						Sample Date:	10/27/2016			10/27/2016			10/27/2016			10/27/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	484.73			487.33			489.93			492.53		
						Reference Elevation Interval (ft AMSL):	4814			4814			4814			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106036			KAFB-106037			KAFB-106037			KAFB-106037		
						Field Sample ID:	GW036-495.13-164			GW037-507.65-164			GW037-507.65-564			GW037-510.25-164		
						Sample Date:	10/27/2016			11/8/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	495.13			507.65			507.65			510.25		
						Reference Elevation Interval (ft AMSL):	4814			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	0.1	0.05	0.075	0.05	**0.26**		0.019	**0.28**	J	0.019	**0.40**	J	0.094	**0.39**		0.095
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106036			KAFB-106037			KAFB-106037			KAFB-106037		
						Field Sample ID:	GW036-495.13-164			GW037-507.65-164			GW037-507.65-564			GW037-510.25-164		
						Sample Date:	10/27/2016			11/8/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			Field Duplicate			REG		
						Sample Depth (ft bgs):	495.13			507.65			507.65			510.25		
						Reference Elevation Interval (ft AMSL):	4814			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106037			KAFB-106037			KAFB-106037			KAFB-106037		
						Field Sample ID:	GW037-512.85-164			GW037-515.45-164			GW037-518.05-164			GW037-520.65-164		
						Sample Date:	11/8/2016			11/8/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	512.85			515.45			518.05			520.65		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	0.05	0.075	0.05	**0.33**		0.095	**0.30**		0.019	**0.37**		0.095	**0.43**		0.095
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106037			KAFB-106037			KAFB-106037			KAFB-106037		
						Field Sample ID:	GW037-512.85-164			GW037-515.45-164			GW037-518.05-164			GW037-520.65-164		
						Sample Date:	11/8/2016			11/8/2016			11/8/2016			11/8/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	512.85			515.45			518.05			520.65		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106063			KAFB-106063			KAFB-106063			KAFB-106063		
						Field Sample ID:	GW063-508.70-164			GW063-511.30-164			GW063-513.90-164			GW063-516.50-164		
						Sample Date:	11/2/2016			11/2/2016			11/2/2016			11/2/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	508.7			511.3			513.9			516.5		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	0.05	0.075	0.05	0.026	J	0.019	0.026	J	0.019	0.025	J	0.019	0.026	J	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	3		1	3		1	3		1	3		1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	ND	U	20	ND	U	20	9	J	20	ND	U	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	3		1	3		1	3		1	3		1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106063			KAFB-106063			KAFB-106063			KAFB-106063		
						Field Sample ID:	GW063-508.70-164			GW063-511.30-164			GW063-513.90-164			GW063-516.50-164		
						Sample Date:	11/2/2016			11/2/2016			11/2/2016			11/2/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	508.7			511.3			513.9			516.5		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	5		2	4	J	2	5	J	2	5	J	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106063			KAFB-106063			KAFB-106064			KAFB-106064		
						Field Sample ID:	GW063-519.10-164			GW063-521.70-164			GW064-488.60-164			GW064-488.60-564		
						Sample Date:	11/2/2016			11/2/2016			11/15/2016			11/15/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	519.1			521.7			488.6			488.6		
						Reference Elevation Interval (ft AMSL):	4838			4838			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	0.1	0.05	0.075	0.05	0.025	J	0.019	0.022	J	0.019	**7.0**		1.9	**6.3**		0.96
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	9	J	4	9	J	4
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	**7**		2	**6**		2
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,2-dichloroethane	10	5	1.7	5	3		1	3		1	2		2	2		2
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	16	ND	U	16
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	8	J	16	8	J	16
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	7	J	16	7	J	16
		Acetone	NS	NS	14,000	14,000	10	J	20	8	J	20	ND	U	40	ND	U	40
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	200	ND	U	200
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	20	ND	U	20
		Benzene	10	5	4.5	5	3		1	3		1	**580**		20	**640**		20
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	4	ND	U	4

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106063			KAFB-106063			KAFB-106064			KAFB-106064		
						Field Sample ID:	GW063-519.10-164			GW063-521.70-164			GW064-488.60-164			GW064-488.60-564		
						Sample Date:	11/2/2016			11/2/2016			11/15/2016			11/15/2016		
						Sample Type:	REG			REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	519.1			521.7			488.6			488.6		
						Reference Elevation Interval (ft AMSL):	4838			4838			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	120		2	110		2
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Isopropylbenzene	NS	NS	450	450	5	J	2	4	J	2	32		4	29		4
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	48		2	45		2
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	4	J	4	4	J	4
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	6	J	4	6	J	4
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	63		2	58		2
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	4	ND	U	4
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	190		2	170		2
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	8	ND	U	8
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	2	ND	U	2
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	110		2	100		2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106064			KAFB-106064			KAFB-106064		
						Field Sample ID:	GW064-491.20-164			GW064-493.80-164			GW064-496.40-164			GW064-499.00-164		
						Sample Date:	11/15/2016			11/15/2016			11/15/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	491.2			493.8			496.4			499		
						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	0.1	0.05	0.075	0.05	**6.6**		0.97	**8.3**		1.9	**7.1**		1.9	**6.9**		1.9
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1-dichloroethane	25	NS	27	25	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1-dichloroethene	5	7	280	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2,4-trimethylbenzene	NS	NS	15	15	10		4	10	J	4	8	J	4	8	J	4
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		1,2-dibromoethane	0.1	0.05	0.075	1	**7**		2	**8**		2	**8**		2	**8**		2
		1,2-dichlorobenzene	600	600	300	600	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dichloroethane	10	5	1.7	5	2		2	2		2	2		2	2		2
		1,2-dichloropropane	NS	5	4.4	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,3-dichlorobenzene	600	600	300	600	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,3-dichloropropane	NS	NS	370	370	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-butanone	NS	NS	5,600	5,600	ND	U	16	ND	U	16	ND	U	16	ND	U	16
		2-chlorotoluene	NS	NS	240	240	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		2-hexanone	NS	NS	38	38	8	J	16	8	J	16	10	J	16	11	J	16
		4-chlorotoluene	NS	NS	250	250	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		4-methyl-2-pentanone	NS	NS	1,200	1,200	6	J	16	ND	U	16	6	J	16	6	J	16
		Acetone	NS	NS	14,000	14,000	ND	U	40	ND	U	40	ND	U	40	ND	U	40
		Acrolein	NS	NS	0.042	100	ND	U	200	ND	U	200	ND	U	200	ND	U	200
		Acrylonitrile	NS	NS	0.52	20	ND	U	20	ND	U	20	ND	U	20	ND	U	20
		Benzene	10	5	4.5	5	**590**		20	**670**		20	**630**		20	**620**		20
		Bromobenzene	NS	NS	62	62	ND	U	4	ND	U	4	ND	U	4	ND	U	4

