Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 6-15-2020

WEATHER: Mostly cloudy, High of 89°F, Wind S@ 9-21 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Beckisch	EA - Site Manager/Supervisor
Peter Ferarri	EA - Site Health and Safetly Office
Dylan Schmeelk	Samplers
Galveston Begaye	Samplers

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0654	Leave field trailer for kAFB-106236
0708	Arrive at KAFB-106236
0813	Leave KAFB-106236 for KAFB-106235
0814	Arrive at KAFB-106235

DQCR Page 1 of 2

Reviewed by: J. Messenger Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 6-15-2020

4. WORK PERFORMED (Continued)	
0902	Leave KAFB-106255 for KAFB-106031 cluster
0907	Arrive at KAFB-106031 cluster
1032	Leave KAFB-106031 cluster for KAFB-106242 cluster
1035	Arrive at KAFB-106242 cluster
1152	Leave KAFB-106242 cluster for KAFB-106231 cluster
1158	Arrive at KAFB-106231 cluster
1240	Leave KAFB-106231 cluster for field trailer
1257	Arrive at field trailer
1322	Leave field trailer for KAFB-106231 cluster
1332	Arrive at KAFB-106231 cluster
1347	Leave KAFB-106231 for field trailer
1356	Arrive at field trailer
	End of Day

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schueller
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 6-16-2020

WEATHER: Partly Cloudy, High of 88°F, light breeze

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Beckisch	EA - Site Manager/Supervisor
Peter Ferasri	EA - Site Health and Safetly Office
Dylan Schweelk	Sampler
Galveston Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0715	Leave field trailer for KAFB-106216 cluster
0721	Arrive at KAFB-106216 cluster
0750	Leave KAFB-106216 cluster for KAFB-106222 cluster
0752	Arrive at KAFB-106222 cluster

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Reviewed by: J. Messenger Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 6-16-2020

4. WORK PERFORMED (Continued)	
0825	Leave KAFB-106222 cluster for KAFB-106204 cluster
0830	Arrive at KAFB-106204 cluster
0928	Leave KAFB-106204 cluster for KAFB-106207 cluster
0930	Arrive at KAFB-106207 cluster
1015	Leave KAFB-106207 cluster for field trailer
1027	Arrive at field trailer
1029	Leave Field trailer for KAFB-106216 cluster
1039	Arrive KAFB-106216 cluster
1100	Leave KAFB-106216 cluster for KAFB-106222
1102	Arrive at KAFB-106222
1125	Leave KAFB-106222 for KAFB-106049
1130	Arrive at KAFB-106049 cluster
1240	Leave KAFB-106049 cluster for field trailer
1301	Arrive at field Trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 6-17-2020

WEATHER: Mostly Sunny, high of 93°F, Winds SW@ 10-18 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Backisch	EA - Site Manager/Supervisor
Peter Ferarri	EA - Site Health and Safetly Office
Dylan Schmeelk	Sampler
Galveston Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidmeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☑

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0641	Leave field trailer for KAFB-106201 cluster
0649	Arrive at KAFB-106201 cluster
0733	Leave KAFB-106201 cluster for KAFB-106041
0741	Arrive ost KAFB-106041

DQCR Page 1 of 2

Reviewed by: J. Messenger Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 6-17-2020

4. WORK PERFORMED (Continued)	
0806	Leave KAFB-106041 for KAFB-106230
0807	Arrive at KAFB-106230
0822	Leave KAFB-106230 for ~~24~~ KAFB-106241
0825	Arrive at KAFB-106241
0851	Leave KAFB-106241 for KAFB-106243
0852	Arrive at KAFB-106243
0924	Leave KAFB-106243 for KAFB-106240
0931	Arrive at KAFB-106240
0955	Leave KAFB-106240 for KAFB-106244
0958	Arrive at KAFB-106244
1022	Leave KAFB-106244 for KAFB-106032 cluster
1044	Arrive at KAFB-106032 cluster
1131 1137	Leave KAFB-106032 cluster for KAFB-106245
1140	Arrive at KAFB-106245
1207	Leave KAFB-106245 for KAFB-106247
1211 1214	Arrive at KAFB-106247
1239	Leave KAFB-106247 for KAFB-1065S4 cluster
1243	Arrive at KAFB-1065S4 cluster
1355	Leave KAFB-1065S4 cluster for field trailer
1358	Arrive at Field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: G. Messenger

Reviewed date: 6-18-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 6-18-2020

WEATHER: High of 90°F, Smokey, wind 6-12 mph @ SSW

1. ONSITE PERSONNEL (including subcontractors and government employees)	
Name	Organization
Bernard Bochisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	Samples
Galveston Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☑	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)	
	Used WH0012 and Solonist Tag Line at
	KAFB-106211.

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)	
0638	Leave Field trailer for KAFB-1065S
0649	Arrive at KAFB-1065S
0716	Leave KAFB-1065S for KAFB-1067S
0719	Arrive at KAFB-1067S

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Reviewed by: J. Messenger Reviewed date: 6-22-20

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 6-18-2020

4. WORK PERFORMED (Continued)	
0742	Leave KAFB-106S7 for KAFB-106S3
0802	Arrive at KAFB-106S3
0824	Leave KAFB-106S3 for KAFB-106S2
0825	Arrive at KAFB-106S2
0855	Leave KAFB-106S2 for KAFB-106S9
0858	Arrive at KAFB-106S9
0928	Leave KAFB-106S9 for KAFB-106151
0929	Arrive at KAFB-106151
0959	Leave KAFB-106151 for KAFB-106152
1000	Arrive at KAFB-106152
1039	Leave KAFB-106152 for KAFB-106S8
1046	Arrive at KAFB-106S8
1115	Leave KAFB-106S8 for KAFB-106153
1116	Arrive at KAFB-106153
1136	Leave KAFB-106153 for KAFB-106S1
1137	Arrive at KAFB-106S1
1204	Leave KAFB-106S1 for KAFB-106149
1205	Arrive at KAFB-106149
1306	Leave KAFB-106149 for field trailer
1311	Arrive at ~~KAFB~~ field trailer
1411	Leave field trailer for KAFB-106211
1418	Arrive at KAFB-106211
	~~Leave~~ KAFB-106211 PID reading 0.0.
	Measure TD with Solonist ~~SN~~ TAG LINE SN:
	351978, and gauge water level with WH0012.
	TD = 466.72, DTW = 464.81 ~~EOD~~ JM

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

JM
DQCR Page 2 of ~~2~~ 3

Reviewed by: J. Messenger

Reviewed date: 6-22-20

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 6-18-2020

4. WORK PERFORMED (Continued)	
1451	Leave KAFB-106211 for field trailer
1506	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ 3 of 3

Reviewed by: J. Messenger

Reviewed date: 6-22-20

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1

DATE: 7-6-2020

WEATHER: high 90s (°F); clear sky

1. ONSITE PERSONNEL (including subcontractors and government employees)	
Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schweelk	Samplers
Galveston Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☒
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)	
	Wells Sampled: KAFB-106236-436, KAFB-106235-438
	" " 236-470, " "235-472
	" " 236-499, " "235-501
	Barricades were not set-up by Southwest Safety. Barricaded wells are now scheduled for tomorrow (7-7-2020).

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)	
0700	Leave field trailer for KAFB-106236
0710	Arrive at KAFB-106236
0736	Sampled KAFB-106236-436
0752	Sampled KAFB-106236-499, 470

DQCR Page 1 of 2

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-6-2020

4. WORK PERFORMED (Continued)	
0814	Sampled KAFB-106236-499
0816	Leave KAFB-106236 for KAFB-106235
0827	Arrive at KAFB-106235
0848	Sampled KAFB-106235-438
0905	Sampled KAFB-106235-472
0922	Sampled KAFB-106235-501
0929	Leave KAFB-106235 for ~~KAFB-~~ field trailer
0944	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-7-2020

WEATHER: Partly Cloudy, high of 97, intermittent breeze NW @ 5-12 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells	Sampled: KAFB-106206, KAFB-106205, KAFB-106204, KAFB-106216, KAFB-106217, KAFB-106218, KAFB-106224, KAFB-106223, KAFB-106222, KAFB-106242, KAFB-106231, KAFB-106232 KAFB-106207, KAFB-106208, KAFB-106209.
1000	found Wells KAFB-106029, 30, and 31 have been paved over, Called to have barricades taken down while issue sorted out with the City.

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0638	Leave field trailer for KAFB-106204 cluster
0645	Arrive at KAFB-106204 cluster
0703	Sampled KAFB-106206
0720	Sampled KAFB-106205

DQCR Page 1 of 3

Reviewed by: J. Messenger Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-7-2020

4. WORK PERFORMED (Continued)	
0740	Sampled KAFB-106204
0749	Leave KAFB-106204 cluster for KAFB-106225 cluster
0752	Arrive at KAFB-106225 cluster
0811	Sampled KAFB-106216
0830	Sampled KAFB-106217
0848	Sampled KAFB-106218
0852	Leave KAFB-106216 cluster for KAFB-106224 cluster
0857	Arrive at KAFB-106224 cluster
0915	Sampled KAFB-106224
0935	Sampled KAFB-106223
0950	Sampled KAFB-106222
0957	Leave KAFB-106224 cluster for KAFB-106029 cluster
1000	Arrive at KAFB-106029 cluster
1030	Leave KAFB-106029 cluster for KAFB-106242
1032	Arrive at KAFB-106242
1055	Sampled KAFB-106242
1106	Leave KAFB-106242 cluster for KAFB-106231 cluster
1110	Arrive at KAFB-106231 cluster
1128	Sampled KAFB-106231
1144	Sampled KAFB-106232
1154	Leave KAFB-106232 cluster for KAFB-106207 cluster
1203	Arrive at KAFB-106207 cluster
1226	Sample KAFB-106207
1251	Sampled KAFB-106208
1303	Sampled KAFB-106209
1307	Leave KAFB-106207 cluster for ~~field trailer~~ Gas Station

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 ~~of 2~~ of 3

Reviewed by: J. Messenger

Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-7-2020

4. WORK PERFORMED (Continued)	
1315	Arrive at Gas station (Carlisle & Gibson)
1320	Leave gas station for field trailer
1129	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schweelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ 3 of 3

Reviewed by: J. Messenger

Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-9-2020

WEATHER: Clear, Sunny, High of 98°F, wind W@ 9-16 mph (intermittent)

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Sampled Wells: KAFB-106247, KAFB-106230, KAFB-106241, KAFB-106041, KAFB-106050, KAFB-106051, KAFB-106049, KAFB-106032, KAFB-106033, KAFB-106034, KAFB-106240, KAFB-106244

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0700	Leave field trailer for KAFB-106247
0707	Arrive at KAFB-106247
0728	Sampled KAFB-106247
0739	Leave KAFB-106247 for KAFB-106230

DQCR Page 1 of 2

Reviewed by: J. Messenger Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-8-2020

4. WORK PERFORMED (Continued)	
0753	Arrive at KAFB-106230
0808	Sampled KAFB-106230
0816	Leave KAFB-106230 for KAFB-106241
0819	Arrive at KAFB-106241
0842	Sampled KAFB-106241
0850	Leave KAFB-106241 for KAFB-106041
0855	Arrive at KAFB-106041
0911	Sample KAFB-106041
0931	Leave KAFB-106041 for KAFB-106049 cluster
0933	~~Sample KAFB-106~~ Arrive at KAFB-106049 cluster
0955	Sampled KAFB-106050
1017	Sampled KAFB-106051
1030	Sampled KAFB-106049
1037	Leave KAFB-106049 for KAFB-106034 cluster
1057	Arrive at KAFB-106034 cluster
1121	Sampled KAFB-106032
1131	Sampled KAFB-106033
1143	Sampled KAFB-106034
1155	Leave KAFB-106034 for KAFB-106240
1200	Arrive at KAFB-106240
1225	Sampled KAFB-106240
1237	Leave KAFB-106240 for KAFB-106244
1239	Arrive at KAFB-106244
1255	Sampled KAFB-106244
1308	Leave KAFB-106244 for field trailer
1340	Arrive at field trailer — Shipping — EOD

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schwoelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-9-2020

WEATHER: Partly Cloudy, high of 98°F, wind E @ ≤ 6mph.

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Samples
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells	sampled: KAFB-106245, KAFB-106029, KAFB-106030, KAFB-106031, KAFB-106243, KAFB-106201, KAFB-106202.
0650	Arrive at KAFB-106029 cluster to supervise Franklin's Earthmoving Inc. remove buried vaults and install new 12" vaults at KAFB-106029, KAFB-106030, and KAFB-106031
0845	Allen Brandon arrived on site to take over supervision of work.
Wells	sampled continued: KAFB-106203, KAFB-106009, KAFB-106344

4. WORK PERFORMED (indicate location, time, and description of work performed by prime and/or subcontractors)

0618	Leave field trailer for KAFB-106245
0620	Arrive at KAFB-106245
0633	Sampled KAFB-106245
0644	Leave KAFB-106245 for KAFB-106029 cluster

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Reviewed by: J. Messenger Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-9-2020

4. WORK PERFORMED (Continued)	
0650	Arrive at KAFB-106029 cluster
0801	Sampled KAFB-106029
0825	Sampled KAFB-106030
0829	Sampled FB203-01
0911	Sampled KAFB-106031
0919	Leave KAFB-106031 cluster for ~~KAFB-106~~ field trailer
0928	Arrive at field trailer
0955	Leave field office for KAFB-106243
1006	Arrive at KAFB-106243
1024	Sampled KAFB-106243
1038	Leave KAFB-106243 for KAFB-106201 cluster
1049	Arrive at KAFB-106201 cluster
419	KAFB-106201 sampled
1130	KAFB-106202 sampled
1145	KAFB-106203 sampled
1149	Leave KAFB-106201 cluster for KAFB-106009
1200	Arrive at KAFB-106009
1220	Sampled KAFB-106009
1245	Leave KAFB-106009 for KAFB-1065S4
1246	Arrive at KAFB-1065S4
1313	Sampled KAFB-1065S4
1326	Leave KAFB-1065S4 for field trailer
1330	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7-10-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-10-2020

WEATHER: Clear & Sunny, High of 98°F, light intermittent breeze.

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☑	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells Sampled: KAFB-106152, KAFB-106151, KAFB-106149, KAFB-106155, KAFB-106157, KAFB-106193, KAFB-106152, KAFB-106159, KAFB-106151, KAFB-106153, KAFB-106158

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0651	Leave field trailer for KAFB-106152
0653	Arrive at KAFB-106152 and notify APTIM of Haz yard entry
0715	Sampled KAFB-106152
0724	Leave KAFB-106152 for field trailer

DQCR Page ~~1 of 2~~ 1 of 3

Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-10-2020

4. WORK PERFORMED (Continued)	
0727	Arrive at field trailer
0729	Leave field trailer for KAFB-106S1
0733	Arrive at KAFB-106S1
0752	Sampled KAFB-106S1
0833	Leave KAFB-106S1 for KAFB-106149
0834	Arrive at KAFB-106149
0910	Sampled KAFB-106149
0929	Leave KAFB-106149 for KAFB-106S5
0938	Arrive at KAFB-106S5
0955	Sampled KAFB-106S5
1012	Leave KAFB-106S5 for KAFB-106029 cluster
1014	Arrive at KAFB-106029 cluster
1017	Leave KAFB-106029 cluster for KAFB-106S7
1021	Arrive at KAFB-106S7
1040	Sample KAFB-106S7
1102	Leave KAFB-106S7 for KAFB-106S3
1126	Arrive at KAFB-106S3
1145	Sampled KAFB-106S3
1200	Leave KAFB-106S3 for KAFB-106S2
1201	Arrive at KAFB-106S2
1222	Sampled KAFB-106S2
1238	Leave KAFB-106S2 for KAFB-106S9
1239	Arrive at KAFB-106S9
1300	Sampled KAFB-106S9
1319	Leave KAFB-106S9 for KAFB-106151
1320	Arrive at KAFB-106151

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

D. Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-10-2020

4. WORK PERFORMED (Continued)

1336	Sampled KAFB-106151
1348 ~~1348~~	Leave KAFB-106151 for KAFB-106153
1352	Arrive at KAFB-106153
1418	Sampled KAFB-106153
1428	Leave KAFB-106153 for KAFB-10658
1429	Arrive at KAFB-10658
1500	Sampled KAFB-10658
~~1530~~	~~Leave KAFB-10658 for field trailer~~ ← 90 day yard
1530	Leave KAFB-10658 for field trailer
1536	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

D. Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-13-2020

WEATHER: Clear, high of 98°F, windy with a sandstorm.

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☒	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☒
Solinst Water Level Meter 253056 ☒	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Sampled ER203-01 (Haz), KAFB-106005.

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

1034	Leave field trailer for KAFB-106005
1037	Arrive at KAFB-106005 and gauge: 469.03 to NAPL,
	469.26 to Water.
1110	Begin Bailing for 1 hr → 469.07 DTW (no measurable NAPL) 12:15

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-13-2020

4. WORK PERFORMED (Continued)	
1620	Leave KAFB-106805 for field trailer
1623	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-14-2020

WEATHER: partly cloudy, high of 97°F, wind W @ 8-17 mph.

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☑	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☑
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Sampled ER203-02 at 1011, and KAFB-106012R at 1240.

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

1041	Leave field trailer for <90-day yard
1044	Arrive at <90-day yard
1050	Leave <90-day yard for KAFB-106012R
1051	Arrive at KAFB-106012R

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-14-2020

4. WORK PERFORMED (Continued)	
1338	Leave KAFB-106012R for field trailer
1345	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schweelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-15-2020

WEATHER: Partly cloudy, high of 94°F, wind gusts to 15mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schweelk	EA - Sampler
Galveston Begaye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☑	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☑	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells sampled: KAFB-106101, KAFB-106102, KAFB-106003, KAFB-106013, KAFB-106098

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0651	Leave field trailer for KAFB-106101 cluster
0653	Arrive at KAFB-106101 cluster
0741 ~~0743~~	Sampled KAFB-106101
0921	Sampled KAFB-106102

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-15-2020

4. WORK PERFORMED (Continued)	
1056	Sampled KAFB-106003
1137	Leave KAFB-106101 cluster for field trailer
1140	Arrive at ~~Field~~ field trailer
1205	Leave field trailer for KAFB-106013 cluster
1215	Arrive at KAFB-106013 cluster
1313	Sampled KAFB-106013
1451	Sampled KAFB-106098
1545	Leave KAFB-106098 for field trailer
1600	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7.24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-16-2020

WEATHER: Partly Cloudy, High of 91°F, wind S @ 8-24 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Beggye	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☒	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☒	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☒	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells sampled: KAFB-106097, KAFB-106004, KAFB-106100, KAFB-106099.

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0652	Leave field trailer for KAFB-106097
0703	Arrive at KAFB-106097
0802	Sampled KAFB-106097
0843	Leave KAFB-106097 for KAFB-106100 cluster

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-16-2020

4. WORK PERFORMED (Continued)	
0847	Arrive at KAFB-106100 cluster
0943	Sampled KAFB-106004
1119	Sampled KAFB-106100
1311	Sampled KAFB-106099
1405	Leave KAFB-106100 cluster for field trailer
1418	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

D. Schweelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 07-17-2020

WEATHER: Partly cloudy NE wind 4MPH

1. ONSITE PERSONNEL (including subcontractors and government employees)	
Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Galveston Begaye	TECH III

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells O&M: KAFB-106247, KAFB-106007, KAFB-106155, KAFB-10658, KAFB-106006, KAFB-106153, KAFB-106154, KAFB-106024, KAFB-106148, KAFB-106001, KAFB-106149, KAFB-10651, KAFB-106076, KAFB-106077, KAFB-106078, KAFB-106150, KAFB-106027, KAFB-106044, KAFB-106045, KAFB-106016, KAFB-106341, KAFB-106156, KAFB-106046, KAFB-106047, KAFB-106048, KAFB-106151, KAFB-106069, KAFB-10659, KAFB-106060, KAFB-106059, KAFB-106152, KAFB-10652, KAFB-106008, KAFB-106062, KAFB-106063, KAFB-106064, KAFB-106201, KAFB-106202, KAFB-106203, KAFB-106245

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0652	left trailer to KAFB-106247
0702	Arrived at KAFB-106247
0711	Left KAFB-106247 to KAFB-106007
0713	Arrived at KAFB-106007

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-17-2020

4. WORK PERFORMED (Continued)	
0717	left KAFB-106007 to KAFB-106155
0719	Arrived at KAFB-106155
0725	left KAFB-106155 to KAFB-106058
0726	Arrived at KAFB-106058
0734	left KAFB-106058 to KAFB-106153
0735	Arrived at KAFB-106153
0740	left KAFB-106153 to KAFB-106154
0741	Arrived at KAFB-106154
0747	left KAFB-106154 to KAFB-106024
0748	Arrived at KAFB-106024
0753	left KAFB-106024 to KAFB-106148
0754	Arrived at KAFB-106148
0758	left KAFB-106148 to KAFB-106001
0759	Arrived at KAFB-106001
0804	left KAFB-106001 to KAFB-106149
0805	Arrived at KAFB-106149
0811	left KAFB-106149 to KAFB-106051
0812	Arrived at KAFB-106051
0815	left KAFB-106051 to KAFB-106076 cluster
0816	Arrived at KAFB-106076 cluster
0828	left KAFB-106076 cluster to KAFB-106150
0829	Arrived at KAFB-106150
0833	left KAFB-106150 to KAFB-106044 cluster
0839	Arrived at KAFB-106044 cluster
0850	left KAFB-106044 cluster to KAFB-106016
0855	Arrived at KAFB-106016

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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2 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-17-2020

4. WORK PERFORMED (Continued)	
0858	left KAFB-106016 to KAFB-106 3411
0900	Arrived at KAFB-3411
0903	left KAFB-3411 to KAFB-106156
0904	Arrived at KAFB-106156
0909	left KAFB-106156 to Valero gas
0924	Arrived at ~~KAFB~~ Valero gas
0929	left Valero gas to trailer
0940	Arrived at trailer
0948	left trailer to KAFB-106046 cluster
0954	Arrived at KAFB-106046 cluster
1013	left KAFB-106046 cluster to KAFB-106151
1019	Arrived at KAFB-106151
1024	left KAFB-106151 to KAFB-106069 cluster
1025	Arrived at KAFB-106061 cluster
1047	left KAFB-106061 cluster to KAFB-106152
1049	Arrived at KAFB-106152
1057	left KAFB-106152 to KAFB-106S2 cluster
1058	Arrived at KAFB-106S2 cluster
1105	left KAFB-106S2 cluster to KAFB-106062 cluster
1106	Arrived at KAFB-106062 cluster
1122	Left KAFB-106062 cluster to KAFB-106201 cluster
1133	Arrived at KAFB-106201 cluster
1145	left KAFB-106201 cluster to KAFB-106245
1153	Arrived at KAFB-106245
1158	left KAFB-106245 to trailer
1200	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Gabrielle Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ 3 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-20-2020

WEATHER: Partly cloudy, high of 95°F, wind SE @ 7-18 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bocksch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler
Amy Rosebrough	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☑	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☑

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0638	Leave field trailer for KAFB-106045
0644	Arrive at KAFB-106045 cluster
0748	Leave KAFB-106045 cluster for field trailer
0754	~~0804~~ Arrive at field trailer

DQCR Page 1 of ~~2~~ 3

Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-20-2020

4. WORK PERFORMED (Continued)	
0804	Leave ~~KAFB~~ field trailer for KAFB-106201 cluster
0814	Arrive at KAFB-106201 cluster
0838	Leave KAFB-106201 cluster for KAFB-106219 cluster
0846	Arrive at KAFB-106219 cluster
0913	Leave KAFB-106219 clusters for KAFB-106207 cluster
0916	Arrive at KAFB-106207 cluster
0943	Leave KAFB-106207 for KAFB-106231 cluster
1002	Leave KAFB-106231 cluster for KAFB-106029 cluster
1008	Arrive at KAFB-106029
1043	Leave KAFB-106029 cluster for KAFB-106241
1047	Arrive at KAFB-106241
1111	Leave KAFB-106241 for field trailer
1121	Arrive at field trailer
1126	Leave field trailer for KAFB-106021
1140	Arrive at KAFB-106021
1153	Leave KAFB-106021 for KAFB-106236
1214	Arrive at KAFB-106236
1234	Leave KAFB-106236 for KAFB-106206 cluster
1238	Arrive at KAFB-106206 cluster
1305	Leave KAFB-106206 cluster for KAFB-106216 cluster
1307	Arrive at KAFB-106216 cluster
1329	Leave KAFB-106216 cluster for KAFB-106222 cluster
1331	Arrive at KAFB-106222 cluster
1359	Leave KAFB-106222 cluster for KAFB-106235
1401	Arrive at KAFB-106235
1420	Leave KAFB-106235 for field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schweelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ ~~3 of 3~~ 2 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-20-2020

4. WORK PERFORMED (Continued)

1432	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ 3 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1

DATE: 7-20-2020

WEATHER: Partly cloudy, high of 95°F, wind SE @ 7-18 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bocksch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - Sampler
Galveston Begaye	EA - Sampler
Amy Rosebrough	EA - Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☑	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☑	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☑

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0638	Leave field trailer for KAFB-106045
0644	Arrive at KAFB-106045 cluster
0748	Leave KAFB-106045 cluster for field trailer
0754	~~0804~~ Arrive at field trailer

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-20-2020

4. WORK PERFORMED (Continued)	
0804	Leave ~~KAF~~ field trailer for KAFB-106201 cluster
0814	Arrive at KAFB-106201 cluster
0838	Leave KAFB-106201 cluster for KAFB-106219 cluster
0846	Arrive at KAFB-106219 cluster
0913	Leave KAFB-106219 clusters for KAFB-106207 cluster
0916	Arrive at KAFB-106207 cluster
0943	Leave KAFB-106207 for KAFB-106231 cluster
1002	Leave KAFB-106231 cluster for KAFB-106029 cluster
1008	Arrive at KAFB-106029
1043	Leave KAFB-106029 cluster for KAFB-106241
1047	Arrive at KAFB-106241
1111	Leave KAFB-106241 for field trailer
1121	Arrive at field trailer
1126	Leave field trailer for KAFB-106021
1140	Arrive at KAFB-106021
1153	Leave KAFB-106021 for KAFB-106236
1214	Arrive at KAFB-106236
1234	Leave KAFB-106236 for KAFB-106206 cluster
1238	Arrive at KAFB-106206 cluster
1305	Leave KAFB-106206 cluster for KAFB-106216 cluster
1307	Arrive at KAFB-106216 cluster
1329	Leave KAFB-106216 cluster for KAFB-106222 cluster
1331	Arrive at KAFB-106222 cluster
1359	Leave KAFB-106222 cluster for KAFB-106235
1401	Arrive at KAFB-106235
1420	Leave KAFB-106235 for field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schweelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ ~~3 of 3~~ 2 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-20-2020

4. WORK PERFORMED (Continued)

1432	Arrive at field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 07-21-2020

WEATHER: 91 Wind at 5 mph NE partly cloudy

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Backish	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Galveston Bagaye	Sampler
Amy Rosebrough	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☒
Geotech Turbidimeter 78081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☒	Geotech Interface Probe 0001 ☒

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells gauged: KAFB-106032, KAFB-106033, KAFB-106034, KAFB-106095, KAFB-106094, KAFB-106096, KAFB-106067, KAFB-106068, KAFB-106069, KAFB-106049, KAFB-106050, KAFB-106051, KAFB-106052, KAFB-106053, KAFB-106054, KAFB-106105, KAFB-106106, KAFB-106107, KAFB-106041, KAFB-106042, KAFB-106043, KAFB-106225, KAFB-106226, KAFB-106227, KAFB-106230, KAFB-106026, KAFB-106025, KAFB-106241, KAFB-106057, KAFB-106058, KAFB-106055, KAFB-106091, KAFB-106092, KAFB-106093, KAFB-106229

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0640	Left trailer to KAFB-106032 cluster
0647	Arrived at KAFB-106032 cluster
0715	left KAFB-106032 cluster to KAFB-106095 cluster
0724	Arrived at KAFB-106095 cluster

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-21-2020

4. WORK PERFORMED (Continued)	
0800	left KAFB-106095 cluster to KAFB-106067 cluster
0808	Arrived at KAFB-106067 cluster
0844	Left KAFB-106067 cluster to KAFB-106049 cluster
0853	Arrived at KAFB-106049 cluster
0930	Left KAFB-106049 cluster to KAFB-106052 cluster
0935	Arrived at KAFB-106052 cluster
1010	Left KAFB-106052 cluster to KAFB-106105 cluster
1013	Arrived at KAFB-106105 cluster
1100	Left KAFB-106105 cluster to KAFB-106041 cluster
1102	Arrived at KAFB-106041 cluster
1127	Left KAFB-106041 cluster to KAFB-106225 cluster
1132	Arrived at KAFB-106225 cluster
1216	Left KAFB-106225 cluster to KAFB-106230 cluster
1220	~~KAFB-106230~~ Arrived at KAFB-106230 cluster
1248	Left KAFB-106230 cluster to KAFB-106025
1252	Arrived at KAFB-106025
1303	Left KAFB-106025 to KAFB-106055 cluster
1308	Arrived at KAFB-106055 cluster
1350	left KAFB-106055 cluster to KAFB-106091 cluster
1355	Arrived at KAFB-106091 cluster
1418	Left KAFB-106091 cluster to trailer
	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Name: Galveston Begaye

Signature:

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 07-22-2020

WEATHER: 88°F partly cloudy wind 3mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Baltrush	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Galveston Begaye	Sampler
Amy Rosebrough	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☒
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☒	Geotech Interface Probe 0001 ☒

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells gauged = KAFB-106073, KAFB-106074, KAFB-106075, KAFB-106020, KAFB-106013, KAFB-106097, KAFB-106098, KAFB-106240, KAFB-106082, KAFB-106083, KAFB-106084, KAFB-106018, KAFB-106091, KAFB-106092, KAFB-106093, KAFB-106213, KAFB-106214, KAFB-106215, KAFB-106217, KAFB-106035, KAFB-106036, KAFB-106037, KAFB-106025, KAFB-106243, KAFB-106088, KAFB-106089, KAFB-106090.

Note: KAFB-106209 was re-gauged DTW; Previous @ 468.73, today @ 469.02

Note: KAFB-106083 security bolt stripped

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0633	Left trailer to KAFB-106073 cluster
0648	Arrived at KAFB-106073 cluster
0727	Left KAFB-106073 cluster to KAFB-106097 cluster
0730	Arrived at KAFB-106097 cluster

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-22-2020

4. WORK PERFORMED (Continued)	
0808	left KAFB-106097 cluster to KAFB-106240
0810	Arrived at KAFB-106240
0821	Left KAFB-106240 to KAFB-106082 cluster
0827	Arrived at KAFB-106082 cluster
0911	left KAFB-106082 cluster to trailer
0920	Arrived at trailer
0925	Left trailer to KAFB-106083
0940	Arrived at KAFB 106083
0948	Left KAFB 106083 to trailer
0958	Arrived at ~~KAFB~~ trailer
1000	Left trailer to KAFB-106083
1008	Arrived at KAFB-106083
1030	left KAFB-106083 to KAFB-106207 cluster
1036	Arrived at ~~KAFB 106207~~ KAFB 106207 cluster
1056	left KAFB-106207 cluster to KAFB-106092 cluster
1104	Arrived at KAFB-106092 cluster
1126	left KAFB-106092 cluster to KAFB-106029 cluster
1130	Arrived at KAFB-106029 cluster
1301	left KAFB-106029 cluster to KAFB-106213 cluster
1308	Arrived at KAFB-106213 cluster
1323	left ~~KAFB~~ KAFB-106213 clusters to trailer
1330	Arrived at trailer
1336	Left trailer to KAFB-106213 cluster
1344	Arrived at KAFB-106213 cluster
1425	left KAFB 106213 cluster to KAFB-106022
1427	Arrived at KAFB-106022

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Beijaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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2 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-22-2020

4. WORK PERFORMED (Continued)

1435	left KAFB-106022 to KAFB-106243 cluster
1440	Arrived at KAFB-106243 cluster
1520	left KAFB-106243 cluster to ~~to KAFB-106~~ trailer
1530	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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3 of 3

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #1 DATE: 7-23-2020

WEATHER: Partly sunny, high of 86°F, winds SW @ 7-16 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Dylan Schmeelk	EA - sampler
Galveston Begaye	EA - sampler
Amy Rosebrough	EA - sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☑
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☑	Solinst Water Level Meter 253053 WH0012 ☑	Geotech Interface Probe 0001 ☑

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

0708	Amy changed to team #2
1208	Amy rejoined team #1

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0636	leave field trailer for KAFB-1065Y cluster
0638	Arrive at KAFB-1065Y cluster
0704	Leave KAFB-1065Y cluster for field trailer
0708	Arrive at field trailer

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Reviewed by: J. Messenger Reviewed date: 7-24-2020

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Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-23-2020

4. WORK PERFORMED (Continued)	
0714	Leave field trailer for KAFB-106~~85~~S5 cluster
0723	Arrive at KAFB-10685 cluster
0740	Leave KAFB-10685 cluster for KAFB-10657 cluster
0744	Arrive at KAFB-10657 cluster
0757	Leave KAFB-10657 cluster for KAFB-106017
0801	Arrive at KAFB-106017
0809	Leave KAFB-1061~~0~~017 for KAFB-106019
0810	Arrive at KAFB-106019
0819	Leave KAFB-106019 for KAFB-106103
0821	Leave KAFB-106103 for KAFB-106087
0837	Arrive at KAFB-106103
0841	Arrive at KAFB-106087
0848	Leave KAFB-106087 for KAFB-106072
0853	Arrive at KAFB-106072
0902	Leave KAFB-106072 for KAFB-106149
0914	Arrive at KAFB-106149
0922	Leave KAFB-106149 for KAFB-10651
0922	Arrive at KAFB-10651
0931	Leave KAFB-10651 for KAFB-106150
0931	Arrive at KAFB-106150
0941	Leave KAFB-106150 for KAFB-10658 cluster
0943	Arrive at KAFB-10658 cluster
0959	Leave KAFB-10658 for KAFB-106153
0959	Arrive at KAFB-106153
1009	Leave KAFB-106153 for KAFB-106154
1009	Arrive at KAFB-106154

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk

Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-23-2020

4. WORK PERFORMED (Continued)	
1020	Leave KAFB-106154 for KAFB-106148
1021	Arrive at KAFB-106148
1029	Leave KAFB-106148 for KAFB-106076
1037	Arrive at KAFB-106076
1046	Leave KAFB-106076 for KAFB-106155
1046	Arrive at KAFB-106155
1056	Leave KAFB-106155 for KAFB-106001
1059	Arrive at KAFB-106001
1106	Leave KAFB-106001 for KAFB-106152
1109	Arrive at KAFB-106152
1118	Leave KAFB-106152 for KAFB-106156
1138	Arrive at KAFB-106156
1150	Leave KAFB-106156 for field trailer
1153	Arrive at field trailer
1208	Leave field trailer for KAFB-10652 cluster
1211	Arrive at KAFB-10652 cluster
1228	Leave KAFB-10652 cluster to KAFB-10659 cluster
1229	Arrive at KAFB-10659 cluster
1259	Leave KAFB-10659 cluster for KAFB-106062
1303	Arrive at KAFB-106062
~~1311~~	Leave KAFB-106062 for KAFB-106080 cluster
~~1316~~	Arrive at KAFB-106080 cluster
1332	Leave KAFB-106080 cluster for KAFB-10653 cluster
1333	Arrive at KAFB-10653 cluster
1357	Leave KAFB-10653 cluster for field trailer
1401	Arrive at ~~KAFB-10~~ field trailer

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Dylan Schmeelk
Name

Signature

EA Engineering, Science and Technology Inc., PBC

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Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Gauging - Team #1 DATE: 7/24/2020

WEATHER: Cloudy, raining intermittently

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernie Bockisch	EA - Site Manager/Supervisor
Pete Ferran	EA - Site Health and Safetly Office
Ginny Bracht	EA
Amy Rosebrough	EA
	AR

2. OPERATING EQUIPMENT

Team #1		Team #2		Spare	
YSI Professional Plus 18L100378 WH0003	☐	YSI Professional Plus 15K101396 WH0001	☐	YSI Professional Plus 15L100541 WH0002	☐
MiniRAE 3000 592-915778 WH0005	☐	MiniRAE 3000 592-915790 WH0004	☐	MiniRAE 3000 592-915579 WH0006	☒
Geotech Turbidimeter 18081855	☐	Hach 2100Q 15100C044633 WH0009	☐	Hach 2100Q 15100C045025 WH0007	☐
Solinst Water Level Meter 253056	☐	Solinst Water Level Meter 253053 WH0012	☒	Geotech Interface Probe 0001	☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

~~Leave trailer for~~ AR

KAFB-106085, KAFB-106086, KAFB-106070, KAFB-106071, KAFB-106023, KAFB-106104, KAFB-106015, KAFB-106046, KAFB-106047, KAFB-106016, KAFB-3411, KAFB-106247 KAFB-106007, KAFB-106077, KAFB-106078, KAFB-106024

AR

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0700	Leave trailer for KAFB-106085 cluster
0705	Arrive at KAFB-106085 cluster
0726	Leave KAFB-106085 cluster for KAFB-106070
0727	Arrive at KAFB-106070 cluster

DQCR Page 1 of 2

Reviewed by: AM Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-24-2020

4. WORK PERFORMED (Continued)	
0749	Leave KAFB-106070 cluster for KAFB-106023 cluster
0750	Arrive at KAFB-106023 cluster
0812	Leave KAFB-106023 cluster for KAFB-106015
0817	Arrive at KAFB-106015
0830	Leave KAFB-106015 for KAFB-106046 cluster
0839	Arrive at KAFB-106046 cluster
0845	Leave KAFB-106046 cluster for trailer
0847	Arrive at trailer
0850	Leave trailer for KAFB-106046 cluster
0853	Arrive at KAFB-106046 cluster
0914	Leave KAFB-106046 cluster for KAFB-106016
0919	Arrive at KAFB-106016
0929	Leave KAFB-106016 for ~~KAFB-106~~ AR KAFB-3411
0930	Arrive at KAFB-3411
0939	Leave KAFB-3411 for KAFB-106247
0944	Arrive at KAFB-106247
0955	Leave KAFB-106247 for KAFB-106007
0957	Arrive at KAFB-106007
1006	Leave KAFB-106007 for KAFB-106077 cluster
1008	Arrive at KAFB-106077 cluster
1030	Leave KAFB-10677 cluster for KAFB-106024
1032	Arrive at KAFB-106024
1046	Leave KAFB-106024 for trailer
1052	Arrive at trailer.
AR	

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Amy Rosebrough
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by:

Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Gauging — Team #2 DATE: 7/23/2020

WEATHER: Warm, cloudy (86°F) Winds 7-15 mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernie Bockisch	EA - Site Manager/Supervisor
Pete Ferrari	EA - Site Health and Safetly Office
Ginny Bracht	EA
Amy Rosebrough	EA
AR	

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☒	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

106004, 106099, 106100, 106244-445, 106066, 106065, 106038, 106039, 106040, 106211, 106101, 106102, 106003, 106002, 106012R, 106011, 106245-460

AR

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0735	Arrive at KAFB-106004 cluster; gauge KAFB-106004, 106099, 106100, 106244-445
0835	Leave KAFB-106004 cluster for KAFB-106066 cluster
0840	Arrive at KAFB-106066 cluster

DQCR Page 1 of 2

Reviewed by: J. Messenger Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7-23-2020

4. WORK PERFORMED (Continued)

0907	Leave KAFB-106066 cluster for KAFB-106039 cluster
0913	Arrive at KAFB-106039 cluster.
0948	Leave KAFB-106039 cluster for KAFB-106211
0949	Arrive at KAFB-106211
1008	Leave KAFB 106211 for cluster KAFB-106101
1016	Arrive at KAFB-106101 cluster
1048	Leave KAFB-106101 cluster for KAFB-106002
1051	Arrive at KAFB-106002
1104	Leave KAFB-106002 for KAFB ~~106012R~~ AA 106012R
1105	Arrive at KAFB 106012R
1116	Leave KAFB-106012R for KAFB-106011
1118	Arrive at KAFB-106011
1135	Leave KAFB-106011 for KAFB-106245-460
1136	Arrive at KAFB-106245-460
1151	Leave KAFB-106245-460 for trailer
1153	Arrive at trailer
	AR

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Amy Rosebrough
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: J. Messenger

Reviewed date: 7-24-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #2 DATE: 07-24-2020

WEATHER: 85°F partly cloudy WSW 8mph

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Gabreton Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 ~~WH0001~~ ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells O&M: KAFB-106003, KAFB-106101, KAFB-106102 KAFB-106002, KAFB-1612R, KAFB-106079, KAFB-106080 KAFB-106081, KAFB-106014, KAFB-106S3, KAFB-106011 KAFB-106015, KAFB-106004, KAFB-106017, KAFB-106211 KAFB-106019, KAFB-106038, KAFB-106039, KAFB-106040

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

1310	left trailer to KAFB-106003 cluster
1315	Arrived at KAFB-106003 cluster
1324	left KAFB-106003 cluster to KAFB-106002
1325	Arrived at KAFB-106002

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Reviewed by: JM Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-24-2020

4. WORK PERFORMED (Continued)	
1329	left KAFB-106002 to KAFB-1061ZR
1330	Arrived at KAFB-1061ZR
1333	left KAFB-1061ZR to KAFB-106014 cluster
1335	Arrived at KAFB-106014 cluster
1353	left KAFB-106014 cluster to KAFB-106011
1354	Arrived at KAFB-106011
1357	left KAFB-106011 to trailer
1400	Arrived at trailer
1403	left trailer to KAFB-106015
1410	Arrived at KAFB-106015
1415	left KAFB-106015 to KAFB-106004
1420	Arrived at KAFB-106004
1424	left KAFB-106004 to KAFB-106017 cluster
1429	Arrived at KAFB-106017 cluster
1445	left KAFB-106017 cluster to KAFB-106019
1447	Arrived at KAFB-106019
1451	left KAFB-106019 to KAFB-106038 cluster
1453	Arrived at KAFB-106038 cluster
1501	left KAFB-106038 cluster to KAFB-106013
1507	Arrived at KAFB-106013
1513	left KAFB-106013 to KAFB-106077
1535	Arrived at KAFB-106077
1541	left KAFB-106077 to trailer
1547	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: _____

Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #2 DATE: 07-27-2020

WEATHER: 84°F partly cloudy wind 5mph west

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Gabreste Degaye	Sampler Team 2

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

Wells O&M: KAFB-106S5, KAFB-106085, KAFB-106086, KAFB-106070, KAFB-106071, KAFB-106072, KAFB-106023, KAFB-106103, KAFB-106104, KAFB-106243, KAFB-106088, KAFB-106089, KAFB-106090, KAFB-106010, KAFB-106028, KAFB-10657, KAFB-106065, KAFB-106066, KAFB-106244, KAFB-106099, KAFB-106100, KAFB-106212, KAFB-106035, KAFB-106036, KAFB-106037, KAFB-106220, KAFB-106221, KAFB-106213, KAFB-106214, KAFB-106215, KAFB-106022

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0700	left to KAFB-106S5 from trailer
0714	Arrived at KAFB-106S5
0735	left KAFB-106S5 to trailer
0750	Arrived at ~~KAFB for~~ trailer

Reviewed by: _____ Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-27-2020

4. WORK PERFORMED (Continued)	
0752	left trailer to KAFB-106085 cluster
0801	Arrived at KAFB-106085 cluster
0818	left KAFB-106085 cluster to KAFB-106070 cluster
0820	Arrived at KAFB-106070 cluster
0850	left KAFB-106070 cluster to KAFB-106023 cluster
0855	Arrived at KAFB-106023 cluster
0920	left KAFB-106023 cluster to KAFB-106089 cluste
0923	Arrived at KAFB-106089 cluster
0955	left KAFB-106089 cluster to KAFB-106010
1000	Arrived at KAFB-106010
1010	left KAFB-106010 to KAFB-106065 cluster
1013	Arrived at KAFB-106065 cluster
1032	left KAFB-106065 cluster to KAFB-106244
1038	Arrived at KAFB-106244
1055	left KAFB-106244 to KAFB-106099 cluster
1056	Arrived at KAFB-106099 cluster
1112	left KAFB-106099 cluster to KAFB-106212 cluster
1120	Arrived at KAFB-106212 cluster
1155	left KAFB-106212 cluster to ~~KAFB~~ trailer
1203	Arrived at trailer
1220	left trailer to KAFB-106219 cluster
1230	Arrived at KAFB-106219 cluster
1256	left KAFB-106219 cluster to KAFB-106213 cluster
1300	Arrived at KAFB-106213 cluster
1322	left KAFB-106213 cluster to KAFB-106022
1324	Arrived at KAFB-106022

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page ~~2 of 2~~ 2 of 3

Reviewed by: JM

Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-27-2020

4. WORK PERFORMED (Continued)

1330	left KAFB 106022 to trailer
1340	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

Reviewed by: JM

DQCR Page 2 of 2 3 of 3

Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Team #2 DATE: 07-28-2020

WEATHER: 86°F partly cloudy 5mph wind NE

1. ONSITE PERSONNEL (including subcontractors and government employees)

Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safetly Office
Gabreyon Begaye	Sampler

2. OPERATING EQUIPMENT

Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☐	~~YSI Professional Plus 15K101396~~ WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☒	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☐	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, converstations with the the public and governmental employees, and problems encountered and remedies applied)

wells O&M: KAFB-106074, KAFB-106216, KAFB-106217, KAFB-106229, KAFB-106091, KAFB-106092, KAFB-106093, KAFB-106241, KAFB-106055, KAFB-106057, KAFB-106058, KAFB-106025, KAFB-106105, KAFB-106106, KAFB-106107, KAFB-106041, KAFB-106042, KAFB-106043, KAFB-106223, KAFB-106225, KAFB-106226, KAFB-106227, KAFB-106228, KAFB-106230,

