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COVER SHEET

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AIR FORCE RESPONSE TO TECHNICAL REVIEW COMMENTS

Lahontan Regional Quality Control Board Comments on
Draft Data Gap Well Installation and Soil Sampling Report, Non-CERCLA Site OT071, Former George Air Force Base, Victorville, San Bernardino County

August 2017

Responses to the Lahontan Regional Water Quality Control Board (RWQCB) comments on the Draft Data Gap Well Installation and Soil Sampling Report, Non-CERCLA Site OT071, Former George Air Force Base, Victorville, San Bernardino County, in a letter to the US Air Force (Air Force) dated February 10, 2017:

Text Comment
The following comments are provided so that future versions of the Report will more effectively document the results of the data gap investigation. Please incorporate the suggested changes and provide a response to comments table. Water Board staff also recommends that the Air Force provide a Word file with tracked changes for the text when the next version of the Report is issued to facilitate document finalization.

Response
As requested a response to comments table is provided below. The Air Force will provide a Word file with tracked changes for the text in the next version of the Report.

Item	Section, Page	Comment	Response
Response to General Comment			
1.	General Comment 1	One of the primary objectives of the Report was to fill data gaps that were identified at Site OT071. Five wells were installed to further characterize the lateral and vertical extent of the dieldrin plume. The draft Report was issued in December 2016 without including the analytical results for groundwater samples collected from the five new wells in October 2016. We understand that these groundwater data have now been validated and request that	It is true that groundwater data were not included in the draft report because the validated data were not available at the time the report was published. Validated data are now available and the results have been incorporated into the revised Data Gap Report. The Annual Groundwater Monitoring (AGWM) Report, in preparation, will include the analytical results for groundwater samples collected from the five new wells and isoconcentration maps for dieldrin in the Upper and Lower Aquifers for wells sampled during the October 2016 groundwater sampling event.

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		the draft final version of the Report be revised to include 1) the analytical results for groundwater samples collected from the five new wells, 2) an isoconcentration map for dieldrin in the Upper Aquifer for all wells sampled during the October 2016 groundwater sampling event, and 3) an isoconcentration map for dieldrin in the Lower Aquifer for all wells sampled during the October 2016 groundwater sampling event. While these requested elements may also be included in the next Basewide Annual Groundwater Monitoring (AGM) Report, the AGM reports are issued as final and typically not until May or June of the following year, preventing the timely reconciliation of any identified issues. Including these elements in the Report will allow the Air Force to proceed with the revised PCAP in a more timely manner.	
Responses to Specific Comments			
1.	**Specific Comment 1, Page 3-3, 4th Paragraph, 2nd Sentence.**	There appears to be an error in the screen slot size: change “0.20-inch” to “0.02-inch” to be consistent with the well completion information on the corresponding boring log in Appendix B.	The text has been revised to change 0.20-inch” to “0.02-inch.
2.	**Specific Comment 2, Page 3-4, 2nd Paragraph, 2nd Sentence.**	Please change “0.20-inch” to “0.02-inch” to be consistent with the well completion information on the corresponding boring log in Appendix B.	The text has been revised to change 0.20-inch” to “0.02-inch.
3.	**Specific Comment 3, Page 3-5, 2nd Paragraph, 2nd Sentence.**	Please change “0.20-inch” to “0.02-inch” to be consistent with the well completion information on the corresponding boring log in Appendix B.	The text has been revised to change 0.20-inch” to “0.02-inch.
4.	**Specific Comment 4,**	Please change “0.20-inch” to “0.02-inch” to be	The text has been revised to change 0.20-inch” to “0.02-inch.

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	Page 3-6, 2nd Paragraph, 2nd Sentence.	consistent with the well completion information on the corresponding boring log in Appendix B.	
5.	**Specific Comment 5, Page 3-6, 6th Paragraph, 2nd Sentence.**	Please change "0.20-inch" to "0.02-inch" to be consistent with the well completion information on the corresponding boring log in Appendix B.	The text will be revised to change 0.20-inch" to "0.02-inch.
6.	**Specific Comment 6, Page 4-1, 3rd Paragraph, 3rd Bullet.**	This bullet states that the detection limits were higher than expected, so the method was used on additional samples. Please provide further explanation on the cause of the elevated detection limits. For example, were the detection limits elevated due to matrix interference effects? Were the detection limits elevated when the additional samples were analyzed by this method?	The bullet has been updated as follows: *"The filtrate from each leached sample were filtered through 0.7-micron and 0.45-micron filter and analyzed by SW846 1312 8081A for dieldrin only. In order to achieve lower reporting limits, the filtrate for several leached samples were selected to be analyzed for SPLP dieldrin by SW846 1312 8270(D) TQ (Modified). Table 4-2 provides the results of the dieldrin analyses (both total and leached results) for comparison."*
7.	**Specific Comment 7, Page 4-2, Table 4-2.**	Please explain the "—" symbol in the table, either as a footnote to the table or in the text. Apparently, it was not always possible to analyze dieldrin as total, amount that passed the 0.70 micron filter, and amount that passed the 0.45 micron filter due to limited sample volume.	See updated Table 4-2. "—" replaced with "Insufficient sample volume"
8.	**Specific Comment 8, Page 4-2, 1st Paragraph.**	Please add a new bullet to describe that the dieldrin concentrations detected in soil in 2016 at locations where previously high concentrations were detected in 2008 were consistently lower than the earlier results, but still exceeded the residential Regional Screening Levels (RSLs) for dieldrin in soil. This is an important point to document for the conceptual site model that will be updated in the revised PCAP.	A new bullet has been added which states: *"The "Total" dieldrin concentrations detected in soil in 2016 at locations where previously high concentrations were detected in 2008 were consistently lower than the earlier results, but still exceeded the residential Regional Screening Levels (RSLs) for dieldrin in soil."*
9.	**Specific Comment 9, Page 5-1, 1st**	This portion of Section 5.0 (Discussion) states that "Additional characterization of the lateral	The sentence *"Additional characterization of the lateral and vertical extent of the Dieldrin plume will be presented in later*

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	Paragraph, 3rd Sentence.	and vertical extent of the Dieldrin plume will be presented in later documents once the modeling is completed. As described in General Comment 1, staff recommend that that the groundwater sampling results for the five new wells be presented in this Report. Please revise the text accordingly.	*documents once the modeling is completed."* has been removed and a presentation of analytical results from groundwater sampling and a discussion of the extent of contamination observed in the new wells has been added in Sections 4.3 and 5.3.
10.	**Specific Comment 10, Page 5-1, 3rd Paragraph.**	This section provides an interpretation for the depth of the top of the Middle Lacustrine Unit (MLU) at new well MW-159. Please add text to clarify that 1) the Upper Aquifer occurs above the MLU contact, 2) most of the screen was installed in the MLU (not the Upper Aquifer as proposed), and 3) why the newly installed well is representative of the Upper Aquifer.	The following sentence has been added to the end of the referenced paragraph to address point 1: *"The Upper Aquifer occurs above the MLU contact at 91 feet bgs (2,746 feet msl)."* The remaining two points are addressed in the related paragraphs in Section 5.2. Which has been revised to describe the well as installed in the MLU/PLZ. Although situated in the MLU the water level measurements for the well are close to levels expected for the Upper Aquifer. Because the Upper Aquifer is thin to nonexistent at this location the water in the well is thought to represent the uppermost water.
11.	**Specific Comment 11, Page 5-1, 4th Paragraph.**	This section provides an interpretation for the depth at new well MW-160 where the top of the MLU occurs (~163 feet). Please add text to clarify that 1) the Upper Aquifer occurs above the MLU contact, 2) the screen was installed entirely within the MLU (not the Upper Aquifer as proposed), and 3) why the newly installed well is representative of the Upper Aquifer.	The following sentence has been added to the end of the referenced paragraph to address point 1: *"The Upper Aquifer/MLU contact occurs at 163 feet bgs (2,727 feet msl)."* The remaining two points are addressed in the related paragraphs in Section 5.2, which has been revised to describe the well as installed in the MLU/PLZ. Although situated in the MLU the water level measurements for the well are close to levels predicted by Upper Aquifer contouring. Because the Upper Aquifer is thin to nonexistent at this location the water in the well is thought to represent the uppermost water.

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12.	**Specific Comment 12, Page 5-1, 5th Paragraph.**	Well MW-161 was installed to provide a Lower Aquifer well adjacent to Upper Aquifer well MW-160. Please add text to clarify 1) the depth to the Upper Aquifer – MLU contact (~163 feet) based on the more complete stratigraphic profile collected during the drilling of the adjacent well MW-160, 2) the depth to the MLU – Lower Aquifer contact (~195 feet), 3) the screen installed from ~291 to 311 feet below grade was installed entirely within the Lower Aquifer.	The text of the paragraph has been revised to state: *"The soil boring at MW-161 was drilled adjacent to MW-160 and the detailed logging from MW-160 is used here. Based on the detailed log of MW-160 the Upper Aquifer/MLU contact is located at a depth of 163 feet bgs. The boring log for MW-161 indicates that from 186 to 195 feet bgs, lean clay forms the lower portion of the MLU. Below 195 feet bgs, silty or clayey sand was observed to 245, where sandy lean clay is at the top of an interbedded series of sands and clays to a depth of 312 feet. The units below 195 feet (2,695 feet msl) are part of the Lower Aquifer."*
13.	**Specific Comment 13, Page 5-2, 1st Paragraph.**	Well MW-162 was installed to provide a Lower Aquifer well at this location. The first paragraph provides an interpretation for the depth interval at new well MW-162 for the MLU (~148-200 feet below grade). Please add text to clarify that 1) the Upper Aquifer occurs above the MLU (above 148 feet below grade), 2) the Lower Aquifer occurs below the MLU (below 200 feet below grade), and 3) the well screen was installed entirely within the Lower Aquifer.	The text of the paragraph has been revised to state: *"The soil boring at MW-162 was observed to be predominantly sand from the surface to 49 feet bgs, with mostly silt and silty sand to 148 feet bgs. This interval is a part of the Upper Aquifer. From 148 feet bgs to 200 feet bgs, several 3- to 5-foot thick beds of clay were observed. This interval is interpreted to be the MLU. Beneath the MLU, silty sands predominate to a depth of 290 feet bgs, where clay exists at the bottom of the screened interval as a depth of 305 feet. This interval is part of the Lower Aquifer."* The related paragraph in Section 5.2 has been revised to add *"The screen was installed from 2,587 to 2,607 feet msl, entirely within the Lower Aquifer."*
14.	**Specific Comment 14, Page 5-2, 2nd Paragraph.**	Well MW-163 was installed to provide a Lower Aquifer well at this location. The second paragraph provides an interpretation for the bottom of the MLU, which at this eastern location appears to grade laterally into the Permeable Lacustrine Zone (PLZ). Please add text to clarify that 1) the Lower Aquifer	The text of the paragraph has been revised to state: *"The soil boring at MW-163 was observed to have predominantly silty sand from the surface to a depth of 77 feet. Below that depth, thin clay layers are interspersed with the sandy silt/silty sand. A thicker clay interval was observed from 106 to 119 feet bgs. This thicker clay is interpreted to form the*

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		occurs below the MLU/PLZ (below ~ 119 feet below grade), 2) the lithologic distinction between the MLU/PLZ and the Lower Aquifer becomes less pronounced at locations like MW-163 as fine-grained layers pinch out and become less common to the east, 3) the well screen was installed mostly within the Lower Aquifer, and 4) why the screened interval at this location produced a water level intermediate between the levels measured in the Upper and Lower Aquifer in areas further west.	*bottom of the MLU. The lithologic distinction between the MLU/PLZ and the Lower Aquifer becomes less pronounced at locations like MW-163 as fine-grained layers pinch out and become less common on the east side of the site, The interval below 119 feet is mostly a well-graded sand to a depth of 137 feet. This interval is part of the Lower Aquifer."* The related paragraph in Section 5.2 has been revised to add: *"MW-163 was located adjacent to MW-149 to assess the groundwater at the top of the Lower Aquifer water table. The screen was installed from 2,597 to 2,617 feet msl, mostly within the Lower Aquifer. The uppermost three feet of the screened interval are within the MLU/PLZ. The water level elevation at MW-163 was measured at 2,661.06. Figure 4-2 shows that the water level measured at MW-163 stabilized more than 40 feet higher than the water level predicted by contouring during past monitoring events. An evaluation of vertical gradients in the vicinity of MW-163 shows that the seemingly anomalous water levels in MW-163 may simply be the result of strong downward gradients between the Upper Aquifer and deeper parts of the Lower Aquifer (Figure 2-5). The vertical gradient between NZ-123 (Upper Aquifer) and MW-163 is (2,682.81-2,616.11)/(2,680.7-2,597.0) = 0.26 downward. The vertical gradient between MW-163 and MW-149 (deeper part of Lower Aquifer) is (2,661.06-2,616.11)/(2,597.0-2,496.0) = 0.44 downward. The location of MW-163 is likely to be in one of the areas where water from the Upper Aquifer migrates directly to the Lower Aquifer producing a water level intermediate between the levels measured to the west in the two aquifers. A similar rational can be used for the inclusion of MW-148 in the Lower Aquifer water levels (e.g., the Upper Aquifer is migrating to the lower aquifer and the anomalous water level is a result of a downward gradient). If the levels at MW-163 and MW-148 are used as part of the Lower Aquifer contouring, this result causes*

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			a pronounced mound at MW-148 and MW-163 (Figure 4-2). Deposition of abundant sands and silts from the north and east created a more permeable sequence of lacustrine sediments, the PLZ, where water from the Upper Aquifer is able to migrate to the Lower Aquifer (MWH, 2011). One other possible mechanism for this downwards flow is migration through a clastic dike through the MLU. "
15.	**Specific Comment 15, Page 5-2, 4th Paragraph, 1st Sentence.**	This sentence states that "MW-159 was screened across the top of the Upper Aquifer to…" As discussed in Specific Comment 12, most of the screen was installed in the MLU. Please revise the text accordingly.	The text of the paragraph has been revised to state: *"MW-159 was screened across the top of the uppermost water (assumed to be the Upper Aquifer) Southeast of NZ-120 to assess the groundwater mound and possible migration into the Lower Aquifer. The screen was installed from 2,732 to 2,752 feet msl. Six feet of the screen extends above Upper Aquifer/MLU contact and 15 feet of the screen was installed in the MLU. The Upper Aquifer at this location is thin to non-existent. The water level elevation at MW-159 was measured at 2,735.69 in October 2016. The water table surface at that elevation is within the MLU/PLZ portion of the screened interval. Figure 4-1 shows that the water level measured at MW-159 is very close to the water level predicted by Upper Aquifer contouring in past monitoring events. The mound created by the measurement at NZ-120 is confirmed by the MW-159 measurement. The newly installed well is considered to be representative of the uppermost water (Upper Aquifer/MLU)."*
16.	**Specific Comment 16, Page 5-2, 5th Paragraph, 1st Sentence.**	Please revise the text as follows: "MW-160 was located south of NZ-125 and paired with MW-161 to assess the southeastern portion of the Upper Aquifer plume."	The text has been revised as requested.
17.	**Specific Comment 17, Page 5-2, 5th Paragraph, 4th Sentence.**	This sentence states that "MW-160 is located in the proposed position and is screened in the aquifer to monitor…" As noted in Specific Comment 13, the screen was installed entirely within the MLU. Please revise the text	The text of the paragraph has been revised to state: *"MW-160 was located south of NZ-125 and paired with MW 161 to assess the southeastern portion of the Upper Aquifer plume. The Upper Aquifer is very thin at this location (between*

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		accordingly.	*1 and 2 feet). Because groundwater was initially observed lower in the well boring at 170 feet bgs, the screen was installed entirely within the MLU. The water level elevation at MW-160 was measured at 2,731.51 in October 2016. Figure 4-1 shows that the water level measured at MW-160 is very close to the water level predicted by Upper Aquifer contouring during past monitoring events. Because the top of the screen is within three and one half feet from the top of the water table, the newly installed well is considered to be representative of the uppermost water (Upper Aquifer/MLU).”*
18	**Specific Comment 18, Page 5-3, 3rd Paragraph.**	Please revise this paragraph based on Specific Comment 16. Considering that the stratigraphic distinction between the MLU/PLZ and the Lower Aquifer becomes less distinct at the location of this well and the measured groundwater level is between the water levels measured in the Upper and Lower Aquifer in adjacent areas to the west, it probably does not make sense to include the groundwater level measured in MW-163 in the contouring of the Lower Aquifer.	Per Comment #7 by the DTSC below, the contours on Figure 4-2 are show as including the water levels for MW-148 and MW-163. The text of the paragraph has been revised to state: *“MW-163 was located adjacent to MW-149 to assess the groundwater at the top of the Lower Aquifer water table. The screen was installed from 2,597 to 2,617 feet msl, mostly within the Lower Aquifer. The uppermost three feet of the screened interval are within the MLU/PLZ. The water level elevation at MW-163 was measured at 2,661.06. Figure 4-2 shows that the water level measured at MW-163 stabilized more than 40 feet higher than the water level predicted by contouring during past monitoring events. An evaluation of vertical gradients in the vicinity of MW-163 shows that the seemingly anomalous water levels in MW-163 may simply be the result of strong downward gradients between the Upper Aquifer and deeper parts of the Lower Aquifer (Figure 2-5). The vertical gradient between NZ-123 (Upper Aquifer) and MW-163 is (2,682.81-2,616.11)/(2,680.7-2,597.0) = 0.26 downward. The vertical gradient between MW-163 and MW-149 (deeper part of Lower Aquifer) is (2,661.06-2,616.11)/(2,597.0-2,496.0) = 0.44 downward. The location of MW-163 is likely to be in one of the areas where water from the Upper Aquifer migrates directly to the Lower Aquifer producing a water level intermediate between the levels measured to the west in the two aquifers. A similar*

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			rational can be used for the inclusion of MW-148 in the Lower Aquifer water levels (e.g., the Upper Aquifer is migrating to the lower aquifer and the anomalous water level is a result of a downward gradient). If the levels at MW-163 and MW-148 are used as part of the Lower Aquifer contouring, this result causes a pronounced mound at MW-148 and MW-163 (Figure 4-2). Deposition of abundant sands and silts from the north and east created a more permeable sequence of lacustrine sediments, the PLZ, where water from the Upper Aquifer is able to migrate to the Lower Aquifer (MWH, 2011). One other possible mechanism for this downwards flow is migration through a clastic dike through the MLU. "
19.	**Specific Comment 19, Figure 1-2.**	We request that a note be added to this figure to indicate the date of the aerial photograph to provide context for comparison to the following figure 2-1 that contains an historical aerial photograph from 1994.	The following note has been added to the figure: *Note: The photo base was taken in 2014*
20.	**Specific Comment 20, Figure 2-3.**	We request that the groundwater flow direction lines be redrawn or relocated so that they cross each of the groundwater elevation lines at 90 degrees. Note that the green groundwater flow lines on Figure 2-3 in the draft Report did not honor this hydrologic requirement.	The flow lines have been redrawn.
21.	**Specific Comment 21, Table 1-1 in the Table Section.**	For well MW-159, there appears to be an error in the Top of Casing Elevation for MW-159, which is listed as the same elevation as the Ground Surface Elevation (2833.74). Revise the Top of Casing Elevation (or Ground Surface Elevation), as appropriate.	The Top of Casing Elevation has been revised to 2,837.04.
22.	**Specific Comment 22, Table 1-1 in the Table Section.**	The Top of Casing (TOC) Elevation for MW-159 appears to be incorrect according to the TOC elevation of 2837.04 feet above mean sea level listed in Appendix G and consistent	Agreed. The revised table shows 2,736.96 for the Groundwater Surface Elevation at MW-159

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		with the previous comment. Subtracting the Depth to Groundwater (100.08 feet below TOC) from this revised TOC elevation (2837.04), results is a Groundwater Surface Elevation of 2736.96 feet above mean sea level for well MW-159, as listed in Table 1-1.	
Responses to Administrative Comments			
1.	**Administrative Comment 1, Page 1-1, 4th Paragraph, 1st Bullet.**	Water Board staff requests that this bullet point be revised as follows: "Results of groundwater monitoring ~~scheduled for~~ completed in October 2016."	The text has been revised as requested.
2.	**Administrative Comment 2, Page 2-1, 3rd Paragraph, 1st Sentence.**	We recommend that this sentence be revised as follows: "The ~~main~~ apparent mechanism for carrying Dieldrin from the surface to the groundwater was ~~unlimited~~ heavy irrigation of the housing area and golf course."	The text has been revised as requested.
3.	**Administrative Comment 3, Page 2-3, 5th Paragraph, Last Sentence.**	We recommend that this sentence be revised as follows: "On the northeast side of Site OT071, flow is ~~east~~ northeast toward the river."	The text has been revised as requested.
4.	**Administrative Comment 4, Page 3-8, Section 3.3 (Surveying).**	We recommend adding a reference to Appendix G (Survey Report) to this section.	The reference to the (Survey Report) has been added to this section and the Appendix numbers have been revised. The Survey Report is now in Appendix D.
5.	**Administrative Comment 5, Page 4-2 and the Tables Section.**	We recommend a more consistent approach for the placement of tables in the Report. In the draft Report, Table 4-2 is inserted in the text, while the other tables are provided in the Tables section. We recommend either 1) placing all the tables in the Tables section or 2) placing all the short tables in the text and moving the very long Table 4-1 (Results of Chemical Laboratory Analysis) to an Appendix.	Table 4-2 has been moved to the Tables section.

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6.	**Administrative Comment 6, Page 4-3, 5th Bullet.**	Please define BV (bulk volume) and GV (grain volume).	The text has been revised to state: *"Total porosity and air-filled porosity. Porosity is the ratio of the void space volume to the bulk (total volume of void and solid material - BV) volume of the soil sample and is expressed as N = (BV – GV)/BV. Total porosity values were calculated using the measured grain volume (the volume occupied by the solid material only - GV) and pore volume data as described above."*
7.	**Administrative Comment 7, Page 4-3, 4th (Last) Paragraph.**	Please clarify that the potentiometric surfaces shown for the Upper Aquifer and Lower Aquifer in Figures 4-1 and 4-2, respectively, are based on April 2016 water level measurements. This is in contrast to the groundwater elevations for the five new wells, which were based on October 2016 measurements.	Figures 4-1 and 4-2 have been revised to use October 2016 water level measurements. The text has been revised to state: *"Figures 4-1 and 4-2 show the October 2016 potentiometric surfaces for the Upper Aquifer, Lower Aquifer, and FPA."*
8.	**Administrative Comment 8, Page 5-2, 6th Paragraph, 1st Sentence.**	We recommend that this sentence be revised as follows: "...the southern portion of the Lower Aquifer plume where Dieldrin has been detected…"	The text has been revised as requested.
9.	**Administrative Comment 9, Page 5-3, 1st Paragraph, 2nd Sentence.**	We recommend that this sentence be revised as follows: "...is screened ~~in the aquifer~~ to monitor the southeastern portion of the plume in the ~~lower aquifer~~ Lower Aquifer."	The text has been revised as requested.
10.	**Administrative Comment 10, Page 5-3, 2nd Paragraph, 1st Sentence.**	We recommend that this sentence be revised as follows: "...to assess the central portion of the Lower Aquifer plume.	The text has been revised as requested.
11.	**Administrative Comment 11, Page 5-3, 2nd Paragraph, 4th (Last) Sentence.**	We recommend that this sentence be revised as follows: "...and is screened in the aquifer to monitor the southeast portion of the plume in the ~~lower aquifer~~ Lower Aquifer."	The text has been revised as requested.
12.	**Administrative Comment 12, Page 5-**	We recommend that this sentence be revised as follows: "The newly installed data gap	The text has been revised as requested and now states:

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	3, 4th Paragraph, 1st Sentence.	wells ~~will be~~ were samples for analysis of Dieldrin and measured for water levels as part of the October 2016 annual sampling event.	*"The newly installed data gap wells were sampled for analysis of Dieldrin and measured for water levels as part of the October 2016 annual sampling event."* The remainder of Section 5.3discusses results of the measurements and analyses and the nature and extent of Dieldrin contamination.
13.	**Administrative Comment 13, Table 1-1 in the Table Section.**	We recommend revising the Drilling Method for MW-161 to "HSA/Mud Rotary."	The table has not been revised because a hollow-stem auger rig was not used at MW-161.
14.	**Administrative Comment 14, Table 1-1 in the Table Section.**	Please expand the height of the row for MW-162 so the entire drilling method of "HSA/Mud Rotary" appears. This drilling method was truncated in the draft Report.	The table has been revised as requested.

AIR FORCE RESPONSE TO TECHNICAL REVIEW COMMENTS

Department of Toxic Substances Control Comments on
Draft Data Gap Investigation Work Plan, Non-CERCLA Site OT071, Former George Air Force Base, Victorville, San Bernardino County

March 2017

Responses to the Department of Toxic Substances Control (DTSC) comments on the Draft Data Gap Well Installation and Soil Sampling Report, Non-CERCLA Site OT071, Former George Air Force Base, Victorville, San Bernardino County, enclosed in a letter from the Lahontan Regional Water Quality Control Board to the US Air Force (Air Force) dated February 10, 2017:

Text Comment
At your request, Chatsworth Geological Services Unit (GSU) staff has reviewed the Draft Data Gap Well Installation and Soil Sampling Report for Non-CERCLA Site OT071 described above and dated December 2016. The Data Gap Report describes work done to address two data gaps in the Pesticides Corrective Action plan for this site. Organochlorine pesticides (OCPs), primarily dieldrin, have been detected in onsite soil and groundwater beneath and downgradient of the site. There is also a substantial groundwater mound present in shallow groundwater beneath the site that may be a key factor in the distribution of the pesticides in groundwater. Modeling studies (not a part. of this report) are underway to investigate the distribution and fate of the OCPs, and the data gaps needed to be addressed to allow modeling to proceed. Five new groundwater wells and five soil borings were drilled and sampled for this study. This review focuses on data quality, especially as it relates to CSM data gaps and use of the data in modeling contaminant flow and transport.

Response
A response to comments table is provided below.

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Response to General Comment			
1.	Section 2.0 Background.	A figure would be helpful to identify the locations of the landfill, housing area, golf course, the storage pond, decorative ponds, and the water tower.	Figure 1-2 has been revised to call out the locations of the housing area, golf course, the storage pond, and the water tower. A landfill and decorative ponds are not part of the site.
2.	Section 2.0 Background.	The last paragraph is contradicted by the results of the study. Irrigation of the golf course has not been shown to have caused the mound. Instead, the main contributor to the	The text has been revised to state: *"Infiltration of leaked water from this water storage pond created a groundwater mound in the vicinity of well NZ-120.*

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		mound has been the leaking of the storage pond, which supplies both the golf course and the Mojave energy plant. Figure 2-2 does not show a mound beneath the golf course even though the kriging flattens the eastern gradient. A triangular interpolation of the 2016 water level dataset (attached below) shows a very steep change in slope that barely crosses the road onto the golf course. The paragraph should be revised.	*Water level data at well NZ-120 indicates that the pond may have again started leaking in late 2011 or early 2012. Water levels have declined since 2013, potentially as a result changing operations of the pond or low precipitation from 2014-2017 (Appendix H).”*
3.	Section 2.0 Background.	The groundwater mound, while near the golf course, is not beneath the golf course but upgradient of it.	Noted: The text has been revised as shown above.
4.	Section 2.1	The MLU/PLZ 'clay' is actually silt, see the next comment. The terminology should be revised.	See the response to Comment 5 below.
5.	Section 4.2, Geotechnical Analyses.	Sieve analyses showed that clay is actually a very minor part of the soils that were analyzed. Most of what is being called clay in the boring logs is actually silt with minor amounts of clay. Some of the very fine sand is being called silt in the boring logs. The results of the geotechnical testing should be mentioned in the boring logs, and the discrepancies should be discussed in the text, because the lithologic descriptions used in modeling are drawn mainly from boring logs, and systematic bias in terminology in boring logs will lead to a low bias in hydraulic conductivity.	The laboratory test results do show a bias toward classification of materials as finer than shown by the test results. However, we hesitate to make wholesale changes to the boring logs based on a limited number of laboratory results. We have changed the boring logs and text where the test results indicate different classifications from the field logging. In addition we have added the following to Section 5.1 the text: *“It should be noted that the geotechnical test results for wells MW-153 through MW-158 and borings SB-02 through SB06 indicated that the field logging descriptions have a tendency to bias toward finer materials than the results from the lab tests (e.g., silts are described as clays).”*
6.	Section 5.	The lithology discussion should include the geotechnical data, particularly for the MLU. The MLU, based on the lab data, appears to be a silt with a little clay, not a clay. Some high plasticity silts (MH) may have also been	See the response above. We have also changed the classifications listed in the text and boring logs where appropriate.

Item	Section, Page	Comment	Response
		missed and called clay. The discrepancies are important because the lithologic data will be used in computer modeling.	
7.	Section 5. Last page.	'Adjacent' need not be capitalized. The 40-foot difference between two adjacent wells with different screen centers shows strong downward gradients consistent with vertical gradients within the Lower Aquifer and shown on Lithology Cross Section B-B'. Sections B-B' and E-E' should include the water levels for both MW-149 and MW-163. The lower aquifer water level line should not use MW-149 but instead use MW-163, because their screens are approximately horizontal with one another, unlike MW-149. The text should be revised to interpret the meaning of the difference in water levels between the two wells.	Noted. The last paragraph of Section 5.2 discusses the downward gradient at this location and explains it as "*MW-163 was located adjacent to MW-149 to assess the groundwater at the top of the Lower Aquifer water table. The screen was installed from 2597 to 2617 feet msl, mostly within the Lower Aquifer. The uppermost three feet of the screened interval are within the MLU/PLZ. The water level elevation at MW-163 was measured at 2,661.06. Figure 4-2 shows that the water level measured at MW-163 stabilized more than 40 feet higher than the water level predicted by contouring during past monitoring events. An evaluation of vertical gradients in the vicinity of MW-163 shows that the seemingly anomalous water levels in MW-163 may simply be the result of strong downward gradients between the Upper Aquifer and deeper parts of the Lower Aquifer (Figure 2-5). The vertical gradient between NZ-123 (Upper Aquifer) and MW-163 is (2,682.81-2,616.11)/(2,680.7-2,597.0) = 0.26 downward. The vertical gradient between MW-163 and MW-149 (deeper part of Lower Aquifer) is (2,661.06-2,616.11)/(2,597.0-2,496.0) = 0.44 downward. The location of MW-163 is likely to be in one of the areas where water from the Upper Aquifer migrates directly to the Lower Aquifer producing a water level intermediate between the levels measured to the west in the two aquifers. A similar rational can be used for the inclusion of MW-148 in the Lower Aquifer water levels (e.g., the Upper Aquifer is migrating to the lower aquifer and the anomalous water level is a result of a downward gradient). If the levels at MW-163 and MW-148 are used as part of the Lower Aquifer contouring, this result causes a pronounced mound at MW-*

Item	Section, Page	Comment	Response
			148 and MW-163 (Figure 4-2). Deposition of abundant sands and silts from the north and east created a more permeable sequence of lacustrine sediments, the PLZ, where water from the Upper Aquifer is able to migrate to the Lower Aquifer (MWH, 2011). One other possible mechanism for this downwards flow is migration through a clastic dike through the MLU/PLZ."
8.	Figures. Figure 2-2.	Figure 2-2, the kriged 2016 contours, do not show a groundwater mound under the golf course, which is consistent with the origin upgradient of the golf course. The TIN contours of the 2016 water level dataset (attached below) show that the eastern gradient is much steeper than the western groundwater gradients, both in the Upper and the Lower aquifers.	Water level contours (both Kriged and TIN) are now shown on Figures 4-1 and 4-2. Both interpretations of the Upper Aquifer water levels show the mounding directly below the pond.
9.	Figure 2-2.	The 2016 dieldrin results for the new wells would be a useful addition to the figure.	The 2016 dieldrin results for all wells are shown on Figures 4-1 and 4-2. 2016 results were not added to Figure 2-2 because it shows 2014 dieldrin results as context for the location of the new wells.
10'	Figures.	Based on the geotechnical analysis, much of what is being called clay, particularly the MLU, appears to be silt. The sections should be reviewed to check whether the picks are based on lab or field data, and adjusted as necessary.	The sections were reviewed and adjusted as needed. For the most part the limited number of geotechnical samples did not change the sections due to the section resolution. The 2-foot vertical grid spacing of the sections did not pick up on many of the changes.
11.	Cross sections.	The lines representing the 'water table' are clearly based on wells with screens not on the same horizontal plane, and do not accurately show the flow system. Flow is three-dimensional, not two-dimensional, and the mismatched screens obscure vertical flow elements. Hydraulic sections, where pressure head at the screen is contoured in the vertical plane, would more clearly show vertical flow	The cross sections have been revised. Water levels have been added to each well on Figures 2-4 through 2-8. The cross sections show the contoured surface in comparison to the water levels observed in each well. This comparison shows the vertical gradients locally. There are too few data points to create equipotential lines or flow nets.

Item	Section, Page	Comment	Response
		in the upper and in the lower aquifers. The sections should be revised.	
12.	Cross Section formatting notes.	Clay is hard to distinguish on the sections because reviewer is somewhat red-green blind. The red lines in on a red background aren't sufficiently distinct. The dieldrin concentrations are impossible to read without a magnifier, perhaps changing the font to black and bold would help. The California Dept. of Water Resources used warm colors for the coarsest material, and cool colors for fine units, with red , orange, and yellow for gravel, coarse and fine sands, pale yellow for silty sands, and blues, grays and greens for clays and silts. Having clay as red/brown and gravel as orange requires extra work for the reader to remember the arbitrary colors, rather than a simple color ramp from coarsest to finest going from warm to cool.	The cross sections have been revised to show the clayey sand and sandy clay units as light blue. Silt is gray, sands are yellow and gravel is orange.
13.	Figure 4-1.	Similar to the comment on the cross sections, using a color ramp on the groundwater contours that goes from red to green is likely to be invisible to people with imperfect red-green vision. https://www.usability.gov/getinvolved/blog/2 01 0/02/color-blindness.html can be consulted for additional information.	The maps on Figures 4-1 and 4-2 have been revised to remove the color ramp and adjust for red-green effects.
14.	Table 1-1.	The Top of Casing elevation for MW-159 is in error. The correct number from Appendix G is 2837.04. The corresponding WSE is then 2836.96. The date(s) of water level measurement should be noted in the table notes. Are they from spring 2016?	The table has been revised to include the correct measurement and the note regarding the time of groundwater measurement.
15.	Table 4-3.	The table is difficult to read because the font is so small. A larger size would be useful.	The table has been revised with a larger font.

Item	Section, Page	Comment	Response
16.	Appendix B, Boring logs.	When geotechnical data is obtained, the lab classifications should be mentioned on the boring logs, because they provide an objective basis for the USCS classification. In many cases, the fines visually identified as silts appear to be misclassified on the boring logs as lean clays, and some fine sand is being called silt in the boring logs. There are also several places where the USCS symbol does not match the description. For example, MW-159 at 27 ft is shown as SP but described as silt. Dilatancy information is missing for many of the materials logged as silt and clay. Fine sands, silts, and clays can be distinguished in the field , but only if all the observations in the USCS field method are collected and logged. The boring logs should be checked again.	See the responses to Comments 5 and 6. We have changed the boring logs and text where the test results indicate different classifications from the field logging. The classification at 27 ft. on MW-159 has been changed to ML and the boring logs have been checked and revised where appropriate.
17.	Appendix B, MW-159 at 105	The last sample mentions sandstone nodules in a lean clay (which is more likely a silt). This suggests syndepositional liquefaction of the sediments. This observation is consistent with defects in the MLU being partly caused by clastic dikes or sand boils during large nearby earthquakes. The description of the MLU should include mention of clastic dikes being a possible mechanism for leakage in the MLU.	The following has been added to the end of Section 5.2. *"Deposition of abundant sands and silts from the north and east created a more permeable sequence of lacustrine sediments, the PLZ, where water from the Upper Aquifer is able to migrate to the Lower Aquifer (MWH, 2011). One other possible mechanism for this downwards flow is migration through a clastic dike through the MLU/PLZ."*
18.	Appendix C, Well development.	The well development logs for the new wells indicate that redox measurements were not consistently taken at all the wells. ORP/redox measurements are essential to verify the DO measurements. DO readings of over 10 are generally suspect; specifically, too-high readings often occur when the membrane in the meter fails. For example, at MW-161 . ORP was 31 mV but DO was 13.46 mg/L.	The questionable values on the well development logs have been flagged (Appendix C). In future well development and monitoring efforts ORP and DO will be checked and if the results are inconsistent, the DO will be flagged as questionable.

Item	Section, Page	Comment	Response
		These two measurements are not likely to both be true at the same time, because one means reducing conditions and the other means highly oxidizing conditions. ORP and DO should be rechecked when the wells are routinely monitored, using a different meter, and if the results are inconsistent, the DO should be flagged as questionable.	
Conclusions and Recommendations:			
1.	GSU recommends soils lab data be added to the boring logs and update the uses classification as needed to match the grain size distribution from lab analyses. Places where the text discusses lithology should be revised.		The boring logs and text have been revised as recommended.
2.	GSU recommends miscellaneous changes to improve readability of the figures.		See below.
3.	The cross sections should be revised to show hydraulic head contours, not an arbitrary 'water table'.		The cross sections have been revised. Water levels have been added to each well on Figures 2-4 through 2-8. The cross sections show the contoured surface in comparison to the water levels observed in each well. This comparison shows the vertical gradients locally. There are too few data points to create equipotential lines or flow nets.
4.	GSU recommends adding a groundwater contour map using TIN, even if buried in an appendix, to expedite review. 2016 TIN maps for the Upper and Lower zones are attached.		TIN contours for the 2016 monitoring event have been added to Figures 4-1 and 4-2. Contours are also shown as generated using the Kriging method. The two sets of contours are in general agreement.
5.	GSU recommends the report be accepted providing the described issues are satisfactorily addressed.		Noted

George AR # 564580

Final
September 2017

Data Gap Well Installation and Soil Sampling Report Non-CERCLA Site OT071 Former George Air Force Base, California

Contract Number: FA8903-09-D-8580
Task Order No. 0018

Air Force Civil Engineer Center

CB&I Federal Services LLC

Data Gap Well Installation and Soil Sampling Report
Non-CERCLA Site OT071
Former George Air Force Base, California

Final
September
2017

DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

MEMORANDUM FOR California RWQCB, Lahontan Region
Attn: Mr. Todd Battey, PG
14440 Civic Drive, Suite 200
Victorville, CA 92392

SEP 22 2017

FROM: AFCEC/CIBW
3411 Olson Street
McClellan CA 95652-1003

SUBJECT: Final Data Gap (DG) Well Installation and Soil Sampling (SS) Report, Non-CERCLA Site OT071, Former George Air Force Base (AFB), California

Attached is the *Final Data Gap Well Installation and Soil Sampling Report, Non-CERCLA Site OT071* for your records.

This document has also been posted on the George AFB Project Portal:
AFCEE WERC-09 Former George Air Force Base Shaw Records Regulators Project Records Shared Documents Final Data Gap Well Installation and Soil Sampling Report, Non-CERCLA Site OT071

Thank you for your support of the former George AFB environmental program. If you have any questions or concerns, please do not hesitate to call me at (916) 643-0830, ext. 211.

DONALD GRONSTAL
Base Environmental Coordinator

Attachment:
Final DG Well Installation and SS Report, Non-CERCLA Site OT071 (Antim, Sep 2017)

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CA RWQCB, Lahontan Region	GeoTracker

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Final
Data Gap Well Installation and Soil Sampling Report Non-CERCLA Site OT071 Former George Air Force Base, California

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Contract No. FA8903-09-D-8580, Task Order 0018
Project No. 145981
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September 2017

CB&I Federal Services LLC

Final
Data Gap Well Installation and Soil Sampling Report
Non-CERCLA Site OT071
Former George Air Force Base, California

Contract No. FA8903-09-D-8580
Task Order 0018

Revision 0
September 2017

This report was prepared under the direction and supervision of the undersigned. To the best of our knowledge, the data and information presented in this report are true, accurate, and complete.