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106064			KAFB-106064			KAFB-106064		
						Field Sample ID:	GW064-491.20-164			GW064-493.80-164			GW064-496.40-164			GW064-499.00-164		
						Sample Date:	11/15/2016			11/15/2016			11/15/2016			11/15/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	491.2			493.8			496.4			499		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Bromodichloromethane	NS	80	1.3	80	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromoform	NS	80	33	80	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromomethane	NS	NS	7.5	7.5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon disulfide	NS	NS	810	810	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Carbon tetrachloride	10	5	4.5	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chlorobenzene	NS	100	78	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloroethane	NS	NS	21,000	21,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloroform	100	80	2.2	80	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Chloromethane	NS	NS	190	190	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Dibromochloromethane	NS	80	1.7	80	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Dibromomethane	NS	NS	8	8	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Ethylbenzene	750	700	15	700	130		2	130		2	130		2	130		2
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Isopropylbenzene	NS	NS	450	450	33		4	33		4	34		4	33		4
		m,p-Xylene	NS	10,000	190	10,000	52		2	60		2	66		2	66		2
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Methylene Chloride	100	5	110	5	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Naphthalene	30	NS	1.7	30	4	J	4	5	J	4	5	J	4	5	J	4
		n-Butylbenzene	NS	NS	1000	1000	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		N-propylbenzene	NS	NS	660	660	7	J	4	6	J	4	6	J	4	6	J	4
		o-Xylene	NS	10,000	190	10,000	66		2	61		2	62		2	62		2
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Styrene	NS	100	1,200	100	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Tert-butylbenzene	NS	NS	690	690	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Tetrachloroethene	20	5	110	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Toluene	750	1000	1,100	750	190		2	240		2	260		2	280		2
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Trichloroethene	100	5	4.9	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Vinyl acetate	NS	NS	410	410	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Vinyl chloride	1	2	0.19	1	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Xylenes, Total	620	10,000	190	620	120		2	120		2	130		2	130		2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106064			KAFB-106064			KAFB-106226		
						Field Sample ID:	GW064-501.60-164			GW064-504.20-164			GW064-506.80-164			GW226-479.30-164		
						Sample Date:	11/15/2016			11/15/2016			11/15/2016			11/9/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	501.6			504.2			506.8			479.3		
						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	0.1	0.05	0.075	0.05	**6.2**		0.94	**11**		1.9	**8.2**		1.9	**0.13**		0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	9		2	6		2	5	J	4	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	8	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	**8**		1	**16**		1	**9**		2	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	2		1	3		1	3		2	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	3	J	8	ND	U	16	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		2-hexanone	NS	NS	38	38	11		8	12		8	7	J	16	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	6	J	8	7	J	8	9	J	16	ND	U	8
		Acetone	NS	NS	14,000	14,000	19	J	20	16	J	20	ND	U	40	14	J	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	200	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	20	ND	U	10
		Benzene	10	5	4.5	5	**700**		5	**960**		5	**630**		20	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	4	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106064			KAFB-106064			KAFB-106064			KAFB-106226		
						Field Sample ID:	GW064-501.60-164			GW064-504.20-164			GW064-506.80-164			GW226-479.30-164		
						Sample Date:	11/15/2016			11/15/2016			11/15/2016			11/9/2016		
						Sample Type:	REG			REG			REG			REG		
						Sample Depth (ft bgs):	501.6			504.2			506.8			479.3		
						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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Ethylbenzene	750	700	15	700	150		1	150		1	55		2	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	8	ND	U	4
		Isopropylbenzene	NS	NS	450	450	37		2	32		2	19		4	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	73		1	72		1	18		2	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	8	ND	U	4
		Naphthalene	30	NS	1.7	30	5		2	4	J	2	3	J	4	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		N-propylbenzene	NS	NS	660	660	6		2	5	J	2	3	J	4	ND	U	2
		o-Xylene	NS	10,000	190	10,000	68		1	68		1	23		2	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	4	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Toluene	750	1000	1,100	750	310		5	700		5	200		2	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	8	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	2	ND	U	1
		Xylenes, Total	620	10,000	190	620	140		1	140		1	42		2	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106226			KAFB-106226			KAFB-106226		
						Field Sample ID:	GW226-479.30-564			GW226-481.90-164			GW226-484.50-164			GW226-487.10-164		
						Sample Date:	11/9/2016			11/9/2016			11/9/2016			11/9/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	479.3			481.9			484.5			487.1		
						Reference Elevation Interval (ft AMSL):	4838			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	0.1	0.05	0.075	0.05	**0.14**		0.019	**0.14**		0.019	**0.14**		0.019	**0.14**		0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	15	J	20	12	J	20	13	J	20	15	J	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106226			KAFB-106226			KAFB-106226		
						Field Sample ID:	GW226-479.30-564			GW226-481.90-164			GW226-484.50-164			GW226-487.10-164		
						Sample Date:	11/9/2016			11/9/2016			11/9/2016			11/9/2016		
						Sample Type:	Field Duplicate			REG			REG			REG		
						Sample Depth (ft bgs):	479.3			481.9			484.5			487.1		
						Reference Elevation Interval (ft AMSL):	4838			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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106226			KAFB-106226		
						Field Sample ID:	GW226-489.70-164			GW226-492.30-164			GW226-492.30-564		
						Sample Date:	11/9/2016			11/9/2016			11/9/2016		
						Sample Type:	REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	489.7			492.3			492.3		
						Reference Elevation Interval (ft AMSL):	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**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.1	0.05	0.075	0.05	**0.13**		0.019	**0.14**		0.019	**0.14**		0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-tetrachloroethane	NS	NS	5.7	5.7	ND	U	1	ND	U	1	ND	U	1
		1,1,1-trichloroethane	60	200	8,000	60	ND	U	1	ND	U	1	ND	U	1
		1,1,2,2-tetrachloroethane	10	NS	0.76	10	ND	U	1	ND	U	1	ND	U	1
		1,1,2-trichloroethane	10	5	2.8	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethane	25	NS	27	25	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloroethene	5	7	280	5	ND	U	1	ND	U	1	ND	U	1
		1,1-dichloropropene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichlorobenzene	NS	NS	7	7	ND	U	2	ND	U	2	ND	U	2
		1,2,3-trichloropropane	NS	NS	0.0075	5	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trichlorobenzene	NS	70	11	70	ND	U	2	ND	U	2	ND	U	2
		1,2,4-trimethylbenzene	NS	NS	15	15	ND	U	2	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	ND	U	4	ND	U	4	ND	U	4
		1,2-dibromoethane	0.1	0.05	0.075	1	ND	U	1	ND	U	1	ND	U	1
		1,2-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,2-dichloroethane	10	5	1.7	5	ND	U	1	ND	U	1	ND	U	1
		1,2-dichloropropane	NS	5	4.4	5	ND	U	1	ND	U	1	ND	U	1
		1,3,5-trimethylbenzene	NS	NS	120	120	ND	U	2	ND	U	2	ND	U	2
		1,3-dichlorobenzene	600	600	300	600	ND	U	2	ND	U	2	ND	U	2
		1,3-dichloropropane	NS	NS	370	370	ND	U	1	ND	U	1	ND	U	1
		1,4-dichlorobenzene	NS	75	4.8	75	ND	U	2	ND	U	2	ND	U	2
		2,2-dichloropropane	NS	NS	NS	NS	ND	U	1	ND	U	1	ND	U	1
		2-butanone	NS	NS	5,600	5,600	ND	U	8	ND	U	8	ND	U	8
		2-chlorotoluene	NS	NS	240	240	ND	U	2	ND	U	2	ND	U	2
		2-hexanone	NS	NS	38	38	ND	U	8	ND	U	8	ND	U	8
		4-chlorotoluene	NS	NS	250	250	ND	U	2	ND	U	2	ND	U	2
		4-Isopropyltoluene	NS	NS	NS	NS	ND	U	2	ND	U	2	ND	U	2
		4-methyl-2-pentanone	NS	NS	1,200	1,200	ND	U	8	ND	U	8	ND	U	8
		Acetone	NS	NS	14,000	14,000	15	J	20	14	J	20	15	J	20
		Acrolein	NS	NS	0.042	100	ND	U	100	ND	U	100	ND	U	100
		Acrylonitrile	NS	NS	0.52	20	ND	U	10	ND	U	10	ND	U	10
		Benzene	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1
		Bromobenzene	NS	NS	62	62	ND	U	2	ND	U	2	ND	U	2