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)

0715	left to KAFB-106074 from trailer
0726	Arrived at KAFB-106074
0732	left KAFB-106074 to KAFB-106216 cluster
0740	Arrived at KAFB ~~106074~~ 106216 cluster

DQCR Page 1 of 2

Reviewed by: _____ Reviewed date: 7-29-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 07-28-2020

4. WORK PERFORMED (Continued)	
0825	left KAFB-106216 cluster to KAFB-106091 cluster
0831	Arrived at KAFB-106091 cluster
0916	left KAFB-106091 cluster to KAFB-106055 cluster
0920	Arrived at KAFB-106055 cluster
0955	left KAFB-106055 cluster to KAFB-106025
1000	Arrived at KAFB-106025
1005	left KAFB-106025 to KAFB-106105 cluster
1007	Arrived at KAFB-106105 cluster
1047	left KAFB-106105 cluster to KAFB-106041 cluster
1050	Arrived at KAFB-106041 cluster
1119	left KAFB-106041 cluster to KAFB-106223
1122	Arrived at KAFB-106223
1141	left KAFB-106223 to KAFB-106225 cluster
1144	Arrived at KAFB-106225 cluster
1222	left KAFB-106225 cluster to KAFB-106230
1225	Arrived at KAFB-106230
1230	left KAFB-106230 to KAFB-106026
1231	Arrived at KAFB-106026
1236	left KAFB-106026 to trailer
1253	Arrived at trailer END of DAY

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Galveston Begaye
Name

Signature

EA Engineering, Science and Technology Inc., PBC

DQCR Page 2 of 2

Reviewed by: _____

Reviewed date: 7-28-2020

Well Gauging Form Team 1	59	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2020 Q2 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106001	—	466.72	7-23-2020	0.0	—	467.44	GB	0001		TWV
KAFB-106002	—	464.12	7-23-2020	0.0	—	464.40	GBR	WH0012		TWV
KAFB-106003	—	462.13	7-23-2020	0.0	—	462.10	AR	WH0012	confirmed by GBR	TWV
KAFB-106005	—	468.63	7-23-2020	0.1	—	469.44	DS	0001		TOPC
KAFB-106006	—	473.59	7-23-2020	0.0	—	474.22*	DS	0001		TWV
KAFB-106007	—	471.79	7-24-2020	0.0	—	472.26	DS	WH0012		TOPC
KAFB-106009	—	470.30	7-23-2020	0.0	—	471.13	DS	0001		TWV
KAFB-106010	—	465.37	7-23-2020	0.0	—	466.00	GB	0001		TWV
KAFB-106011	—	475.30	7-23-2020	0.0	—	475.87	GBr	WH0012		TOPC
KAFB-106012R	—	467.11	7-23-2020	0.0	—	467.61	AR	WH0012		TOPC
KAFB-106014	—	472.25	7-23-2020	0.0	—	472.84	DS	0001		TOPC
KAFB-106015	—	464.51	7-24-2020	0.0	—	466.50	DS	WH0012		TOPC
KAFB-106016	—	464.44	7-24-2020	0.0	—	464.69	DS	WH0012		TOPC
KAFB-106024	—	465.78	7-24-2020	0.0	—	466.52	AR	WH0012		TWV
KAFB-106027	—	470.83	7-20-2020	0.0	—	470.96	DS	WH0012		TOPC
KAFB-106044	—	470.97	7-20-2020	0.0	—	471.11	DS	WH0012		TOPC
KAFB-106045	—	470.70	7-20-2020	0.0	—	470.82	DS	WH0012		TOPC
KAFB-106046	—	475.19	7-24-2020	0.0	—	475.63	AR	WH0012	EA Barricade	TWV
KAFB-106047	—	475.26	7-24-2020	0.0	—	475.69	DS	WH0012	EA Barricade	TWV
KAFB-106048	—	474.99	7-24-2020	0.0	—	475.34	AR	WH0012	EA Barricade	TWV
KAFB-106060	—	467.53	7-23-2020	0.0	—	468.06	AR	0001		TWV

* tripple checked level, which was taken 4.5 hrs after KAFB-106046, and 047

Well Gauging Form Team 1										59	2020
Project: Kirtland AFB BFF ST-106/SS-111											Quarter : 3
Well ID	Previous DTW 2020 Q2 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact		Reference Point
	Depth to NAPL	DTW									
KAFB-106061	—	467.48	7-23-2020	0.0	—	467.93	AR	WH0012			TWV
KAFB-106062	—	473.46	7-23-2020	0.0	—	473.91	GB	WH0012	APTIM		TOPC
KAFB-106077	—	468.35	7-24-2020	0.0	—	~~469.81~~ 468.81	AR	WH0012	verified as 468.81 - DS		TWV
KAFB-106078	—	467.49	7-24-2020	0.0	—	467.95	DS	WH0012			TWV
KAFB-106080	—	470.45	7-23-2020	0.0	—	471.04	GB	0001			TOPC
KAFB-106081	—	471.65	7-23-2020	0.0	—	472.23	AR	WH0012			TOPC
KAFB-106101	—	462.27	7-23-2020	0.0	—	462.35	AR	WH0012			TOPC
KAFB-106102	—	462.41	7-23-2020	0.0	—	462.48	GB	WH0012			TOPC
KAFB-106201	—	479.55	7-20-2020	0.0	—	484.36	GB	WH0012	Do early in the morning and ensure production well is pumping		TOPC
KAFB-106202	—	480.58	7-20-2020	0.0	—	485.27	AR	"			TOPC
KAFB-106203	—	481.01	7-20-2020	0.0	—	485.61	DS	"			TOPC
KAFB-3411	—	465.54	7-24-2020	0.0	—	465.92	DS	WH0012			TOPC
KAFB-106245-460	—	483.36	7-23-2020	0.0	—	483.90	AR	WH0012			TOPC
KAFB-106247	—	474.03	7-24-2020	0.0	—	474.37	AR	WH0012	double checked DTW - DS		TOPC
KAFB-106008	—	473.64	7-23-2020	0.0	—	474.31	DS	253056			TWV
KAFB-106028	—	471.09	7-23-2020	0.0	—	471.56	GB	253056			TOPC
KAFB-106059	469.91	470.06	7-23-2020	1.2	470.40	470.41	GB	253056			TOPC
KAFB-106063	—	NA	Equipment in well						DS APTIM		TOPC
KAFB-106064	—	NA	"	"	"				DS APTIM		TOPC
KAFB-106076	467.25	467.26	7-23-2020	0.0	—	467.68	GB	253056			TWV
KAFB-106079	—	471.91	7-23-2020	0.5	—	472.33	DS	253056			TOPC

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Well Gauging Form Team 1	59	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2020 Q2 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point	
	Depth to NAPL	DTW									
KAFB-106148-484	—	466.3	7-23-2020	0.0	—	466.68	GB	253056		TWV	
KAFB-106149-484	—	468.22	7-23-2020	0.0	—	468.70	GB	253056		TWV	
KAFB-106150-484	466.50	466.88	7-23-2020	0.0	466.85	467.12	GB	253056		TWV	★
KAFB-106151-484	—	468.01	7-23-2020	0.0	—	468.47	GB	253056		TWV	
KAFB-106152-484	—	469.79	7-23-2020	0.0	—	470.32	GB	253056		TWV	
KAFB-106153-484	—	471.22	7-23-2020	0.0	—	471.72	DS	253056		TWV	
KAFB-106154-484	—	469.43	7-23-2020	0.0	469.77	469.79	GB	253056		TWV	★
KAFB-106155-484	—	469.88	7-23-2020	0.0	—	470.33	GB	253056		TWV	
KAFB-106156-484	—	463.31	7-23-2020	0.0	—	463.67	GB	253056		TWV	
KAFB-106S1-447	—	467.31	7-23-2020	0.0	—	467.76	DS	253056		TWV	
KAFB-106S2-451	—	474.51	7-23-2020	0.0	—	474.96	GB	253056		TOPC	
KAFB-106S3-449	—	473.59	7-23-2020	0.0	—	474.00	GB	253056		TOPC	
KAFB-106S4-446	—	468.51	7-23-2020	0.0	—	469.19	AR	0001		TOPC	
KAFB-106S5-446	—	465.38	7-23-2020	0.0	—	466.13	GB	253056		TWV	
KAFB-106S7-451	—	470.87	7-23-2020	0.0	—	471.60	GB	253056		TWV	
KAFB-106S8-451	—	473.61	7-23-2020	0.0	—	474.08	GB	253056		TOPC	
KAFB-106S9-447	—	468.08	7-23-2020	0.0	—	468.68	GB	253056		TOPC	

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★ = NAPL present

Well Gauging Form Team 2

56	2020
Project: Kirtland AFB BFF ST-106/SS-111 Verified 7-24-2020 - DS	Quarter : 3

Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106004	—	467.53	7-~~24~~ 23-2020	0.0	—	468.11	AR	WH0012	EA Barricade	TOPC
KAFB-106013	—	472.65	7-22-2020	0.0	—	~~473.16~~ 473.16	AR	WH0012	Call VA Police	TOPC
KAFB-106019	—	477.06	7-23-2020	0.0	—	477.74	DS	0001		TOPC
KAFB-106020	—	462.88	7-22-2020	0.0	—	463.50	AR	0001	Call VA Police	TWV
KAFB-106021	—	436.31	7-20-2020	0.0	—	436.79	GB	0001	Barricades by SWSS	TWV
KAFB-106022	—	440.15	7-22-2020	0.0	—	441.33	AR	WH0012		TWV
KAFB-106023	—	450.85	7-24-2020	0.0	—	451.96	DS	WH0012		TWV
KAFB-106029	—	432.42	7-20-2020	0.0	~~433.05~~ AR	433.05	DS	WH0012	Barricades by SWSS	TWV
KAFB-106030	—	432.54	7-20-2020	0.0	—	433.12	DS	WH0012	Barricades by SWSS	TWV
KAFB-106031	—	432.56	7-20-2020	0.0	—	433.24	AR	WH0012	Barricades by SWSS	TWV
KAFB-106035	—	444.20	7-22-2020	0.0	—	445.20	AR	WH0012	Church - make sure you see if anyone is present at the church to inform them that you are there	TWV
KAFB-106036	—	444.68	7-22-2020	0.0	—	445.74	GB	0001		TWV
KAFB-106037	—	445.31	7-22-2020	0.0	—	446.38	GB	WH0012		TWV
KAFB-106038	—	473.93	7-23-2020	0.0	—	474.67	GB	WH0012		TOPC
KAFB-106039	—	473.74	7-23-2020	0.0	—	474.49	AR	WH0012		TOPC
KAFB-106040	—	472.64	7-23-2020	0.0	—	473.38	AR	WH0012		TOPC
KAFB-106065	—	471.03	7-20-2020	0.0	—	471.50	GB	WH0012	USS Bullhead	TWV
KAFB-106066	—	471.23	7-23-2020	0.0	—	471.86	GB	WH0012	USS Bullhead	TWV
KAFB-106067	—	470.01	7-21-2020	0.0	—	470.36	AR	WH0012		TWV
KAFB-106068	—	469.79	7-21-2020	0.0	—	470.30	AR	WH0012		TWV

Well Gauging Form Team 2	56	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106069	—	469.61	07-21-2020	0.0	—	469.98	AR	WH0012		TWV
KAFB-106070	—	440.55	07-24-2020	0.0	—	441.65	DS	WH0012		TWV
KAFB-106071	—	442.82	7-24-2020	0.0	—	443.95	DS	WH0012		TWV
KAFB-106072	—	441.04	7-23-2020	0.0	—	442.21	DS	0001	confirmed	TWV
KAFB-106073	—	461.76	07-22-2020	0.0	—	462.32	AR	WH0012	Call VA Police	TWV
KAFB-106074	—	462.50	07-22-2020	0.0	—	463.08	AR	WH0012	Call VA Police	TWV
KAFB-106075	—	462.47	07-22-2020	0.0	—	463.04	AR	WH0012	Call VA Police	TWV
KAFB-106082	—	457.69	07-22-2020	0.0	—	458.23	AR	WH0012	Call VA Police	TWV
KAFB-106083	—	457.34	07-22-2020	0.0	—	457.83	AR	WH0012	Call VA Police	TWV
KAFB-106084	—	460.14	07-22-2020	0.0	—	460.75	~~AR~~ GB	WH0012	Call VA Police	TWV
KAFB-106085	—	439.30	07-24-2020	0.0	—	439.97	AR	WH0012		TWV
KAFB-106086	—	439.66	7-24-2020	0.0	—	440.37	AR	WH0012		TWV
KAFB-106087	—	438.81	7-23-2020	0.0	—	439.65	GB	0001		TWV
KAFB-106088	—	446.65	7-22-2020	0.0	—	447.49	AR	0001		TWV
KAFB-106089	—	446.33	7-22-2020	0.0	—	447.08	GB	WH0012		TWV
KAFB-106090	—	445.17	7-22-2020	0.0	✓	446.06	GB	0001		TWV
KAFB-106094	—	467.24	7-21-2020	0.0	—	467.68	AR	~~GB~~ 0001		TWV
KAFB-106095	—	466.79	7-21-2020	0.0	—	467.14	AR	WH0012		TWV
KAFB-106096	—	467.44	7-21-2020	0.0	—	467.89	AR	0001		TWV

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Well Gauging Form Team 2	56	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106097	—	469.59	7-22-2020	0.0	—	470.10	GB	WH0012	Call VA Police	TWV
KAFB-106098	—	469.67	7-22-2020	0.0	—	470.20	AR	WH0012	Call VA Police	TWV
KAFB-106099	—	464.50	7-23-2020	0.0	—	465.05	GB	WH0012	EA Barricade	TWV
KAFB-106100	—	464.52	7-23-2020	0.0	—	465.07	AR	WH0012	EA Barricade	TWV
KAFB-106103	—	451.10	7-23-2020	0.0	—	452.26	GB	0001		TWV
KAFB-106104	—	450.34	7-24-2020	0.0	—	451.64	DS	WH0012		TWV
KAFB-106212	—	444.86	7-22-2020	0.0	—	445.95	GB		Church - make sure you see if anyone is present at the church to inform them that you are there	TWV
KAFB-106213	—	447.64	7-22-2020	0.0	—	448.62	AR			TWV
KAFB-106214	—	447.76	7-22-2020	0.0	—	448.86	AR			TWV
KAFB-106215	—	447.99	7-22-2020	0.0	—	449.08	GB	WH0012		TWV
KAFB-106231	—	448.66	7-20-2020	0.0	—	450.38	DS	WH0012	Barricades by SWSS	TWV
KAFB-106232	—	448.22	7-20-2020	0.0	—	450.00	AR	WH0012	Barricades by SWSS	TWV
KAFB-106240-449	—	469.49	7-22-2020	0.0	—	470.09	GB	WH0012		TWV
KAFB-106242-418	—	438.2	7-20-2020	0.0	—	438.64	GB	WH0012	Barricades by SWSS	TWV
KAFB-106243-425	—	442.84	7-22-2020	0.0	—	443.61	GB	WH0012		TWV
KAFB-106244-445	—	465.3	7-23-2020	0.0	—	465.85	AR	WH0012		TWV
KAFB-106211	—	Dry	7/23-2020	0.0	—	465.28	AR	WH0012		TWV

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Well Gauging Form Team 3	52	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106017	—	464.96	7-23-2020	0.0	—	465.71	GB	0001		TOPC
KAFB-106018	—	458.57	7-22-2020	0.0	—	459.06	AR	0001		TOPC
KAFB-106025	—	438.86	7-21-2020	0.0	—	439.73	AR	WH0012		TWV
KAFB-106026	—	444.00	7-21-2020	0.0	—	445.23	AR	WH0012		TWV
KAFB-106032	—	439.06	~~7-21~~ 7-21-20	0.0	—	439.49	AR	WH0012	Gibson Med. Ctr.	TWV
KAFB-106033	—	439.22	07-21-2020	0.0	—	439.62	AR	WH0012	Gibson Med. Ctr.	TWV
KAFB-106034	—	440.06	07-21-2020	0.0	—	440.49	AR	WH0012	Gibson Med. Ctr.	TWV
KAFB-106041	—	445.85	07-21-2020	0.0	—	446.93	AR	WH0012		TWV
KAFB-106042	—	445.60	7-21-2020	0.0	—	446.68	AR	WH0012		TWV
KAFB-106043	—	445.85	7-21-2020	0.0	—	446.95	GB	WH0012		TWV
KAFB-106049	—	437.36	7-21-2020	0.0	—	438.11	AR	WH0012		TWV
KAFB-106050	—	436.75	7-21-2020	0.0	—	437.50	AR	WH0012		TWV
KAFB-106051	—	437.06	7-21-2020	0.0	—	437.84	AR	WH0012		TWV
KAFB-106052	—	440.41	7-21-2020	0.0	—	441.34	AR	0001		TWV
KAFB-106053	—	440.33	7-21-2020	0.0	—	441.20	AR	WH0012		TWV
KAFB-106054	—	439.91	7-21-2020	0.0	—	440.81	AR	WH0012		TWV
KAFB-106055	—	446.87	7-21-2020	0.0	—	447.53	AR	WH0012		TWV
KAFB-106057	—	447.22	7-21-2020	0.0	—	448.31	AR	WH0012		TWV
KAFB-106058	—	447.79	7-21-2020	0.0	—	448.88	AR	WH0012		TWV
KAFB-106091	—	436.11	7-22-2020	0.0	—	437.56	GB	WH0012		TWV
KAFB-106092	—	436.25	7-22-2020	0.0	—	437.57	GB	WH0012		TWV

Well Gauging Form Team 3	52	2020
Project: Kirtland AFB BFF ST-106/SS-111		Quarter : 3

Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact	Reference Point
	Depth to NAPL	DTW								
KAFB-106093	—	436.33	7-21-2020	0.0	—	437.49	AR	WH0012		TWV
KAFB-106105	—	443.65	7-21-2020	0.0	—	444.72	AR	0001		TWV
KAFB-106106	—	443.52	7-21-2020	0.0	—	444.50	AR	WH0012		TWV
KAFB-106107	—	443.76	7-21-2020	0.0	—	444.83	GB	0001		TWV
KAFB-106204	—	454.10	7-20-2020	0.0	—	456.04	~~DS~~ AR	WH0012		TWV
KAFB-106205	—	454.47	7-20-2020	0.0	—	456.51	DS	WH0012		TWV
KAFB-106206	—	454.61	7-20-2020	0.0	—	456.73	DS	WH0012		TWV
KAFB-106207	—	464.85	7-20-2020	0.0	—	~~469.20~~ ~~468.73~~	~~GB~~ DS	WH0012		TWV
KAFB-106208	—	464.56	7-20-2020	0.0	—	469.02	AR	WH0012		TWV
KAFB-106209	—	463.90	7-20-2020	0.0	—	468.73	DS	WH0012		TWV
KAFB-106216	—	456.00	7-20-2020	0.0	—	457.20	AR	WH0012		TWV
KAFB-106217	—	455.90	7-20-2020	0.0	—	457.12	DS	WH0012		TWV
KAFB-106218	—	456.05	7-20-2020	0.0	—	457.30	DS	WH0012		TWV
KAFB-106219	—	462.07	7-20-2020	0.0	—	464.20	DS	WH0012		TWV
KAFB-106220	—	462.00	7-20-2020	0.0	—	464.12	AR	WH0012		TWV
KAFB-106221	—	461.80	7-20-2020	0.0	—	463.88	AR	WH0012		TWV
KAFB-106222	—	454.87	7-20-2020	0.0	—	456.56	AR	WH0012		TWV
KAFB-106223	—	455.46	7-20-2020	0.0	—	457.21	DS	WH0012		TWV
KAFB-106224	—	456.61	7-20-2020	0.0	—	458.34	DS	WH0012		TWV
KAFB-106225	—	448.24	~~7-21-2020 20~~ AR	0.0	—	449.63	AR	WH0012		TWV
KAFB-106226	—	448.85	7-21-2020	0.0	—	450.27	AR	WH0012		TWV

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Project: Kirtland AFB BFF ST-106/SS-111											Quarter : 3
Well ID	Previous DTW 2018 Q1 (ft MRP)		Date	PID (ppm)	Depth to NAPL (ft MRP)	DTW (ft MRP)	Initials	WL Meter Used (serial number)	Contact		Reference Point
	Depth to NAPL	DTW									
KAFB-106227	—	449.62	7-21-2020	0.0	—	451.04	AR	WH0012			TWV
KAFB-106229	—	436.02	7-21-2020	0.0	—	438.09	AR	0001			TWV
KAFB-106230		446.08	7-21-2020	0.0	—	447.54	GB	WH0012			TWV
KAFB-106235-438	—	437.29	7-20-2020	0.0	—	438.19	GB	WH0012			TWV
KAFB-106235-472	—	437.28	7-20-2020	0.0	—	438.20	DS	WH0012			TWV
KAFB-106235-501	—	437.32	7-20-2020	0.0	—	438.28	DS	WH0012			TWV
KAFB-106236-436	—	437.09	7-20-2020	0.0	—	438.24	AR	WH0012			TWV
KAFB-106236-470	—	437.07	7-20-2020	0.0	—	438.27	DS	WH0012			TWV
KAFB-106236-499	—	437.11	7-20-2020	0.0	—	438.30	DS	WH0012			TWV
KAFB-106241-428	—	446.42	7-21-2020	0.0	—	447.51	AR	WH0012			TWV

Table E-2-1
Water Level Meter Calibration Data

	Depth to Water (feet below ground surface)			Difference Between Meters (feet)		
	Interface Probe					
Well Identification	**253053 (control probe)**	**253056**	**0001**	**253053 and 253056**	**253053 and 0001**	**253056 and 0001**
KAFB-106027	470.96	470.97	471.06	-0.01	-0.1	-0.09
KAFB-106044	471.11	471.12	471.21	-0.01	-0.1	-0.09
KAFB-106045	470.82	470.82	470.92	0	-0.1	-0.1
			Average Difference	-0.01	-0.10	-0.09
Correction Factor	**0**	**0**	**-0.10**			

Table E-2-2
Gauging Calibration Corrections, Q3 2020

Well Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Water Level Interface Probe Used (Serial Number)	Correction Applied (ft)	Corrected Depth to LNAPL (ft MRP)	Corrected Depth to Water (ft MRP)
KAFB-106001[a]	4857/4838	7/23/2020	—	467.44	0001	-0.10	—	467.34
KAFB-106002	4857	7/23/2020	—	464.40	253053	0.00	—	464.40
KAFB-106003	4857	7/23/2020	—	462.10	253053	0.00	—	462.10
KAFB-106004	4857	7/23/2020	—	468.11	253053	0.00	—	468.11
KAFB-106005	4857	7/23/2020	—	469.44	0001	-0.10	—	469.34
KAFB-106006	4857	7/23/2020	—	474.22	0001	-0.10	—	474.12
KAFB-106007	4857	7/24/2020	—	472.26	253053	0.00	—	472.26
KAFB-106008	4857	7/23/2020	—	474.31	253056	0.00	—	474.31
KAFB-106009	4857	7/23/2020	—	471.13	0001	-0.10	—	471.03
KAFB-106010	4857	7/23/2020	—	466.00	0001	-0.10	—	465.90
KAFB-106011	4857	7/23/2020	—	475.87	253053	0.00	—	475.87
KAFB-106012R	4857	7/23/2020	—	467.61	253053	0.00	—	467.61
KAFB-106013	4857	7/22/2020	—	473.16	253053	0.00	—	473.16
KAFB-106014	4857	7/23/2020	—	472.84	0001	-0.10	—	472.74
KAFB-106015[a]	4857/4838	7/24/2020	—	466.50	253053	0.00	—	466.50
KAFB-106016	4857	7/24/2020	—	464.69	253053	0.00	—	464.69
KAFB-106017[a]	4857/4838	7/23/2020	—	465.71	0001	-0.10	—	465.61
KAFB-106018[a]	4857/4838	7/22/2020	—	459.06	0001	-0.10	—	458.96
KAFB-106019[a]	4857/4838	7/23/2020	—	477.74	0001	-0.10	—	477.64
KAFB-106020	4857	7/22/2020	—	463.50	0001	-0.10	—	463.40
KAFB-106021[a]	4857/4838	7/20/2020	—	436.79	0001	-0.10	—	436.69
KAFB-106022[a]	4857/4838	7/22/2020	—	441.33	253053	0.00	—	441.33
KAFB-106023	4857	7/24/2020	—	451.96	253053	0.00	—	451.96
KAFB-106024	4857	7/24/2020	—	466.52	253053	0.00	—	466.52
KAFB-106025[a]	4857/4838	7/21/2020	—	439.73	253053	0.00	—	439.73
KAFB-106026	4857	7/21/2020	—	445.23	253053	0.00	—	445.23
KAFB-106027	4857	7/20/2020	—	470.96	253053	0.00	—	470.96
KAFB-106028	4857	7/23/2020	—	471.56	253056	0.00	—	471.56
KAFB-106029	4857	7/20/2020	—	433.05	253053	0.00	—	433.05
KAFB-106030	4838	7/20/2020	—	433.12	253053	0.00	—	433.12
KAFB-106031	4814	7/20/2020	—	433.24	253053	0.00	—	433.24
KAFB-106032	4857	7/21/2020	—	439.49	253053	0.00	—	439.49
KAFB-106033	4838	7/21/2020	—	439.62	253053	0.00	—	439.62
KAFB-106034	4814	7/21/2020	—	440.49	253053	0.00	—	440.49
KAFB-106035	4857	7/22/2020	—	445.20	253053	0.00	—	445.20
KAFB-106036	4838	7/22/2020	—	445.74	0001	-0.10	—	445.64
KAFB-106037	4838	7/22/2020	—	446.38	253053	0.00	—	446.38
KAFB-106038	4857	7/23/2020	—	474.67	253053	0.00	—	474.67
KAFB-106039	4838	7/23/2020	—	474.49	253053	0.00	—	474.49
KAFB-106040	4814	7/23/2020	—	473.38	253053	0.00	—	473.38
KAFB-106041	4857	7/21/2020	—	446.93	253053	0.00	—	446.93
KAFB-106042	4857	7/21/2020	—	446.68	253053	0.00	—	446.68
KAFB-106043	4814	7/21/2020	—	446.95	253053	0.00	—	446.95
KAFB-106044	4838	7/20/2020	—	471.11	253053	0.00	—	471.11
KAFB-106045	4814	7/20/2020	—	470.82	253053	0.00	—	470.82
KAFB-106046	4857	7/24/2020	—	475.63	253053	0.00	—	475.63
KAFB-106047	4838	7/24/2020	—	475.69	253053	0.00	—	475.69
KAFB-106048	4814	7/24/2020	—	475.34	253053	0.00	—	475.34
KAFB-106049	4857	7/21/2020	—	438.11	253053	0.00	—	438.11
KAFB-106050	4838	7/21/2020	—	437.50	253053	0.00	—	437.50
KAFB-106051	4814	7/21/2020	—	437.84	253053	0.00	—	437.84
KAFB-106052	4857	7/21/2020	—	441.34	0001	-0.10	—	441.24
KAFB-106053	4838	7/21/2020	—	441.20	253053	0.00	—	441.20
KAFB-106054	4814	7/21/2020	—	440.81	253053	0.00	—	440.81
KAFB-106055[b]	4857	7/21/2020	—	447.95	253053	0.00	—	447.95
KAFB-106057	4838	7/21/2020	—	448.31	253053	0.00	—	448.31
KAFB-106058	4814	7/21/2020	—	448.88	253053	0.00	—	448.88
KAFB-106059	4857	7/23/2020	470.40	470.41	253056	0.00	470.40	470.41
KAFB-106060	4838	7/23/2020	—	468.06	0001	-0.10	—	467.96
KAFB-106061	4814	7/23/2020	—	467.93	253053	0.00	—	467.93
KAFB-106062	4814	7/23/2020	—	473.91	253053	0.00	—	473.91
KAFB-106063[c]	4838	NA	NA	NA	NA	0.00	NA	NA
KAFB-106064[c]	4857	NA	NA	NA	NA	0.00	NA	NA
KAFB-106065	4838	7/23/2020	—	471.50	253053	0.00	—	471.50
KAFB-106066	4814	7/23/2020	—	471.86	253053	0.00	—	471.86
KAFB-106067	4857	7/21/2020	—	470.36	253053	0.00	—	470.36
KAFB-106068	4814	7/21/2020	—	470.30	253053	0.00	—	470.30
KAFB-106069	4838	7/21/2020	—	469.98	253053	0.00	—	469.98
KAFB-106070	4857	7/24/2020	—	441.65	253053	0.00	—	441.65
KAFB-106071	4814	7/24/2020	—	443.95	253053	0.00	—	443.95
KAFB-106072	4838	7/23/2020	—	442.21	0001	-0.10	—	442.11
KAFB-106073	4838	7/22/2020	—	462.32	253053	0.00	—	462.32
KAFB-106074	4814	7/22/2020	—	463.08	253053	0.00	—	463.08
KAFB-106075	4857	7/22/2020	—	463.04	253053	0.00	—	463.04
KAFB-106076	4857	7/23/2020	—	467.68	253056	0.00	—	467.68
KAFB-106077	4838	7/24/2020	—	468.81	253053	0.00	—	468.81
KAFB-106078	4814	7/24/2020	—	467.95	253053	0.00	—	467.95
KAFB-106079	4857	7/23/2020	—	472.33	253056	0.00	—	472.33
KAFB-106080	4838	7/23/2020	—	471.04	0001	-0.10	—	470.94
KAFB-106081	4814	7/23/2020	—	472.23	253053	0.00	—	472.23
KAFB-106082	4857	7/22/2020	—	458.23	253053	0.00	—	458.23
KAFB-106083	4838	7/22/2020	—	457.83	253053	0.00	—	457.83

Table E-2-2
Gauging Calibration Corrections, Q3 2020

Well Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Water Level Interface Probe Used (Serial Number)	Correction Applied (ft)	Corrected Depth to LNAPL (ft MRP)	Corrected Depth to Water (ft MRP)
KAFB-106084	4814	7/22/2020	—	460.75	253053	0.00	—	460.75
KAFB-106085	4857	7/24/2020	—	439.97	253053	0.00	—	439.97
KAFB-106086	4838	7/24/2020	—	440.37	253053	0.00	—	440.37
KAFB-106087	4814	7/23/2020	—	439.65	0001	-0.10	—	439.55
KAFB-106088	4857	7/22/2020	—	447.49	0001	-0.10	—	447.39
KAFB-106089	4838	7/22/2020	—	447.08	253053	0.00	—	447.08
KAFB-106090	4814	7/22/2020	—	446.06	0001	-0.10	—	445.96
KAFB-106091	4857	7/22/2020	—	437.56	253053	0.00	—	437.56
KAFB-106092	4838	7/22/2020	—	437.57	253053	0.00	—	437.57
KAFB-106093	4814	7/22/2020	—	437.49	253053	0.00	—	437.49
KAFB-106094	4857	7/21/2020	—	467.68	0001	-0.10	—	467.58
KAFB-106095	4838	7/21/2020	—	467.14	253053	0.00	—	467.14
KAFB-106096	4814	7/21/2020	—	467.89	0001	-0.10	—	467.79
KAFB-106097	4838	7/22/2020	—	470.10	253053	0.00	—	470.10
KAFB-106098	4814	7/22/2020	—	470.20	253053	0.00	—	470.20
KAFB-106099	4838	7/23/2020	—	465.05	253053	0.00	—	465.05
KAFB-106100	4814	7/23/2020	—	465.07	253053	0.00	—	465.07
KAFB-106101	4838	7/23/2020	—	462.35	253053	0.00	—	462.35
KAFB-106102	4814	7/23/2020	—	462.48	253053	0.00	—	462.48
KAFB-106103	4838	7/23/2020	—	452.26	0001	-0.10	—	452.16
KAFB-106104	4814	7/24/2020	—	451.64	253053	0.00	—	451.64
KAFB-106105	4838	7/21/2020	—	444.72	0001	-0.10	—	444.62
KAFB-106106	4857	7/21/2020	—	444.50	253053	0.00	—	444.50
KAFB-106107	4814	7/21/2020	—	444.83	0001	-0.10	—	444.73
KAFB-106148-484[d]	4857	7/23/2020	—	466.68	253056	0.00	—	466.68
KAFB-106149-484[d]	4857	7/23/2020	—	468.70	253056	0.00	—	468.70
KAFB-106150-484[d]	4857	7/23/2020	466.85	467.12	253056	0.00	466.85	467.12
KAFB-106151-484[d]	4857	7/23/2020	—	468.47	253056	0.00	—	468.47
KAFB-106152-484[d]	4857	7/23/2020	—	470.32	253056	0.00	—	470.32
KAFB-106153-484[d]	4857	7/23/2020	—	471.72	253056	0.00	—	471.72
KAFB-106154-484[d]	4857	7/23/2020	469.77	469.79	253056	0.00	469.77	469.79
KAFB-106155-484[d]	4857	7/23/2020	—	470.33	253056	0.00	—	470.33
KAFB-106156-484[d]	4857	7/23/2020	—	463.67	253056	0.00	—	463.67
KAFB-106201	4857	7/20/2020	—	484.36	253053	0.00	—	484.36
KAFB-106202	4838	7/20/2020	—	485.27	253053	0.00	—	485.27
KAFB-106203	4814	7/20/2020	—	485.61	253053	0.00	—	485.61
KAFB-106204	4857	7/20/2020	—	456.04	253053	0.00	—	456.04
KAFB-106205	4838	7/20/2020	—	456.51	253053	0.00	—	456.51
KAFB-106206	4814	7/20/2020	—	456.73	253053	0.00	—	456.73
KAFB-106207	4857	7/20/2020	—	469.20	253053	0.00	—	469.20
KAFB-106208	4838	7/20/2020	—	469.02	253053	0.00	—	469.02
KAFB-106209	4814	7/20/2020	—	468.73	253053	0.00	—	468.73
KAFB-106211[d]	4857	7/23/2020	—	465.28	253053	0.00	—	465.28
KAFB-106212	4814	7/22/2020	—	445.95	253053	0.00	—	445.95
KAFB-106213	4857	7/22/2020	—	448.62	253053	0.00	—	448.62
KAFB-106214	4838	7/22/2020	—	448.86	253053	0.00	—	448.86
KAFB-106215	4814	7/22/2020	—	449.08	253053	0.00	—	449.08
KAFB-106216	4857	7/20/2020	—	457.20	253053	0.00	—	457.20
KAFB-106217	4838	7/20/2020	—	457.12	253053	0.00	—	457.12
KAFB-106218	4814	7/20/2020	—	457.30	253053	0.00	—	457.30
KAFB-106219	4857	7/20/2020	—	464.20	253053	0.00	—	464.20
KAFB-106220	4838	7/20/2020	—	464.12	253053	0.00	—	464.12
KAFB-106221	4814	7/20/2020	—	463.88	253053	0.00	—	463.88
KAFB-106222	4857	7/20/2020	—	456.56	253053	0.00	—	456.56
KAFB-106223	4838	7/20/2020	—	457.21	253053	0.00	—	457.21
KAFB-106224	4814	7/20/2020	—	458.34	253053	0.00	—	458.34
KAFB-106225	4857	7/21/2020	—	449.63	253053	0.00	—	449.63
KAFB-106226	4838	7/21/2020	—	450.27	253053	0.00	—	450.27
KAFB-106227	4814	7/21/2020	—	451.04	253053	0.00	—	451.04
KAFB-106229[a,d]	4857/4838	7/21/2020	—	438.09	0001	-0.10	—	437.99
KAFB-106230	4814	7/21/2020	—	447.54	253053	0.00	—	447.54
KAFB-106231	4857	7/20/2020	—	450.38	253053	0.00	—	450.38
KAFB-106232	4814	7/20/2020	—	450.00	253053	0.00	—	450.00
KAFB-106235-438	4857	7/20/2020	—	438.19	253053	0.00	—	438.19
KAFB-106235-472	4838	7/20/2020	—	438.20	253053	0.00	—	438.20
KAFB-106235-501	4814	7/20/2020	—	438.28	253053	0.00	—	438.28
KAFB-106236-436	4857	7/20/2020	—	438.24	253053	0.00	—	438.24
KAFB-106236-470	4838	7/20/2020	—	438.27	253053	0.00	—	438.27
KAFB-106236-499	4814	7/20/2020	—	438.30	253053	0.00	—	438.30
KAFB-106240-449	4857	7/22/2020	—	470.09	253053	0.00	—	470.09
KAFB-106241-428	4857	7/21/2020	—	447.51	253053	0.00	—	447.51
KAFB-106242-418	4857	7/20/2020	—	438.64	253053	0.00	—	438.64
KAFB-106243-425	4857	7/22/2020	—	443.61	253053	0.00	—	443.61
KAFB-106244-445	4857	7/23/2020	—	465.85	253053	0.00	—	465.85
KAFB-106245-460	4857	7/23/2020	—	483.90	253053	0.00	—	483.90
KAFB-106247-450	4857	7/24/2020	—	474.37	253053	0.00	—	474.37
KAFB-106S1-447	4857	7/23/2020	—	467.76	253056	0.00	—	467.76
KAFB-106S2-451	4857	7/23/2020	—	474.96	253056	0.00	—	474.96
KAFB-106S3-449	4857	7/23/2020	—	474.00	253056	0.00	—	474.00
KAFB-106S4-446	4857	7/23/2020	—	469.19	0001	-0.10	—	469.09
KAFB-106S5-446	4857	7/23/2020	—	466.13	253056	0.00	—	466.13
KAFB-106S7-451	4857	7/23/2020	—	471.60	253056	0.00	—	471.60

Table E-2-2
Gauging Calibration Corrections, Q3 2020

Well Location ID	Reference Elevation Interval (ft AMSL)	Date of Measurement	Depth to LNAPL (ft MRP)	Depth to Water (ft MRP)	Water Level Interface Probe Used (Serial Number)	Correction Applied (ft)	Corrected Depth to LNAPL (ft MRP)	Corrected Depth to Water (ft MRP)
KAFB-106S8-451	4857	7/23/2020	—	474.08	253056	0.00	—	474.08
KAFB-106S9-447	4857	7/23/2020	—	468.68	253056	0.00	—	468.68
KAFB-3411	4857	7/24/2020	—	465.92	253053	0.00	—	465.92

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

[b] The initial measurement at KAFB-106055 on 7/21/2020 showed a water level decrease of 0.66 feet since Q2 2020, while the decrease at the other wells in the cluster (KAFB-106057, KAFB-106058, and KAFB-106241) was 1.09 feet. This cluster was re-gauged on 7/31/20 to check the initial readings. At that time, the water level in KAFB-106055 showed a decrease of -1.73 since Q2 2020, consistent with other wells in the cluster. KAFB-106057 and KAFB-106058 showed a decrease of 1.74 ft, and KAFB-106241 had a decrease of 1.67. It was therefore determined that the original measurement on 7/21/2020 at KAFB-106055 was in error, and the measurement was back-calculated to assume a decrease of 1.08 ft since Q2 2020, consistent with the other wells in the cluster.

[c] Well was not gauged due to presence of monitoring equipment.

[d] Well not permanently designated in REI listed.

AMSL = above mean sea level

ft = foot/feet

ID = identification

LNAPL = light non-aqueous phase liquid

MRP = measurement reference point

REI = reference elevation interval

— = LNAPL not detected

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106003
Project No: 62599DM01
Samplers: D Schmeelk, G. Begaye
Date: 7-15-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 506.00 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 479.00 ft MRP
Barricade/Notification: ☐
Bottom of Screen: 504.00 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4857
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: ____ ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 462.13 ft MRP
Depth to Water (DTW): 462.01 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 481.00 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW003-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW003-603
Sampling Medium: Water
COC#: COC-003-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106003

Date: 7-15-2020

Purge Information and Field Parameter

Purge Start Time: 1030 Purge Rate: 0.920 L/min X 0.265 = 0.2438 gal/min

Description of first water purged: clear and odor less

Drawdown Limit: 16.87 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**462.13**	**0.96**	**17.1**	-------	**6.5**	**867**	**7.85**	**159.8**
1035	462.03	1.75	21.6	126.2	11.01	450.8	8.07	349.1
1040	462.04	4.13	21.0	80.6	7.24	602	7.76	350.4
1045	462.04	3.40	20.5	72.7	6.50	586	7.78	341.8
1050	462.04	2.86	20.5	72.3	6.50	598	7.79	336.3
1055	462.04	2.31	20.4	74.3	6.64	602	7.79	329.9

Sample Time: 1056 Sample Date: 7-15-2020

Purge End Time: 1059

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schweelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	12
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

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Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106004
Project No: 62599DM01
Samplers: D. Schwegler, G. Begaye
Date: 7-16-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 512.74 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 486.74 ft MRP
Barricade/Notification: X
Bottom of Screen: 511.74 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4857
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: Intact / Damaged
Well Locked/Security Bolt Present: Yes / No
Well ID Marked: Yes / No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes / No
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 467.53 ft MRP
Depth to Water (DTW): 467.94 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 488.74 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW004-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW004-603
Sampling Medium: Water
COC#: COC-004-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106004

Purge Information and Field Parameter

Date: 7-16-2020

Purge Start Time: 0922 Purge Rate: 0.760 L/min X 0.265 = 0.2014 gal/min

Description of first water purged: clear and odorless

Drawdown Limit: 19.21 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**467.53**	**2.72**	**19.7**	**-------**	**7.62**	**548.2**	**7.78**	**-7.5**
0925	468.98	1.26	23.1	101.2	8.64	380.8	7.64	346.9
0930	468.97	0.21	22.4	79.0	6.89	493.0	7.58	351.6
0935	468.97	0.22	21.9	74.9	6.58	487.2	7.58	352.4
0940	468.98	0.60	22.0	74.1	6.48	481.1	7.59	352.6

Sampled @

Sample Time: 0943 Sample Date: 7-16-2020

Purge End Time: 0946

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schmeelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	10 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106005
Project No: 62599DM01
Samplers: D. Schmeltz, G. Begaye
Date: 7-13-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 508.87 ft MRP
SCREEN SUBMERGED on 4/16/2020 (previous gauging date)
Top of Screen: 481.87 ft MRP
Barricade/Notification: ☐
Bottom of Screen: 506.87 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4857
IDW will be taken to: Pending Analysis Yard
IDW Label: White Pending Analysis

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 1.6 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: 0 ft
LNAPL NOT observed during last gauging event: 4/16/2020

Previous Depth to water: 468.63 ft MRP
Depth to Water (DTW): 469.00 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-902

Non-Dedicated Pump Depth: 483.87 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	18L100376
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	253056
Turbidity Meter:	Hach 2100Q	Serial No:	WH0007

Sample Information

Sample ID: GW005-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW005-603
Sampling Medium: Water
COC#: COC-005-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106005

Date: 7-13-2020

Purge Information and Field Parameter

Purge Start Time: 1410 Purge Rate: 0.840 L/min X 0.265 = 0.2226 gal/min

Description of first water purged: Clear & light VOC odor

Drawdown Limit: 13.24 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	468.63	10.9	18.3	-------	0.58	2463	7.06	-154.9
1420	469.07	300	23.6	69.6	5.57	1122	7.20	9.4
1425	469.07	52.9	22.1	11.8	1.03	1176	7.28	-144.1
1430	469.07	32.3	22.7	5.2	0.45	1181	7.32	-193.8
1435	469.07	28.0	22.6	3.9	0.34	1176	7.34	-215.3
1440	469.07	22.6	22.5	3.2	0.27	1177	7.35	-227.4
1445	469.07	21.8	22.6	2.9	0.25	1174	7.36	-240.6
1450	469.07	19.3	22.5	2.9	0.25	1179	7.36	-253.1
1455	469.07	17.2	22.6	2.8	0.24	1177	7.37	-259.1
1500	469.06	16.2	22.4	2.7	0.24	1176	7.37	-264.2
1505	469.06	14.7	22.0	2.6	0.23	1176	7.37	-275.5
1510	469.06	13.2	22.2	2.6	0.23	1180	7.37	-279.9
1515	469.06	13.1	22.5	2.6	0.22	1179	7.38	-284.7
1520	469.06	13.8	22.4	2.5	0.21	1179	7.38	-289.1

Sample Time: 1525 Sample Date: 7-13-2020

Purge End Time: 1528

6mm

Bubbles in the vials?: ☑ Yes ☐ No Where? 1xBTEX Amount 1 Size ≤1mm

Sampled by: D. Schuelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	26 gal
2	
Total	

IDW will be taken to: Pending Analysis Yard

IDW Label: White Pending Analysis

Comments: Water Aerated with fine microbubbles.

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Page 2 of 2

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106009 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW009-203

Well Information

Screen Interval Length (ft): 25
Previous Depth to Water (MRP): 470.30 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -13.39

Well Depth: 511.19 ft MRP
Top of Screen: 483.69 ft MRP
Bottom of Screen: 508.69 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1351

PID: MiniRAE 3000 Serial No: W40004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Duplicate sample required. Please deploy extra DMS as needed

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	484.39
2	486.99
3	489.59
4	492.19
5	494.79
6	497.39
7	499.99
8	502.59

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106009 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW009-203

Date Sampled: 7-9-2020 Time Sampled: 1220 Sampling Team: D. Schweelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? X *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	(BTEX) (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	/	
2	EDB	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	/	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	Alkalinity	~~Anions~~ X	(~~Nitrate / Nitrite~~)	/	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	(Alkalinity)	(Anions)	(Nitrate / Nitrite)	/	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	(Alkalinity)	(Anions)	Nitrate / Nitrite		
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		6mm

Duplicate sample required.