Mark Unruh, CEG, CHG
Certified Engineering Geologist

9/22/2017
Date

Homayoun (David) Daftary, PG, CHG
Project Manager

9/22/2017
Date

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Acronyms and Abbreviations

µg/L	micrograms per liter
bgs	below ground surface
CB&I	CB&I Federal Services LLC
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DPT	direct-push technology
EPA	U.S. Environmental Protection Agency
FPA	Flood Plain Aquifer
GAFB	George Air Force Base
IDW	investigation-derived waste
mg/kg	milligrams per kilogram
MLU	Middle Lacustrine Unit
msl	mean sea level
MWH	MWH Americas, Inc.
PCAP	*Non-CERCLA Site OT071 Corrective Action Plan for Pesticides in Ground Water*
PLZ	Permeable Lacustrine Zone
PVC	polyvinyl chloride
RWQCB	California Regional Water Quality Control Board
Site	Site OT071
SPLP	synthetic precipitation leaching procedure
Work Plan	*Final Data Gap Well Installation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, California*

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1.0 INTRODUCTION

This data gap well installation and soil sampling report describes investigation activities performed from May 2016 through July 2016 by CB&I Federal Services LLC (CB&I) at non-Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Site OT071 (Site). The Site is located at the southeastern and east-central portion of the former George Air Force Base (GAFB), Victorville, California (Figures 1-1 and 1-2).

The primary objective of the investigation was twofold:

1. Fill data gaps identified in the *Non-CERCLA Site OT071 Corrective Action Plan for Pesticides in Ground Water* (PCAP; MWH Americas, Inc. [MWH], 2011a) and during discussions between the Air Force and the Lahontan Region office of the California Regional Water Quality Control Board (RWQCB). The proposed wells were intended to further characterize the lateral and vertical extent of the Dieldrin plume at specific locations identified by the Air Force and the RWQCB. In addition, the wells may be usable at a later date as monitoring wells in a long-term monitoring program and/or as future sentinel wells (Lower Aquifer).
2. Acquire shallow soil samples across the Site. The shallow soil sampling provides Dieldrin concentrations in near-surface soils for calibration of vadose zone modeling. The samples also provide soil property data (geotechnical data) for use in the vadose zone and groundwater modeling.

Five wells (MW-159 through MW-163) were installed in accordance with the approved *Final Data Gap Well Installation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, California* (Work Plan; CB&I Federal Services, Inc. [CB&I], 2016). The purpose and construction details of the individual wells are provided in Table 1-1. Five direct-push technology (DPT) borings were drilled and sampled to depths of 15 feet. Table 1-2 provides the purpose and details of the individual borings. Figure 1-2 shows the locations of the investigation activities. This document reports the methods, procedures, and results of the investigation. Detailed analysis of the results will be provided in a revision to the PCAP (MWH, 2011a) including the following:

- Results of modeling using the data acquired during this investigation and groundwater monitoring
- Updated conceptual site model

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2.0 BACKGROUND

The former GAFB is located in Victorville, San Bernardino County, California, adjacent to the city of Adelanto. The former GAFB was operational from 1941 to 1992. At present, the former GAFB includes property transferred to civilian ownership under the Base Realignment and Closure process, property that remains under the control of the Air Force Civil Engineer Center pending transfer, and property transferred to the Federal Bureau of Prisons. The Southern California Logistical Airport has been the largest recipient of property transferred from the Air Force to date. The former GAFB site presently hosts both civilian and Air Force organizations and activities, the majority of which are related to aviation. During its operational history, GAFB supported a significant training and readiness mission that required military housing and support facilities. The facilities included housing, a golf course, a hospital, and other community-related buildings. Facilities and housing overlaying the site-groundwater plume area were used and maintained for military personnel until base closure in 1992, with the exception of the former housing area, which was infrequently used for military training and continued operation, and the Westwinds Golf Course.

The source for pesticides in groundwater appears to be pesticides used for pest control in the former housing area, with subsequent transport to the groundwater by irrigation. As part of the construction and routine maintenance of the housing area, pesticides were applied to the building foundations for pest control, including prevention and treatment in accordance with standard practices of the time. The first housing was built in 1961 and construction continued through the 1970s. Dieldrin was historically used from approximately 1950 to 1970. The U.S. Environmental Protection Agency (EPA) banned all uses of Dieldrin in 1987.

The apparent mechanism for carrying Dieldrin from the surface to the groundwater was colloidal transport of Dieldrin resulting from heavy irrigation of the housing area and golf course. The former housing area was heavily irrigated to support trees, lawns, and other landscaping. The landscaping in the former housing area is evident in review of a 1994 aerial photograph (Figure 2-1) compared to the view in the current 2014 photograph, which serves as the basis for Figure 1-2. The volume of water used for irrigation was sufficient to create runoff into two drainage culverts near the eastern edge of the northern housing area and to support vegetation year-round (MWH, 2002). Irrigation water was supplied by wells installed in the Flood Plain Aquifer (FPA) near the Mojave River. Application of pesticide combined with irrigation practices in the housing area resulted in a pesticide impact to the groundwater and the identification of the non-CERCLA Site OT071. Westwinds Golf Course is an approximately 100-acre, nine-hole course now controlled by the City of Victorville. Westwinds Golf Course historically used water pumped from former GAFB production wells located east of the base for irrigation. In 2003, the irrigation water supply source changed to

effluent water from the Victor Valley Waste Reclamation Authority Wastewater Treatment Plant. This water was piped via a 3-mile-long pipeline to the 600,000-gallon golf course water storage pond, which is now lined. At some time during the history of the pond, it was used as feed-water pond for the water tower immediately south of the pond. The City of Victorville completed lining this pond in April 2007 at the request of the Air Force and regulatory agencies (MWH, 2008).

Infiltration of leaked water from this water storage pond created a groundwater mound in the vicinity of well NZ-120. Water level data at well NZ-120 indicates that the pond may have again started leaking in late 2011 or early 2012. Water levels have declined at well NZ-120 since 2013, potentially as a result changing operations of the pond or low precipitation from 2014 through 2017 (Appendix H).

2.1 Site Description

The Site encompasses approximately 900 acres in the southeastern and east-central portion of former GAFB and consists of pesticides in groundwater beneath the former housing areas and the Westwinds Golf Course. Figure 1-2 shows the Site boundary. The primary pesticide of concern in groundwater at the Site is Dieldrin.

City of Adelanto supply well Adelanto-4, the nearest active supply well, is located east of the Site, screened in the Lower Aquifer (Figure 1-2), and is monitored periodically for pesticides.

The Federal Bureau of Prisons property has two inactive supply wells (PW-1 and PW-2) installed in the Lower Aquifer south of the Site. The wells are inactive due to high naturally occurring arsenic levels in groundwater. In addition, these wells allow leakage from the Upper Aquifer to the Lower Aquifer. Figures 1-2, 2-2, and 2-3 show the locations of the wells.

2.1.1 Hydrogeology

The Dieldrin plume at the Site is present in both aquifers beneath the former GAFB. These are the Upper Aquifer and Lower Aquifer. The Middle Lacustrine Unit (MLU), which grades into a heterogeneous zone named the Permeable Lacustrine Zone (PLZ), separates the two aquifers. Site maps (Figures 2-2 and 2-3) show the areal extent of the PLZ as underlying the eastern edge of GAFB. The PLZ underlies most of the Site and provides a route for groundwater to move downward from the Upper Aquifer into the Lower Aquifer. The groundwater in the Lower Aquifer is separated from the MLU/PLZ by an upper, unsaturated (dry) zone of the Lower Aquifer. The Mojave River to the east is located on a unit called the FPA. The FPA is younger and more porous and permeable than any of the other aquifers in

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the area. The FPA is located below and on either side of the Mojave River and next to the Lower Aquifer.

Details of these zones are described as follows:

- **Upper Aquifer**—The Upper Aquifer is composed of fine-grained sand and silt with some clay (Figures 2-4 through 2-8). Groundwater in the Upper Aquifer is present at 40 to 170 feet below ground surface (bgs) and the aquifer is between 0 and 40 feet thick. Underlying most of the Site, the Upper Aquifer is the closest aquifer to the original source of Dieldrin and was the first aquifer to become impacted. In some locations the Upper Aquifer thins to a couple of feet or is not observed. At those locations, the MLU/PLZ contains the uppermost water.

  Groundwater in the Upper Aquifer generally flows northeast toward the Mojave River (Figure 2-2) and then downward through the intermixed sand and clay layers that comprise the PLZ. During the time of base operation, it is presumed that there was a large groundwater mound in the Upper Aquifer beneath the heavily irrigated portions of the base. It is probable that this mounding caused the plume, which has resulted from infiltration through soils in the housing area above the Upper Aquifer to be large and dilute. Flow beneath the Site is radial, away from the groundwater mound made by the downward percolation of water from the golf course water storage pond and the golf course (Figure 2-2).

- **The Middle Lacustrine Unit and Permeable Lacustrine Zone**—The MLU is composed mostly of silty sand, silt, and clay and is approximately 170 feet deep and approximately 40 feet thick. The PLZ is the eastern edge of the MLU, where thin clay and sand layers overlap in both horizontal and vertical directions and layers appear to become coarser in grain size. The PLZ is also up to 170 feet deep and approximately 40 feet thick. In the variably saturated PLZ, the groundwater in the Upper Aquifer moves downward to the Lower Aquifer.

- **Lower (Regional) Aquifer**—The Lower Aquifer is primarily sand and sandy gravel. The Lower Aquifer lies beneath the MLU/PLZ. Groundwater flows downward from the Upper Aquifer through the PLZ to the Lower Aquifer. Outside the area of the former GAFB, regional flow in the Lower Aquifer is generally to the northeast. However, recharge near the Mojave River created groundwater mounds (e.g., the Victor Valley Waste Reclamation Authority percolation ponds) directing flow to the west on the northern end of the base. At the southern edge of the housing area, a mound in the vicinity of MW-149 and A-4 (Figure 2-2) creates flow to the west and north. On the northeastern side, flow is northeast toward the river.

- **Flood Plain Aquifer**—The lithology of the FPA to the east of the study area is primarily fine-grained sand and silty sands. The FPA has an average thickness of about 150 feet and is approximately 1 mile wide beneath the active river channel. Groundwater flow in the FPA is to the north along the river.

The following network of groundwater monitoring wells was present at the Site (Figures 2-2 and 2-3) prior to the installation of the new wells. The wells were monitored semiannually to track potential changes in the Dieldrin concentrations in groundwater:

- Fifteen Upper Aquifer wells: NZ-63, NZ-66, NZ-89, NZ-91, NZ-119 through NZ-125, MW-136, MW-137, MW-144, and MW-146
- Eight Lower Aquifer wells: NZ-64, NZ-65, MW-142, MW-143, MW-145, MW-147, MW-149, and MW-151
- Two PLZ wells (wells screened at Lower Aquifer depths with groundwater elevations higher than the other Lower Aquifer wells): MW-148 and MW-152

Cross sections and maps on Figures 2-2 through 2-7 show the spatial relationships between the new wells and the wells listed above. Figures 2-2 and 2-3 also show the plumes as defined by the old network in 2014 to provide context for the locations of the new wells.

2.1.2 Dieldrin Water Quality Objective

The water quality objective at the Site is 0.002 micrograms per liter (µg/L), which is the current analytical detection limit and California Department of Public Health advisory level for Dieldrin.

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3.0 INVESTIGATION FIELDWORK

The investigation fieldwork included drilling and sampling soils in five DPT borings and the installation of five wells. Figure 1-2 shows the fieldwork locations.

3.1 Pre-Field Activities

The following pre-field activities were performed:

- Well permits were acquired from the San Bernardino County Department of Public Health for wells off Air Force property (MW-160 and MW-161). Copies of the permits are included in Appendix A.
- The Air Force coordinated field activities with Southern California Logistical Airport (MW-159, MW-162, and MW-163) and the Bureau of Prisons (MW-160 and MW-161) and complied with security protocols in place for access to the project locations.
- Personnel and subcontractors were trained and certified in compliance with the *Final Environmental Health and Safety Plan, Quality Program Plan—Volume 3, Former George Air Force Base, California, Revision 1* (CB&I, 2014) for the activities they would perform.
- Areas for storage of investigation-derived wastes (IDWs) were established.
- Existing Site facilities, including underground and aboveground utilities, were protected by complying with utility avoidance protocols described in the Work Plan (CB&I, 2016). Each boring location was hand dug to a depth of 5 feet bgs prior to the advancement of powered drilling tools.

3.2 Field Activities

The following sections describe the soil sampling and well installation.

3.2.1 Soil Sampling Using Direct-Push Rig

Five borings were drilled using a DPT rig. The purpose of the five borings was to provide Dieldrin concentration data and geotechnical data for use in calibrating the vadose zone model. Figure 1-2 shows the boring locations. The boring series starts with SB02 to avoid confusion in the GAFB database. A boring designated SB01 was drilled and sampled during the 2008 data gap investigation reported in the PCAP (MWH, 2011a). The following subsections summarize individual borings SB02 through SB06. Appendix B provides the boring logs.

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SB02

SB02 was drilled at 5073 Washington Street, Unit 207, where the highest Dieldrin concentration was previously detected (SS-37 at 15,000 micrograms per kilogram). A limited-access DPT rig with 1.5-inch-diameter rods was used to collect continuous cores in 1-inch-diameter acetate liners. Six samples were selected, one from directly beneath the slab and the others at depths of 2, 4, 7, 8.5, and 10 feet below grade. The boring encountered silty sand and sandy silt to 10 feet where poorly graded sands with gravel caused the boring to be terminated early at approximately 11.5 feet bgs due to refusal. The boring was backfilled with grout.

SB03

SB03 was drilled at the location of a previous high-concentration sample (SS-35 at 1,710 mg/kg) beneath the slab of the house located at 7301 Massachusetts Avenue. A DPT rig with 2.25-inch-diameter rods was used to collect continuous core in acetate liners. Six samples were selected from depths of 2, 4, 6, 7, 10, and 12 feet below grade. A geologist logged the core. The boring encountered sand with silt to 15 feet and silt below to 16 feet. The boring was terminated at approximately 16 feet bgs. The boring was backfilled with grout.

SB04

SB04 was drilled in an unpaved area near the locations of former high-concentration samples (SS-23 at 1,210 mg/kg). A DPT rig with 2.25-inch-diameter rods was used to collect continuous cores in acetate liners. Seven samples were selected from depths of 2, 4, 6, 7, 10, 14, and 15 feet below grade. A geologist logged the core. The boring encountered well-graded sand with silt. The boring was terminated at 16 feet bgs. The boring was backfilled with grout.

SB05

SB05 was drilled in an unpaved area near the locations of a former high-concentration sample (SS-44 at 294 mg/kg). A DPT rig with 2.25-inch-diameter rods was used to collect continuous core in acetate liners. Four samples were selected from depths of 2, 4, 7, and 9 feet below grade. A geologist logged the core. The boring encountered silty sand with a 1-foot-thick layer of well-graded sand at 9 feet bgs and clayey sand below approximately 13 feet. The boring was terminated at approximately 16 feet bgs. The boring was backfilled with grout.

SB06

SB06 was drilled in a topographic low where runoff may have concentrated Dieldrin. Four samples were selected from depths of 2, 3, 4, and 9 feet below grade. A DPT rig with 2.25-inch-diameter rods was used to collect continuous core in acetate liners. A geologist

logged the core. The boring encountered sandy silt and sand with silt. The boring was terminated at approximately 16 feet bgs. The boring was backfilled with grout.

3.2.2 Monitoring Well Drilling and Installation

Exploratory borings included five well borings and subsequent groundwater monitoring well installations (Figure 1-2). The borings were used to further characterize the geologic units at each of those areas identified in the PCAP (MWH, 2011a) as data gaps. Well installation details are provided in the following subsections, in Table 1-1, and in the Appendix B boring logs.

Each boring was cleared with a hand auger down to 5 feet bgs before commencement of drilling.

MW-159

The soil boring at OT071-MW-159 was completed in the Upper Aquifer by drilling a pilot boring using an 8-inch hollow-stem auger rig. Soil samples for lithological logging were collected continuously from 5 to 105 feet bgs at 2.5-foot intervals using a modified California split-spoon sampler. Each soil core sample was characterized for recovery amount and lithologic classification. The pilot boring was terminated at 105 feet bgs. The boring was reamed using a 10-inch auger to allow the installation of the well through the auger stem.

A 4-inch-diameter, flush-threaded, Schedule 80 polyvinyl chloride (PVC) screen, riser, and 6-inch-long threaded end cap, were assembled to complete the well string. The screen slot size is 0.02 inch.

The well string was suspended in the 10-inch augers with the well screen extended from 85 to 105 feet bgs. The space between the outside of the well string and the borehole wall was filled with a #3 sand filter pack, bentonite seal, and annular seal as the augers were withdrawn. The filter pack extended from the bottom of the end cap to 5 feet above the top of the screen. The borehole was surged after adding the sand pack to remove air voids and allow the sand pack to settle.

After surging, the level of the sand pack was restored to 5 feet above the top of the screen and a 6-foot-thick bentonite seal consisting of hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was placed on top of the filter pack. The annular seal, composed of 97 percent neat cement and 3 percent bentonite, was emplaced from the top of the bentonite seal to 5 feet bgs.

The monitoring well was completed at the surface using a standard wellhead/surface seal composed of an aboveground yellow standpipe set in a 3-foot-by-3-foot, 6-inch-thick,

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concrete pad, with a protective steel casing with locking well cap. Four yellow bollards surrounded the monument.

After the water level had stabilized in the well, it was measured at 100.08 feet bgs (2,736.96 feet mean sea level [msl]) on September 1, 2016.

MW-160

The soil boring at MW-160 was completed in the Upper Aquifer by drilling a pilot boring using an 8-inch hollow-stem auger rig. Soil samples for lithological logging were collected continuously from 5 to 105 feet bgs at 2.5-foot intervals using a modified California split-spoon sampler. Each soil core sample was characterized for recovery amount and lithologic classification. The pilot boring was terminated at 185 feet bgs. The boring was reamed and extended to 187 feet bgs using a 10-inch auger to allow the installation of the well through the auger stem.

A 4-inch-diameter, flush-threaded Schedule 80 PVC screen, riser, and 6-inch-long threaded end cap, were assembled to complete the well string. The screen slot size is 0.02-inch.

The well string was suspended in the 10-inch augers. The space between the outside of the well string and the borehole wall was filled with a #3 sand filter pack, bentonite seal, and annular seal. The filter pack extended from 2 feet below the bottom of the end cap to 5 feet above the top of the screen. The borehole was surged after adding the sand pack to remove air voids and allow the sand pack to settle.

After surging, the level of the sand pack was restored to 5 feet above the top of the screen and a 5-foot-thick bentonite seal consisting of hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was placed on top of the filter pack. The annular seal composed of 97 percent neat cement and 3 percent bentonite was emplaced from the top of the bentonite seal to 5 feet bgs.

The monitoring well was completed at the surface using a standard wellhead/surface seal composed of an aboveground yellow standpipe set in a 3-foot-by-3-foot, 6-inch-thick, concrete pad, with a protective steel casing with locking well cap. Four yellow bollards surrounded the monument.

After the water level had stabilized in the well, it was measured at 161.45 feet bgs (2,731.63 feet msl) on September 1, 2016.

MW-161

The soil boring at MW-161 was completed in the Lower Aquifer by drilling a pilot boring using an 8-inch hollow-stem auger rig to 185 feet bgs. Soil samples for lithological logging

were not collected in this interval because MW-161 is located approximately 17 feet south of MW-160, which was continuously cored. A mud-rotary rig was used to drill a boring to 184.5 feet bgs, and a mild steel isolation casing was installed to 184.5 feet bgs. The isolation casing was grouted in place using a mix of 97 percent neat cement and 3 percent bentonite.

Once the casing was in place and the grout had set, the boring was extended using an 8-inch diameter mud-rotary rig. Soil samples were collected at 10-foot intervals from 190 feet bgs to approximately 312 feet bgs. Soil samples were collected with a standard penetration test 1.5-inch-diameter, 18-inch-long core barrel. The boring was terminated at 312.33 feet bgs.

A 4-inch-diameter, flush-threaded Schedule 80 PVC screen, riser, and 6-inch-long threaded end cap were assembled to complete the well string. The screen slot size is 0.02 inch. Two centralizers were used on both ends of the screen, and centralizers were used on the riser casing at 40-foot intervals above the screen to the surface.

The well string was suspended in the 8-inch borehole. The space between the outside of the well string and the borehole wall was filled with a #3 sand filter pack, bentonite seal, and annular seal. The filter pack extended from the bottom of the end cap to 13 feet above the top of the screen. The borehole was surged after adding the sand pack to remove air voids and allow the sand pack to settle. After surging, the level of the sand pack was restored to 13 feet above the top of the screen. A 10-foot-thick bentonite seal consisting of hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was pumped into place on top of the filter pack using a tremie pipe. The annular seal, composed of 97 percent neat cement and 3 percent bentonite, was emplaced from the top of the bentonite seal to 5 feet bgs.

The monitoring well was completed at the surface using a standard wellhead/surface seal composed of an aboveground yellow standpipe set in a 3-foot-by-3-foot, 6-inch-thick, concrete pad, with a protective steel casing with locking well cap. Four yellow bollards surrounded the monument.

After the water level had stabilized in the well, it was measured at 290.85 feet bgs (2,602.02 feet msl) on September 1, 2016.

MW-162

The soil boring at MW-162 was completed in the Lower Aquifer by drilling a pilot boring using an 8-inch hollow- stem auger rig to 190 feet bgs and mud-rotary drilling to the total depth. Soil samples for lithological logging were collected continuously from 5 to 190 feet bgs at 5-foot intervals using a 5-foot-long 2.5-inch-diameter, split-barreled sampler. From 190 to 305 feet bgs (the total depth of the boring), continuous soil samples were collected

using 5-foot-long HQ® core barrel. Soil core samples were characterized for recovery amount and lithologic classification.

After the pilot boring was completed, a mud-rotary rig was used to drill a 14-inch-diameter boring to 188 feet bgs, and a 10-inch-diameter mild steel isolation casing was installed to that depth. The isolation casing was grouted in place using a mix of 97 percent neat cement and 3 percent bentonite. Once the casing was in place and the grout had set, the boring was extended using an 8-inch-diameter mud-rotary rig. The boring was terminated at 305 feet bgs.

A 4-inch-diameter, flush-threaded Schedule 80 PVC screen, riser, and 6-inch-long threaded end cap were assembled to complete the well string. The screen slot size is 0.02 inch. The well screen extended from 280 to 300 feet bgs. Two centralizers were used on both ends of the screen, and centralizers were used on the riser casing at 40-foot intervals above the screen to the surface. The well string was suspended in the 8-inch borehole. The space between the outside of the well string and the borehole wall was filled with a #3 sand filter pack, bentonite seal, and annular seal. The filter pack extended from the bottom of the end cap to 6 feet above the top of the screen. The well casing was surged after adding the sand pack to remove air voids and allow the sand pack to settle. After surging, the level of the sand pack was restored to 6 feet above the top of the screen. A 15-foot-thick bentonite seal consisting of hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was pumped into place on top of the filter pack using a tremie pipe. The annular seal, composed of 97 percent neat cement and 3 percent bentonite, was emplaced from the top of the bentonite seal to 5 feet bgs.

The monitoring well was completed at the surface using a standard wellhead/surface seal composed of an aboveground yellow standpipe set in a 3-foot-by-3-foot, 6-inch-thick, concrete pad, with a protective steel casing with locking well cap. Four yellow bollards surrounded the monument.

After the water level had stabilized in the well, it was measured at 286.67 feet bgs (2,603.26 feet msl) on September 1, 2016.

MW-163

The soil boring at MW-163 was completed in the Lower Aquifer by drilling a pilot boring using an 8-inch hollow- stem auger rig to 137.5 feet bgs. Soil samples for lithological logging were collected continuously from 5 to 137.5 feet bgs at 2.5-foot intervals using a modified California split- spoon sampler. The boring was reamed using a 10-inch auger to allow the installation of the well through the auger stem.

A 4-inch-diameter, flush-threaded Schedule 80 PVC screen, riser, and 6-inch-long threaded end cap were assembled to complete the well string. The screen slot size is 0.02 inch.

The well string was suspended in the 10-inch augers with the well screen extended from 116 to 136 feet bgs. The space between the outside of the well string and borehole wall was filled with a #3 sand filter pack, bentonite seal, and annular seal as the augers were withdrawn. The filter pack extended from 1.5 feet below the bottom of the end cap to 6 feet above the top of the screen. The borehole was surged after adding the sand pack to remove air voids and allow the sand pack to settle. After surging, the level of the sand pack was restored to 6 feet above the top of the screen. A 5-foot-thick bentonite seal consisting of hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was pumped into place on top of the filter pack. The annular seal, composed of 97 percent neat cement and 3 percent bentonite, was emplaced from the top of the bentonite seal to 5 feet bgs.

The monitoring well was completed at the surface using a standard wellhead/surface seal composed of an above ground yellow standpipe set in a 3-foot-by-3-foot, 6-inch-thick, concrete pad, with a protective steel casing with locking well cap. The monument was surrounded by four yellow bollards.

After the water level had stabilized in the well, it was measured at 75.02 feet bgs (2,661.06 feet msl) on September 1, 2016.

Table 1-1 presents a summary of well construction details.

The well construction details demonstrate that the data gap wells were installed in the intended depth intervals and provide the wanted information for Dieldrin plume delineation.

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3.2.3 Well Development

Each newly installed monitoring well was developed to assure hydraulic performance of the well. Basic water quality monitoring parameters (temperature, pH, turbidity, specific conductance, and dissolved oxygen) were measured through well development. Appendix C presents well development records.

Development methods for the data gap monitoring wells at GAFB included mechanical surging, bailing, and pumping. Several rounds of alternated bailing and surging were conducted, followed by pumping at varied depths along the screen interval. The development procedure continued until the following conditions were met:

- Water was less than 10 nephelometric turbidity units for three or more consecutive readings

- Temperature, pH, turbidity, and specific conductance values had stabilized
- Water added to the borehole or well during drilling and installation had been removed

Purged water from well development was contained and treated as IDW.

3.3 Surveying

Upon completion of the well installation, well locations and elevations were surveyed by Arrow Engineering Services, Inc., a State of California registered professional land surveyor. Horizontal coordinates were surveyed to the nearest 0.01 foot and referenced to the U.S. State Plane Coordinate System, North American Datum, 1983. Ground surface elevations and top of casing elevations were surveyed to the nearest 0.01 foot and referenced to the 1988 North American Vertical Datum.

Appendix D presents the results of the survey. Survey results and well construction details were also uploaded to the Air Force Environmental Resources Program Information Management System database.

3.4 Investigation-Derived Waste Storage and Disposal

The IDW solids generated from soil cuttings and drilling muds were temporarily placed in 20-cubic-yard roll-off containers pending disposal at the Soil Safe facility located at 12328 Hibiscus Avenue, Adelanto, California 92301. Five samples of solids were collected for analysis of the following:

- ASTM International D-2216 Moisture Content
- EPA Method 8015B Total Petroleum Hydrocarbon Diesel
- EPA Method 8015B Total Petroleum Hydrocarbon Gasoline
- EPA Method 6010B Inductivity Coupled Plasma Metals
- EPA Method 7471A Mercury
- EPA Method 8081A Organochlorine Pesticides
- EPA Method 8082 Polychlorinated Biphenyl Aroclors
- EPA Method 8141A Organophosphorus Pesticides
- EPA Method 8151A Chlorinated Herbicides

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- EPA Method 8270C Semivolatile Organics
- EPA Method 8270C SIM Polynuclear Aromatic Hydrocarbons and Volatile Organics

Appendix E includes the laboratory analytical data package and manifests.

The IDW water generated from well installation and development was containerized and analyzed for the following:

- Volatile organic compounds (EPA Method 8260B)
- Metals (EPA Method 6010B and EPA Method 7471A)
- Moisture (ASTM International Method D-2216 M) (Appendix E)

The water was discharged to an on-site storage tank for purge water from all other groundwater monitoring activities at GAFB. The storage tank is a 5,000-gallon Poly tank housed within the ST057 soil vapor extraction compound inside the flight line. Two roll-off bins with liquids remain. All the water, classified as non-hazardous, will be transported to the K-Pure facility located at 8910 Rochester Avenue, Rancho Cucamonga, California 91730.

4.0 RESULTS

Soil samples, geotechnical analyses, water levels, groundwater analyses, and survey results are discussed in the following subsections.

4.1 Soil Samples

Soil samples collected during this investigation were delivered for two general types of analyses:

- Chemical analysis of soil samples for pesticides (primarily Dieldrin) and analysis for waste disposal of IDW
- Geotechnical testing to provide soil property data for use in the vadose zone and groundwater modeling

Sample depths varied based on the geologist's field observations and the materials encountered.

4.1.1 Chemical Analyses

The purpose of the chemical analyses is to provide concentrations of Dieldrin in near-surface soil for calibration of the vadose zone model. Accordingly, 27 selected samples were sent to the laboratory. Of the 27 samples collected for Dieldrin analyses, the shallowest samples were analyzed first. Samples from depths below two consecutive nondetect results were not analyzed. Samples were analyzed for total Dieldrin by EPA Method 8081A. Table 4-1 provides the results of the analyses, and Table 4-2 summarizes the results of the Dieldrin samples. Appendix F provides the chemical laboratory reports. The quality of the data was assessed and a report of that assessment is included at the end of Appendix F.

Dieldrin migration is suspected to occur in the form of colloidal transport rather than in a dissolved phase. In an effort to assess the mechanism of Dieldrin migration through the subsurface at the Site, filtered extracts of water from the samples were analyzed. To assess the potential for Dieldrin migration as a colloid, samples were analyzed using the following procedures.

- A baseline was established for comparison with historical samples by using the standard EPA Method 8081A total analysis for soils.
- The synthetic precipitation leaching procedure (SPLP) was used to extract water from the soil samples. The water was then filtered through two sizes of filter, 0.7 microns and 0.45 microns.

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The filtrate from each leached sample was filtered through 0.7-micron and 0.45-micron filter and analyzed by SW846 1312 8081A for Dieldrin only. In order to achieve lower reporting limits, the filtrate of several leached samples were selected for SPLP analysis Dieldrin by SW846 1312 8270(D) TQ (Modified). Table 4-2 provides the results of the Dieldrin analyses (both total and leached results) for comparison.

The following can be observed from the results in Table 4-2:

- Dieldrin was detected near the surface in the total samples. No Dieldrin was detected below 7 feet.
- Of the SPLP extracts, which passed the 0.70-micron filter, eight detected Dieldrin. Of the SPLP extracts passing the smaller pore spaces of the 0.45-micron filter, only one detected Dieldrin. In general, colloids with Dieldrin passed the 0.70-micron filter but were retained on the 0.45-micron filter.
- The “Total” Dieldrin concentrations detected in soil in 2016 at locations where previously high concentrations were detected in 2008 were consistently lower than the earlier results, but still exceeded the residential Regional Screening Levels for Dieldrin in soil.

4.1.2 Geotechnical Analyses

The purpose of the geotechnical analyses is to provide soil property data for use in the vadose zone and groundwater modeling. The geologist selected samples based on lithology and the results of the white light core photography. Geotechnical testing included the following:

- Full-scale digital core photography (white light) by ASTM D5079—The photographs were used to document the appearance of the material in the tests and as part of the selection process for testing samples.
- Grain-size analysis by laser by Method ASTM D4464—Results of the grain-size analyses are summarized in Table 4-3. Particle size is determined by using laser light diffraction to measure the amount and patterns of light scattered by a particle's surface. Detailed presentation of the results of the analyses is provided in Appendix G. Additional explanation of the analytical method is provided in a letter from the geotechnical lab director, also in Appendix G.
- Total organic carbon by Walkley-Black method.
- Native state permeability to air—The permeability of soils is determined by flowing gas (or liquid) through plug samples confined at in situ or other overburden conditions in a flexible wall permeameter. Pressure drop and flow rate are measured until steady-state conditions exist. Permeability measurements are based on API RP40.

- Total porosity and air-filled porosity—Porosity is the ratio of the void space volume to the bulk (total volume of void and solid material-BV [bulk volume]) volume of the soil sample and is expressed as N = (BV-GV)/BV. Total porosity values were calculated using the measured grain volume (the volume occupied by the solid material only-GV [grain volume]) and pore volume data as described above. Air-filled porosity is determined by subtracting the volume of pore space occupied by fluids from the total pore volume.

- Grain-size and bulk density, moisture content, total pore fluid saturation (reported as water only) by methods API RP40 and ASTM D2216.

Appendix G provides the core photographs and laboratory reports for results of the individual tests.

4.2 Water Levels

The water level elevations for the five wells were measured on September 1, 2016, after the wells had stabilized, with the following results:

- MW-159 was measured at 2,736.96 msl.
- MW-160 was measured at 2,731.63 msl.
- MW-161 was measured at 2,602.02 msl.
- MW-162 was measured at 2,603.26 msl.
- MW-163 was measured at 2,661.06 msl.

Figures 4-1 and 4-2 show the April 2016 potentiometric surfaces for the Upper Aquifer, Lower Aquifer, and FPA.

4.3 Groundwater Analyses

The newly installed data gap wells were sampled for analysis of Dieldrin and water levels measured as part of the October annual sampling event. The existing wells at the Site were sampled in April 2016. Details of the sampling procedures and analytical methods will be provided in the Annual Basewide Groundwater Monitoring Report (in progress). The samples were analyzed for Dieldrin by EPA Method SW8270D. The results of the spring and fall sampling events are summarized in Tables 4-4 and 4-5 respectively. The data gap well results are summarized as follows:

- Upper Aquifer wells MW-159 and NZ-160 did not detect Dieldrin at a detection limit of 0.0019 µg/L.

- Lower Aquifer wells MW-161 and NZ-163 did not detect Dieldrin at a detection limit of 0.0019 µg/L. MW-162 detected Dieldrin at a concentration of 0.0032 µg/L.

4.4 Survey Results

The Appendix G boring and well logs present the survey results for the wells and soil borings. Figure 1-2 shows surveyed well and soil boring locations.

5.0 DISCUSSION

This section presents a summary of the Site geology and hydrogeology based on the observations of the lithology encountered in the soil borings and the water levels observed in the wells. Details of the materials encountered can be seen on the boring logs in Appendix B.

5.1 Lithology

Lithology from soil borings and groundwater elevation data collected during drilling and well development are discussed in the following subsections. Appendix B presents soil boring logs. Figure 1-2 shows monitoring well and cross-section locations. Based on the results of the newly installed data gap wells, Figures 2-4 through 2-7 present updated geologic cross sections.

MW-159

The soil boring at MW-159 was observed to be mostly sands and silts with a few thin layers of clay from the surface to 91 feet bgs (2,746 feet msl). The MLU (Clay Aquitard) is interpreted from 91 feet to the bottom of the boring at a depth of 105 feet. It consists primarily of silt with thin silty sand layers interbedded. The Upper Aquifer occurs above the MLU contact at 91 feet bgs.

MW-160

The soil boring at MW-160 was observed to be mostly silts and sands from the surface to 91 feet bgs with a few beds of clay at 102, 109, 114, and 137. Well-graded gravel exists at 128 to 134 feet bgs. The MLU (Clay Aquitard) is interpreted from 163 feet to the bottom of the boring at a depth of 187 feet. At those depths, clay has thin silty sand layers interbedded. The Upper Aquifer/MLU contact occurs at 163 feet bgs (2,727 feet msl).

MW-161

The soil boring at MW-161 was drilled adjacent to MW-160 and the detailed logging from MW-160 is used here. Based on the detailed log of MW-160 the Upper Aquifer/MLU contact is located at a depth of 163 feet bgs. The boring log for MW-161 indicates that from 186 to 195 feet bgs, lean clay forms the lower portion of the MLU. Below 195 feet bgs, silty or clayey sand was observed to 245, where sandy lean clay is at the top of an interbedded series of sands and clays to a depth of 312 feet. The units below 195 feet (2,695 feet msl) are part of the Lower Aquifer.

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MW-162

The soil boring at MW-162 was observed to be predominantly sand from the surface to 49 feet bgs, with mostly silt and silty sand to 148 feet bgs. This interval is a part of the Upper Aquifer. From 148 feet bgs to 200 feet bgs, several 3- to 5-foot-thick beds of clay were observed. This interval is interpreted to be the MLU. Beneath the MLU, silty sands predominate to a depth of 290 feet bgs, where clay exists at the bottom of the screened interval as a depth of 305 feet. This interval is part of the Lower Aquifer.

MW-163

The soil boring at MW-163 was observed to have predominantly silty sand from the surface to a depth of 77 feet. Below that depth, thin clay layers are interspersed with the sandy silt/silty sand. A thicker clay interval was observed from 106 to 119 feet bgs. This thicker clay is interpreted to form the bottom of the MLU. The lithologic distinction between the MLU/PLZ and the Lower Aquifer becomes less pronounced at locations like MW-163 as fine-grained layers pinch out and become less common on the east side of the Site. The interval below 119 feet is mostly a well-graded sand to a depth of 137 feet. This interval is part of the Lower Aquifer.

It should be noted that the geotechnical test results for wells MW-153 through MW-158 and borings SB-02 through SB06 indicated that the field logging descriptions have a tendency to bias toward finer materials than the results from the lab tests (e.g., silts are described as clays).

5.2 Groundwater Elevations

The following subsections, Figures 4-1 and 4-2, and the boring logs (Appendix B) present groundwater elevation data collected during drilling, well development, and groundwater monitoring. With the exception of MW-163, the water levels measured in the wells following the well completion were near to the elevations predicted in the Work Plan (CB&I, 2016).

MW-159

MW-159 was screened across the top of the uppermost water (assumed to be the Upper Aquifer) Southeast of NZ-120 to assess the groundwater mound and possible migration into the Lower Aquifer. The screen was installed from 2,732 to 2,752 feet msl. Six feet of the screen extends above Upper Aquifer/MLU contact and 15 feet of the screen was installed in the MLU. The Upper Aquifer at this location is thin to non-existent. The water level elevation at MW-159 was measured at 2,735.69 feet msl in October 2016. The water table surface at that elevation is within the MLU/PLZ portion of the screened interval. Figure 4-1 shows that the water level measured at MW-159 is very close to the water level predicted by Upper Aquifer contouring in past monitoring events. The mound created by the measurement

at NZ-120 is confirmed by the MW-159 measurement. The newly installed well is considered to be representative of the uppermost water (Upper Aquifer/MLU).

MW-160

MW-160 was located south of NZ-125 and paired with MW 161 to assess the southeastern portion of the Upper Aquifer plume. The Upper Aquifer is very thin at this location (between 1 and 2 feet). Because groundwater was initially observed lower in the well boring at 170 feet bgs, the screen was installed entirely within the MLU. The water level elevation at MW-160 was measured at 2,731.51 feet msl in October 2016. Figure 4-1 shows that the water level measured at MW-160 is very close to the water level predicted by Upper Aquifer contouring during past monitoring events. Because the top of the screen is within three and one half feet of the top of the water table, the newly installed well is considered to be representative of the uppermost water (Upper Aquifer/MLU).

MW-161

MW-161 was located south of MW-147 and paired with MW-160 to assess the southern portion of the Lower Aquifer plume where Dieldrin has been detected above the notification level at MW 147. The water level elevation at MW-161 was measured at 2,603.32 feet msl in October 2016. Figure 4-2 shows that the water level measured at MW-161 is very close to the water level predicted by contouring during past monitoring events. The screen installed from 291 to 311 feet below grade (2,679 to 2,699 feet msl) was installed entirely within the Lower Aquifer. MW-161 is located in the proposed position and is screened in the aquifer to monitor the southeastern portion of the plume in the Lower Aquifer.

MW-162

MW-162 was located north of MW-147 and paired with NZ-125 to assess the central portion of the plume. The water level elevation at MW-162 was measured at 2,603.39 feet msl in October 2016. The screen was installed from 2,587 to 2,607 feet msl, entirely within the Lower Aquifer. Figure 4-2 shows that the water level measured at MW-162 is very close to the water level predicted by contouring during last (April) monitoring event. MW-161 is located in the proposed position and is screened in the aquifer to monitor southeastern portion of the plume in the Lower Aquifer.