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

						Well Location ID:	KAFB-106226			KAFB-106226			KAFB-106226		
						Field Sample ID:	GW226-489.70-164			GW226-492.30-164			GW226-492.30-564		
						Sample Date:	11/9/2016			11/9/2016			11/9/2016		
						Sample Type:	REG			REG			Field Duplicate		
						Sample Depth (ft bgs):	489.7			492.3			492.3		
						Reference Elevation Interval (ft AMSL):	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**
VOCs	Method SW8260C (µg/L)	Bromochloromethane	NS	NS	83	83	ND	U	2	ND	U	2	ND	U	2
		Bromodichloromethane	NS	80	1.3	80	ND	U	1	ND	U	1	ND	U	1
		Bromoform	NS	80	33	80	ND	U	1	ND	U	1	ND	U	1
		Bromomethane	NS	NS	7.5	7.5	ND	U	1	ND	U	1	ND	U	1
		Carbon disulfide	NS	NS	810	810	ND	U	2	ND	U	2	ND	U	2
		Carbon tetrachloride	10	5	4.5	5	ND	U	1	ND	U	1	ND	U	1
		Chlorobenzene	NS	100	78	100	ND	U	1	ND	U	1	ND	U	1
		Chloroethane	NS	NS	21,000	21,000	ND	U	1	ND	U	1	ND	U	1
		Chloroform	100	80	2.2	80	ND	U	1	ND	U	1	ND	U	1
		Chloromethane	NS	NS	190	190	ND	U	1	ND	U	1	ND	U	1
		cis-1,2-dichloroethene	NS	70	36	70	ND	U	1	ND	U	1	ND	U	1
		cis-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1
		Dibromochloromethane	NS	80	1.7	80	ND	U	1	ND	U	1	ND	U	1
		Dibromomethane	NS	NS	8	8	ND	U	1	ND	U	1	ND	U	1
		Dichlorodifluoromethane	NS	NS	200	200	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	750	700	15	700	ND	U	1	ND	U	1	ND	U	1
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	ND	U	4	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	ND	U	2	ND	U	2	ND	U	2
		m,p-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1
		Methyl tert-butyl ether	NS	NS	140	140	ND	U	1	ND	U	1	ND	U	1
		Methylene Chloride	100	5	110	5	ND	U	4	ND	U	4	ND	U	4
		Naphthalene	30	NS	1.7	30	ND	U	2	ND	U	2	ND	U	2
		n-Butylbenzene	NS	NS	1000	1000	ND	U	2	ND	U	2	ND	U	2
		N-propylbenzene	NS	NS	660	660	ND	U	2	ND	U	2	ND	U	2
		o-Xylene	NS	10,000	190	10,000	ND	U	1	ND	U	1	ND	U	1
		Sec-butylbenzene	NS	NS	2,000	2,000	ND	U	2	ND	U	2	ND	U	2
		Styrene	NS	100	1,200	100	ND	U	2	ND	U	2	ND	U	2
		Tert-butylbenzene	NS	NS	690	690	ND	U	2	ND	U	2	ND	U	2
		Tetrachloroethene	20	5	110	5	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	1000	1,100	750	ND	U	1	ND	U	1	ND	U	1
		trans-1,2-dichloroethene	NS	100	360	100	ND	U	1	ND	U	1	ND	U	1
		trans-1,3-dichloropropene	NS	NS	4.7	4.7	ND	U	1	ND	U	1	ND	U	1
		Trichloroethene	100	5	4.9	5	ND	U	1	ND	U	1	ND	U	1
		Trichlorofluoromethane	NS	NS	1,100	1,100	ND	U	1	ND	U	1	ND	U	1
		Vinyl acetate	NS	NS	410	410	ND	U	4	ND	U	4	ND	U	4
		Vinyl chloride	1	2	0.19	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	10,000	190	620	ND	U	1	ND	U	1	ND	U	1

Table 3-14
Groundwater Analytical Results for Vertical Profile Evaluation Wells Using Passive Diffusion Bags, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). For metals, the NMWQCC numeric standard applies to
[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2009).
[c] EPA Region 6 RSL for Tapwater (May 2016) 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 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.
µg/L = microgram per liter
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
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
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level
Qualifiers:
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.
-- = Qualifier not assigned to the associated numerical value.

Table 4-1
Drinking Water Supply Well Analytical Results, Q4 2016

					Well Location ID		KAFB-003			ST 106-VA-2			ST 106-VA-2			KAFB-015		
					Field Sample ID		GW16030			GW16031			GW16032			GW16033		
					Sample Date		10/3/2016			10/3/2016			10/3/2016			10/3/2016		
					Sample Type / Laboratory		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)	Ethylene Dibromide	0.1	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.018
VOCs	Method SW8260 (µg/L)	Benzene	10	5	4.5	5	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Toluene	750	1000	1100	750	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Ethylbenzene	750	700	15	700	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		m,p-Xylenes	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		o-Xylene	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
Total metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Iron	1000	NS	NS	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Magnesium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Manganese	200	NS	NS	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Potassium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sodium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SW6020A (mg/L)	Arsenic	NS	10	0.00052	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Lead	NS	15	0.015	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Chloride	250	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sulfate	600	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method E353.2 (mg/L)	Nitrogen as nitrate + nitrite	10[e]	1.0[f]	NS	1.0[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity	Method SM2320B (mg/L)	Alkalinity, total (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Parameters		Temperature (°C)	NS	NS	NS	NS	20.1			21.9			21.9			26.0		
		pH	NS	NS	NS	NS	7.98			7.99			7.99			7.66		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	366.0			376.6			376.6			414.1		
		DO (mg/L)	NS	NS	NS	NS	4.71			1.80			1.80			1.10		
		ORP (mV)	NS	NS	NS	NS	101.0			110.6			110.6			129.2		
		Trubidity (NTU)	NS	NS	NS	NS	0.73			0.40			0.40			0.44		