PID: MiniRAE 3000 Serial No: 595006

IDW will be taken to: **Pending Analysis Yard**

Sample ID: GW009-203
Duplicate ID: (if applicable) GW009-603
COC#: COC-009-203

Notes: ~~Bag #3 - duplicate Metals and Nitrate/Nitrite. Bag~~ X Bag #4 - duplicate
N/N

Reviewed by: J. Messenger Review Date: 7-10-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106012R
Project No: 62599DM01
Samplers: D. Schwoegler, G. Begaye
Date: 7-14-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 502.91 ft MRP
SCREEN SUBMERGED on 4/15/2020 (previous gauging date)
Top of Screen: 468.49 ft MRP
Barricade/Notification: ☐
Bottom of Screen: 497.74 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4857
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/15/2020

Previous Depth to water: 467.11 ft MRP
Depth to Water (DTW): 467.40 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 180B-752

Non-Dedicated Pump Depth: 470.49 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0007
Turbidity Meter:	Hach 2100Q	Serial No:	WH0012

Sample Information

Sample ID: GW012R-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW012R-603
Sampling Medium: Water
COC#: COC-012R-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106012R

Date: 7-14-2020

Purge Information and Field Parameter

Purge Start Time: 1130 Purge Rate: 0.640 L/min X 0.265 = 0.1696 gal/min

Description of first water purged: clear and odor less

Drawdown Limit: 1.38 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**467.11**	**10.1**	**20.4**	-------	**8.16**	**1974**	**7.36**	**146**
1135	467.45	3.23	23.8	120.1	10.10	1410	7.41	290.1
1140	467.46	7.48	22.9	98.4	8.34	1494	7.35	308.4
1145	467.46	18.8	22.4	91.2	7.84	1387	7.35	314.7
1150	467.46	22.8	22.7	89.0	7.60	1350	7.34	318.4
1155	467.46	~~32.8~~ 22.8	22.8	87.8	7.50	1356	7.34	320.3
~~1200~~ 1200	467.46	20.2	22.2	85.4	7.41	1362	7.35	320.6
1205	467.46	17.8	22.7	83.2	7.13	1373	7.33	320.7
1210	467.45	20.3	23.4	81.8	6.97	1370	7.34	318.5
1215	467.45	18.2	23.0	81.2	6.94	1377	7.34	317.4
1220	467.45	14.7	22.1	80.5	6.97	1380	7.35	315.5
1225	467.45	13.1	22.8	79.4	6.82	1390	7.35	312.7
1230	467.45	15.4	23.0	80.0	6.83	1388	7.36	308.0
1235	467.45	12.0	22.9	81.1	6.93	1400	7.36	300.8

Sample Time: 1240 Sample Date: 7-14-2020

Purge End Time: 1258

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D Schmeelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	17
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Page 2 of 2

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106013
Project No: 62599DM01
Samplers: D. Schuseelk, G. Begaye
Date: 7-15-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 519.65 ft MRP
SCREEN SUBMERGED on 4/15/2020 (previous gauging date)
Top of Screen: 489.65 ft MRP
Barricade/Notification: X
Bottom of Screen: 514.65 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4857
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/15/2020

Previous Depth to water: 472.65 ft MRP
Depth to Water (DTW): 472.98 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 491.65 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW013-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW013-603
Sampling Medium: Water
COC#: COC-013-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106013

Date: 7-15-2020

Purge Information and Field Parameter

Purge Start Time: 1238 Purge Rate: 0.600 L/min X 0.265 = 0.159 gal/min

Description of first water purged: Clear & odorless

Drawdown Limit: 17.00 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**472.65**	**2.64**	**19.8**	**-------**	**1.08**	**419.1**	**7.19**	**65.7**
1245	473.01	2.13	24.4	98.3	8.18	453.6	7.63	308.1
1250	473.01	9.39	23.5	79.2	6.77	447.2	7.60	312.6
1255	473.01	7.75	23.0	59.5	5.11	452.8	7.60	310.5
1300	473.01	9.26	23.5	52.2	4.43	452.9	7.61	302.6
1305	473.01	8.99	23.9	49.5	4.17	452.1	7.62	292.0
1310	473.01	6.67	23.9	48.1	4.05	451.8	7.63	278.4

Sample Time: 1313 Sample Date: 7-15-2020

Purge End Time: 1316 6mm

Bubbles in the vials?: ☐ Yes ☒ No Where? — Amount — Size —

Sampled by: Dylan Schmeelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	11 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Page 2 of 2

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106029 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW029-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 432.42 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -18.38

Well Depth: 475.80 ft MRP
Top of Screen: 450.80 ft MRP
Bottom of Screen: 470.80 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 1024

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	451.50
2	454.10
3	456.70
4	459.30
5	461.90
6	464.50
7	467.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106029 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW029-203

Date Sampled: 7-9-2020 Time Sampled: 0801 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW029-203
Duplicate ID: (if applicable) GW029-603
COC#: COC-029-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106030 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW030-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 432.54 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -36.96

Well Depth: 489.90 ft MRP
Top of Screen: 469.50 ft MRP
Bottom of Screen: 484.50 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 1002

PID: MiniRAE 3000 Serial No: 410004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ☆

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Sampler Number:	Top of Sampler Depth (MRP)
1	470.20
2	472.80
3	475.40
4	478.00
5	480.60

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106030 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW030-203

Date Sampled: 7-9-2020 Time Sampled: 0825 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? Y *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW030-203
Duplicate ID: (if applicable) GW030-603
COC#: COC-030-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106031 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW031-203

Well Information

Screen Interval Length (ft): 14
Previous Depth to Water (MRP): 432.56 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -63.24

Well Depth: 514.90 ft MRP
Top of Screen: 495.80 ft MRP
Bottom of Screen: 509.50 ft MRP

Deployment Team: D. Schweelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 0932

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? D

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	496.50
2	499.10
3	501.70
4	504.30
5	506.90

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106031 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW031-203

Date Sampled: 7-9-2020 Time Sampled: 0911 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? D *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW031-203
Duplicate ID: (if applicable) GW031-603
COC#: COC-031-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106032 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW032-203

Well Information

Screen Interval Length (ft): 20

Previous Depth to Water (MRP): 439.06 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging

Length of Screen not submerged (ft): -16.94

Well Depth: 480.50 ft MRP
Top of Screen: 456.00 ft MRP
Bottom of Screen: 476.00 ft MRP

Deployment Team: D. Schweelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1108

PID: MiniRAE 3000 Serial No: 414 0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	456.70
2	459.30
3	461.90
4	464.50
5	467.10
6	469.70
7	472.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106032 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW032-203

Date Sampled: 7-8-2020 Time Sampled: 1121 Sampling Team: D. Schmeltz, G. Begeny

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*									Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		☐	☐ 6mm

PID: MiniRAE 3000 Serial No: 440006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW032-203
Duplicate ID: (if applicable) GW032-603
COC#: COC-032-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106033 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW033-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 439.22 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -37.78

Well Depth: 496.60 ft MRP
Top of Screen: 477.00 ft MRP
Bottom of Screen: 492.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1117

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	477.70
2	480.30
3	482.90
4	485.50
5	488.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106033 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW033-203

Date Sampled: 7-8-2020 Time Sampled: 1131 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW033-203
Duplicate ID: (if applicable) GW033-603
COC#: COC-033-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106034 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW034-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 440.06 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -61.94

Well Depth: 522.00 ft MRP
Top of Screen: 502.00 ft MRP
Bottom of Screen: 517.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1126

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	502.70
2	505.30
3	507.90
4	510.50
5	513.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106034 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW034-203

Date Sampled: 7-8-2020 Time Sampled: 1143 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ____ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW034-203
Duplicate ID: (if applicable) GW034-603
COC#: COC-034-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106041 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW041-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 445.85 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -3.15 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 473.80 ft MRP
Top of Screen: 449.00 ft MRP
Bottom of Screen: 469.00 ft MRP

Deployment Team: D. Schneelk, G. Beegan

Date Deployed: 6-17-2020 Time Deployed: 0759

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 446.27
Measure Water Level

DMS Tether and Reel ID match Well ID? Y
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

MS/MSD required. Please deploy extra DMS as needed

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Sampler Number:	Top of Sampler Depth (MRP)
1	449.70
2	452.30
3	454.90
4	457.50
5	460.10
6	462.70
7	465.30

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106041 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW041-203

Date Sampled: 7-8-2020 Time Sampled: 0911 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

	Choose only one								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☑
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☑
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☑
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☑
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

MS/MSD required.

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW041-203
Duplicate ID: (if applicable) GW041-603
COC#: COC-041-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106049 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW049-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 437.36 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -19.44

Well Depth: 480.70 ft MRP
Top of Screen: 456.80 ft MRP
Bottom of Screen: 476.80 ft MRP

Deployment Team: Dylan Schweelk, Galveston Beegay

Date Deployed: 6-16-2020 Time Deployed: 1206

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	457.50
2	460.10
3	462.70
4	465.30
5	467.90
6	470.50
7	473.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW049-203

Well Location ID: KAFB-106049 *Sampling*

Date Sampled: 7-8-2020 Time Sampled: 1030 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? Y *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Notes:

Sample ID: GW049-203
Duplicate ID: (if applicable) GW049-603
COC#: COC-049-203

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106050 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW050-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 436.75 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -37.65

Well Depth: 494.80 ft MRP
Top of Screen: 474.40 ft MRP
Bottom of Screen: 489.40 ft MRP

Deployment Team: D. Schmeelk, G. Begeye

Date Deployed: 6-16-2020 Time Deployed: 1219

PID: MiniRAE 3000 Serial No: W10006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	475.10
2	477.70
3	480.30
4	482.90
5	485.50

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106050 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW050-203

Date Sampled: 7-8-2020 Time Sampled: 0955 Sampling Team: D. Schmeelk, G. Regauge

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW050-203
Duplicate ID: (if applicable) GW050-603
COC#: COC-050-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106051 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW051-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 437.06 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -63.74

Well Depth: 521.20 ft MRP
Top of Screen: 500.80 ft MRP
Bottom of Screen: 515.80 ft MRP

Deployment Team: D. Schweelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 1236

PID: MiniRAE 3000 Serial No: 610006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? X

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
Duplicate sample required. Please deploy extra DMS as needed	- EDB

Notes: —

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	501.50
2	504.10
3	506.70
4	509.30
5	511.90

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106051 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW051-203

Date Sampled: 7-8-2020 Time Sampled: 1017 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	✓	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		6mm

Duplicate sample required.

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW051-203
Duplicate ID: (if applicable) GW051-603
COC#: COC-051-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106097
Project No: 62599DM01
Samplers: D. Schmeelk, G. Begaye
Date: 7-16-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 526.04 ft MRP
SCREEN SUBMERGED on 4/15/2020 (previous gauging date)
Top of Screen: 506.04 ft MRP
Barricade/Notification: X
Bottom of Screen: 521.04 ft MRP
Measurement Reference Point (MRP): Top of Well Vault
Reference Elevation Interval: 4838
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: ____ ft
LNAPL NOT observed during last gauging event: 4/15/2020

Previous Depth to water: 469.59 ft MRP
Depth to Water (DTW): 470.05 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752
Non-Dedicated Pump Depth: 508.04 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW097-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW097-603
Sampling Medium: Water
COC#: COC-097-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106097

Date: 7-16-2020

Purge Information and Field Parameter

Purge Start Time: 0740 Purge Rate: 0.800 L/min X 0.265 = 0.21 gal/min

Description of first water purged: clear and odorless

Drawdown Limit: 36.45 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**469.59**	**0.83**	**22.5**	-------	**2.46**	**372**	**7.24**	**68.3**
0740 ✓	470.07	1.26	21.7	82.1	7.30	468.7	7.69	351.0
0745	470.08	0.42	20.5	42.2	3.78	396.1	7.59	353.4
0750	470.06	0.48	20.1	34.6	3.14	393.7	7.61	351.1
0755	470.06	0.46	20.0	33.5	3.03	392.6	7.62	349.8
0800	470.0	0.37	19.9	32.7	2.97	395.6	7.63	349.1

Sampled ✓

Sample Time: 0802 Sample Date: 7-16-2020

Purge End Time: 0804

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schwelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	10 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

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Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106098
Project No: 62599DM01
Samplers: D. Schmeelk, G. Beaguye
Date: 7-15-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 551.12 ft MRP
SCREEN SUBMERGED on 4/15/2020 (previous gauging date)
Top of Screen: 531.02 ft MRP
Barricade/Notification: X
Bottom of Screen: 546.02 ft MRP
Measurement Reference Point (MRP): Top of Well Vault
Reference Elevation Interval: 4814
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/15/2020

Previous Depth to water: 469.67 ft MRP
Depth to Water (DTW): 469.94 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 533.02 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW098-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW098-603
Sampling Medium: Water
COC#: COC-098-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106098

Purge Information and Field Parameter

Date: 7-15-2020

Purge Start Time: 1424 Purge Rate: ~~0.780~~ 0.780 L/min X 0.265 = 0.2067 gal/min

Description of first water purged: clear & odorless

Drawdown Limit: 61.35 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**469.67**	**0.52**	**22.1**	-------	**3.77**	**331**	**7.22**	**127.6**
1425	470.00	1.81	25.2	117.5	9.70	403.5	7.85	238.1
1430	470.00	1.26	22.8	54.2	4.62	453.2	7.77	233.2
1435	470.00	1.20	22.0	46.1	4.01	448.2	7.79	224.3
1440	470.00	0.98	21.6	40.7	3.59	444.0	7.77	218.3
1445	470.00	1.06	21.6	39.4	3.47	437.7	7.75	213.0
1450	470.00	0.75	21.4	38.3	3.38	435.5	7.75	209.9

Sampled

Sample Time: 1451 Sample Date: 7-15-2020

Purge End Time: 1457

6mm

Bubbles in the vials?: ☑ Yes ☐ No Where? BTEX - 1 VOA Amount 1 Size ~1.5 mm

Sampled by: Dylan Schweelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	12gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

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Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106099
Project No: 62599DM01
Samplers: D. Schmeltz G. Begaye
Date: 7-16-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 521.00 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 501.00 ft MRP
Barricade/Notification: X
Bottom of Screen: 516.00 ft MRP
Measurement Reference Point (MRP): Top of Well Vault
Reference Elevation Interval: 4838
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: ____ ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 464.5 ft MRP
Depth to Water (DTW): 464.83 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 503.00 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW099-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW099-603
Sampling Medium: Water
COC#: COC-099-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106099

Date: 7-16-2020

Purge Information and Field Parameter

Purge Start Time: 1235 Purge Rate: 0.680 L/min X 0.265 = 0.1802 gal/min

Description of first water purged: clear and odorless

Drawdown Limit: 36.50 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**464.5**	**0.8**	**20.9**	-------	**5.54**	**485.3**	**7.15**	**93.7**
1245	464.86	0.95	23.3	84.0	7.20	372.7	7.69	332.4
1250	464.87	0.95	22.0	69.2	6.02	370.0	7.71	327.9
1255	464.87	1.04	21.5	64.1	5.62	368.5	7.71	324.8
1300	464.87	0.85	21.7	63.0	5.48	368.4	7.70	321.6
1305	464.87	0.69	21.0	61.8	5.59*	372.6	7.71	319.2

Sampled ✓

Sample Time: 1311 Sample Date: 7-16-2020

Purge End Time: 1317 6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schmeelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	12
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106100
Project No: 62599DM01
Samplers: D. Schmeelk, G. Begaye
Date: 7-16-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 546.00 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 526.00 ft MRP
Barricade/Notification: X
Bottom of Screen: 541.00 ft MRP
Measurement Reference Point (MRP): Top of Well Vault
Reference Elevation Interval: 4814
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 464.52 ft MRP
Depth to Water (DTW): 464.87 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 18073-752

Non-Dedicated Pump Depth: 528.00 ft ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW100-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW100-603
Sampling Medium: Water
COC#: COC-100-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106100

Date: 7-16-2020

Purge Information and Field Parameter

Purge Start Time: 1054 Purge Rate: 0.860 L/min X 0.265 = 0.2279 gal/min

Description of first water purged: clear & odorless

Drawdown Limit: 61.48 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**464.52**	**3.52**	**16.7**	-------	**5.6**	**425.3**	**7.89**	**68.3**
1055	464.93	0.96	25.1	88.0	7.27	334.6	8.12	341.7
1100	464.94	1.02	23.1	54.8	4.80	329.8	7.74	346.2
1105	464.94	0.76	22.6	36.4	3.12	330.9	7.75	337.6
1110	464.95	0.68	22.0	36.5	3.19	329.8	7.74	333.3
1115	464.95	0.79	22.1	33.9	2.96	331.7	7.74	328.9
			Sampled					

Sample Time: 1119 Sample Date: 7-16-2020

Purge End Time: 1122

6mm

Bubbles in the vials?: ☐ Yes ☒ No Where? — Amount — Size —

Sampled by: D. Schweelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	11 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106101
Project No: 62599DM01
Samplers: D. Schweelk, G. Begaye
Date: 7-15-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 518.01 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 498.81 ft MRP
Barricade/Notification: ☐
Bottom of Screen: 514.11 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4838
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: — ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 462.27 ft MRP
Depth to Water (DTW): 462.24 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 1807B-752

Non-Dedicated Pump Depth: 500.81 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW101-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW101-603
Sampling Medium: Water
COC#: COC-101-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106101

Date: 7-15-2020

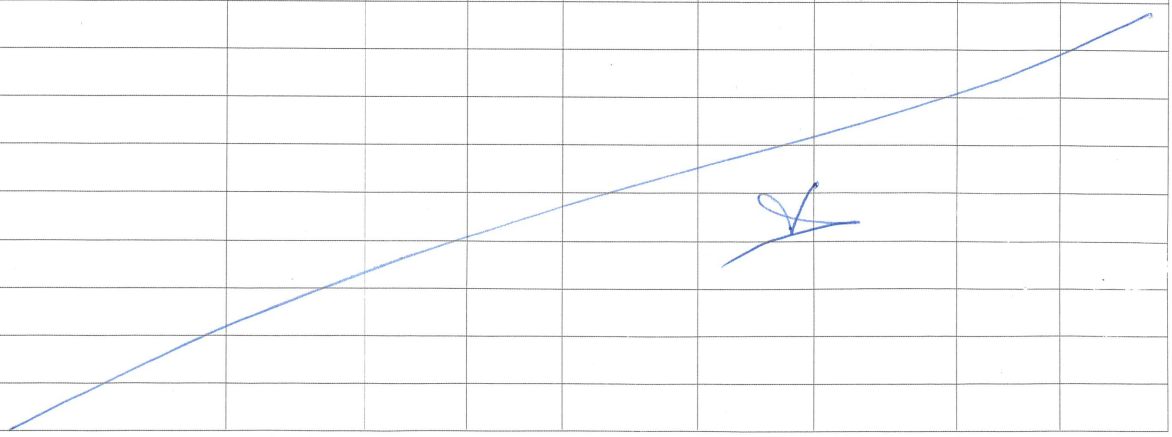
Purge Information and Field Parameter

Purge Start Time: 0721 Purge Rate: 0.800 L/min X 0.265 = 0.212 gal/min

Description of first water purged: clear and odorless

Drawdown Limit: 36.54 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**462.27**	**1.52**	**15.4**	-------	**6.85**	**534.9**	**7.85**	**132.2**
0725	462.28	0.91	20.2	80.4	7.21	438.7	7.63	335.5
0730	462.28	1.00	19.9	70.7	6.45	436.8	7.66	339.4
0735	462.28	0.95	19.7	68.5	6.24	434.4	7.67	342.5
0740	462.29	0.82	19.7	67.0	6.11	432.4	7.68	345.2



Sample Time: 0741 Sample Date: 7-15-2020

Purge End Time: 0743

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schweik Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	10 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Page 2 of 2

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111
Well ID: KAFB-106102
Project No: 62599DM01
Samplers: D. Schmeelk, G. Begaye
Date: 7-15-2020
Crew Signature:

Well Information

Well was NOT HAZARDOUS
Well Depth: 543.08 ft MRP
SCREEN SUBMERGED on 4/14/2020 (previous gauging date)
Top of Screen: 523.98 ft MRP
Barricade/Notification: ☐
Bottom of Screen: 537.68 ft MRP
Measurement Reference Point (MRP): Top of Protective Casing
Reference Elevation Interval: 4814
IDW will be taken to: GWTS/Pending Disposal Area
IDW Label: Green Non-hazardous

Protective Casing/Vault: (Intact) Damaged
Well Locked/Security Bolt Present: (Yes) No
Well ID Marked: (Yes) No

Photoionization Measurements at Wellhead: 0.0 ppm

LNAPL Present (circle one)? Yes (No)
LNAPL Thickness: 0 ft
LNAPL NOT observed during last gauging event: 4/14/2020

Previous Depth to water: 462.41 ft MRP
Depth to Water (DTW): 462.37 ft MRP

Pump Information

Non-Dedicated Pump

Bennett Pump Serial No.: 18073-752

Non-Dedicated Pump Depth: 525.98 ft MRP

* - if screen is submerged, place pump 2 ft below top of screen; if not submerged, place pump 2 ft above bottom of screen.

Field Instrumentation

pH, Conductivity, ORP, DO, Temperature	YSI Professional Plus	Serial No:	WH0003
PID:	MiniRAE 3000	Serial No:	WH0004
Water Level Meter:	Solinst 500 ft	Serial No:	WH0012
Turbidity Meter:	Hach 2100Q	Serial No:	WH0009

Sample Information

Sample ID: GW102-203
Sampling Method: Low-flow
Duplicate ID: (if applicable) GW102-603
Sampling Medium: Water
COC#: COC-102-203

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Groundwater Purge and Sampling Log

Year: 2020
Quarter: 3 (Jul-Sep)

Project: Kirtland AFB BFF ST-106/SS-111 Well ID: KAFB-106102

Date: 7-15-2020

Purge Information and Field Parameter

Purge Start Time: 0840 Purge Rate: 0.760* L/min X 0.265 = 0.2014 gal/min

Description of first water purged: clear and odorless

Drawdown Limit: 61.57 ft (based on previous water level)

Time	DTW (ft)	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Stabilization Requirements	-------	If >10,±10%	±10%	-------	±10%	±10%	±0.5	-------
Historical Data:	**462.41**	**0.92**	**19.3**	-------	**4.51**	**355.3**	**7.88**	**142**
0845	462.42	1.78	20.8	103.3	9.29	322.5	7.77	363.4
0850	462.42	1.15	20.3	76.0	6.60	324.0	7.80	358.7
0855	462.43	1.33	20.1	55.5	5.04	324.3	7.80	353.8
~~0858~~ 0900	462.43	0.95	20.2	46.2	4.17	325.3	7.79	349.6
0905	462.43	1.06	20.0	41.0	3.73	325.5	7.79	346.6
0910	462.43	0.84	20.1	37.8	3.43*	326.3	7.79	342.7
0915	462.43	0.80	20.1	36.5	3.31	326.5	7.78	340.3
0920	462.43	0.93	20.1	35.8	3.25	327.0	7.78	337.9

Sample Time: 0921 Sample Date: 7-15-2020

Purge End Time: 0923

6mm

Bubbles in the vials?: ☐ Yes ☑ No Where? — Amount — Size —

Sampled by: D. Schmeelk Sampler Signature:

IDW Management

Drum No.	Estimated volume per IDW drum (gal)
1	14 gal
2	
Total	

IDW will be taken to: GWTS/Pending Disposal Area

IDW Label: Green Non-hazardous

Comments:

Reviewed by: J. Messenger Initials: JM Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106149-484 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW149-484-203

Well Information

Screen Interval Length (ft): 130
Previous Depth to Water (MRP): 468.22 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 114.22 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 484.00 ft MRP
Top of Screen: 354.00 ft MRP
Bottom of Screen: 484.00 ft MRP

Deployment Team: Dylan Schmeelk, Galveston Begaye

Date Deployed: 06-18-2020 Time Deployed: 1300

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 3.9 ppm

Depth to Water: 468.25
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes: ADD DMS PROTECTIVE SLEEVES ✓
Surveyed by High Mesa January 2018
Deployed extra bag

Reviewed by: J Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
10	453.80
11	456.40
12	459.00
13	461.60
14	464.20
15	466.80
16 Bare	469.40
17 sleeved	472.00
18	474.60
19	477.20
20	479.80

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106149-484 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW149-484-203

Date Sampled: 7-10-2020 Time Sampled: 0910 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Sampler Number		Choose only one							Document in notes: Dup?	MS/MSD?
1/2	EDB	VOCs	BTEX (N)	~~Metals (Dissolved)~~	Metals (Total)	Alkalinity	~~Anions~~ *	Nitrate / Nitrite		
2/3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		6mm

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GW149-484-203
Duplicate ID: (if applicable) GW149-484-603
COC#: COC-149-484-203

Notes: HISTORICAL SAMPLER FAIL - PULL UP GENTLY. Bag #1 was completely dry. The assumption being that it was never submerged and therefore was not sampled. Perforated sleeves protected bags but Bag #2 still lost lower rubberband, and protector was bent (Bag #1 did not deploy with sleeve). See pictures

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106151-484 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW151-484-203

Well Information

Screen Interval Length (ft): 129
Previous Depth to Water (MRP): 468.01 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 112.82 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 484.19 ft MRP
Top of Screen: 355.19 ft MRP
Bottom of Screen: 484.19 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 0948

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 0.0 ppm

Depth to Water: 468.06

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- Alkalinity - Anions - Dissolved Metals - EDB - NO3/NO2-N - Total Metals

Notes:

Surveyed by High Mesa January 2018

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
10	453.99
11	456.59
12	459.19
13	461.79
14	464.39
15 ▽	466.99
16	469.59
17	472.19
18	474.79
19	477.39
20	479.99

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106151-484 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW151-484-203

Date Sampled: 7-10-2020 Time Sampled: 1336 Sampling Team: D. Schmeelk G. Beggaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	(Nitrate / Nitrite)	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	(Alkalinity)	(Anions)	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GW151-484-203
Duplicate ID: (if applicable) GW151-484-603
COC#: COC-151-484-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106152-484 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW152-484-203

Well Information

Screen Interval Length (ft): 129
Previous Depth to Water (MRP): 469.79 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 114.51 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 484.28 ft MRP
Top of Screen: 355.28 ft MRP
Bottom of Screen: 484.28 ft MRP

Deployment Team: Dylan Schmeelk, Galveston Begaye

Date Deployed: 6-18-2020 Time Deployed: 1035

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 2530576

PID Reading: 0.0 ppm

Depth to Water: ~~468.21~~ 469.85

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:
Surveyed by High Mesa January 2018

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
10	454.08
11	456.68
12	459.28
13	461.88
14	464.48
15	467.08
16 ▽	469.68
17	472.28
18	474.88
19	477.48
20	480.08

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106152-484 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW152-484-203

Date Sampled: 7-10-2020 Time Sampled: 0715 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	(Nitrate / Nitrite)	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	(Alkalinity)	(Anions)	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GW152-484-203
Duplicate ID: (if applicable) GW152-484-603
COC#: COC-152-484-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106153-484 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW153-484-203

Well Information

Screen Interval Length (ft): 129
Previous Depth to Water (MRP): 471.22 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 115.93 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 484.29 ft MRP
Top of Screen: 355.29 ft MRP
Bottom of Screen: 484.29 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 1133

PID: MiniRAE 3000 Serial No: W140006

Water Level Meter: Solinst 500 ft Serial No: ~~256053~~ 253056

PID Reading: 1.4 ppm

Depth to Water: 471.28
Measure Water Level

DMS Tether and Reel ID match Well ID? X
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:
Surveyed by High Mesa January 2018

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
10	454.09
11	456.69
12	459.29
13	461.89
14	464.49
15	467.09
16 ▽	469.69
17	472.29
18	474.89
19	477.49
20	480.09

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106153-484 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW153-484-203

Date Sampled: 7-10-2020 Time Sampled: 1418 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? D *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	(Nitrate / Nitrite)	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	(Alkalinity)	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	(Anions)	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: 904005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GW153-484-203
Duplicate ID: (if applicable) GW153-484-603
COC#: COC-153-484-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106201 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW201-203

Well Information

Screen Interval Length (ft): 30
Previous Depth to Water (MRP): 479.55 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -10.10

Well Depth: 524.65 ft MRP
Top of Screen: 489.65 ft MRP
Bottom of Screen: 519.65 ft MRP

Deployment Team: D. Schmeelk,

Date Deployed: 6-17-2020 Time Deployed: 0714

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	490.35
2	492.95
3	495.55
4	498.15
5	500.75
6	503.35
7	505.95
8	508.55
9	511.15
10	513.75

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106201 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW201-203

Date Sampled: 7-9-2020 Time Sampled: 1119 Sampling Team: D. Schmeelk, G. Beyaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? * *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: W110006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW201-203
Duplicate ID: (if applicable) GW201-603
COC#: COC-201-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106202 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW202-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 480.58 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -39.31

Well Depth: 539.90 ft MRP
Top of Screen: 519.90 ft MRP
Bottom of Screen: 534.90 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 0721

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? X
Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	520.60
2	523.20
3	525.80
4	528.40
5	531.00

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106202 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW202-203

Date Sampled: 7-9-2020 Time Sampled: 1130 Sampling Team: D. Schwecke, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW202-203
Duplicate ID: (if applicable) GW202-603
COC#: COC-202-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106203 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW203-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 481.01 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -142.07

Well Depth: 643.08 ft MRP
Top of Screen: 623.08 ft MRP
Bottom of Screen: 638.08 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 0728

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	623.78
2	626.38
3	628.98
4	631.58
5	634.18

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106203 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW203-203

Date Sampled: 7-9-2020 Time Sampled: 1145 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW203-203
Duplicate ID: (if applicable) GW203-603
COC#: COC-203-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106204 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW204-203

Well Information

Screen Interval Length (ft): 30
Previous Depth to Water (MRP): 454.10 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -8.40

Well Depth: 497.50 ft MRP
Top of Screen: 462.50 ft MRP
Bottom of Screen: 492.50 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: ~~0806~~ 0923

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

Notes: —

QC sample notes.
(If blank, no QC samples required):

Duplicate sample required. Please deploy extra DMS as needed

Analyte(s):
- EDB

Sampler Number:	Top of Sampler Depth (MRP)
1	463.20
2	465.80
3	468.40
4	471.00
5	473.60
6	476.20
7	478.80
8	481.40
9	484.00
10	486.60

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW204-203

Well Location ID: KAFB-106204 *Sampling*

Date Sampled: 7-7-2020 Time Sampled: 0740 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☒	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

~~Duplicate sample required.~~ X

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW204-203
Duplicate ID: (if applicable) GW204-603
COC#: COC-204-203

Notes: No Duplicate at this well, ~~switched with X~~ instead, duplicate taken at another well per Amanda Smith (KAFB-106216)

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106205 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW205-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 454.47 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -38.03

Well Depth: 512.50 ft MRP
Top of Screen: 492.50 ft MRP
Bottom of Screen: 507.50 ft MRP

Deployment Team: D.Schmeltz, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 0909

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? JS

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	493.20
2	495.80
3	498.40
4	501.00
5	503.60

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106205 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW205-203

Date Sampled: 7-7-2020 Time Sampled: 0720 Sampling Team: D. Schmeeckle, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

	Choose only one								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: 472H0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW205-203
Duplicate ID: (if applicable) GW205-603
COC#: COC-205-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106206 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW206-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 454.61 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -138.89

Well Depth: 613.20 ft MRP
Top of Screen: 593.50 ft MRP
Bottom of Screen: 608.20 ft MRP

Deployment Team: D. Schaelk, G. Bergaye

Date Deployed: 6-16-2020 Time Deployed: 0843

PID: MiniRAE 3000 Serial No: W40006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? D

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):

Analyte(s):
- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	594.20
2	596.80
3	599.40
4	602.00
5	604.60

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106206 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW206-203

Date Sampled: 7-7-2020 Time Sampled: 0703 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW206-203
Duplicate ID: (if applicable) GW206-603
COC#: COC-206-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106207 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW207-203

Well Information

Screen Interval Length (ft): 30
Previous Depth to Water (MRP): 464.85 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -8.15

Well Depth: 508.00 ft MRP
Top of Screen: 473.00 ft MRP
Bottom of Screen: 503.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 0949

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? X

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	473.70
2	476.30
3	478.90
4	481.50
5	484.10
6	486.70
7	489.30
8	491.90
9	494.50
10	497.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106207 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW207-203

Date Sampled: 7-7-2020 Time Sampled: 1226 Sampling Team: D. Schmeck, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW207-203
Duplicate ID: (if applicable) GW207-603
COC#: COC-207-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106208 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW208-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 464.56 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -38.44

Well Depth: 523.00 ft MRP
Top of Screen: 503.00 ft MRP
Bottom of Screen: 518.00 ft MRP

Deployment Team: D.Schmeelk, G.Begaye

Date Deployed: 6-16-2020 Time Deployed: 1000

PID: MiniRAE 3000 Serial No: 414006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	503.70
2	506.30
3	508.90
4	511.50
5	514.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106208 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW208-203

Date Sampled: 7-7-2020 Time Sampled: 1251 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: W10006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW208-203
Duplicate ID: (if applicable) GW208-603
COC#: COC-208-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106209 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW209-203

Well Information

Screen Interval Length (ft): 14
Previous Depth to Water (MRP): 463.90 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -139.10

Well Depth: 622.00 ft MRP
Top of Screen: 603.00 ft MRP
Bottom of Screen: 617.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 1011

PID: MiniRAE 3000 Serial No: W10006

Water Level Meter: Solinst 500 ft Serial No:

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	603.70
2	606.30
3	608.90
4	611.50
5	614.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106209 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW209-203

Date Sampled: 7-7-2020 Time Sampled: 1303 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW209-203
Duplicate ID: (if applicable) GW209-603
COC#: COC-209-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106216 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW216-203

Well Information

Screen Interval Length (ft): 30
Previous Depth to Water (MRP): 456.00 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 0.50 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 490.50 ft MRP
Top of Screen: 455.50 ft MRP
Bottom of Screen: 485.50 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 1055

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 456.53
Measure Water Level

DMS Tether and Reel ID match Well ID? ▽
Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1 ▽	456.20
2	458.80
3	461.40
4	464.00
5	466.60
6	469.20
7	471.80
8	474.40
9	477.00
10	479.60

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW216-203

Well Location ID: KAFB-106216 *Sampling*

Date Sampled: 7-7-2020 Time Sampled: 0811 Sampling Team: D. Schmeltz, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

Duplicate Sample Required

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW216-203
Duplicate ID: (if applicable) GW216-603
COC#: COC-216-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106217 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW217-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 455.90 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -29.10

Well Depth: 505.00 ft MRP
Top of Screen: 485.00 ft MRP
Bottom of Screen: 500.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 0746

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	485.70
2	488.30
3	490.90
4	493.50
5	496.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106217 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW217-203

Date Sampled: 7-7-2020 Time Sampled: 0830 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW217-203
Duplicate ID: (if applicable) GW217-603
COC#: COC-217-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106218 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW218-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 456.05 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -95.95

Well Depth: 572.45 ft MRP
Top of Screen: 552.00 ft MRP
Bottom of Screen: 567.00 ft MRP

Deployment Team: D. Schmeltz, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 0733

PID: MiniRAE 3000 Serial No: 440006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	552.70
2	555.30
3	557.90
4	560.50
5	563.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW218-203

Well Location ID: KAFB-106218 *Sampling*

Date Sampled: 7-7-2020 Time Sampled: 0848 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: W40006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW218-203
Duplicate ID: (if applicable) GW218-603
COC#: COC-218-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106222 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW222-203

Well Information

Screen Interval Length (ft): 30
Previous Depth to Water (MRP): 454.87 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -2.93 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 493.20 ft MRP
Top of Screen: 457.80 ft MRP
Bottom of Screen: 487.80 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: 1121

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 455.61

Measure Water Level

DMS Tether and Reel ID match Well ID? ☆

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	458.50
2	461.10
3	463.70
4	466.30
5	468.90
6	471.50
7	474.10
8	476.70
9	479.30
10	481.90

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106222 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW222-203

Date Sampled: 7-7-2020 Time Sampled: 0950 Sampling Team: D. Schmeelk, G. Beegouye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?	
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH00006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW222-203
Duplicate ID: (if applicable) GW222-603
COC#: COC-222-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106223 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW223-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 455.46 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -32.34

Well Depth: 508.00 ft MRP
Top of Screen: 487.80 ft MRP
Bottom of Screen: 502.80 ft MRP

Deployment Team: D. Schmeelk, G. Beggage

Date Deployed: 6-16-2020 Time Deployed: ~~0806~~ 0822

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	488.50
2	491.10
3	493.70
4	496.30
5	498.90

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106223 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW223-203

Date Sampled: 7-7-2020 Time Sampled: 0935 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW223-203
Duplicate ID: (if applicable) GW223-603
COC#: COC-223-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106224 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW224-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 456.61 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -98.39

Well Depth: 575.50 ft MRP
Top of Screen: 555.00 ft MRP
Bottom of Screen: 570.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-16-2020 Time Deployed: ~~0745~~ 0754

PID: MiniRAE 3000 Serial No: W10006

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	555.70
2	558.30
3	560.90
4	563.50
5	566.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106224 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW224-203

Date Sampled: 7-7-2020 Time Sampled: 0915 Sampling Team: D. Schweelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)		*Choose only one*							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: W18006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW224-203
Duplicate ID: (if applicable) GW224-603
COC#: COC-224-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106230 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW230-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 446.08 **(Gauged on 4/15/2020)** **LNAPL NOT detected during prior gauging**
Length of Screen not submerged (ft): -54.92

Well Depth: 521.00 ft MRP
Top of Screen: 501.00 ft MRP
Bottom of Screen: 516.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 **Time Deployed:** 0818

PID: MiniRAE 3000 **Serial No:** WH0004

Water Level Meter: Solinst 500 ft **Serial No:** —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger **Review Date:** 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	501.70
2	504.30
3	506.90
4	509.50
5	512.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106230 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW230-203

Date Sampled: 7-8-2020 Time Sampled: 0808 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

	Choose only one								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	(Nitrate / Nitrite)	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	(Alkalinity)	(Anions)	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW230-203
Duplicate ID: (if applicable) GW230-603
COC#: COC-230-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106231 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW231-203

Well Information

Screen Interval Length (ft): 35
Previous Depth to Water (MRP): 448.66 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 8.66 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 480.00 ft MRP
Top of Screen: 440.00 ft MRP
Bottom of Screen: 475.00 ft MRP

Deployment Team: D. Schmerelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 1344

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 449.24

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	440.70
2	443.30
3	445.90
4	448.50
5	451.10
6	453.70
7	456.30
8	458.90
9	461.50
10	464.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106231 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW231-203

Date Sampled: 7-7-2020 Time Sampled: 1128 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? QB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW231-203
Duplicate ID: (if applicable) GW231-603
COC#: COC-231-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106232 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW232-203

Well Information

Screen Interval Length (ft): 15
Previous Depth to Water (MRP): 448.22 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -54.78

Well Depth: 523.00 ft MRP
Top of Screen: 503.00 ft MRP
Bottom of Screen: 518.00 ft MRP

Deployment Team: D. Schmeelk, G. Beegaye

Date Deployed: 6-15-2020 Time Deployed: 1235

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	503.70
2	506.30
3	508.90
4	511.50
5	514.10

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106232 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW232-203

Date Sampled: 7-7-2020 Time Sampled: 1144 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW232-203
Duplicate ID: (if applicable) GW232-603
COC#: COC-232-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-438 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW235-438-203

Well Information

Screen Interval Length (ft): 25
Previous Depth to Water (MRP): 437.29 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -0.71 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 465.00 ft MRP
Top of Screen: 438.00 ft MRP
Bottom of Screen: 463.00 ft MRP

Deployment Team: D.Schmeelk, G.Beegaye

Date Deployed: 6-15-2020 Time Deployed: 0837

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 437.72
Measure Water Level

DMS Tether and Reel ID match Well ID? ✶
Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):
Duplicate sample required. Please deploy extra DMS as needed

Analyte(s):
- EDB

Notes:

Reviewed by: J.Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	438.70
2	441.30
3	443.90
4	446.50
5	449.10
6	451.70
7	454.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-438 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW235-438-203

Date Sampled: 7-6-2020 Time Sampled: 0848 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

Duplicate sample required.

PID: MiniRAE 3000 Serial No: W10006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW235-438-203
Duplicate ID: (if applicable) GW235-438-603
COC#: COC-235-438-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-472 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW235-472-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 437.28 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -34.72

Well Depth: 494.00 ft MRP
Top of Screen: 472.00 ft MRP
Bottom of Screen: 492.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: _____

PID: MiniRAE 3000 Serial No: ~~WH00012~~ WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? X

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes: _____

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	472.70
2	475.30
3	477.90
4	480.50
5	483.10
6	485.70
7	488.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-472 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW235-472-203

Date Sampled: 07-06-2020 Time Sampled: 0905 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐	6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW235-472-203
Duplicate ID: (if applicable) GW235-472-603
COC#: COC-235-472-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-20

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-501 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW235-501-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 437.32 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -63.68

Well Depth: 523.00 ft MRP
Top of Screen: 501.00 ft MRP
Bottom of Screen: 521.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 0856

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: —

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	501.70
2	504.30
3	506.90
4	509.50
5	512.10
6	514.70
7	517.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106235-501 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW235-501-203

Date Sampled: 7-6-2020 Time Sampled: 0922 Sampling Team: D. Schweelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? Y *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?	
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite			6mm

PID: MiniRAE 3000 Serial No: W10006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW235-501-203
Duplicate ID: (if applicable) GW235-501-603
COC#: COC-235-501-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106236-436 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW236-436-203

Well Information

Screen Interval Length (ft): 25
Previous Depth to Water (MRP): 437.09 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 1.09 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 463.00 ft MRP
Top of Screen: 436.00 ft MRP
Bottom of Screen: 461.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 0741

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 437.52
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1 ▽	436.70
2	439.30
3	441.90
~~4~~	444.50
5	447.10
6	449.70
7	452.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106236-436 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW236-436-203

Date Sampled: 7-6-2020 Time Sampled: 0736 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW236-436-203
Duplicate ID: (if applicable) GW236-436-603
COC#: COC-236-436-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106236-470 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW236-470-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 437.07 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -32.93

Well Depth: 492.00 ft MRP
Top of Screen: 470.00 ft MRP
Bottom of Screen: 490.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 0752

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

MS/MSD required. Please deploy extra DMS as needed

Analyte(s):
- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	470.70
2	473.30
3	475.90
4	478.50
5	481.10
6	483.70
7	486.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW236-470-203

Well Location ID: KAFB-106236-470 *Sampling*

Date Sampled: 7-6-2020 Time Sampled: 0752 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☑
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

MS/MSD required.

PID: MiniRAE 3000 Serial No: W10006

IDW will be taken to: **GWTS/Pending Disposal Area**

Notes: Aerated sample, 1 VOA with 1 x ≤ 1mm bubble

Sample ID: GW236-470-203
Duplicate ID: (if applicable) GW236-470-603
COC#: COC-236-470-203

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106236-499 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW236-499-203

Well Information

Screen Interval Length (ft): 20
Previous Depth to Water (MRP): 437.11 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): -61.89

Well Depth: 521.00 ft MRP
Top of Screen: 499.00 ft MRP
Bottom of Screen: 519.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 0803

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: —

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- EDB

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	499.70
2	502.30
3	504.90
4	507.50
5	510.10
6	512.70
7	515.30

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106236-499 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW236-499-203

Date Sampled: 07-06-2020 Time Sampled: 0814 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? DB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

Choose only one

									Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Notes:

Sample ID: GW236-499-203
Duplicate ID: (if applicable) GW236-499-603
COC#: COC-236-499-203

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106240-449 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW240-449-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 469.49 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.45 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 491.04 ft MRP
Top of Screen: 449.04 ft MRP
Bottom of Screen: 489.04 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 0951

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 469.53
Measure Water Level

DMS Tether and Reel ID match Well ID? X
Initial to confirm that ID check was completed

Notes:

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- Alkalinity - BTEX - Anions - Dissolved Metals - EDB - NO3/NO2-N - Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	449.74
2	452.34
3	454.94
4	457.54
5	460.14
6	462.74
7	465.34
8 ▽	467.94
9	470.54
10	473.14
11	475.74
12	478.34
13	480.94
14	483.54

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106240-449 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW240-449-203

Date Sampled: 7-8-2020 Time Sampled: 1225 Sampling Team: D.Schmeelk, G.Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? DS *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: W10006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW240-449-203
Duplicate ID: (if applicable) GW240-449-603
COC#: COC-240-449-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106241-428 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW241-428-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 446.42 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 18.32 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 470.10 ft MRP
Top of Screen: 428.10 ft MRP
Bottom of Screen: 468.10 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 0847

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 446.95

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

Notes:

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	428.80
2	431.40
3	434.00
4	436.60
5	439.20
6	441.80
7 ▽	444.40
8	447.00
9	449.60
10	452.20
11	454.80
12	457.40
13	460.00
14	462.60

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106241-428 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW241-428-203

Date Sampled: 07-08-2020 Time Sampled: 0842 Sampling Team: D. Schmeelk, O. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? AB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WK0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW241-428-203
Duplicate ID: (if applicable) GW241-428-603
COC#: COC-241-428-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106242-418 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW242-418-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 438.20 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.06 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 460.14 ft MRP
Top of Screen: 418.14 ft MRP
Bottom of Screen: 458.14 ft MRP

Deployment Team: D. Schmelk, G. Begaye

Date Deployed: 6-15-2020 Time Deployed: 1127

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 438.32

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

Notes:

QC sample notes. (If blank, no QC samples required):	Analyte(s):
	- Alkalinity - Anions - Dissolved Metals - EDB - NO3/NO2-N - Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	418.84
2	421.44
3	424.04
4	426.64
5	429.24
6	431.84
7	434.44
8	437.04
9	439.64
10	442.24
11	444.84
12	447.44
13	450.04
14	452.64

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106242-418 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW242-418-203

Date Sampled: 7-7-2020 Time Sampled: 1055 Sampling Team: D. Schmeelk, E. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? [initials] *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: W160006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW242-418-203
Duplicate ID: (if applicable) GW242-418-603
COC#: COC-242-418-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106243-425 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GW243-425-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 442.84 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 17.80 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 467.54 ft MRP
Top of Screen: 425.04 ft MRP
Bottom of Screen: 465.04 ft MRP

Deployment Team: D. Schmeelk, G. Begeye

Date Deployed: 6-17-2020 Time Deployed: 0919

PID: MiniRAE 3000 Serial No: WH00014

Water Level Meter: Solinst 500 ft Serial No: ~~WH000~~ WH0012

PID Reading: 0.0 ppm

Depth to Water: 443.09
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

Notes:

QC sample notes.
(If blank, no QC samples required):

Duplicate sample required. Please deploy extra DMS as needed

Analyte(s):
- Alkalinity
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	425.74
2	428.34
3	430.94
4	433.54
5	436.14
6	438.74
7	441.34
8	443.94
9	446.54
10	449.14
11	451.74
12	454.34
13	456.94
14	459.54

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106243-425 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW243-425-203

Date Sampled: 7-9-2020 Time Sampled: 1024 Sampling Team: D. Schmeelk

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? [initials] *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one								Document in notes: Dup?	Document in notes: MS/MSD?
1	(EDB)	VOCs	BTEX (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
2	EDB	VOCs	BTEX (N)	(Metals (Dissolved))	(Metals (Total))	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	Alkalinity	(Anions)	(Nitrate / Nitrite)	☑	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	(Alkalinity)	Anions	Nitrate / Nitrite	☑	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

Duplicate sample required.