MW-163

MW-163 was located adjacent to MW-149 to assess the groundwater at the top of the Lower Aquifer water table. The screen was installed from 2,597 to 2,617 feet msl, mostly within the Lower Aquifer. The uppermost three feet of the screened interval are within the MLU/PLZ. The water level elevation at MW-163 was measured at 2,661.06 feet msl. Figure 4-2 shows that the water level measured at MW-163 stabilized more than 40 feet higher than the water level predicted by contouring during past monitoring events. An evaluation of vertical

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gradients in the vicinity of MW-163 shows that the seemingly anomalous water levels in MW-163 may simply be the result of strong downward gradients between the Upper Aquifer and deeper parts of the Lower Aquifer (Figure 2-5). The vertical gradient between NZ-123 (Upper Aquifer) and MW-163 is (2,682.81-2,616.11)/(2,680.7-2,597.0) = 0.26 downward. The vertical gradient between MW-163 and MW-149 (deeper part of Lower Aquifer) is (2,661.06-2,616.11)/(2,597.0-2,496.0) = 0.44 downward. The location of MW-163 is likely to be in one of the areas where water from the Upper Aquifer migrates directly to the Lower Aquifer producing a water level intermediate between the levels measured to the west in the two aquifers. A similar rational can be used for the inclusion of MW-148 in the Lower Aquifer water levels (e.g., the Upper Aquifer is migrating to the Lower Aquifer and the anomalous water level is a result of a downward gradient). If the levels at MW-163 and MW-148 are used as part of the Lower Aquifer contouring, this result causes a pronounced mound at MW-148 and MW-163 (Figure 4-2). Deposition of abundant sands and silts from the north and east created a more permeable sequence of lacustrine sediments, the PLZ, where water from the Upper Aquifer is able to migrate to the Lower Aquifer (MWH, 2011b). One other possible mechanism for this downwards flow is migration through a clastic dike through the MLU/PLZ.

5.3 Groundwater Chemistry

The following sections summarize the groundwater results from the data gap wells in the context of the Site monitoring results for 2016. Tables 4-4 and 4-5 provide the analytical results for the spring and fall 2016 groundwater sampling events. Figures 4-1 and 4-2 show the results and the Dieldrin plume in the Upper and Lower Aquifers respectively. The aquifers are discussed individually in the following subsections.

5.3.1 Upper Aquifer

Figure 4-1 presents concentrations of Dieldrin in Upper Aquifer groundwater from the 2016 monitoring. The figure also shows the isoconcentration contours that illustrate the interpreted extent of Dieldrin in groundwater. Spring and fall results are combined on the figure to allow a complete picture of the Dieldrin extent. The highest concentrations of Dieldrin in the Upper Aquifer occur in monitoring wells NZ 66 (0.092 J µg/L in spring), NZ-89 (0.11 J µg/L in spring), and NZ-91 (0.087 J µg/L in spring) in the northeast portion of the Site. Dieldrin concentrations at the Department of Health Services action level of 0.002 µg/L extend to monitoring well NZ-121 in the northeast, NZ 123 in the southeast, monitoring well NZ-160 in the south central portion, and monitoring well NZ-144 west of the mound. The recharge from the water tower pond at NZ-120 appears to have flushed out Dieldrin because NZ-120 and downgradient well MW-159 did not detect Dieldrin.

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The plume geometry in 2016 is similar to previous illustrations of Dieldrin in Upper Aquifer groundwater with one exception. The newly installed well NZ-160 did not detect Dieldrin and constrains the plume on the south. The similarity of the current plume to past interpretations is confirmed by a review of the Dieldrin concentration-versus-time graphs for the Upper Aquifer presented in Appendix H. The concentrations at the individual wells have mostly remained stable over time. There are no discernible increasing trends in the Upper Aquifer; which suggests that overall, the plume is stable or decreasing. Some Upper Aquifer wells have had decreasing concentrations since the winter of 2010 (NZ-91, NZ-122, NZ-123, NZ-124, and NZ-125).

The historical maximum concentration of Dieldrin in Upper Aquifer groundwater is 0.23 µg/L in NZ-89. The maximum concentration of Dieldrin in 2016 was 0.11 µg/L at well NZ-89 (down from 0.18 µg/L in 2015; Table 14-1). Maximum Dieldrin concentrations detected during 2016 were lower than the historic maximum concentration. The extent of Dieldrin in the Upper Aquifer groundwater at the Site is consistent with the extent presented during previous years. The plume is not migrating laterally. Concentrations in the Upper Aquifer have declined for most wells.

5.3.2 Lower Aquifer

Groundwater-flow directions in the Lower Aquifer during the 2016 monitoring event are illustrated on Figure 4-2. This figure indicates that the Lower Aquifer flows from southeast to the west or northwest beneath the southern portion of the Site. This flow is driven by an apparent mound in the southeast corner of the Site centered on MW-149. The higher groundwater elevation at well MW 149 may be related to vertical recharge from the Upper Aquifer through the PLZ in this area. The flow direction in the northern portion of the Site is to the northeast.

Figure 4-2 depicts Dieldrin in the Lower Aquifer groundwater using data from both the Spring and Fall 2016 monitoring events. Dieldrin was detected at five of the Lower Aquifer wells (MW-143, MW-145, MW-147, MW-162, and NZ-64). Dieldrin concentration-versus-time graphs for the Lower Aquifer are provided in Appendix H. The highest 2016 concentration of Dieldrin in Lower Aquifer groundwater was detected in well MW-147 (0.052 µg/L) in the southern portion of the Site. The previous historical maximum concentration of Dieldrin in the Lower Aquifer groundwater was 0.052 µg/L at well MW 147 in Spring 2015. In the Lower Aquifer, concentrations are decreasing or are stable for all the wells except MW-143. Although concentrations in the well are lower than the initial concentrations observed in 2009, the past two sampling events have shown an upward trend from 0.0027 to 0.0073 in MW-143.

5.4 Additional Data Analyses

The data generated during this investigation and historical results will be used to model the Dieldrin migration. The modeling will be used to support the conceptual site model and assessments of costs and time to complete for remedial alternatives. As described in the Work Plan (CB&I, 2016), a modeling approach regarding the HYDRUS model was presented to the RWQCB for comment and inclusion in the original Work Plan (CB&I, 2016) as an addendum. Once the approach is decided, the modeling will be performed and the conceptual site model refined. The results will be described and documented in a technical memorandum or in a revision to the PCAP (MWH, 2011a).

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6.0 REFERENCES

CB&I Federal Services LLC (CB&I), 2014, *Final Environmental Health and Safety Plan, Quality Program Plan—Volume 3, Former George Air Force Base, California, Revision 1*, Prepared for the U.S. Air Force Civil Engineer Center, AR# 421806, October.

CB&I Federal Services, Inc. (CB&I), 2016, *Final Data Gap Well Installation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, California*, April.

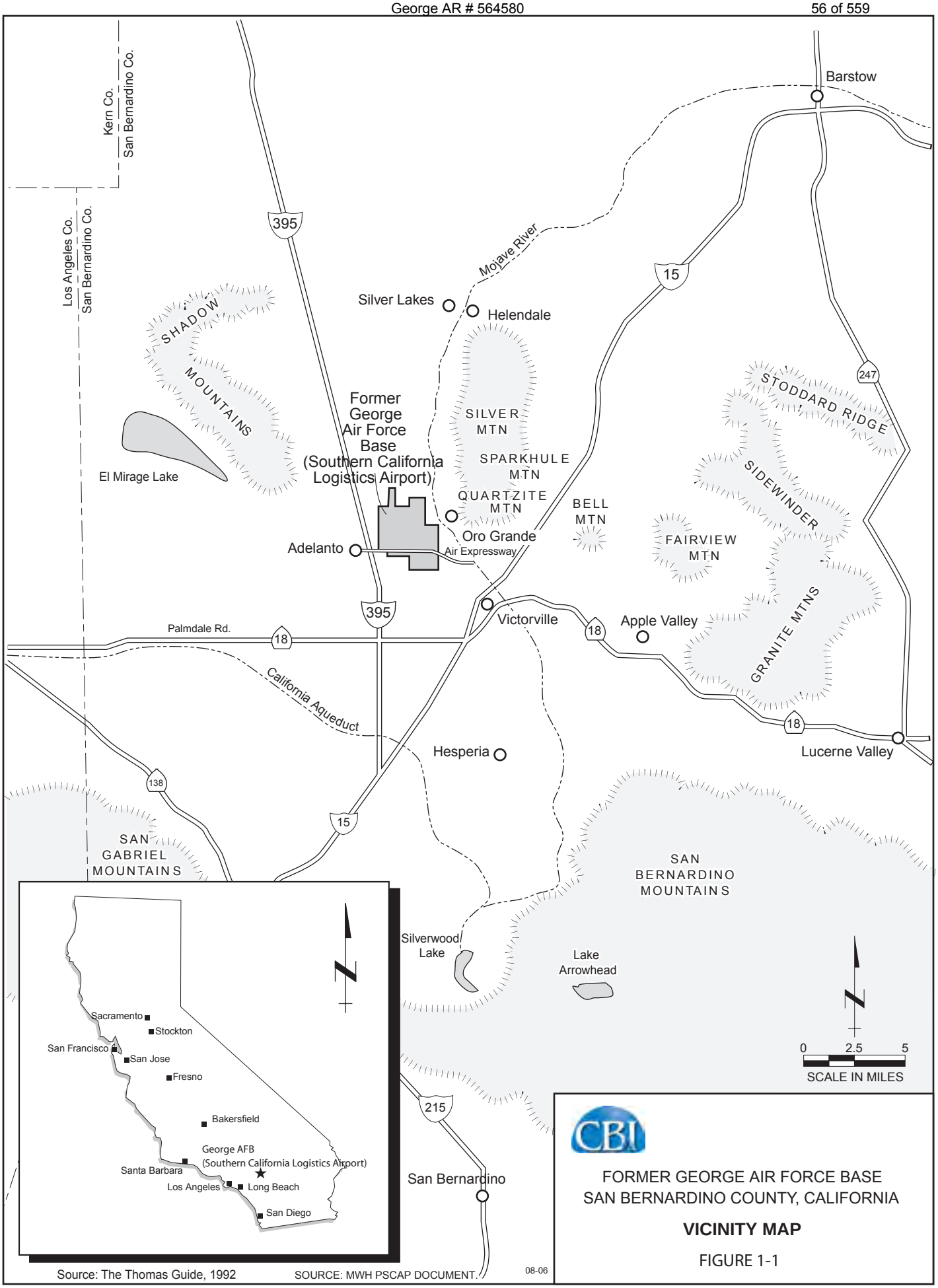
MWH Americas, Inc. (MWH), 2002, *Geologic Conceptual Site Model, George Air Force Base, Victorville, California*, April (Administrative Record File No. 2152).

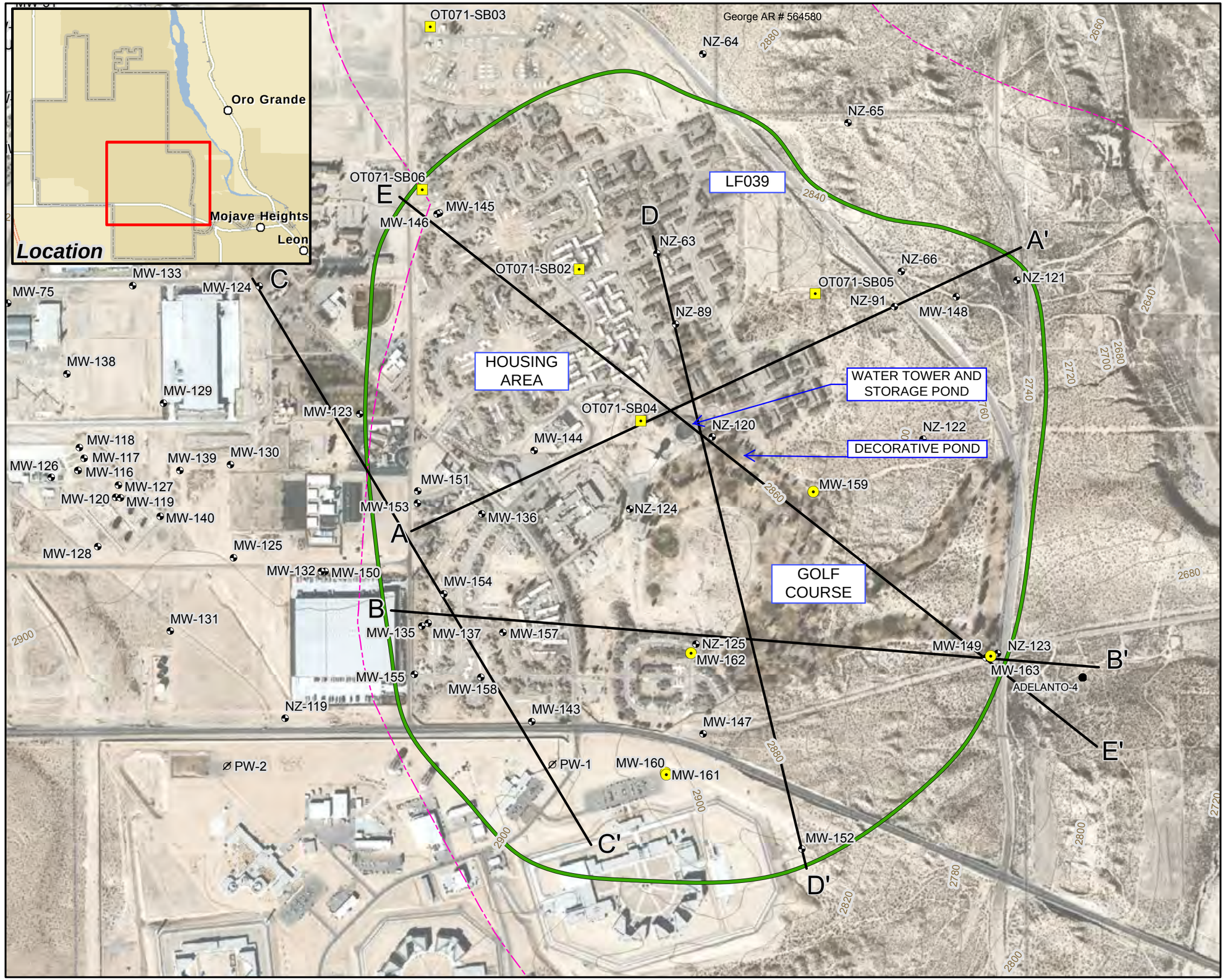
MWH Americas, Inc. (MWH), 2008, *Final Non-CERCLA Site OT071 Dieldrin Delineation Work Plan, Former George Air Force Base*, September.

MWH Americas, Inc. (MWH), 2011a, *Non-CERCLA Site OT071 Corrective Action Plan for Pesticides in Ground Water*, June.

MWH Americas, Inc. (MWH), 2011b, *Final Focused Feasibility Study OU1 TCE Ground Water Plume*, October.

Figures


Kern Co.
San Bernardino Co.
Los Angeles Co.
San Bernardino Co.
Barstow
395
Mojave River
15
Silver Lakes
Helendale
SHADOW MOUNTAINS
247
STODDARD RIDGE
Former George Air Force Base (Southern California Logistics Airport)
SILVER MTN
SPARKHULE MTN
QUARTZITE MTN
BELL MTN
SIDEWINDER
El Mirage Lake
Oro Grande
Air Expressway
Adelanto
FAIRVIEW MTN
395
Victorville
18
Apple Valley
Palmdale Rd.
18
GRANITE MTNS
California Aqueduct
18
Lucerne Valley
Hesperia
138
15
SAN GABRIEL MOUNTAINS
SAN BERNARDINO MOUNTAINS
Silverwood Lake
Lake Arrowhead
0 2.5 5
SCALE IN MILES
Sacramento
Stockton
San Francisco
San Jose
Fresno
Bakersfield
George AFB (Southern California Logistics Airport)
Santa Barbara
Los Angeles
Long Beach
San Diego
215
San Bernardino
CBI
FORMER GEORGE AIR FORCE BASE
SAN BERNARDINO COUNTY, CALIFORNIA
VICINITY MAP
FIGURE 1-1
Source: The Thomas Guide, 1992
SOURCE: MWH PSCAP DOCUMENT.
08-06



LEGEND

- New Groundwater Monitoring Well
- New Soil Boring
- Groundwater Monitoring Well
- City of Adelanto Production Well
- Inactive Supply Well
- Permeable Lacustrine Zone (PLZ) Boundary
- Topogaphic Contour (ft msl)
- Site OT071 Boundary
- Former George Air Force Base Boundary

Note: The photo base was taken in 2014.

N

0 400 800 1,600

Feet

1 inch = 800 feet

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FIGURE 1-2

INVESTIGATION ACTIVITY LOCATIONS
OT071

Google earth

miles 1

km 1

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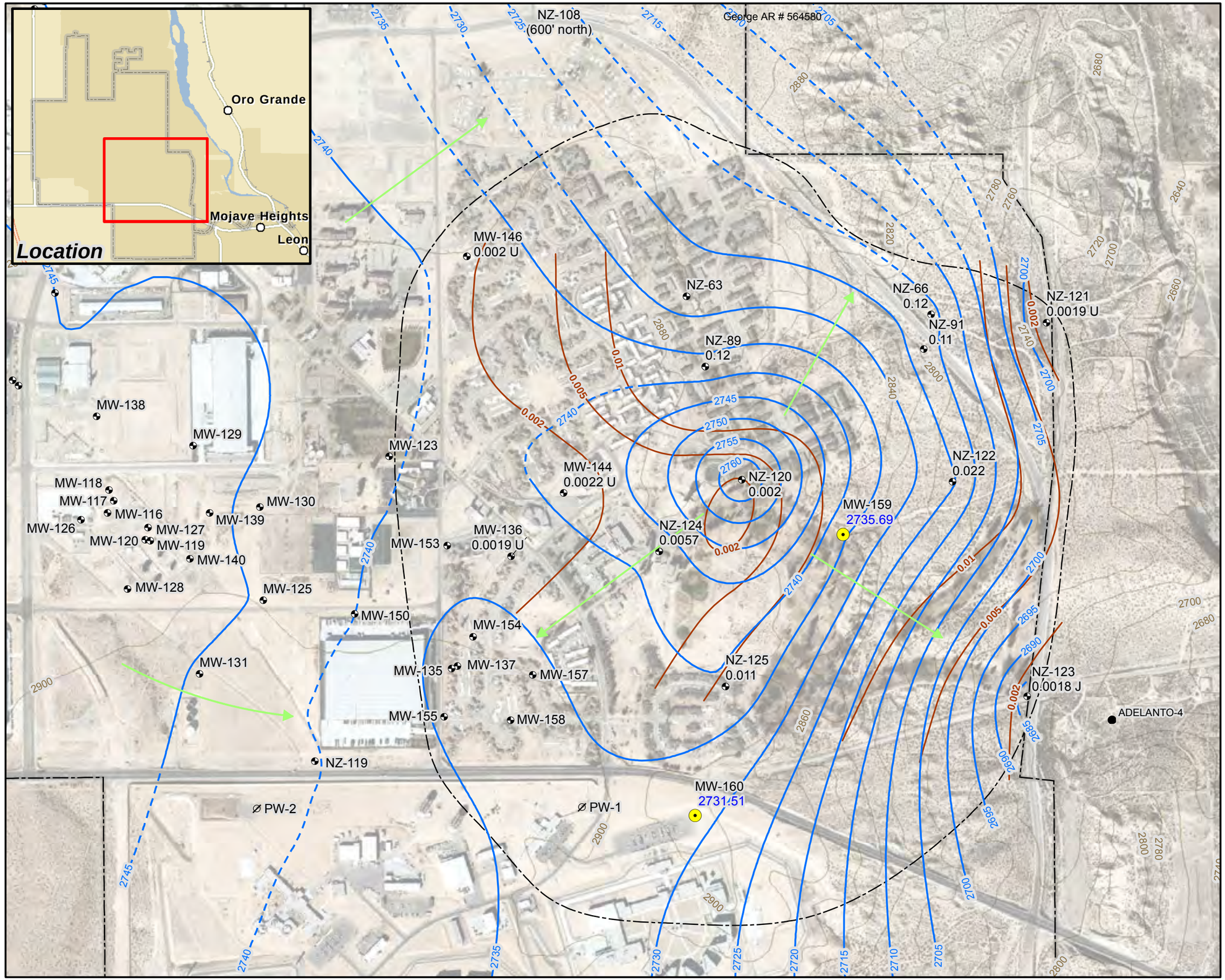
FIGURE 2-1

1994 George Air Force Base Housing



LEGEND

- New Upper Aquifer Groundwater Monitoring Well with Water Level
- Groundwater Monitoring Well
- City of Adelanto Production Well
- Inactive Supply Well
- April/May 2014 Dieldrin Concentration Contour (µg/L)
- October 2016 Upper Aquifer Groundwater Contour (ft msl)
- (dashed where estimated)
- Groundwater Flow Direction Arrow
- Permeable Lacustrine Zone (PLZ) Boundary
- Topogaphic Contour (ft msl)
- Site OT071 Boundary
- Former George Air Force Base Boundary

0.022 April/May 2014 Dieldrin Concentration (µg/L)
J = estimated concentration
U = not detected at concentration shown

Note: Dieldrin concentrations were gridded using IDW with a range of 1800 ft, IDW exponent of 2, and no smoothing. A value of 0.002 µg/L was used for non-detects. The resulting contours were modified by a hydrogeologist.

N

0 400 800 1,600
Feet
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FIGURE 2-2

NEW UPPER AQUIFER WELLS
MW-159 AND MW-160

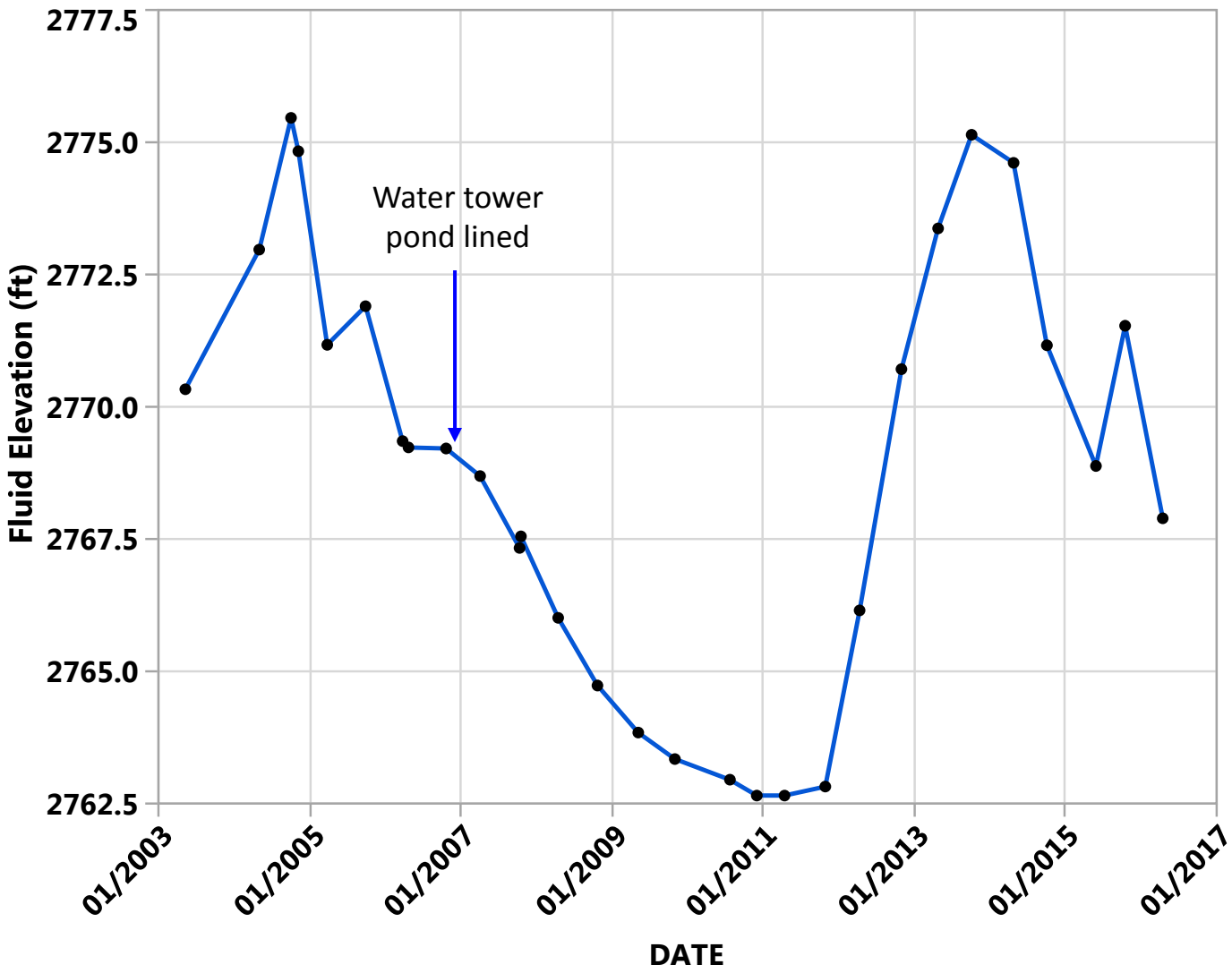

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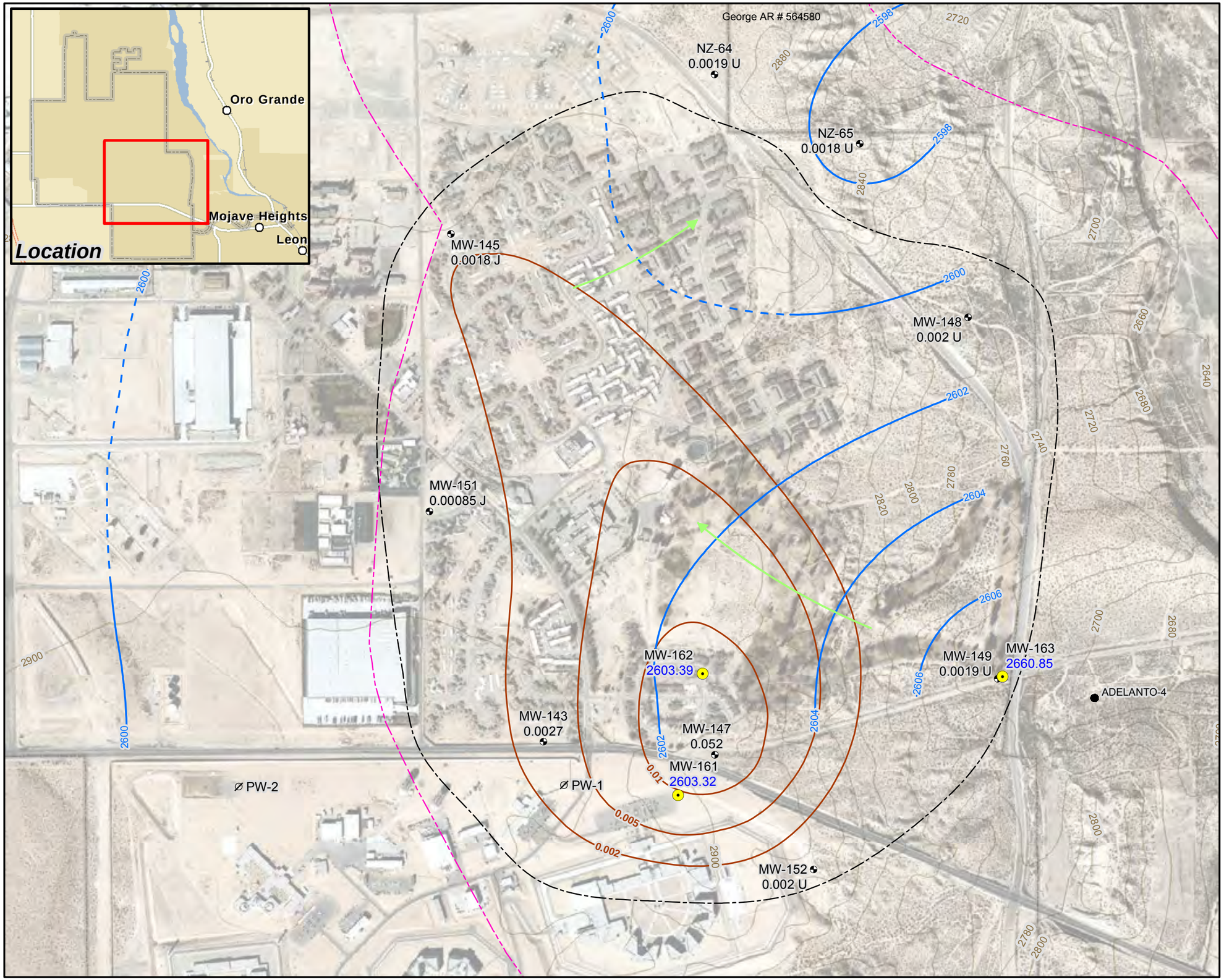
FIGURE 2-2a

NZ-120 HYDROGRAPH



LEGEND

- New Lower Aquifer Groundwater Monitoring Well with Water Level
- Groundwater Monitoring Well
- City of Adelanto Production Well
- Inactive Supply Well
- April/May 2014 Dieldrin Concentration Contour (µg/L)
- October 2016 Lower Aquifer Groundwater Contour (ft msl)
- (dashed where estimated)
- Groundwater Flow Direction Arrow
- Permeable Lacustrine Zone (PLZ) Boundary
- Topogaphic Contour (ft msl)
- Site OT071 Boundary
- Former George Air Force Base Boundary

0.052 April/May 2014 Dieldrin Concentration (µg/L);
J = estimated concentration
U = not detected at concentration shown

Note: Dieldrin concentrations were gridded using IDW with a range of 1800 ft, IDW exponent of 2, and no smoothing. A value of 0.002 µg/L was used for non-detects. The resulting contours were modified by a hydrogeologist.

N

0 400 800 1,600
Feet
1 inch = 800 feet

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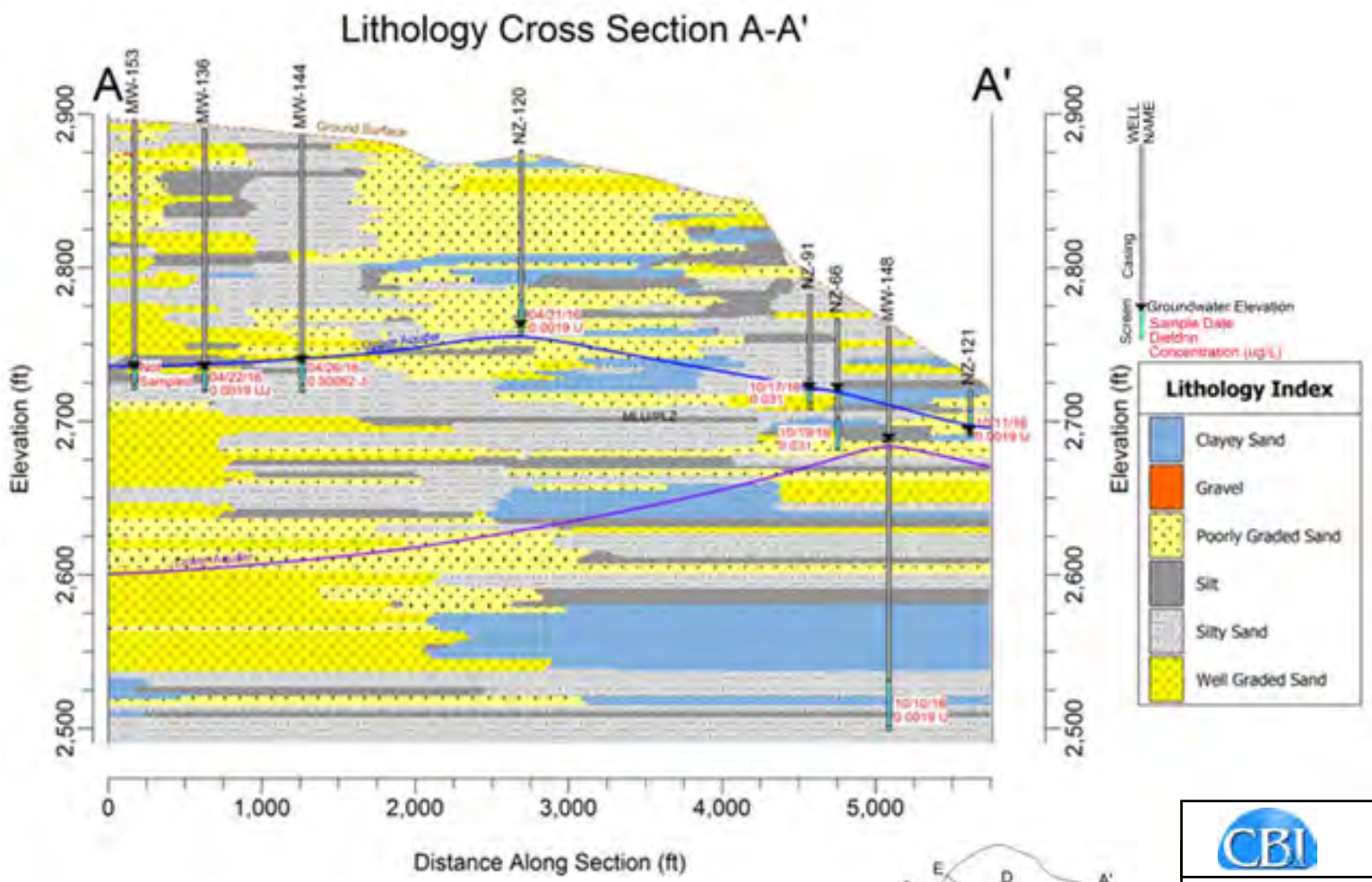
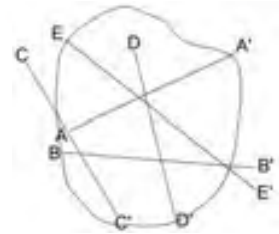
FIGURE 2-3

NEW LOWER AQUIFER WELLS
MW-161, MW-162, MW-163





Notes:
1. Cross section vertical exaggeration = 10x.
2. Borings within 1000 ft of the cross section line are projected onto the section.
3. Lithology model horizontal grid spacing is 20 ft and vertical grid spacing is 2 ft.
4. Groundwater elevations are from October 2016.

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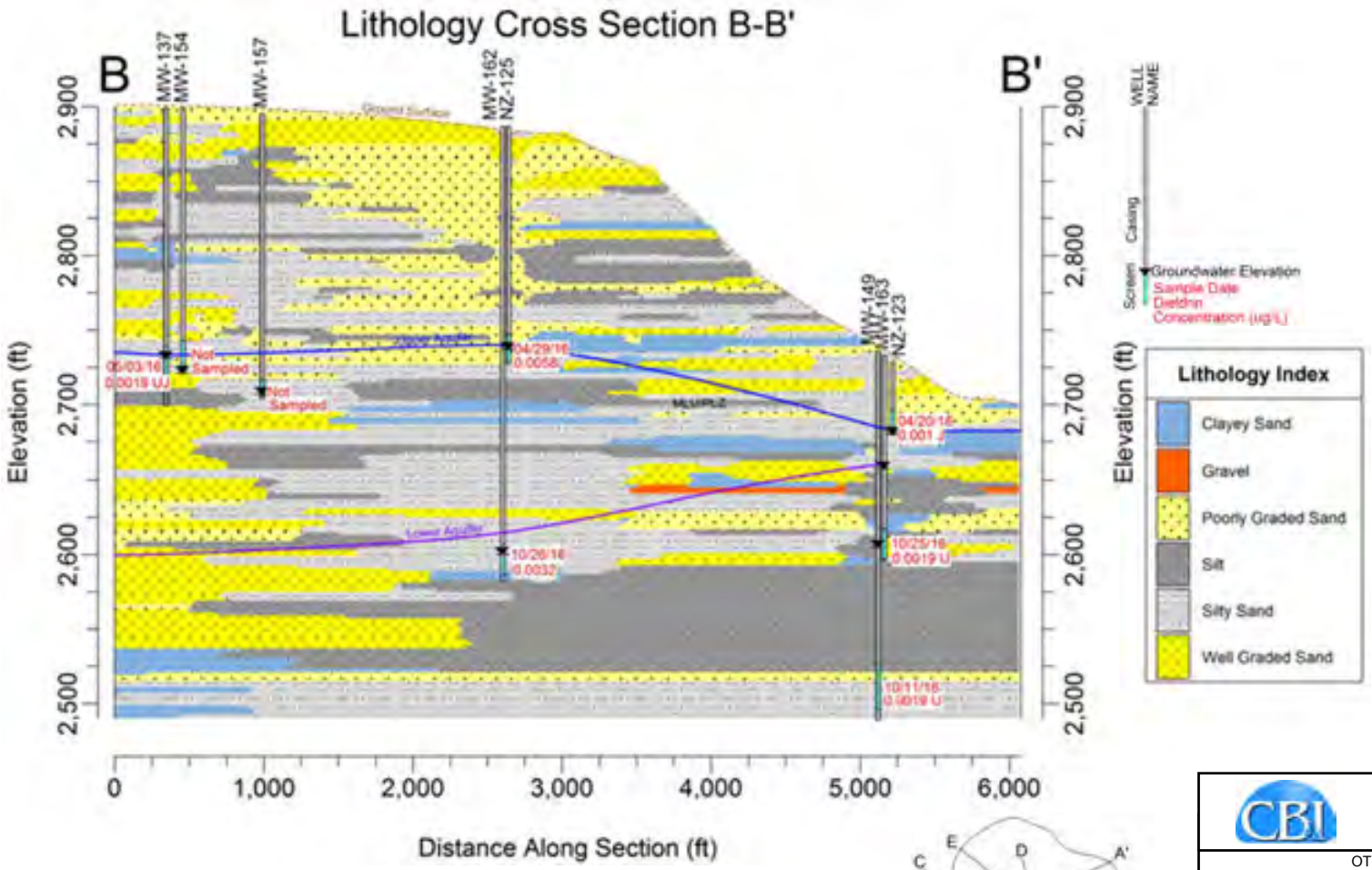
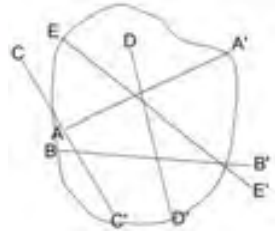
FIGURE 2-4

CROSS SECTION A-A'

H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\OT071_CAP\OT071_CAP_cross_sections_2016._rev5.pptx Model: OT071_Lith03_20x20x2_2016_09_28.RwMod Profile: OT071_AA





Notes:
1. Cross section vertical exaggeration = 10x.
2. Borings within 1000 ft of the cross section line are projected onto the section.
3. Lithology model horizontal grid spacing is 20 ft and vertical grid spacing is 2 ft.
4. Groundwater elevations are from October 2016.