Table 4-1
Drinking Water Supply Well Analytical Results, Q4 2016

						Well Location ID	KAFB-003			KAFB-003			ST 106-VA-2			KAFB-015		
						Field Sample ID	K003-164			K003-564			VA2-164			K015-164		
						Sample Date	10/3/2016			10/3/2016			10/3/2016			10/3/2016		
						Sample Type / Laboratory	REG / ELLE			DUP / ELLE			REG / ELLE			REG / ELLE		
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[d]**	**VAL QUAL**	**LOQ**
EDB	Method E504.1 (µg/L)	Ethylene Dibromide	0.1	0.05	0.075	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.017
VOCs	Method SW8260 (µg/L)	Benzene	10	5	4.5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.5
		Toluene	750	1000	1100	750	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.5
		Ethylbenzene	750	700	15	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.5
		m,p-Xylenes	NS	10,000	190	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.5
		o-Xylene	NS	10,000	190	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	U	0.5
Total metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	44.7	--	0.400	44.1	--	0.400	35.8	--	0.400	29.9	--	0.400
		Iron	1000	NS	NS	1000	ND	U	0.400	ND	U	0.400	ND	U	0.400	ND	U	0.400
		Magnesium	NS	NS	NS	NS	6.06	J	0.200	5.97	J	0.200	7.02	J	0.200	7.52	J	0.200
		Manganese	200	NS	NS	200	ND	U	0.0100	ND	U	0.0100	ND	U	0.0100	0.027	--	0.0100
		Potassium	NS	NS	NS	NS	2.48	--	1.00	2.52	--	1.00	3.77	--	1.00	6.48	--	1.00
		Sodium	NS	NS	NS	NS	23.7	--	2.00	23.3	--	2.00	22.0	--	2.00	36.5	--	2.00
	Method SW6020A (mg/L)	Arsenic	NS	10	0.00052	10	0.00087	J	0.004	0.001	J	0.004	0.0027	J	0.004	0.0172	--	0.004
		Lead	NS	15	0.015	15	0.00022	J	0.002	0.00022	J	0.002	0.00067	J	0.002	0.00025	U	0.002
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2.5	ND	U	2.5	ND	U	2.5	ND	U	2.5
		Chloride	250	250	NS	250	24	--	2.00	24.2	--	2.00	38.9	--	20.0	46.6	--	20.0
		Sulfate	600	250	NS	250	34.4	--	5.00	34.7	--	5.00	26.9	--	5.00	32.8	--	5.00
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	ND	U	2.00	ND	U	2.00	ND	U	2.00	ND	U	2.00
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	ND	U	0.6	ND	U	0.6	ND	U	0.6	ND	U	0.6
	Method E353.2 (mg/L)	Nitrogen as nitrate + nitrite	10[e]	1.0[f]	NS	1.0[f]	0.76	J	0.10	0.65	J	0.10	0.12	J	0.10	ND	U	0.10
Alkalinity	Method SM2320B (mg/L)	Alkalinity, total (as CaCO3)	NS	NS	NS	NS	121	J	5.0	121	--	5.0	103	--	5.0	102	J	5.0
		Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	121	J	5.0	121	--	5.0	103	--	5.0	102	J	5.0
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	5.0	ND	U	5.0	ND	U	5.0	ND	U	5.0
Field Parameters		Temperature (°C)	NS	NS	NS	NS	20.1			20.1			21.9			26.0		
		pH	NS	NS	NS	NS	7.98			7.98			7.99			7.66		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	366.0			366.0			376.6			414.1		
		DO (mg/L)	NS	NS	NS	NS	4.71			4.71			1.80			1.10		
		ORP (mV)	NS	NS	NS	NS	101.0			101.0			110.6			129.2		
		Trubidity (NTU)	NS	NS	NS	NS	0.73			0.73			0.40			0.44		

Table 4-1
Drinking Water Supply Well Analytical Results, Q4 2016

					Well Location ID		KAFB-003			ST 106-VA-2			KAFB-015			KAFB-015		
					Field Sample ID		GW16034			GW16035			GW16036			GW16037		
					Sample Date		11/9/2016			11/9/2016			11/9/2016			11/9/2016		
					Sample Type / Laboratory		REG			REG			REG			Field Duplicate		
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)	Ethylene Dibromide	0.1	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017
VOCs	Method SW8260 (µg/L)	Benzene	10	5	4.5	5	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Toluene	750	1000	1100	750	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Ethylbenzene	750	700	15	700	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		m,p-Xylenes	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		o-Xylene	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
Total metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Iron	1000	NS	NS	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Magnesium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Manganese	200	NS	NS	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Potassium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sodium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SW6020A (mg/L)	Arsenic	NS	10	0.00052	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Lead	NS	15	0.015	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Chloride	250	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sulfate	600	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method E353.2 (mg/L)	Nitrogen as nitrate + nitrite	10[e]	1.0[f]	NS	1.0[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity	Method SM2320B (mg/L)	Alkalinity, total (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Parameters		Temperature (°C)	NS	NS	NS	NS	19.6			21.40			25.3			25.3		
		pH	NS	NS	NS	NS	7.82			8.00			8.09			8.09		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	342.8			336.4			378.6			378.6		
		DO (mg/L)	NS	NS	NS	NS	4.57[g]			2.59[g]			1.60[g]			1.60[g]		
		ORP (mV)	NS	NS	NS	NS	45.3[h]			-13.5[h]			-8.6[h]			-8.6[h]		
		Trubidity (NTU)	NS	NS	NS	NS	0.45			0.68			0.97			0.97		

Table 4-1
Drinking Water Supply Well Analytical Results, Q4 2016

					Well Location ID		KAFB-003			KAFB-003			KAFB-015			ST 106-VA-2		
					Field Sample ID		GW16038			GW16039			GW16040			GW16041		
					Sample Date		12/1/2016			12/1/2016			12/1/2016			12/1/2016		
					Sample Type / Laboratory		REG			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**	**Result**	**VAL QUAL**	**LOQ**
EDB	Method E504.1 (µg/L)	Ethylene Dibromide	0.1	0.05	0.075	0.05	ND	U	0.017	ND	U	0.017	ND	U	0.017	ND	U	0.017
VOCs	Method SW8260 (µg/L)	Benzene	10	5	4.5	5	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Toluene	750	1000	1100	750	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		Ethylbenzene	750	700	15	700	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		m,p-Xylenes	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
		o-Xylene	NS	10,000	190	10,000	ND	U	0.50	ND	U	0.50	ND	U	0.50	ND	U	0.50
Total metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Iron	1000	NS	NS	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Magnesium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Manganese	200	NS	NS	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Potassium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sodium	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SW6020A (mg/L)	Arsenic	NS	10	0.00052	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Lead	NS	15	0.015	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Chloride	250	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Sulfate	600	250	NS	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500S2F (mg/L)	Sulfide	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method SM4500NH3BC (mg/L)	Nitrogen, ammonia	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Method E353.2 (mg/L)	Nitrogen as nitrate + nitrite	10[e]	1.0[f]	NS	1.0[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity	Method SM2320B (mg/L)	Alkalinity, total (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Parameters		Temperature (°C)	NS	NS	NS	NS	18.2			18.2			21.5			20.8		
		pH	NS	NS	NS	NS	7.29			7.29			7.59			7.97		
		Specific Conductance (µS/cm)	NS	NS	NS	NS	313.0			313.0			385			339		
		DO (mg/L)	NS	NS	NS	NS	6.5			6.5			2.22			3.47		
		ORP (mV)	NS	NS	NS	NS	186.4			186.4			181.1			155.5		
		Trubidity (NTU)	NS	NS	NS	NS	0.20			0.20			0.00			0.00		

Table 4-1
Drinking Water Supply Well Analytical Results, Q4 2016

[a] NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). For metals, the NMWQCC numeric standard applies to dissolved metals and total mercury.