PID: MiniRAE 3000 Serial No: 410006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW243-425-203
Duplicate ID: (if applicable) GW243-425-603
COC#: COC-243-425-203

Notes: Bag #1 - EDB Duplicate, Bag #3 - Anions and Nitrate/Nitrite duplicate, Bag #4 - Alkalinity duplicate.

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106244-445 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW244-445-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 465.30 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.21 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 487.09 ft MRP
Top of Screen: 445.09 ft MRP
Bottom of Screen: 485.09 ft MRP

Deployment Team: D.Schmeelk, G.Begaye

Date Deployed: 6-17-2020 Time Deployed: 1018

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 465.14
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

Notes:

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	445.79
2	448.39
3	450.99
4	453.59
5	456.19
6	458.79
7	461.39
8 ▽	463.99
9	466.59
10	469.19
11	471.79
12	474.39
13	476.99
14	479.59

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Year: 2020
Quarter: 3
Sample ID: GW244-445-203

Well Location ID: KAFB-106244-445 *Sampling*

Date Sampled: 7-8-2020 Time Sampled: 1255 Sampling Team: D. Schmeelk, G. Beggaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: 414006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW244-445-203
Duplicate ID: (if applicable) GW244-445-603
COC#: COC-244-445-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106245-460 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW245-460-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 483.36 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 19.69 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 505.67 ft MRP
Top of Screen: 463.67 ft MRP
Bottom of Screen: 503.67 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1204

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 483.39
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

Notes:

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	464.37
2	466.97
3	469.57
4	472.17
5	474.77
6	477.37
7	479.97
8 ▽	482.57
9	485.17
10	487.77
11	490.37
12	492.97
13	495.57
14	498.17

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106245-460 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW245-460-203

Date Sampled: 7-9-2020 Time Sampled: 0633 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: 440026

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW245-460-203
Duplicate ID: (if applicable) GW245-460-603
COC#: COC-245-460-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106247-450 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GW247-450-203

Well Information

Screen Interval Length (ft): 40

Previous Depth to Water (MRP): 474.03 (Gauged on 4/14/2020) LNAPL NOT detected during prior gauging

Length of Screen not submerged (ft): 20.71 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 495.64 ft MRP
Top of Screen: 453.32 ft MRP
Bottom of Screen: 493.32 ft MRP

Deployment Team: Dylan Schweelk, Galveston Begaye

Date Deployed: 6-17-2020 Time Deployed: 1234

PID: MiniRAE 3000 Serial No: WH0004

Water Level Meter: Solinst 500 ft Serial No: WH0012

PID Reading: 0.0 ppm

Depth to Water: 473.85

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-18-2020

Sampler Number:	Top of Sampler Depth (MRP)
1	454.02
2	456.62
3	459.22
4	461.82
5	464.42
6	467.02
7	469.62
8	472.22
9	474.82
10	477.42
11	480.02
12	482.62
13	485.22
14	487.82

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106247-450 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GW247-450-203

Date Sampled: 7-8-2020 Time Sampled: 0728 Sampling Team: D. Schmeck, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate) — *Choose only one*

									Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **GWTS/Pending Disposal Area**

Sample ID: GW247-450-203
Duplicate ID: (if applicable) GW247-450-603
COC#: COC-247-450-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S1-447 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS1-447-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 467.31 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.31 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 489.99 ft MRP
Top of Screen: 447.00 ft MRP
Bottom of Screen: 487.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 1200

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 3.4 ppm

Depth to Water: 467.25
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

MS/MSD required. Please deploy extra DMS as needed

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
1	447.70
2	450.30
3	452.90
4	455.50
5	458.10
6	460.70
7	463.30
8	465.90
9	468.50
10	471.10
11	473.70
12	476.30
13	478.90
14	481.50

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S1-447 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS1-447-203

Date Sampled: 7-10-2020 Time Sampled: 0752 Sampling Team: D. Schmaelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	Document in notes: MS/MSD?
1	(EDB)	VOCs	(BTEX) (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		✓
2	(EDB)	VOCs	(BTEX) (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		✓
3	EDB	VOCs	BTEX (N)	(Metals (Dissolved))	(Metals (Total))	Alkalinity	Anions	Nitrate / Nitrite		✓
4	EDB	VOCs	BTEX (N)	(Metals (Dissolved))	(Metals (Total))	Alkalinity	Anions	Nitrate / Nitrite		✓
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	Alkalinity	(Anions)	(Nitrate / Nitrite)		✓
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	(Alkalinity)	Anions	Nitrate / Nitrite		✓ 6mm

MS/MSD required.

PID: MiniRAE 3000 Serial No: 401005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GWS1-447-203
Duplicate ID: (if applicable) GWS1-447-603
COC#: COC-S1-447-203

Notes: Bubbles in 4×BTEX and 1×EDB → 1 bubble each ≤ 1mm. Sample water aerated.

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S2-451 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS2-451-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 474.51 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.28 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 496.90 ft MRP
Top of Screen: 454.23 ft MRP
Bottom of Screen: 494.23 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 0851

PID: MiniRAE 3000 Serial No: 401006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 1.8 ppm

Depth to Water: 474.52
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
1	454.93
2	457.53
3	460.13
4	462.73
5	465.33
6	467.93
7	470.53
8 ▽	473.13
9	475.73
10	478.33
11	480.93
12	483.53
13	486.13
14	488.73

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S2-451 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS2-451-203

Date Sampled: 7-10-2020 Time Sampled: 1222 Sampling Team: D.Schmeelk, G.Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? JB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)		*Choose only one*							Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Notes:

Sample ID: GWS2-451-203
Duplicate ID: (if applicable) GWS2-451-603
COC#: COC-S2-451-203

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S3-449 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS3-449-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 473.59 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 21.41 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 494.42 ft MRP
Top of Screen: 452.18 ft MRP
Bottom of Screen: 492.18 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 0822

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 2.1 ppm

Depth to Water: 473.60

Measure Water Level

DMS Tether and Reel ID match Well ID? ▽

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
1	452.88
2	455.48
3	458.08
4	460.68
5	463.28
6	465.88
7	468.48
8	471.08
9	473.68
10	476.28
11	478.88
12	481.48
13	484.08
14	486.68

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S3-449 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS3-449-203

Date Sampled: 7-10-2020 Time Sampled: 1145 Sampling Team: D. Schuelke, G. Beggoye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	(EDB)	VOCs	(BTEX) (N)	(Metals (Dissolved))	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	(Metals (Total))	Alkalinity	(Anions)	(Nitrate / Nitrite)	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	(Alkalinity)	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: 440005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GWS3-449-203
Duplicate ID: (if applicable) GWS3-449-603
COC#: COC-S3-449-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S4-446 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS4-446-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 468.51 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 19.28 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 491.73 ft MRP
Top of Screen: 449.23 ft MRP
Bottom of Screen: 489.23 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-17-2020 Time Deployed: 1316

PID: MiniRAE 3000 Serial No: w140004

Water Level Meter: ~~Solinst 500 ft~~ Solinst 500 ft Serial No: Geotech – 001

PID Reading: 0.0 ppm

Depth to Water: 468.46
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Sampler Number:	Top of Sampler Depth (MRP)
1	449.93
2	452.53
3	455.13
4	457.73
5	460.33
6	462.93
7	465.53
8 ▽	468.13
9	470.73
10	473.33
11	475.93
12	478.53
13	481.13
14	483.73

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-18-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S4-446 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS4-446-203

Date Sampled: 7-9-2020 Time Sampled: 1313 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? ✓ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WH0006

IDW will be taken to: **Pending Analysis Yard**

Sample ID: GWS4-446-203
Duplicate ID: (if applicable) GWS4-446-603
COC#: COC-S4-446-203

Notes:

Reviewed by: J. Messenger Review Date: 7-10-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S5-446 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS5-446-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 465.38 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 19.30 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 488.32 ft MRP
Top of Screen: 446.08 ft MRP
Bottom of Screen: 486.08 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 0711

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 1.8 ppm

Depth to Water: 465.65

Measure Water Level

DMS Tether and Reel ID match Well ID? ✓

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
1	446.78
2	449.38
3	451.98
4	454.58
5	457.18
6	459.78
7	462.38
8 ▽	464.98
9	467.58
10	470.18
11	472.78
12	475.38
13	477.98
14	480.58

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S5-446 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS5-446-203

Date Sampled: 7-10-2020 Time Sampled: 0955 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? GB *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

PID: MiniRAE 3000 Serial No: WK0005

IDW will be taken to: **90-day Hazardous Waste Area**

Notes:

Sample ID: GWS5-446-203
Duplicate ID: (if applicable) GWS5-446-603
COC#: COC-S5-446-203

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S7-451 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS7-451-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 470.87 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 19.87 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 492.60 ft MRP
Top of Screen: 451.00 ft MRP
Bottom of Screen: 491.00 ft MRP

Deployment Team: D. Schmeelk, G. Begaye

Date Deployed: 6-18-2020 Time Deployed: 0739

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 2.2 ppm

Depth to Water: 471.12
Measure Water Level

DMS Tether and Reel ID match Well ID? ✓
Initial to confirm that ID check was completed

Notes: ADD DMS PROTECTIVE SLEEVES ✓
Used bags with black mesh.

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	451.70
2	454.30
3	456.90
4	459.50
5	462.10
6	464.70
7	467.30
8	469.90
9	472.50
10	475.10
11	477.70
12	480.30
13	482.90
14	485.50

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-22-20

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S7-451 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS7-451-203

Date Sampled: 7-10-2020 Time Sampled: 1040 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? _____ *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number: (shallow to deep)	Choose only one								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite		

6mm

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Notes: HISTORICAL SAMPLER FAIL - PULL UP GENTLY. Bags #1, 2 and 3 had broken/damaged Rubberbands and membrane appeared warped/melted. Garlic smell from water in top bag. Damage to bags appears to be caused by chemical reaction. See pictures. All bags had black mesh protectors.

Sample ID: GWS7-451-203
Duplicate ID: (if applicable) GWS7-451-603
COC#: COC-S7-451-203

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S8-451 ***Deployment***

Year: 2020
Quarter: 3
Sample ID: GWS8-451-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 473.61 (Gauged on 4/15/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 19.39 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 491.97 ft MRP
Top of Screen: 454.22 ft MRP
Bottom of Screen: 494.22 ft MRP

Deployment Team: Dylan Schmeelk, Galveston Begaye

Date Deployed: 06-18-2020 Time Deployed: 1113

PID: MiniRAE 3000 Serial No: WH0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 2.4 ppm

Depth to Water: 473.56
Measure Water Level

DMS Tether and Reel ID match Well ID? X
Initial to confirm that ID check was completed

Notes:

QC sample notes.
(If blank, no QC samples required):

Duplicate sample required. Please deploy extra DMS as needed

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Sampler Number:	Top of Sampler Depth (MRP)
1	454.92
2	457.52
3	460.12
4	462.72
5	465.32
6	467.92
7	470.52
8	473.12
9	475.72
10	478.32
11	480.92
12	483.52
13	486.12
14	488.72

Depths highlighted blue represent submerged samplers based on previous water level

Reviewed by: J. Messenger Review Date: 6-22-20

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S8-451 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS8-451-203

Date Sampled: 7-10-2020 Time Sampled: 1500 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? Y *Initial to confirm that ID check was completed*

Sampler Number: (shallow to deep)

Type of Analysis (circle appropriate)

		Choose only one							Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☑	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐

6mm

Duplicate sample required.

PID: MiniRAE 3000 Serial No: WH0005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GWS8-451-203
Duplicate ID: (if applicable) GWS8-451-603
COC#: COC-S8-451-203

Notes: Bag #1 appears to only have been submerged 1/3, therefore did not sample. Alkalinity bottles filled to 225 mL, not full 250 mL. See pictures.

Reviewed by: J. Messenger Review Date: 7-24-2020

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S9-447 *Deployment*

Year: 2020
Quarter: 3
Sample ID: GWS9-447-203

Well Information

Screen Interval Length (ft): 40
Previous Depth to Water (MRP): 468.08 (Gauged on 4/16/2020) LNAPL NOT detected during prior gauging
Length of Screen not submerged (ft): 20.96 **** *(Water level <5ft above top of screen or screen not submerged)*

Well Depth: 489.49 ft MRP
Top of Screen: 447.12 ft MRP
Bottom of Screen: 487.12 ft MRP

Deployment Team: Dylan Schmeelk, Galveston Begaye

Date Deployed: 6-18-2020 Time Deployed: 0923

PID: MiniRAE 3000 Serial No: WH 0006

Water Level Meter: Solinst 500 ft Serial No: 253056

PID Reading: 0.0 ppm

Depth to Water: 468.21

Measure Water Level

DMS Tether and Reel ID match Well ID? D

Initial to confirm that ID check was completed

QC sample notes.
(If blank, no QC samples required):

Analyte(s):
- Alkalinity
- BTEX
- Anions
- Dissolved Metals
- EDB
- NO3/NO2-N
- Total Metals

Notes:

Reviewed by: J. Messenger Review Date: 6-22-20

Sampler Number:	Top of Sampler Depth (MRP)
1	447.82
2	450.42
3	453.02
4	455.62
5	458.22
6	460.82
7	463.42
8	466.02
9	468.62
10	471.22
11	473.82
12	476.42
13	479.02
14	481.62

Depths highlighted blue represent submerged samplers based on previous water level

Passive Diffusion Water Sampling Data Sheet

Well Location ID: KAFB-106S9-447 *Sampling*

Year: 2020
Quarter: 3
Sample ID: GWS9-447-203

Date Sampled: 7-10-2020 Time Sampled: 1300 Sampling Team: D. Schmeelk, G. Begaye

PID Reading: 0.0 DMS Tether and Reel ID match Well ID? [initials] *Initial to confirm that ID check was completed*

Type of Analysis (circle appropriate)

Sampler Number (shallow to deep)	*Choose only one*								Document in notes: Dup?	MS/MSD?
1	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	~~Anions~~	Nitrate / Nitrite	☐	☐
2	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
3	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
4	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
5	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐
6	EDB	VOCs	BTEX (N)	Metals (Dissolved)	Metals (Total)	Alkalinity	Anions	Nitrate / Nitrite	☐	☐ 6mm

PID: MiniRAE 3000 Serial No: WH00005

IDW will be taken to: **90-day Hazardous Waste Area**

Sample ID: GWS9-447-203
Duplicate ID: (if applicable) GWS9-447-603
COC#: COC-S9-447-203

Notes:

Reviewed by: J. Messenger Review Date: 7-24-2020

Table E-3-1
Water Quality Field Measurements for the Current and Previous Three Quarters

Well Location ID	Sample Quarter	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106002	Q2 2020	4/17/2020	18.5	7.51	410.6	6.31	303.1	0.31
	Q4 2019	10/11/2019	18.5	7.85	457.2	4.55	216.8	0.08
KAFB-106003	Q3 2020	7/15/2020	20.4	7.79	602	6.64	329.9	2.31
	Q2 2020	4/30/2020	21.3	7.77	514.8	5.49	181.6	1.51
	Q1 2020	1/17/2020	16.7	7.95	632	6.03	400.4	0.18
	Q4 2019	10/28/2019	17.5	7.8	863	8.14	383.5	2.06
KAFB-106004	Q3 2020	7/16/2020	22.0	7.59	481.1	6.48	352.6	0.60
	Q2 2020	5/5/2020	20.9	7.65	393.2	7.45	166.3	0.39
	Q1 2020	1/16/2020	13.4	7.93	428.4	7.17	403.8	2.42
	Q4 2019	10/24/2019	15.5	7.91	471	5.59	233.9	2.26
KAFB-106005	Q3 2020	7/13/2020	22.4	7.38	1179	0.21	-289.1	13.8
KAFB-106006	Q2 2020	4/24/2020	18.4	7.69	527.8	1.60	-74.6	2.79
	Q4 2019	11/4/2019	19.4	7.33	477.6	1	-90	1.52
KAFB-106007	Q2 2020	4/24/2020	21.2	7.88	389.5	4.57	242.2	1.66
	Q4 2019	10/18/2019	17	7.92	381.7	4.4	376.9	0.26
KAFB-106008	Q4 2019	11/7/2019	18.1	6.87	925	2.02	-68.1	7.28
KAFB-106010	Q2 2020	4/24/2020	20.7	7.13	577	0.80	-196.6	1.11
	Q4 2019	11/5/2019	18.6	7.03	780	0.65	-155.9	2.32
KAFB-106011	Q2 2020	4/17/2020	18.3	7.62	1,050	0.71	291.0	1.12
	Q4 2019	10/14/2019	18.8	7.47	1413	0.93	153.1	0.43
KAFB-106012R	Q3 2020	7/14/2020	22.9	7.36	1,400	6.93	300.8	12.0
	Q2 2020	4/23/2020	23.0	7.40	1,700	6.03	228.7	0.85
	Q1 2020	1/14/2020	17.0	7.34	1,586	6.60	334.5	7.14
	Q4 2019	10/18/2019	19	7.48	1739	7.24	387.6	0.57
KAFB-106013	Q3 2020	7/15/2020	23.9	7.63	451.8	4.05	278.4	6.67
	Q2 2020	5/1/2020	21.5	7.79	467.7	1.53	138.1	10.8
	Q1 2020	1/15/2020	16.7	7.82	483.2	1.82	360.2	2.72
	Q4 2019	10/23/2019	17.8	7.71	477.1	2.47	83.8	3.79
KAFB-106014	Q2 2020	4/24/2020	19.1	7.19	1,085	1.56	-128.6	4.86
	Q4 2019	11/4/2019	18.8	7.12	1088	1.64	-91.5	23.7
KAFB-106016	Q2 2020	4/17/2020	18.9	7.88	346.3	2.86	103.5	3.30
	Q4 2019	10/11/2019	18.2	7.48	370.3	3.88	76.6	8.24
KAFB-106017	Q2 2020	4/21/2020	19	7.59	497.4	0.24	-64.8	1.42
	Q4 2019	10/15/2019	18.3	7.71	442.5	0.26	-34.8	0.87
KAFB-106018	Q2 2020	5/8/2020	19.9	7.57	558	0.59	32.8	3.08
	Q4 2019	10/15/2019	18.9	7.89	460	0.18	43.5	0.16
KAFB-106019	Q2 2020	4/23/2020	19.8	7.45	1,895	5.27	77.8	36.6
	Q4 2019	10/16/2019	18.9	7.37	1026	2.97	76.3	9.72
KAFB-106020	Q2 2020	4/28/2020	19.3	7.82	583	5.51	271.8	118
	Q4 2019	10/17/2019	18.4	7.48	726	5.11	53.9	194
KAFB-106024	Q2 2020	4/20/2020	20.1	7.57	428.1	0.56	301.7	9.44
	Q4 2019	10/16/2019	20.2	7.69	443.8	0.44	128.5	0.5
KAFB-106027	Q2 2020	4/20/2020	18.1	7.84	385.9	3.88	348.4	3.38
	Q4 2019	10/15/2019	18.1	7.98	436.7	3.19	319.6	1.07

Table E-3-1
Water Quality Field Measurements for the Current and Previous Three Quarters

Well Location ID	Sample Quarter	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106038	Q2 2020	4/22/2020	19.7	7.68	823	4.07	286.0	2.46
	Q4 2019	10/17/2019	20.7	7.74	892	2.31	364.7	1.07
KAFB-106039	Q2 2020	4/22/2020	20.9	7.72	689	5.25	244.1	10.7
	Q4 2019	10/17/2019	19.3	7.77	781	2.54	377.8	0.86
KAFB-106040	Q2 2020	4/23/2020	20.3	7.69	453.9	4.47	345.2	5.12
	Q4 2019	10/16/2019	21.4	7.75	551	3.78	296	27.7
KAFB-106044	Q2 2020	4/20/2020	18.1	7.85	365.1	3.11	331.1	0.52
	Q4 2019	10/15/2019	18.6	7.98	374.7	3.03	325	0.66
KAFB-106045	Q2 2020	4/24/2020	18.9	7.91	354.0	2.85	348.7	0.47
	Q4 2019	10/21/2019	17.4	7.91	394.8	2.65	344.4	0.11
KAFB-106046	Q2 2020	4/22/2020	19.7	7.8	432.7	4.46	202.2	0.50
	Q4 2019	10/14/2019	19.1	7.81	417.3	5.3	358.1	0.57
KAFB-106047	Q2 2020	4/17/2020	18.5	7.27	386.8	5.81	324.3	3.40
	Q4 2019	10/14/2019	19	7.41	403.7	5.95	353.1	9.67
KAFB-106048	Q2 2020	4/29/2020	19.4	7.78	362.2	5.39	166.0	1.88
	Q4 2019	10/22/2019	19.9	8.01	427.6	5.4	384.2	1.11
KAFB-106059	Q2 2020	5/6/2020	20.4	6.96	566	0.13	-256.6	7.33
	Q4 2019	10/21/2019	18.4	6.59	1029.0	3.37	-68.9	4.88
KAFB-106060	Q2 2020	4/20/2020	18.6	7.68	792	5.90	295.5	0.42
	Q4 2019	10/11/2019	18.5	7.13	993.0	0.49	159.6	0.27
KAFB-106061	Q2 2020	4/27/2020	22.3	7.63	349.3	3.18	138.1	5.99
	Q4 2019	11/5/2019	19.2	7.84	282.1	2.69	362	6.14
KAFB-106062	Q2 2020	4/21/2020	19.2	7.78	376.0	3.97	141.0	2.57
	Q4 2019	10/14/2019	18.6	7.18	369.0	6.89	115	0.56
KAFB-106063[a]	Q2 2020	5/19/2020	18.9	6.90	NA	0.13	-168.6	1.98
KAFB-106064[a]	Q2 2020	5/19/2020	18.3	6.81	NA	0.05	-193.6	4.84
KAFB-106065	Q2 2020	4/22/2020	17.0	7.27	677	0.22	7.7	7.15
	Q4 2019	10/11/2019	14.9	6.8	693	8.05	82.1	1.39
KAFB-106066	Q2 2020	4/22/2020	17.0	7.84	381.6	4.26	175.6	0.76
	Q4 2019	10/10/2019	16.4	7.44	374.7	6.52	360.8	0.54
KAFB-106067	Q2 2020	4/21/2020	18.2	7.33	559.2	0.20	35.9	2.22
	Q4 2019	10/14/2019	19.0	7.26	671	0.27	-47.9	2.39
KAFB-106068	Q2 2020	4/20/2020	18.3	7.57	380.0	4.75	303.4	6.13
	Q4 2019	10/11/2019	18.7	7.77	413.1	4.94	229.2	2.05
KAFB-106069	Q2 2020	4/23/2020	20.7	7.59	540.8	2.55	238.6	1.88
	Q4 2019	10/16/2019	17.3	7.5	475.1	4.06	93.7	0.99
KAFB-106073	Q2 2020	4/30/2020	20.2	7.67	555	0.84	139.0	1.15
	Q4 2019	10/17/2019	19.8	7.51	439.9	4.35	85	4.72
KAFB-106074	Q2 2020	4/30/2020	21.8	7.75	450.6	3.44	162.2	1.53
	Q4 2019	10/22/2019	17.5	7.96	651	3.84	394.3	0.52
KAFB-106075	Q2 2020	4/20/2020	18.3	7.63	629	0.30	158.4	0.62
	Q4 2019	10/14/2019	17.8	7.36	675	0.58	60.6	3.32
KAFB-106076	Q2 2020	4/28/2020	24.2	7.49	454.2	0.18	-242.7	23.7
	Q4 2019	10/16/2019	21.3	7.37	467.6	1.07	-171.3	26.2

Table E-3-1
Water Quality Field Measurements for the Current and Previous Three Quarters

Well Location ID	Sample Quarter	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-106077	Q2 2020	4/27/2020	21.5	7.78	387.0	3.28	133.2	1.60
	Q4 2019	10/18/2019	20.4	7.94	383.7	3.13	369.3	0.8
KAFB-106078	Q2 2020	4/21/2020	19.8	7.82	360.9	1.89	235.6	5.02
	Q4 2019	10/15/2019	19.8	7.75	338.1	2.26	96.3	4.1
KAFB-106079	Q4 2020	10/23/2019	18.7	7.1	1197	1.54	-74.9	5.11
KAFB-106080	Q2 2020	4/23/2020	18.4	6.99	1,327	0.25	-18.0	1.31
	Q4 2019	10/16/2019	18.5	7.0	1377	0.3	-45.3	2.09
KAFB-106081	Q2 2020	4/29/2020	22.0	7.58	350.9	5.08	170.6	1.06
	Q4 2019	10/18/2019	20.1	7.87	364.4	4.47	364.6	1.63
KAFB-106082	Q2 2020	4/28/2020	23.6	7.46	582	1.48	127.2	0.39
	Q4 2019	10/18/2019	19.3	7.51	557.7	2.97	45.6	3.07
KAFB-106083	Q2 2020	4/28/2020	20.0	7.83	491.4	0.71	97.1	1.52
	Q4 2019	10/18/2019	18.6	7.76	431	4.54	4.4	8.79
KAFB-106084	Q2 2020	4/28/2020	22.6	7.78	366.0	3.31	150.6	1.25
	Q4 2019	10/22/2019	16.2	8.06	421.8	3.42	381.2	0.45
KAFB-106094	Q2 2020	4/21/2020	18.6	7.46	511.4	0.20	59.1	1.48
	Q4 2019	10/14/2019	19.1	7.23	563.1	0.35	35.7	4.57
KAFB-106095	Q2 2020	4/29/2020	21.8	7.67	469.9	2.28	148.0	4.39
	Q4 2019	10/21/2019	19.1	7.74	451.4	2.36	350.9	0.68
KAFB-106096	Q2 2020	5/8/2020	19.4	7.76	357.5	4.23	134.7	5.11
	Q4 2019	10/10/2019	18.7	7.46	369.2	6.99	301.8	3.98
KAFB-106097	Q3 2020	7/16/2020	19.9	7.63	395.6	2.97	349.1	0.37
	Q2 2020	5/1/2020	20.5	7.70	496.2	2.77	134.1	0.96
	Q1 2020	1/15/2020	17.8	7.86	455.0	3.22	357.3	0.29
	Q4 2019	10/23/2019	19.1	7.65	445.3	2.88	108.9	0.68
KAFB-106098	Q3 2020	7/15/2020	21.4	7.75	435.5	3.38	209.9	0.75
	Q2 2020	5/1/2020	19.3	7.44	440.1	3.32	165.5	0.73
	Q1 2020	1/15/2020	18.2	7.90	380.9	3.10	354.5	0.59
	Q4 2019	10/23/2019	19.6	7.69	420.3	3.07	92.8	1.63
KAFB-106099	Q3 2020	7/16/2020	21.0	7.71	372.6	5.59	319.2	0.69
	Q2 2020	5/5/2020	19.6	7.79	363.8	6.06	164.6	1.23
	Q1 2020	1/16/2020	17.0	7.95	412.0	6.12	370.5	2.43
	Q4 2019	10/24/2019	18.4	7.92	453.7	5.92	253.2	0.15
KAFB-106100	Q3 2020	7/16/2020	22.1	7.74	331.7	2.96	328.9	0.79
	Q2 2020	5/5/2020	19.1	7.81	331.4	2.75	162.5	1.18
	Q1 2020	1/16/2020	14.4	8.01	378.7	2.31	292.3	0.82
	Q4 2019	10/24/2019	18	7.99	398.4	2.42	253.1	0.49
KAFB-106101	Q3 2020	7/15/2020	19.7	7.68	432.4	6.11	345.2	0.82
	Q2 2020	5/4/2020	19.6	7.79	398.9	5.35	158.4	2.91
	Q1 2020	1/17/2020	16.3	7.93	488.8	5.17	386.5	0.81
	Q4 2019	10/28/2019	16.5	7.93	386.3	5.62	373.0	0.73
KAFB-106102	Q3 2020	7/15/2020	20.1	7.78	327	3.25	337.9	0.93
	Q2 2020	5/4/2020	20.7	7.79	328.3	2.17	160.2	1.28
	Q1 2020	1/17/2020	17.1	8.00	396.7	2.13	401.9	0.38
	Q4 2019	10/28/2019	16.9	7.96	322.4	2.27	356.3	0.65

Table E-3-1
Water Quality Field Measurements for the Current and Previous Three Quarters

Well Location ID	Sample Quarter	Sample Date	Temperature (°C)	pH (S.U.)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
KAFB-3411	Q2 2020	4/24/2020	20.0	7.87	365.0	3.02	261.1	1.17
	Q4 2019	10/17/2019	21.9	7.71	444.2	1.14	331.2	0.45

[a] Specific conductance not collected at this location.
°C = degrees Celsius
µS/cm = microSiemens per centimeter
DO = dissolved oxygen
ID = identification
mg/L = milligram per liter
NA = not applicable
mV = millivolt
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential
Spec. Cond. = specific conductivity
S.U. = standard unit

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-003-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW003-203	7-15-2020	1056	5	—	3	—	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 1807B-752

TB203-29

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-16-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-004-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW004-203	7-16-2020	0943	5	—	3	—	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 1807B-752

TB203- 30

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-16-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-005-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW005-203	7-13-2020	1525	10	—	3	—	2	1	1*	1.	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Pump SN: 180738-902

TB203-27

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0168

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-14-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-009-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW009-203	7-9-2020	1120	10	—	3	—	2	1	1*	1	1	1			
2	GW009-603	7-9-2020	1220	10	—	3	—	2	1	1*	1	1	1			
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-15

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0180

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-012R-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA; LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW012R-203	7-14-2020	1240	24	—	9	—	6	3	3*	1	1	1			Please see Comments for requested MS/MSD analytes
2	~~GW012R-603~~	~~7-14-2020~~	~~1240~~	~~10~~	—	~~3~~	—	~~2~~	~~1~~	~~1*~~	~~1~~	~~1~~	~~1~~			
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Please run MS/MSD on the following analytes only:
VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe

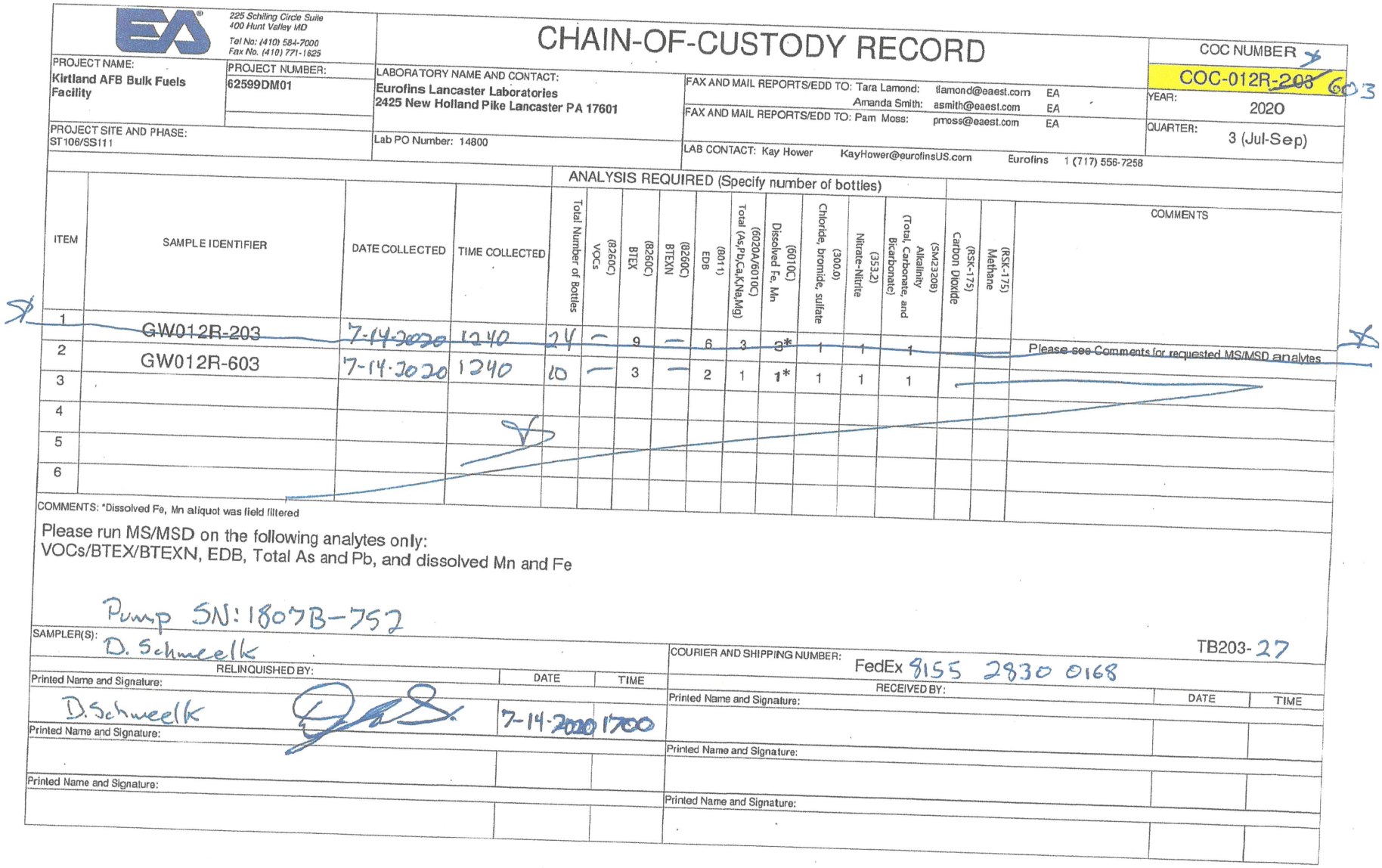
Pump SN: 1807B-757

TB203-28

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0157

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schweelk	7-14-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		



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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-012R-203 603

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW012R-203	7-14-2020	1240	24	—	9	—	6	3	3*	1	1	1			Please see Comments for requested MS/MSD analytes
2	GW012R-603	7-14-2020	1240	10	—	3	—	2	1	1*	1	1	1			
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Please run MS/MSD on the following analytes only:
VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe

Pump SN: 1807B-757

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0168

TB203-27

RELINQUISHED BY: Printed Name and Signature	DATE	TIME
D. Schmeelk	7-14-2020	1700
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-013-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020

QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW013-203	7-15-2020	1313	5	-	3	~	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 18078-752

TB203- 31

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-16-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-029-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW029-203	7-9-2020	0801	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-18

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-9-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-030-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW030-203	7-9-2020	0825	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 18

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-031-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster.PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW031-203	7-9-2020	0911	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-18

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-9-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-032-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM4320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	
1	GW032-203	7-8-2020	1121	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-09

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0330

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
D. Schmeelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-033-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW033-203	7-8-2020	1131	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-13

SAMPLER(S): DSchmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0293

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D.Schmeelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-034-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW034-203	7-8-2020	1143	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 13

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0293

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-041-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	
	Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
	ANALYSIS REQUIRED (Specify number of bottles)															
1	GW041-203	7-8-2020	0911	15	—		—	6	3	3*	1	1	1	—		Please see Comments for requested MS/MSD analytes
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Please run MS/MSD on the following analytes only:
VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe

TB203-10

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0320

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D.Schmeelk	7-9-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-049-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
			YEAR: 2020
			QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW049-203	7-8-2020	1030	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-12

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0308

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-050-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles) Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW050-203	7-8-2020	0955	2	—			2	—							
2																
3																
4						V										
5																
6																

COMMENTS:

TB203- 13

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0293

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-051-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020

QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW051-203	7-8-2020	1017	2				2								
2	GW051-603	7-8-2020	1017	2				2								
3																
4																
5																
6																

COMMENTS:

TB203- 12

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0308

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
D Schmeelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-097-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW097-203	7-16-2020	0802	5	-	3	-	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 1807B-752

SAMPLER(S): D. Schwelk

TB203- 31

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
D. Schwelk	7-16-2020	1730
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-098-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020

QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW098-203	7-15-2020	1451	5	–	3	–	2								
2																
3																
4																
5																
6																

COMMENTS:

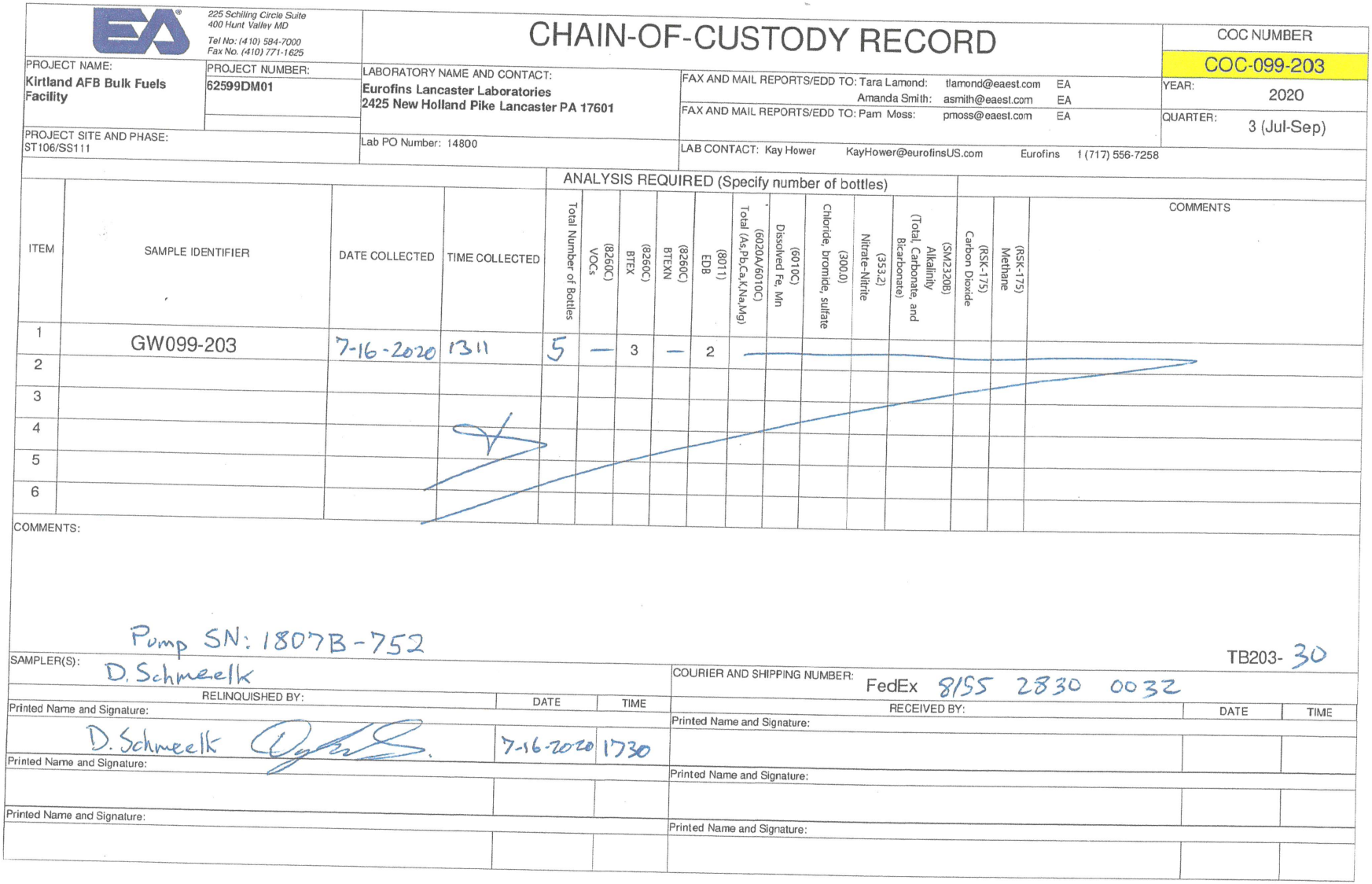
Pump SN: 180TB-752

TB203- 31

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-16-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		



225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-099-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW099-203	7-16-2020	1311	5	—	3	—	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 1807B-752

TB203-30

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-16-2020	1730
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-100-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW100-203	7-16-2020	1119	5	–	3	–	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 1807B-752

TB203- 30

SAMPLER(S): D. Schmeltz

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeltz	7-16-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-101-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW101-203	7-15-2020	0741 0743 GB	5	—	3	—	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 19078-752

TB203- 29

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-16-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-102-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW102-203	7-15-2020	0921	5	–	3	–	2								
2																
3																
4																
5																
6																

COMMENTS:

Pump SN: 18078-752

TB203- 29

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schmeelk	7-16-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-149-484-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111	Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW149-484-203	7-10-2020	0910	7	—			2	1	1*	1	1	1	—		
2																
3																
4					☆											
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-26

SAMPLER(S): D. Schweelb

COURIER AND SHIPPING NUMBER: FedEx 8155 7829 9984

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelb	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-151-484-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW151-484-203	7-10-2020	1336	7	—			2	1	1*	1	1	1	—		
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203- 25

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0216

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-152-484-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW152-484-203	7-10-2020	0715	7	—	—	—	2	1	1*	1	1	1	—		
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-21 25

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 9155 2830 0216

RELINQUISHED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-10-2020	1900
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		
Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-153-484-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW153-484-203	7-10-2020	1418	7				2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-26

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9984

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
D. Schmeelk	7-10-2020	1900			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-201-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW201-203	7-9-2020	1119	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 19

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9973

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-9-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-202-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW202-203	7-9-2020	1130	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-19

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9973

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D.Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-203-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW203-203	7-9-2020	1145	2	—	—	—	2	—	—	—	—	—	—	—	
2																
3																
4																
5																
6																

COMMENTS:

TB203-19

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9973

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-204-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW204-203	7-7-2020	0740	2				2								
2	~~GW204-603~~	~~7-7-2020~~		~~2~~				~~2~~								
3																
4																
5																
6																

COMMENTS:

TB203- 03

SAMPLER(S): D Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-205-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW205-203	7-7-2020	0720	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 03

SAMPLER(S): D Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-206-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA; LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020

QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW206-203	7-7-2020	0703	2	—			2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 03

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-207-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW207-203	7-7-2020	1226	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-04

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 ~~0244~~ GB 0250

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D.Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-208-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW208-203	7-7-2020	1251	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 04

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D.Schmeelk,	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-209-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)													COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)		
1	GW209-203	7-7-2020	1303	2				2									
2																	
3																	
4																	
5																	
6																	

COMMENTS:

TB203- 04

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
DSchmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-216-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW216-203	7-7-2020	0811	2				2								
2	GW216-603	7-7-2020	0811	2				2								
3																
4																
5																
6							X									

COMMENTS:

TB203- 05

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-7-2020	1600
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-217-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW217-203	7-7-2020	0830	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 05

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-218-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles) Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW218-203	7-7-2020	0848	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-05

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-222-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW222-203	7-7-2020	0950	1				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 06

SAMPLER(S): D.Schmeelk, G.Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D.Schmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-223-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW223-203	7-7-2020	0935	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 06

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-224-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,NaMg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW224-203	7-7-2020	0915	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 06

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-230-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	
		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW230-203	7-8-2020	0808	7	—	—	—	2	1	1*	1	1	1	—		
2																
3																
4						X										
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-11

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0319

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-8-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-231-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW231-203	7-7-2020	1128	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 07

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0282

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-232-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW232-203	7-7-2020	1144	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-07

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0282

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
D.Schmeelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-235-438-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW235-438-203	7-6-2020	0848	2				2								
2	GW235-438-603	7-6-2020	0848	2				2								
3																
4																
5																
6																

COMMENTS:

TB203-01

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-6-2020	1320	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-235-501-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW235-501-203	7-6-2020	0922	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203-01

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-6-2020	1330	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-236-436-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111	Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW236-436-203	7-6-2020	0736	2				2								
2																
3																
4																
5																
6																

COMMENTS:

TB203- 02

SAMPLER(S): D. Schwelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0341

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schwelk	7-6-2020	1330			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-236-499-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW236-499-203	7-6-2020	0814	2	—			2	—							
2																
3																
4																
5																
6																

COMMENTS:

TB203-02

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 788155 2830 0341

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-6-2020	1330	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-240-449-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW240-449-203	7-8-2020	1225	10	–	3	–	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-08

SAMPLER(S): D Schweik

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweik	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-241-428-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW241-428-203	07-08-2020	0842	7				2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-11

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0319

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D.Schmeelk	7-8-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-242-418-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEX (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW242-418-203	7-7-2020	1055	7	—			2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-07

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0282

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D.Schmeelk,	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-243-425-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3 (Jul-Sep)		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW243-425-203	7-9-2020	1024	7				2	1	1*	1	1	1			
2	GW243-425-603	7-9-2020	1024	7				2	1	1*	1	1	1			
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203- 17

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9951

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schmeelk	7-9-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-244-445-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
Lab PO Number: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW244-445-203	7-8-2020	1255	10	-	3	-	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-08

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940

RELINQUISHED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-8-2020	1700
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		
Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-245-460-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GW245-460-203	7-9-2020	0633	10	-	3	-	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-16

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0190

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-9-2020	1730
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-247-450-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GW247-450-203	7-8-2020	0728	10	—	3	—	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-09

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0330

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-8-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-ER203-01

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
			LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles): Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	ER203-01	7-13-2020	0921	6	–	3	–	2	1					
2														
3														
4														
5														

Please add Fe and Mn to total metals anaylsis.