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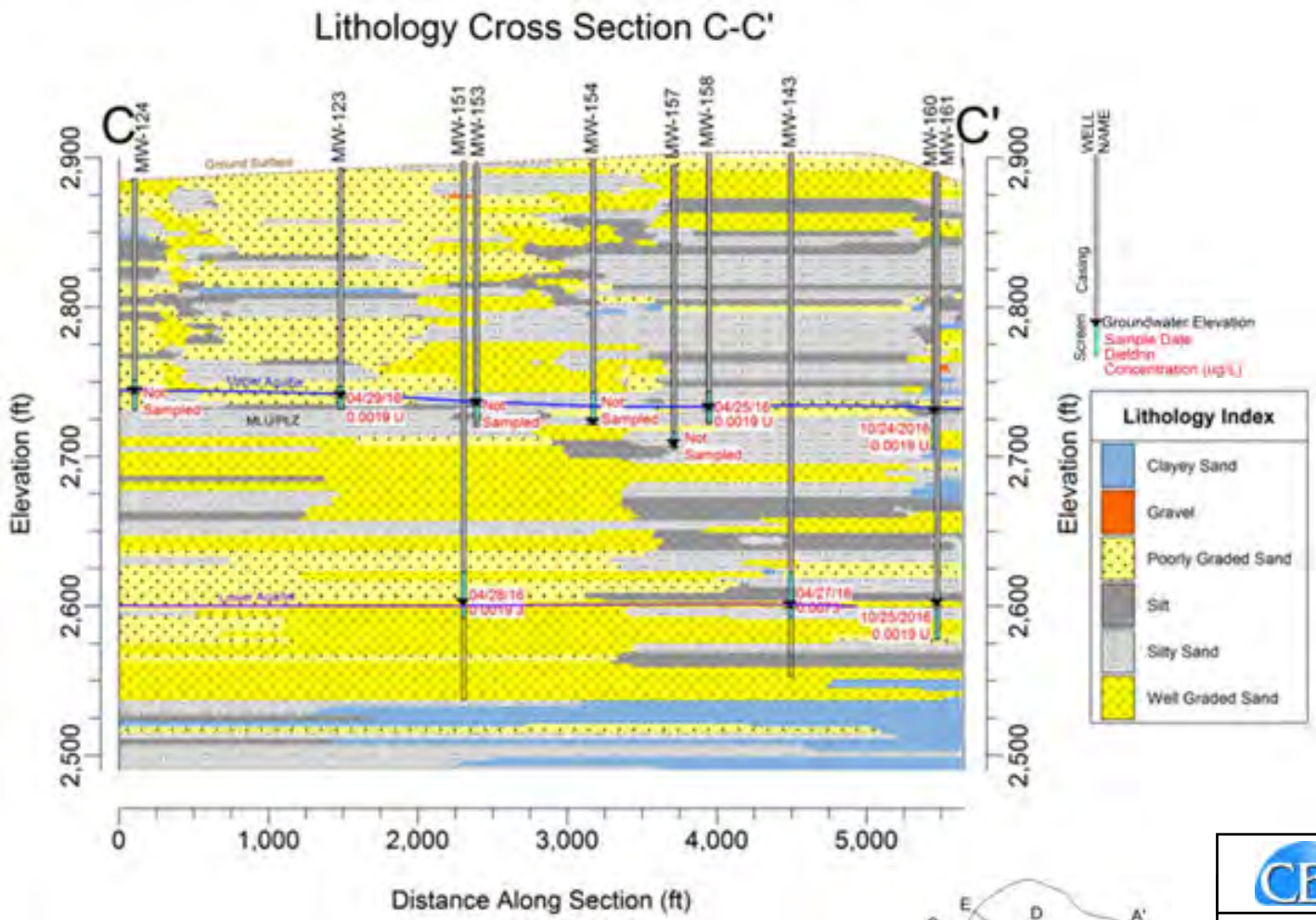
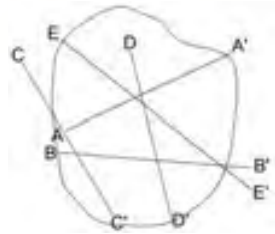
FIGURE 2-5

CROSS SECTION B-B'

H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\OT071_CAP\OT071_CAP_cross_sections_2016._rev5.pptx Model: OT071_Lith03_20x20x2_2016_09_28.RwMod Profile: OT071_BB





Notes:
1. Cross section vertical exaggeration = 10x.
2. Borings within 1000 ft of the cross section line are projected onto the section.
3. Lithology model horizontal grid spacing is 20 ft and vertical grid spacing is 2 ft.
4. Groundwater elevations are from October 2016.

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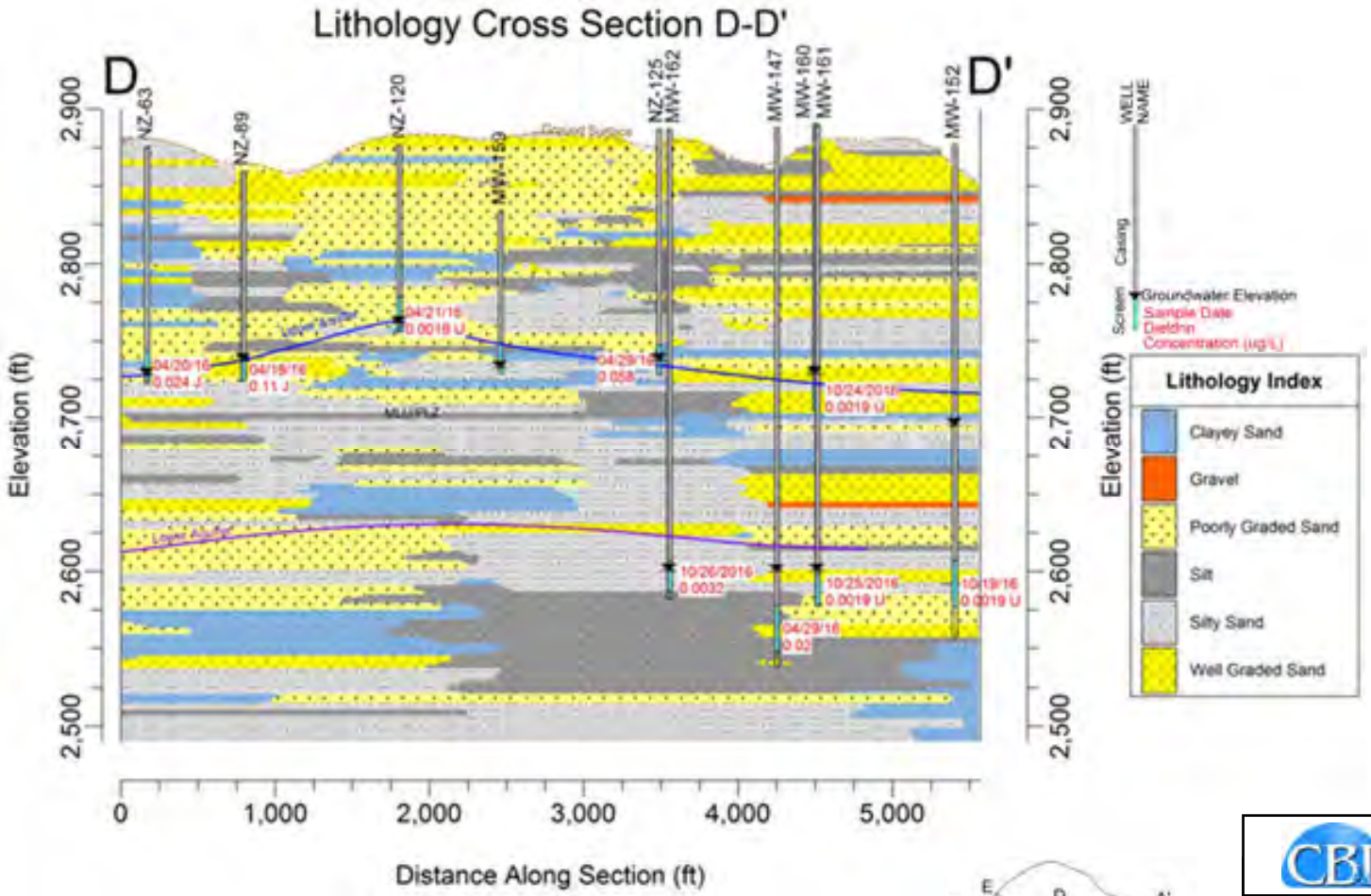
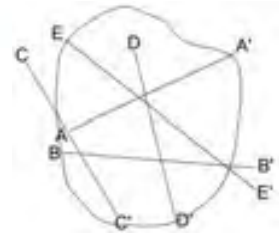
FIGURE 2-6

CROSS SECTION C-C'

H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\OT071_CAP\OT071_CAP_cross_sections_2016._rev5.pptx Model: OT071_Lith03_20x20x2_2016_09_28.RwMod Profile: OT071_CC





Notes:
1. Cross section vertical exaggeration = 10x.
2. Borings within 1000 ft of the cross section line are projected onto the section.
3. Lithology model horizontal grid spacing is 20 ft and vertical grid spacing is 2 ft.
4. Groundwater elevations are from October 2016.

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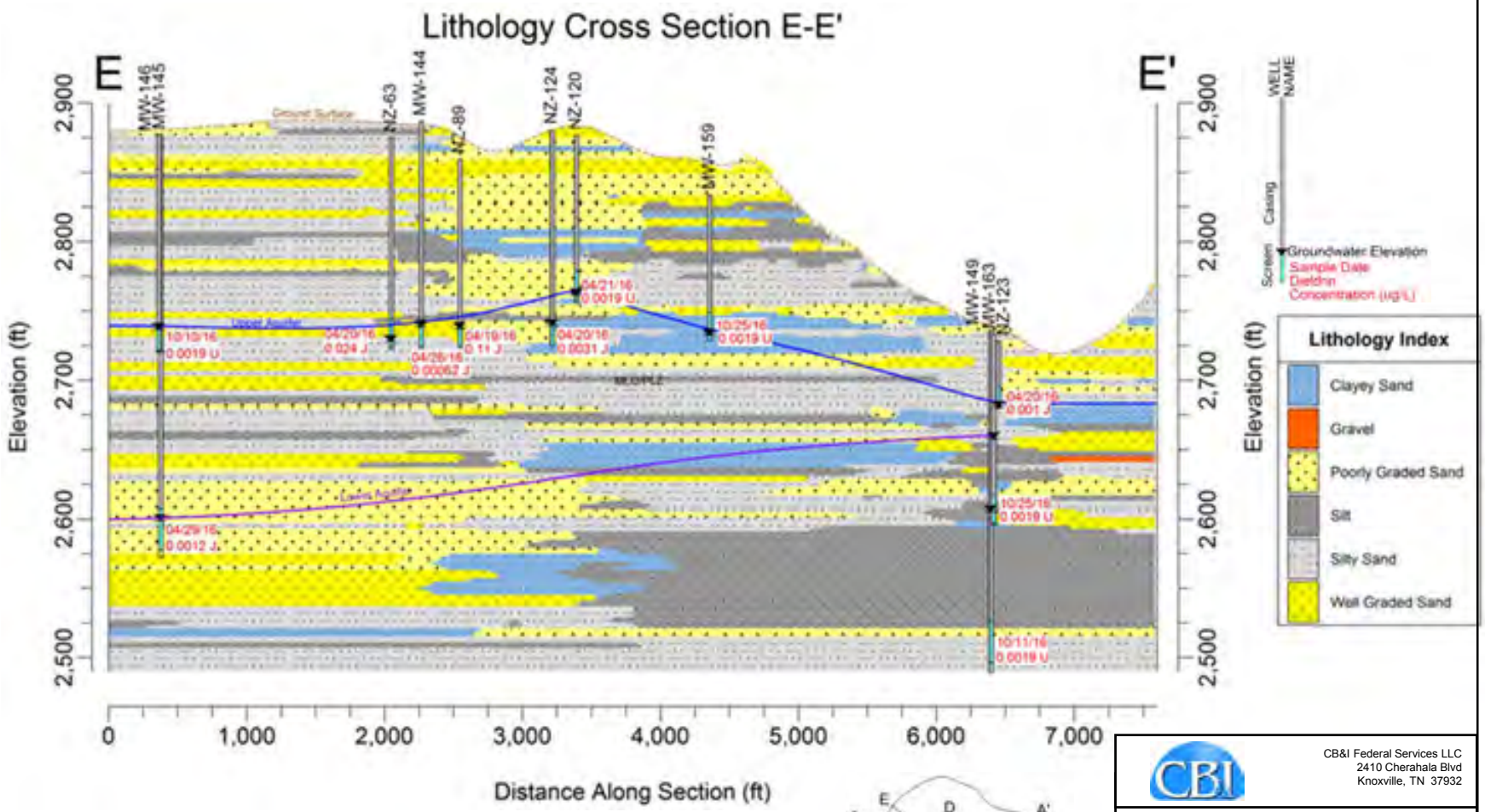
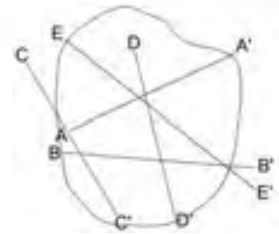
FIGURE 2-7

CROSS SECTION D-D'

H:\H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\OT071_CAP\OT071_CAP_cross_sections_2016._rev5.pptx Model: OT071_Lith03_20x20x2_2016_09_28.RwMod Profile: OT071_DD





Notes:
1. Cross section vertical exaggeration = 10x.
2. Borings within 1000 ft of the cross section line are projected onto the section.
3. Lithology model horizontal grid spacing is 20 ft and vertical grid spacing is 2 ft.
4. Groundwater elevations are from October 2016.

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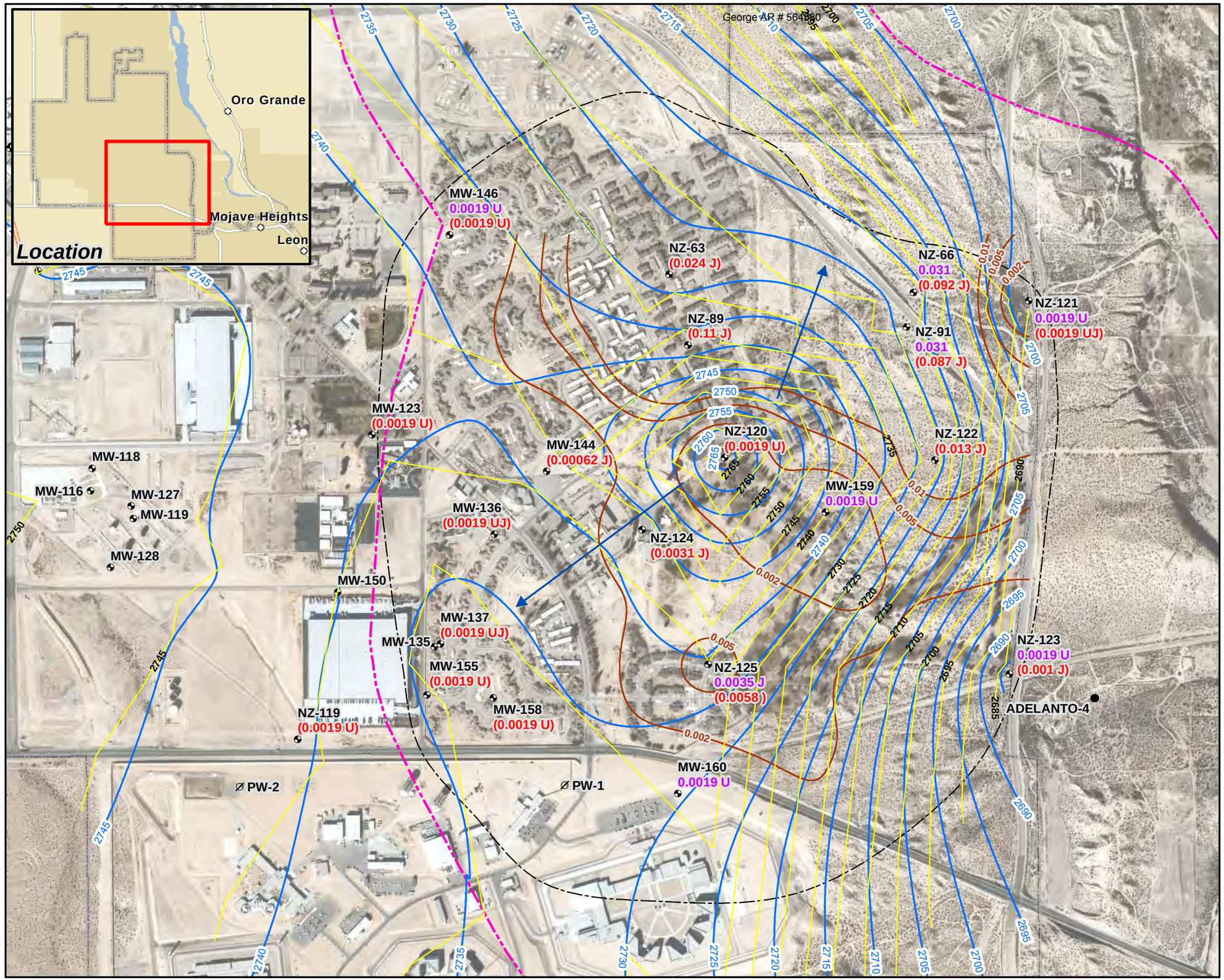
FIGURE 2-8

CROSS SECTION E-E'

H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\OT071_CAP\OT071_CAP_cross_sections_2016._rev5.pptx Model: OT071_Lith03_20x20x2_2016_09_28.RwMod Profile: OT071_EE



LEGEND

- Groundwater Monitoring Well
- City of Adelanto Production Well
- Inactive Supply Well
- April 2016 Dieldrin Concentration Contour (µg/L)
- April 2016 Upper Aquifer Groundwater Contour (ft msl) (Kriging contouring method)
- April 2016 Groundwater Contour (ft msl) (TIN contouring method)
- Groundwater Flow Direction Arrow
- Permeable Lacustrine Zone (PLZ) Boundary
- Site OT071 Boundary
- Former George Air Force Base Boundary

2.3 October 2016 Dieldrin Concentration (µg/L)
(2.4) April 2016 Dieldrin Concentration (µg/L)
J Estimated concentration
U Not detected at concentration shown

Note: Dieldrin concentrations were gridded using IDW with a range of 1800 ft, IDW exponent of 2, and smoothing of 0.2. A value of 0.00095 was used for non-detects. The resulting contours were modified by a hydrogeologist.

0 450 900 1,800
Feet
1 inch = 800 feet

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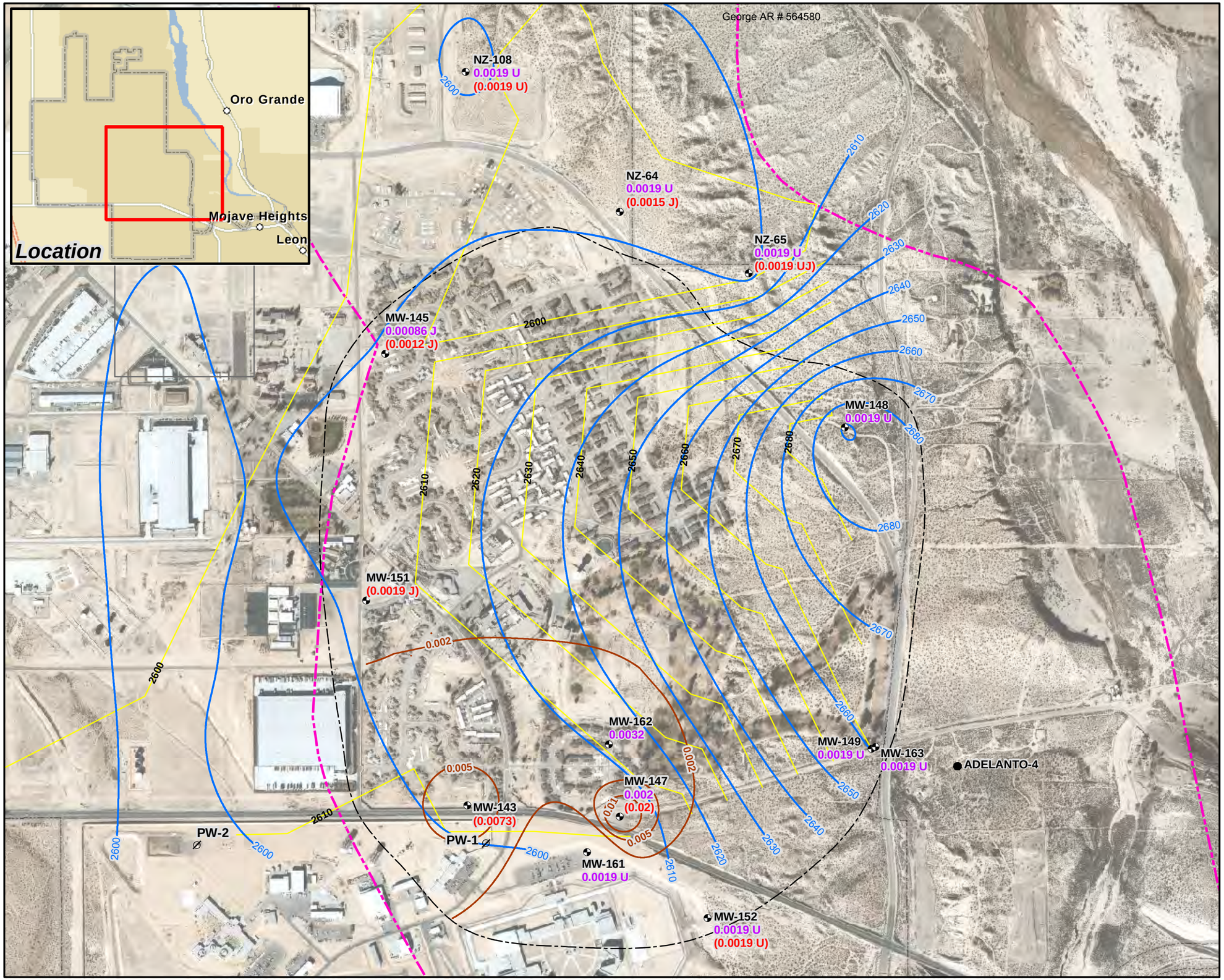
FIGURE 4-1

DIELDRIN CONCENTRATIONS IN THE UPPER AQUIFER, SITE OT071
APRIL AND OCTOBER 2016

H:\George_AFB\GIS_Documents\Project_Maps\Basewide_Documents\2016_Annual_Report\GAFB_008_OT071_Dieldrin_upper_spring.mxd 06/12/17



LEGEND

- Groundwater Monitoring Well
- City of Adelanto Production Well
- Inactive Supply Well
- April/October 2016 Dieldrin Concentration Contour (µg/L) (IDW Contouring Method)
- Groundwater Flow Direction Arrow
- April 2016 Lower Aquifer Groundwater Contour (ft msl)
- April 2016 Groundwater Contour (ft msl) (TIN contouring method)
- Permeable Lacustrine Zone (PLZ) Boundary
- Site OT071 Boundary
- Former George Air Force Base Boundary

0.032 October 2016 Dieldrin Concentration (µg/L)
(0.02) April 2016 Dieldrin Concentration (µg/L)
J Estimated concentration
U Not detected at concentration shown

Note: Dieldrin concentrations were gridded using IDW with a range of 1800 ft, IDW exponent of 2, and no smoothing. A value of 0.0002 µg/L was used for non-detects. The resulting contours were modified by a hydrogeologist.

0 450 900 1,800
Feet
1 inch = 900 feet

N

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FIGURE 4-2

DIELDRIN CONCENTRATIONS IN THE LOWER AQUIFER, SITE OT071
APRIL AND OCTOBER 2016

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Tables

Table 1-1

Well Construction Details
Non-CERCLA Site OT071
Former George Air Force Base

Well ID	Aquifer	Drilling Method	Top/Bottom of Screen Elevation (feet amsl)	Casing Diameter (inches)	Approximate Well Depth (feet btoc)	Ground Surface Elevation (feet amsl)	Top of Casing Elevation (feet amsl)	Depth to Groundwater* (feet btoc)	Groundwater Surface Elevation* (feet amsl)	Data Gap / Monitoring Purpose
MW-159	Upper	HSA	2748/ 2728	4	109.1	2833.74	2837.04	101.35	2735.69	Southeast of NZ-120 to assess the groundwater mound and possible migration to the Lower Aquifer.
MW-160	Upper	HSA	2725/ 2705	4	188.25	2890.25	2893.08	161.57	2731.51	South of NZ-125 and paired with MW-161 to assess the southeastern portion of the plume.
MW-161	Lower	Mud Rotary	2601/ 2581	4	313.9	2889.78	2892.87	289.55	2603.32	South of MW-147 and paired with MW-160 to assess the southern portion of the plume where dieldrin has been detected above the notification level at MW 147.
MW-162	Lower	HSA / Mud Rotary	2606/ 2586	4	305	2886.89	2889.93	286.54	2603.39	North of MW-147 and paired with NZ-125 to assess the central portion of the plume.
MW-163	Lower	HSA	2617/ 2597	4	137.1	2733.03	2736.08	75.02	2661.06	Adjacent to MW-149 to assess the groundwater at the top of the water table.

amsl – Above mean sea level.
ARCH – Air rotary casing hammer.
bgs – Below ground surface.
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act.
HAS – Hollow-stem auger.
TOC – Top of casing.
* Groundwater measurements from the Spring 2016 sampling event

Table 1-2

Vadose Zone Model Calibration Borings
Non-CERCLA Site OT071
Former George Air Force Base

Boring ID	Drilling Method	Boring Depth (feet bgs)	Samples Collected	Data Gap / Sampling Purpose
OT071-SB02	Limited access rig/ Geoprobe	11	Continuous core - one sample for Dieldrin from directly beneath the slab and the others at depths of 2, 4, 7, 8.5, and 10 feet below grade	Located beneath a slab where the highest dieldrin concentration was previously detected (SS-37 at 15,000 µg/kg).
OT071-SB03	Geoprobe	16	Continuous core - samples for Dieldrin from depths of 2, 4, 6, 7, 10, and 12 feet below grade	Located beneath a slab in the vicinity of previous sample SS-35 (1710 µg/kg).
OT071-SB04	Geoprobe	15	Continuous core - samples for Dieldrin from depths of 2, 4, 6, 7, 10, 14, and 15 feet below grade.	Located in an unpaved area near the locations of a former high concentration sample (SS-23 at 1210 µg/kg)
OT071-SB05	Geoprobe	15	Continuous core - samples for Dieldrin from depths of 2, 4, 7, and 9 feet below grade.	Located in an unpaved area near the locations of former high concentration samples (SS-44 at 294 µg/kg)
OT071-SB06	Geoprobe	15	Continuous core - samples for Dieldrin from depths of 2, 3, 4, and 9 feet below grade.	Located in a topographic low where runoff may have concentrated Dieldrin

µg/kg – Micrograms per kilogram.