[b] EPA National Primary Drinking Water Regulations, Maximum Contaminant Levels and Secondary Maximum Contaminant Levels, Title 40CFR Part 141, 143 (May 2009).

c EPA Region 6 RSL for Tapwater (June 2015) 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. Project screening levels below the LOD are highlighted and these project screening levels are set at the LOQ.

[e] NMWQCC numeric standard for nitrate is 10 mg/L; NMWQCC numeric standard for nitrite is not specified.

[f] MCL for nitrite is listed; the MCL for nitrate is 10 mg/L.

[g]Reading originally recorded as percent dissolved oxygen and then converted to mg/L using calculator provided here: http://baliga.systemsbiology.net/drupal/sites/default/files/DO-percent-to-mg-per-L-Calculator.xls

[h]Anomalous readings when instrument was calibrated correctly and within range.

-- = Parameter or analyte not required for analysis in Q1

AFB = Air Force Base

°C = degrees Celsius

CFR = Code of Federal Regulations

ELLE = Eurofins Lancaster Laboratories Environmental, LLC

EPA = U.S. Environmental Protection Agency

DO = dissolved oxygen

EPA = Environmental Protection Agency

ID = identification

LOD = limit of detection

LOQ = limit of quantitation

MCL = maximum contaminant level

µg/L = microgram per liter

µS/cm = microsiemens per centimeter

mg/L = milligram per liter

mV = millivolts

NA = not applicable

ND = not detected

NMAC = New Mexico Administrative Code

NMWQCC = New Mexico Water Quality Control Commission

NS = not specified

NTU = nephelometric turbidity unit

ORP = oxidation reduction potential

REG = regular or parent sample

S.U. = standard unit

SWMU = Solid Waste Management Unit

VA = United States Department of Veterans Affairs

Val Qual = validation qualifier based on independent data validation

VOC = volatile organic compound

Shading = reported concentrations are above the detection limit

Qualifiers:

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 LOD.

Table 5-1
Quantities of Groundwater Treated and Discharged

Groundwater Treatment System Operation	Total Groundwater Extracted (gallons)	Treated Groundwater Injected to Injection Well KAFB-7 (gallons)	Treated Groundwater Discharged to the Golf Course Main Pond (gallons)
2015 Total	17,664,900	0	17,664,900
Jan-16	1,777,200	0	1,777,200
Feb-16	881,000	181,300	699,700
Mar-16	22,168,080	1,231,350	20,936,730
Apr-16	12,649,920	582,570	12,067,350
May-16	12,090,000	0	12,090,000
Jun-16	8,850,000	0	8,850,000
Jul-16	9,940,000	0	9,940,000
Aug-16	9,400,000	0	9,400,000
Sep-16	12,980,000	0	12,980,000
Oct-16	8,300,000	0	8,300,000
Nov-16	7,200,000	2,970,000	4,230,000
Dec-16	14,570,100	14,501,190	68,910
Quarter 4 2016 Total	30,070,100	17,471,190	12,598,910
2016 Total	120,806,300	19,466,410	101,339,890
Total to Date	138,471,200	19,466,410	119,004,790

Table 5-2
Groundwater Treatment System Extraction Well Performance, Q4 2016

Well ID	Well Parameter	October	November	December	Q4[a]
KAFB-106228	Avg. Flow Rate[b] (gpm)	98.4	77.2	145.0	107.2
	Flow Rate Range[c] (gpm)	0.0 - 145.8	0.0 - 145.3	0.0 - 145.8	0.0 - 145.8
	Avg. Drawdown[d] (ft)	14.9	14.8	15.4	15.1
	Drawdown Elevation Range[c] (ft)	4853.2 - 4868.9	4853.3 - 4869.4	4853.0 - 4854.8	4853.0 - 4869.4
	Avg. Specific Capacity[e] (gpm/ft)	9.8	9.8	9.4	9.6
	Avg. Transmissivity[e] (gpd/ft)	14,636	14,662	14,125	14,409
	Run Time %[f]	71%	64%	95%	77%
	Notes	NA	NA	NA	NA
KAFB-106233[g]	Avg. Flow Rate[b] (gpm)	0.0	0.0	0.0	0.0
	Flow Rate Range[c] (gpm)	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
	Avg. Drawdown[d] (ft)	NA	NA	NA	NA
	Drawdown Elevation Range[c] (ft)	NA	NA	NA	NA
	Avg. Specific Capacity[e] (gpm/ft)	NA	NA	NA	NA
	Avg. Transmissivity[e] (gpd/ft)	NA	NA	NA	NA
	Run Time %[f]	0%	0%	0%	0%
	Notes	Offline	Offline	Offline	Offline
KAFB-106234	Avg. Flow Rate[b] (gpm)	105.0	82.7	155.0	114.6
	Flow Rate Range[c] (gpm)	0.0 - 155.3	0.0 - 155.2	0.0 - 155.4	0.0 - 155.4
	Avg. Drawdown[d] (ft)	4.8	5.0	4.2	4.6
	Drawdown Elevation Range[c] (ft)	4863.6 - 4869.0	4863.3 - 4869.7	4863.9 - 4866.7	4863.3 - 4869.7
	Avg. Specific Capacity[e] (gpm/ft)	32.9	31.1	38.7	35.0
	Avg. Transmissivity[e] (gpd/ft)	49,331	46,590	57,987	52,475
	Run Time %[f]	71%	64%	95%	77%
	Notes	NA	NA	NA	NA
Combined Extraction Well Totals	Combined Avg. Flow (gpm)	203.3	159.9	300.0	221.7
	Combined Flow Rate Range[c] (gpm)	0.0 - 298.7	0.0 - 306.4	0.0 - 299.0	0.0 - 302.3
	Run Time %[f]	71%	64%	95%	77%