Associated with well: KAFB-106005

Pump Serial Number: 1807B-902

TB203-27

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: 8155 2830 0168

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
G. Begaye	7-14-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
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Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-ER203-02

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020

QUARTER: 3

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles): Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	ER203-02	7-14-2020	1011	6	–	3	–	2	1					
2														
3														
4														
5														

Please add Fe and Mn to total metals anaylsis.

Associated with well: KAFB-106 12R

Pump Serial Number: 180 7B-~~599~~ 752

TB203-28

SAMPLER(S): G. Begaye, D. Schmeelk

COURIER AND SHIPPING NUMBER: 8155 2830 0157

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
Dylan Schmeelk	7-14-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-FB203-01

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS110		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	FB203-01	7-9-2020	0829	2	—			2						
2														
3														
4						∀								
5														

Field blank associated with well KAFB-106029, KAFB-106030, and KAFB-106031

TB203-18

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schweelk	7-9-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S1-447-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GWS1-447-203	7-10-2020	0752	24	-	9	-	6	3	3*	1	1	1	-	-	Please see Comments for requested MS/MSD analytes
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Please run MS/MSD on the following analytes only:
VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe

TB203-20

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0205

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-10-2020	1900			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S2-451-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GWS2-451-203	7-10-2020	1222	10	—	3	—	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-22

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S3-449-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
			YEAR: 2020
			QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GWS3-449-203	7-10-2020	1145	10	—	3	—	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-22

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S4-446-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62735DM02
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
New PO

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GWS4-446-203	7-9-2020	13/3	10	–	3	–	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-16

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0190

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S5-446-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GWS5-446-203	7-10-2020	0955	10	—	3	—	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-23

SAMPLER(S): D.Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
D.Schmeelk	7-10-2020	1900
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S7-451-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111	New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK 175) Methane	COMMENTS
1	GWS7-451-203	7-10-2020	1040	10	–	3	–	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

Please combine this 1 sample into one SDG and invoice SDG to 62735DM02.1017.06

TB203-24 ✕

0010 TB203-~~2326~~ ✕

SAMPLER(S): D. Schmeelk	COURIER AND SHIPPING NUMBER: FedEx 8155 2830 ~~0238~~ ✕	

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
D. Schmeelk	7-10-2020	1900			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S8-451-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3 (Jul-Sep)

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As,Pb,Ca,K,Na,Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GWS8-451-203	7-10-2020	1500	10	—	3	—	2	1	1*	1	1	1			
2	GWS8-451-603	7-10-2020	1500	10	—	3	—	2	1	1*	1	1	1			
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203-21

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9995

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-S9-447-203

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3 (Jul-Sep)
PROJECT SITE AND PHASE: ST106/SS111		New PO	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total (As,Pb,Ca,K,Na,Mg)	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(RSK-175) Carbon Dioxide	(RSK-175) Methane	COMMENTS
1	GWS9-447-203	7-10-2020	1300	10	—	3	—	2	1	1*	1	1	1			
2																
3																
4																
5																
6																

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered

TB203- 23

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schweelk	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-SWB203-01

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles): Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	SWB203-01	7-29-2020	1600	6	–	3	–	2	1					
2														
3														
4														
5														

Please add Fe and Mn to total metals anaylsis.

Associated with: ESS lab grade water

TB203-34

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: 8155 7830 0076

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schweelk	7-29-2020	1800			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-SWB203-02

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
				ANALYSIS REQUIRED (Specify number of bottles)										
1	SWB203-02	7-29-2020	1605	6	—	3	—	2	1					
2														
3														
4														
5														

Please add Fe and Mn to total metals anaylsis.

Associated with: ~~ESS lab grade water~~ Crystal Springs DI water TB203-34

SAMPLER(S): D.Schweelk

COURIER AND SHIPPING NUMBER: 8155 2830 0076

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D.Schweelk	7-29-2020	1800	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-01

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS
				Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	
1	TB203-01	07-06-2020	1100	2	—	2	—	2						
2														
3														
4														
5														07-06-2020

Associated with: GW235-438-203
GW235-438-603
GW235-472-203
GW235-501-203

SAMPLER(S): G-Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
Galveston Begaye	07-06-2020	1330			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203- 02

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203- 02	07-06-2020	1100	2	—	2	—	2						
2														
3														
4														
5														

07-06-2020

Associated with: GW 236-436-203
GW 236-470-203
GW 236-499-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0341

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
Galveston Begaye	07-06-2020	1330			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-03

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	
		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111	LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
				ANALYSIS REQUIRED (Specify number of bottles)										
1	TB203-03	7-7-2020	1415	2		2		2						
2														
3														
4														
5														

Associated with: GW204-203
GW205-203
GW206-203

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-04

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-04	7-7-2020	1415	2	~~2~~	~~2~~		2						
2														
3														
4														
5														

Associated with:
GW207-203
GW208-203
GW209-203

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No. (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-05

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-05	7-7-2020	1415	2		2		2						
2														
3														
4														
5														

Associated with: GW 216-203
GW 216-603
GW 217-203
GW 218-203

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-06

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	COMMENTS
1	TB203-06	7-7-2020	1415	2	X	2		2						
2														
3														
4					X									
5														

Associated with:
GW222-203
GW223-203
GW224-203

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-7-2020	1600	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-07

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-07	7-7-2020	1415	2		2		2						
2														
3														
4														
5														

Associated with: GW 231-203
GW 232-203
GW 242-418-203

SAMPLER(S): D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D Schweelk	7-7-2020	1600			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203- 08

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate and Bicarbonate) Alkalinity (SM2320B)	COMMENTS
				ANALYSIS REQUIRED (Specify number of bottles)										
1	TB203- 08	07-08-2020	1400	4	—	2	—	2						
2														
3														
4														
5														

07-08-2020

Associated with: GW 244-445-203
GW 240-449-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
Galveston Begaye	07-08-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite 400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-09

PROJECT NAME:	PROJECT NUMBER:	LABORATORY NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:	YEAR:
Kirtland AFB Bulk Fuels Facility	**62599DM01**	**Eurofins Lancaster Laboratories** **2425 New Holland Pike Lancaster PA 17601**	Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	2020 QUARTER: 3

PROJECT SITE AND PHASE: ST106/SS111

LAB PO NUMBER: 14800

LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-09	07-08-2020	1400	4	—	2	—	2						
2														
3		07-08-2020												
4														
5														

Associated with: GW032-203
GW247-450-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0330

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
Galveston Begaye	07-08-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-10

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-10	07-08-2020	1400	2	–	2	–	2						
2														
3														
4														
5														

07-08-2020

Associated with: GW041-203

SAMPLER(S): G-Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2836 0319 0326

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: Galveston Begaye	07-08-2020	1400	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-11

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203- 11	07-08-2020	1400	2	–	~~2~~	–	2						
2														
3														
4														
5														

07-08-2020

Associated with:
GW 230-203
GW 241-428-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 ~~0320~~ 0319 X

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: Galveston Begaye	07-08-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203- 12

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3		
PROJECT SITE AND PHASE: ST106/SS111	LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A,6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203- 12	07-08-2020	1400	2	–	~~2~~	–	2						
2														
3														
4		07-08-2020												
5														

Associated with:
GW049-203
GW051-203
GW051-603

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2836 ~~0330~~ 0308

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: Galveston Begaye	07-08-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-13

PROJECT NAME:	PROJECT NUMBER:	LABORATORY NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:	YEAR:
Kirtland AFB Bulk Fuels Facility	62599DM01	Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA Pam Moss: pmoss@eaest.com EA	2020 QUARTER: 3

PROJECT SITE AND PHASE: ST106/SS111

LAB PO NUMBER: 14800

LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-13	07-08-2020	1400	2	-	2	-	2						
2														
3														
4														
5														

07-08-2020

Associated with:
GW033-203
GW034-203
GW050-203

SAMPLER(S): G. Begayc

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940 30 0293 Y

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: Galveston Begaye	07-08-2020	1700	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-15

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
				ANALYSIS REQUIRED (Specify number of bottles)										
1	TB203-15	7-9-2020	1415 1430	4	—	2	—	2	—					
2														
3														
4														
5														

Associated with: GW009-203
GW009-603

SAMPLER(S): D. Schmeelk, G. Beggage

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0180

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

EA Engineering, Science, and Technology, Inc., PBC
225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-16

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	YEAR: 2020
		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	QUARTER: 3
		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	
PROJECT SITE AND PHASE: ST106/SS111	LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles): Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-16	7-9-2020	~~1415~~ 1430	4	~	2	~	2						
2														
3														
4														
5														

Associated with: GW54-446-203
GW245-460-203

SAMPLER(S): D. Schweelk, G. Beegaye

COURIER AND SHIPPING NUMBER: FedEx 6155 2830 0190

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
Dylan Schweelk	7-9-2020	1730			

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-17

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-17	7-9-2020	1715 1430	2		2		2						
2														
3														
4														
5														

Associated with: GW243-425-203
GW243-425-603

SAMPLER(S): D.Schmeelk, G.Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9951

RELINQUISHED BY:	DATE	TIME
Printed Name and Signature: D.Schmeelk	7-9-2020	1730
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		
Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-18

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT; Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
				ANALYSIS REQUIRED (Specify number of bottles)										
1	TB203- 18	7-9-2020	~~1145~~ 1430	2		~~4~~ 2		2						
2														
3														
4														
5														

Associated with: GW029-203
GW030-203
GW031-203
FB203-01

SAMPLER(S): D. Schmelk, G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203- 19

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate and Bicarbonate) (SM2320B)	
1	TB203-~~0~~ 19	7-9-2020	1430	2	~~2~~	2		2						
2														
3														
4														
5														

Associated with: GW 203-203
GW 202-203
GW 201-203

SAMPLER(S): D Schmeelk, G. Beggage

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9973

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-9-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-20

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories
2425 New Holland Pike Lancaster PA 17601
LAB PO NUMBER: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-20	7-10-2020	1030	4	—	2	—	2						
2														
3														
4														
5														

Associated with: GWS1-447-203

SAMPLER(S): J. Messenger

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0205

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME
Joshua Messenger	7-10-2020	1900
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature:	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-21

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-21	7-10-2020	1030	4	—	2	—	2						
2														
3														
4														
5														

Associated with: GWS8-451-203
GWS8-451-603

SAMPLER(S): J. Messenger, D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9995

RELINQUISHED BY: Printed Name and Signature	DATE	TIME
D. Schmeelk	7-10-2020	1900
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-22

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	COMMENTS
1	TB203-22	7-10-2020	1030	4	–	2	–	2						
2														
3														
4														
5														

Associated with: GWS2-451-203
GWS3-449-203

SAMPLER(S): JM

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: J. Messenger	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-23

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-23	7-10-2020	1030	4	—	2	—	2						
2														
3														
4														
5														

Associated with: ~~GWS7-451-203~~ X
GWS9-447-203
GWS5-446-203

SAMPLER(S): JM

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238 ~~0279~~

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
J. Messenger	7-10-2020	1900			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-24

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
YEAR: 2020	QUARTER: 3		
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	(6020A/6010C) Total As,Pb,Ca,K,Na,Mg	(6010C) Dissolved Fe, Mn	(300.0) Chloride, bromide, sulfate	(353.2) Nitrate-Nitrite	(SM2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-24	7-10-2020	1030	4	–	2	–	2						
2														
3														
4														
5														

Associated with: GWS7-451-203

SAMPLER(S): J. Messenger, D. Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0010

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
D. Schweelk	7-10-2020	1900			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-25

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**

PROJECT NUMBER: **62599DM01**

LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA

FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA

YEAR: 2020

QUARTER: 3

LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

PROJECT SITE AND PHASE: ST106/SS111

LAB PO NUMBER: 14800

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-25	7-10-2020	1030	2		2		2						
2														
3														
4														
5														

Associated with: GW151-484-203
GW152-484-203

SAMPLER(S): JM

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0216 ~~2829 9984~~ JS

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: J. Messenger	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-26

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	COMMENTS
1	TB203-26	7-10-2020	1030	2	~~2~~			2						
2														
3														
4														
5														

Associated with: GW149-484-203
GW153-484-203

SAMPLER(S): JM

COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9984 ~~9995~~

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: J. Messenger	7-10-2020	1900	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-27

PROJECT NAME: **Kirtland AFB Bulk Fuels Facility**	PROJECT NUMBER: **62599DM01**	LABORATORY NAME AND CONTACT: **Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601**	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA; FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-27	7-14-2020	1411	4	–	2	–	2						
2														
3														
4														
5														

Associated with: GW005-203
ER203-01
GW012R-603

SAMPLER(S): D. Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0168

RELINQUISHED BY: Printed Name and Signature:	DATE	TIME	RECEIVED BY: Printed Name and Signature:	DATE	TIME
D. Schmeelk	7-14-2020	1700			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

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Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-28

PROJECT NAME: Kirtland AFB Bulk Fuels Facility
PROJECT NUMBER: 62599DM01
PROJECT SITE AND PHASE: ST106/SS111

LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories, 2425 New Holland Pike Lancaster PA 17601
LAB PO NUMBER: 14800

FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA
Amanda Smith: asmith@eaest.com EA
FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA
LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) VOCs	(8260C) BTEX	(8260C) BTEXN	(8011) EDB	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (SM2320B)	COMMENTS
1	TB203-28	7-14-2020	1411	4	–	2	–	2						
2														
3														
4														
5														

Associated with: GW012R-203
ER203-02

Note: 1 small bubble in 1 BTEX VOA - size = 2mm
1 small bubble in 1 EDB VOA - size < 1mm

SAMPLER(S): D.Schweelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0157

RELINQUISHED BY: Printed Name and Signature	DATE	TIME
D. Schweelk	7-14-2020	1700
Printed Name and Signature:		
Printed Name and Signature:		

RECEIVED BY: Printed Name and Signature	DATE	TIME
Printed Name and Signature:		
Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-29

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA	YEAR: 2020
			FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-29	7-16-2020	1500	4	–	2	–	2						
2														
3														
4														
5														

Associated with: GW003-203
GW101-203
GW102-203

SAMPLER(S): G.Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: G.Begaye	7-16-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-30

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-30	7-16-2020	1500	4	-	2	-	2						
2														
3														
4														
5														

Associated with: GW004-203
GW099-203
GW100-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: G. Begaye	7-16-2020	1730	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schiling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-31

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA; Amanda Smith: asmith@eaest.com EA
PROJECT SITE AND PHASE: ST106/SS111	LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA

YEAR: 2020
QUARTER: 3

ANALYSIS REQUIRED (Specify number of bottles)

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS
1	TB203-31	7-16-2020	1500	4	—	2	—	2						
2														
3														
4														
5														

Associated with: GW013-203
GW097-203
GW098-203

SAMPLER(S): G. Begaye

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043

RELINQUISHED BY: Printed Name and Signature	DATE	TIME	RECEIVED BY: Printed Name and Signature	DATE	TIME
G. Begaye	7-16-2020	1730			
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

225 Schilling Circle Suite
400 Hunt Valley MD
Tel No: (410) 584-7000
Fax No. (410) 771-1625

CHAIN-OF-CUSTODY RECORD

COC NUMBER: COC-TB203-34

PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62599DM01	LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601	FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020 QUARTER: 3
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800	LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As,Pb,Ca,K,Na,Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	
1	TB203-34	7-29-2020	1630	4	-	2	-	2						
2														
3														
4														
5														

Associated with: SWB203-01
SWB203-02

SAMPLER(S): D Schmeelk

COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0076

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
Printed Name and Signature: D. Schmeelk	7-29-2020	1850	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

United States Department of the Interior

U. S. GEOLOGICAL SURVEY
New Mexico Water Science Center
Albuquerque, New Mexico 87110

MEMORANDUM FOR RECORD

October 7, 2020

Attention: Cynthia Cash, AFCEC

Through: Kimberly Beisner, Water Quality Specialist, NMWSC
Stuart Norton, Supervisory Hydrologist, NMWSC

From: Kate Wilkins, Hydrologic Technician, NMWSC

Subject: Quarterly Organic Data Transmittal for Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) Ethylene Dibromide (EDB) Plume Sentinel Wells for the July 2020 to September 2020 Quarter.

The USGS installed sentinel wells downgradient of the KAFB BFF EDB plume and upgradient from community water-supply wells, as a means of providing advanced warning of water quality in the vicinity of community water-supply wells. Samples are collected from the sentinel wells on a quarterly basis in accordance with the USGS fundamental science practices. This memorandum provides a summary of organic data results for the USGS KAFB BFF EDB plume Sentinel Wells (Figure 1, Table 1). Laboratory analytical results for the quarter from July 2020 through September 2020 are presented in Table 2.

Site Descriptions

All the sentinel well sites (Figure 1, Table 1) are located in urban areas. The Trumbull well nest is located in a parking lot at the intersection of Trumbull Avenue SE and Mesilla Street SE. The surrounding neighborhood has a high volume of vehicle traffic. The Cesar Chavez well nest is located behind the Cesar E. Chavez Community Center, and the site is separated from vehicle traffic. The Southern well nest is located east of Phil Chacon Park, and the site is generally separated from vehicle traffic. The VA well nest is located next to Randolph Road SE, which has a high volume of vehicle traffic.

Sampling Period

Samplers were deployed between June 2, 2020, and June 5, 2020. Environmental samples were collected between July 6, 2020, and July 9, 2020.

Sampling Protocols

Samples were collected using dual membrane diffusion samplers following USGS sampling protocols outlined in the National Field Manual for the collection of water-quality data (U.S. Geological Survey, variously dated). The quality assurance samples collected include a source solution blank, trip blank, field blanks, equipment blank, matrix spike, and replicate.

Sample Analysis

In November 2018, USGS began using the USGS National Water Quality Laboratory (NWQL) for organic compound analyses at the USGS KAFB EDB sentinel wells in order to improve data quality and ensure timely delivery of the data. Organic compound analysis is completed by NWQL using method O-4127-96 (Connor and others, 1998). Effective October 1, 2019, laboratory reporting thresholds were modified to reflect detection limits of EPA Method SW8260C and EPA Method SW8011. The method is approved to be in conformance with the National Environmental Laboratory Accreditation Program (NELAP).

Data Review

The data presented herein have been reviewed and approved by USGS staff, as outlined in the work plan (Travis, 2017). Results are reported in Table 2. No detections were found in the environmental samples. The data reviewed within this memorandum were in accordance with the quality assurance requirements outlined in the work plan.

The data are publicly available via NWIS at https://waterdata.usgs.gov/nwis/. If you have any questions regarding the data, please feel free to contact me at 505-830-7946 or klwilkins@usgs.gov.

Sincerely,

KATE WILKINS

Digitally signed by KATE WILKINS
Date: 2020.10.07 08:26:52 -06'00'

Kate Wilkins
Project Chief
Hydrologic Technician
USGS New Mexico Water Science Center

cc: Sheen Kottkamp, AFCEC
Ben Moayyad, USACE
Bernard Bockisch, EA Engineering
Stuart Norton, USGS
Kimberly Beisner, USGS
Michael Johnson, USGS
Erik Storms, USGS

References:

Connor, B.F., Rose, D.L., Noriega, M.C., Murtagh, L.K., and Abney, S.R., 1998, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of 86 volatile organic compounds in water by gas chromatography/mass spectrometry, including detections less than reporting limits: U.S. Geological Survey Open-File Report 97-829, 78 p.

Travis, R., 2017, Work Plan for The Quarterly Sampling of the Kirtland Air Force Base Bulk Fuels Facility Plume Sentinel Wells. 31 p.

U.S. Environmental Protection Agency, 1992,1,2-Dibromoethane and 1,2-dibromo-3-chloropropane by microextraction and gas chromatography: U.S. Environmental Protection Agency 13 p., accessed August 17, 2020, at https://www.epa.gov/sites/production/files/2015-12/documents/8011.pdf.

U.S. Environmental Protection Agency, 2006,Volatile organic compounds by gas chromatography/mass spectrometry (GC/MS): U.S. Environmental Protection Agency 92 p., accessed August 17, 2020, at https://www.epa.gov/sites/production/files/2018-06/documents/method_8260c_rev_3_8-1-2006.pdf.

U.S. Geological Survey, variously dated, National field manual for the collection of water-quality data: U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chaps. A1-A10, available online at http://pubs.water.usgs.gov/twri9A.

Figure 1: Location of Kirtland Air Force Base Bulk Fuels Facility, USGS sentinel wells, and community water supply wells, Albuquerque and Kirtland Air Force Base, New Mexico.

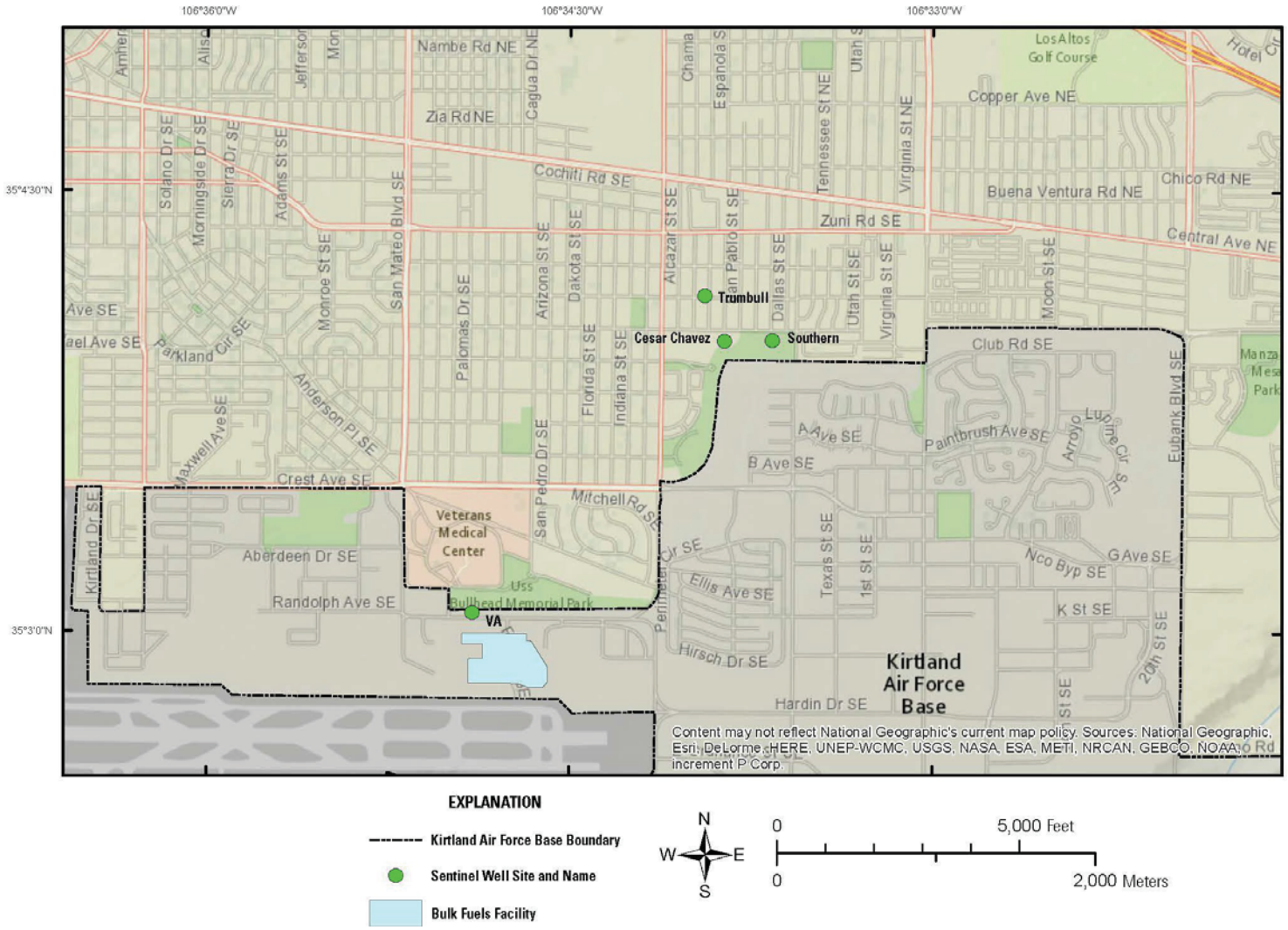

Table 1: Sentinel Well Site Information

Site Identification Number	Station Name	Construction Completion Date	Well Depth (feet below land surface (bls))	Well Diameter (inches)	Screened Interval (feet bls)
Cesar Chavez Sentinel Wells					
350359106335201	10N.04E.30.134A CESAR CHAVEZ SENTINEL WELL 1A	11/20/2014	519	2.5	459 - 509
350359106335202	10N.04E.30.134B CESAR CHAVEZ SENTINEL WELL 1B	10/28/2014	620	2.5	580 - 600
350359106335203	10N.04E.30.134C CESAR CHAVEZ SENTINEL WELL 1C	10/28/2014	1,040	2.5	1,000 - 1,020
350359106335204	10N.04E.30.134D CESAR CHAVEZ SENTINEL WELL 1D	10/28/2014	1,338	2.5	1,298 - 1,318
Southern Sentinel Wells					
350359106333901	10N.04E.30.144A SOUTHERN SENTINEL WELL 1A	12/11/2014	538	2.5	468 - 518
350359106333902	10N.04E.30.144B SOUTHERN SENTINEL WELL 1B	3/22/2015	610	2.5	570 - 590
350359106333903	10N.04E.30.144C SOUTHERN SENTINEL WELL 1C	3/22/2015	1,090	2.5	1,050 - 1,070
350359106333904	10N.04E.30.144D SOUTHERN SENTINEL WELL 1D	3/22/2015	1,400	2.5	1,360 - 1,380
Trumbull Sentinel Wells					
350408106335601	10N.04E.30.1243A TRUMBULL-NEST-1A	4/18/2013	522	2.5	437 - 467; 467 - 517
350408106335602	10N.04E.30.1243B TRUMBULL-NEST-1B	4/18/2013	1,018	2.5	998 - 1,008
350408106335603	10N.04E.30.1243B TRUMBULL-NEST-1C	4/18/2013	1,432	2.5	1,412 - 1,422
VA Sentinel Wells					
350304106345401	10N.03E.36.1433A T10N.R03E.S36.1433A Shallow VA Sentinel Well	4/26/2016	660	3	620 -640
350304106345402	10N.03E.36.1433B T10N.R03E.S36.1433A Middle VA Sentinel Well	4/26/2016	860	3	820 - 840
350304106345403	10N.03E.36.1433C T10N.R03E.S36.1433A Deep VA Sentinel Well	4/26/2016	1,040	3	1,000 - 1,020

Table 2
Groundwater Analytical Results for Sentinel Wells, July- September 2020

			Site Name:	Cesar Chavez 1A			Cesar Chavez 1B			Cesar Chavez 1C			Cesar Chavez 1D		
			Station Identification:	350359106335201			350359106335202			350359106335203			350359106335204		
			Sample Date:	07/07/2020 1300			07/07/2020 1200			07/07/2020 1100			07/07/2020 1000		
			Sample Type:	Environmental			Environmental			Environmental			Environmental		
			Sample Depth (ft bgs):	496			591			1002			1303		
			Site Elevation (ft above sea level):	5350.33			5350.23			5350.23			5350.23		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**
EDB	USGS Method O-4127-96 (µg/L)	1,2-dibromoethane[d]	0.1	0.05	0.05	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014
VOCs		Benzene	10	5	5	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Ethylbenzene	750	700	700	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Naphthalene	30	NS	30	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Toluene	750	1,000	750	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Total Xylenes	620	10,000	620	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8

			Site Name:	Southern 1A			Southern 1B			Southern 1C			Southern 1D		
			Station Identification:	350359106333901			350359106333902			350359106333903			350359106333904		
			Sample Date:	07/08/2020 1300			07/08/2020 1200			07/08/2020 1100			07/08/2020 1000		
			Sample Type:	Environmental			Environmental			Environmental			Environmental		
			Sample Depth (ft bgs):	506			580			1062			1370		
			Site Elevation (ft above sea level):	5363.20			5363.10			5363.10			5363.10		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**
EDB	USGS Method O-4127-96 (µg/L)	1,2-dibromoethane[d]	0.1	0.05	0.05	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014
VOCs		Benzene	10	5	5	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Ethylbenzene	750	700	700	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Naphthalene	30	NS	30	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Toluene	750	1,000	750	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Total Xylenes	620	10,000	620	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8

			Site Name:	Trumbull 1A			Trumbull 1B			Trumbull 1C		
			Station Identification:	350408106335601			350408106335602			350408106335603		
			Sample Date:	07/06/2020 1200			07/06/2020 1100			07/06/2020 1000		
			Sample Type:	Environmental			Environmental			Environmental		
			Sample Depth (ft bgs):	484			1000			1414		
			Site Elevation (ft above sea level):	5337.76			5337.76			5337.76		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**
EDB	USGS Method O-4127-96 (µg/L)	1,2-dibromoethane[d]	0.1	0.05	0.05	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014
VOCs		Benzene	10	5	5	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Ethylbenzene	750	700	700	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Naphthalene	30	NS	30	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Toluene	750	1,000	750	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Total Xylenes	620	10,000	620	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8

Table 2
Groundwater Analytical Results for Sentinel Wells, July- September 2020

					Site Name:	VA Shallow			VA Middle			VA Deep		
					Station Identification:	350304106345401			350304106345402			350304106345403		
					Sample Date:	07/09/2020 1100			07/09/2020 1000			07/09/2020 900		
					Sample Type:	Environmental			Environmental			Environmental		
					Sample Depth (ft bgs):	622			820			1000		
					Site Elevation (ft above sea level):	5340.668			5340.668			5340.668		
Parameter	**Analytical Method**	**Analyte**	**NMAC NMWQCC[a]**	**EPA MCL[b]**	**Project Screening Level[c]**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**	**Result**	**Val Qual**	**MRL**
EDB	USGS Method O-4127-96 (µg/L)	1,2-dibromoethane[d]	0.1	0.05	0.05	<0.028	U	0.014	<0.028	U	0.014	<0.028	U	0.014
VOCs		Benzene	10	5	5	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Ethylbenzene	750	700	700	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Naphthalene	30	NS	30	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Toluene	750	1,000	750	<0.6	U	0.60	<0.6	U	0.60	<0.6	U	0.60
		Total Xylenes	620	10,000	620	<1.8	U	1.8	<1.8	U	1.8	<1.8	U	1.8

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004).
[b] EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2009).
[c] 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.
[d] 1,2-dibromoethane is reported as a MDL based on NELAP certification. The MDL for 1,2-dibromoethane is 0.014 µg/L.

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
MCL = maximum contaminant level
MRL = USGS National Water Quality Laboratory Method Reporting Level
MDL = USGS National Water Quality Laboratory Method Detection Limit
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
Val Qual = validation qualifier
VOC = volatile organic compound

Results:
< = less than the limit of quantification (numerical result)

Qualifiers:
Val Quals based on criteria set by NWQL.
U = A result that is either not detected or below the Method Detection Level.

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

APPENDIX E-6

Descriptions from Previous Reports

LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
µg/L	micrograms per liter
AFB	Air Force Base
amsl	above mean sea level
BFF	Bulk Fuels Facility
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DMS	dual-membrane sampler
DO	dissolved oxygen
EDB	ethylene dibromide
GWM	groundwater monitoring
GWTS	groundwater treatment system
mg/L	milligrams per liter
PSL	project screening limit
Q1	first quarter of the year (January 1 through March 31)
Q2	second quarter of the year (April 1 through June 30)
Q4	fourth quarter of the year (September 1 through December 31)
REI	reference elevation interval
RPD	relative percent different
SE	southeast
VA	Veteran's Affairs

1. EXPLANATION OF REFERENCE ELEVATION INTERVAL DESIGNATIONS

The following text was initially provided in the Fourth Quarter (Q4) 2016 Quarterly and Annual Report (Kirtland Air Force Base [AFB], 2017a):

In previous reports, the distribution of groundwater contamination had been described in terms of shallow, intermediate, and deep intervals within the ethylene dibromide (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 groundwater treatment system (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 Veteran's 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. Table 3-4 includes the REI assignations for the groundwater monitoring (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 feet) 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- TO 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.

2. DISCUSSION OF FIELD PARAMETERS FROM PASSIVE SAMPLING

2.1 Comparison of field parameters between passive and low-flow sampling

The following text was initially provided in the Second Quarter (Q2) 2017 Quarterly Report (Kirtland AFB, 2017b):

Upon initiating the Q2 2017 passive sampling, field parameter measurements were notably skewed from historical measurements. Following the collection of field parameters from 13 GWM well locations with passive samplers, it was apparent that field parameter data collected from the passive samplers were not representative of the groundwater conditions due to the pore diameter of the passive sampling membranes, and continued collection of field parameters from passive samplers was terminated pending discussion with the New Mexico Environment Department. Therefore, field parameters were only collected from wells that utilized low-flow sampling techniques (all located south of Gibson Boulevard SE).

2.2 Passive Sampler Evaluation

The following text was initially provided in the Q4 2017 Quarterly and Annual Report (Kirtland AFB, 2018a):

A demonstration was performed in Q4 2017 to assess a proposed transition from collecting grab samples using a low-flow methodology (Bennett pump sampling systems) to a passive sampling technique (i.e., dual-membrane sampler [DMS]). This demonstration consisted of comparing low-flow sample analytical results and passive sample analytical results for EDB; benzene, toluene, ethylbenzene, and total xylenes (BTEX); and inorganic compounds from groundwater samples collected from five source area wells (Figure E-7-1). The results are reported in Table 3-14, and shown on Figure 3-23.

In addition, field parameters were compared between the low-flow purge water using a YSI Pro Plus multiparameter probe with a flow-through cell, and measurements taken *in situ* within the well using an Aqua TROLL® 600 multiparameter sonde deployed within the well screen depth (Table 3-15). If passive sampling is approved for source area wells, reliable field parameter measurements will not be achieved from the DMSs and, therefore, an *in situ* method may be proposed if continued field parameter collection is necessary.

The analytical results from this demonstration are summarized below. In accordance with the work plan (Kirtland AFB, 2017c), the low-flow sample data are used for reporting purposes. The sample results from the DMSs are only used for demonstration purposes, and a relative percent difference (RPD) was calculated for each analyte within each sample (Table 3-14). The approved Quality Assurance Project Plan acceptable RPD for duplicate groundwater samples is 35 percent (%) for analytical results and was, therefore, used herein to determine a comparable threshold value. The RPD acceptance threshold of 35% is relevant when comparing two samples utilizing the same sampling methodology. A comparison of results collected via two different sampling methods, one discrete (DMS) and one indiscrete (Bennett Pump), may result in widely varying RPDs. The 35% threshold has been selected to illustrate that the two methods provide results that are comparable to two samples obtained using the same sampling methodology. Analytical results and RPDs are summarized below:

- EDB was detected in all groundwater samples collected using both low-flow and passive technologies. The RPD for EDB from samples collected from KAFB-106005 was 10%. The EDB

concentrations from the other four wells in the demonstration ranged from 0.85 to 5.9 micrograms per liter (µg/L), with RPDs ranging from 48 to 175%; above the acceptable 35% RPD.

- Benzene was detected in all groundwater samples (at concentrations above the project screening limit [PSL] of 5 µg/L) using both low-flow and passive technologies. The RPD for the benzene results was 0% for KAFB-106008 (both methods had a benzene concentration of 2,300 µg/L) and the RPD was relatively low for two other wells (KAFB-106005 and KAFB-106006) at 26 and 31%, respectively. The RPD for benzene from groundwater samples collected from KAFB-106014 and KAFB-106059 was 64 and 121%, respectively; above the acceptable 35% RPD.

- Toluene was detected or estimated in all groundwater samples collected using both low-flow and passive technologies. The RPD for toluene ranged from 16 to 195%, and was below the acceptable 35% RPD in two wells (KAFB-106005 and KAFB-106008).

- Ethylbenzene was detected in all groundwater samples collected using both low-flow and passive technologies. The RPD for ethylbenzene was 0% in KAFB-106006 (both methods had an ethylbenzene concentration of 3 µg/L) and the RPD was relatively low for KAFB-106005 (19%). The ethylbenzene concentrations from the other three wells in the demonstration ranged from 45 to 470 µg/L, with RPDs ranging from 39 to 164%; above the acceptable 35% RPD.

- Total xylenes were detected all groundwater samples collected using both low-flow and passive technologies, with the exception of the DMS sample from KAFB-106006, precluding the ability to calculate an RPD from that well. The RPD for total xylenes was 17% from KAFB-106005, within the 35% RPD. The RPD was above 35% in the remaining wells (KAFB-106008, KAFB-106014, and KAFB-106059).

It should be noted that while some RPD values for EDB and benzene exceeded the 35% threshold, no significant differences in analyte concentrations were observed between either sampling method or the respective analyte PSL. Both methods yielded comparable results that were either both below or above the PSL. The only exception to this was the EDB results from well KAFB-106006. At this well, the low-flow sampling method resulted in an estimated value below the PSL (0.014 µg/L) while the passive sampling method resulted in a value above the PSL (0.21 µg/L). When comparing plume maps utilizing either the passive sampling data or the low-flow sampling data, only minimal shifts of some internal isocontours occur between the two sample types (Figure 3-23); however, the overall contoured boundary (specified as the PSL concentration) generally remained unchanged.

- Inorganic concentrations observed in the groundwater samples collected using the two methods were generally in agreement, with only a few samples that exceeded the 35% RPD, as follows:

  — Dissolved manganese in KAFB-106005 (40% RPD) and KAFB-106014 (46% RPD)

  — Nitrate/nitrite nitrogen in KAFB-106005 (156% RPD) and KAFB-106006 (40% RPD)

  — Dissolved iron in KAFB-106006 (44% RPD)

  — Chloride in KAFB-106014 (80% RPD).

The results from the field parameter demonstration are summarized below. In accordance with the work plan (Kirtland AFB, 2017c), the low-flow purge water data are used for reporting purposes as measured using the YSI Pro Plus. The field parameters from the Aqua TROLL® 600 multiparameter sonde are used

for demonstration purposes only, and an RPD was calculated for each parameter within each well (Table 3-15). An RPD of 50% was deemed acceptable for the field parameters, and is conservative given the variability and relatively low concentrations of dissolved oxygen (DO) and turbidity. In accordance with the work plan (Kirtland AFB, 2017c), field parameters were collected until stabilization of three consecutive readings within 10% of one another was achieved, or a maximum of 1 hour. The final, stabilized field parameters measurements are used for reporting and demonstration purposes.

- Turbidity had relatively high RPDs, with the exception of KAFB-106014 at 20%; the remaining four wells had an RPD for turbidity ranging from 60 to 198%.

- Temperature was consistent between the two methods, with a maximum RPD of 12% (KAFB-106008).

- DO had relatively high RPDs in three wells (KAFB-106005, KAFB-106006, and KAFB-106008). DO had relatively low RPDs in KAFB-106014 (46%) and KAFB-106059 (28%). Although DO had relatively high RPDs in three of the demonstration wells, the results were all <1 milligrams per liter (mg/L), with the exception of the low-flow result from KAFB-106006 (2.94 mg/L).

- Specific conductivity was consistent between the two methods, with a maximum RPD of 43% (KAFB-106005).

- pH was consistent between the two methods, with a maximum RPD of 7% (KAFB-106059).

- Oxidation-reduction potential had relatively high RPDs in wells KAFB-106005 and KAFB-106059 at 55 and 54%, respectively. The other wells demonstrated relatively low RPDs for oxidation reduction potential, ranging from 5 to 29%.

These results indicate that passive sampling techniques (i.e., DMSs) generally provide results that are comparable to low-flow techniques for inorganic parameters. For volatile parameters, including EDB and BTEX, the results indicate good agreement between the two methods for relatively lower concentrations (e.g., KAFB-106005 and KAFB-106006); however, the higher concentrations of EDB and BTEX did not provide as comparable results between the two methods (e.g., KAFB-106008, KAFB-106014, and KAFB-106059). Plume delineation in the source area at the PSL for both EDB and benzene was comparable between both methods. Significant differences in concentration contours were only observed at concentrations exceeding the PSL by approximately three orders of magnitude (Figure 3-23). The only exception to the plume boundary was for the EDB PSL contour extending further south around KAFB-106006 due to the higher passive sampler concentration.

Previous demonstrations have shown generally comparable results between the two methods, with no consistent bias identified (i.e., neither method has consistently resulted in higher or lower concentrations). Furthermore, vertical profiles were evaluated in Q4 2016 and first quarter (Q1) 2017 (Kirtland AFB, 2017d) that demonstrated most source area wells that were evaluated did not have significant vertical gradients and, therefore, matching the passive sample depths to the low-flow sample depth, as was done for this demonstration, should not result in a significant sample bias. The two field parameter methods (low-flow purge water versus *in situ* measurements) resulted in agreement between the methods, with turbidity being the parameter with the greatest discrepancies. Temperature, pH, and specific conductivity all revealed consistent measurements between the two methods. Although DO resulted in RPDs greater than 50% in three wells, all results were <1 mg/L, with the exception of the low-flow result from KAFB-106006 (2.94 mg/L).

3. REGIONAL GROUNDWATER GRADIENT

The following text was initially provided in the Q2 2018 Quarterly Report (Kirtland AFB, 2018b):

The GWM well network for the Kirtland AFB Bulk Fuels Facility (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 the 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, which the dissolved-phase constituents migrated along, was north-northeast. To reduce the use of groundwater while maintaining municipal water supply, in 2008, the Albuquerque Bernalillo County Water Utility 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 groundwater levels have been rebounding approximately 3-4 ft per year, with rates varying depending upon the proximity to pumping wellfields or historical groundwater sinks (Beman, 2013). A more detailed discussion of the conceptual site model can be found in Section 7 of the RFI Report (Kirtland AFB, 2018c).

4. DESCRIPTION OF FORMER WELL DESIGNATIONS AND ASSOCIATED SAMPLING REGIMES

The following text was initially provided in the Q4 2018 Quarterly and Annual Report (Kirtland AFB, 2019):

In previous reports, GWM wells were assigned designations based either on their location related to the groundwater gradient and their spatial relationship to the dissolved-phase EDB or simply on their location (i.e., source area, etc.). However, due to the changing regional groundwater gradient (Section 3), these designations may no longer be appropriate or meaningful. In order to present analytical data and data summaries conveniently at the project scale, all GWM wells will hereafter be designated simply as "groundwater monitoring well," except for newly added wells (which includes any newly installed wells), and the presentation of analytical data will be centered on analytes as opposed to former well designation. The former well designations and monitoring well objective are provided in Table 3-1 along with the current sampling regime by quarter. A brief description of the former well designations and the frequency of samples collected by designation is provided below.

Newly Added Wells—Newly added wells include both existing wells that are added to the GWM network as well as newly installed wells that have not completed four quarters of baseline sampling. Newly added GWM wells require a minimum of four consecutive quarters of baseline full-suite analytical sampling before receiving a designation that determines the long-term sampling regime. These wells have been added to define the plume boundary and provide additional water table monitoring due to the rising groundwater elevation.

Source Area Wells—Primarily located in the BFF south of Randolph Road SE and proximal to the spill site on-Base. Sampled during Q2 and Q4. These wells monitor the higher concentrations of dissolved-phase contaminants on-Base.

Downgradient Proximal Wells—Located north of Ridgecrest Drive SE surrounding the historical low concentration dissolved-phase EDB to the west, north, and east into the distal portion of the GWM network. Analytical data for these wells have been historically below the maximum contaminant level for EDB. Sampled every quarter. These wells assist in plume boundary definition.

Veterans Affairs (VA) Proximal Wells—Three sets of nested wells located between the historical dissolved-phase EDB south of Ridgecrest Drive SE and the Raymond G. Murphy VA Medical Center as a means to detect any potential contaminant migration toward the VA medical campus. Sampled every quarter. These wells provide additional wellhead protection monitoring for the VA supply well.

Signal Wells—Three wells located along the south side of Ridgecrest Drive SE to monitor BTEX and provide early indication if theses dissolved-phase constituents are migrating from the source area into the interim measure Target Capture Zone. Sampled during Q2 and Q4.

GWM Wells—Primarily located north of Ridgecrest Drive SE within the historical footprint of the dissolved-phase EDB. Analytical data from these wells serve to define the volume and mass of the dissolved-phase EDB throughout the GWM network. Sampled in Q2 and Q4.

5. EDB CAPTURE EVALUATION METHODOLOGIES

5.1 Capture Evaluation Methodologies from the Q4 2016 Quarterly and Annual Report

The following text was initially provided in the Q4 2016 Quarterly and Annual Report (Kirtland AFB, 2017a):

5.1.1 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.

5.1.2 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.