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB02																								
	Sample ID:	OT071-00001					OT071-00001-LEACH-SPLP-0.45um					OT071-00001-LEACH-SPLP-0.70um					OT071-00003					OT071-00003-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG				
	Sample Depth:	2 - 2 ft					2 - 2 ft					2 - 2 ft					4 - 4 ft					4 - 4 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																										
Dieldrin	µg/L	NS					<0.29	0.5	0.5	0.29	U	4	0.5	0.5	0.29		NS					<0.29	0.5	0.5	0.29	U
MOISTURE																										
Percent Moisture	Percent	7.4	0.1	0.1	0.1		NS					NS					1.7	0.1	0.1	0.1		NS				
PESTICIDES																										
Aldrin	mg/kg	0.25	0.054	0.049	0.024		NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Alpha BHC	mg/kg	<0.004	0.011	0.0049	0.004	U	NS					NS					<0.0037	0.01	0.0046	0.0037	U	NS				
Alpha Endosulfan	mg/kg	<0.0021	0.0054	0.0049	0.0021	U	NS					NS					<0.002	0.0051	0.0046	0.002	U	NS				
Alpha-Chlordane	mg/kg	<0.0022	0.0054	0.0049	0.0022	U	NS					NS					<0.0021	0.0051	0.0046	0.0021	U	NS				
Beta BHC	mg/kg	<0.0027	0.0054	0.0049	0.0027	U	NS					NS					<0.0025	0.0051	0.0046	0.0025	U	NS				
Beta Endosulfan	mg/kg	<0.0025	0.0054	0.0049	0.0025	U	NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
Delta BHC	mg/kg	<0.0047	0.011	0.0049	0.0047	U	NS					NS					<0.0044	0.01	0.0046	0.0044	U	NS				
Dieldrin	mg/kg	0.7	0.54	0.49	0.24		NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Endosulfan Sulfate	mg/kg	<0.0028	0.0054	0.0049	0.0028	U	NS					NS					<0.0026	0.0051	0.0046	0.0026	U	NS				
Endrin	mg/kg	<0.0025	0.0054	0.0049	0.0025	U	NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
Endrin Aldehyde	mg/kg	<0.0033	0.0054	0.0049	0.0033	U	NS					NS					<0.0031	0.0051	0.0046	0.0031	U	NS				
Endrin Ketone	mg/kg	0.0044	0.0054	0.0049	0.0027	J	NS					NS					<0.0025	0.0051	0.0046	0.0025	U	NS				
Gamma BHC	mg/kg	<0.0024	0.0054	0.0049	0.0024	U	NS					NS					<0.0023	0.0051	0.0046	0.0023	U	NS				
Gamma-Chlordane	mg/kg	<0.0045	0.011	0.0049	0.0045	U	NS					NS					<0.0042	0.01	0.0046	0.0042	U	NS				
Heptachlor	mg/kg	<0.0023	0.0054	0.0049	0.0023	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Heptachlor Epoxide	mg/kg	<0.004	0.011	0.0049	0.004	U	NS					NS					<0.0037	0.01	0.0046	0.0037	U	NS				
Methoxychlor	mg/kg	<0.0029	0.0054	0.0049	0.0029	U	NS					NS					<0.0028	0.0051	0.0046	0.0028	U	NS				
p,p'-DDD	mg/kg	<0.0026	0.0054	0.0049	0.0026	U	NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
p,p'-DDE	mg/kg	<0.0024	0.0054	0.0049	0.0024	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
p,p'-DDT	mg/kg	<0.0024	0.0054	0.0049	0.0024	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Toxaphene	mg/kg	<0.048	0.11	0.054	0.048	U	NS					NS					<0.045	0.1	0.051	0.045	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB02																													
	Sample ID:	OT071-00003-LEACH-SPLP-0.70um					OT071-00004					OT071-00004-LEACH-SPLP-0.45um					OT071-00004-LEACH-SPLP-0.70um					OT071-00005					OT071-00005-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	4 - 4 ft					7 - 7 ft					7 - 7 ft					7 - 7 ft					10 - 10 ft					10 - 10 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	NS					0.9	0.1	0.1	0.1		NS					NS					0.9	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					0.0028	0.005	0.0045	0.0022	J	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
Alpha BHC	mg/kg	NS					<0.0037	0.01	0.0045	0.0037	U	NS					NS					<0.0037	0.01	0.0045	0.0037	U	NS				
Alpha Endosulfan	mg/kg	NS					<0.002	0.005	0.0045	0.002	U	NS					NS					<0.002	0.005	0.0045	0.002	U	NS				
Alpha-Chlordane	mg/kg	NS					<0.002	0.005	0.0045	0.002	U	NS					NS					<0.002	0.005	0.0045	0.002	U	NS				
Beta BHC	mg/kg	NS					<0.0025	0.005	0.0045	0.0025	U	NS					NS					<0.0025	0.005	0.0045	0.0025	U	NS				
Beta Endosulfan	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					<0.0024	0.005	0.0045	0.0024	U	NS				
Delta BHC	mg/kg	NS					<0.0044	0.01	0.0045	0.0044	U	NS					NS					<0.0044	0.01	0.0045	0.0044	U	NS				
Dieldrin	mg/kg	NS					0.0038	0.005	0.0045	0.0022	J	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
Endosulfan Sulfate	mg/kg	NS					<0.0026	0.005	0.0045	0.0026	U	NS					NS					<0.0026	0.005	0.0045	0.0026	U	NS				
Endrin	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					<0.0024	0.005	0.0045	0.0024	U	NS				
Endrin Aldehyde	mg/kg	NS					<0.003	0.005	0.0045	0.003	U	NS					NS					<0.003	0.005	0.0045	0.003	U	NS				
Endrin Ketone	mg/kg	NS					<0.0025	0.005	0.0045	0.0025	U	NS					NS					<0.0025	0.005	0.0045	0.0025	U	NS				
Gamma BHC	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
Gamma-Chlordane	mg/kg	NS					<0.0042	0.01	0.0045	0.0042	U	NS					NS					<0.0042	0.01	0.0045	0.0042	U	NS				
Heptachlor	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
Heptachlor Epoxide	mg/kg	NS					<0.0037	0.01	0.0045	0.0037	U	NS					NS					<0.0037	0.01	0.0045	0.0037	U	NS				
Methoxychlor	mg/kg	NS					<0.0027	0.005	0.0045	0.0027	U	NS					NS					<0.0027	0.005	0.0045	0.0027	U	NS				
p,p'-DDD	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					<0.0024	0.005	0.0045	0.0024	U	NS				
p,p'-DDE	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
p,p'-DDT	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					<0.0022	0.005	0.0045	0.0022	U	NS				
Toxaphene	mg/kg	NS					<0.045	0.1	0.05	0.045	U	NS					NS					<0.045	0.1	0.05	0.045	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB02																				OT071-SB03									
	Sample ID:	OT071-00005-LEACH-SPLP-0.70um					OT071-00036					OT071-00036-LEACH-SPLP-0.45um					OT071-00036-LEACH-SPLP-0.70um					OT071-00008					OT071-00008-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/13/2016					5/13/2016					5/13/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	10 - 10 ft					8.41 - 8.83 ft					8.41 - 8.83 ft					0 - 0 FT					2 - 2 ft					2 - 2 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	**0.44**	0.5	0.5	0.29		**NS**					**0.036**	0.02	0.02	0.0061	nv	**0.39**	0.08	0.08	0.024	nv	**NS**					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	**NS**					**0.7**	0.1	0.1	0.1		**NS**					**NS**					**3.3**	0.1	0.1	0.1		**NS**				
PESTICIDES																															
Aldrin	mg/kg	**NS**					**NS**					**NS**					**NS**					**0.013**	0.0051	0.0046	0.0022		**NS**				
Alpha BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0038	0.01	0.0046	0.0038	U	**NS**				
Alpha Endosulfan	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.002	0.0051	0.0046	0.002	U	**NS**				
Alpha-Chlordane	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0021	0.0051	0.0046	0.0021	U	**NS**				
Beta BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0025	0.0051	0.0046	0.0025	U	**NS**				
Beta Endosulfan	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0024	0.0051	0.0046	0.0024	U	**NS**				
Delta BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0045	0.01	0.0046	0.0045	U	**NS**				
Dieldrin	mg/kg	**NS**					**NS**					**NS**					**NS**					**1**	0.26	0.23	0.11		**NS**				
Endosulfan Sulfate	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0027	0.0051	0.0046	0.0027	U	**NS**				
Endrin	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0024	0.0051	0.0046	0.0024	U	**NS**				
Endrin Aldehyde	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0031	0.0051	0.0046	0.0031	U	**NS**				
Endrin Ketone	mg/kg	**NS**					**NS**					**NS**					**NS**					**0.0047**	0.0051	0.0046	0.0026	J	**NS**				
Gamma BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0023	0.0051	0.0046	0.0023	U	**NS**				
Gamma-Chlordane	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0043	0.01	0.0046	0.0043	U	**NS**				
Heptachlor	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0022	0.0051	0.0046	0.0022	U	**NS**				
Heptachlor Epoxide	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0038	0.01	0.0046	0.0038	U	**NS**				
Methoxychlor	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0028	0.0051	0.0046	0.0028	U	**NS**				
p,p'-DDD	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0024	0.0051	0.0046	0.0024	U	**NS**				
p,p'-DDE	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0023	0.0051	0.0046	0.0023	U	**NS**				
p,p'-DDT	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0022	0.0051	0.0046	0.0022	U	**NS**				
Toxaphene	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.046	0.1	0.051	0.046	U	**NS**				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB03																													
	Sample ID:	OT071-00008-LEACH-SPLP-0.70um					OT071-00009					OT071-00009-LEACH-SPLP-0.45um					OT071-00009-LEACH-SPLP-0.70um					OT071-00010					OT071-00010-LEACH-SPLP-0.45um				
	Sample Date:	5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	2 - 2 ft					4 - 4 ft					4 - 4 ft					4 - 4 ft					7 - 7 ft					7 - 7 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	2.4	0.5	0.5	0.29		NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	NS					4.7	0.1	0.1	0.1		NS					NS					2.1	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					0.027	0.0052	0.0047	0.0023		NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Alpha BHC	mg/kg	NS					<0.0039	0.01	0.0047	0.0039	U	NS					NS					<0.0037	0.01	0.0046	0.0037	U	NS				
Alpha Endosulfan	mg/kg	NS					<0.0021	0.0052	0.0047	0.0021	U	NS					NS					<0.002	0.0051	0.0046	0.002	U	NS				
Alpha-Chlordane	mg/kg	NS					<0.0021	0.0052	0.0047	0.0021	U	NS					NS					<0.0021	0.0051	0.0046	0.0021	U	NS				
Beta BHC	mg/kg	NS					<0.0026	0.0052	0.0047	0.0026	U	NS					NS					<0.0025	0.0051	0.0046	0.0025	U	NS				
Beta Endosulfan	mg/kg	NS					<0.0025	0.0052	0.0047	0.0025	U	NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
Delta BHC	mg/kg	NS					<0.0046	0.01	0.0047	0.0046	U	NS					NS					<0.0044	0.01	0.0046	0.0044	U	NS				
Dieldrin	mg/kg	NS					1.2	0.26	0.23	0.11		NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Endosulfan Sulfate	mg/kg	NS					<0.0027	0.0052	0.0047	0.0027	U	NS					NS					<0.0026	0.0051	0.0046	0.0026	U	NS				
Endrin	mg/kg	NS					0.0054	0.0052	0.0047	0.0025		NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
Endrin Aldehyde	mg/kg	NS					<0.0032	0.0052	0.0047	0.0032	U	NS					NS					<0.0031	0.0051	0.0046	0.0031	U	NS				
Endrin Ketone	mg/kg	NS					0.013	0.0052	0.0047	0.0026		NS					NS					<0.0025	0.0051	0.0046	0.0025	U	NS				
Gamma BHC	mg/kg	NS					<0.0023	0.0052	0.0047	0.0023	U	NS					NS					<0.0023	0.0051	0.0046	0.0023	U	NS				
Gamma-Chlordane	mg/kg	NS					<0.0043	0.01	0.0047	0.0043	U	NS					NS					<0.0042	0.01	0.0046	0.0042	U	NS				
Heptachlor	mg/kg	NS					<0.0023	0.0052	0.0047	0.0023	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Heptachlor Epoxide	mg/kg	NS					<0.0039	0.01	0.0047	0.0039	U	NS					NS					<0.0037	0.01	0.0046	0.0037	U	NS				
Methoxychlor	mg/kg	NS					<0.0028	0.0052	0.0047	0.0028	U	NS					NS					<0.0027	0.0051	0.0046	0.0027	U	NS				
p,p'-DDD	mg/kg	NS					<0.0025	0.0052	0.0047	0.0025	U	NS					NS					<0.0024	0.0051	0.0046	0.0024	U	NS				
p,p'-DDE	mg/kg	NS					<0.0023	0.0052	0.0047	0.0023	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
p,p'-DDT	mg/kg	NS					<0.0023	0.0052	0.0047	0.0023	U	NS					NS					<0.0022	0.0051	0.0046	0.0022	U	NS				
Toxaphene	mg/kg	NS					<0.047	0.1	0.052	0.047	U	NS					NS					<0.045	0.1	0.051	0.045	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB03																													
	Sample ID:	OT071-00010-LEACH-SPLP-0.70um					OT071-00011					OT071-00011-LEACH-SPLP-0.45um					OT071-00011-LEACH-SPLP-0.70um					OT071-00032					OT071-00032-LEACH-SPLP-0.45um				
	Sample Date:	5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	7 - 7 ft					10 - 10 ft					10 - 10 ft					10 - 10 ft					5.92 - 6.67 ft					5.92 - 6.67 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.0061	0.02	0.02	0.0061	nv
MOISTURE																															
Percent Moisture	Percent	NS					1.5	0.1	0.1	0.1		NS					NS					4.1	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
Alpha BHC	mg/kg	NS					<0.0037	0.01	0.0045	0.0037	U	NS					NS					NS					NS				
Alpha Endosulfan	mg/kg	NS					<0.002	0.005	0.0045	0.002	U	NS					NS					NS					NS				
Alpha-Chlordane	mg/kg	NS					<0.002	0.005	0.0045	0.002	U	NS					NS					NS					NS				
Beta BHC	mg/kg	NS					<0.0025	0.005	0.0045	0.0025	U	NS					NS					NS					NS				
Beta Endosulfan	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					NS					NS				
Delta BHC	mg/kg	NS					<0.0044	0.01	0.0045	0.0044	U	NS					NS					NS					NS				
Dieldrin	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
Endosulfan Sulfate	mg/kg	NS					<0.0026	0.005	0.0045	0.0026	U	NS					NS					NS					NS				
Endrin	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					NS					NS				
Endrin Aldehyde	mg/kg	NS					<0.003	0.005	0.0045	0.003	U	NS					NS					NS					NS				
Endrin Ketone	mg/kg	NS					<0.0025	0.005	0.0045	0.0025	U	NS					NS					NS					NS				
Gamma BHC	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
Gamma-Chlordane	mg/kg	NS					<0.0042	0.01	0.0045	0.0042	U	NS					NS					NS					NS				
Heptachlor	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
Heptachlor Epoxide	mg/kg	NS					<0.0037	0.01	0.0045	0.0037	U	NS					NS					NS					NS				
Methoxychlor	mg/kg	NS					<0.0027	0.005	0.0045	0.0027	U	NS					NS					NS					NS				
p,p'-DDD	mg/kg	NS					<0.0024	0.005	0.0045	0.0024	U	NS					NS					NS					NS				
p,p'-DDE	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
p,p'-DDT	mg/kg	NS					<0.0022	0.005	0.0045	0.0022	U	NS					NS					NS					NS				
Toxaphene	mg/kg	NS					<0.045	0.1	0.05	0.045	U	NS					NS					NS					NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB03																				OT071-SB04									
	Sample ID:	OT071-00032-LEACH-SPLP-0.70um					OT071-00033					OT071-00033-LEACH-SPLP-0.45um					OT071-00033-LEACH-SPLP-0.70um					OT071-00013					OT071-00013-LEACH-SPLP-0.45um				
	Sample Date:	5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	5.92 - 6.67 ft					12 - 13 ft					12 - 13 ft					12 - 13 ft					2 - 2 ft					2 - 2 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	**0.035**	0.02	0.02	0.0061	nv	**NS**					<0.0061	0.02	0.02	0.0061	nv	<0.0061	0.02	0.02	0.0061	nv	**NS**					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	**NS**					**8.5**	0.1	0.1	0.1		**NS**					**NS**					**1.9**	0.1	0.1	0.1		**NS**				
PESTICIDES																															
Aldrin	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0022	0.0051	0.0046	0.0022	UJ	**NS**				
Alpha BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0038	0.01	0.0046	0.0038	UJ	**NS**				
Alpha Endosulfan	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.002	0.0051	0.0046	0.002	UJ	**NS**				
Alpha-Chlordane	mg/kg	**NS**					**NS**					**NS**					**NS**					**0.0041**	0.0051	0.0046	0.0021	J	**NS**				
Beta BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0025	0.0051	0.0046	0.0025	U	**NS**				
Beta Endosulfan	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0024	0.0051	0.0046	0.0024	UJ	**NS**				
Delta BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0045	0.01	0.0046	0.0045	U	**NS**				
Dieldrin	mg/kg	**NS**					**NS**					**NS**					**NS**					**2.5**	0.51	0.46	0.22		**NS**				
Endosulfan Sulfate	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0026	0.0051	0.0046	0.0026	UJ	**NS**				
Endrin	mg/kg	**NS**					**NS**					**NS**					**NS**					**0.014**	0.0051	0.0046	0.0024	J	**NS**				
Endrin Aldehyde	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0031	0.0051	0.0046	0.0031	U	**NS**				
Endrin Ketone	mg/kg	**NS**					**NS**					**NS**					**NS**					**0.0059**	0.0051	0.0046	0.0026	J	**NS**				
Gamma BHC	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0023	0.0051	0.0046	0.0023	UJ	**NS**				
Gamma-Chlordane	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0042	0.01	0.0046	0.0042	UJ	**NS**				
Heptachlor	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0022	0.0051	0.0046	0.0022	UJ	**NS**				
Heptachlor Epoxide	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0038	0.01	0.0046	0.0038	UJ	**NS**				
Methoxychlor	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0028	0.0051	0.0046	0.0028	U	**NS**				
p,p'-DDD	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0024	0.0051	0.0046	0.0024	UJ	**NS**				
p,p'-DDE	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0023	0.0051	0.0046	0.0023	UJ	**NS**				
p,p'-DDT	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.0022	0.0051	0.0046	0.0022	UJ	**NS**				
Toxaphene	mg/kg	**NS**					**NS**					**NS**					**NS**					<0.046	0.1	0.051	0.046	U	**NS**				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB04																													
	Sample ID:	OT071-00013-LEACH-SPLP-0.70um					OT071-00014					OT071-00014-LEACH-SPLP-0.45um					OT071-00014-LEACH-SPLP-0.70um					OT071-00015					OT071-00015-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	2 - 2 ft					4 - 4 ft					4 - 4 ft					4 - 4 ft					7 - 7 ft					7 - 7 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	**9.1**	2.5	2.5	1.4		**NS**					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	**NS**					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	**NS**					**3.1**	0.1	0.1	0.1		**NS**					**NS**					**3.8**	0.1	0.1	0.1		**NS**				
PESTICIDES																															
Aldrin	mg/kg	**NS**					<0.0023	0.0052	0.0046	0.0023	U	**NS**					**NS**					<0.0023	0.0052	0.0047	0.0023	U	**NS**				
Alpha BHC	mg/kg	**NS**					<0.0038	0.01	0.0046	0.0038	U	**NS**					**NS**					<0.0038	0.01	0.0047	0.0038	U	**NS**				
Alpha Endosulfan	mg/kg	**NS**					<0.002	0.0052	0.0046	0.002	U	**NS**					**NS**					<0.0021	0.0052	0.0047	0.0021	U	**NS**				
Alpha-Chlordane	mg/kg	**NS**					<0.0021	0.0052	0.0046	0.0021	U	**NS**					**NS**					<0.0021	0.0052	0.0047	0.0021	U	**NS**				
Beta BHC	mg/kg	**NS**					<0.0026	0.0052	0.0046	0.0026	U	**NS**					**NS**					<0.0026	0.0052	0.0047	0.0026	U	**NS**				
Beta Endosulfan	mg/kg	**NS**					<0.0024	0.0052	0.0046	0.0024	U	**NS**					**NS**					<0.0024	0.0052	0.0047	0.0024	U	**NS**				
Delta BHC	mg/kg	**NS**					<0.0045	0.01	0.0046	0.0045	U	**NS**					**NS**					<0.0045	0.01	0.0047	0.0045	U	**NS**				
Dieldrin	mg/kg	**NS**					**0.052**	0.026	0.023	0.011		**NS**					**NS**					**0.016**	0.0052	0.0047	0.0023		**NS**				
Endosulfan Sulfate	mg/kg	**NS**					<0.0027	0.0052	0.0046	0.0027	U	**NS**					**NS**					<0.0027	0.0052	0.0047	0.0027	U	**NS**				
Endrin	mg/kg	**NS**					<0.0024	0.0052	0.0046	0.0024	U	**NS**					**NS**					<0.0024	0.0052	0.0047	0.0024	U	**NS**				
Endrin Aldehyde	mg/kg	**NS**					<0.0031	0.0052	0.0046	0.0031	U	**NS**					**NS**					<0.0031	0.0052	0.0047	0.0031	U	**NS**				
Endrin Ketone	mg/kg	**NS**					<0.0026	0.0052	0.0046	0.0026	U	**NS**					**NS**					<0.0026	0.0052	0.0047	0.0026	U	**NS**				
Gamma BHC	mg/kg	**NS**					<0.0023	0.0052	0.0046	0.0023	U	**NS**					**NS**					<0.0023	0.0052	0.0047	0.0023	U	**NS**				
Gamma-Chlordane	mg/kg	**NS**					<0.0043	0.01	0.0046	0.0043	U	**NS**					**NS**					<0.0043	0.01	0.0047	0.0043	U	**NS**				
Heptachlor	mg/kg	**NS**					<0.0022	0.0052	0.0046	0.0022	U	**NS**					**NS**					<0.0022	0.0052	0.0047	0.0022	U	**NS**				
Heptachlor Epoxide	mg/kg	**NS**					<0.0038	0.01	0.0046	0.0038	U	**NS**					**NS**					<0.0038	0.01	0.0047	0.0038	U	**NS**				
Methoxychlor	mg/kg	**NS**					<0.0028	0.0052	0.0046	0.0028	U	**NS**					**NS**					<0.0028	0.0052	0.0047	0.0028	U	**NS**				
p,p'-DDD	mg/kg	**NS**					<0.0024	0.0052	0.0046	0.0024	U	**NS**					**NS**					<0.0024	0.0052	0.0047	0.0024	U	**NS**				
p,p'-DDE	mg/kg	**NS**					<0.0023	0.0052	0.0046	0.0023	U	**NS**					**NS**					<0.0023	0.0052	0.0047	0.0023	U	**NS**				
p,p'-DDT	mg/kg	**NS**					<0.0023	0.0052	0.0046	0.0023	U	**NS**					**NS**					<0.0023	0.0052	0.0047	0.0023	U	**NS**				
Toxaphene	mg/kg	**NS**					<0.046	0.1	0.052	0.046	U	**NS**					**NS**					<0.046	0.1	0.052	0.046	U	**NS**				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB04																													
	Sample ID:	OT071-00015-LEACH-SPLP-0.70um					OT071-00016					OT071-00016-LEACH-SPLP-0.45um					OT071-00016-LEACH-SPLP-0.70um					OT071-00017					OT071-00017-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	7 - 7 ft					10 - 10 ft					10 - 10 ft					10 - 10 ft					15 - 15 ft					15 - 15 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	NS					2.4	0.1	0.1	0.1		NS					NS					7.6	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
Alpha BHC	mg/kg	NS					<0.0038	0.01	0.0046	0.0038	U	NS					NS					<0.004	0.011	0.0049	0.004	U	NS				
Alpha Endosulfan	mg/kg	NS					<0.002	0.0051	0.0046	0.002	U	NS					NS					<0.0022	0.0055	0.0049	0.0022	U	NS				
Alpha-Chlordane	mg/kg	NS					<0.0021	0.0051	0.0046	0.0021	U	NS					NS					<0.0022	0.0055	0.0049	0.0022	U	NS				
Beta BHC	mg/kg	NS					<0.0025	0.0051	0.0046	0.0025	U	NS					NS					<0.0027	0.0055	0.0049	0.0027	U	NS				
Beta Endosulfan	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0026	0.0055	0.0049	0.0026	U	NS				
Delta BHC	mg/kg	NS					<0.0045	0.01	0.0046	0.0045	U	NS					NS					<0.0048	0.011	0.0049	0.0048	U	NS				
Dieldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
Endosulfan Sulfate	mg/kg	NS					<0.0027	0.0051	0.0046	0.0027	U	NS					NS					<0.0029	0.0055	0.0049	0.0029	U	NS				
Endrin	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0026	0.0055	0.0049	0.0026	U	NS				
Endrin Aldehyde	mg/kg	NS					<0.0031	0.0051	0.0046	0.0031	U	NS					NS					<0.0033	0.0055	0.0049	0.0033	U	NS				
Endrin Ketone	mg/kg	NS					<0.0026	0.0051	0.0046	0.0026	U	NS					NS					<0.0027	0.0055	0.0049	0.0027	U	NS				
Gamma BHC	mg/kg	NS					<0.0023	0.0051	0.0046	0.0023	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
Gamma-Chlordane	mg/kg	NS					<0.0042	0.01	0.0046	0.0042	U	NS					NS					<0.0045	0.011	0.0049	0.0045	U	NS				
Heptachlor	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
Heptachlor Epoxide	mg/kg	NS					<0.0038	0.01	0.0046	0.0038	U	NS					NS					<0.004	0.011	0.0049	0.004	U	NS				
Methoxychlor	mg/kg	NS					<0.0028	0.0051	0.0046	0.0028	U	NS					NS					<0.003	0.0055	0.0049	0.003	U	NS				
p,p'-DDD	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0026	0.0055	0.0049	0.0026	U	NS				
p,p'-DDE	mg/kg	NS					<0.0023	0.0051	0.0046	0.0023	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
p,p'-DDT	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0024	0.0055	0.0049	0.0024	U	NS				
Toxaphene	mg/kg	NS					<0.046	0.1	0.051	0.046	U	NS					NS					<0.049	0.11	0.055	0.049	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB04																													
	Sample ID:	OT071-00017-LEACH-SPLP-0.70um					OT071-00034					OT071-00034-LEACH-SPLP-0.45um					OT071-00034-LEACH-SPLP-0.70um					OT071-00035					OT071-00035-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	15 - 15 ft					5.67 - 6.67 ft					5.67 - 6.67 ft					5.67 - 6.67 ft					13.83 - 14.67 ft					13.83 - 14.67 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.0061	0.02	0.02	0.0061	nv	0.19	0.02	0.02	0.0061	nv	NS					<0.0061	0.02	0.02	0.0061	nv
MOISTURE																															
Percent Moisture	Percent	NS					5.4	0.1	0.1	0.1		NS					NS					11	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					NS					NS					NS					NS					NS				
Alpha BHC	mg/kg	NS					NS					NS					NS					NS					NS				
Alpha Endosulfan	mg/kg	NS					NS					NS					NS					NS					NS				
Alpha-Chlordane	mg/kg	NS					NS					NS					NS					NS					NS				
Beta BHC	mg/kg	NS					NS					NS					NS					NS					NS				
Beta Endosulfan	mg/kg	NS					NS					NS					NS					NS					NS				
Delta BHC	mg/kg	NS					NS					NS					NS					NS					NS				
Dieldrin	mg/kg	NS					NS					NS					NS					NS					NS				
Endosulfan Sulfate	mg/kg	NS					NS					NS					NS					NS					NS				
Endrin	mg/kg	NS					NS					NS					NS					NS					NS				
Endrin Aldehyde	mg/kg	NS					NS					NS					NS					NS					NS				
Endrin Ketone	mg/kg	NS					NS					NS					NS					NS					NS				
Gamma BHC	mg/kg	NS					NS					NS					NS					NS					NS				
Gamma-Chlordane	mg/kg	NS					NS					NS					NS					NS					NS				
Heptachlor	mg/kg	NS					NS					NS					NS					NS					NS				
Heptachlor Epoxide	mg/kg	NS					NS					NS					NS					NS					NS				
Methoxychlor	mg/kg	NS					NS					NS					NS					NS					NS				
p,p'-DDD	mg/kg	NS					NS					NS					NS					NS					NS				
p,p'-DDE	mg/kg	NS					NS					NS					NS					NS					NS				
p,p'-DDT	mg/kg	NS					NS					NS					NS					NS					NS				
Toxaphene	mg/kg	NS					NS					NS					NS					NS					NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB04					OT071-SB05																								
	Sample ID:	OT071-00035-LEACH-SPLP-0.70um					OT071-00018					OT071-00018-LEACH-SPLP-0.45um					OT071-00018-LEACH-SPLP-0.70um					OT071-00019					OT071-00019-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	13.83 - 14.67 ft					2 - 2 ft					2 - 2 ft					2 - 2 ft					4 - 4 ft					4 - 4 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.0061	0.02	0.02	0.0061	nv	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	NS					13	0.1	0.1	0.1		NS					NS					7.6	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					0.011	0.0058	0.0052	0.0025		NS					NS					<0.0024	0.0054	0.0048	0.0024	U	NS				
Alpha BHC	mg/kg	NS					<0.0043	0.012	0.0052	0.0043	U	NS					NS					<0.004	0.011	0.0048	0.004	U	NS				
Alpha Endosulfan	mg/kg	NS					<0.0023	0.0058	0.0052	0.0023	U	NS					NS					<0.0021	0.0054	0.0048	0.0021	U	NS				
Alpha-Chlordane	mg/kg	NS					0.0076	0.0058	0.0052	0.0023		NS					NS					<0.0022	0.0054	0.0048	0.0022	U	NS				
Beta BHC	mg/kg	NS					<0.0029	0.0058	0.0052	0.0029	U	NS					NS					<0.0027	0.0054	0.0048	0.0027	U	NS				
Beta Endosulfan	mg/kg	NS					<0.0027	0.0058	0.0052	0.0027	U	NS					NS					<0.0025	0.0054	0.0048	0.0025	U	NS				
Delta BHC	mg/kg	NS					<0.0051	0.012	0.0052	0.0051	U	NS					NS					<0.0047	0.011	0.0048	0.0047	U	NS				
Dieldrin	mg/kg	NS					0.62	0.58	0.52	0.25		NS					NS					<0.0024	0.0054	0.0048	0.0024	U	NS				
Endosulfan Sulfate	mg/kg	NS					<0.003	0.0058	0.0052	0.003	U	NS					NS					<0.0028	0.0054	0.0048	0.0028	U	NS				
Endrin	mg/kg	NS					<0.0027	0.0058	0.0052	0.0027	U	NS					NS					<0.0025	0.0054	0.0048	0.0025	U	NS				
Endrin Aldehyde	mg/kg	NS					<0.0035	0.0058	0.0052	0.0035	U	NS					NS					<0.0033	0.0054	0.0048	0.0033	U	NS				
Endrin Ketone	mg/kg	NS					<0.0029	0.0058	0.0052	0.0029	U	NS					NS					<0.0027	0.0054	0.0048	0.0027	U	NS				
Gamma BHC	mg/kg	NS					<0.0026	0.0058	0.0052	0.0026	U	NS					NS					<0.0024	0.0054	0.0048	0.0024	U	NS				
Gamma-Chlordane	mg/kg	NS					0.007	0.012	0.0052	0.0048	J	NS					NS					<0.0045	0.011	0.0048	0.0045	U	NS				
Heptachlor	mg/kg	NS					<0.0025	0.0058	0.0052	0.0025	U	NS					NS					<0.0023	0.0054	0.0048	0.0023	U	NS				
Heptachlor Epoxide	mg/kg	NS					<0.0043	0.012	0.0052	0.0043	U	NS					NS					<0.004	0.011	0.0048	0.004	U	NS				
Methoxychlor	mg/kg	NS					<0.0032	0.0058	0.0052	0.0032	U	NS					NS					<0.0029	0.0054	0.0048	0.0029	U	NS				
p,p'-DDD	mg/kg	NS					<0.0027	0.0058	0.0052	0.0027	U	NS					NS					<0.0025	0.0054	0.0048	0.0025	U	NS				
p,p'-DDE	mg/kg	NS					0.0037	0.0058	0.0052	0.0026	J	NS					NS					<0.0024	0.0054	0.0048	0.0024	U	NS				
p,p'-DDT	mg/kg	NS					<0.0025	0.0058	0.0052	0.0025	U	NS					NS					<0.0024	0.0054	0.0048	0.0024	U	NS				
Toxaphene	mg/kg	NS					<0.052	0.12	0.058	0.052	U	NS					NS					<0.048	0.11	0.054	0.048	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB05																													
	Sample ID:	OT071-00019-LEACH-SPLP-0.70um					OT071-00021					OT071-00021-LEACH-SPLP-0.45um					OT071-00021-LEACH-SPLP-0.70um					OT071-00029					OT071-00029-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016					5/16/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	4 - 4 ft					7 - 7 ft					7 - 7 ft					7 - 7 ft					9 - 9.67 ft					9 - 9.67 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.0061	0.02	0.02	0.0061	nv
MOISTURE																															
Percent Moisture	Percent	NS					2.3	0.1	0.1	0.1		NS					NS					2.8	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					NS					NS				
Alpha BHC	mg/kg	NS					<0.0038	0.01	0.0046	0.0038	U	NS					NS					NS					NS				
Alpha Endosulfan	mg/kg	NS					<0.002	0.0051	0.0046	0.002	U	NS					NS					NS					NS				
Alpha-Chlordane	mg/kg	NS					<0.0021	0.0051	0.0046	0.0021	U	NS					NS					NS					NS				
Beta BHC	mg/kg	NS					<0.0025	0.0051	0.0046	0.0025	U	NS					NS					NS					NS				
Beta Endosulfan	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					NS					NS				
Delta BHC	mg/kg	NS					<0.0045	0.01	0.0046	0.0045	U	NS					NS					NS					NS				
Dieldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					NS					NS				
Endosulfan Sulfate	mg/kg	NS					<0.0027	0.0051	0.0046	0.0027	U	NS					NS					NS					NS				
Endrin	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					NS					NS				
Endrin Aldehyde	mg/kg	NS					<0.0031	0.0051	0.0046	0.0031	U	NS					NS					NS					NS				
Endrin Ketone	mg/kg	NS					<0.0026	0.0051	0.0046	0.0026	U	NS					NS					NS					NS				
Gamma BHC	mg/kg	NS					<0.0023	0.0051	0.0046	0.0023	U	NS					NS					NS					NS				
Gamma-Chlordane	mg/kg	NS					<0.0043	0.01	0.0046	0.0043	U	NS					NS					NS					NS				
Heptachlor	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					NS					NS				
Heptachlor Epoxide	mg/kg	NS					<0.0038	0.01	0.0046	0.0038	U	NS					NS					NS					NS				
Methoxychlor	mg/kg	NS					<0.0028	0.0051	0.0046	0.0028	U	NS					NS					NS					NS				
p,p'-DDD	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					NS					NS				
p,p'-DDE	mg/kg	NS					<0.0023	0.0051	0.0046	0.0023	U	NS					NS					NS					NS				
p,p'-DDT	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					NS					NS				
Toxaphene	mg/kg	NS					<0.046	0.1	0.051	0.046	U	NS					NS					NS					NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB05					OT071-SB06																								
	Sample ID:	OT071-00029-LEACH-SPLP-0.70um					OT071-00024					OT071-00024-LEACH-SPLP-0.45um					OT071-00024-LEACH-SPLP-0.70um					OT071-00025					OT071-00025-LEACH-SPLP-0.45um				
	Sample Date:	5/16/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG				
	Sample Depth:	9 - 9.67 ft					2 - 2 ft					2 - 2 ft					2 - 2 ft					4 - 4 ft					4 - 4 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																															
Dieldrin	µg/L	0.013	0.02	0.02	0.0061	nv	NS					<0.29	0.5	0.5	0.29	U	<0.29	0.5	0.5	0.29	U	NS					<0.29	0.5	0.5	0.29	U
MOISTURE																															
Percent Moisture	Percent	NS					2.1	0.1	0.1	0.1		NS					NS					4.2	0.1	0.1	0.1		NS				
PESTICIDES																															
Aldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0023	0.0052	0.0047	0.0023	U	NS				
Alpha BHC	mg/kg	NS					<0.0037	0.01	0.0046	0.0037	U	NS					NS					<0.0038	0.01	0.0047	0.0038	U	NS				
Alpha Endosulfan	mg/kg	NS					<0.002	0.0051	0.0046	0.002	U	NS					NS					<0.0021	0.0052	0.0047	0.0021	U	NS				
Alpha-Chlordane	mg/kg	NS					<0.0021	0.0051	0.0046	0.0021	U	NS					NS					<0.0021	0.0052	0.0047	0.0021	U	NS				
Beta BHC	mg/kg	NS					<0.0025	0.0051	0.0046	0.0025	U	NS					NS					<0.0026	0.0052	0.0047	0.0026	U	NS				
Beta Endosulfan	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0024	0.0052	0.0047	0.0024	U	NS				
Delta BHC	mg/kg	NS					<0.0044	0.01	0.0046	0.0044	U	NS					NS					<0.0045	0.01	0.0047	0.0045	U	NS				
Dieldrin	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0023	0.0052	0.0047	0.0023	U	NS				
Endosulfan Sulfate	mg/kg	NS					<0.0026	0.0051	0.0046	0.0026	U	NS					NS					<0.0027	0.0052	0.0047	0.0027	U	NS				
Endrin	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0024	0.0052	0.0047	0.0024	U	NS				
Endrin Aldehyde	mg/kg	NS					<0.0031	0.0051	0.0046	0.0031	U	NS					NS					<0.0031	0.0052	0.0047	0.0031	U	NS				
Endrin Ketone	mg/kg	NS					<0.0025	0.0051	0.0046	0.0025	U	NS					NS					<0.0026	0.0052	0.0047	0.0026	U	NS				
Gamma BHC	mg/kg	NS					<0.0023	0.0051	0.0046	0.0023	U	NS					NS					<0.0023	0.0052	0.0047	0.0023	U	NS				
Gamma-Chlordane	mg/kg	NS					<0.0042	0.01	0.0046	0.0042	U	NS					NS					<0.0043	0.01	0.0047	0.0043	U	NS				
Heptachlor	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0022	0.0052	0.0047	0.0022	U	NS				
Heptachlor Epoxide	mg/kg	NS					<0.0037	0.01	0.0046	0.0037	U	NS					NS					<0.0038	0.01	0.0047	0.0038	U	NS				
Methoxychlor	mg/kg	NS					<0.0027	0.0051	0.0046	0.0027	U	NS					NS					<0.0028	0.0052	0.0047	0.0028	U	NS				
p,p'-DDD	mg/kg	NS					<0.0024	0.0051	0.0046	0.0024	U	NS					NS					<0.0024	0.0052	0.0047	0.0024	U	NS				
p,p'-DDE	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0023	0.0052	0.0047	0.0023	U	NS				
p,p'-DDT	mg/kg	NS					<0.0022	0.0051	0.0046	0.0022	U	NS					NS					<0.0023	0.0052	0.0047	0.0023	U	NS				
Toxaphene	mg/kg	NS					<0.045	0.1	0.051	0.045	U	NS					NS					<0.046	0.1	0.052	0.046	U	NS				

Table 4-1

Results of Chemical Laboratory Analyses - Soils
Non-CERCLA Site OT071
Former George Air Force Base

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	Location Code:	OT071-SB06																																	
	Sample ID:	OT071-00025-LEACH-SPLP-0.70um					OT071-00030					OT071-00030-LEACH-SPLP-0.45um					OT071-00030-LEACH-SPLP-0.70um					OT071-00031					OT071-00031-LEACH-SPLP-0.45um					OT071-00031-LEACH-SPLP-0.70um				
	Sample Date:	5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016					5/13/2016				
	Sample Purpose:	REG					REG					REG					REG					REG					REG					REG				
	Sample Depth:	4 - 4 ft					2.33 - 3.67 ft					2.33 - 3.67 ft					2.33 - 3.67 ft					8 - 9.67 ft					8 - 9.67 ft					8 - 9.67 ft				
Parameter	Units	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
LEACH PESTICIDES																																			
Dieldrin	µg/L	<0.29	0.5	0.5	0.29	U	NS					<0.0061	0.02	0.02	0.0061	nv	<0.0061	0.02	0.02	0.0061	nv	NS					<0.0061	0.02	0.02	0.0061	nv	<0.0061	0.02	0.02	0.0061	nv
MOISTURE																																			
Percent Moisture	Percent	NS					2.3	0.1	0.1	0.1		NS					NS					3.7	0.1	0.1	0.1		NS					NS				
PESTICIDES																																			
Aldrin	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Alpha BHC	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Alpha Endosulfan	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Alpha-Chlordane	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Beta BHC	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Beta Endosulfan	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Delta BHC	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Dieldrin	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Endosulfan Sulfate	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Endrin	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Endrin Aldehyde	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Endrin Ketone	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Gamma BHC	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Gamma-Chlordane	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Heptachlor	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Heptachlor Epoxide	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Methoxychlor	mg/kg	NS					NS					NS					NS					NS					NS					NS				
p,p'-DDD	mg/kg	NS					NS					NS					NS					NS					NS					NS				
p,p'-DDE	mg/kg	NS					NS					NS					NS					NS					NS					NS				
p,p'-DDT	mg/kg	NS					NS					NS					NS					NS					NS					NS				
Toxaphene	mg/kg	NS					NS					NS					NS					NS					NS					NS				

Table 4-2

Summary of Soils Dieldrin Analyses
Non-CERCLA Site OT071
Former George Air Force Base

Boring	Sample Depth (ft)	Total 8081A for dieldrin only (mg/kg)	SPLP 8270(D) TQ (Modified).	
			0.70 Micron Extraction (µg/L)	0.45 Micron Extraction (µg/L)
SB02 Located adjacent to the highest previous Dieldrin concentration (SS-37 at 15 mg/kg)	0	Insufficient sample volume	0.39	Insufficient sample volume
	2	0.7	4	<0.29
	4	<0.0022	<0.29	<0.29
	7	0.0038	<0.29	<0.29
	8.41 - 8.83	Insufficient sample volume	Insufficient sample volume	0.036
	10	<0.0022	0.44	<0.29
SB03 Located adjacent to a previous high concentration sample (SS-35 with 1.7 mg/kg)	2	1	2.4	<0.29
	4	1.2	<0.29	<0.29
	5.92 - 6.67	<0.0022	0.035	<0.0061
	7	<0.0022	<0.29	<0.29
	10	<0.0022	<0.29	<0.29
	12 - 13	Insufficient sample volume	<0.0061	<0.0061
SB04 Drilled in an unpaved area near the locations of a former high concentration sample (SS-23 at 1.2 mg/kg)	2	2.5	9.1	<0.29
	4	0.052	<0.29	<0.29
	5.67 - 6.67	Insufficient sample volume	0.19	<0.0061
	7	0.016	<0.29	<0.29
	10	<0.0022	<0.29	<0.29
	13.83 - 14.67	Insufficient sample volume	<0.0061	<0.0061
	15	<0.0024	<0.29	<0.29
SB05 Drilled in an unpaved area near the locations of former high concentration samples (SS-44 at 0.29 mg/kg)	2	0.62	<0.29	<0.29
	4	<0.0024	<0.29	<0.29
	7	<0.0022	<0.29	<0.29
	9 - 9.67	Insufficient sample volume	0.013	<0.0061
SB06 Drilled in a topographic low where runoff may have concentrated Dieldrin	2	<0.0022	<0.29	<0.29
	2.33 - 3.67	Insufficient sample volume	<0.0061	<0.0061
	4	<0.0023	<0.29	<0.29
	8 - 9.67	Insufficient sample volume	<0.0061	<0.0061

Table 4-3

Summary of Geotechnical Tests
Non-CERCLA Site OT071
Former George Air Force Base

Boring No	Sample ID	Depth, ft.	Mean Grain Size USCS/ASTM Description	Median Grain Size mm	Moisture Content % weight	Density		Porosity		Total Pore Fluid Saturations (3), % Pv	Effective Permeability to Air (4), millidarcy	Total Organic Carbon, mg/kg	Fraction Organic Carbon, g/g
						Dry Bulk, g/cc	Grain, g/cc	Total	Air-Filled				
OT071-SB02	OT071-SB02-4'5.5"-5'7.5"	5.1	Medium sand	0.359	4.1	1.45	2.65	45.4	39.4	13.2	250	790	0.00079
	OT071-SB02-7.0'-8.0'	7.5	Medium sand	1.106	0.9	1.58	2.63	39.9	38.5	3.5	12400	710	0.00071
	OT071-SB02-10.0'-11'6"	10.9	Medium sand	1.189	3.1	1.58	2.63	39.9	34.9	12.5	4380	320	0.00032
OT071-SB03	OT071-SB03 28"-48"	3.7	Medium sand	0.350	4.5	1.58	2.64	40.3	33.2	17.6	1400	1850	0.00185
	OT071-SB03 96"-120"	8.8	Medium sand	0.700	3.0	1.61	2.64	39.1	34.3	12.2	10200	510	0.00051
	OT071-SB03 124"-144"	11.4	Medium sand	0.280	12.5	1.29	2.65	51.3	35.2	31.3	256	910	0.00091
	OT071-SB03 156"-14'8"	14.0	Fine sand	0.149	10.0	1.40	2.68	47.6	33.5	29.6	883	620	0.00062
OT071-SB04	OT071-SB04-2'8"-3'8"	3.1	Medium sand	0.460	2.8	1.64	2.65	38.2	33.6	12.1	10000	880	0.00088
	OT071-SB04-7.0'-8.0'	7.8	Medium sand	0.625	3.4	1.61	2.63	38.8	33.3	14.3	5550	700	0.00070
	OT071-SB04-10.0'-11.0'	10.2	Medium sand	0.955	1.7	1.58	2.61	39.7	37.1	6.6	17200	230	0.00023
OT071-SB05	OT071-SB05-7.0'-8.0'	7.5	Medium sand	0.418	6.1	1.47	2.64	44.5	35.6	20.0	10400	320	0.00032
	OT071-SB05-10.0'-12.0'	11.0	Medium sand	0.874	2.8	1.48	2.62	43.7	39.7	9.3	17800	320	0.00032
	OT071-SB05-15.0-16.0	15.0	Silt	0.047	24.2	1.40	2.65	47.0	13.0	72.3	0.02	420	0.00042
OT071-SB06	OT071-SB06 4'-5'5"	4.5	Silt	0.021	14.0	1.46	2.67	45.3	24.8	45.2	89.6	620	0.00062
	OT071-SB06 7-8	7.1	Medium sand	0.391	11.1	1.49	2.64	43.5	26.9	38.1	276	420	0.00042
OT071-MW-159	OT071-MW-159-92	92	Silt	0.016	18.9	1.45	2.65	45.2	17.8	60.6	83.7	430	0.00043
	OT071-MW-159-100	100	Fine sand	0.037	26.6	1.37	2.63	47.9	11.4	76.2	0.29	320	0.00032
OT071-MW-160	OT071-MW-160-33	33	Gravel	5.496	1.0	1.67	2.63	36.3	34.7	4.4	19900	<100	<1.00E-04
	OT071-MW-160-39	39	Medium sand	0.386	13.4	1.60	2.64	39.3	17.7	54.9	10.3	330	0.00033
	OT071-MW-160-164	164	Silt	0.032	18.9	1.59	2.66	40.1	10.0	75.0	0.41	230	0.00023
	OT071-MW-160-184	184	Fine sand	0.302	19.2	1.57	2.63	40.2	10.0	75.2	0.03	<100	<1.00E-04
OT071-MW-161	OT071-MW-161-210	210	Coarse sand	1.956	10.6	1.81	2.64	31.5	12.2	61.2	706	140	0.00014
OT071-MW-162	OT071-MW-162-35	35	Gravel	2.832	1.0	1.74	2.63	33.8	32.2	4.9	655	<100	<1.00E-04
	OT071-MW-162-188	188	Silt	0.046	15.0	1.45	2.67	45.8	24.0	47.4	58.8	<100	<1.00E-04
	OT071-MW-162-214	214	Medium sand	0.752	9.1	1.70	2.65	35.9	20.5	42.8	649	410	0.00041
OT071-MW-163	OT071-MW-163-111	111	Fine sand	0.268	23.1	1.40	2.65	47.1	14.6	68.9	52.7	330	0.00033
	OT071-MW-163-124	124	Medium sand	0.801	16.0	1.61	2.63	38.6	12.7	67.2	0.02	<100	<1.00E-04
			Minimum	**0.016**	**0.9**	**1.29**	**2.61**	**31.5**	**10.0**	**3.5**	**0.02**	**140**	**0.00014**
			Maximum	**5.496**	**26.6**	**1.81**	**2.68**	**51.3**	**39.7**	**76.2**	**19900**	**1850**	**0.00185**

(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; Air = Nitrogen gas.

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
Former George Air Force Base, California

(Page 1 of 8)

		Location Code:	MW-123					MW-136					MW-143					MW-144										MW-145					MW-146				
		Sample ID:	ST067b-30197					ST067b-30197					ST067b-30203					ST067b-30204					ST067b-30205					OT071-30102					OT071-30103				
		Sample Date:	4/27/2016					4/27/2016					4/27/2016					4/26/2016					4/26/2016					4/29/2016					4/29/2016				
		Sample Purpose:	REG					REG					REG					REG					FD					REG					REG				
		Sample Depth:	153.75 - 154.3 FT					156 - 158.67 FT					304.01 - 305.23 FT					148.52 - 153.44 FT					148.52 - 153.44 FT					279.33 - 279.71 FT					140.92 - 141.1 FT				
Parameter		Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Field Tests																																					
	Depth to Water	Ft (btoc)	-	153.75					156					304.01					148.52					NS					279.33					140.92				
	Dissolved Oxygen	mg/L	-	6.76					8.15					4.53					8.35					NS					2.16					5.62				
	Ferrous Iron	mg/L	-	0					0					0					0					NS					0					0				
	Hydrogen Sulfide	mg/L	-	0					0					0					0					NS					0					0				
	Oxygen Reduction Potential	mV	-	119.3					188.7					-67.2					178.2					NS					203.8					116.5				
	pH	pH units	-	7.41					7.63					7.67					7.54					NS					7.87					7.44				
	Specific Conductance	mmhos/cm	-	1.77					1.068					0.7730001					1.33					NS					0.578					1.156				
	Temperature	Deg C	-	22.2					21.4					19.8					20.5					NS					24.8					23.4				
	Total Well Depth	Ft (btoc)	-	164.23					173.12					312.58					165.88					NS					NS					NS				
	Turbidity	NTU	-	6					8.24					18					9.14					NS					2.31					30				
General Chemistry																																					
	Alkalinity, Total (as CaCO3)	mg/L	-	147	2	1.7	0.848		102	2	1.7	0.848		81	2	1.7	0.848		123	2	1.7	0.848		124	2	1.7	0.848		68	2	1.7	0.848		159	2	1.7	0.848	
	Chloride	mg/L	-	210	5	2.5	1.2		100	5	2.5	1.2	J	54	1	0.5	0.23		140	5	2.5	1.2		140	5	2.5	1.2		32	1	0.5	0.23		100	5	2.5	1.2	
	Nitrogen, Nitrate	mg/L	-	8.1	0.1	0.05	0.022		3.5	0.1	0.05	0.022		2.1	0.1	0.05	0.022		4.3	0.1	0.05	0.022		4.3	0.1	0.05	0.022		2	0.1	0.05	0.022		3.9	0.1	0.05	0.022	
	Sulfate	mg/L	-	390	5	2.5	1.1		210	5	2.5	1.1	J	150	2	1	0.44		260	5	2.5	1.1		260	5	2.5	1.1		120	2	1	0.44	J	210	5	2.5	1.1	
	Total Dissolved Solids	mg/L	-	1160	2	1.8	0.87		560	2	1.8	0.87		455	2	1.8	0.87		775	2	1.8	0.87		800	2	1.8	0.87		365	2	1.8	0.87		700	2	1.8	0.87	
Metals																																					
	Calcium, Dissolved	mg/L	-	128	0.5	0.1	0.0665		63.5	0.05	0.01	0.0067		39.9	0.5	0.1	0.0665		80.1	0.05	0.01	0.0067		82.2	0.05	0.01	0.0067		32.2	0.5	0.1	0.0665		97.7	0.5	0.1	0.0665	
	Magnesium, Dissolved	mg/L	-	38.5	0.25	0.1	0.0278		17.5	0.025	0.01	0.0028		8.21	0.25	0.1	0.0278		21.4	0.025	0.01	0.0028		21.8	0.025	0.01	0.0028		6.19	0.25	0.1	0.0278		29.3	0.25	0.1	0.0278	
	Potassium, Dissolved	mg/L	-	3.83	0.5	0.1	0.0744		2.63	0.05	0.01	0.0074		3.59	0.5	0.1	0.0744		3.03	0.05	0.01	0.0074		3.09	0.05	0.01	0.0074		2.13	0.5	0.1	0.0744		3.96	0.5	0.1	0.0744	
	Sodium, Dissolved	mg/L	-	182	0.25	0.1	0.0303		104	0.25	0.1	0.0303		98.1	0.25	0.1	0.0303		144	0.25	0.1	0.0303		140	0.25	0.1	0.0303		64.3	0.25	0.1	0.0303		166	0.25	0.1	0.0303	
SEMIVOLATILES																																					
	Dieldrin	µg/L	0.002	< 0.00058	0.0019	0.00095	0.00058	U	0.00058	0.0019	0.0009	0.0006	UJ	0.0073	0.0019	0.0009	0.0006		0.00062	0.0019	0.001	0.0006	J	0.00058	0.0019	0.001	0.0006	J	0.0012	0.0019	0.0009	0.0006	J	< 0.00058	0.0019	0.00095	0.00058	U
Volatile Organic Compounds																																					
	1,1,1,2-Tetrachloroethane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
	1,1,1-Trichloroethane	µg/L	200	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U
	1,1,2,2-Tetrachloroethane	µg/L	1	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U
	1,1,2-Trichloroethane	µg/L	5	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U
	1,1-Dichloroethane	µg/L	5	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U
	1,1-Dichloroethene	µg/L	6	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U
	1,1-Dichloropropene	µg/L	-	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U
	1,2,3-Trichlorobenzene	µg/L	-	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U
	1,2,3-Trichloropropane	µg/L	-	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U
	1,2,4-Trichlorobenzene	µg/L	5	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U
	1,2,4-Trimethylbenzene	µg/L	330	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U
	1,2-Dibromo-3-Chloropropane	µg/L	0.2	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R
	1,2-Dibromoethane	µg/L	0.05	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U
	1,2-Dichlorobenzene	µg/L	600	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U
	1,2-Dichloroethane	µg/L	0.5	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U
	1,2-Dichloropropane	µg/L	5	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
	1,3,5-Trimethylbenzene	µg/L	330	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U
	1,3-Dichlorobenzene	µg/L	-	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U
	1,3-Dichloropropane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
	1,4-Dichlorobenzene	µg/L	5	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U
	2,2-Dichloropropane	µg/L	-	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	UJ	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U
	2-Butanone	µg/L	-	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	U
	2-Chlorotoluene	µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U
	2-Hexanone	µg/L	-	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	U
	4-Chlorotoluene	µg/L	-	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U
	4-Methyl-2-Pentanone	µg/L	-	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R
	Acetone	µg/L	-	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	R	< 3.5	10	5	3.5	U
	Benzene	µg/L	1	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U
	Bromobenzene	µg/L	-	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U
	Bromochloromethane	µg/L	-	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
Former George Air Force Base, California