[a] Daily avg. values
[b] Flow rate calculation is an avg. rate that includes non-operating time for a conservative estimate of pump performance; avg. values were computed from daily values throughout Q4.
[c] Ranges are provided for raw HMI data only; ranges are not provided for calculated values.
[d] Avg. drawdown calculated from approximate static water elevation in August 2016 and does not account for dynamic water elevation increases in the aquifer; avg. values were computed from daily values throughout Q4.
[e] Specific capacity and Transmissivity avg. values only include pump run time (i.e. pump down time is not factored into the calculation); avg. values were computed from daily values throughout Q4.
[f] Percent run time is calculated where any one well is running at a minimum of 50 gpm; dataset includes readings for every minute throughout Q4.
[g] KAFB-106233 was offline in Q4 2016 due to biofouling; planned for rehabilitation in Q1 and Q2 2017.
Avg. = average
ft = foot/feet
gpd = gallons per day
gpm = gallons per minute
HMI = human-machine interface
NA = not applicable

Table 5-3
Annual Groundwater Treatment System Extraction Well Performance, 2016

Well ID	Well Parameter	Q1[a]	Q2	Q3	Q4	2016
KAFB-106228[b]	Avg. Flow Rate[c] (gpm)	56.2	21.2	100.8	107.2	74.5
	Flow Rate Range[d] (gpm)	0.0 - 149.8	0.0 - 93.6	0.0 - 146.7	0.0 - 145.8	0.0 - 149.8
	Avg. Drawdown (ft)	9.3	9.0	14.5	14.9	12.9
	Drawdown Elevation Range[d] (ft)	4854.6 - 4868.9	4859.7 - 4869.8	4853.1 - 4868.4	4853.0 - 4869.4	4853.0 - 4869.8
	Avg. Specific Capacity (gpm/ft)	11.0	10.0	10.0	9.6	10.1
	Avg. Transmissivity (gpd/ft)	16,427	14,980	14,993	14,409	15,108
	Run Time %[e]	59%	19%	75%	77%	58%
	Notes	NA	NA	NA	NA	NA
KAFB-106233[f]	Avg. Flow Rate[c] (gpm)	94.5	113.9	0.0	0.0	44.5
	Flow Rate Range[d] (gpm)	0.0 - 158.6	0.0 - 172.7	0.0 - 0.0	0.0 - 0.0	0.0 - 172.7
	Avg. Drawdown (ft)	12.0	8.9	NA	NA	10.2
	Drawdown Elevation Range[d] (ft)	4855.5 - 4868.0	4859.3 - 4869.1	NA	NA	4855.5 - 4869.8
	Avg. Specific Capacity (gpm/ft)	13.1	18.4	NA	NA	16.3
	Avg. Transmissivity (gpd/ft)	19716.1	27621.8	NA	NA	24477.5
	Run Time %[e]	51%	65%	0%	0%	28%
	Notes	NA	NA	System Offline	System Offline	NA
KAFB-106234	Avg. Flow Rate[c] (gpm)	88.7	159.0	124.2	114.6	123.3
	Flow Rate Range[d] (gpm)	0.0 - 156.7	0.0 - 175.2	0.0 - 175.7	0.0 - 155.4	0.0 - 175.7
	Avg. Drawdown (ft)	6.2	6.0	4.5	4.5	5.2
	Drawdown Elevation Range[d] (ft)	4862.3 - 4867.8	4862.2 - 4868.4	4862.6 - 4872.0	4863.3 - 4869.7	4862.2 - 4872.0
	Avg. Specific Capacity (gpm/ft)	25.2	27.4	47.1	37.7	35.6
	Avg. Transmissivity (gpd/ft)	37,809	41,069	70,635	56,504	53,373
	Run Time %[e]	47%	89%	79%	77%	74%
	Notes	NA	NA	NA	NA	NA
Combined Extraction Well Totals	Combined Avg. Flow[c] (gpm)	239.5	294.1	225.1	221.7	245.1
	Combined Flow Rate Range[d] (gpm)	0.0 - 408.1	0.0 - 408.5	0.0 - 320.4	0.0 - 300.9	0.0 - 408.5
	Run Time %[e]	59%	89%	79%	77%	83%

[a] Reporting period = January 16 - March 31 for well KAFB-106228 and February 3 - March 31 for wells KAFB-106233 and KAFB-106234 (HMI / data reporting unavailable prior to this timeframe).
[b] Transducer in well KAFB-106228 was pulled due to downhole equipment repairs from May 22 -July 30; reported values exclude this time frame.
[c] Flow rate calculation is an avg. rate that includes non-operating time for a conservative estimate of pump performance; .
[d] Ranges are provided for raw HMI data only; ranges are not provided for calculated values.
[e] Percent run time is calculated where any one well is running at a minimum of 50 gpm; dataset includes readings for every minute throughout 2016.
[f] KAFB-106233 was offline from June 10 - December 31 due to biofouling and mechanical issues.
Avg. = average
ft = foot/feet
gpd = gallons per day
gpm = gallons per minute
HMI = human-machine interface
NA = not applicable

Table 5-4
Groundwater Treatment System Performance Samples Analytical Results, Q4 2016

				Location ID:	GWTS-INF			GWTS-INF			GWTS-INF			GWTS-GAC1			GWTS-GAC1			GWTS-GAC1		
				Field Sample ID:	GWTS-INF-102016			GWTS-INF-112116			GWTS-INF-122016			GWTS-GAC1-102016			GWTS-GAC1-112116			GWTS-GAC1-122016		
				Sample Date:	10/20/2016			11/21/2016			12/20/2016			10/20/2016			11/21/2016			12/20/2016		
				Sample Type:	REG			REG			REG			REG			REG			REG		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**Project Screening Level[b]**	**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	**0.072**		0.019	**0.074**		0.019	**0.082**		0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	10	5.0	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	700	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dissolved Metals	Method SW6010C (mg/L)	Iron	1.0	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Manganese	0.2	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
Field Parameters		Temperature (°C)	NS	NS	19.7			19.7			19.6			19.4			19.7			19.6		
		Spec Cond (µS/cm)	NS	NS	550.5			822			413.6			494.1			821			413.8		
		pH (S.U.)	NS	NS	7.9			7.81			7.84			7.73			7.62			7.68		
		ORP (mV)	NS	NS	145.7			99			163.4			146.5			103.6			167.9		
		DO (mg/L)	NS	NS	5.4			8.54			6.72			3.9			6.88			5.36		

Table 5-4
Groundwater Treatment System Performance Samples Analytical Results, Q4 2016

				Location ID:	GWTS-EFF			GWTS-EFF			GWTS-EFF			GWTS-EFF			GWTS-EFF			GWTS-EFF		
				Field Sample ID:	GWTS-EFF-102016			GWTS-EFFDUP-102016			GWTS-EFF-112116			GWTS-EFFDUP-112116			GWTS-EFF-122016			GWTS-EFFDUP-122016		
				Sample Date:	10/20/2016			10/20/2016			11/21/2016			11/21/2016			12/20/2016			12/20/2016		
				Sample Type:	REG			Field Duplicate			REG			Field Duplicate			REG			Field Duplicate		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**Project Screening Level[b]**	**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	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	10	5.0	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Ethylbenzene	700	700	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Toluene	750	750	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
		Xylenes, Total	620	620	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dissolved Metals	Method SW6010C (mg/L)	Iron	1.0	1.0	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200	ND	U	0.200
		Manganese	0.2	0.2	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050	ND	U	0.0050
Field Parameters		Temperature (°C)	NS	NS	19.2			--			19.8			--			19.6			--		
		Spec Cond (µS/cm)	NS	NS	551.2			--			821			--			413.2			--		
		pH (S.U.)	NS	NS	7.63			--			7.55			--			7.67			--		
		ORP (mV)	NS	NS	150.4			--			100.8			--			165.5			--		
		DO (mg/L)	NS	NS	4.12			--			8.26			--			6.67			--		

Table 5-4
Groundwater Treatment System Performance Samples Analytical Results, Q4 2016

[a] NMWQCC standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). For metals, the NMWQCC numeric standard applies to dissolved metals.