5.2 Capture Evaluation Methodologies from the Appendix I-7 of the Q2 2018 Quarterly Report

The following text was initially provided in Appendix I-7 of the Q2 2018 Quarterly Report (Kirtland AFB, 2018b):

Model domain capture was analyzed using two sets of 3D particle track exports. The first set was designed to visualize the capture produced by each simulated extraction well across the model domain. The 3D location points were assigned at the top and bottom elevation of each simulated extraction well. Additional location points were assigned at 10-ft intervals along the length of each screen interval. The 10-ft interval was chosen because 10 ft is the shortest screen interval in the monitoring well network and, therefore, represents the default resolution to vertical data. FEFLOW was then instructed to produce 72 "seed" points (particle track start points) around each location point at an assigned radius of 1 m (3.3 ft). FEFLOW uses sets of 24 for radius assignments. It is assumed that water within the 1-m radius flows to the well. Backward 3D particle tracks are then run from all "seed" points and the path lines are exported as 3D lines (geographic information system and 3D points (American Standard Code for Information Interchange). The point export represents the X, Y, and Z location of all vertices along each particle track line. Capture evaluation, using this method, of the seven extraction wells within the model domain produced 6,129 particle track lines. Appendix I-7 – Figure 8 shows a 2D representation of the particle tracks produced from each extraction well.

While the above analysis allows for a visual analysis of model scale capture, it does not allow for quantifying capture produced by each extraction well specific to the dissolved EDB plume volume. Particle tracks run backwards from the wells did not completely represent flow from the water table in the plume area, resulting in large volumes of plume without particle track penetration and therefore without capture indication. As a result, the plume specific capture was analyzed using the following four-step process.

Step 1 was converting the 3D plume grid into 3D "seed" points for particle tracking in FEFLOW. All of the modeled plume cells were exported as geographic information system polygons from the 3D plume model for Q2 2018. Exporting the plume cells from C Tech's Mining Visualization System software results in a set of polygons delineating the external faces of the plume as well as the internal makeup of the plume. Appendix I-7 – Figure 9a shows a 2D representation of the cell export. Each cell is attributed with the X, Y, and Z value for the cell centroid.

Step 2 was the production of particle tracks and extraction well mapping. The centroid data produced in Step 1 was converted into a 3D point file, which was brought into the 2018 Q2 numerical model as observation points. FEFLOW was instructed to use each of these points as "seed" points for forward run particle tracks, 2D representation of the results are shown in Appendix I-7 – Figure 9b. Each particle track was mapped to its discharge point (extraction well) and attributed, respectively.

Step 3 was the mapping of plume capture to the originally exported plume cells. The particle track lines were converted to a point file representing the start and endpoints of each line labeled with the extraction well identification. The start points matched the cell centroid locations and elevations and were used to attribute each plume cell with the extraction well to which the aquifer volume at that location flowed (Appendix I-7 – Figure 9c).

Step 4 was the delineation of extraction well capture polygons for calculation of plume capture volumetrics. Analysis of the extraction well attributed plume cells showed that the capture zones produced by each extraction well were coincident (did not cross) except for the capture boundary between KAFB-106228 and KAFB-106239. There was some overlap of the KAFB-106233 and KAFB-20 cell areas with KAFB-106228 cell areas; however, the centroids did not overlap. Cell areas and centroids between KAFB-106228 and KAFB-106239 did overlap. KAFB-106228 captured the upper part of the plume at or near the water table, while KAFB-106239 captured the deeper portion of the plume. This is likely due to KAFB-106228 being screened across the water table and KAFB-106239 being screened completely below the water table. The capture boundaries were assigned along neighboring particle track lines for each zone except for between KAFB-106228 and KAFB-106239. Where these two capture zones overlapped, the capture boundary was assigned as the centerline of the overlap area. These capture zones were exported into Mining Visualization System 3D space and used to split the plume volume and develop estimates of plume volume and mass captured by each well. Appendix I-7 – Figure 9d shows a 2D rendering of the final 3D capture zone delineations and the plume area split into these capture zones.

5.3 Capture Evaluation Methodologies from the Appendix I-6 of the Q4 2018 Quarterly and Annual Report

The following text was initially provided in Appendix I-6 of the Q4 2018 Quarterly and Annual Report (Kirtland AFB, 2019):

5.3.1 Introduction

The purpose of Step 4 of the EPA Systematic Approach for Evaluation of Capture Zones is to perform specific calculations to add additional lines of evidence characterizing the extent of capture (EPA, 2008). This performance assessment incorporates the use of a numerical groundwater flow model to simulate heads resulting from interim measure extraction. The purpose of the model is to define the three-dimensional hydraulic containment produced by interim measure extraction at the point in time when groundwater heads are measured and compare these containment zones to the Target Capture Zone developed for the same time period.
For the second quarter (Q2) 2018 performance assessment of the Kirtland Bulk Fuels Facility interim measure extraction system, EA Engineering, Science, and Technology, Inc., PBC (EA) developed and began use of a numerical flow model to simulate heads and estimate capture for the interim measure extraction wells (Kirtland AFB, 2018b). This was done to satisfy Step 4 of the U.S. Environmental Protection Agency's (EPA's) systematic evaluation of capture zones at pump and treat systems by providing a supporting line of evidence to the measured data-based capture evaluation (Step 3 [EPA, 2008]). This first version of the model incorporated a relatively simple design, assuming flow into and across the model domain could be represented by a uniform gradient and that the aquifer could be represented by the assignment of a homogeneous horizontal hydraulic conductivity (Kh). The model design would remain simple unless comparison of simulated to observed heads suggested the need to add complexity.

While Version 1 of the model met the criteria for calibration, the results showed a continuous region around interim measure extraction well KAFB-106234 where simulated heads were outside of the acceptable error range. Concerns about the assumption of a uniform gradient causing this error were raised during Hydrologic Working Group meetings. The main concern was that the uniform gradient did not adequately represent the hydrologic dynamics along the northern model boundary representing the division between interim measure well stresses and base water supply stresses as well as northern stresses produced by Albuquerque Bernalillo County Water Utility Authority water supply wells. Therefore,

Version 2 of the flow model was developed for use this quarter, using a different method for assigning model boundary conditions to address both the error and stress concerns.

This appendix presents the updated method for assigning model boundary conditions and the recalibration of the flow model using this method. Unless noted as a change in the following sections, model design and calibration follow the same methods described in Appendix I-7 of the Q2 2018 report (Kirtland AFB, 2018b). This appendix is designed to be an update to that modeling report, not a standalone report.

5.3.2 Boundary Assignment Revision

The boundary assignment was revised (Version 2) in Q4 2018 to better reflect pumping stresses external to the domain boundary that could not be addressed with Version 1 of the flow model which had a uniform gradient assigned along its boundaries using constant head nodes. Figure I-6-1 shows the interpolated water levels for the fourth quarter (Q4) 2017 and Q4 2018. Instead of uniform flow directions from recharge in the western quadrants toward discharge in the eastern quadrants, the interpolated water table represents recharge from the west/northwest that shifts and splits within the model domain toward discharges to the east and northeast. Easily seen is the representation of Ridgecrest extraction along the northern boundary of the model while still honoring the water level measurements made at Trumbull 1A and the other northern-most U.S. Geological Survey and project monitoring wells.

The method for assigning boundary conditions in Version 2 of the model attempts to give representation to each of these stresses along the model boundary. The primary reason this was not attempted in Version 1 is that there is very little data available from which to delineate these stresses. Drawdowns at the Albuquerque Bernalillo County Water Utility Authority's Ridgecrest wellfield (closest wellfield to the site area) are not monitored and very few off-Base head measurements are made within a 3-mile radius of the plume area. Numerous head measurements are taken at on-Base locations south of the plume area, but they are mostly located in perched and low permeability aquifer regions and are not taken synoptic with interim measure gauging. The closest available regularly taken head measurements in the unconfined aquifer outside of the base are located at three U.S. Geological Survey monitoring wells: Jerry Cline C located approximately 1.8 miles north of the model boundary, Del Sol Divider 3 located approximately 1.8 miles northwest of the model boundary, and Montessa Park B located approximately 2.3 miles southwest of the model boundary. The two northern wells are known to be north of the Ridgecrest wellfield, therefore, necessitating a need to estimate the drawdown associated with Ridgecrest extractions.

A simple linear regression model was used to estimate the water level in the Ridgecrest wellfield produced by extraction. Assuming that the cone of depression around the wellfield is relatively circular, the heads from Del Sol Divider 3 and Trumbull 1A were used to estimate the water levels at Ridgecrest wells 3, 4, and 5. The distances of each of the extraction wells from the two monitoring wells were calculated and the water level at each well was assumed to be along the slope produced between the two monitoring wells. Table I-6-1 lists the measured head for the two monitoring wells, the calculated distance from each well to the extraction wells and the estimated water level for each extraction well. The measurements from the three regional U.S. Geological Survey monitoring wells and from the three estimated Ridgecrest extraction wells were used in conjunction with the project area head measurements to grid the water table within and outside of the model domain. Interpolated water levels along the model boundary were assigned as constant head nodes in the model design, controlling the water level and flux along the boundary and representing external hydrologic conditions in the aquifer for the given measurement quarter.

5.3.3 Model Recalibration

The change in the method used to estimate the boundary conditions of the model domain necessitated a recalibration of the numerical flow model. As with Version 1 of the model representing Q4 2017 conditions under a uniform gradient (Kirtland AFB, 2018b), calibration of this version of the model was performed by changing the assigned horizontal Kh and the vertical anisotropy (VANI). The assumptions of homogeneous Kh and VANI and of zero areal recharge were maintained and the values for Kh and VANI were allowed to range between the minimum and maximum values produced by the 2015 constant rate aquifer test performed using interim measure extraction well KAFB-106228 (Table I-6-2) (Kirtland AFB, 2016).

Version 1 of the model was calibrated to a single boundary condition based on a gradient estimated for Q4 2017 conditions. This updated version (Version 2) was simultaneously calibrated to the Q4 2017 and the Q4 2018 conditions. The calibration criteria were established as:

1. A Normalized Root Mean Squared Derivation of less than 10 percent (%) for the entire model domain.

2. Simulated head at each of the three interim measure drawdown monitoring well nests (KAFB-106037, KAFB-106092, and KAFB-106203), matching the lowest observed drawdown in the nest to within 10% of the total head drop measured within the model domain. The acceptable error tolerance was +/- 0.34 feet (ft) and +/- 0.46 ft for Q4 2017 and Q4 2018, respectively.

Thirty-six model simulations, containing different Kh/VANI combinations, were run for both the Q4 2017 and Q4 2018 conditions for a total of 72 calibration runs (Table I-6-3). A total of 19 simulations, with Kh ranging from 110 ft/day to 130 ft/day and VANI ranging from 0.005 to 0.05, produced results meeting the calibration criteria. From these, the simulation with a Kh of 120 ft/day and a VANI of 0.01 was chosen as the best-fit model as it produced the lowest combined error at the three drawdown monitoring nests. Figure I-7-2 shows scatterplots of the simulated versus measured heads for both the Q4 2017 and Q4 2018 conditions. Under Q4 2017 conditions, the simulated heads met the calibration criteria at 62 of the 79 calibration locations (78%) producing a Normalized Root Mean Squared Derivation of 9.4%. Under Q4 2018 conditions, the simulated heads met the calibration criteria for 57 of the 78 calibration locations (73%) producing a Normalized Root Mean Squared Derivation of 9.4%.

Figure I-6-3a shows the spatial distribution of simulation head residuals across the model domain for Q4 2017 conditions. Outside of the interim measure objective area, south of Ridgecrest Drive Southeast, the residuals exceeding the calibration criteria are dispersed and surrounded by calibrated regions showing no grouping that may indicate a flaw in the design of the conceptual model. Small, localized regions where calibration cannot be achieved are expected using a homogeneous model to simulated heads in an aquifer known to have thin, discontinuous lenses of high and low permeability material. However, within the objective area, there does seem to be a more continuous region where simulated heads exceed the calibration criteria. This region is located around the northern side of KAFB-106234, extending clockwise from a region of high simulated head at the KAFB-106235 well nest around to a region of low simulated heads at the KAFB-106219 well nest.

Figure I-6-3b shows the spatial distribution of simulation head residuals across the model domain for Q4 2018 conditions. The same general pattern of errors exists under these conditions with a dispersal of calibrated and uncalibrated regions outside of the objective area and a more continuous and expanded region of error around KAFB-106234. Having the same region express above tolerance error under two different conditions suggests an inadequacy in the conceptual model upon which the model is designed. Given the assumptions contained in the model, the most likely conceptual model change to address this region of error would be in the assumption of homogeneous hydraulic conductivity.

In order to test this hypothesis, a grain-size based permeability analysis of the objective area aquifer was performed. In unconsolidated aquifers, permeability is primarily controlled by the d10, or 10% finer grain size. Using bore logs recording visually determined grain sizes, a three-dimensional d10 grain size model was constructed of the objective area. The aquifer was delineated into eight grain size categories: clay, silt, very fine sand, fine sand, medium sand, coarse sand, very coarse sand, and gravel. The d10 model results were analyzed between an elevation of 4,905 and 4,785 ft above mean sea level, the bottom of which represents the lithology reporting depth from the shallowest reference elevation interval (REI) 4814 monitoring well in the objective area. In this region, the model estimates that sand and gravel make up 80% of the aquifer material, very close to the 85% expected from the literature reviews performed for Appendix I-7 of the Q2 2018 report (Kirtland AFB, 2018b). Fine sand was found to be the most dominant grain size at 47%. Clay and silt were distributed as thin discontinuous lenses and very fine sand through medium sand seemed to be well mixed throughout the aquifer volume. The 6% of coarse sand and gravel, however, showed to be primarily grouped into to relatively continuous lenses.

Figure I-6-4 shows the distribution of coarse sand and gravel in the objective area between the elevations of 4,845 and 4,800 ft above mean sea level. In this region, coarse sand and gravel lenses with thicknesses ranging from 5 to greater than 25 ft are intercepted by interim measure extraction wells KAFB-106228, KAFB-106233, and KAFB-106234 and by base water supply well KAFB-003. The extent and elevation of these high permeability lenses seem to be well correlated with most of the calibration errors seen in both the Q4 2017 and Q4 2018 simulations.

Figure I-6-4a shows the Q4 2017 calibration residuals overlain on the coarse sand and gravel lens locations. All of the simulated heads above the acceptable error tolerance (orange and red dots) are located on the high permeability lens connecting to KAFB-106234 extraction at an elevation of 4,825 ft above mean sea level. It is likely that this error is due to the presence of this lens and that if the lens was incorporated into the model design, this high permeability pathway would channel most of the water extracted from KAFB-106234. This would result in reducing the total drawdown currently simulated at KAFB-106234 and directionalizing the drawdown to the west, northwest decreasing simulated heads in monitoring wells intercepting the lens. The high permeability lens connecting KAFB-003 drawdown to the deeper monitoring wells in the KAFB-106207 nest would have the same effect on KAFB-003 drawdown. By reducing drawdown at depth in both of these extraction wells, the below acceptable simulated heads seen at depth between the two extraction wells should increase. Figure I-6-4a also shows the location of vertical gradients observed in nested monitoring wells. The black stars show where relatively low heads exist in either REI 4838 or REI 4814 monitoring wells causing vertical head differences of 0.5 ft or greater. All of these wells are located on high permeability lenses connecting to either KAFB-106228 or KAFB-106233. It is likely that the addition of these pathways to the numerical model design would allow the model to be calibrated to represent these vertical gradients.

Figure I-6-4b shows the same type of comparison, overlaying Q4 2018 calibration residuals on the high permeability pathways. The distribution of errors is similar suggesting that addition of the high permeability pathways into the numerical model would improve calibration by reducing drawdown at KAFB-106234 and KAFB-003 thereby increasing simulated heads between the extraction wells, directionalizing drawdown along the pathways thereby reducing simulated head at the KAFB-106235 monitoring well nest, and directionalizing drawdown from KAFB-106228 such that simulated heads are reduced in the REI 4838 wells at the KAFb-106088, KAFB-106023, and KAFB-106216 nest allowing simulation of observed vertical gradients.

6. TARGET CAPTURE ZONE DELINEATION METHOD

The following text was initially provided in Appendix I-7 of the Q4 2016 Quarterly and Annual Report (Kirtland AFB, 2017a):

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.

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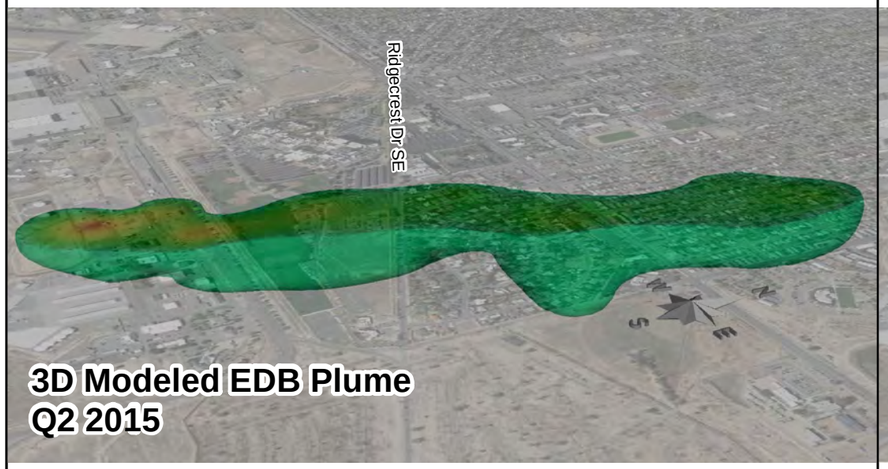
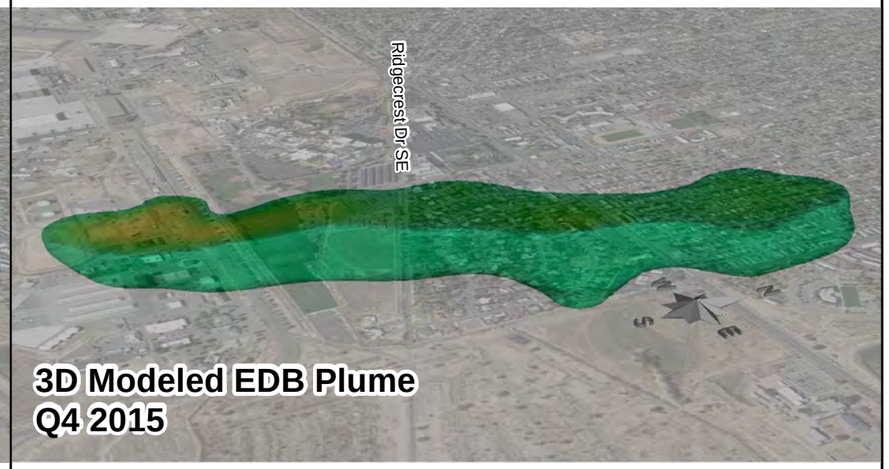
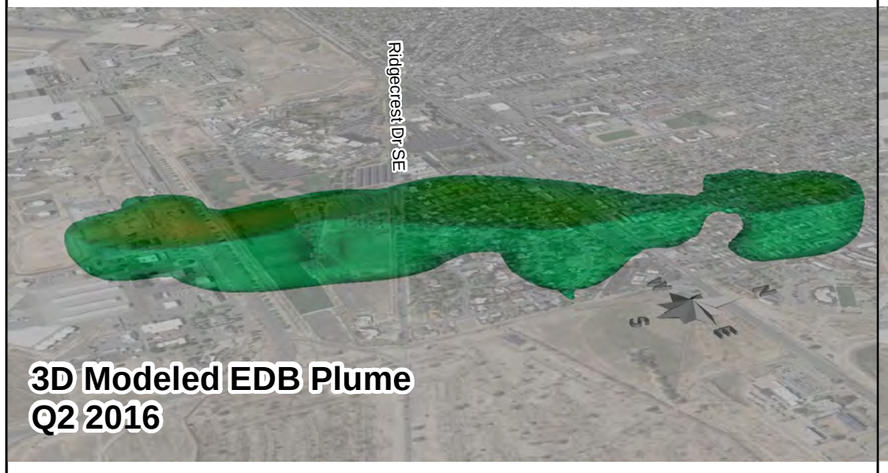
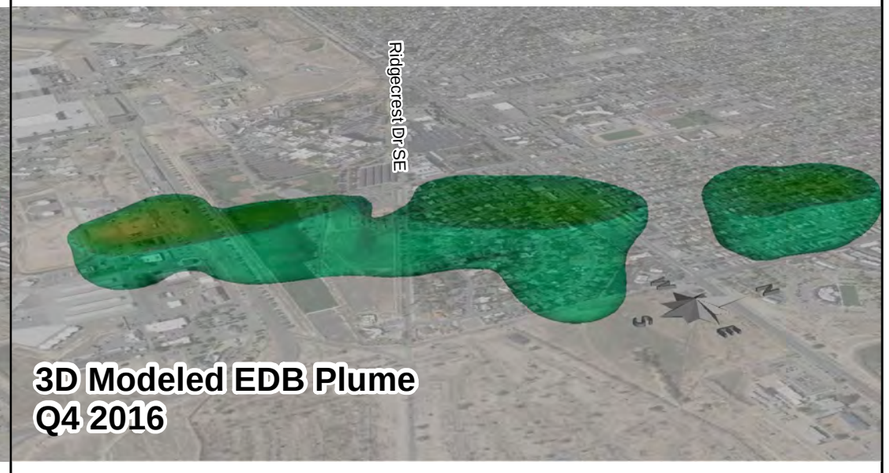
- Q4 2018 Figure I-6-4 – Spatial Distribution of Simulated vs Measured Residuals and Lithology, Q4 2017 and Q4 2018









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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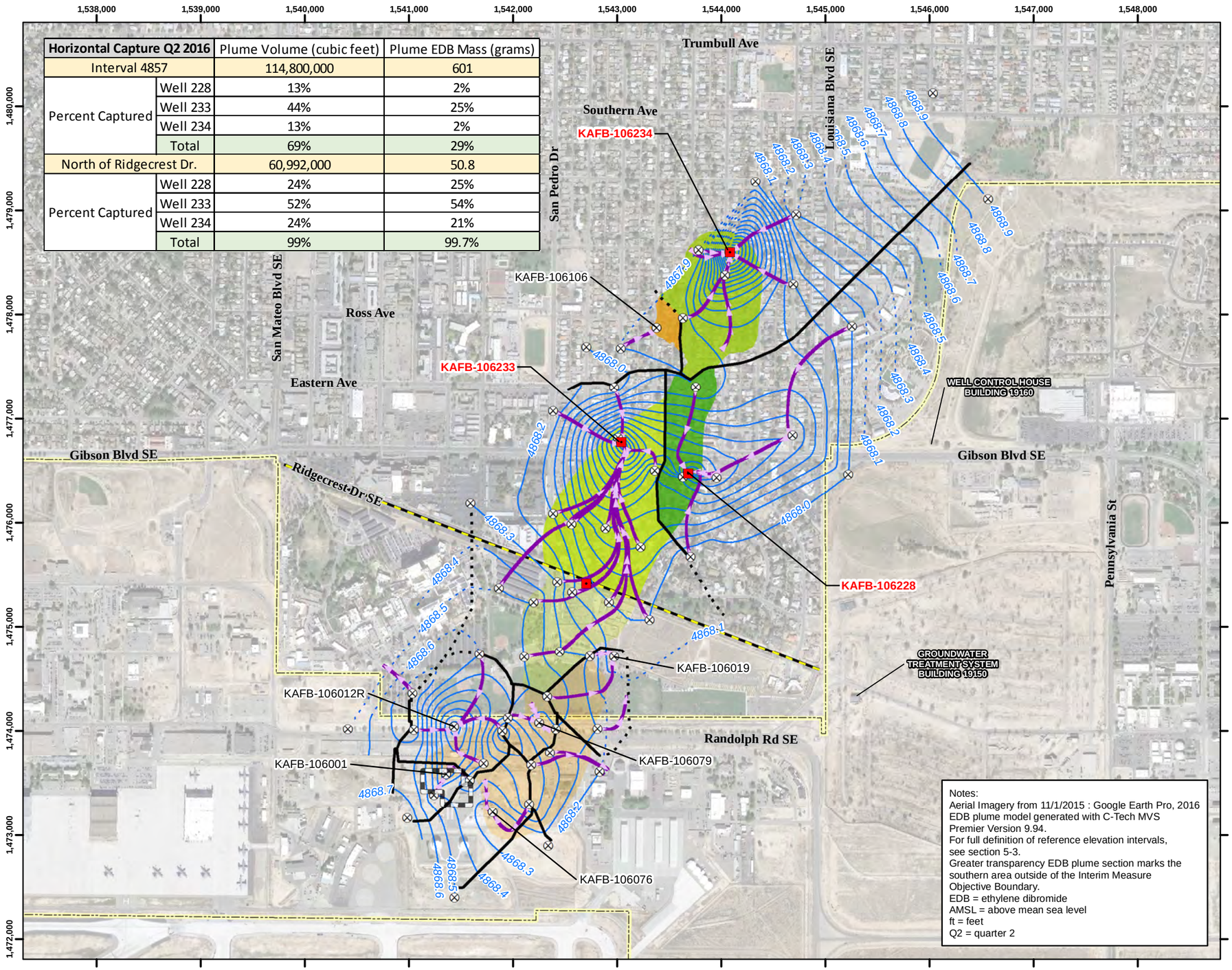
FIGURE 5-2

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%

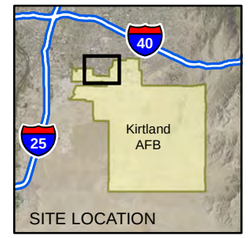


Legend

- 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

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

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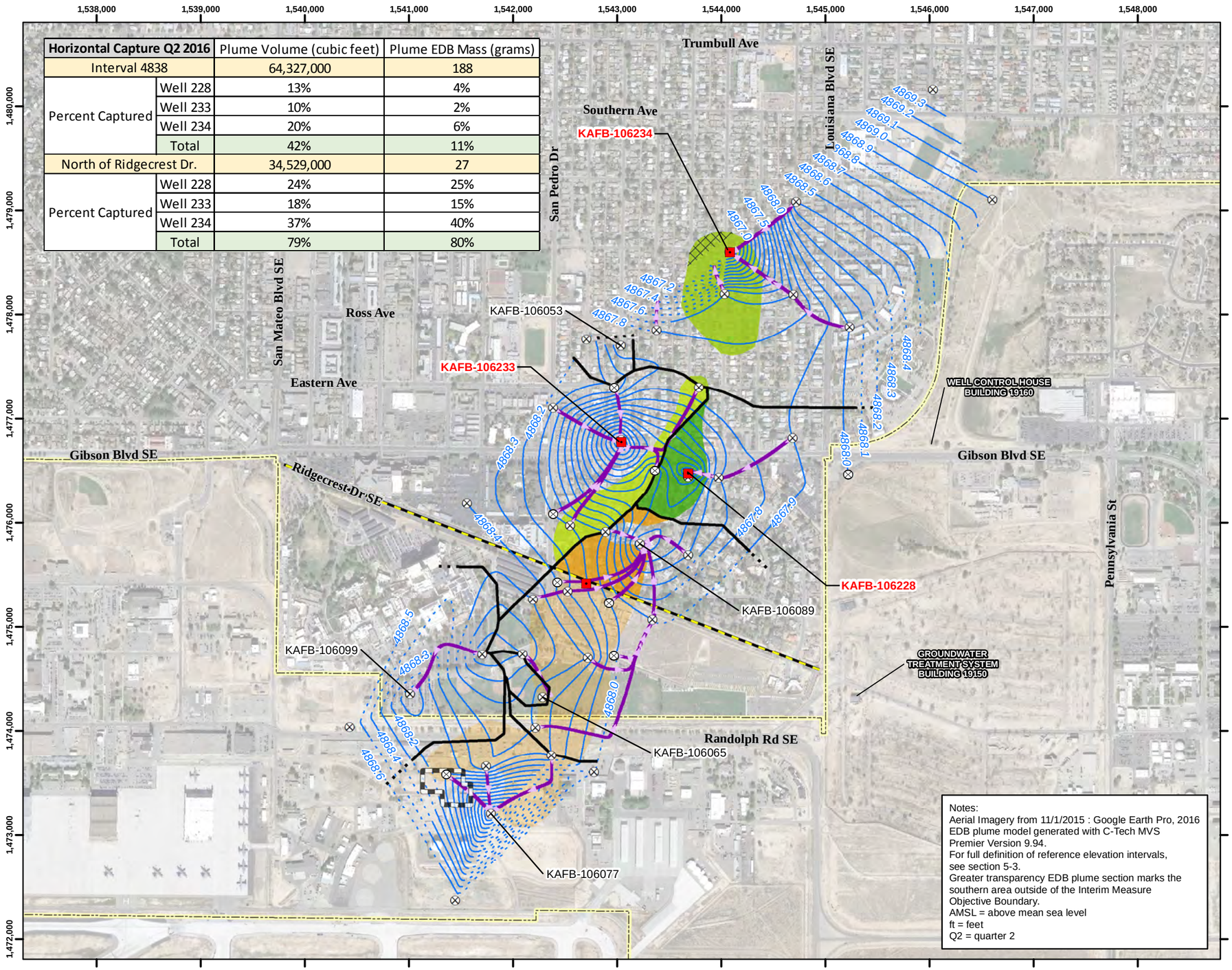
FIGURE 5-3

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%

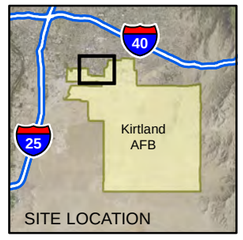


Legend

- 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

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

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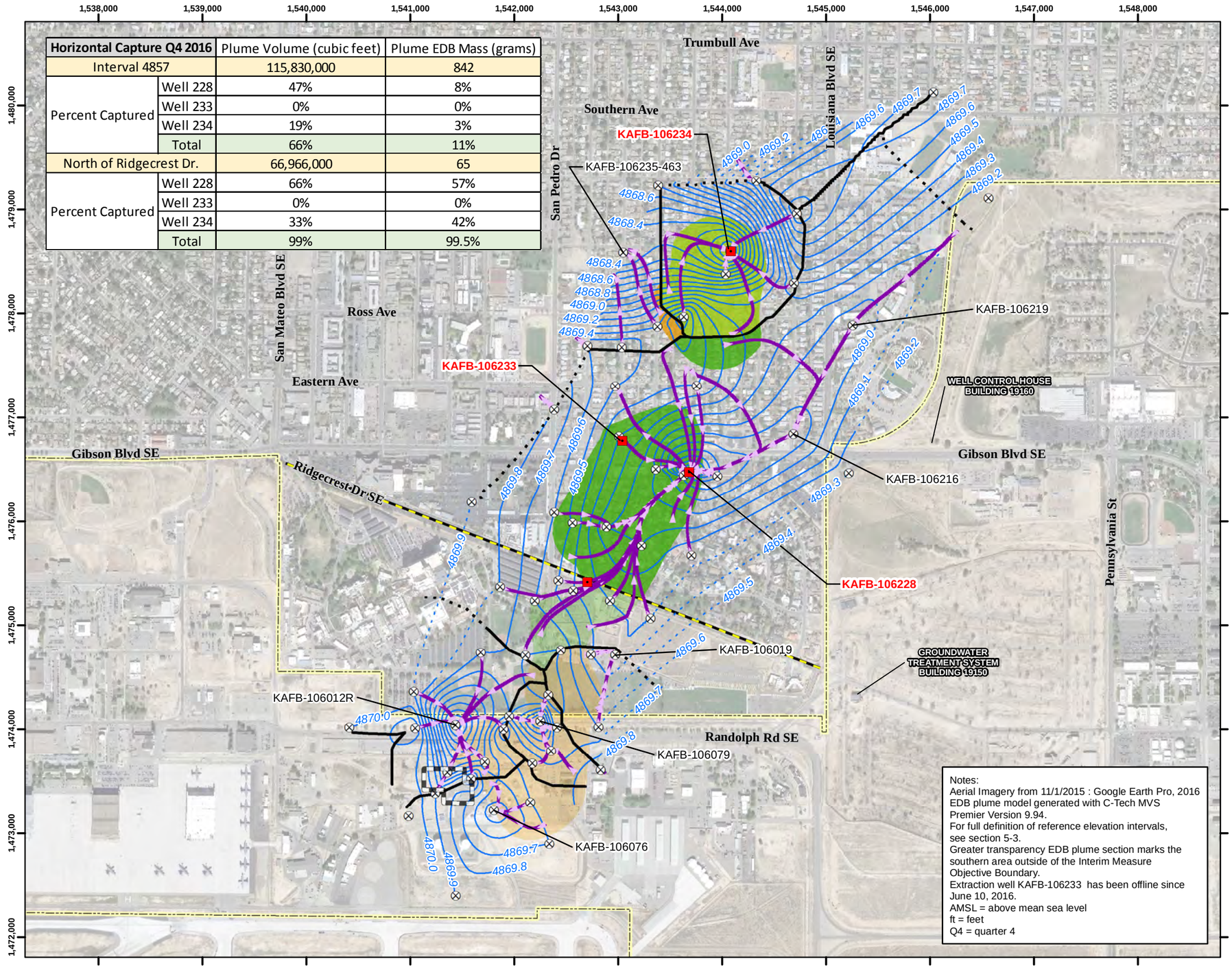
FIGURE 5-4

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%



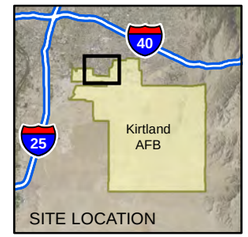
Notes:
Aerial Imagery from 11/1/2015 : Google Earth Pro, 2016
EDB plume model generated with C-Tech MVS Premier Version 9.94.
For full definition of reference elevation intervals, see section 5-3.
Greater transparency EDB plume section marks the southern area outside of the Interim Measure Objective 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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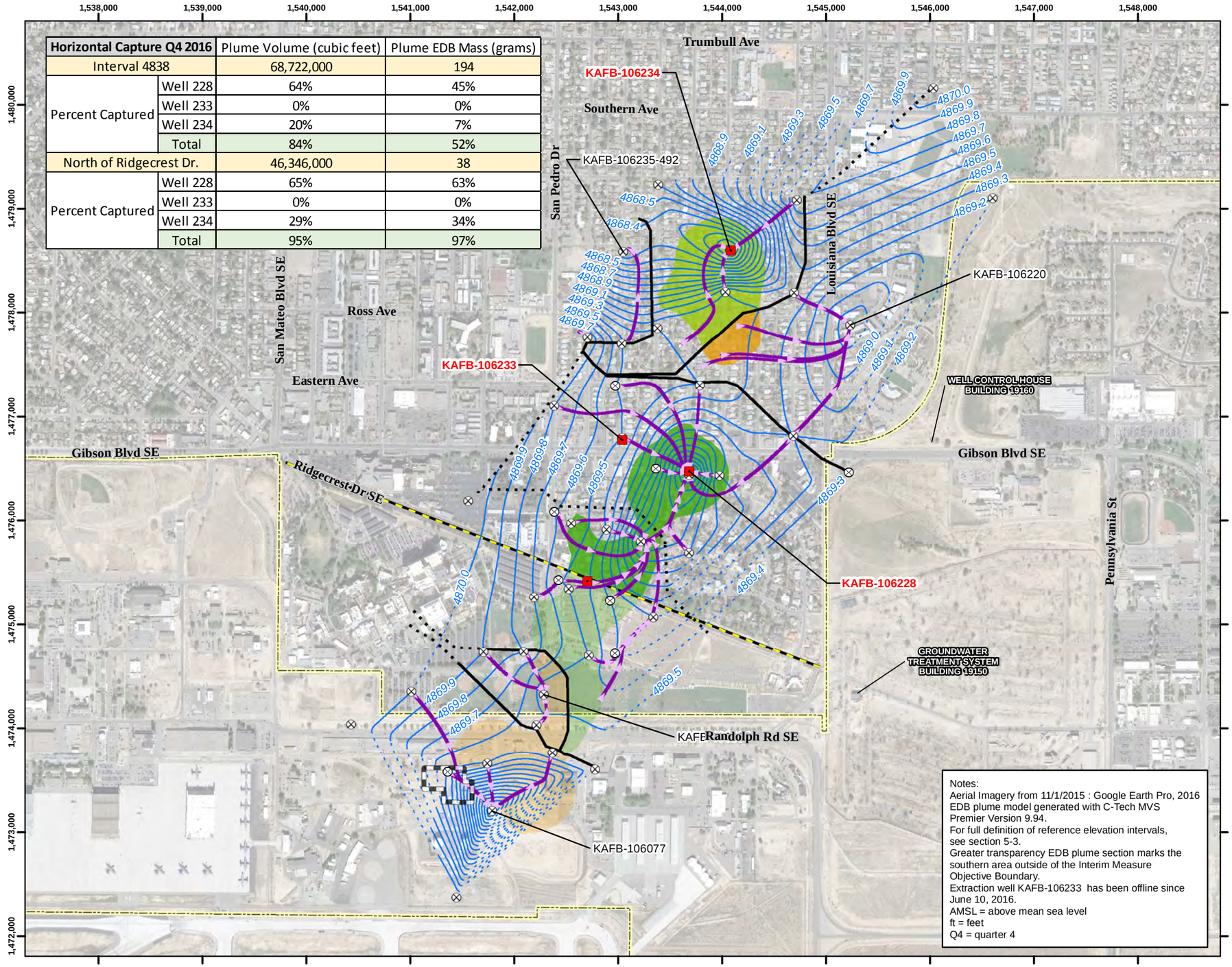
FIGURE 5-5

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%

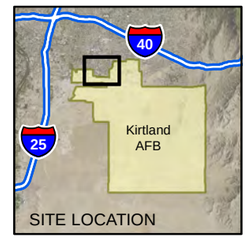


Legend

- 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

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

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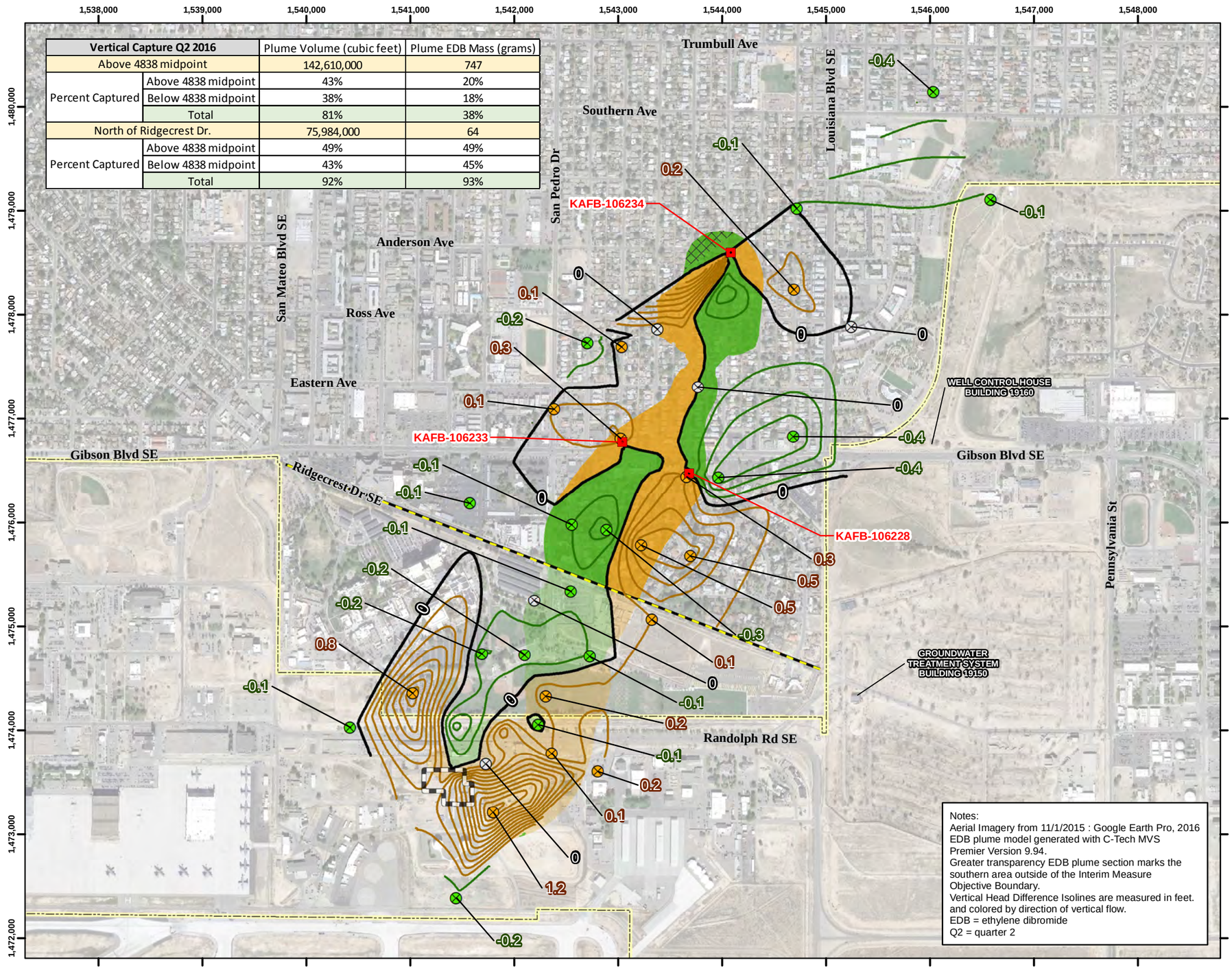
FIGURE 5-6

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

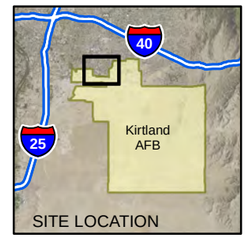
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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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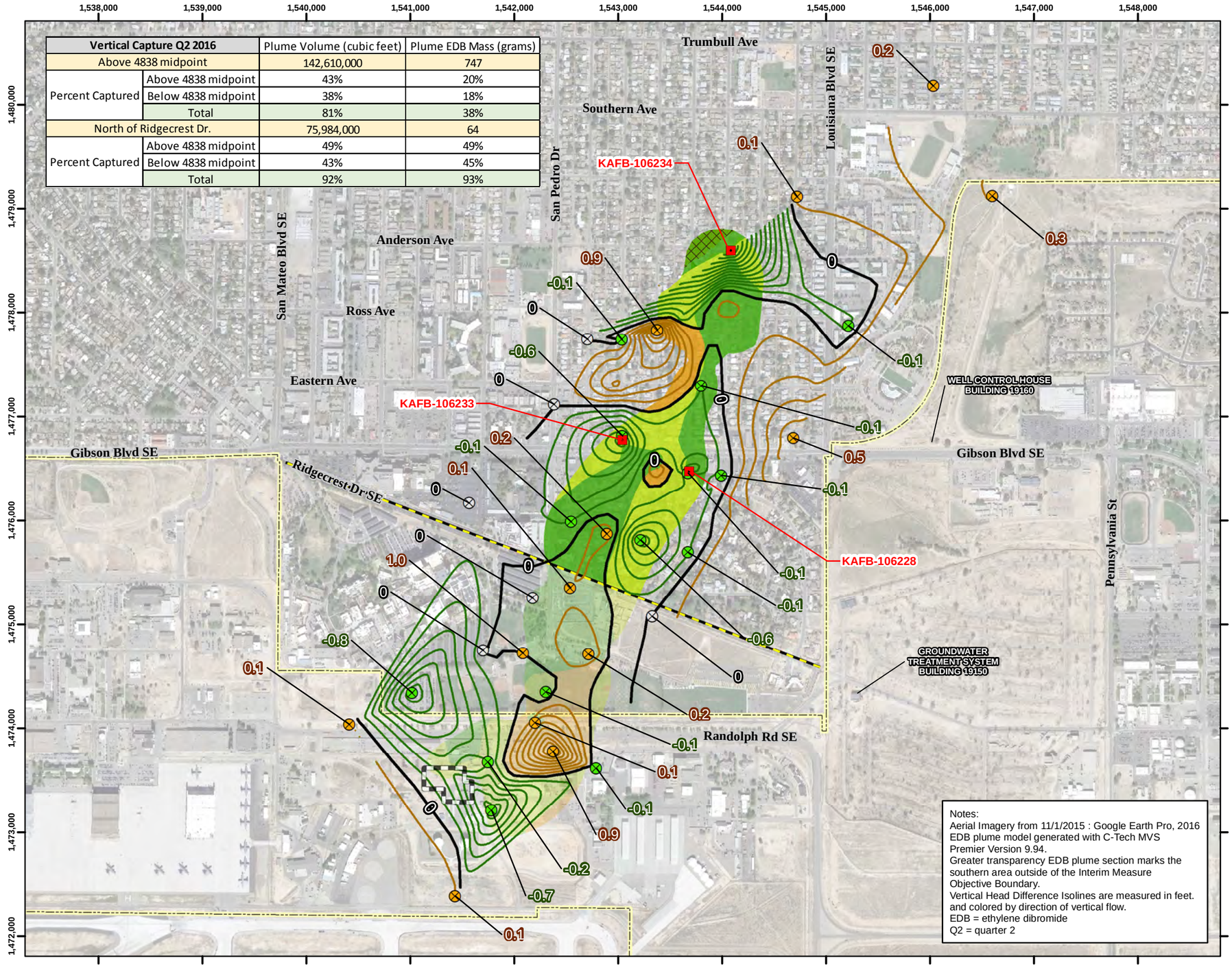
FIGURE 5-7