(Page 2 of 8)

		Location Code:	MW-123					MW-136					MW-143					MW-144										MW-145					MW-146				
		Sample ID:	ST067b-30197					ST067b-30197					ST067b-30203					ST067b-30204					ST067b-30205					OT071-30102					OT071-30103				
		Sample Date:	4/27/2016					4/27/2016					4/27/2016					4/26/2016					4/26/2016					4/29/2016					4/29/2016				
		Sample Purpose:	REG					REG					REG					REG					FD					REG					REG				
		Sample Depth:	153.75 - 154.3 FT					156 - 158.67 FT					304.01 - 305.23 FT					148.52 - 153.44 FT					148.52 - 153.44 FT					279.33 - 279.71 FT					140.92 - 141.1 FT				
Parameter	Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Bromodichloromethane	µg/L	100	0.2	0.5	0.2	0.2	U	< 0.21	0.5	0.2	0.2	J	< 0.2	0.5	0.2	0.2	U	< 0.2	0.5	0.2	0.2	U	< 0.2	0.5	0.2	0.2	U	< 0.2	0.5	0.2	0.2	U	< 0.2	0.5	0.2	0.2	U
Bromoform	µg/L	80	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	UJ
Bromomethane	µg/L	-	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	UJ	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	UJ
Carbon Disulfide	µg/L	-	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	UJ
Carbon Tetrachloride	µg/L	0.5	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U
Chlorobenzene	µg/L	70	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U
Chloroethane	µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U
Chloroform	µg/L	80	1.5	0.5	0.4	0.22	U	< 0.67	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	0.36	0.5	0.4	0.22	U	0.36	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	0.56	0.5	0.4	0.22	U
Chloromethane	µg/L	-	0.22	0.5	0.4	0.22	U	< 0.31	0.5	0.4	0.22	J	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	0.26	0.5	0.4	0.22	J	< 0.22	0.5	0.4	0.22	U	0.29	0.5	0.4	0.22	J
cis-1,2-Dichloroethene	µg/L	6	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
cis-1,3-Dichloropropene	µg/L	0.5	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U
Dibromochloromethane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
Dibromomethane	µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U
Dichlorodifluoromethane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U
Ethylbenzene	µg/L	300	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U
Hexachlorobutadiene	µg/L	-	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U
Isopropylbenzene	µg/L	700	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U
m,p-Xylene	µg/L	1750	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U
Methyl Tert-Butyl Ether	µg/L	13	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U
Methylene chloride	µg/L	5	< 0.38	0.5	0.4	0.38	UJ	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U
Naphthalene	µg/L	-	< 0.41	1	0.5	0.41	U	< 0.41	1	0.5	0.41	U	< 0.41	1	0.5	0.41	UJ	< 0.41	1	0.5	0.41	U	< 0.41	1	0.5	0.41	U	< 0.41	1	0.5	0.41	UJ	< 0.41	1	0.5	0.41	U
n-Butylbenzene	µg/L	260	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U
n-Propylbenzene	µg/L	-	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U
o-Xylene	µg/L	1750	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U
p-Isopropyltoluene	µg/L	-	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U
sec-Butylbenzene	µg/L	260	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U
Styrene	µg/L	100	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U
tert-Butylbenzene	µg/L	260	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U
Tetrachloroethene	µg/L	5	0.22	0.5	0.4	0.22	U	< 4.3	0.5	0.4	0.22		< 0.22	0.5	0.4	0.22	U	1.1	0.5	0.4	0.22		1.1	0.5	0.4	0.22		< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U
Toluene	µg/L	150	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U
trans-1,2-Dichloroethene	µg/L	10	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U
trans-1,3-Dichloropropene	µg/L	0.5	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U
Trichloroethene	µg/L	5	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	0.85	0.5	0.4	0.23	
Trichlorofluoromethane	µg/L	150	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U
Vinyl Acetate	µg/L	-	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	R
Vinyl Chloride	µg/L	0.5	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
Former George Air Force Base, California

(Page 3 of 8)

		Location Code:	MW-147					MW-151					MW-152										MW-158					NZ-63				
		Sample ID:	OT071-30104					OT071-30105					OT071-30106					OT071-30107					ST067b-30211					OT071-30108				
		Sample Date:	4/29/2016					4/28/2016					4/28/2016					4/28/2016					4/25/2016					4/20/2016				
		Sample Purpose:	REG					REG					REG					FD					REG					REG				
		Sample Depth:	288.33 - 288.35 FT					297.12 - 297.13 FT					180.38 - 180.55 FT					180.38 - 180.55 FT					171.91 - 172.91 FT					147.39 - 147.43 FT				
Parameter		Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Field Tests																																
	Depth to Water	Ft (btoc)	-	288.33					297.12					180.38					NS					171.91					147.39				
	Dissolved Oxygen	mg/L	-	5.89					4.25					0.86					NS					6.53					6.11				
	Ferrous Iron	mg/L	-	0					0					NS					NS					0					NS				
	Hydrogen Sulfide	mg/L	-	0					0					NS					NS					0					NS				
	Oxygen Reduction Potential	mV	-	205					98.2					159.8					NS					-18.6					64.6				
	pH	pH units	-	7.8					7.87					8.42					NS					7.81					7.66				
	Specific Conductance	mmhos/cm	-	0.759					0.631					0.456					NS					0.846					0.881				
	Temperature	Deg C	-	25.1					19.1					21.8					NS					19.1					20.2				
	Total Well Depth	Ft (btoc)	-	NS					NS					NS					NS					181.5					NS				
	Turbidity	NTU	-	3.89					52					2.01					NS					228					28				
General Chemistry																																
	Alkalinity, Total (as CaCO3)	mg/L	-	57	2	1.7	0.848		63	2	1.7	0.848		NS					NS					130	2	1.7	0.848		NS				
	Chloride	mg/L	-	86	1	0.5	0.23		66	1	0.5	0.23		NS					NS					76	1	0.5	0.23		NS				
	Nitrogen, Nitrate	mg/L	-	2.5	0.1	0.05	0.022		2.5	0.1	0.05	0.022		NS					NS					1.7	0.1	0.05	0.022		NS				
	Sulfate	mg/L	-	150	2	1	0.44		120	2	1	0.44		NS					NS					140	2	1	0.44		NS				
	Total Dissolved Solids	mg/L	-	455	2	1.8	0.87		425	2	1.8	0.87		NS					NS					470	2	1.8	0.87		NS				
Metals																																
	Calcium, Dissolved	mg/L	-	44.1	0.5	0.1	0.0665		37.8	0.5	0.1	0.0665		NS					NS					42.5	0.05	0.01	0.00665		NS				
	Magnesium, Dissolved	mg/L	-	9.88	0.25	0.1	0.0278		7.9	0.25	0.1	0.0278		NS					NS					8.89	0.025	0.01	0.00278		NS				
	Potassium, Dissolved	mg/L	-	2.29	0.5	0.1	0.0744		2.37	0.5	0.1	0.0744		NS					NS					2.34	0.05	0.01	0.00744		NS				
	Sodium, Dissolved	mg/L	-	83	0.25	0.1	0.0303		72.8	0.25	0.1	0.0303		NS					NS					102	0.25	0.1	0.0303		NS				
SEMIVOLATILES																																
	Dieldrin	µg/L	0.002	0.02	0.0019	0.0009	0.0006		0.0019	0.0019	0.00095	0.00058	J	< 0.00058	0.0019	0.001	0.0006	U	< 0.00058	0.0019	0.00095	0.00058	U	< 0.00058	0.0019	0.00095	0.00058	U	0.024	0.0094	0.0047	0.0029	J
Volatile Organic Compounds																																
	1,1,1,2-Tetrachloroethane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
	1,1,1-Trichloroethane	µg/L	200	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	NS					NS					< 0.19	0.5	0.2	0.19	U	NS				
	1,1,2,2-Tetrachloroethane	µg/L	1	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	NS					NS					< 0.22	0.5	0.4	0.22	U	NS				
	1,1,2-Trichloroethane	µg/L	5	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	NS					NS					< 0.32	0.5	0.4	0.32	U	NS				
	1,1-Dichloroethane	µg/L	5	< 0.19	0.5	0.2	0.19	U	< 0.19	0.5	0.2	0.19	U	NS					NS					< 0.19	0.5	0.2	0.19	U	NS				
	1,1-Dichloroethene	µg/L	6	< 0.2	0.5	0.4	0.2	U	< 0.2	0.5	0.4	0.2	U	NS					NS					< 0.2	0.5	0.4	0.2	U	NS				
	1,1-Dichloropropene	µg/L	-	< 0.28	0.5	0.4	0.28	U	< 0.28	0.5	0.4	0.28	U	NS					NS					< 0.28	0.5	0.4	0.28	U	NS				
	1,2,3-Trichlorobenzene	µg/L	-	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	NS					NS					< 0.25	0.5	0.4	0.25	U	NS				
	1,2,3-Trichloropropane	µg/L	-	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	NS					NS					< 0.25	0.5	0.4	0.25	U	NS				
	1,2,4-Trichlorobenzene	µg/L	5	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	NS					NS					< 0.25	0.5	0.4	0.25	U	NS				
	1,2,4-Trimethylbenzene	µg/L	330	< 0.15	0.5	0.2	0.15	U	< 0.15	0.5	0.2	0.15	U	NS					NS					< 0.15	0.5	0.2	0.15	U	NS				
	1,2-Dibromo-3-Chloropropane	µg/L	0.2	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	NS					NS					< 2.9	10	5	2.9	R	NS				
	1,2-Dibromoethane	µg/L	0.05	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
	1,2-Dichlorobenzene	µg/L	600	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	NS					NS					< 0.17	0.5	0.2	0.17	U	NS				
	1,2-Dichloroethane	µg/L	0.5	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	NS					NS					< 0.18	0.5	0.2	0.18	U	NS				
	1,2-Dichloropropane	µg/L	5	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
	1,3,5-Trimethylbenzene	µg/L	330	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	NS					NS					< 0.33	0.5	0.4	0.33	U	NS				
	1,3-Dichlorobenzene	µg/L	-	< 0.17	0.5	0.2	0.17	U	< 0.17	0.5	0.2	0.17	U	NS					NS					< 0.17	0.5	0.2	0.17	U	NS				
	1,3-Dichloropropane	µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
	1,4-Dichlorobenzene	µg/L	5	< 0.31	0.5	0.4	0.31	U	< 0.31	0.5	0.4	0.31	U	NS					NS					< 0.31	0.5	0.4	0.31	U	NS				
	2,2-Dichloropropane	µg/L	-	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	NS					NS					< 0.42	1	0.5	0.42	U	NS				
	2-Butanone	µg/L	-	< 2.9	10	5	2.9	R	< 2.9	10	5	2.9	R	NS					NS					< 2.9	10	5	2.9	R	NS				
	2-Chlorotoluene	µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
	2-Hexanone	µg/L	-	< 2.6	10	5	2.6	R	< 2.6	10	5	2.6	R	NS					NS					< 2.6	10	5	2.6	R	NS				
	4-Chlorotoluene	µg/L	-	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	NS					NS					< 0.33	0.5	0.4	0.33	U	NS				
	4-Methyl-2-Pentanone	µg/L	-	< 2.7	10	5	2.7	R	< 2.7	10	5	2.7	R	NS					NS					< 2.7	10	5	2.7	R	NS				
	Acetone	µg/L	-	< 3.5	10	5	3.5	R	3.6	10	5	3.5	UJ	NS					NS					< 3.5	10	5	3.5	R	NS				
	Benzene	µg/L	1	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	NS					NS					< 0.32	0.5	0.4	0.32	U	NS				
	Bromobenzene	µg/L	-	< 0.33	0.5	0.4	0.33	U	< 0.33	0.5	0.4	0.33	U	NS					NS					< 0.33	0.5	0.4	0.33	U	NS				
	Bromochloromethane	µg/L	-	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	NS					NS					< 0.38	0.5	0.4	0.38	U	NS				

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
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		Location Code:	MW-147					MW-151					MW-152										MW-158					NZ-63				
		Sample ID:	OT071-30104					OT071-30105					OT071-30106					OT071-30107					ST067b-30211					OT071-30108				
		Sample Date:	4/29/2016					4/28/2016					4/28/2016					4/28/2016					4/25/2016					4/20/2016				
		Sample Purpose:	REG					REG					REG					FD					REG					REG				
		Sample Depth:	288.33 - 288.35 FT					297.12 - 297.13 FT					180.38 - 180.55 FT					180.38 - 180.55 FT					171.91 - 172.91 FT					147.39 - 147.43 FT				
Parameter		Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Bromodichloromethane		µg/L	100	< 0.2	0.5	0.2	0.2	U	< 0.2	0.5	0.2	0.2	U	NS					NS					< 0.2	0.5	0.2	0.2	U	NS				
Bromoform		µg/L	80	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
Bromomethane		µg/L	-	< 0.38	1	0.5	0.38	U	< 0.38	1	0.5	0.38	U	NS					NS					< 0.38	1	0.5	0.38	U	NS				
Carbon Disulfide		µg/L	-	< 0.44	1	0.5	0.44	U	< 0.44	1	0.5	0.44	U	NS					NS					< 0.44	1	0.5	0.44	U	NS				
Carbon Tetrachloride		µg/L	0.5	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	NS					NS					< 0.22	0.5	0.4	0.22	U	NS				
Chlorobenzene		µg/L	70	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	NS					NS					< 0.14	0.5	0.2	0.14	U	NS				
Chloroethane		µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
Chloroform		µg/L	80	0.33	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	NS					NS					0.76	0.5	0.4	0.22	U	NS				
Chloromethane		µg/L	-	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	NS					NS					< 0.22	0.5	0.4	0.22	U	NS				
cis-1,2-Dichloroethene		µg/L	6	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
cis-1,3-Dichloropropene		µg/L	0.5	< 0.18	0.5	0.2	0.18	U	< 0.18	0.5	0.2	0.18	U	NS					NS					< 0.18	0.5	0.2	0.18	U	NS				
Dibromochloromethane		µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
Dibromomethane		µg/L	-	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
Dichlorodifluoromethane		µg/L	-	< 0.24	0.5	0.4	0.24	U	< 0.24	0.5	0.4	0.24	U	NS					NS					< 0.24	0.5	0.4	0.24	U	NS				
Ethylbenzene		µg/L	300	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	NS					NS					< 0.32	0.5	0.4	0.32	U	NS				
Hexachlorobutadiene		µg/L	-	< 0.48	1	0.5	0.48	U	< 0.48	1	0.5	0.48	U	NS					NS					< 0.48	1	0.5	0.48	U	NS				
Isopropylbenzene		µg/L	700	< 0.42	1	0.5	0.42	U	< 0.42	1	0.5	0.42	U	NS					NS					< 0.42	1	0.5	0.42	U	NS				
m,p-Xylene		µg/L	1750	< 0.24	1	0.4	0.24	U	< 0.24	1	0.4	0.24	U	NS					NS					< 0.24	1	0.4	0.24	U	NS				
Methyl Tert-Butyl Ether		µg/L	13	< 0.29	0.5	0.4	0.29	U	< 0.29	0.5	0.4	0.29	U	NS					NS					< 0.29	0.5	0.4	0.29	U	NS				
Methylene chloride		µg/L	5	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	NS					NS					< 0.38	0.5	0.4	0.38	U	NS				
Naphthalene		µg/L	-	< 0.41	1	0.5	0.41	UJ	< 0.41	1	0.5	0.41	UJ	NS					NS					< 0.41	1	0.5	0.41	U	NS				
n-Butylbenzene		µg/L	260	< 0.34	0.5	0.4	0.34	U	< 0.34	0.5	0.4	0.34	U	NS					NS					< 0.34	0.5	0.4	0.34	U	NS				
n-Propylbenzene		µg/L	-	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	NS					NS					< 0.38	0.5	0.4	0.38	U	NS				
o-Xylene		µg/L	1750	< 0.39	0.5	0.4	0.39	U	< 0.39	0.5	0.4	0.39	U	NS					NS					< 0.39	0.5	0.4	0.39	U	NS				
p-Isopropyltoluene		µg/L	-	< 0.14	0.5	0.2	0.14	U	< 0.14	0.5	0.2	0.14	U	NS					NS					< 0.14	0.5	0.2	0.14	U	NS				
sec-Butylbenzene		µg/L	260	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	NS					NS					< 0.23	0.5	0.4	0.23	U	NS				
Styrene		µg/L	100	< 0.32	0.5	0.4	0.32	U	< 0.32	0.5	0.4	0.32	U	NS					NS					< 0.32	0.5	0.4	0.32	U	NS				
tert-Butylbenzene		µg/L	260	< 0.38	0.5	0.4	0.38	U	< 0.38	0.5	0.4	0.38	U	NS					NS					< 0.38	0.5	0.4	0.38	U	NS				
Tetrachloroethene		µg/L	5	< 0.22	0.5	0.4	0.22	U	< 0.22	0.5	0.4	0.22	U	NS					NS					< 0.22	0.5	0.4	0.22	U	NS				
Toluene		µg/L	150	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	NS					NS					< 0.26	0.5	0.4	0.26	U	NS				
trans-1,2-Dichloroethene		µg/L	10	< 0.26	0.5	0.4	0.26	U	< 0.26	0.5	0.4	0.26	U	NS					NS					< 0.26	0.5	0.4	0.26	U	NS				
trans-1,3-Dichloropropene		µg/L	0.5	< 0.35	0.5	0.4	0.35	U	< 0.35	0.5	0.4	0.35	U	NS					NS					< 0.35	0.5	0.4	0.35	U	NS				
Trichloroethene		µg/L	5	< 0.23	0.5	0.4	0.23	U	< 0.23	0.5	0.4	0.23	U	NS					NS					< 0.23	0.5	0.4	0.23	U	NS				
Trichlorofluoromethane		µg/L	150	< 0.25	0.5	0.4	0.25	U	< 0.25	0.5	0.4	0.25	U	NS					NS					< 0.25	0.5	0.4	0.25	U	NS				
Vinyl Acetate		µg/L	-	< 2.2	10	5	2.2	U	< 2.2	10	5	2.2	U	NS					NS					< 2.2	10	5	2.2	U	NS				
Vinyl Chloride		µg/L	0.5	< 0.27	0.5	0.4	0.27	U	< 0.27	0.5	0.4	0.27	U	NS					NS					< 0.27	0.5	0.4	0.27	U	NS				

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		Location Code:	NZ-64					NZ-65					NZ-66					NZ-89					NZ-91					NZ-120					NZ-121				
		Sample ID:	OT071-30109					OT071-30110					OT071-30111					OT071-30112					OT071-30113					OT071-30114					OT071-30115				
		Sample Date:	4/21/2016					4/19/2016					4/20/2016					4/19/2016					4/20/2016					4/21/2016					4/20/2016				
		Sample Purpose:	REG					REG					REG					REG					REG					REG					REG				
		Sample Depth:	274.2 - 274.63 FT					264.06 - 264.78 FT					46 - 46.19 FT					112.83 - 112.87 FT					61.29 - 64.18 FT					112.96 - 113.25 FT					26.84 - 27 FT				
Parameter		Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Field Tests																																							
	Depth to Water	Ft (btoc)	-	274.2					264.06					46					121.83					61.29					112.96					26.84				
	Dissolved Oxygen	mg/L	-	7.72					6.21					8.12					8.18					8.55					7.03					5.12				
	Ferrous Iron	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Hydrogen Sulfide	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Oxygen Reduction Potential	mV	-	168.7					-29.7					184.6					-76.4					193.8					88					71.8				
	pH	pH units	-	7.89					7.87					7.54					7.34					7.41					7.3					7.24				
	Specific Conductance	mmhos/cm	-	0.482					0.6350001					0.654					1.331					0.671					0.922					0.807				
	Temperature	Deg C	-	26.4					27.1					21.6					24.2					20.7					25					19.6				
	Total Well Depth	Ft (btoc)	-	NS					NS					NS					NS					NS					NS					NS				
	Turbidity	NTU	-	5.54					32.7					2.57					5.34					3.7					415					26				
General Chemistry																																							
	Alkalinity, Total (as CaCO3)	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Chloride	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Nitrogen, Nitrate	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Sulfate	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Total Dissolved Solids	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
Metals																																							
	Calcium, Dissolved	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Magnesium, Dissolved	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Potassium, Dissolved	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Sodium, Dissolved	mg/L	-	NS					NS					NS					NS					NS					NS					NS				
SEMIVOLATILES																																							
	Dieldrin	µg/L	0.002	0.0015	0.002	0.001	0.0006	J	< 0.00058	0.0019	0.00094	0.00058	UJ	0.092	0.019	0.0094	0.0057	J	0.11	0.019	0.0094	0.0057	J	0.087	0.019	0.01	0.006	J	< 0.00058	0.0019	0.00095	0.00058	U	< 0.00058	0.0019	0.00095	0.00058	UJ
Volatile Organic Compounds																																							
	1,1,1,2-Tetrachloroethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,1,1-Trichloroethane	µg/L	200	NS					NS					NS					NS					NS					NS					NS				
	1,1,2,2-Tetrachloroethane	µg/L	1	NS					NS					NS					NS					NS					NS					NS				
	1,1,2-Trichloroethane	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
	1,1-Dichloroethane	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
	1,1-Dichloroethene	µg/L	6	NS					NS					NS					NS					NS					NS					NS				
	1,1-Dichloropropene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,2,3-Trichlorobenzene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,2,3-Trichloropropane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,2,4-Trichlorobenzene	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
	1,2,4-Trimethylbenzene	µg/L	330	NS					NS					NS					NS					NS					NS					NS				
	1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS					NS					NS					NS					NS					NS					NS				
	1,2-Dibromoethane	µg/L	0.05	NS					NS					NS					NS					NS					NS					NS				
	1,2-Dichlorobenzene	µg/L	600	NS					NS					NS					NS					NS					NS					NS				
	1,2-Dichloroethane	µg/L	0.5	NS					NS					NS					NS					NS					NS					NS				
	1,2-Dichloropropane	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
	1,3,5-Trimethylbenzene	µg/L	330	NS					NS					NS					NS					NS					NS					NS				
	1,3-Dichlorobenzene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,3-Dichloropropane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	1,4-Dichlorobenzene	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
	2,2-Dichloropropane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	2-Butanone	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	2-Chlorotoluene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	2-Hexanone	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	4-Chlorotoluene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	4-Methyl-2-Pentanone	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Acetone	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Benzene	µg/L	1	NS					NS					NS					NS					NS					NS					NS				
	Bromobenzene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
	Bromochloromethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				

Table 4-4

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		Location Code:	NZ-64					NZ-65					NZ-66					NZ-89					NZ-91					NZ-120					NZ-121				
		Sample ID:	OT071-30109					OT071-30110					OT071-30111					OT071-30112					OT071-30113					OT071-30114					OT071-30115				
		Sample Date:	4/21/2016					4/19/2016					4/20/2016					4/19/2016					4/20/2016					4/21/2016					4/20/2016				
		Sample Purpose:	REG					REG					REG					REG					REG					REG					REG				
		Sample Depth:	274.2 - 274.63 FT					264.06 - 264.78 FT					46 - 46.19 FT					112.83 - 112.87 FT					61.29 - 64.18 FT					112.96 - 113.25 FT					26.84 - 27 FT				
Parameter	Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Bromodichloromethane	µg/L	100	NS					NS					NS					NS					NS					NS					NS				
Bromoform	µg/L	80	NS					NS					NS					NS					NS					NS					NS				
Bromomethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Carbon Disulfide	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Carbon Tetrachloride	µg/L	0.5	NS					NS					NS					NS					NS					NS					NS				
Chlorobenzene	µg/L	70	NS					NS					NS					NS					NS					NS					NS				
Chloroethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Chloroform	µg/L	80	NS					NS					NS					NS					NS					NS					NS				
Chloromethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
cis-1,2-Dichloroethene	µg/L	6	NS					NS					NS					NS					NS					NS					NS				
cis-1,3-Dichloropropene	µg/L	0.5	NS					NS					NS					NS					NS					NS					NS				
Dibromochloromethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Dibromomethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Dichlorodifluoromethane	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Ethylbenzene	µg/L	300	NS					NS					NS					NS					NS					NS					NS				
Hexachlorobutadiene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Isopropylbenzene	µg/L	700	NS					NS					NS					NS					NS					NS					NS				
m,p-Xylene	µg/L	1750	NS					NS					NS					NS					NS					NS					NS				
Methyl Tert-Butyl Ether	µg/L	13	NS					NS					NS					NS					NS					NS					NS				
Methylene chloride	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
Naphthalene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
n-Butylbenzene	µg/L	260	NS					NS					NS					NS					NS					NS					NS				
n-Propylbenzene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
o-Xylene	µg/L	1750	NS					NS					NS					NS					NS					NS					NS				
p-Isopropyltoluene	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
sec-Butylbenzene	µg/L	260	NS					NS					NS					NS					NS					NS					NS				
Styrene	µg/L	100	NS					NS					NS					NS					NS					NS					NS				
tert-Butylbenzene	µg/L	260	NS					NS					NS					NS					NS					NS					NS				
Tetrachloroethene	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
Toluene	µg/L	150	NS					NS					NS					NS					NS					NS					NS				
trans-1,2-Dichloroethene	µg/L	10	NS					NS					NS					NS					NS					NS					NS				
trans-1,3-Dichloropropene	µg/L	0.5	NS					NS					NS					NS					NS					NS					NS				
Trichloroethene	µg/L	5	NS					NS					NS					NS					NS					NS					NS				
Trichlorofluoromethane	µg/L	150	NS					NS					NS					NS					NS					NS					NS				
Vinyl Acetate	µg/L	-	NS					NS					NS					NS					NS					NS					NS				
Vinyl Chloride	µg/L	0.5	NS					NS					NS					NS					NS					NS					NS				

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
Former George Air Force Base, California

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		Location Code:	NZ-122					NZ-123					NZ-124					NZ-125				
		Sample ID:	OT071-30116					OT071-30117					OT071-30118					OT071-30119				
		Sample Date:	4/20/2016					4/20/2016					4/20/2016					4/29/2016				
		Sample Purpose:	REG					REG					REG					REG				
		Sample Depth:	60.27 - 60.4 FT					47.45 - 47.51 FT					140.68 - 140.8 FT					149.3 - 149.9 FT				
Parameter	Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Field Tests																						
Depth to Water	Ft (btoc)	-	60.27					47.45					140.68					149.38				
Dissolved Oxygen	mg/L	-	6.52					3.4					5.84					6.36				
Ferrous Iron	mg/L	-	NS					NS					NS					0				
Hydrogen Sulfide	mg/L	-	NS					NS					NS					0				
Oxygen Reduction Potential	mV	-	91					110					79					139.1				
pH	pH units	-	7.24					7.1					7.59					7.62				
Specific Conductance	mmhos/cm	-	1.292					1.58					1.54					1.12				
Temperature	Deg C	-	24.2					23					24.3					21.1				
Total Well Depth	Ft (btoc)	-	NS					NS					NS					NS				
Turbidity	NTU	-	7					110					15					5				
General Chemistry																						
Alkalinity, Total (as CaCO3)	mg/L	-	NS					NS					NS					109	2	1.7	0.848	
Chloride	mg/L	-	NS					NS					NS					180	2	1	0.47	
Nitrogen, Nitrate	mg/L	-	NS					NS					NS					5.3	0.1	0.05	0.022	
Sulfate	mg/L	-	NS					NS					NS					160	2	1	0.44	
Total Dissolved Solids	mg/L	-	NS					NS					NS					670	2	1.8	0.87	
Metals																						
Calcium, Dissolved	mg/L	-	NS					NS					NS					81.7	0.5	0.1	0.0665	
Magnesium, Dissolved	mg/L	-	NS					NS					NS					20.8	0.25	0.1	0.0278	
Potassium, Dissolved	mg/L	-	NS					NS					NS					3.27	0.5	0.1	0.0744	
Sodium, Dissolved	mg/L	-	NS					NS					NS					99.3	0.25	0.1	0.0303	
SEMIVOLATILES																						
Dieldrin	µg/L	0.002	0.013	0.0019	0.0009	0.0006	J	0.001	0.0019	0.0009	0.0006	J	0.0031	0.0019	0.00097	0.00059	J	0.0058	0.0019	0.0009	0.0006	
Volatile Organic Compounds																						
1,1,1,2-Tetrachloroethane	µg/L	-	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
1,1,1-Trichloroethane	µg/L	200	NS					NS					NS					< 0.19	0.5	0.2	0.19	U
1,1,2,2-Tetrachloroethane	µg/L	1	NS					NS					NS					< 0.22	0.5	0.4	0.22	U
1,1,2-Trichloroethane	µg/L	5	NS					NS					NS					< 0.32	0.5	0.4	0.32	U
1,1-Dichloroethane	µg/L	5	NS					NS					NS					< 0.19	0.5	0.2	0.19	U
1,1-Dichloroethene	µg/L	6	NS					NS					NS					< 0.2	0.5	0.4	0.2	U
1,1-Dichloropropene	µg/L	-	NS					NS					NS					< 0.28	0.5	0.4	0.28	U
1,2,3-Trichlorobenzene	µg/L	-	NS					NS					NS					< 0.25	0.5	0.4	0.25	U
1,2,3-Trichloropropane	µg/L	-	NS					NS					NS					< 0.25	0.5	0.4	0.25	U
1,2,4-Trichlorobenzene	µg/L	5	NS					NS					NS					< 0.25	0.5	0.4	0.25	U
1,2,4-Trimethylbenzene	µg/L	330	NS					NS					NS					< 0.15	0.5	0.2	0.15	U
1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS					NS					NS					< 2.9	10	5	2.9	R
1,2-Dibromoethane	µg/L	0.05	NS					NS					NS					< 0.34	0.5	0.4	0.34	U
1,2-Dichlorobenzene	µg/L	600	NS					NS					NS					< 0.17	0.5	0.2	0.17	U
1,2-Dichloroethane	µg/L	0.5	NS					NS					NS					< 0.18	0.5	0.2	0.18	U
1,2-Dichloropropane	µg/L	5	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
1,3,5-Trimethylbenzene	µg/L	330	NS					NS					NS					< 0.33	0.5	0.4	0.33	U
1,3-Dichlorobenzene	µg/L	-	NS					NS					NS					< 0.17	0.5	0.2	0.17	U
1,3-Dichloropropane	µg/L	-	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
1,4-Dichlorobenzene	µg/L	5	NS					NS					NS					< 0.31	0.5	0.4	0.31	U
2,2-Dichloropropane	µg/L	-	NS					NS					NS					< 0.42	1	0.5	0.42	U
2-Butanone	µg/L	-	NS					NS					NS					< 2.9	10	5	2.9	U
2-Chlorotoluene	µg/L	-	NS					NS					NS					< 0.34	0.5	0.4	0.34	U
2-Hexanone	µg/L	-	NS					NS					NS					< 2.6	10	5	2.6	U
4-Chlorotoluene	µg/L	-	NS					NS					NS					< 0.33	0.5	0.4	0.33	U
4-Methyl-2-Pentanone	µg/L	-	NS					NS					NS					< 2.7	10	5	2.7	R
Acetone	µg/L	-	NS					NS					NS					< 3.5	10	5	3.5	U
Benzene	µg/L	1	NS					NS					NS					< 0.32	0.5	0.4	0.32	U
Bromobenzene	µg/L	-	NS					NS					NS					< 0.33	0.5	0.4	0.33	U
Bromochloromethane	µg/L	-	NS					NS					NS					< 0.38	0.5	0.4	0.38	U

Table 4-4

Spring 2016
Groundwater Analytical Results
Site OT071
Former George Air Force Base, California

(Page 8 of 8)

		Location Code:	NZ-122					NZ-123					NZ-124					NZ-125				
		Sample ID:	OT071-30116					OT071-30117					OT071-30118					OT071-30119				
		Sample Date:	4/20/2016					4/20/2016					4/20/2016					4/29/2016				
		Sample Purpose:	REG					REG					REG					REG				
		Sample Depth:	60.27 - 60.4 FT					47.45 - 47.51 FT					140.68 - 140.8 FT					149.3 - 149.9 FT				
Parameter	Units	MCL	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ	Result	LOQ	LOD	DL	VQ
Bromodichloromethane	µg/L	100	NS					NS					NS					< 0.2	0.5	0.2	0.2	U
Bromoform	µg/L	80	NS					NS					NS					< 0.34	0.5	0.4	0.34	UJ
Bromomethane	µg/L	-	NS					NS					NS					< 0.38	1	0.5	0.38	UJ
Carbon Disulfide	µg/L	-	NS					NS					NS					< 0.44	1	0.5	0.44	UJ
Carbon Tetrachloride	µg/L	0.5	NS					NS					NS					< 0.22	0.5	0.4	0.22	U
Chlorobenzene	µg/L	70	NS					NS					NS					< 0.14	0.5	0.2	0.14	U
Chloroethane	µg/L	-	NS					NS					NS					< 0.34	0.5	0.4	0.34	U
Chloroform	µg/L	80	NS					NS					NS					0.84	0.5	0.4	0.22	U
Chloromethane	µg/L	-	NS					NS					NS					0.3	0.5	0.4	0.22	J
cis-1,2-Dichloroethene	µg/L	6	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
cis-1,3-Dichloropropene	µg/L	0.5	NS					NS					NS					< 0.18	0.5	0.2	0.18	U
Dibromochloromethane	µg/L	-	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
Dibromomethane	µg/L	-	NS					NS					NS					< 0.34	0.5	0.4	0.34	U
Dichlorodifluoromethane	µg/L	-	NS					NS					NS					< 0.24	0.5	0.4	0.24	U
Ethylbenzene	µg/L	300	NS					NS					NS					< 0.32	0.5	0.4	0.32	U
Hexachlorobutadiene	µg/L	-	NS					NS					NS					< 0.48	1	0.5	0.48	U
Isopropylbenzene	µg/L	700	NS					NS					NS					< 0.42	1	0.5	0.42	U
m,p-Xylene	µg/L	1750	NS					NS					NS					< 0.24	1	0.4	0.24	U
Methyl Tert-Butyl Ether	µg/L	13	NS					NS					NS					< 0.29	0.5	0.4	0.29	U
Methylene chloride	µg/L	5	NS					NS					NS					< 0.38	0.5	0.4	0.38	U
Naphthalene	µg/L	-	NS					NS					NS					< 0.41	1	0.5	0.41	U
n-Butylbenzene	µg/L	260	NS					NS					NS					< 0.34	0.5	0.4	0.34	U
n-Propylbenzene	µg/L	-	NS					NS					NS					< 0.38	0.5	0.4	0.38	U
o-Xylene	µg/L	1750	NS					NS					NS					< 0.39	0.5	0.4	0.39	U
p-Isopropyltoluene	µg/L	-	NS					NS					NS					< 0.14	0.5	0.2	0.14	U
sec-Butylbenzene	µg/L	260	NS					NS					NS					< 0.23	0.5	0.4	0.23	U
Styrene	µg/L	100	NS					NS					NS					< 0.32	0.5	0.4	0.32	U
tert-Butylbenzene	µg/L	260	NS					NS					NS					< 0.38	0.5	0.4	0.38	U
Tetrachloroethene	µg/L	5	NS					NS					NS					< 0.22	0.5	0.4	0.22	U
Toluene	µg/L	150	NS					NS					NS					< 0.26	0.5	0.4	0.26	U
trans-1,2-Dichloroethene	µg/L	10	NS					NS					NS					< 0.26	0.5	0.4	0.26	U
trans-1,3-Dichloropropene	µg/L	0.5	NS					NS					NS					< 0.35	0.5	0.4	0.35	U
Trichloroethene	µg/L	5	NS					NS					NS					< 0.23	0.5	0.4	0.23	U
Trichlorofluoromethane	µg/L	150	NS					NS					NS					< 0.25	0.5	0.4	0.25	U
Vinyl Acetate	µg/L	-	NS					NS					NS					< 2.2	10	5	2.2	R
Vinyl Chloride	µg/L	0.5	NS					NS					NS					< 0.27	0.5	0.4	0.27	U

NOTES:
Deg C - Degrees Celsius.
DL - Detection limit.
FD - Field duplicate sample.
Ft (btoc) - feet (below top of casing)
LOD - Limit of detection.
LOQ - Limit of quantification.
MCL - Maximum contaminant level, the lower of the Federal and California MCLs
California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22
Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April
µg/L - Micrograms per liter.
mg/L - Milligrams per liter.
mmhos/cm - Micromohs per centimeter.
mV - Millivolts.
NS - Analyte not sampled for.
NTU - Nephelometric turbidity units.
REG- Regular analytical sample.
Shaded - Result greater than the MCL.
VQ - Validation qualifier.

Validation Qualifiers
J denotes the analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed.
U denotes not detected. The compound/analyte was analyzed for, but was not detected above the associated DL or above the reported concentration due to blank contamination.
UJ denotes the compound/analyte was analyzed for, but was not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or the sampling and analysis process have indicated that the reporting limit may be inaccurate or imprecise. The nondetect result should be estimated.
R denotes the reported sample results are rejected due to the following: (1) severe deficiencies in the supporting QC data, (2) anomalies noted in the sampling and/or analysis process that could affect the validity of the reported data, (3) the presence or absence of the constituent cannot be verified based on the data provided, and (4) to indicate not to use a particular result in the event of a reanalysis.