[b] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit No. NM9570024423 as the lower of (1) approved permit requirements or 2) NMWQCC standard. Project screening levels below the LOD are highlighted and these project screening levels are set at the LOQ.

°C = degree Celsius
µg/L = microgram per liter
µS/cm = microsiemens per centimeter
GWTS = groundwater treatment system
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
ID = identification
LOD = limit of detection
mg/L = milligram per liter
mV = millivolt
NA = not available
ND = not detected
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
ORP = oxidation reduction potential
REG = normal field sample
Spec Cond = specific conductivity
S.U. = standard units
Val Qual = validation qualifier
VOC = volatile organic compound
Shading = reported concentrations are above the detection limit
Bold/Shading = reported concentrations exceed the project screening level

Qualifiers:
Val Qual based on independent data validation
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.
-- = Qualifier not assigned to the associated numerical value.

Table 5-5
Groundwater Treatment System Ethylene Dibromide Removal, Q4 2016

Month	Date[1]	Cumulative Volume Extracted (gal)	Monthly Volume Treated (gal)	EDB concentration (µg/L)[2]	Cumulative Mass of EDB Extracted (mg)	Mass of EDB Removed (mg)
January	12/31/2015	17,664,900	1,777,200	0.183	7,570	1,021
	1/7/2016	17,965,025		0.180	7,775	
	1/27/2016	19,442,100		0.146	8,591	
February	2/9/2016	20,323,100	4,417,500	0.146	9,078	2,495
	3/1/2016	23,859,600		0.150	11,086	
March	3/10/2016	29,006,300	18,631,580	0.080	12,644	5,568
	3/15/2016	33,151,500		0.080	13,900	
	3/22/2016	36,861,100		0.080	15,023	
	3/29/2016	40,801,100		0.075	16,142	
	3/31/2016	42,491,180		0.080	16,654	
Q1 2016 Total			24,826,280			9,083
April	4/5/2016	45,491,100	12,649,920	0.080	17,562	3,680
	4/11/2016	48,205,100		0.080	18,384	
	4/18/2016	52,081,100		0.080	19,558	
	4/25/2016	55,141,100		0.067	20,334	
May	5/2/2016	58,211,100	12,090,000	0.067	21,112	3,145
	5/9/2016	61,391,100		0.067	21,919	
	5/16/2016	63,071,100		0.067	22,345	
	5/23/2016	63,471,100		0.072	22,454	
	5/31/2016	67,231,100		0.072	23,479	
June	6/6/2016	70,061,100	8,850,000	0.072	24,250	2,412
	6/13/2016	72,531,100		0.072	24,923	
	6/20/2016	74,361,100		0.072	25,422	
	6/27/2016	76,081,100		0.072	25,891	
Q2 2016 Total			33,589,920			9,237
July	7/5/2016	78,021,100	9,940,000	0.072	26,420	2,751
	7/11/2016	79,331,100		0.072	26,777	
	7/18/2016	82,321,100		0.072	27,592	
	7/25/2016	85,281,100		0.075	28,432	
	8/1/2016	86,021,100		0.075	28,642	
August	8/8/2016	88,521,100	9,400,000	0.075	29,352	3,649
	8/15/2016	91,231,100		0.075	30,121	
	8/22/2016	93,411,100		0.090	30,864	
	8/29/2016	95,421,100		0.090	31,549	
September	9/6/2016	97,601,100		0.090	32,291	
	9/12/2016	99,811,100	12,980,000	0.090	33,044	3,419
	9/19/2016	102,671,100		0.090	34,019	
	9/26/2016	105,521,100		0.078	34,860	
	10/3/2016	108,401,100		0.078	35,711	
Q3 2016 Total			32,320,000			9,820
October	10/10/2016	110,811,100	8,300,000	0.078	36,422	2,330
	10/17/2016	111,381,100		0.078	36,590	
	10/24/2016	113,921,100		0.072	37,283	
	10/31/2016	116,701,100		0.072	38,040	
November	11/7/2016	118,501,100	7,200,000	0.072	38,531	1,995
	11/14/2016	119,601,100		0.072	38,831	
	11/21/2016	122,101,100		0.074	39,531	
	11/28/2016	123,901,100		0.074	40,035	
December	12/5/2016	126,801,100	14,570,100	0.074	40,848	4,081
	12/12/2016	129,502,599		0.074	41,604	
	12/19/2016	132,087,400		0.074	42,328	
	12/28/2016	135,559,800		0.074	43,301	
	1/3/2016	138,471,200		0.074	44,117	
Q4 2016 Total			30,070,100			8,406
Annual Total			120,806,300			36,547

Table 5-5
Groundwater Treatment System Ethylene Dibromide Removal, Q4 2016

[1] Monthly date ranges may include dates falling outside of the actual month as weekly HMI data retreivals occur
[2] Estimated EDB concentrations from monthly EDB sampling
µg/L = microgram per liter
EDB = ethylene dibromide (or 1,2-dibromoethane)
gal = gallon
mg = milligram
Q = quarter

Table 5-6
Groundwater Treatment System Routine Maintenance Schedule

	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 HMI	X			
Recording extraction well pressure, flow rate, and totalizer readings from the HMI	X			
Recording extraction well pressure, flow rate, and totalizer readings from the gauges at their well vaults.		X		
Inspecting well control house and recording well control house pressure, flow rate, and totalizer readings		X		
Recording totalizer reading, and inspecting/testing of hydraulic systems at injection well KAFB-7		X		
Running and inspecting the GWTS air compressor		X		
Maintaining the V-smart valve hydraulic pump (manually actuate open and close)		X		
Inspecting extraction well, conveyance line, and ARV vaults			X	
Inspecting wellhead and associated equipment of injection well KAFB-7			X	
Inspecting and performing maintenance of flow meters 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	
Logging lock out - tag out entries				X
Logging system shutdowns				X
Emptying storm water runoff flooded vaults				X
Performing air compressor maintenance				X
Cleaning GWTS sumps				X
Draining ARV containment vessels				X
Grounds keeping including vegetation control				X
Inspecting and cleaning the GWTS Y-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]
Maintaining of the V-smart valve hydraulic pump (oil filter and fluid change)				X[d]
Testing of alarms and interlocks				X[d]
Cleaning coils and replacing air filter for the Well Control House air conditioner				X[e]

Table 5-6
Groundwater Treatment System Routine Maintenance Schedule

[a] Flow meters 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 three 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 and GAC is scheduled for change out when the pressure differential across a GAC vessel exceeds 10 psi.