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

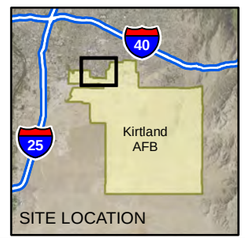
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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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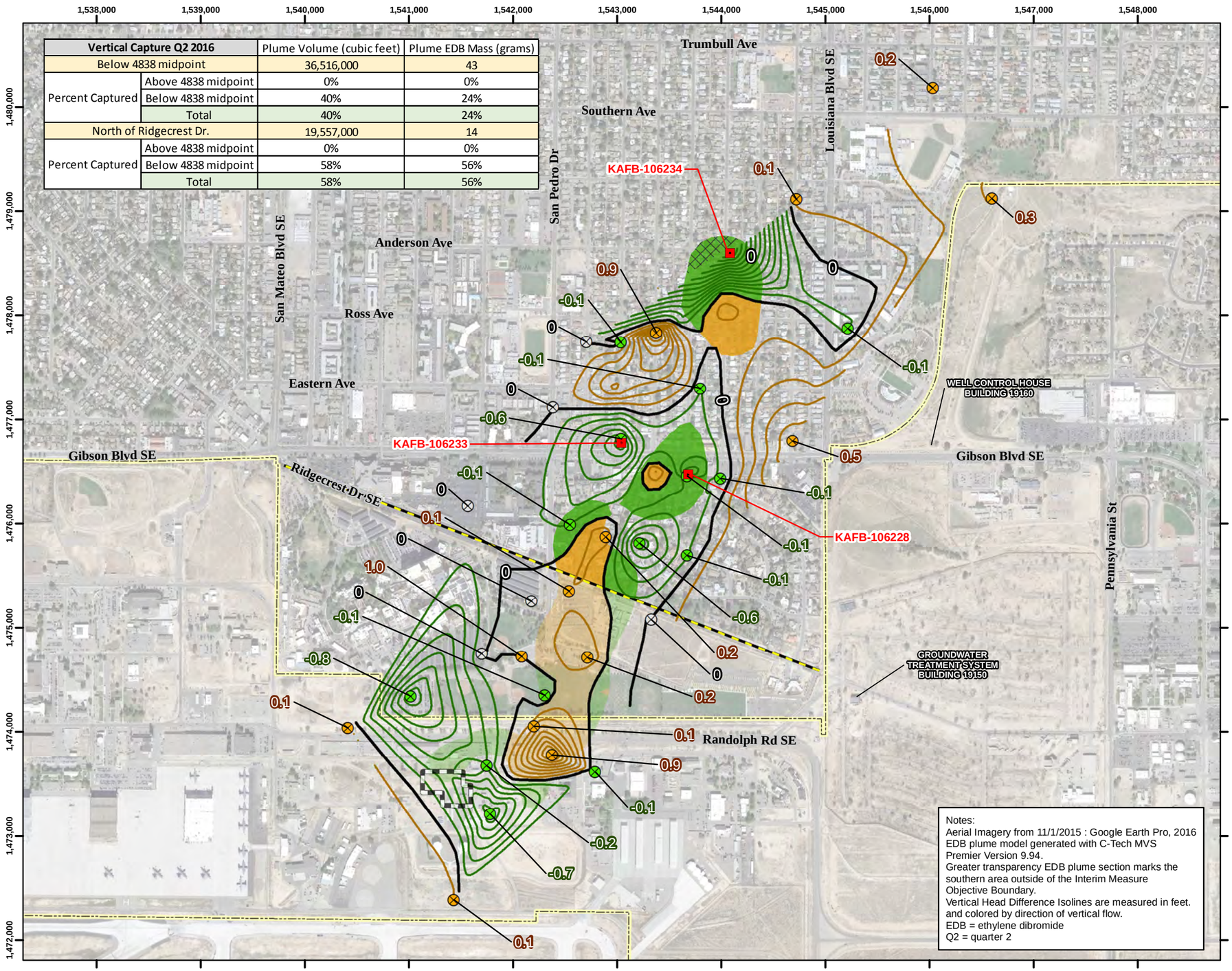
FIGURE 5-8

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

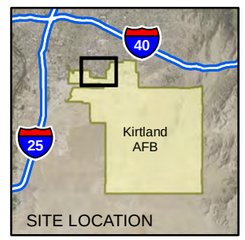
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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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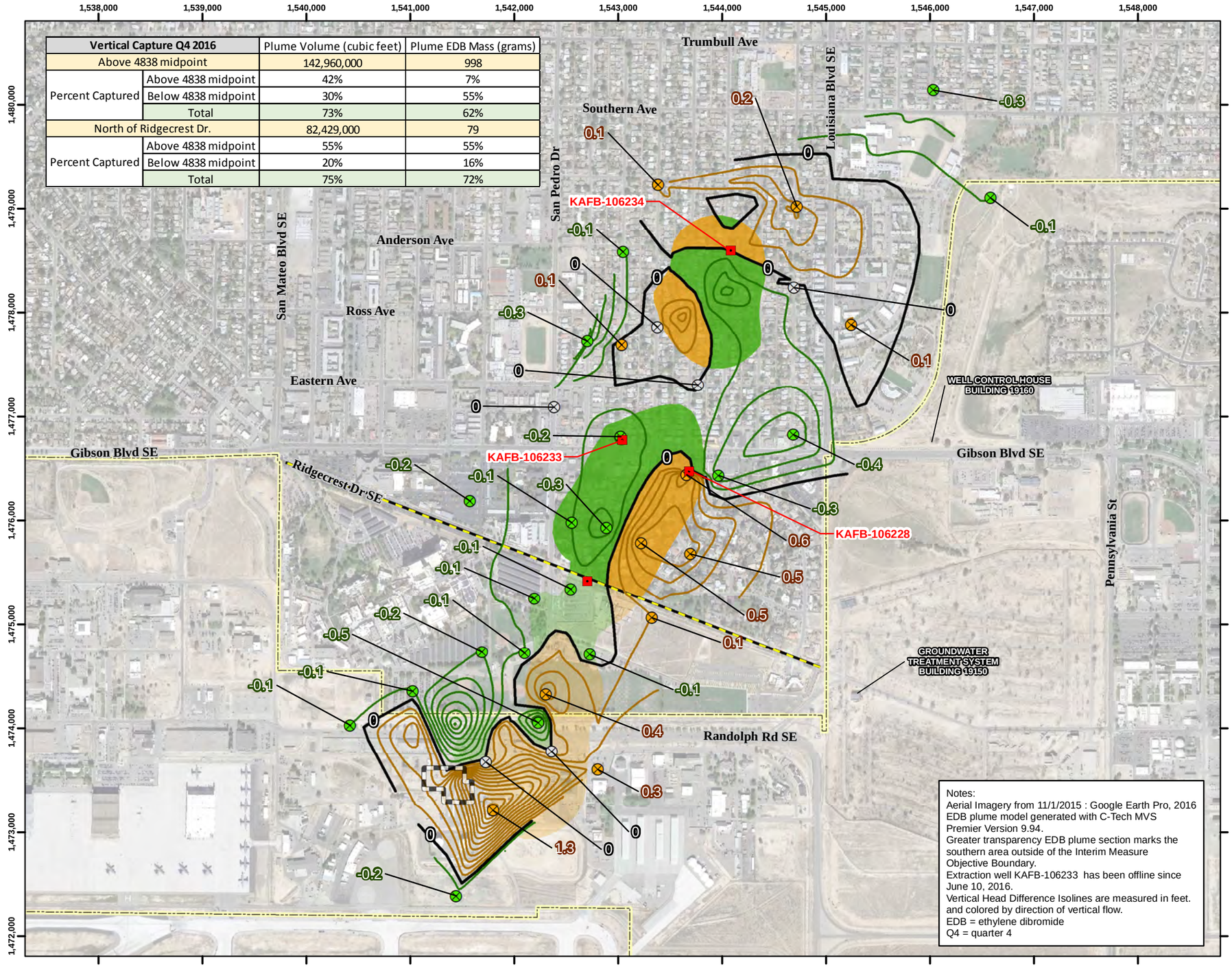
FIGURE 5-9

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%



Legend

- Extraction Well

Nested Monitoring Wells

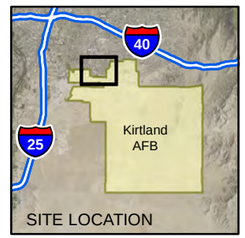
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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

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

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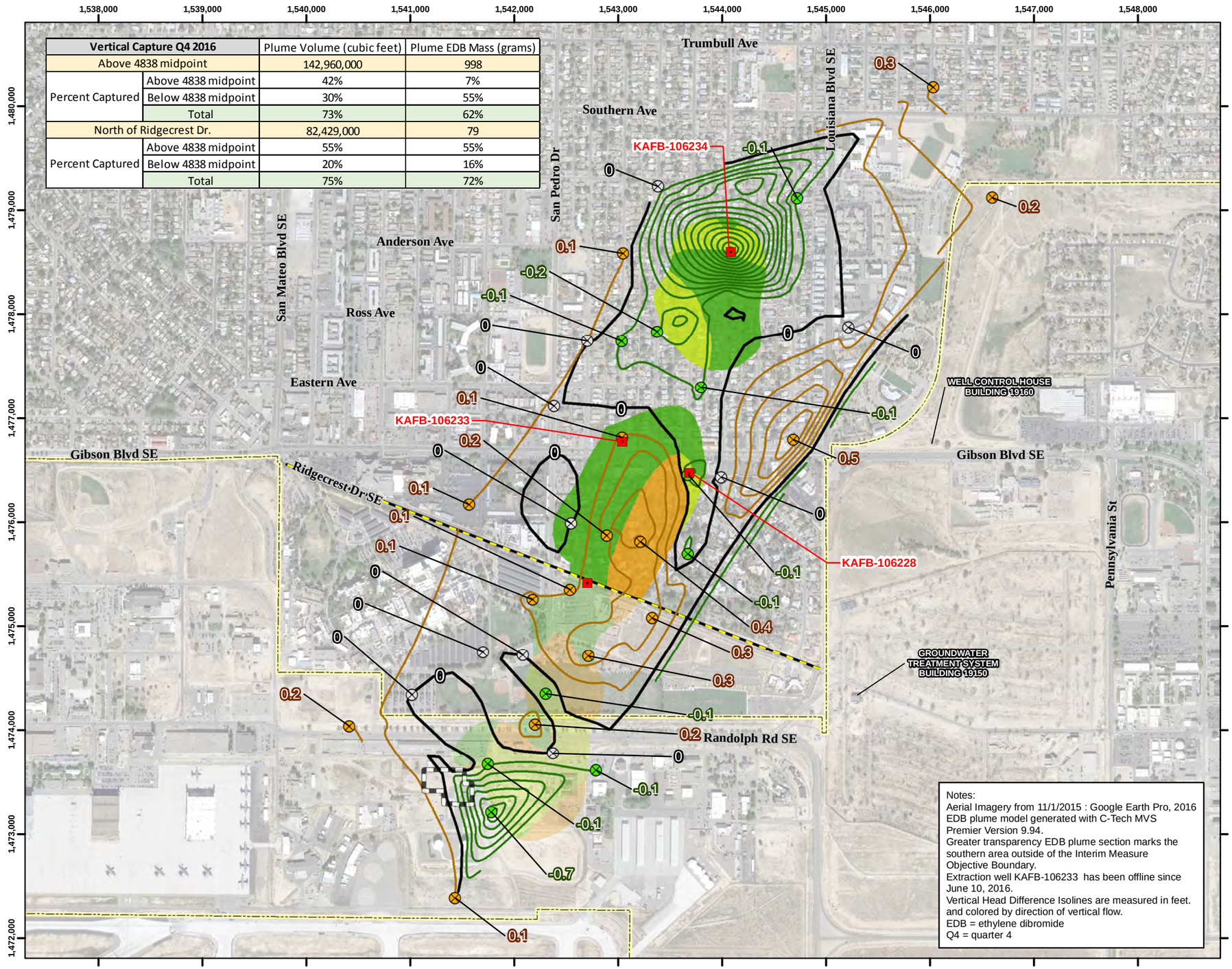
FIGURE 5-10

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%



Legend

- Extraction Well

Nested Monitoring Wells

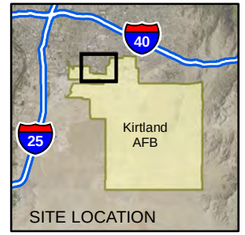
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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

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

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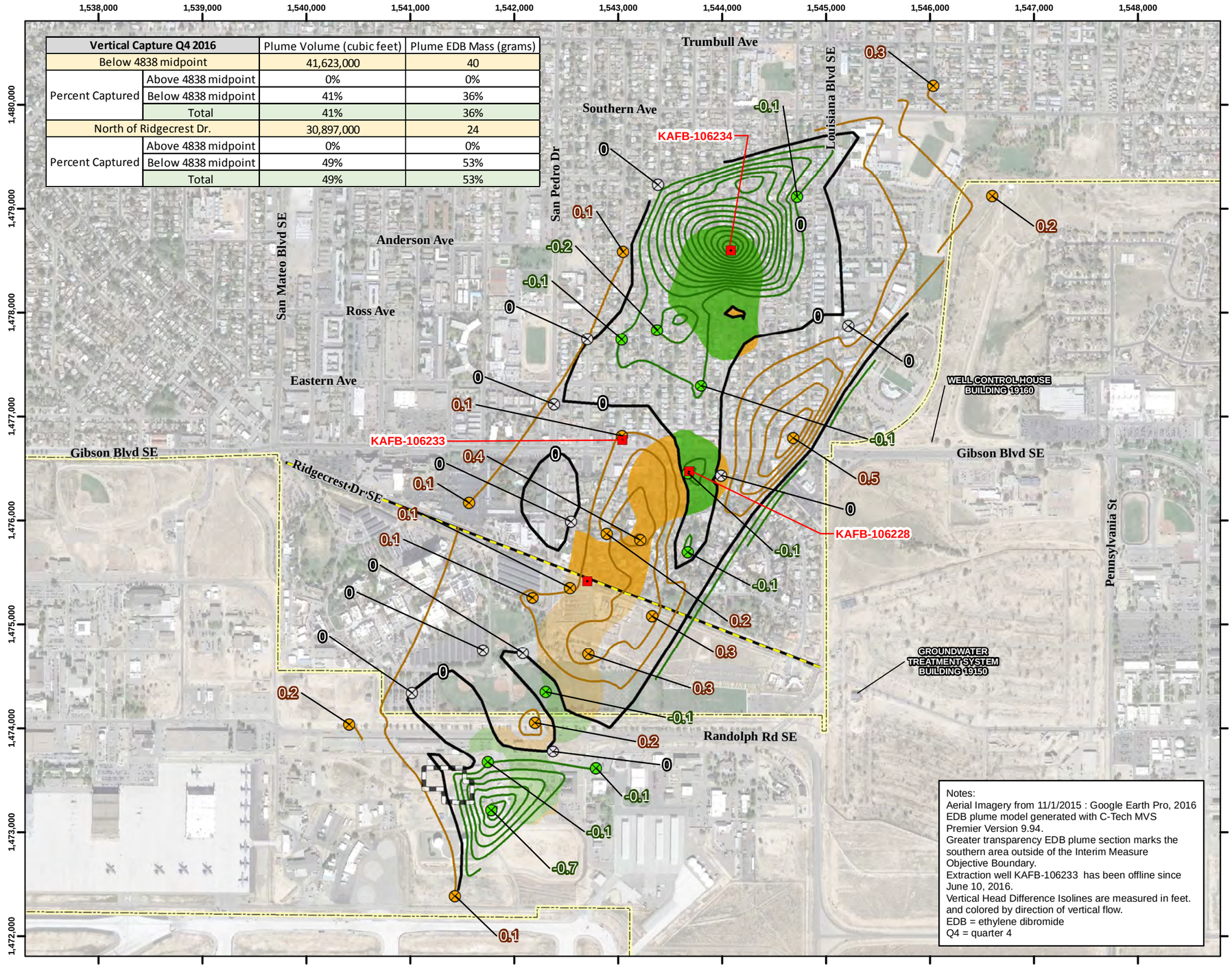
FIGURE 5-11

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

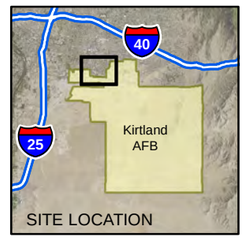
- Monitoring Well Defining Upward Vertical Flow
- Monitoring Well Defining Downward Vertical Flow
- Monitoring Well Defining No Vertical Flow
- Installation Boundary
- Interim Measure Objective Boundary

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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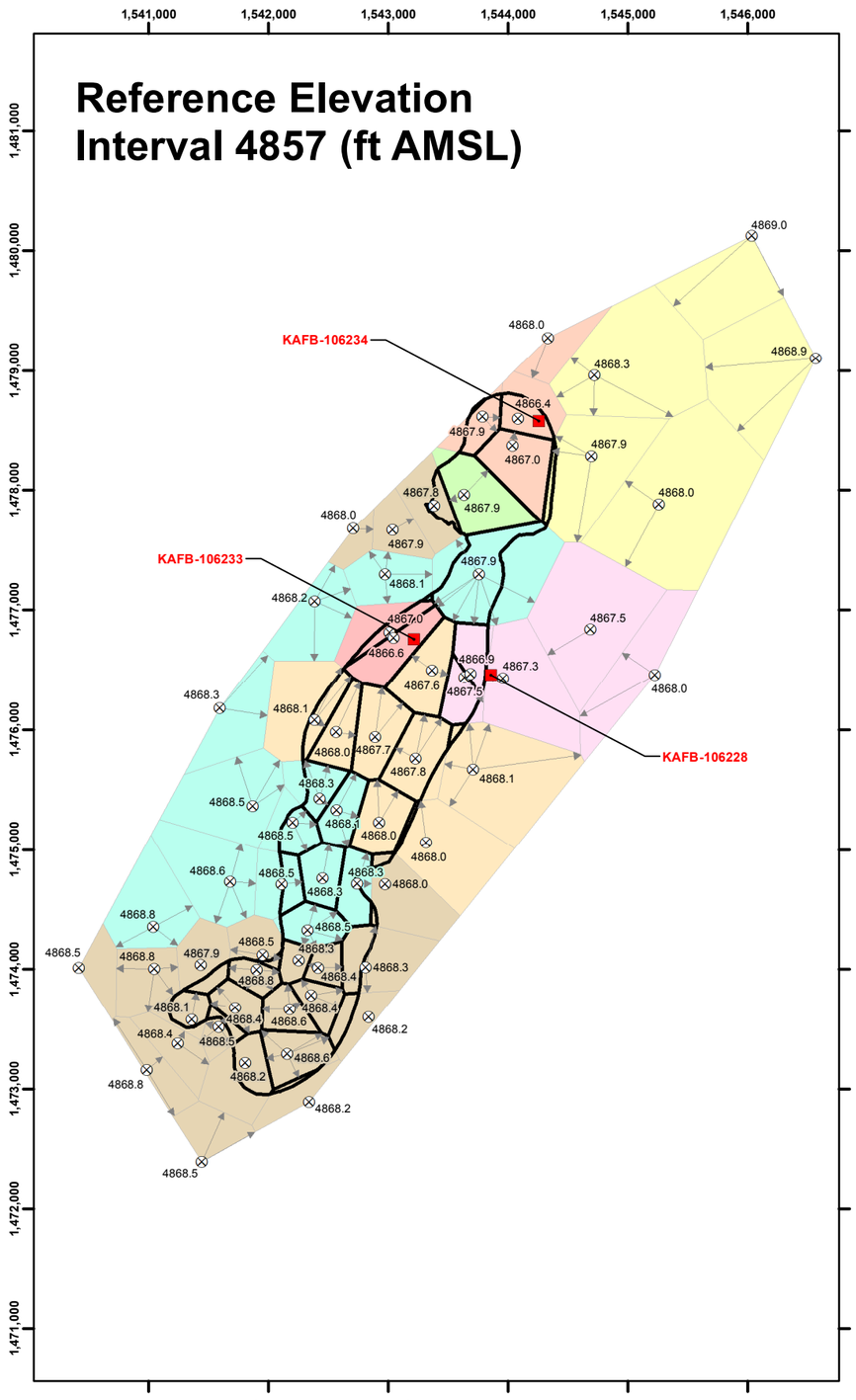
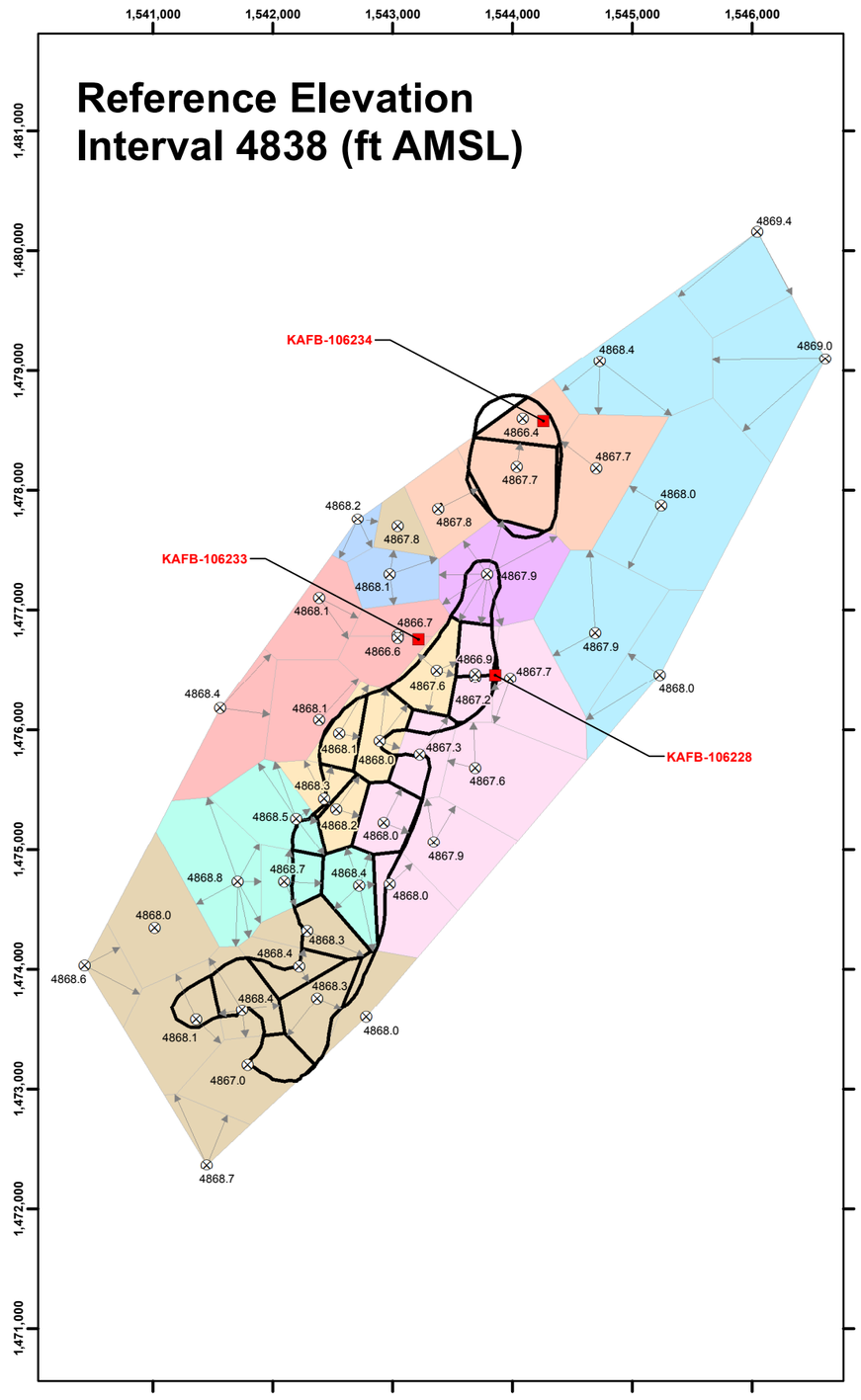
FIGURE 5-12

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





Legend

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

Captured by Extraction Well

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

Notes:
EDB plume model generated with
C-Tech MVS Premier Version 9.94
ft AMSL = feet above mean sea level
Q2 = quarter 2
µg/L = microgram(s) per liter
EDB = ethylene dibromide
EPA MCL = United States Environmental Protection Agency
Maximum Contaminant Level

N

0 625 1,250 2,500

Feet

1 inch = 1,250 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE I-6-1

WATER LEVEL PAIRS
INTERVAL 4857 AND INTERVAL 4838
Q2 2016

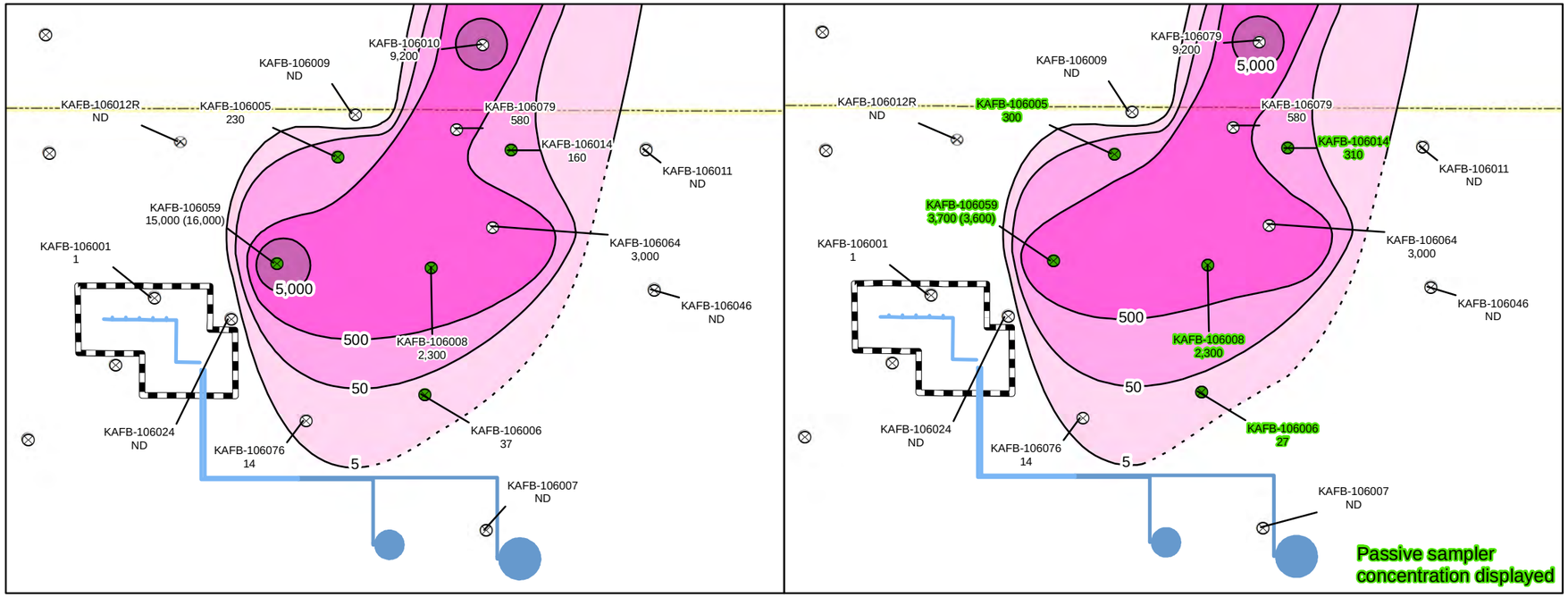
P:\gis\Projects\Kirtland\Figures\BFF Quartlery Report\2016_Q4\Report Figures\Appendix I-6\new temp\I-6-1 2016 Q2 Interval 4857 and Interval 4838 Water Level Pairs.mxd 1/31/2017 EA sbusby

Q4 2017

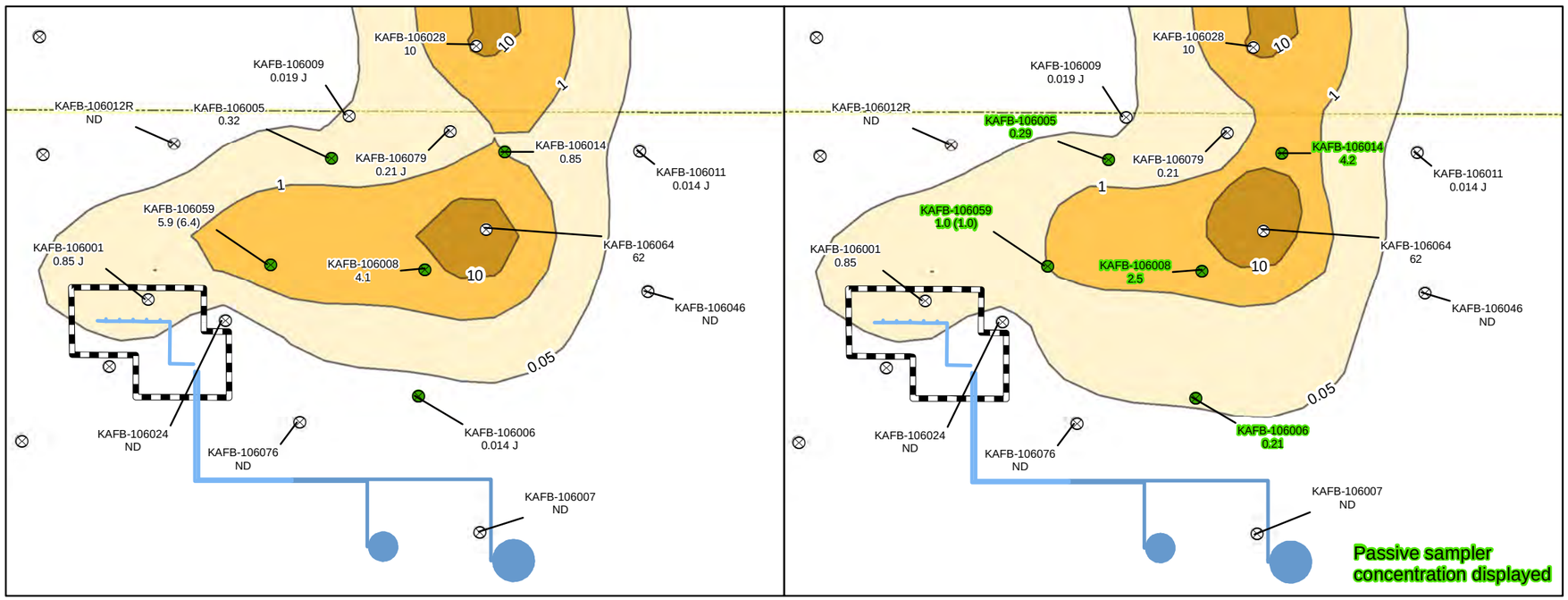
Low Flow Grab Samples

Passive Samples

Benzene



EDB



Legend

- Groundwater Monitoring Well
- Groundwater Monitoring Well used in Source Area Comparison Study
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Installation Boundary
- Former Aboveground Storage Tank
- 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

EDB Concentration Range

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

Notes:
Monitoring wells used in comparison study:
KAFB-106005, KAFB-106006, KAFB-106008,
KAFB-106014, and KAFB-106059.
EDB plume based on model generated with
C-Tech MVS Premier Version 9.94.
Values in parentheses are duplicate sample results.
All units are measured in µg/L.
µg/L = micrograms per liter
EDB = ethylene dibromide
ND = nondetect
Q4 = quarter 4
Qualifer(s):
J = denotes the analyte was positively identified,
but the associated numerical value is estimated.

N

0 200 400 800

Feet

1 inch = 400 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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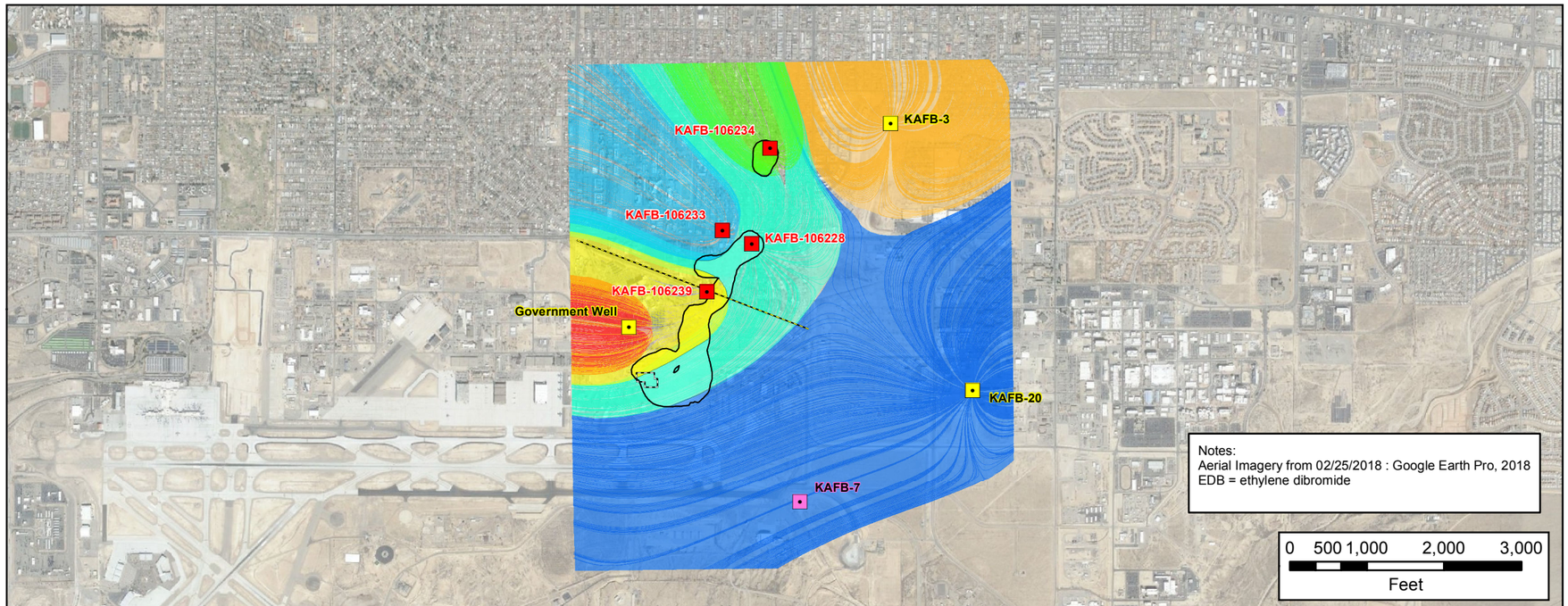
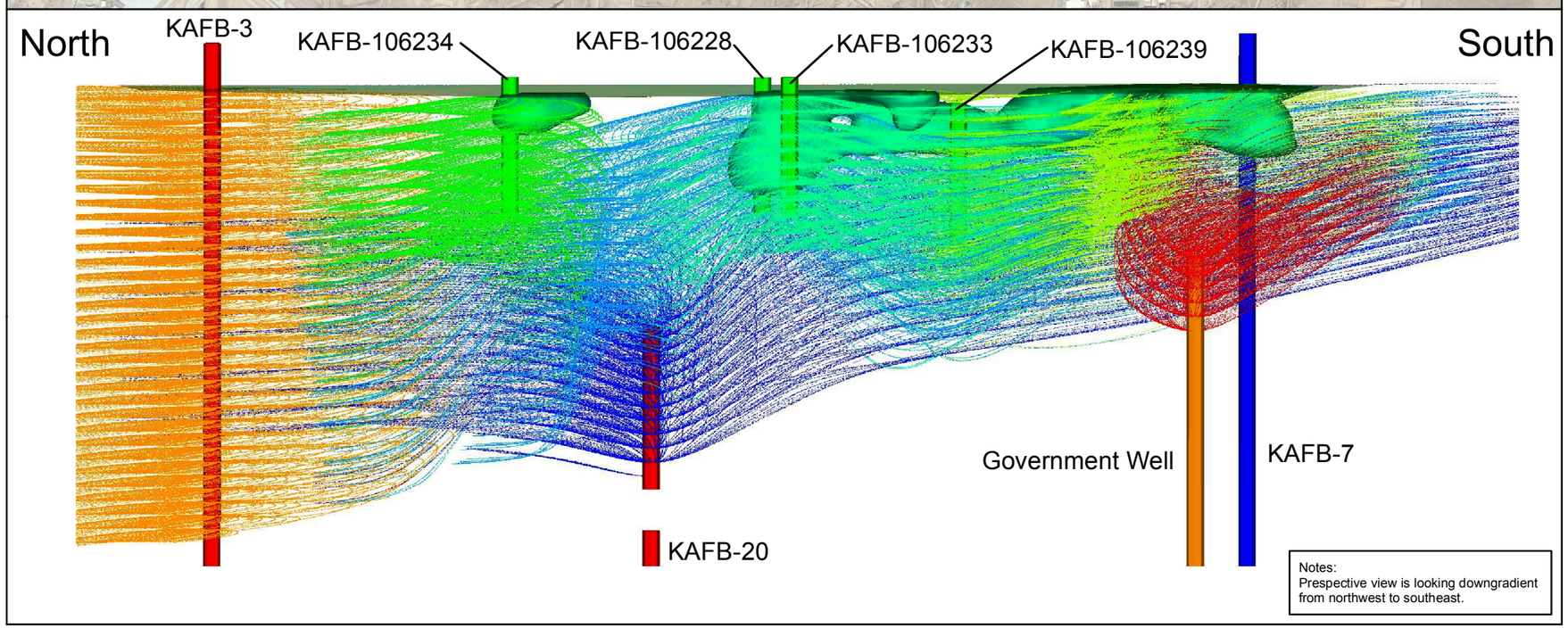
FIGURE 3-23

SOURCE AREA WELL COMPARISON
BETWEEN LOW FLOW SAMPLES AND
PASSIVE SAMPLERS IN REI 4857, Q4 2017

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2017_Q4\Section 3\3-23 EDB Benzene Comparison Q4 2017.mxd 2/28/2018 EA sbusby





Legend

- Model Assigned Interim Measure Extraction Well
- Model Assigned Drinking Water Supply Well
- Injection Well KAFB-7
- KAFB-003 Extraction Well Capture Particle Track
- KAFB-20 Extraction Well Capture Particle Track
- KAFB-106228 Extraction Well Capture Particle Track
- KAFB-106233 Extraction Well Capture Particle Track
- KAFB-106234 Extraction Well Capture Particle Track
- KAFB-106239 Extraction Well Capture Particle Track
- Government Extraction Well Capture Particle Track
- Interim Measure Objective Area Boundary
- Source Area

EDB Plume Capture Analysis

Q2 2018 EDB Plume

- Captured by KAFB-20
- Captured by KAFB-106228
- Captured by KAFB-106233
- Captured by KAFB-106234
- Captured by KAFB-106239

N

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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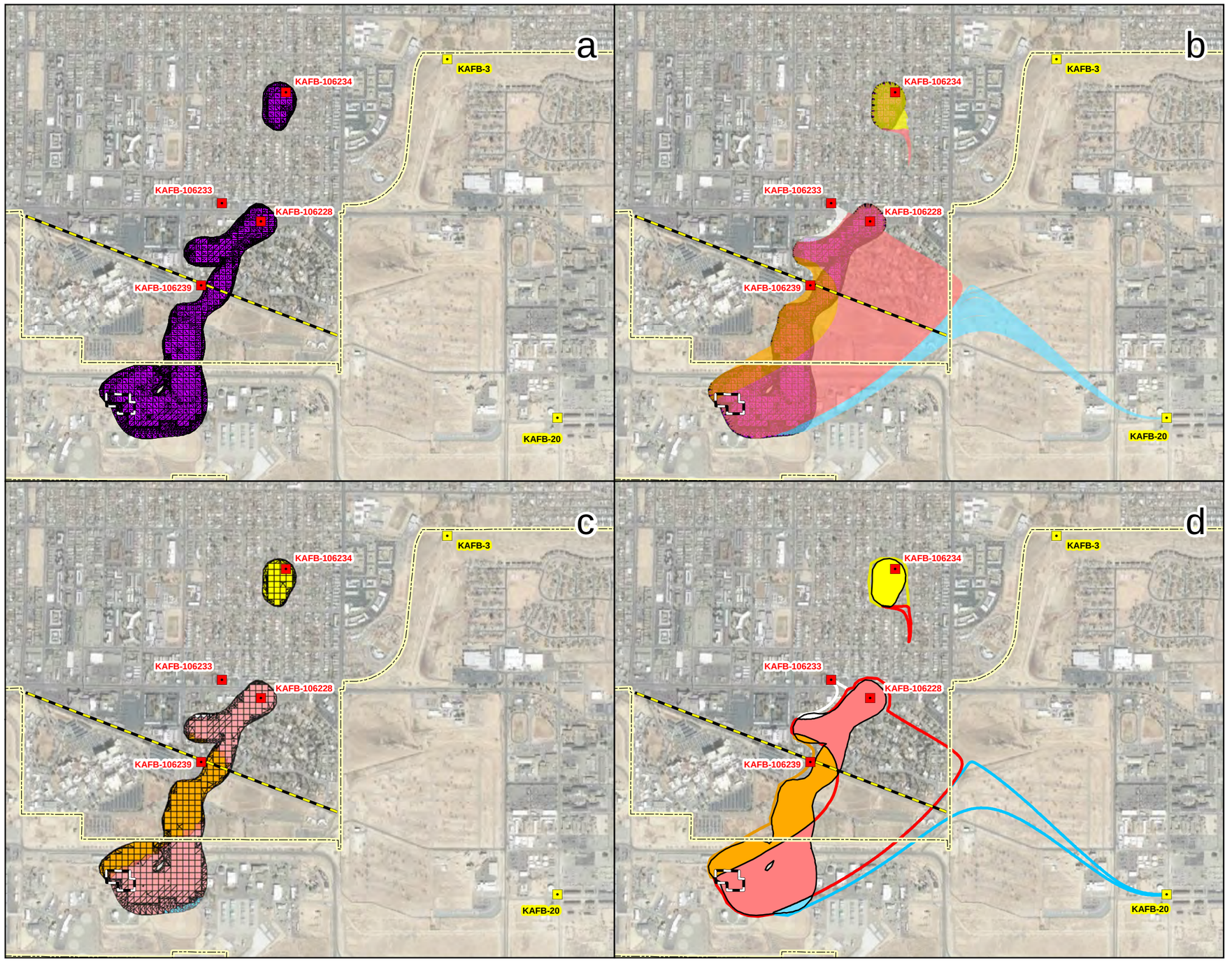
FIGURE I-7-8

PLAN VIEW AND THREE-DIMENSIONAL PERSPECTIVE VIEW OF EXTRACTION WELL PARTICLE TRACKS, Q2 2018.