Table 4-5

Fall 2016 Groundwater Analytical Results, Site OT071,
Former George Air Force Base
Victorville, California

	Location Code:		MW-145						MW-146						MW-147						MW-148						MW-149						MW-152					
	Sample ID:		OT071-30133						OT071-30134						OT071-30135						OT071-30136						OT071-30137						OT071-30138					
	Sample Date:		10/10/2016						10/10/2016						10/13/2016						10/10/2016						10/11/2016						10/19/2016					
	Sample Purpose:		REG						REG						REG						REG						REG						REG					
Parameter	Units		Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ
Field Tests																																						
Total Well Depth	Ft (btoc)	-	301.91						158.9						343.4						262.9						242.31						302.15					
Pump Placement Depth	Ft (btoc)	-	289.5						148.5						325						245						225						285					
Depth to Water	Ft (btoc)	-	278.74						140.73						288						74						130.88						181.82					
Dissolved Oxygen	mg/L	-	3.78						5.65						5.76						0.8						0.41						0.82					
Oxygen Reduction Potential	mV	-	30.5						119.6						134.3						159						-51.9						133.4					
pH	pH units	-	7.62						7.34						7.6						8.35						8.59						8.56					
Specific Conductance	mmhos/cm	-	0.559						1.11						0.711						0.435						0.01469						0.419					
Temperature	Deg C	-	25.3						24.5						26.2						236						26.1						23.7					
Turbidity	NTU	-	7.61						5						3						4						6.55						1					
General Chemistry																																						
Chloride	mg/L	-	NS						NS						NS						NS						NS						NS					
Nitrogen, Nitrate	mg/L	-	NS						NS						NS						NS						NS						NS					
SEMIVOLATILES																																						
Dieldrin	µg/L	0.002	0.00086	0.0019	0.00095	0.00058	J	J	<0.00058	0.0019	0.00096	0.00058	U	U	0.002	0.0019	0.00095	0.00058			<0.00058	0.0019	0.00096	0.00058	U	U	<0.00058	0.0019	0.00096	0.00058	U	U	<0.00057	0.0019	0.00094	0.00057	U	U
Volatile Organic Compounds																																						
1,1,1,2-Tetrachloroethane	µg/L	-	NS						NS						NS						NS						NS						NS					
1,1,1-Trichloroethane	µg/L	200	NS						NS						NS						NS						NS						NS					
1,1,2,2-Tetrachloroethane	µg/L	1	NS						NS						NS						NS						NS						NS					
1,1,2-Trichloroethane	µg/L	5	NS						NS						NS						NS						NS						NS					
1,1-Dichloroethane	µg/L	5	NS						NS						NS						NS						NS						NS					
1,1-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS						NS					
1,1-Dichloropropene	µg/L	-	NS						NS						NS						NS						NS						NS					
1,2,3-Trichlorobenzene	µg/L	-	NS						NS						NS						NS						NS						NS					
1,2,3-Trichloropropane	µg/L	-	NS						NS						NS						NS						NS						NS					
1,2,4-Trichlorobenzene	µg/L	5	NS						NS						NS						NS						NS						NS					
1,2,4-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS						NS					
1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS						NS						NS						NS						NS						NS					
1,2-Dibromoethane	µg/L	0.05	NS						NS						NS						NS						NS						NS					
1,2-Dichlorobenzene	µg/L	600	NS						NS						NS						NS						NS						NS					
1,2-Dichloroethane	µg/L	0.5	NS						NS						NS						NS						NS						NS					
1,2-Dichloropropane	µg/L	5	NS						NS						NS						NS						NS						NS					
1,3,5-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS						NS					
1,3-Dichlorobenzene	µg/L	-	NS						NS						NS						NS						NS						NS					
1,3-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS						NS					
1,4-Dichlorobenzene	µg/L	5	NS						NS						NS						NS						NS						NS					
2,2-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS						NS					
2-Butanone	µg/L	-	NS						NS						NS						NS						NS						NS					
2-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS						NS					
2-Hexanone	µg/L	-	NS						NS						NS						NS						NS						NS					
4-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS						NS					
4-Methyl-2-Pentanone	µg/L	-	NS						NS						NS						NS						NS						NS					
Acetone	µg/L	-	NS						NS						NS						NS						NS						NS					
Benzene	µg/L	1	NS						NS						NS						NS						NS						NS					
Bromobenzene	µg/L	-	NS						NS						NS						NS						NS						NS					
Bromochloromethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Bromodichloromethane	µg/L	100	NS						NS						NS						NS						NS						NS					
Bromoform	µg/L	80	NS						NS						NS						NS						NS						NS					
Bromomethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Carbon Disulfide	µg/L	-	NS						NS						NS						NS						NS						NS					
Carbon Tetrachloride	µg/L	0.5	NS						NS						NS						NS						NS						NS					
Chlorobenzene	µg/L	70	NS						NS						NS						NS						NS						NS					
Chloroethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Chloroform	µg/L	80	NS						NS						NS						NS						NS						NS					
Chloromethane	µg/L	-	NS						NS						NS						NS						NS						NS					
cis-1,2-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS						NS					
cis-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS						NS					
Dibromochloromethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Dibromomethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Dichlorodifluoromethane	µg/L	-	NS						NS						NS						NS						NS						NS					
Ethylbenzene	µg/L	300	NS						NS						NS						NS						NS						NS					
Hexachlorobutadiene	µg/L	-	NS						NS						NS						NS						NS						NS					
Isopropylbenzene	µg/L	700	NS						NS						NS						NS						NS						NS					
m,p-Xylene	µg/L	1750	NS						NS						NS						NS						NS						NS					
Methyl Tert-Butyl Ether	µg/L	13	NS						NS						NS						NS						NS						NS					
Methylene chloride	µg/L	5	NS						NS						NS						NS						NS						NS					
Naphthalene	µg/L	-	NS						NS						NS						NS						NS						NS					
n-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS						NS					
n-Propylbenzene	µg/L	-	NS						NS						NS						NS						NS						NS					
o-Xylene	µg/L	1750	NS						NS						NS						NS						NS						NS					
p-Isopropyltoluene	µg/L	-	NS						NS						NS						NS						NS						NS					
sec-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS						NS					
Styrene	µg/L	100	NS						NS						NS						NS						NS						NS					
tert-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS						NS					
Tetrachloroethene	µg/L	5	NS						NS						NS						NS						NS						NS					
Toluene	µg/L	150	NS						NS						NS						NS						NS						NS					
trans-1,2-Dichloroethene	µg/L	10	NS						NS						NS						NS						NS						NS					
trans-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS						NS					
Trichloroethene	µg/L	5	NS						NS						NS						NS						NS						NS					
Trichlorofluoromethane	µg/L	150	NS						NS						NS						NS						NS						NS					
Vinyl Acetate	µg/L	-	NS						NS						NS						NS						NS						NS					
Vinyl Chloride	µg/L	0.5	NS						NS						NS						NS						NS						NS					

Table 4-5

Fall 2016 Groundwater Analytical Results, Site OT071,
Former George Air Force Base
Victorville, California

	Location Code:		MW-159						MW-160						MW-161						MW-162						MW-163					
	Sample ID:		OT071-30139						OT071-30140						OT071-30141						OT071-30142						OT071-30143					
	Sample Date:		10/25/2016						10/24/2016						10/25/2016						10/26/2016						10/25/2016					
	Sample Purpose:		REG						REG						REG						REG						REG					
Parameter	Units		Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ
Field Tests																																
Total Well Depth	Ft (btoc)	-	109.2						188.15						313.24						304.1						136.59					
Pump Placement Depth	Ft (btoc)	-	103.5						175						-999						293						126					
Depth to Water	Ft (btoc)	-	101.35						161.57						289.55						286.54						75.23					
Dissolved Oxygen	mg/L	-	4.24						6.5						3.1						5.48						0.86					
Oxygen Reduction Potential	mV	-	112.5						143.9						-63.7						93.6						-2.9					
pH	pH units	-	7.24						7.7						10.1						7.87						8.18					
Specific Conductance	mmhos/cm	-	1.373						0.543						1.851						0.89						0.425					
Temperature	Deg C	-	21.7						24.1						20.3						23.4						21.8					
Turbidity	NTU	-	4						4						23						80.79						1.09					
General Chemistry																																
Chloride	mg/L	-	NS						NS						NS						NS						NS					
Nitrogen, Nitrate	mg/L	-	NS						NS						NS						NS						NS					
SEMIVOLATILES																																
Dieldrin	µg/L	0.002	<0.00058	0.0019	0.00095	0.00058	U	U	<0.00058	0.0019	0.00095	0.00058	U	U	<0.00057	0.0019	0.00094	0.00057	U	U	0.0032	0.0019	0.00094	0.00057			<0.00058	0.0019	0.00095	0.00058	U	U
Volatile Organic Compounds																																
1,1,1,2-Tetrachloroethane	µg/L	-	NS						NS						NS						NS						NS					
1,1,1-Trichloroethane	µg/L	200	NS						NS						NS						NS						NS					
1,1,2,2-Tetrachloroethane	µg/L	1	NS						NS						NS						NS						NS					
1,1,2-Trichloroethane	µg/L	5	NS						NS						NS						NS						NS					
1,1-Dichloroethane	µg/L	5	NS						NS						NS						NS						NS					
1,1-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS					
1,1-Dichloropropene	µg/L	-	NS						NS						NS						NS						NS					
1,2,3-Trichlorobenzene	µg/L	-	NS						NS						NS						NS						NS					
1,2,3-Trichloropropane	µg/L	-	NS						NS						NS						NS						NS					
1,2,4-Trichlorobenzene	µg/L	5	NS						NS						NS						NS						NS					
1,2,4-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS					
1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS						NS						NS						NS						NS					
1,2-Dibromoethane	µg/L	0.05	NS						NS						NS						NS						NS					
1,2-Dichlorobenzene	µg/L	600	NS						NS						NS						NS						NS					
1,2-Dichloroethane	µg/L	0.5	NS						NS						NS						NS						NS					
1,2-Dichloropropane	µg/L	5	NS						NS						NS						NS						NS					
1,3,5-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS					
1,3-Dichlorobenzene	µg/L	-	NS						NS						NS						NS						NS					
1,3-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS					
1,4-Dichlorobenzene	µg/L	5	NS						NS						NS						NS						NS					
2,2-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS					
2-Butanone	µg/L	-	NS						NS						NS						NS						NS					
2-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS					
2-Hexanone	µg/L	-	NS						NS						NS						NS						NS					
4-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS					
4-Methyl-2-Pentanone	µg/L	-	NS						NS						NS						NS						NS					
Acetone	µg/L	-	NS						NS						NS						NS						NS					
Benzene	µg/L	1	NS						NS						NS						NS						NS					
Bromobenzene	µg/L	-	NS						NS						NS						NS						NS					
Bromochloromethane	µg/L	-	NS						NS						NS						NS						NS					
Bromodichloromethane	µg/L	100	NS						NS						NS						NS						NS					
Bromoform	µg/L	80	NS						NS						NS						NS						NS					
Bromomethane	µg/L	-	NS						NS						NS						NS						NS					
Carbon Disulfide	µg/L	-	NS						NS						NS						NS						NS					
Carbon Tetrachloride	µg/L	0.5	NS						NS						NS						NS						NS					
Chlorobenzene	µg/L	70	NS						NS						NS						NS						NS					
Chloroethane	µg/L	-	NS						NS						NS						NS						NS					
Chloroform	µg/L	80	NS						NS						NS						NS						NS					
Chloromethane	µg/L	-	NS						NS						NS						NS						NS					
cis-1,2-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS					
cis-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS					
Dibromochloromethane	µg/L	-	NS						NS						NS						NS						NS					
Dibromomethane	µg/L	-	NS						NS						NS						NS						NS					
Dichlorodifluoromethane	µg/L	-	NS						NS						NS						NS						NS					
Ethylbenzene	µg/L	300	NS						NS						NS						NS						NS					
Hexachlorobutadiene	µg/L	-	NS						NS						NS						NS						NS					
Isopropylbenzene	µg/L	700	NS						NS						NS						NS						NS					
m,p-Xylene	µg/L	1750	NS						NS						NS						NS						NS					
Methyl Tert-Butyl Ether	µg/L	13	NS						NS						NS						NS						NS					
Methylene chloride	µg/L	5	NS						NS						NS						NS						NS					
Naphthalene	µg/L	-	NS						NS						NS						NS						NS					
n-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					
n-Propylbenzene	µg/L	-	NS						NS						NS						NS						NS					
o-Xylene	µg/L	1750	NS						NS						NS						NS						NS					
p-Isopropyltoluene	µg/L	-	NS						NS						NS						NS						NS					
sec-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					
Styrene	µg/L	100	NS						NS						NS						NS						NS					
tert-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					
Tetrachloroethene	µg/L	5	NS						NS						NS						NS						NS					
Toluene	µg/L	150	NS						NS						NS						NS						NS					
trans-1,2-Dichloroethene	µg/L	10	NS						NS						NS						NS						NS					
trans-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS					
Trichloroethene	µg/L	5	NS						NS						NS						NS						NS					
Trichlorofluoromethane	µg/L	150	NS						NS						NS						NS						NS					
Vinyl Acetate	µg/L	-	NS						NS						NS						NS						NS					
Vinyl Chloride	µg/L	0.5	NS						NS						NS						NS						NS					

Table 4-5

Fall 2016 Groundwater Analytical Results, Site OT071,
Former George Air Force Base
Victorville, California

	Location Code:		NZ-64						NZ-65						NZ-66						NZ-91										NZ-108					
	Sample ID:		OT071-30120						OT071-30121						OT071-30122						OT071-30124						OT071-30125					OT071-30126				
	Sample Date:		10/12/2016						10/12/2016						10/19/2016						10/17/2016						10/17/2016					10/12/2016				
	Sample Purpose:		REG						REG						REG						REG						FD					REG				
Parameter	Units		Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ
Field Tests																																						
Total Well Depth	Ft (btoc)	-	299.89						289.2						83.82						73.13						NS					279.2					
Pump Placement Depth	Ft (btoc)	-	287						278						75						66						NS					268					
Depth to Water	Ft (btoc)	-	273.5						263.63						46.59						61.8						NS					256.54					
Dissolved Oxygen	mg/L	-	6.16						5.37						6.99						6.94						NS					5.44					
Oxygen Reduction Potential	mV	-	148.6						140						81.2						106.5						NS					155.5					
pH	pH units	-	7.67						7.68						7.47						7.19						NS					7.38					
Specific Conductance	mmhos/cm	-	0.46						0.558						0.577						0.642						NS					0.666					
Temperature	Deg C	-	23.5						24.6						22.5						20.1						NS					26.4					
Turbidity	NTU	-	2						7						3.16						2.92						NS					3					
General Chemistry																																						
Chloride	mg/L	-	NS						NS						NS						NS						NS					55	1	0.5	0.23		
Nitrogen, Nitrate	mg/L	-	NS						NS						NS						NS						NS					5.2	0.1	0.05	0.022		
SEMIVOLATILES																																						
Dieldrin	µg/L	0.002	<0.00058	0.0019	0.00096	0.00058	U	U	<0.00058	0.0019	0.00096	0.00058	U	U	0.031	0.0038	0.0019	0.0012			0.031	0.0077	0.0038	0.0023			0.025	0.0076	0.0038	0.0023			<0.00058	0.0019	0.00095	0.00058	U	U
Volatile Organic Compounds																																						
1,1,1,2-Tetrachloroethane	µg/L	-	NS						NS						NS						NS						NS					NS					
1,1,1-Trichloroethane	µg/L	200	NS						NS						NS						NS						NS					NS					
1,1,2,2-Tetrachloroethane	µg/L	1	NS						NS						NS						NS						NS					NS					
1,1,2-Trichloroethane	µg/L	5	NS						NS						NS						NS						NS					NS					
1,1-Dichloroethane	µg/L	5	NS						NS						NS						NS						NS					NS					
1,1-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS					NS					
1,1-Dichloropropene	µg/L	-	NS						NS						NS						NS						NS					NS					
1,2,3-Trichlorobenzene	µg/L	-	NS						NS						NS						NS						NS					NS					
1,2,3-Trichloropropane	µg/L	-	NS						NS						NS						NS						NS					NS					
1,2,4-Trichlorobenzene	µg/L	5	NS						NS						NS						NS						NS					NS					
1,2,4-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS					NS					
1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS						NS						NS						NS						NS					NS					
1,2-Dibromoethane	µg/L	0.05	NS						NS						NS						NS						NS					NS					
1,2-Dichlorobenzene	µg/L	600	NS						NS						NS						NS						NS					NS					
1,2-Dichloroethane	µg/L	0.5	NS						NS						NS						NS						NS					NS					
1,2-Dichloropropane	µg/L	5	NS						NS						NS						NS						NS					NS					
1,3,5-Trimethylbenzene	µg/L	330	NS						NS						NS						NS						NS					NS					
1,3-Dichlorobenzene	µg/L	-	NS						NS						NS						NS						NS					NS					
1,3-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS					NS					
1,4-Dichlorobenzene	µg/L	5	NS						NS						NS						NS						NS					NS					
2,2-Dichloropropane	µg/L	-	NS						NS						NS						NS						NS					NS					
2-Butanone	µg/L	-	NS						NS						NS						NS						NS					NS					
2-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS					NS					
2-Hexanone	µg/L	-	NS						NS						NS						NS						NS					NS					
4-Chlorotoluene	µg/L	-	NS						NS						NS						NS						NS					NS					
4-Methyl-2-Pentanone	µg/L	-	NS						NS						NS						NS						NS					NS					
Acetone	µg/L	-	NS						NS						NS						NS						NS					NS					
Benzene	µg/L	1	NS						NS						NS						NS						NS					NS					
Bromobenzene	µg/L	-	NS						NS						NS						NS						NS					NS					
Bromochloromethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Bromodichloromethane	µg/L	100	NS						NS						NS						NS						NS					NS					
Bromoform	µg/L	80	NS						NS						NS						NS						NS					NS					
Bromomethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Carbon Disulfide	µg/L	-	NS						NS						NS						NS						NS					NS					
Carbon Tetrachloride	µg/L	0.5	NS						NS						NS						NS						NS					NS					
Chlorobenzene	µg/L	70	NS						NS						NS						NS						NS					NS					
Chloroethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Chloroform	µg/L	80	NS						NS						NS						NS						NS					NS					
Chloromethane	µg/L	-	NS						NS						NS						NS						NS					NS					
cis-1,2-Dichloroethene	µg/L	6	NS						NS						NS						NS						NS					NS					
cis-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS					NS					
Dibromochloromethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Dibromomethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Dichlorodifluoromethane	µg/L	-	NS						NS						NS						NS						NS					NS					
Ethylbenzene	µg/L	300	NS						NS						NS						NS						NS					NS					
Hexachlorobutadiene	µg/L	-	NS						NS						NS						NS						NS					NS					
Isopropylbenzene	µg/L	700	NS						NS						NS						NS						NS					NS					
m,p-Xylene	µg/L	1750	NS						NS						NS						NS						NS					NS					
Methyl Tert-Butyl Ether	µg/L	13	NS						NS						NS						NS						NS					NS					
Methylene chloride	µg/L	5	NS						NS						NS						NS						NS					NS					
Naphthalene	µg/L	-	NS						NS						NS						NS						NS					NS					
n-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					NS					
n-Propylbenzene	µg/L	-	NS						NS						NS						NS						NS					NS					
o-Xylene	µg/L	1750	NS						NS						NS						NS						NS					NS					
p-Isopropyltoluene	µg/L	-	NS						NS						NS						NS						NS					NS					
sec-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					NS					
Styrene	µg/L	100	NS						NS						NS						NS						NS					NS					
tert-Butylbenzene	µg/L	260	NS						NS						NS						NS						NS					NS					
Tetrachloroethene	µg/L	5	NS						NS						NS						NS						NS					NS					
Toluene	µg/L	150	NS						NS						NS						NS						NS					NS					
trans-1,2-Dichloroethene	µg/L	10	NS						NS						NS						NS						NS					NS					
trans-1,3-Dichloropropene	µg/L	0.5	NS						NS						NS						NS						NS					NS					
Trichloroethene	µg/L	5	NS						NS						NS						NS						NS					NS					
Trichlorofluoromethane	µg/L	150	NS						NS						NS						NS						NS					NS					
Vinyl Acetate	µg/L	-	NS						NS						NS						NS						NS					NS					
Vinyl Chloride	µg/L	0.5	NS						NS						NS						NS						NS					NS					

Table 4-5

Fall 2016 Groundwater Analytical Results, Site OT071,
Former George Air Force Base
Victorville, California

	Location Code:		NZ-121						NZ-123						NZ-125					
	Sample ID:		OT071-30127						OT071-30129						OT071-30130					
	Sample Date:		10/11/2016						10/11/2016						10/12/2016					
	Sample Purpose:		REG						REG						REG					
Parameter	Units		Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ	Result	LOQ	LOD	DL	LQ	VQ
Field Tests																				
Total Well Depth	Ft (btoc)	-	31.7						49.84						161.42					
Pump Placement Depth	Ft (btoc)	-	-999						-999						155					
Depth to Water	Ft (btoc)	-	27.47						47.74						149.48					
Dissolved Oxygen	mg/L	-	3.6						2.7						6.44					
Oxygen Reduction Potential	mV	-	84.6						-32.1						51.2					
pH	pH units	-	7.43						6.89						7.55					
Specific Conductance	mmhos/cm	-	0.766						1.545						1.147					
Temperature	Deg C	-	21.4						22						23.8					
Turbidity	NTU	-	480						1000						2.96					
General Chemistry																				
Chloride	mg/L	-	NS						NS						NS					
Nitrogen, Nitrate	mg/L	-	NS						NS						NS					
SEMIVOLATILES																				
Dieldrin	µg/L	0.002	<0.00059	0.0019	0.00096	0.00059	U	U	<0.00058	0.0019	0.00096	0.00058	U	U	0.0035	0.0019	0.00096	0.00058		J
Volatile Organic Compounds																				
1,1,1,2-Tetrachloroethane	µg/L	-	NS						NS						<0.24	0.5	0.4	0.24	U	U
1,1,1-Trichloroethane	µg/L	200	NS						NS						<0.19	0.5	0.2	0.19	U	U
1,1,2,2-Tetrachloroethane	µg/L	1	NS						NS						<0.22	0.5	0.4	0.22	U	U
1,1,2-Trichloroethane	µg/L	5	NS						NS						<0.32	0.5	0.4	0.32	U	U
1,1-Dichloroethane	µg/L	5	NS						NS						<0.19	0.5	0.2	0.19	U	U
1,1-Dichloroethene	µg/L	6	NS						NS						<0.2	0.5	0.4	0.2	U	U
1,1-Dichloropropene	µg/L	-	NS						NS						<0.28	0.5	0.4	0.28	U	U
1,2,3-Trichlorobenzene	µg/L	-	NS						NS						<0.25	0.5	0.4	0.25	U	U
1,2,3-Trichloropropane	µg/L	-	NS						NS						<0.25	0.5	0.4	0.25	U	U
1,2,4-Trichlorobenzene	µg/L	5	NS						NS						<0.25	0.5	0.4	0.25	U	U
1,2,4-Trimethylbenzene	µg/L	330	NS						NS						<0.15	0.5	0.2	0.15	U	U
1,2-Dibromo-3-Chloropropane	µg/L	0.2	NS						NS						<2.9	10	5	2.9	U	R
1,2-Dibromoethane	µg/L	0.05	NS						NS						<0.34	0.5	0.4	0.34	U	U
1,2-Dichlorobenzene	µg/L	600	NS						NS						<0.17	0.5	0.2	0.17	U	U
1,2-Dichloroethane	µg/L	0.5	NS						NS						<0.18	0.5	0.2	0.18	U	U
1,2-Dichloropropane	µg/L	5	NS						NS						<0.24	0.5	0.4	0.24	U	U
1,3,5-Trimethylbenzene	µg/L	330	NS						NS						<0.33	0.5	0.4	0.33	U	U
1,3-Dichlorobenzene	µg/L	-	NS						NS						<0.17	0.5	0.2	0.17	U	U
1,3-Dichloropropane	µg/L	-	NS						NS						<0.24	0.5	0.4	0.24	U	U
1,4-Dichlorobenzene	µg/L	5	NS						NS						<0.31	0.5	0.4	0.31	U	U
2,2-Dichloropropane	µg/L	-	NS						NS						<0.42	1	0.5	0.42	U	U
2-Butanone	µg/L	-	NS						NS						<2.9	10	5	2.9	U	R
2-Chlorotoluene	µg/L	-	NS						NS						<0.34	0.5	0.4	0.34	U	U
2-Hexanone	µg/L	-	NS						NS						<2.6	10	5	2.6	U	U
4-Chlorotoluene	µg/L	-	NS						NS						<0.33	0.5	0.4	0.33	U	U
4-Methyl-2-Pentanone	µg/L	-	NS						NS						<2.7	10	5	2.7	U	R
Acetone	µg/L	-	NS						NS						<3.5	10	5	3.5	U	R
Benzene	µg/L	1	NS						NS						<0.32	0.5	0.4	0.32	U	U
Bromobenzene	µg/L	-	NS						NS						<0.33	0.5	0.4	0.33	U	U
Bromochloromethane	µg/L	-	NS						NS						<0.38	0.5	0.4	0.38	U	U
Bromodichloromethane	µg/L	100	NS						NS						<0.2	0.5	0.2	0.2	U	U
Bromoform	µg/L	80	NS						NS						<0.34	0.5	0.4	0.34	U	U
Bromomethane	µg/L	-	NS						NS						<0.38	1	0.5	0.38	U	U
Carbon Disulfide	µg/L	-	NS						NS						<0.44	1	0.5	0.44	U	U
Carbon Tetrachloride	µg/L	0.5	NS						NS						<0.22	0.5	0.4	0.22	U	U
Chlorobenzene	µg/L	70	NS						NS						<0.14	0.5	0.2	0.14	U	U
Chloroethane	µg/L	-	NS						NS						<0.34	0.5	0.4	0.34	U	U
Chloroform	µg/L	80	NS						NS						0.79	0.5	0.4	0.22		
Chloromethane	µg/L	-	NS						NS						0.22	0.5	0.4	0.22	J	J
cis-1,2-Dichloroethene	µg/L	6	NS						NS						<0.24	0.5	0.4	0.24	U	U
cis-1,3-Dichloropropene	µg/L	0.5	NS						NS						<0.18	0.5	0.2	0.18	U	U
Dibromochloromethane	µg/L	-	NS						NS						<0.24	0.5	0.4	0.24	U	U
Dibromomethane	µg/L	-	NS						NS						<0.34	0.5	0.4	0.34	U	U
Dichlorodifluoromethane	µg/L	-	NS						NS						<0.24	0.5	0.4	0.24	U	UJ
Ethylbenzene	µg/L	300	NS						NS						<0.32	0.5	0.4	0.32	U	U
Hexachlorobutadiene	µg/L	-	NS						NS						<0.48	1	0.5	0.48	U	U
Isopropylbenzene	µg/L	700	NS						NS						<0.42	1	0.5	0.42	U	U
m,p-Xylene	µg/L	1750	NS						NS						<0.24	1	0.4	0.24	U	U
Methyl Tert-Butyl Ether	µg/L	13	NS						NS						<0.29	0.5	0.4	0.29	U	U
Methylene chloride	µg/L	5	NS						NS						<0.38	0.5	0.4	0.38	U	U
Naphthalene	µg/L	-	NS						NS						<0.41	1	0.5	0.41	U	U
n-Butylbenzene	µg/L	260	NS						NS						<0.34	0.5	0.4	0.34	U	U
n-Propylbenzene	µg/L	-	NS						NS						<0.38	0.5	0.4	0.38	U	U
o-Xylene	µg/L	1750	NS						NS						<0.39	0.5	0.4	0.39	U	U
p-Isopropyltoluene	µg/L	-	NS						NS						<0.14	0.5	0.2	0.14	U	U
sec-Butylbenzene	µg/L	260	NS						NS						<0.23	0.5	0.4	0.23	U	U
Styrene	µg/L	100	NS						NS						<0.32	0.5	0.4	0.32	U	U
tert-Butylbenzene	µg/L	260	NS						NS						<0.38	0.5	0.4	0.38	U	U
Tetrachloroethene	µg/L	5	NS						NS						<0.22	0.5	0.4	0.22	U	U
Toluene	µg/L	150	NS						NS						<0.26	0.5	0.4	0.26	U	U
trans-1,2-Dichloroethene	µg/L	10	NS						NS						<0.26	0.5	0.4	0.26	U	U
trans-1,3-Dichloropropene	µg/L	0.5	NS						NS						<0.35	0.5	0.4	0.35	U	U
Trichloroethene	µg/L	5	NS						NS						<0.23	0.5	0.4	0.23	U	U
Trichlorofluoromethane	µg/L	150	NS						NS						<0.25	0.5	0.4	0.25	U	U
Vinyl Acetate	µg/L	-	NS						NS						<2.2	10	5	2.2	U	U
Vinyl Chloride	µg/L	0.5	NS						NS						<0.27	0.5	0.4	0.27	U	U

NOTES:
Deg C - Degrees Celsius.
DL - Detection limit.
FD - Field duplicate sample.
Ft (btoc) - feet (below top of casing)
LOD - Limit of detection.
LOQ - Limit of quantification.
MCL - Maximum contaminant level, the lower of the Federal and California MCLs
California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22
Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April
µg/L - Micrograms per liter.
mg/L - Milligrams per liter.
mmhos/cm - Micromohs per centimeter.
mV - Millivolts.
NS - Analyte not sampled for.
NTU - Nephelometric turbidity units.
REG- Regular analytical sample.
Shaded - Result greater than the MCL.
VQ - Validation qualifier.

Validation Qualifiers
J denotes the analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed.
U denotes not detected. The compound/analyte was analyzed for, but was not detected above the associated DL or above the reported concentration due to blank contamination.
UJ denotes the compound/analyte was analyzed for, but was not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or the sampling and analysis process have indicated that the reporting limit may be inaccurate or imprecise. The nondetect result should be estimated.
R denotes the reported sample results are rejected due to the following: (1) severe deficiencies in the supporting QC data, (2) anomalies noted in the sampling and/or analysis process that could affect the validity of the reported data, (3) the presence or absence of the constituent cannot be verified based on the data provided, and (4) to indicate not to use a particular result in the event of a reanalysis.

Appendix A
County Well Permits

DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

MEMORANDUM FOR County of San Bernardino
Department of Environmental Health Services
Attn: Mr. Gustavo Cervantes Jacobo
172 W. 3rd Street
San Bernardino, CA 92415

MAY 25 2016

FROM: SAF/GCN
3411 Olson Street
McClellan, CA 95652-1003

SUBJECT: Authorization of Mr. Donald K. Gronstal to Sign as Property Owner on San Bernardino County, Well Permits, Victorville, California

This letter confirms that Mr. Donald K. Gronstal is the Base Environmental Coordinator for the former George Air Force Base (AFB) and has U.S. Air Force authorization to sign the County of San Bernardino, Department of Environmental Health Services (DEHS), well permit applications as the property owner. These monitoring wells are being installed to directly support the environmental cleanup of groundwater beneath the former George AFB, as required by State and Federal laws. These monitoring wells will be installed on property that is still owned by the United States Government.

Thank you for your support of the former George AFB environmental cleanup program. If you have any questions or concerns, please do not hesitate to call me at (916) 643-0830, ext. 106.

Michael P. Kelly
MICHAEL P. KELLY
Associate General Counsel
Office of the Deputy General Counsel of the Air Force (Installations, Energy & Environment)

cc:
AFCEC/CIBW, Attn: Administrative Record
AFCEC/CIBW, Attn: Mr. Don Gronstal (electronic)
SAF/GCN, Attn: Mr. Michael P. Kelly, Esq. (electronic)
CNTS, Attn: Mr. Calvin Cox (electronic)

SAN BERNARDINO COUNTY

Public Health
Environmental Health Services

www.SBCounty.gov
www.sbcounty.gov/dph/dehs
Phone: (800) 442-2283

Paying Online 1082

APPLICATION FOR WELL PERMIT

MW-160

THIS SECTION TO BE COMPLETED BY APPLICANT • HEALTH PERMITS ARE NOT TRANSFERABLE

1 – PROPERTY INFORMATION

Property Owner: United States of America			Phone Number: (760) 246-5360
Site Address: 18374 West Phantom Street	City: Victorville	State: CA	Zip: 92394
Assessor's Parcel Number: 0459-211-11-0000	Email: donald.gronstal@us.af.mil		
Township: N/S Tier: T6N	E/W Range: R5W	Section: 36	
Well Head: Latitude (decimal): TBD 34.57075	Longitude (decimal): TBD —		
Property Owner's Mailing Address: 18374 West Phantom Street	City: Victorville	State: CA	Zip: 92394

2 – CONSULTANT INFORMATION

Name of Consultant: CB&I Federal Services, LLC	Email: carl.lind@cbifederalservices.com		Phone Number: (949) 637-9962
Address: 420 Exchange, Suite 150	City: Irvine	State: CA	Zip: 92602

3 – REGISTERED WELL DRILLER INFORMATION

Name of Driller: Tri-County		Phone Number: (858) 271-0099
Email: timd@tcdrilling.com	PR0035454	C-57 License Number: 547737

Return well permit to ☐ Well Driller ■ Consultant ☐ Property Owner

Return by ☐ Mail ■ Email

4 – TYPE OF WORK

■ New ☐ Reconstruction ☐ Destruction

Date of Work	Start Date: May 16, 2016	Completion Date: May 27, 2016

5 – WELL TYPE

☐ Agriculture	☐ Geothermal	☐ Industrial
☐ Cathodic	☐ Horizontal	■ Monitoring/Observation
☐ Community/PWS/City – **Specify Use Below**	☐ Residential – cannot be used as a community well	☐ Test
Use:		☐ Other

6 – ANNULAR SEAL

Seal Depth (ft.) 162

☐ Driven Conductor Diameter (in.) ☐ Wall (gauge) (in.)

■ Sealing Material Bentonite:#80 sand (7:1, approximately) ■ Thickness (in.) 3

Sealing material shall be placed in one continuous pour. Annular seal thickness must be at least 3 inches for public water supply wells.

ITEMS 7 THROUGH 10 TO BE ESTIMATED FOR NEW WELLS, EXACT FOR ALL OTHER WELLS

7 – DIMENSIONS

Proposed Depth of Well (ft.) 192	Existing Depth of Well (ft.) NA	Diameter of Bore (in.) 10

8 – CASING INSTALLED

☐ Steel ■ Plastic ☐ Standard Casing ☐ Other ☐ No Casing

From (ft.)	To (ft.)	Diameter (in.)	Wall (Gauge)
0	157	4	schedule 80 PVC

Gravel Pack ■ Yes ☐ No		From (ft.) 167	To (ft.) 192
Specify Other Backfill Material	cement:bentonite grout (96%:4%, approximately)	From (ft.) 5	To (ft.) 162

MW-160

9 – PERFORATIONS (list all if applicable)

From (ft.) 172	To (ft.) 192	Pumping Rate (gpm) NA

10 – SEALED ZONES (list all if applicable)

From (ft.) 162	To (ft.) 167

11 – PLOT PLAN

a) In perspective to the well site, sketch and label the following items on a separate paper, well lot property lines, other wells (include abandoned wells), sewage disposal systems (sewers, septic tanks, leaching fields, seepage pits, cesspools), lakes and ponds, watercourses and animals or fowl kept.

b) Indicate the distance, in feet, of any of the above which are within 500 ft. of the well site. The plot plan needs to be drawn to scale (½ inch = 100 feet). Show the approximate drainage pattern of the property and show access roads to the well site within 500 feet.

c) ☒ None of the above is within 500 feet

d) Solid or Liquid Disposal Site within Two Miles ☐ Yes ☒ No Location

12 – METHOD OF CONSTRUCTION OR DESTRUCTION

Provide the method of construction/destruction in the space below or as an attachment if more space is needed. The method shall be in accordance with the standards recommended in the California Department of Water Resources Bulletin No. 74-81 and 74-90. Title 22 standards shall also be followed for public water supply wells.

See attached figures.

13 – AGREEMENT AND SIGNATURE

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

Property Owner's Signature	X [signature]	Date	4/29/2016
Print Property Owner's Name	DONALD GRONSTAL		
C-57 Contractor's Signature	X [signature]	Date	4/28/16
Print Contractor's Name	Tim Duddie, Tri-County Drilling		

For Office Use Only DISPOSITION OF PERMIT For Office Use Only DISPOSITION OF PERMIT

☐ Sent to Water Agency
☐ Water Agency conditions or recommendations attached
☐ Denied
☒ Approved subject to the following.

Permit Number	2016005304
Expiration Date:	11-25-16
WP Number:	WP0032306

A. ☒ Notify the Division's Safe Drinking Water Program at (800) 442-2283 at least seventy two (72) hours in advance to make an inspection of the following operations. (Inspections are conducted Monday – Friday between 8:00 AM to 5.00 PM). Failure to cancel or reschedule appointments may result in an additional hourly fee

☐ Prior to sealing of the annular space or filling of the conductor casing.
☐ After installation of the surface protective slab and pumping equipment
☒ After installation of the surface features
☐ During destruction of wells, prior to pouring the sealing material.

B. ☒ Submit to the Division, within thirty (30) days after completion of work, a copy of

☒ Water Well Driller's Report ☐ Bacterial Analysis ☐ Inorganic Chemical Analysis ☐ General Physical
☐ Radiological Analysis ☐ Nitrate ☐ Organic Chemical Analysis ☐ General Mineral

Comments

For Office Use Only For Office Use Only For Office Use Only For Office Use Only For Office Use Only

Fee 371	FA Number	Record ID 72958	PE Number 4555
Late Fee. ☐ Y ☒ N	Designated Employee J Younger	Received By [signature]	Date 5/3/16
Check One ☒ New ☐ Transfer ☐ Reactivate		Changes (please specify)	

paying online 2082

SAN BERNARDINO COUNTY

Public Health
Environmental Health Services

www.SBCounty.gov
www.sbcounty.gov/dph/dehs
Phone: (800) 442-2283

APPLICATION FOR WELL PERMIT MW-161

THIS SECTION TO BE COMPLETED BY APPLICANT • HEALTH PERMITS ARE NOT TRANSFERABLE

1 – PROPERTY INFORMATION

Property Owner: United States of America			Phone Number: (760) 246-5360
Site Address: 18374 West Phantom Street	City: Victorville	State: CA	Zip: 92394
Assessor's Parcel Number: 0459-211-11-0000	Email: donald.gronstal@us.af.mil		
Township: N/S Tier: T6N	E/W Range: R5W	Section: 36	
Well Head: Latitude (decimal): TBD 34.570744	Longitude (decimal): TBD −117.357789		
Property Owner's Mailing Address: 18374 West Phantom Street	City: Victorville	State: CA	Zip: 92394

2 – CONSULTANT INFORMATION

Name of Consultant: CB&I Federal Services, LLC	Email: carl.lind@cbifederalservices.com		Phone Number: (949) 637-9962
Address: 420 Exchange, Suite 150	City: Irvine	State: CA	Zip: 92602

3 – REGISTERED WELL DRILLER INFORMATION

Name of Driller: Tri-County		Phone Number: (858) 271-0099
Email: timd@tcdrilling.com	PR0035454	C-57 License Number: 547737

Return well permit to ☐ Well Driller ■ Consultant ☐ Property Owner

Return by ☐ Mail ■ Email

4 – TYPE OF WORK

■ New ☐ Reconstruction ☐ Destruction

Date of Work	Start Date: May 16, 2016	Completion Date: May 27, 2016

5 – WELL TYPE

☐ Agriculture	☐ Geothermal	☐ Industrial
☐ Cathodic	☐ Horizontal	■ Monitoring/Observation
☐ Community/PWS/City – **Specify Use Below**	☐ Residential – cannot be used as a community well	☐ Test
Use:		☐ Other

6 – ANNULAR SEAL

Seal Depth (ft.) 292

■ Driven Conductor Diameter (in.) 12 ■ Wall (gauge) (in.) 3/16

■ Sealing Material Bentonite:#80 sand (7:1, approximately) ■ Thickness (in.) 2

Sealing material shall be placed in one continuous pour. Annular seal thickness must be at least 3 inches for public water supply wells.

ITEMS 7 THROUGH 10 TO BE ESTIMATED FOR NEW WELLS, EXACT FOR ALL OTHER WELLS

7 – DIMENSIONS

Proposed Depth of Well (ft.) 322	Existing Depth of Well (ft.)	Diameter of Bore (in.) 12

8 – CASING INSTALLED

■ Steel ■ Plastic ☐ Standard Casing ☐ Other ☐ No Casing

From (ft.)	To (ft.)	Diameter (in.)	Wall (Gauge)
0	322	4	schedule 80 PVC

Gravel Pack ■ Yes ☐ No		From (ft.) 297	To (ft.) 322
Specify Other Backfill Material	cement/bentonite grout (96%:4%, approximately)	From (ft.) 5	To (ft.) 292

MW-161

9 – PERFORATIONS (list all if applicable)

From (ft.) 302	To (ft.) 322	Pumping Rate (gpm) NA

10 – SEALED ZONES (list all if applicable)

From (ft.) 0 292	To (ft.) 200 297

11 – PLOT PLAN

a) In perspective to the well site, sketch and label the following items **on a separate paper**: well lot property lines, other wells (include abandoned wells), sewage disposal systems (sewers, septic tanks, leaching fields, seepage pits, cesspools), lakes and ponds, watercourses and animals or fowl kept.

b) Indicate the distance, in **feet**, of any of the above which are within 500 ft. of the well site. The plot plan needs to be drawn to scale (½ inch = 100 feet). Show the approximate drainage pattern of the property and show access roads to the well site within 500 feet.

c) ☒ None of the above is within 500 feet.

d) Solid or Liquid Disposal Site within Two Miles ☐ Yes ☒ No Location

12 – METHOD OF CONSTRUCTION OR DESTRUCTION

Provide the method of construction/destruction in the space below or as an attachment if more space is needed. The method shall be in accordance with the standards recommended in the California Department of Water Resources Bulletin No. 74-81 and 74-90. Title 22 standards shall also be followed for public water supply wells.

See attached figures.

13 – AGREEMENT AND SIGNATURE

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

Property Owner's Signature X [signature]	Date 4/29/2016
Print Property Owner's Name DONALD GRONSTAL	
C-57 Contractor's Signature X [signature]	Date 4/28/16
Print Contractor's Name Tim Dobbie, Tri-County Drilling	

For Office Use Only DISPOSITION OF PERMIT For Office Use Only DISPOSITION OF PERMIT

☐ Sent to Water Agency
☐ Water Agency conditions or recommendations attached
☐ Denied
☒ Approved subject to the following:

Permit Number:	2016005305
Expiration Date:	11-25-16
WP Number:	WP0032307

A. ☒ Notify the Division's Safe Drinking Water Program at (800) 442-2283 at least seventy two (72) hours in advance to make an inspection of the following operations: (Inspections are conducted Monday – Friday between 8:00 AM to 5:00 PM). Failure to cancel or reschedule appointments may result in an additional hourly fee.

☐ Prior to sealing of the annular space or filling of the conductor casing.
☐ After installation of the surface protective slab and pumping equipment.
☒ After installation of the surface features.
☐ During destruction of wells, prior to pouring the sealing material.