[d] V-smart valve maintenance and testing of alarms and interlocks occur annually or more often as needed.

[e] Cleaning of the coil and replacing of the air filter are scheduled as quarterly activities, but frequency may be

ARV = air release valve
GAC = granular activated carbon
GWTS = groundwater treatment system
HMI = human machine interface
KAFB = Kirtland Air Force Base
psi = pounds per square inch

Table 5-7
Annual Operations and Maintenance Summary, 2016

Month	KAFB-106228	KAFB-106233	KAFB-106234	KAFB-106239	Well Control House	GWTS Building	Influent Skid	GAC Vessels	Effluent Skid	ARV Vaults	KAFB-7
January	Wafer cone flow meter installed	NA	NA	NA	Pipeline debris removal; wafer cone flow meter installed	NA	V-cone flow meter installed	NA	V-cone flow meter installed	NA	NA
February	NA	NA	NA	NA	NA	NA	Oil was changed on skid pumps	NA	Oil was changed on skid pumps	NA	NA
March	NA	NA	NA	NA	NA	NA	Bearings on pump motors were greased	NA	Bearings on pump motors were greased	NA	NA
April	Shut down on April 19 for motor replacement	NA	NA	NA	NA	NA	Bag filters frequently changed	NA	NA	NA	NA
May	Offline	NA	NA	NA	NA	NA	Bag filters frequently changed; oil was changed on skid pumps	NA	Gate valve replaced with ball valve at the actuator; effluent pump replacement; oil was changed on skid pumps	NA	NA
June	Offline	Shut down on June 10 due to biofouling	NA	NA	NA	NA	Bag filters frequently changed; bearings on pump motors were greased	Defouling of the lead GAC vessel	Bearings on pump motors were greased	NA	NA
July	Motor replaced; pumping recommenced on July 11	Offline	NA	NA	Variable frequency drives and air conditioning unit installed	NA	NA	NA	NA	NA	NA
August	NA	Offline	NA	NA	NA	NA	Oil was changed on skid pumps; bearings on pump motors were greased	NA	Oil was changed on skid pumps; bearings on pump motors were greased	NA	NA
September	NA	Offline	NA	NA	NA	Two overhead light fixtures removed to facilitate construction activities	NA	NA	NA	NA	NA
October	Pressure transmitters installed	Offline	NA	NA	Pressure transmitters installed	NA	Pressure transmitters installed; bearings on pump motors were greased	Train 2 GAC manifold piping installed	Pressure transmitters installed; bearings on pump motors were greased	NA	NA
November	NA	Offline	NA	Drilling began for new extraction well installation	NA	NA	Oil was changed on skid pumps	NA	Oil was changed on skid pumps	NA	NA
December	Magnetic flow meter and piping installed (replaced old flow meter)	Offline	NA	Well installation completed	Magnetic flow meter and piping installed (replaced old flow meter)	Two overhead light fixtures reinstalled; installation of conduit and wiring completed	Magnetic flow meter and piping installed (replaced old flow meter)	NA	Magnetic flow meter and piping installed (replaced old flow meter)	NA	NA

Table 5-8
Horizontal Capture Anaylsis for the Interim Measure Objective Area

2016 Sample Period	Capture Interval	Plume[a]		Horizontal Capture[a]		Percent Captured	
		Volume (cubic ft.)	Mass (grams)	Volume (cubic ft.)	Mass (grams)	Volume	Mass
Q2	Interval 4857	6.10E+07	5.08E-02	6.06E+07	5.06E-02	99.3%	99.7%
	Interval 4838	3.45E+07	2.70E-02	2.71E+07	2.16E-02	78.6%	80.0%
		9.55E+07	7.77E-02	8.77E+07	7.22E-02	91.8%	92.9%
Q4	Interval 4857	6.70E+07	6.48E-02	6.63E+07	6.45E-02	99.0%	99.5%
	Interval 4838	4.63E+07	3.78E-02	4.39E+07	3.66E-02	94.7%	96.6%
		1.13E+08	1.03E-01	1.10E+08	1.01E-01	97.2%	98.5%

[a] Volume and mass value assumes a uniform total porosity of 25% for the aquifer

Table 5-9
Vertical Capture Anaylsis for the Interim Measure Objective Area

2016 Sample Period	Dissolved EDB Plume Segment North of Ridgecrest Drive SE	Plume[a]		Vertical Capture[a]		Percent Captured	
		Volume (cubic ft.)	Mass (grams)	Volume (cubic ft.)	Mass (grams)	Volume	Mass
Q2	Above Interval 4838 mid-point	7.60E+07	6.42E-02	3.72E+07	3.11E-02	48.9%	48.5%
		7.60E+07	6.42E-02	3.27E+07	2.87E-02	43.0%	44.7%
	Below Interval 4838 mid-point	1.96E+07	1.35E-02	1.14E+07	7.65E-03	58.2%	56.4%
	Total	9.55E+07	7.77E-02	8.12E+07	6.75E-02	85.0%	86.8%
Q4	Above Interval 4838 mid-point	8.24E+07	7.91E-02	4.56E+07	4.37E-02	55.3%	55.2%
		8.24E+07	7.91E-02	1.66E+07	1.29E-02	20.1%	16.3%
	Below Interval 4838 mid-point	3.09E+07	2.36E-02	1.52E+07	1.26E-02	49.3%	53.4%
	Total	1.13E+08	1.03E-01	7.74E+07	6.92E-02	68.3%	67.4%

[a] Plume and mass value assumes a uniform total porosity of 25% for the aquifer

Table 5-10
Plume Volume and Mass Comparison between Q2 2016 and Q4 2016

	Well		Q2 2016		Q4 2016	
Interval	From	To	Volume (cubic ft.)	Mass (grams)	Volume (cubic ft.)	Mass (grams)
A	KAFB-106045	KAFB-106078	3,437,400	3	4,966,400	23
B	KAFB-106078	KAFB-106062	19,721,000	84	19,875,000	341
C	KAFB-106062	KAFB-106081	13,852,000	139	11,337,000	47
D	KAFB-106081	KAFB-106068	8,963,600	218	7,464,800	196
E	KAFB-106066	KAFB-106068	11,531,000	208	9,223,900	284
F	KAFB-106068	KAFB-106090	44,446,000	76	35,778,000	56
G	KAFB-106090	KAFB-106037	28,527,000	26	29,795,000	26
H	KAFB-106037	KAFB-106058	22,997,000	18	25,300,000	22
I	KAFB-106058	KAFB-106227	10,035,000	5	14,311,000	9
J	KAFB-106227	KAFB-106234	17,439,000	16	23,142,000	30
K	KAFB-106234	KAFB-106206	3,355,700	2	7,622,300	6
		Total	184,230,000	795	188,750,000	1042

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.
Table corresponds to Figure 5-14.

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APPENDICES

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