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q2\I-7\I-7-8 Plan and 3D View of Particle Tracks.mxd 8/14/2018 EA eomalia



Legend

- Model Assigned Interim Measure Extraction Well
- Model Assigned Drinking Water Supply Well
- Modeled Plume Cell Centroid
- KAFB-20 Extraction Well Capture Particle Track
- KAFB-106228 Extraction Well Capture Particle Track
- KAFB-106233 Extraction Well Capture Particle Track
- KAFB-106234 Extraction Well Capture Particle Track
- KAFB-106239 Extraction Well Capture Particle Track
- Interim Measure Objective Area Boundary
- Installation Boundary
- Modeled Plume Cell
- Source Area

EDB Plume Area Capture Analysis

- Captured by KAFB-20
- Captured by KAFB-106228
- Captured by KAFB-106233
- Captured by KAFB-106234
- Captured by KAFB-106239

N

0 875 1,750 3,500

Feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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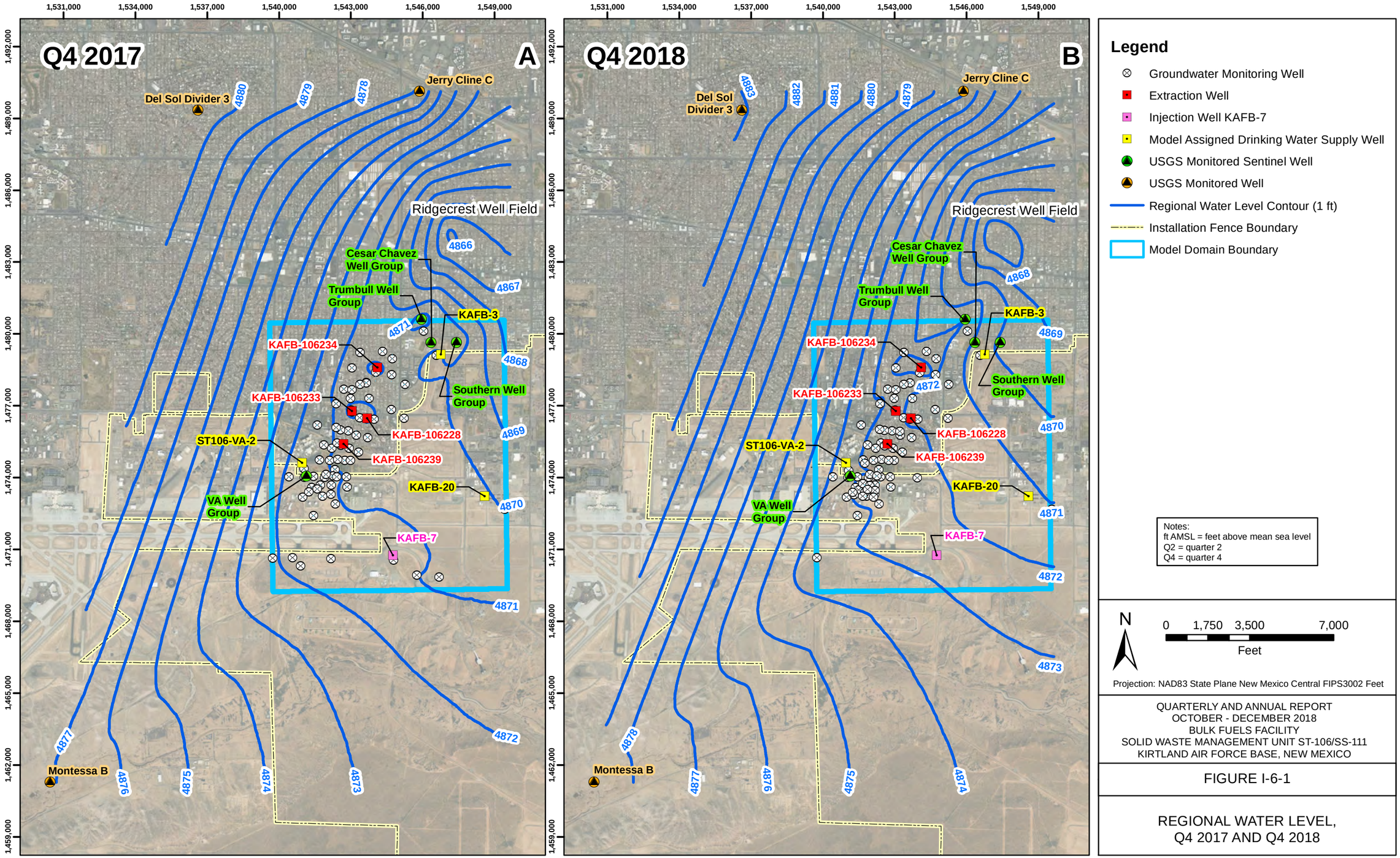
FIGURE I-7-9

MODEL DESIGN METHOD STEPS

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q2\I-7\I-7-9 Model Design Steps.mxd 8/13/2018 EA Sbusby



Legend

- Groundwater Monitoring Well
- Extraction Well
- Injection Well KAFB-7
- Model Assigned Drinking Water Supply Well
- USGS Monitored Sentinel Well
- USGS Monitored Well
- Regional Water Level Contour (1 ft)
- Installation Fence Boundary
- Model Domain Boundary

Notes:
ft AMSL = feet above mean sea level
Q2 = quarter 2
Q4 = quarter 4

N

0 1,750 3,500 7,000

Feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE I-6-1

REGIONAL WATER LEVEL,
Q4 2017 AND Q4 2018

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q4\Appendicies\I-6-1 Regional Water Level, Q4 2017 and 2018_R1.mxd 3/6/2019 EA eomalia

Figure I-7-2A, Q4 2017 Numerical Model Calibration Results
Simulated vs Measured Groundwater Levels

A

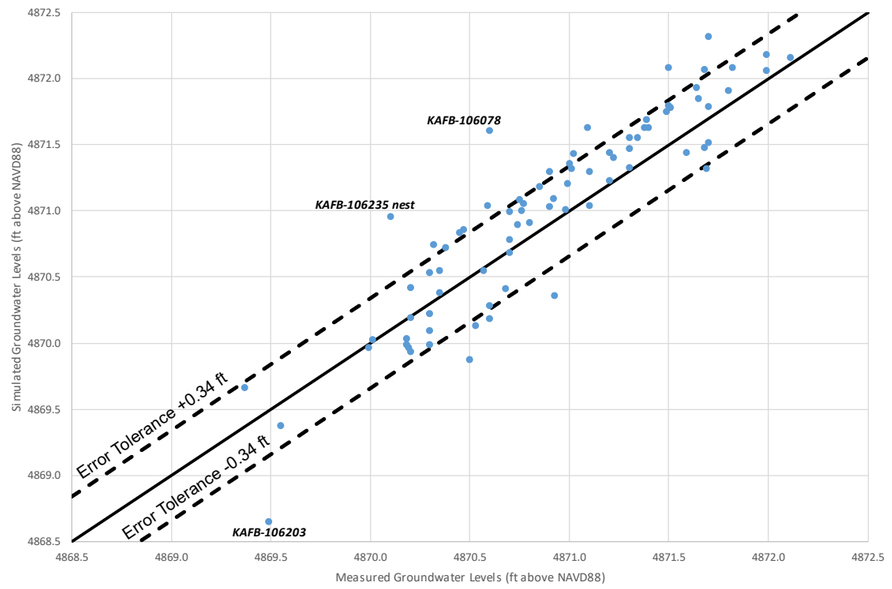
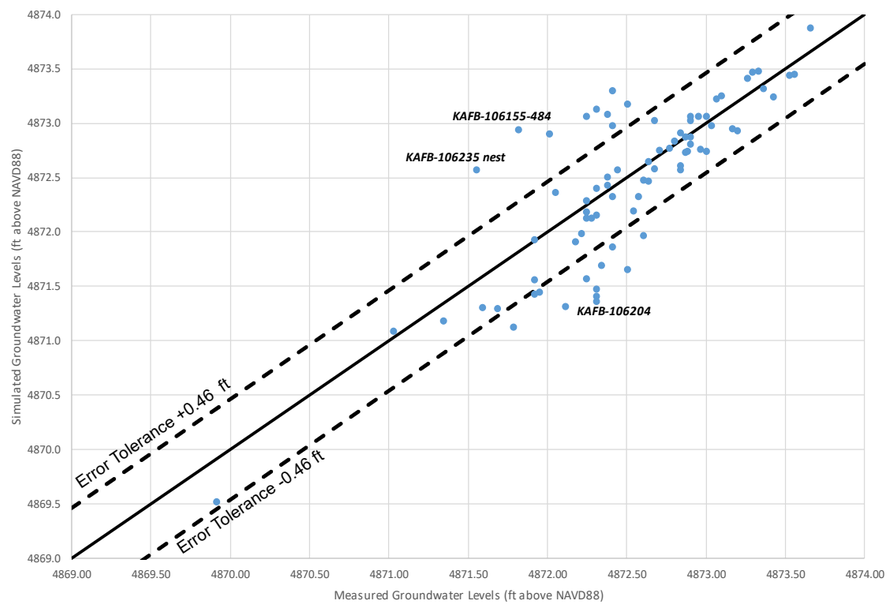


Figure I-7-2B, Q4 2018 Numerical Model Calibration Results
Simulated vs Measured Groundwater Levels

B



Legend

- Simulated vs Measured Groundwater Level

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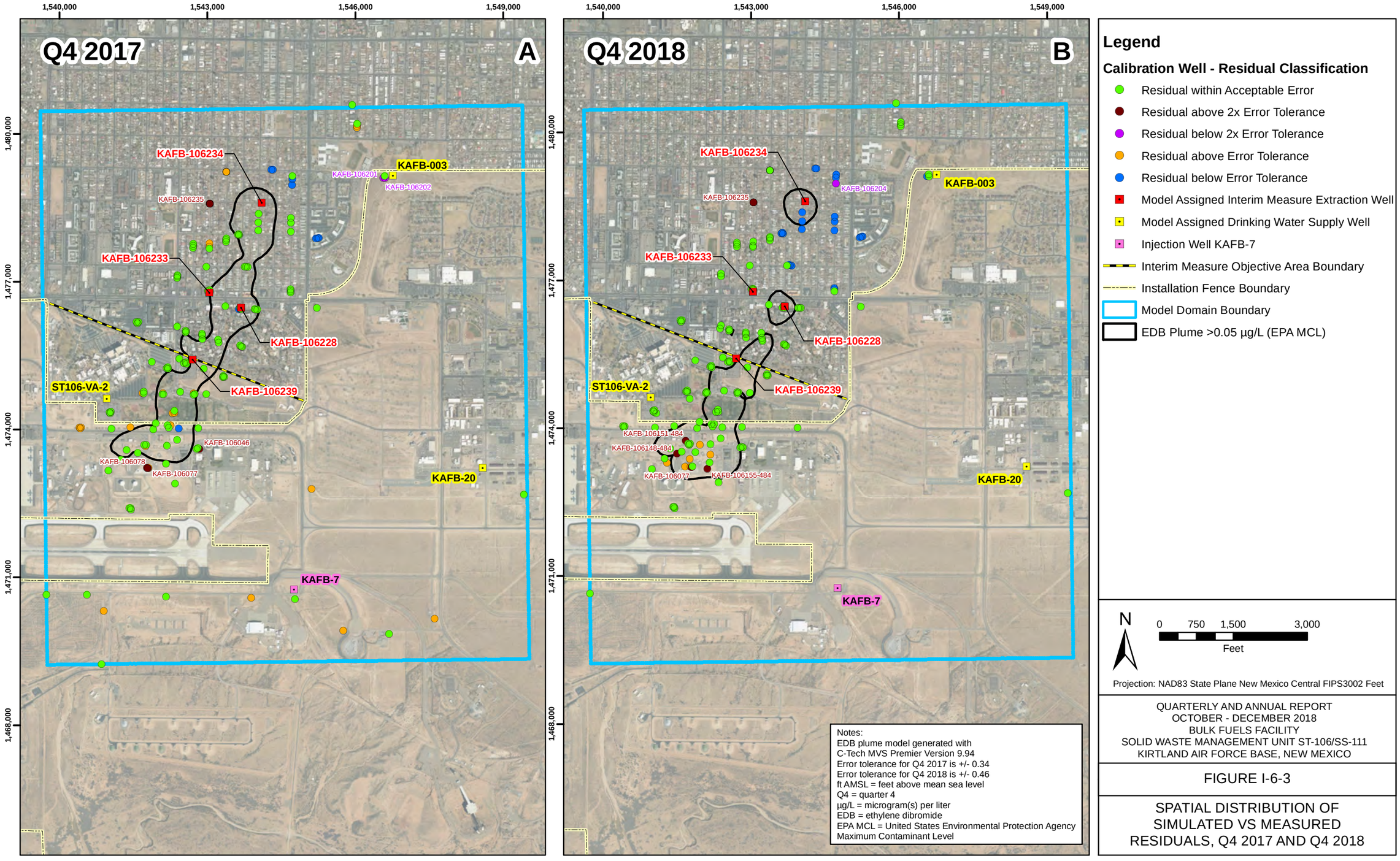
FIGURE I-6-2

Q4 2017 AND Q4 2018 NUMERICAL MODEL CALIBRATION RESULTS - SIMULATED VS MEASURED GROUNDWATER LEVELS

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q4\Appendicies\I-6-2 Q4 2017 and 2018 Calibration Plot_R1.mxd 3/6/2019 EA eomalia



Legend

Calibration Well - Residual Classification

- Residual within Acceptable Error
- Residual above 2x Error Tolerance
- Residual below 2x Error Tolerance
- Residual above Error Tolerance
- Residual below Error Tolerance
- Model Assigned Interim Measure Extraction Well
- Model Assigned Drinking Water Supply Well
- Injection Well KAFB-7
- Interim Measure Objective Area Boundary
- Installation Fence Boundary
- Model Domain Boundary
- EDB Plume >0.05 µg/L (EPA MCL)

N

0 750 1,500 3,000

Feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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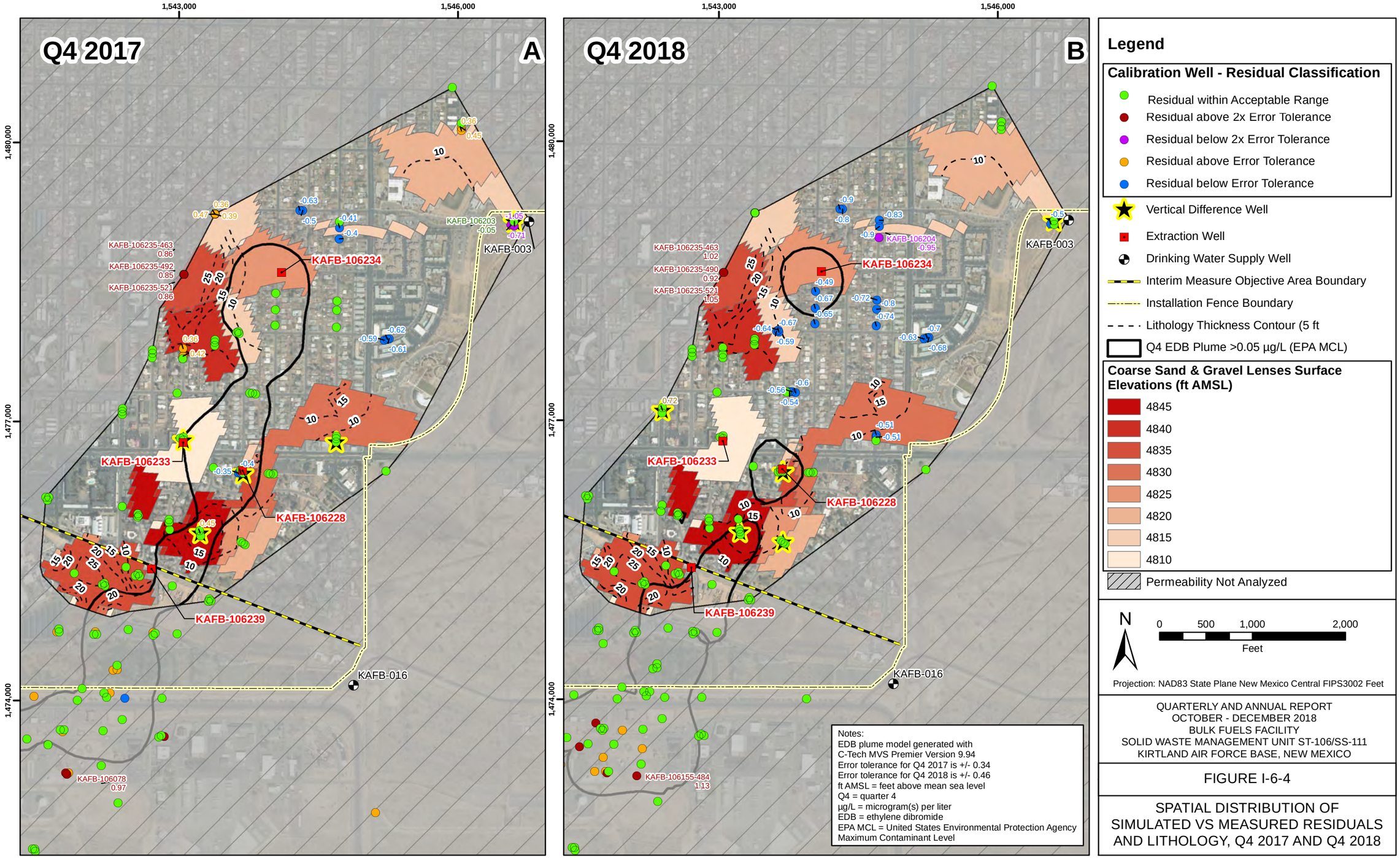
FIGURE I-6-3

SPATIAL DISTRIBUTION OF SIMULATED VS MEASURED RESIDUALS, Q4 2017 AND Q4 2018

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q4\Appendicies\I-6-3 Spatial Distribution of Calibration Errors, Q4 2017 and 2018_R1.mxd 3/6/2019 EA eomalia



Legend

Calibration Well - Residual Classification

- Residual within Acceptable Range
- Residual above 2x Error Tolerance
- Residual below 2x Error Tolerance
- Residual above Error Tolerance
- Residual below Error Tolerance

- Vertical Difference Well
- Extraction Well
- Drinking Water Supply Well
- Interim Measure Objective Area Boundary
- Installation Fence Boundary
- Lithology Thickness Contour (5 ft
- Q4 EDB Plume >0.05 µg/L (EPA MCL)

Coarse Sand & Gravel Lenses Surface Elevations (ft AMSL)

- 4845
- 4840
- 4835
- 4830
- 4825
- 4820
- 4815
- 4810

Permeability Not Analyzed

N

0 500 1,000 2,000

Feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

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FIGURE I-6-4

SPATIAL DISTRIBUTION OF SIMULATED VS MEASURED RESIDUALS AND LITHOLOGY, Q4 2017 AND Q4 2018

P:\gis\Projects\Kirtland\Figures\BFF Quarterly Report\2018_Q4\Appendicies\I-6-4 Spatial Distribution of Calibration Errors and Lithology, Q4 2017 and 2018_R1.mxd 3/6/2019 EA eomalia

TABLES

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- Q4 2018 Table I-6-1 – Estimated Water Level in Ridgecrest Well Field Wells, Q4 2018
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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

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]
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

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]
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 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 I-6-1
Horizontal Capture Analysis for the Entire Plume Volume

2016 Sample Period	Dissolved EDB Plume Segment	Capture Interval	Plume[a]		Horizontal Capture[a]		Percent Captured	
			Volume (cubic ft.)	Mass (grams)	Volume (cubic ft.)	Mass (grams)	Volume	Mass
Q2	Above Interval 4838 mid-point	Interval 4857	1.15E+08	6.01E-01	7.93E+07	1.77E-01	69.0%	29.4%
	Below Interval 4838 mid-point	Interval 4838	6.43E+07	1.88E-01	2.71E+07	2.16E-02	42.2%	11.5%
	Total		1.79E+08	7.89E-01	1.06E+08	1.98E-01	59.4%	25.1%
Q4	Above Interval 4838 mid-point	Interval 4857	1.16E+08	8.42E-01	7.64E+07	9.16E-02	66.0%	10.9%
	Below Interval 4838 mid-point	Interval 4838	6.87E+07	1.94E-01	5.77E+07	1.00E-01	83.9%	51.7%
	Total		1.85E+08	1.04E+00	1.34E+08	1.92E-01	72.7%	18.5%

[a] Plume and mass value assumes a uniform total porosity of 25% for the aquifer

Table I-6-2
Vertical Capture Analysis for the Entire Plume Volume

2016 Sample Period	Dissolved EDB Plume Segment	Capture Interval	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	Interval 4857	1.43E+08	7.47E-01	6.07E+07	1.46E-01	42.6%	19.5%
		Interval 4838	1.43E+08	7.47E-01	5.44E+07	1.34E-01	38.2%	18.0%
	Below Interval 4838 mid-point	Interval 4838	3.65E+07	4.27E-02	1.46E+07	1.03E-02	40.1%	24.0%
	Total		1.79E+08	7.90E-01	1.30E+08	2.91E-01	72.5%	36.8%
Q4	Above Interval 4838 mid-point	Interval 4857	1.43E+08	9.98E-01	6.08E+07	7.05E-02	42.5%	7.1%
		Interval 4838	1.43E+08	9.98E-01	4.31E+07	5.52E-01	30.1%	55.3%
	Below Interval 4838 mid-point	Interval 4838	4.16E+07	4.01E-02	1.71E+07	1.46E-02	41.0%	36.4%
	Total		1.85E+08	1.04E+00	1.21E+08	6.37E-01	65.5%	61.4%

[a] Plume and mass value assumes a uniform total porosity of 25% for the aquifer

Table 3-14
Comparison of Analytical Results between Bennett Pumps and Passive Samplers in Source Area Wells, Q4 2017

		Well Location ID:	KAFB-106005			KAFB-106006			KAFB-106008		
		Sample Date:	10/23/2017	10/18/2017		10/19/2017			10/20/2017		
		Field Sample ID:	GW005-174	GW005-174D		GW006-174	GW006-174D		GW008-174	GW008-174D	
		Sample Collection Method:	Bennett Pump	DMS[a]		Bennett Pump	DMS[a]		Bennett Pump	DMS[a]	
Parameter	**Analytical Method**	**Analyte**	**Project Screening Level[d]**	**Result[b]**	**Result[b]**	**Relative Percent Difference[c]**	**Result[b]**	**Result[b]**	**Relative Percent Difference[c]**	**Result[b]**	**Result[b]**	**Relative Percent Difference[c]**
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.32	0.29	10	0.014 J	0.21	175	4.1	2.5	48
VOCs	Method SW8260C (µg/L)	Benzene	5	230	300	26	37	27	31	2300	2300	0
		Ethylbenzene	700	29	35	19	3	3	0	120	190	45
		Toluene	750	4	3	29	7	0.6 J	168	1700	2000	16
		Xylenes, Total	620	63	75	17	2	< 1 U	NA	310	490	45
Total Metals	Method SW6010C (mg/L)	Calcium	NS	250	243	3	35.2	35.0	1	121	138	13
		Iron, dissolved	1.0	0.164 J	0.189 J	14	0.390 J	0.610	44	3.58	3.55 J	1
		Magnesium	NS	39.7	38.5	3	5.46	5.51	1	20.0	22.5	12
		Manganese, dissolved	0.2	0.136	0.0905	40	0.702	0.798	13	5.80	6.80	16
		Potassium	NS	5.42	5.22	4	2.08	2.01	3	3.31	3.54	7
		Sodium	NS	80.9	77.8	4	22.5	22.1	2	34.8	36.7	5
	Method SW6020A (mg/L)	Arsenic	0.01	< 0.0020 U	< 0.0020 U	NA	0.0010 J	< 0.0020 U	NA	0.00080 J	< 0.0020 U	NA
		Lead	0.015	0.00015 J	< 0.00025 U	NA	< 0.00025 U	< 0.00025 U	NA	< 0.00025 U	0.00030 J	NA
Anions	Method E300.0 (mg/L)	Bromide	NS	3.8	3.5	8	< 2.5 U	< 2.5 U	NA	1.9 J	2.0 J	5
		Chloride	250	211 J	217	3	9.7	9.3	4	16.0	16.8	5
		Sulfate	250	480	529	10	33.8	33.7	0	3.0 J	2.6 J	14
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	0.50 J	0.062 J	156	0.10 J	0.15 J	40	< 0.10 U	< 0.10 U	NA
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	167 J	134	22	107	106	1	344	371	8
		Alkalinity, carbonate (as CaCO3)	NS	< 5.0 U	< 5.0 U	NA	< 5.0 U	< 5.0 U	NA	< 5.0 U	< 5.0 U	NA
		Alkalinity, total (as CaCO3)	NS	167 J	134	22	107	106	1	344	371	8

Table 3-14
Comparison of Analytical Results between Bennett Pumps and Passive Samplers in Source Area Wells, Q4 2017

		Well Location ID:	KAFB-106014			KAFB-106059					
		Sample Date:	10/20/2017	10/19/2017		10/19/2017					
		Field Sample ID:	GW014-174	GW014-174D		GW059-174	GW059-174D		GW059-574	GW059-574D	
		Sample Collection Method:	Bennett Pump	DMS[a]		Bennett Pump	DMS[a]		Bennett Pump	DMS[a]	
Parameter	Analytical Method	Analyte	Project Screening Level[d]	Result[b]	Result[b]	Relative Percent Difference[c]	Result[b]	Result[b]	Relative Percent Difference[c]	Result[b]	Result[b]	Relative Percent Difference[c]
EDB	Method SW8011 (µg/L)	1,2-dibromoethane	0.05	0.85	4.2	133	5.9	1.0	142	6.4	1.0	146
VOCs	Method SW8260C (µg/L)	Benzene	5	160	310	64	15000	3700	121	16000	3600	127
		Ethylbenzene	700	67	45	39	870	86	164	890	86	165
		Toluene	750	170	2	195	18000	6600	93	18000	6300	96
		Xylenes, Total	620	140	2	194	3000	1700	55	3000	1600	61
Total Metals	Method SW6010C (mg/L)	Calcium	NS	67.2	54.8	20	138	113	20	137	138	1
		Iron, dissolved	1.0	< 0.200 U	< 0.200 U	NA	7.38	5.98	21	7.28	5.98	20
		Magnesium	NS	10.2	8.83	14	24.7	20.3	20	24.5	24.7	1
		Manganese, dissolved	0.2	1.19	1.91	46	4.07	3.45	16	4.08	3.49	16
		Potassium	NS	2.79	2.32	18	3.99	3.47	14	3.94	3.99	1
		Sodium	NS	30.4	25.6	17	41.1	34.8	17	40.6	42.1	4
	Method SW6020A (mg/L)	Arsenic	0.01	< 0.0020 U	< 0.0020 U	NA	0.0024 J	0.0020 J	18	0.0023 J	0.0017 J	30
		Lead	0.015	< 0.00025 U	< 0.00025 U	NA	< 0.00025 U	< 0.00025 U	NA	< 0.00025 U	< 0.00025 U	NA
Anions	Method E300.0 (mg/L)	Bromide	NS	1.8 J	1.6 J	12	2.3 J	2.2 J	4	2.3 J	2.0 J	14
		Chloride	250	55.0	23.7	80	61.4	52.6	15	61.0	47.4	25
		Sulfate	250	21.0	17.1	20	< 5.0 U	< 5.0 U	NA	< 5.0 U	3.0 J	NA
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10[e]	< 0.10 U	0.79 J	NA	< 0.10 U	< 0.10 U	NA	< 0.10 U	< 0.10 U	NA
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	165	168	2	403	382	5	406	372	9
		Alkalinity, carbonate (as CaCO3)	NS	< 5.0 U	< 5.0 U	NA	< 5.0 U	< 5.0 U	NA	< 5.0 U	< 5.0 U	NA
		Alkalinity, total (as CaCO3)	NS	165	168	2	403	382	5	406	372	9

Table 3-14
Comparison of Analytical Results between Bennett Pumps and Passive Samplers in Source Area Wells, Q4 2017

[a] Sample aliquots were collected using dual-membrane samplers.

[b] Nondetect results are reported less than the LOD.

[c] RPD is calculated as (A-B) / (A+B/2) X 100 where the Bennett pump result is A and the DMS result is B.

-- = sample not analyzed for this parameter

DMS = dual-membrane sampler

EDB = ethylene dibromide (1,2-dibromoethane)

LOD = limit of detection

LOQ = limit of quantitation

NA = RPD is not calculated if both results are nondetect or if one or both of the results are below the LOQ.

RPD = relative percent difference

VOC = volatile organic compound

Shaded = RPD value exceeds 35 percent field duplicate sample precision criteria (Kirtland AFB Quality Assurance Project Plan for Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design Solid Waste Management Unit ST-106/SS-111 (USAF 2016)

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.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 3-15
Comparison of Analytical Results between YSI and Aqua-Troll Parameter Readings for Source Area Wells, Q4 2017

		Well Location ID:		KAFB-106005			KAFB-106006			KAFB-106008			KAFB-106014		
		Sample Date:		10/23/2017	10/18/2017		10/19/2017	10/19/2017		10/20/2017	10/18/2017		10/20/2017	10/19/2017	
		Sample Depth (ft bgs):		483			486			490			490		
		Reference Elevation Interval		4857			4857			4857			4857		
Parameter	**Analyte**	**NMAC NMWQCC[a]**	**Project Screening Level[b]**	**YSI**	**Aqua-troll**	**Relative Percent Difference**	**YSI**	**Aqua-troll**	**Relative Percent Difference**	**YSI**	**Aqua-troll**	**Relative Percent Difference**	**YSI**	**Aqua-troll**	**Relative Percent Difference**
Field Parameters	Turbidity	NS	NS	10.9	3.63	100.1	2.65	1.43	59.8	9.07	1.5	143.2	3.66	3.00	19.8
	Temperature (°C)	NS	NS	18.3	19.77	7.7	19.9	20.43	2.6	17.50	19.82	12.4	18.80	19.68	4.6
	DO (mg/L)	NS	NS	0.6	0.07	156.9	2.94	.64	128.5	0.28	0.07	120.0	0.32	0.20	46.2
	Spec Cond (µS/cm)	NS	NS	2463	1590.6	43.0	334.5	329.46	1.5	882.00	967.87	9.3	618.00	467.64	27.7
	pH (S.U.)	NS	NS	7.06	7.03	0.4	7.57	7.51	0.8	6.95	6.89	0.9	7.44	7.16	3.8
	ORP (mV)	NS	NS	-154.90	-270.9	54.5	-161.10	-169.50	5.1	-113.30	-152.10	29.2	-210.60	-194.30	8.1

Table 3-15
Comparison of Analytical Results between YSI and Aqua-Troll Parameter Readings for Source Area Wells, Q4 2017

		Well Location ID:		KAFB-106059		
		Sample Date:		10/19/2017	10/19/2017	
		Sample Depth (ft bgs):		488		
		Reference Elevation Interval		4857		
Parameter	**Analyte**	**NMAC NMWQCC[a]**	**Project Screening Level[b]**	**YSI**	**Aqua-troll**	**Relative Percent Difference**
Field Parameters	Turbidity	NS	NS	1.66	273.15	197.6
	Temperature (°C)	NS	NS	20.2	19.99	1.0
	DO (mg/L)	NS	NS	0.58	.77	28.1
	Spec Cond (µS/cm)	NS	NS	1016	896.17	12.5
	pH (S.U.)	NS	NS	7.24	6.78	6.6
	ORP (mV)	NS	NS	-134.8	-77.5	54.0

Table 3-15
Comparison of Analytical Results between YSI and Aqua-Troll Parameter Readings for Source Area Wells, Q4 2017

[a] NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2004). For metals,

[b] The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

µg/L = microgram per liter
µS/cm = microsiemens per centimeter
ºC = degree Celsius
EPA = U.S. Environmental Protection Agency
ID = identification
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
REG = normal field sample
Spec Cond = Specific Conductivity
S.U. = standard unit

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Monitoring Well Objective[h,g]
Newly Added Wells[a]					
KAFB-106041[b,d]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106149-484[b,e]	EDB, metals anions, alkalinity	BTEX, EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106151-484[b,e]	EDB, metals anions, alkalinity	BTEX, EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106152-484[b,e]	EDB, metals anions, alkalinity	BTEX, EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106153-484[b,e]	EDB, metals anions, alkalinity	BTEX, EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106235-463[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106235-492[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106235-521[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106236-461[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106236-490[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	NA
KAFB-106236-519[b,f]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106240-449[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106241-428[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106242-418[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106243-425[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106244-445[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
KAFB-106245-460[b,g]	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, metals anions, alkalinity	EDB, VOCs, metals anions, alkalinity	NA
Groundwater Monitoring Wells[a]					
KAFB-106001	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106002	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106003	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106004	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106005[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106006	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106007	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106008	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106009[b]	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	BTEX, EDB, metals, anions, alkalinity	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106010	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106011	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106012R	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, metals, anions, alkalinity, FP	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106013	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106014	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106015[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106016	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106017	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106018	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106019	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106020	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106021[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106022[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106023[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106024	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106025[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106026[c]	--	--	--	--	Groundwater Monitoring
KAFB-106027	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106028	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106029[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106030[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Monitoring Well Objective[h,g]
Groundwater Monitoring Wells[a]					
KAFB-106031[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106032[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106033[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106034[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106035[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106036[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106037[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106038	None	BTEX, Naphthalene, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Signal
KAFB-106039	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106040	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106042[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106043[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106044	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106045	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106046	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106047	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106048	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106049[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106050[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106051[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106052[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106053[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106054[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106055[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106057[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106058[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106059	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106060	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106061	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106062	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106063	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106064	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106065	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106066	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106067	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106068	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106069	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106070[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106071[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106072[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106073	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106074	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106075	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106076	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106077	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106078	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106079[b]	None	BTEX, EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Source Area
KAFB-106080	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Monitoring Well Objective[h,g]
Groundwater Monitoring Wells[a]					
KAFB-106081	None	BTEX, EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Source Area
KAFB-106082	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106083	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106084	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106085[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106086[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106087[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106088[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106089[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106090[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106091[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106092[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106093[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106094	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106095[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106096	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring
KAFB-106097	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106098	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106099	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106100	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106101	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106102	BTEX, EDB, FP	BTEX, EDB, metals, anions, alkalinity, FP	BTEX, EDB, FP	EDB, VOCs, metals, anions, alkalinity, FP	VA Proximal
KAFB-106103[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106104[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106105[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106106[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106107[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106201[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106202[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106203[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106204[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106205[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106206[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106207[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106208[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106209[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106212[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106213[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106214[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106215[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106216[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106217[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106218[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106219[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106220[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106221[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106222[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal

Table 3-1
Groundwater Monitoring Program

Location ID	1st Quarter (January-March)	2nd Quarter Semiannual (April-June)	3rd Quarter (July-September)	4th Quarter Annual (October-December)	Former Well Designation and Monitoring Well Objective[h,g]
Groundwater Monitoring Wells[a]					
KAFB-106223[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106224[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106225[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106226[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106227[b]	None	EDB, metals, anions, alkalinity	None	EDB, VOCs, metals, anions, alkalinity	Groundwater Monitoring
KAFB-106230[c]	--	--	--	--	Groundwater Monitoring
KAFB-106231[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-106232[b]	EDB	EDB, metals, anions, alkalinity	EDB	EDB, VOCs, metals, anions, alkalinity	Downgradient Proximal
KAFB-3411	None	EDB, metals, anions, alkalinity, FP	None	EDB, VOCs, metals, anions, alkalinity, FP	Groundwater Monitoring

Table 3-1
Groundwater Monitoring Program

[a] The groundwater monitoring network consists of 149 wells that are currently sampled under Solid Waste Management Unit ST106/SS-111. Select wells are identified for additional or more frequent monitoring of risk-driving constituents. Metals analysis consists of select total metals (arsenic, calcium, lead, potassium, magnesium, and sodium) and select dissolved metals (iron and manganese). Anions analysis consists of bromide, chloride, nitrate/nitrite nitrogen, and sulfate. Field parameters include pH, specific conductivity, dissolved oxygen, oxidation reduction potential, temperature, and turbidity.

[b] Well sampled with passive sampling methodology; field parameter measurements are not representative and therefore are not collected.

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

[d] Newly added to the groundwater monitoring network in fourth quarter 2017.

[e] Newly added to the groundwater monitoring network in first quarter 2018.

[f] Newly installed groundwater monitoring well that was completed in fourth quarter 2016.

[g] Newly installed groundwater monitoring well that was completed in third quarter 2018.

[h] In previous reports, groundwater monitoring wells were designated based on their location related to groundwater gradient and the EDB plume or on their location, i.e. “downgradient”, “source area”, etc. However, due to the changing regional groundwater gradient (see Quarter 2 2018 Quarterly Monitoring Report [USACE 2018]), these designations are not always appropriate. To simplify and more accurately represent dynamic hydrologic conditions, all groundwater monitorings wells will be designated simply as “groundwater monitoring well” after completing a baseline sampling of four quarters. Prior to the baseline sampling, the wells will be designated as "newly added".

[g] Monitoring Well Objective:
Newly Added Wells—Newly added wells can include both existing wells that are added to the GWM network as well as newly installed wells. Newly added GWM wells require a minimum of four consecutive quarters of baseline full-suite analytical sampling before receiving a designation that determines the long-term sampling regime. These wells have been added to define the plume boundaries and provide additional water table monitoring due to the rising groundwater elevation.

Source Area Wells—Primarily located in the BFF south of Randolph Road SE and proximal to the spill site on-Base. Sampled during Q2 and Q4. These wells monitor the higher concentrations of dissolved-phase plumes on-Base.

Downgradient Proximal Wells—Located north of Ridgecrest Drive SE surrounding the historical EDB plume to the west, north, and east into the distal portion of the GWM network. Analytical data for these wells have been historically below the maximum contaminant level (MCL) for EDB. Sampled every quarter. These wells assist in plume boundary definition.

Veterans Affairs (VA) Proximal Wells—Three sets of nested wells located between the historical EDB plume south of Ridgecrest Drive SE and the Raymond G. Murphy VA Medical Center as a means to detect any potential contaminant migration towards the VA medical campus. Sampled every quarter. These wells provide additional wellhead protection monitoring for the VA supply well.

Signal Wells—Three wells located along the south side of Ridgecrest Drive SE to monitor benzene, toluene, ethylbenzene, and total xylenes (BTEX) and provide early indication if the benzene plume is migrating from the source area into the interim measure target area capture zone created by the groundwater extraction wells. Sampled during Q2 and Q4.

Groundwater Monitoring Wells—Primarily location north of Ridgecrest Drive SE within the historical footprint of the EDB plume. Analytical data from these wells serve to define the volume and mass of the EDB plume throughout the GWM network. Sampled in Q2 and Q4.

BTEX = benzene, toluene, ethylbenzene, and total xylenes

EDB = ethylene dibromide

FP = field parameter
ID = identification

NA = not applicable

VOC = volatile organic compound

USACE. 2018. *Quarterly Monitoring Report April-June 2018, Bulk Fuels Facility, SWMU ST-106/SS-111.*
Prepared by EA Engineering, Science, and Technology, Inc., PBC for the USACE–Albuquerque District under USACE Contract No. W912WR-12-D-0006. September.

Table I-6-1
Estimated Water Level in Ridgecrest Well Field Wells, Q4 2018

Well	Q4 2017 Water-Level (ft above NAVD88)	Q4 2018 Water-Level (ft above NAVD88)	Distance to Trumbull (miles)	Distance to Del Sol Divider (miles)	Data Type
Montessa Site-B	4877.2	4878.7	na	na	Measured
Jerry Cline-C	4877.3	4877.3	na	na	Measured
Del Sol Divider-3	4880.8	4883.3	na	na	Measured
Trumbull-1A	4870.5	4872.2	na	na	Measured
Ridgecrest 3	4867.3	4868.7	0.70	2.94	Estimated
Ridgecrest 4	4865.4	4866.7	0.73	2.22	Estimated
Ridgecrest 5	4869.2	4870.8	0.27	2.40	Estimated

Notes:
ft = foot/feet
NAVD88 = North American Vertical Datum of 1988

Table I-6-2
Summary of KAFB-106228 Aquifer Test Analysis

Well ID	Radial Distance to the Pumping Well (r, ft)	Reference Elevation Interval (ft amsl)	Maximum Displacement During Pumping (ft)	Drawdown or Recovery	Aquifer Transmissivity (T, ft^2/day)	Hydraulic Conductivity (Kh, ft/day)	Specific Yield (Sy, dimensionless)	Storativity (S, dimensionless)	Specific Storage (Ss, per ft)	Vertical to Horizontal Anisotropy Ratio (VANI, dimensionless)
KAFB-106035	58	4857	0.56	Drawdown (Pumping)	52,000	170	0.29	0.63	2.1E-03	0.003
				Recovery (Agarwal plot)	53,000	180	0.11	0.75	2.5E-03	0.001
KAFB-106213	275	4857	0.27	Drawdown (Pumping)	59,000	200	0.04	0.034	1.1E-04	0.02
KAFB-10622	321	4857	0.21	Drawdown (Pumping)	79,000	260	0.16	0.15	5.0E-04	0.002
				Recovery (Agarwal plot)	94,000	310	0.25	0.094	3.1E-04	0.01
KAFB-106036	40	4838	0.66	Drawdown (Pumping)	44,000	150	0.25	0.20	6.7E-04	0.05
				Recovery (Agarwal plot)	45,000	150	0.16	0.26	8.7E-04	0.03
KAFB-106214	296	4838	0.24	Recovery (Agarwal plot)	87,000	290	0.013	0.046	1.5E-04	0.002
KAFB-106212	24	4814	0.97	Drawdown (Pumping)	17,000	60	0.05	0.0009	3.0E-06	0.01
				Recovery (Agarwal plot)	15,000	50	0.11	0.0022	7.3E-06	0.04
KAFB-106037	32	4838	1.15	Drawdown (Pumping)	31,000	100	0.10	0.013	4.3E-05	0.03
				Recovery (Agarwal plot)	30,000	100	0.10	0.014	4.7E-05	0.03
KAFB-106215	330	4814	0.20	Recovery (Agarwal plot)	52,000	170	0.0046	0.0058	1.9E-05	0.02

Table modified from Aquifer Test Report for Groundwater Extraction Well KAFB-106228, Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111, Kirtland Air Force Base, New Mexico (USACE, 2016).
amsl = above mean sea level
ft = foot/feet
ID = identification
USACE = U.S. Army Corps of Engineers

USACE. 2016. Aquifer Test Report for Groundwater Extraction Well KAFB-106228, Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111, Kirtland Air Force Base, New Mexico. Prepared by CB&I Federal Services for the USACE-Albuquerque District under USACE Contract No. W912DY-10-D-0014. July.

Table I-6-3
Model Simulation Comparison Q4 2017 and Q4 2018

Horizontal Hydraulic Conductivity (ft/day)	2017 Q4 Simulation Results	Vertical Anisotropy				
		0.001	0.005	0.01	0.03	0.05
80	RMSD	NA	NA	NA	0.442	NA
	NRMSD				13.0%	
90	RMSD	NA	NA	NA	0.373	NA
	NRMSD				10.9%	
100	RMSD	0.450	0.375	0.351	0.335	0.334
	NRMSD	13.2%	11.0%	10.3%	**9.8%**	**9.8%**
	KAFB-106037	-0.67	-0.50	-0.40	**-0.25**	**-0.19**
	KAFB-106092	-0.58	-0.40	**-0.29**	**-0.12**	**-0.05**
	KAFB-106203	-0.36	-0.36	-0.36	-0.35	-0.35
110	RMSD	0.409	0.344	0.326	0.318	0.319
	NRMSD	12.0%	10.1%	**9.6%**	**9.3%**	**9.4%**
	KAFB-106037	-0.41	**-0.27**	**-0.18**	**-0.04**	**0.01**
	KAFB-106092	**-0.29**	**-0.14**	**-0.05**	**0.11**	**0.17**
	KAFB-106203	**-0.19**	**-0.19**	**-0.19**	**-0.18**	**-0.18**
120	RMSD	0.388	0.332	0.320	0.317	0.320
	NRMSD	11.4%	**9.7%**	**9.4%**	**9.3%**	**9.4%**
	KAFB-106037	**-0.20**	**-0.07**	**0.00**	**0.13**	**0.18**
	KAFB-106092	**-0.06**	**0.07**	**0.16**	**0.29**	0.36
	KAFB-106203	**-0.05**	**-0.05**	**-0.05**	**-0.04**	**-0.04**
130	RMSD	0.382	0.333	0.325	0.326	0.329
	NRMSD	**11.2%**	**9.8%**	**9.5%**	**9.6%**	**9.6%**
	KAFB-106037	**-0.02**	**0.09**	**0.16**	**0.27**	**0.31**
	KAFB-106092	**0.14**	**0.25**	**0.33**	0.45	0.51
	KAFB-106203	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**
140	RMSD	0.386	0.342	0.336	0.340	0.343
	NRMSD	11.3%	10.0%	**9.9%**	10.0%	10.1%
	KAFB-106037	**0.13**	**0.23**	**0.29**	0.39	0.43
	KAFB-106092	**0.31**	0.41	0.47	0.59	0.64
	KAFB-106203	**0.17**	**0.17**	**0.17**	**0.17**	**0.18**
150	RMSD	0.396	0.355	0.351	0.356	0.359
	NRMSD	11.6%	10.4%	10.3%	10.4%	10.5%
	KAFB-106037	**0.27**	0.35	0.41	0.50	0.54
	KAFB-106092	0.46	0.54	0.60	0.71	0.76
	KAFB-106203	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**
175	RMSD	NA	NA	NA	0.394	NA
	NRMSD				11.6%	
200	RMSD	NA	NA	NA	0.432	NA
	NRMSD				12.7%	
250	RMSD	NA	NA	NA	0.491	NA
	NRMSD				14.4%	
300	RMSD	NA	NA	NA	0.534	NA
	NRMSD				15.7%	

Horizontal Hydraulic Conductivity (ft/day)	2018 Q4 Simulation Results	Vertical Anisotropy				
		0.001	0.005	0.01	0.03	0.05
80	RMSD	NA	NA	NA	0.545	NA
	NRMSD				11.9%	
90	RMSD	NA	NA	NA	0.513	NA
	NRMSD				11.2%	
100	RMSD	0.545	0.499	0.484	0.466	0.461
	NRMSD	11.9%	10.9%	10.5%	10.2%	10.0%
	KAFB-106037	**-0.39**	**-0.35**	**-0.30**	**-0.21**	**-0.17**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	**-0.07**	**-0.06**	**-0.06**	**-0.06**	**-0.06**
110	RMSD	0.518	0.466	0.451	0.436	0.433
	NRMSD	11.3%	10.1%	**9.8%**	**9.5%**	**9.4%**
	KAFB-106037	**-0.19**	**-0.17**	**-0.12**	**-0.05**	**-0.01**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	**0.10**	**0.10**	**0.10**	**0.11**	**0.11**
120	RMSD	0.503	0.445	0.431	0.419	0.416
	NRMSD	10.9%	**9.7%**	**9.4%**	**9.1%**	**9.1%**
	KAFB-106037	**-0.03**	**-0.01**	**0.02**	**0.09**	**0.13**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	**0.24**	**0.24**	**0.24**	**0.24**	**0.24**
130	RMSD	0.496	0.434	0.421	0.410	0.407
	NRMSD	10.8%	**9.5%**	**9.2%**	**8.9%**	**8.9%**
	KAFB-106037	**0.11**	**0.12**	**0.15**	**0.21**	**0.24**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	**0.36**	**0.36**	**0.36**	**0.36**	**0.36**
140	RMSD	0.496	0.429	0.416	0.406	0.404
	NRMSD	10.8%	**9.3%**	**9.1%**	**8.8%**	**8.8%**
	KAFB-106037	**0.23**	**0.23**	**0.25**	**0.31**	**0.34**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	0.46	0.46	0.46	0.46	0.46
150	RMSD	0.499	0.429	0.416	0.407	0.405
	NRMSD	10.9%	**9.3%**	**9.0%**	**8.9%**	**8.8%**
	KAFB-106037	**0.34**	**0.32**	**0.35**	**0.40**	**0.42**
	KAFB-106092	NA	NA	NA	NA	NA
	KAFB-106203	0.55	0.55	0.55	0.55	0.55
175	RMSD	NA	NA	NA	0.411	NA
	NRMSD				**8.9%**	
200	RMSD	NA	NA	NA	0.431	NA
	NRMSD				**9.4%**	
250	RMSD	NA	NA	NA	0.468	NA
	NRMSD				10.2%	
300	RMSD	NA	NA	NA	0.497	NA
	NRMSD				10.8%	

Calibration Criteria: NRMSD less than 10%; absolute simulated head error at extraction well drawdown monitoring wells less than 0.34 feet (2017 Q4) and 0.46 feet (2018 Q4).

Bold text indicates value meets calibration criteria

Light shading indicates simulation meets all calibration criteria

Dark shading identifies best-fit simulation (used to estimate capture)