B. ☒ Submit to the Division, within thirty (30) days after completion of work, a copy of:

☒ Water Well Driller's Report ☐ Bacterial Analysis ☐ Inorganic Chemical Analysis ☐ General Physical
☐ Radiological Analysis ☐ Nitrate ☐ Organic Chemical Analysis ☐ General Mineral

Comments

For Office Use Only For Office Use Only For Office Use Only For Office Use Only For Office Use Only

Fee 371–	FA Number	Record ID: 72958	PE Number 4555
Late Fee: ☐ Y ☒ N	Designated Employee: J Youngn	Received By: [signature]	Date 5/3/16
Check One: ☒ New ☐ Transfer ☐ Reactivate		Changes (please specify)	

Appendix B
Boring Logs

BORING LOG

Boring/Well ID: OT071-MW-159
Sheet: 1 **of** 4

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/17/2016
Ended: 5/19/2016
Surface Elevation: 2837.04 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: CME-75
Driller: William O
Drlling Method: Hollow-Stem Auger
Hole Diameter: 8 & 10 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559
Northing: 2033256.96
Easting: 6756204.29

First Water: 90 ft bgs on 18-May-16 at 0840 hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2835		SW	**WELL-GRADED SAND** ; brown (10YR 4/3); dry; loose; no gravel; mostly (90%) angular, medium to coarse grained sand; few silty (10%) fines.		Hand augered to 5 feet bgs to clear for utilities. well head/surface sea: above ground yellow standpipe set in a 3 by 3-foot, 6-inch thick, concrete pad, and 4 yellow bollards.
					5	2830					**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
					10			ML	**SILT** ; light gray (10YR 7/2); dry; medium dense; no gravel; no sand; mostly fines with low plasticity.		
						2825		CL	**LEAN CLAY** ; brown (7.5YR 4/3); dry; firm; no gravel; no sand; mostly fines with high plasticity, no dilatancy.		
								CL	**SANDY LEAN CLAY** ; dark yellowish brown (10YR 4/6); dry; firm; no gravel; trace (5%) fine grained sand; mostly (95%) fines with medium plasticity, no dilatancy; banded: gray and yellowish brown.		
					15			SC	**CLAYEY SAND** ; dark yellowish brown (10YR 4/6); dry; no gravel; mostly (60%) fine grained sand; some silty (40%) fines.		
						2820		SW	**WELL-GRADED SAND** ; pinkish white (7.5YR 8/2); dry; no gravel; mostly (90%) angular, fine to coarse grained sand; few silty (10%) fines.		
					20				As above ; trace fine to coarse angular to subangular gravel; with thin (approximately 0.5-foot thick) beds of poorly graded, fine grained sand.		
						2815		CL	**LEAN CLAY** ; brown (10YR 5/3); moist; firm to hard; no gravel; no sand; mostly (100%) fines with medium to high plasticity, no dilatancy; thin (<1/4-inch) beds of coarse grained sand interbedded with 1-inch thick beds of lean clay.		
								SC	**CLAYEY SAND** ; brown (7.5YR 5/3) with reddish yellow (7.5YR 6/6); moist; medium dense; no gravel; mostly (60%) fine grained sand; some clayey (40%) fines; with occassional 1 to 2-inch thick beds of coarse grained, reddish yellow (7.5 6/6), sand.		
					25						
						2810		ML	**SILT** ; brown (10YR 5/3) with pinkish gray (7.5YR 7/2); moist; loose; no gravel; mostly (60%) angular, fine to coarse grained sand; some (40%) fines with low plasticity, rapid dilatancy; silt beds are: 0.8 to 1.0-feet thick; sand beds are: 0.4 to 0.5-feet thick, with about 85% fine grained, about 10% medium to coarse grained sand, and about 5% silty fines.		
					30						

CB&I MEDIUM LOG GEORGEII.GPJ SHAWEI.GDT 4/17/17

BORING LOG

Boring/Well ID: OT071-MW-159
Sheet: 2 **of** 4

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2805		SW	**WELL-GRADED SAND** ; pinkish gray (7.5YR 7/2) with light brown (7.5YR 6/4); dry; loose; no gravel; mostly (95%) angular, fine to coarse grained sand; trace (5%) fines.		
					35						
						2800					
					40						
						2795		ML	**SANDY SILT** ; brown (7.5YR 4/4); moist; firm; no gravel; some (35%) fine grained sand; mostly (65%) fines with low plasticity, rapid dilatancy.		
					45			SP	**POORLY GRADED SAND** ; pinkish gray (7.5YR 7/2); moist; loose; no gravel; mostly (95%) fine grained sand; trace fines.		Annular Backfill: 97% neat cement/3% bentonite
						2790		ML	**SANDY SILT** ; brown (7.5YR 4/4); moist; soft to firm; no gravel; some (30%) fine grained sand; mostly (70%) fines with no plasticity, rapid dilatancy.		
					50				As above ; with thin beds of silty fine grained sand.		
1216								SM	**SILTY SAND** ; brown (7.5YR 4/4); moist; loose; no gravel; mostly (70%) fine to coarse grained sand; some silty (30%) fines.		
						2785		CL	**LEAN CLAY** ; brown (10YR 5/3); moist; firm; no gravel; trace fine grained sand; mostly (95%) fines with medium to high plasticity, medium toughness, no dilatancy.		
								SM	**SILTY SAND** ; brown (10YR 5/3); moist; medium dense; no gravel; mostly (60%) fine to medium grained sand; some silty (40%) fines.		
					55			SM	**SILTY SAND** ; brown (10YR 5/3); moist; firm; no gravel; some silty fine to medium grained sand; mostly fines with low plasticity, low toughness, rapid dilatancy; 1-foot thick interbeds of Silt (ML) and Silty Sand (SM).		
						2780					
1245								ML	**SILT** ; brown (10YR 5/3); moist; soft; no gravel; no sand; mostly fines with no to low plasticity, low toughness, rapid dilatancy.		
				NR	60			SM	**SILTY SAND** ; brown (10YR 5/3); moist; soft; no gravel; some silty sand; mostly fines with no to low plasticity, low toughness, rapid dilatancy; thin interbeds of Silt (ML) and Silty Sand (SM); silt beds range from 9 to 12-inches and silty sand beds range from 3 to 6-inches thick at the top of the sequence, the beds thin to about 1/2-inch thick near the bottom of the sequence.		
						2775					
1400											

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-159
Sheet: 2 **of** 4

BORING LOG

Boring/Well ID: OT071-MW-159
Sheet: 3 **of** 4

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
					65	2770		As above ; red (2.5YR 5/6) with yellowish brown (10YR 5/4); moist; alternating bands.		
								As above ; reddish yellow (7.5YR 6/8) with yellowish brown (10YR 5/4); moist; banding grades to reddish yellow.		
1430					70	2765				
							ML	**SILT** ; brown (7.5YR 5/3); moist; firm; no gravel; little fine grained sand; mostly fines with low plasticity, slow to rapid dilatancy.		
					75	2760	SM	**SILTY SAND** ; yellowish brown (10YR 5/4); moist; firm; no gravel; some fine grained sand; mostly fines with low plasticity, rapid dilatancy; silty sand beds are: 60% fine grained sand and 40% silty fines.		Bentonite Seal: hydrated bentonite gel/powder and #60 sand in a dry weight ratio of about 6:1 was used as a seal between the annular backfill and the filter pack.
					80	2755	SW-SM	**WELL-GRADED SAND WITH SILT** ; reddish yellow (7.5YR 6/6); moist; loose; no gravel; mostly (90%) angular, fine to coarse grained sand; few silty (10%) fines.		Filter Pack: #3 sand
1600					85		SW	**WELL-GRADED SAND** ; reddish yellow (7.5YR 6/6); moist; loose; no gravel; mostly (95%) angular, fine to coarse grained sand; trace fines; percentage of sand ranges from 50 % fine and medium grained sand to equal parts fine, medium, and coarse grained.		Screen: 4-inch diameter, flush threaded, Schedule 80 PVC with 6-row, machine cut, 0.020-inch slot perforations.
0745						2750	ML	**SILT** ; brown (7.5YR 5/4); moist; no gravel; few (10%) fine grained sand; mostly (90%) fines with low plasticity, low toughness, slow dilatancy.		
0807				NR			SM	**SILTY SAND** ; brown (7.5YR 5/4); moist; no gravel; mostly (65%) fine to coarse grained sand; some silty (35%) fines with low plasticity, low toughness, slow dilatancy; interbedded Silt (ML) and Sitly Sand (SM), beds are approximatley 1-foot thick.		
0820				NR	90 ▽		SM	**SILTY SAND** ; brown (7.5YR 5/4); wet; loose; no gravel; mostly (70%) fine to coarse grained sand; some silty (30%) fines.		
0845	OT071-MW-159-92			■		2745	CL / ML	**LEAN CLAY WITH SAND** ; grayish brown (10YR 5/2); wet; hard; no gravel; little (20%) fine to medium grained sand; mostly (80%) fines with high plasticity, high toughness, no dilatancy, and medium dry strength.		@92 ft: Silt; 0.016 mm; Porosity = 45.2; TOC = 430 mg/kg.
					95			**SANDY SILT** ; grayish brown (10YR 5/2); wet; hard; no gravel; some fine grained sand; mostly fines; interbedded Clay (CL) and Silt (ML), with thin (<2-inch thick) beds of Silty Sand (SM): fined grained sand.		
						2740	SM	**SILTY SAND** ; strong brown (7.5YR 5/6); wet; loose; no gravel; mostly (75%) angular, fine to coarse grained sand; little silty (25%) fines.		

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
1030	OT071-MW-159-100					100			CL	**LEAN CLAY** ; olive brown (2.5Y 4/3); dry to moist; hard; no gravel; no sand; mostly (100%) fines with high plasticity, medium to high toughness, no dilatancy.		@100 ft: Fine Sand; 0.037 mm; Porosity = 47.9; TOC = 320 mg/kg.
							2735		SM	**SILTY SAND** ; reddish brown (5YR 5/3); wet; loose; no gravel; mostly (60%) fine grained sand; some silty (40%) fines.		
1100									CL	**LEAN CLAY** ; brown (10YR 5/3); dry to moist; hard; no gravel; trace fine grained sand; mostly (95%) fines with low to medium toughness, no to slow dilatancy; gradational contact between Silty Sand (SM), above, and Lean Clay (CL), contains trace sandstone nodules or fragments.		Well Cap: 6-inch long, 4-inch diameter, flush threaded Schedule 80 PVC
						105						
							2730			**Boring was terminated at approximately 105 feet bgs.**		
						110						
							2725					
						115						
							2720					
						120						
							2715					
						125						
							2710					
						130						
							2705					

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Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/26/2016
Ended: 6/7/2016
Surface Elevation: 2890.25 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: CME-75
Driller: William O
Drlling Method: Hollow-Stem Auger
Hole Diameter: 8 & 10 **(inches)**

Logged By: Matthew Curtis
Edited By: Carl J. Lind
Checked By: Mark Unruh
Number: CEG1176
Northing: 2030854.72
Easting: 6754941.53

First Water: 170 ft bgs on 02-Jun-16 at 1000 hrs
Static Water: 161.45 ft bgs on 01-Sep-16 at 0837 hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
1500								SP	**POORLY GRADED SAND** ; light yellowish brown (10YR 6/4); dry; loose; trace gravel; mostly fine to medium grained sand; trace fines; odorless.		Hand augered to 5 feet bgs to clear for utilities. well head/surface sea: above ground yellow standpipe set in a 3 by 3-foot, 6-inch thick, concrete pad, and 4 yellow bollards.
1515	R1				5	2885					
1535	R2				10	2880					**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
								ML	**SILT** ; light yellowish brown (2.5Y 6/4); moist; @13.5': 2" thick yellowish brown (2.5Y 6/4) SILT, moist.		
								GP	**POORLY GRADED GRAVEL** ; dry; mostly coarse rounded gravel; @14.3': 3" round GRAVEL.		
	R3				15	2875		ML	**SANDY SILT** ; dark grayish brown (2.5Y 4/2); moist; firm; little fine grained sand; mostly fines with low plasticity.		
									Brown (10YR 5/3); micaceous.		
	R4				20	2870					
								SM	**SILTY SAND** ; yellowish brown (10YR 5/4); dry to moist; loose; mostly fine grained sand; some silty fines.		
								ML	**SILT** ; grayish brown (2.5Y 5/2) with yellowish brown (10YR 5/4); with low plasticity; gradational contact.		
1555	R5				25	2865					
								ML	**SANDY SILT** ; brown (7.5YR 5/4); moist; little fine grained sand; with no plasticity; micaceous.		
					30			SP	**POORLY GRADED SAND** ; pale brown (10YR 6/3); dry; loose; fine		

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
	R6							to medium grained sand.		
1600	MW-160-33 R7				35	2855	GW	**WELL-GRADED GRAVEL WITH SAND** ; light yellowish brown (2.5Y 6/4); dry; medium dense; mostly coarse gravel; some fine to coarse grained sand.		@33 ft: Gravel; 5.496 mm; Porosity = 36.3; TOC = <100 mg/kg.
							SP-SM	**POORLY GRADED SAND WITH SILT** ; yellowish brown (10YR 5/4); moist; medium dense; fine grained sand; little silty fines.		
							ML	**SILT** ; light brownish gray (2.5Y 6/2); dry to moist; trace fine grained sand; mostly fines with no plasticity; silt.		
1615 0755	MW-160-39 R8				40	2850	SM	**SILTY SAND** ; light yellowish brown (10YR 6/4); dry to moist; firm; mostly medium grained sand; some silty fines; odorless.		
	R9				45	2845	SM	@44.3': 3" thick, very pale brown (10YR 7/3) SANDY SILT.		
							ML	Very hard drilling, the driller adds water to aid cuttings return in the interval of 44 to 66 feet bgs, between sample runs.		
							ML	**SANDY SILT** ; pale brown (10YR 6/3); dry; hard; some fine grained sand; with no to low plasticity; odorless.		
	R10				50	2840	SP-SM	**POORLY GRADED SAND** ; brown (10YR 4/3); moist; medium dense; with low plasticity.		
							ML	**SILT** ; pale brown (10YR 6/3); dry; hard; trace fine grained sand; with no to low plasticity, slow dilatancy; laminated.		
	R11				55	2835	SM	**SILTY SAND** ; brown (10YR 5/3); moist; medium dense; mostly fine grained sand; some silty fines.		
							SC	@57': 2" thick CLAYEY SAND.		
							SM			
	R12				60	2830	ML	**SILT** ; dark grayish brown (10YR 4/2); moist; mostly fines with low plasticity, no dilatancy.		
							ML	**SANDY SILT** ; dark yellowish brown (10YR 4/4); moist; hard; fine grained sand; with low plasticity, slow dilatancy; micaceous.		
							ML			

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
0930	R13				65	2825			**SILT** ; light yellowish brown (10YR 6/4); dry; hard; trace fine grained sand; with no plasticity.		
								ML	**SANDY SILT** ; brown (10YR 4/3); moist; hard; some fine to medium grained sand; with low plasticity.		
								SM	**SILTY SAND** ; olive brown (2.5Y 4/4); moist; medium dense; fine to medium grained sand.		
	R14				70	2820			INTERBEDDED SILT & SAND: 6" layers of pale brown (10YR 6/3) low plastic silt andyellowish brown (10YR 5/4) fine to medium sand; dry to moist.		
								SM	**SILTY SAND** ; brown (10YR 4/3); moist; mostly fine to medium grained sand.		
	R15				75	2815		SP	**POORLY GRADED SAND** ; dark yellowish brown (10YR 4/4); moist; dense; fine to medium grained sand.		Casing: 4-inch diameter, flush threaded, Schedule 80 PVC
				NR				ML	**SILT** ; yellowish brown (10YR 5/4); dry to moist; hard; trace fine grained sand; with no to low plasticity; laminated.		
	R16				80	2810		SM	**SILTY SAND** ; light brownish gray (10YR 6/2); moist; medium dense; mostly fine grained sand; little silty fines; laminated.		
	R17				85	2805		SM	**SILTY SAND** ; dark brown (10YR 3/3); moist; medium dense; mostly fine to medium grained sand; with no plasticity.		
				NR				ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity; laminated.		
1150	R18				90	2800		SM	**SILTY SAND** ; grayish brown (2.5Y 5/2); moist; medium dense; mostly fine to medium grained sand; some silty fines.		Driller is still adding water between sample runs to aid cutting returns
				NR							
	R19				95	2795		CL SP-SM	@94.5': 2" thick CLAY interval with thin bedding.		
								ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity; laminated.		

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
	R20			NR	100	2790			
							CH	**FAT CLAY** ; brown (7.5YR 4/4); moist; very hard; with medium to high plasticity.	
							ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity, medium toughness, slow dilatancy.	
	R21				105	2785			
							CL	**SILTY CLAY** ; dark yellowish brown (10YR 4/4); moist; very hard; trace fine grained sand; with slow dilatancy.	
	R22				110	2780			
							ML	@111': 8 thick SANDY SILT.	
							CL		
							SM	**SILTY SAND** ; dark grayish brown (2.5Y 4/2); moist; medium dense; mostly fine to medium grained sand; some silty fines.	
1345	R23				115	2775	CL	**LEAN CLAY** ; olive brown (2.5Y 4/3); moist; hard.	
							SP	**POORLY GRADED SAND** ; brown (10YR 4/3); moist; medium dense; fine to medium grained sand.	
1115	R24				120	2770	SM	**SILTY SAND** ; brown (10YR 5/3); moist; medium dense; fine grained sand; with no plasticity.	@120 ft: no water added
							SP	@123.5': 3" thick POORLY GRADED SAND followed by 4" thick SILT.	@123 ft: very hard drilling, difficult to drill dry
							ML		
	R25			NR	125	2765	SM	**SILTY SAND**.	@125 ft: the driller added water between sample runs to aid cuttings return
				NR			SM		
							GW	**WELL-GRADED GRAVEL**.	
1238	R26			NR	130	2760			@130 - 134 ft: gravel and cobbles block end of core-barrel and prevent sample recovery

WELL DETAIL

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
	R27			NR	135	2755	SP	**POORLY GRADED SAND** ; brown (10YR 5/3); moist; medium dense; trace fine gravel; mostly fine to medium grained sand.	
				NR			CL	**SILTY CLAY** ; brown (10YR 5/3); moist; hard; with low to medium plasticity, slow dilatancy; laminated.	
							SW	@138.5': very thin SAND interbed dipping 11*.	
	R28				140	2750	CL	As above ; yellowish brown (10YR 5/4).	
	R29				145	2745	ML	**SANDY SILT** ; yellowish brown (10YR 5/4); moist; hard; some fine grained sand; with low plasticity; laminated.	
							ML	@147': 10" thick SILT layer.	
							ML		
1400	R30				150	2740	SP-SM	@149': 10" thick, fine to medium POORLY GRADED SAND with SILT, moist to wet, micaceous.	Sample run R-30 is stuck downhole, partial recovery
							ML		
				NR	155	2735			
				NRNR			ML	**SANDY SILT** ; light olive brown (2.5Y 5/3); moist; very hard; some fine grained sand; with low plasticity, slow dilatancy.	
0920	R31				160	2730			
0955	OT071-MW-160-164 R32			NR	165	2725	ML	**CLAYEY SILT** ; light olive brown (2.5Y 5/3) with dark yellowish brown (10YR 4/4); moist; very hard; mostly fines with low to medium plasticity; some silty sand interbeds.	Filter Pack: #3 sand @164 ft: Silt; 0.032 mm; Porosity = 40.1; TOC = 230 mg/kg.

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									SM	@ 167.0-feet bgs: 6-inch layer of Silty Sand (SM).		
									ML	@167.5-feet bgs: 6-inch layer of Sandy Silt (ML).		
					NR				CL-ML SM	**SILTY SAND** ; brown (10YR 5/3); moist to wet; mostly fine to medium grained sand; little silty fines; laminated.		
	R33					170	2720					
									CL-ML	**SILTY CLAY** ; light olive brown (2.5Y 5/3); moist; very hard; with low to medium plasticity.		Screen: 4-inch diameter, flush threaded, Schedule 80 PVC with 6-row, machine cut, 0.020-inch slot perforations
	R34											
	R35					175	2715					
									SP	**POORLY GRADED SAND**.		
	R36								SW	**WELL-GRADED SAND** ; light olive brown (2.5Y 5/3); wet; medium dense; fine to medium grained sand.		
	R37					180	2710					
1240	R38								CH SW	@182.4': 1" thick CLAY interbed.		
						185	2705		SC	**CLAYEY SAND** ; yellowish brown (10YR 5/4); moist; firm to hard; mostly fine grained sand; with low plasticity, slow dilatancy; some thin clay interbeds.		@184 ft: Fine Sand; 0.302 mm; Porosity = 40.2; TOC = <100 mg/kg.
										Boring was terminated at approximately 187 feet bgs.		
						190	2700					
						195	2695					
						200	2690					

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Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/26/2016
Ended: 6/7/2016
Surface Elevation: 2890.25 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: CME-75
Driller: William O
Drlling Method: Hollow-Stem Auger
Hole Diameter: 8 & 10 **(inches)**

Logged By: Matthew Curtis
Edited By: Carl J. Lind
Checked By: Mark Unruh
Number: CEG1176
Northing: 2030854.72
Easting: 6754941.53

First Water: 170 ft bgs on 02-Jun-16 at 1000 hrs
Static Water: 161.45 ft bgs on 01-Sep-16 at 0837 hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
1500								SP	**POORLY GRADED SAND** ; light yellowish brown (10YR 6/4); dry; loose; trace gravel; mostly fine to medium grained sand; trace fines; odorless.		Hand augered to 5 feet bgs to clear for utilities. well head/surface sea: above ground yellow standpipe set in a 3 by 3-foot, 6-inch thick, concrete pad, and 4 yellow bollards.
1515	R1				5	2885					
1535	R2				10	2880					**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
								ML	**SILT** ; light yellowish brown (2.5Y 6/4); moist; @13.5': 2" thick yellowish brown (2.5Y 6/4) SILT, moist.		
								GP	**POORLY GRADED GRAVEL** ; dry; mostly coarse rounded gravel; @14.3': 3" round GRAVEL.		
	R3				15	2875		ML	**SANDY SILT** ; dark grayish brown (2.5Y 4/2); moist; firm; little fine grained sand; mostly fines with low plasticity.		
									Brown (10YR 5/3); micaceous.		
	R4				20	2870					
								SM	**SILTY SAND** ; yellowish brown (10YR 5/4); dry to moist; loose; mostly fine grained sand; some silty fines.		
								ML	**SILT** ; grayish brown (2.5Y 5/2) with yellowish brown (10YR 5/4); with low plasticity; gradational contact.		
1555	R5				25	2865					
								ML	**SANDY SILT** ; brown (7.5YR 5/4); moist; little fine grained sand; with no plasticity; micaceous.		
					30			SP	**POORLY GRADED SAND** ; pale brown (10YR 6/3); dry; loose; fine		

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
	R6			NR					to medium grained sand.		
1600	MW-160-33							GW	**WELL-GRADED GRAVEL WITH SAND** ; light yellowish brown (2.5Y 6/4); dry; medium dense; mostly coarse gravel; some fine to coarse grained sand.		@33 ft: Gravel; 5.496 mm; Porosity = 36.3; TOC = <100 mg/kg.
	R7			NR	35	2855		SP-SM	**POORLY GRADED SAND WITH SILT** ; yellowish brown (10YR 5/4); moist; medium dense; fine grained sand; little silty fines.		
								ML	**SILT** ; light brownish gray (2.5Y 6/2); dry to moist; trace fine grained sand; mostly fines with no plasticity; silt.		
1615	MW-160-39							SM	**SILTY SAND** ; light yellowish brown (10YR 6/4); dry to moist; firm; mostly medium grained sand; some silty fines; odorless.		
0755	R8				40	2850					
	R9				45	2845		SM	@44.3': 3" thick, very pale brown (10YR 7/3) SANDY SILT.		
								ML	Very hard drilling, the driller adds water to aid cuttings return in the interval of 44 to 66 feet bgs, between sample runs.		
								ML	**SANDY SILT** ; pale brown (10YR 6/3); dry; hard; some fine grained sand; with no to low plasticity; odorless.		
	R10			NR	50	2840		SP-SM	**POORLY GRADED SAND** ; brown (10YR 4/3); moist; medium dense; with low plasticity.		
								ML	**SILT** ; pale brown (10YR 6/3); dry; hard; trace fine grained sand; with no to low plasticity, slow dilatancy; laminated.		
	R11			NR	55	2835		SM	**SILTY SAND** ; brown (10YR 5/3); moist; medium dense; mostly fine grained sand; some silty fines.		
								SC	@57': 2" thick CLAYEY SAND.		
								SM			
	R12				60	2830		ML	**SILT** ; dark grayish brown (10YR 4/2); moist; mostly fines with low plasticity, no dilatancy.		
								ML	**SANDY SILT** ; dark yellowish brown (10YR 4/4); moist; hard; fine grained sand; with low plasticity, slow dilatancy; micaceous.		
								ML			

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
0930	R13				65	2825			**SILT** ; light yellowish brown (10YR 6/4); dry; hard; trace fine grained sand; with no plasticity.		
								ML	**SANDY SILT** ; brown (10YR 4/3); moist; hard; some fine to medium grained sand; with low plasticity.		
								SM	**SILTY SAND** ; olive brown (2.5Y 4/4); moist; medium dense; fine to medium grained sand.		
	R14				70	2820			INTERBEDDED SILT & SAND: 6" layers of pale brown (10YR 6/3) low plastic silt andyellowish brown (10YR 5/4) fine to medium sand; dry to moist.		
								SM	**SILTY SAND** ; brown (10YR 4/3); moist; mostly fine to medium grained sand.		
	R15				75	2815		SP	**POORLY GRADED SAND** ; dark yellowish brown (10YR 4/4); moist; dense; fine to medium grained sand.		Casing: 4-inch diameter, flush threaded, Schedule 80 PVC
				NR				ML	**SILT** ; yellowish brown (10YR 5/4); dry to moist; hard; trace fine grained sand; with no to low plasticity; laminated.		
	R16				80	2810		SM	**SILTY SAND** ; light brownish gray (10YR 6/2); moist; medium dense; mostly fine grained sand; little silty fines; laminated.		
	R17				85	2805		SM	**SILTY SAND** ; dark brown (10YR 3/3); moist; medium dense; mostly fine to medium grained sand; with no plasticity.		
				NR				ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity; laminated.		
1150	R18				90	2800		SM	**SILTY SAND** ; grayish brown (2.5Y 5/2); moist; medium dense; mostly fine to medium grained sand; some silty fines.		Driller is still adding water between sample runs to aid cutting returns
				NR							
	R19				95	2795		CL SP-SM	@94.5': 2" thick CLAY interval with thin bedding.		
								ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity; laminated.		

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
	R20				100	2790			
							CH	**FAT CLAY** ; brown (7.5YR 4/4); moist; very hard; with medium to high plasticity.	
							ML	**SANDY SILT** ; dark yellowish brown (10YR 3/4); moist; hard; some fine grained sand; mostly fines with low plasticity, medium toughness, slow dilatancy.	
	R21				105	2785			
							CL	**SILTY CLAY** ; dark yellowish brown (10YR 4/4); moist; very hard; trace fine grained sand; with slow dilatancy.	
	R22				110	2780			
							ML	@111': 8 thick SANDY SILT.	
							CL		
							SM	**SILTY SAND** ; dark grayish brown (2.5Y 4/2); moist; medium dense; mostly fine to medium grained sand; some silty fines.	
1345	R23				115	2775	CL	**LEAN CLAY** ; olive brown (2.5Y 4/3); moist; hard.	
							SP	**POORLY GRADED SAND** ; brown (10YR 4/3); moist; medium dense; fine to medium grained sand.	
1115	R24				120	2770	SM	**SILTY SAND** ; brown (10YR 5/3); moist; medium dense; fine grained sand; with no plasticity.	@120 ft: no water added
							SP	@123.5': 3" thick POORLY GRADED SAND followed by 4" thick SILT.	@123 ft: very hard drilling, difficult to drill dry
							ML		
	R25				125	2765	SM	**SILTY SAND**.	@125 ft: the driller added water between sample runs to aid cuttings return
							SM		
							GW	**WELL-GRADED GRAVEL**.	
1238	R26				130	2760			@130 - 134 ft: gravel and cobbles block end of core-barrel and prevent sample recovery

WELL DETAIL

BORING LOG

Boring/Well ID: OT071-MW-160
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
	R27			NR	135	2755	SP	**POORLY GRADED SAND** ; brown (10YR 5/3); moist; medium dense; trace fine gravel; mostly fine to medium grained sand.	
				NR			CL	**SILTY CLAY** ; brown (10YR 5/3); moist; hard; with low to medium plasticity, slow dilatancy; laminated.	
							SW	@138.5': very thin SAND interbed dipping 11*.	
	R28				140	2750	CL	As above ; yellowish brown (10YR 5/4).	
	R29				145	2745	ML	**SANDY SILT** ; yellowish brown (10YR 5/4); moist; hard; some fine grained sand; with low plasticity; laminated.	
							ML	@147': 10" thick SILT layer.	
							ML		
1400	R30				150	2740	SP-SM	@149': 10" thick, fine to medium POORLY GRADED SAND with SILT, moist to wet, micaceous.	Sample run R-30 is stuck downhole, partial recovery
							ML		
				NR	155	2735			
				NRNR			ML	**SANDY SILT** ; light olive brown (2.5Y 5/3); moist; very hard; some fine grained sand; with low plasticity, slow dilatancy.	
0920	R31				160	2730			
0955	OT071-MW-160-164 R32			NR	165	2725	ML	**CLAYEY SILT** ; light olive brown (2.5Y 5/3) with dark yellowish brown (10YR 4/4); moist; very hard; mostly fines with low to medium plasticity; some silty sand interbeds.	Filter Pack: #3 sand @164 ft: Silt; 0.032 mm; Porosity = 40.1; TOC = 230 mg/kg.

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									SM	@ 167.0-feet bgs: 6-inch layer of Silty Sand (SM).		
									ML	@167.5-feet bgs: 6-inch layer of Sandy Silt (ML).		
					NR				CL-ML SM	**SILTY SAND** ; brown (10YR 5/3); moist to wet; mostly fine to medium grained sand; little silty fines; laminated.		
	R33					170	2720					
									CL-ML	**SILTY CLAY** ; light olive brown (2.5Y 5/3); moist; very hard; with low to medium plasticity.		Screen: 4-inch diameter, flush threaded, Schedule 80 PVC with 6-row, machine cut, 0.020-inch slot perforations
	R34											
	R35					175	2715					
									SP	**POORLY GRADED SAND**.		
	R36								SW	**WELL-GRADED SAND** ; light olive brown (2.5Y 5/3); wet; medium dense; fine to medium grained sand.		
	R37					180	2710					
1240	R38								CH SW	@182.4': 1" thick CLAY interbed.		
						185	2705		CL	**CLAYEY SAND** ; yellowish brown (10YR 5/4); moist; firm to hard; mostly fine grained sand; with low plasticity, slow dilatancy; some thin clay interbeds.		@184 ft: Fine Sand; 0.302 mm; Porosity = 40.2; TOC = <100 mg/kg.
										Boring was terminated at approximately 187 feet bgs.		
						190	2700					
						195	2695					
						200	2690					

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Location: Former George AFB, Victorville, CA

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BORING LOG

Boring/Well ID: OT071-MW-161
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Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 6/8/2016
Ended: 6/21/2016
Surface Elevation: 2889.78 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: SIMCO
Driller: William O
Drlling Method: Mud
Hole Diameter: 8 & 14 **(inches)**

Logged By: Carl J. Lind
Edited By: Carl J. Lind
Checked By: Mark Unruh
Number: CEG1176
Northing: 2030838.63
Easting: 6754946.63

First Water: 170 ft bgs on 13-Jun-16 at 0815 hrs
Static Water: 290.85 ft bgs on 01-Sep-16 at 0844 hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
0930								SM	**SILTY SAND** ; angular, sand; Sand/soil surface..		Hand auger from 0 to 5-feet bgs to clear location for underground utilities. Begin drilling at 09:30 on 6-8-2016. Well head/surface seal: protected with a yellow above ground standpipe set in a 6 by 6-foot, 6-inc thick concrete pad, and 4 yellow bollards.
					5	2885					
								SM	**SILTY SAND WITH GRAVEL** ; angular, sand.		
					10	2880		SM	**SILTY SAND** ; angular, sand.		For a detailed log of geology from surface to 185 feet bgs refer to the log of MW-160. This boring was logged by cuttings from 0 to 185 feet and samples collected at 10-foot intervals from 190-feet bgs to 312-feet bgs.
					15	2875					
					20	2870					**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
					25	2865		SM	**SILTY SAND** ; angular, coarse grained sand.		
					30	2860					

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									SM	**SILTY SAND WITH GRAVEL** ; fine to coarse subangular gravel; angular, coarse grained sand.		
						35	2855					
						40	2850		SM	**SILTY SAND** ; angular, coarse grained sand.		
						45	2845		SM	**SILTY SAND WITH GRAVEL** ; fine to coarse subangular gravel; coarse grained sand.		
						50	2840					End of day, June 8, 2016, at 14:00 hrs. Depth is 50 feet bgs.
						55	2835					
						60	2830		SM	**SILTY SAND** ; mostly angular, coarse grained sand; little silty fines.		

BORING LOG

Boring/Well ID: OT071-MW-161
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						65	2825					
						70	2820					
						75	2815					
						80	2810					
						85	2805					
						90	2800					
						95	2795					

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						100	2790					
						105	2785					
						110	2780		SM	**SILTY SAND** ; mostly fine to coarse grained sand; thin clay layer.		End of day June 9, 2016, at 14:30 hrs. Depth is 110-feet bgs.
						115	2775		CL	**LEAN CLAY**.		
									SM	**SILTY SAND**.		
						120	2770					
						125	2765					
						130	2760					

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Location: Former George AFB, Victorville, CA

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BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						135	2755					
						140	2750					
						145	2745					
						150	2740		SM	**SILTY SAND**.		End of day June 10, 2016, at 14:25 hrs. Depth is 150 feet bgs.
						155	2735					
						160	2730					
						165	2725					

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BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
					170	2720			
					175	2715			
					180	2710			
					185	2705			End of day June 13, 2016. Depth is 185 feet bgs. Set isolation casing on June 14, 2016, to 185-feet bgs.
1030			35 21 30				CL	**LEAN CLAY** ; moist; with high plasticity, high toughness, no to slow dilatancy.	
					190	2700			
1345			7 16 21				CL	**LEAN CLAY** ; reddish brown (5YR 5/4); moist; very hard; with high plasticity, high toughness, no dilatancy; (may be a fat clay [CH]).	Below the bottom of the isolation casing the borehole was drilled with an 8-inch diameter bit.
					195	2695			June 15, 2016: resume drilling. Drilling on the inside of isolation casing at 185-feet bgs
0745			28 35 50/4"	NR	200	2690	SC	**CLAYEY SAND** ; brown (7.5YR 5/3); moist; very dense; mostly (70%) angular, fine to coarse grained sand; some clayey (30%) fines;	June 16, 2016

WELL DETAIL

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BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
										sand is mostly feldspar.		
						205	2685		SC	**CLAYEY SAND** ; light brown (7.5YR 6/3); moist; very dense; mostly (70%) fine to coarse grained sand; some clayey (30%) fines.		
0930	OT071-MW-161-210		37 49 50/3"		NR	210	2680			As above; sand is coarse grained.		@210 ft: Coarse Sand; 1.956 mm; Porosity = 31.5; TOC = 140 mg/kg
						215	2675					
1100			50/4"		NR	220	2670		SC	**CLAYEY SAND** ; light brown (7.5YR 6/3); moist; very dense; few (5%) subangular gravel; mostly (70%) angular, fine to coarse (mostly coarse grained) grained sand; little clayey (25%) fines; sand is mostly feldspar, gravel is black.		
						225	2665					
1240			50/6"		NR	230	2660		SM	**SILTY SAND** ; yellowish brown (10YR 5/4); moist; very dense; mostly (65%) fine to medium grained sand; some clayey (35%) fines.		
						235	2655					

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
1440			37 50/5"		NR	240	2650		SM	**SILTY SAND** ; pink (5YR 7/4); moist; very dense; mostly (85%) angular, fine to coarse grained sand; little silty (15%) fines; sand is mostly feldspar.		
						245	2645					
0850			6 11 30			250	2640		CL	**SANDY LEAN CLAY** ; brown (7.5YR 4/4); moist; very hard; some (35%) fine to medium grained sand; mostly (65%) fines with low plasticity, medium toughness; sand is mostly fine grained with some medium grained sand.		June 17, 2016
						255	2635					
1040			50/5"		NR	260	2630		SW	**WELL-GRADED SAND** ; brown (7.5YR 5/4); moist; very dense; mostly (95%) fine to coarse grained sand; trace fines; sand is mostly fine to medium grained with little coarse grained sand.		
						265	2625					
1230			47		NR	270	2620					

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
			46 50/2"			275	2615		CL	**LEAN CLAY WITH SAND** ; yellowish brown (10YR 5/4); moist; hard; trace angular gravel; little (20%) angular, fine to coarse grained sand; mostly (80%) fines with medium plasticity, medium toughness, no to slow dilatancy.		
1445			50/6"			280	2610		SM	**SILTY SAND** ; brown (10YR 5/3); moist; very dense; mostly (75%) angular, fine to coarse grained sand; little silty (25%) fines.		
						285	2605					
0830			23 41 50/4"		NR	290	2600		CL	**SANDY LEAN CLAY** ; brownish yellow (10YR 6/6); moist; dense; some (40%) fine grained sand; mostly (60%) fines with medium plasticity; intebedded with CLAYEY SAND (SC), mostly (60%) fine grained sand with some clayey (40%) fines.		June 20, 2016
						295	2595					
1035			50/5"		NR	300	2590		SM	**SILTY SAND** ; light yellowish brown (10YR 6/4); wet; very dense; mostly (85%) angular, fine to coarse grained sand; little silty (15%) fines; sand is mostly quarts with some feldspar.		June 20, 2016. The temperature at 1030 is 100F.

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						305	2585					
						310	2580		SW-SM	**WELL-GRADED SAND WITH SILT** ; very pale brown (10YR 7/4); wet; very dense; trace angular gravel; mostly (90%) fine to coarse grained sand; few silty (10%) fines; gravel is black.		June 21, 2015
0900			50/4"									
										Boring was terminated at approximately 312.33 feet bgs.		Well Cap: 6-inch long, 4-inch diameter, flush threaded Schedule 80 PVC.
						315	2575					
						320	2570					
						325	2565					
						330	2560					
						335	2555					

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BORING LOG

Boring/Well ID: OT071-MW-162
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Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 6/23/2016
Ended: 6/28/2016
Surface Elevation: 2886.89 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: D-120/SIMCO
Driller: James Sauer
Drlling Method: Hollow-Stem Auger & Mud
Hole Diameter: 8 & 14 **(inches)**
TOC Elevation: 2889.93 **ft**

Logged By: Carl J. Lind
Edited By: Carl J. Lind
Checked By: Mark Unruh
Number: CEG1176
Northing: 2031878.17
Easting: 6755157.48

First Water: 140 ft bgs on 24-Jun-16 at 0730 hrs
Static Water: 286.67 ft bgs on 01-Sep-16 at 0909 hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2885					Surface is soil. Hand auger from 0 to 5-feet bgs to clear for underground utilities. Well head/surface seal: protected with a yellow above ground standpipe set in a 3 by 3-ffot, 6-inch thick, concrete pad; and 4 yellow bollards.
					5			SW	**WELL-GRADED SAND WITH GRAVEL** ; very pale brown (10YR 7/3); dry; loose; little (20%) fine angular gravel; mostly (80%) fine to coarse grained sand; trace fines; sand is approximately 50% quarts and 50% feldspar.		
						2880					
					10						**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
						2875					
								SM	**SILTY SAND** ; few (10%) fine angular gravel; mostly (60%) fine to coarse grained sand; little silty (20%) fines.		
					15						
						2870					
								SW	**WELL-GRADED SAND**.		
					20						
						2865		SM	**SILT** ; yellowish brown (10YR 5/4); dry; firm.		
					25			SP	**POORLY GRADED SAND** ; pinkish white (7.5YR 8/2); dry; loose; mostly angular, fine grained sand; trace fines; sand is quartz and feldspar.		
						2860					
					30			SW-SM	**WELL-GRADED SAND WITH SILT** ; pink (7.5YR 7/4); dry; loose; few (5%) gravel; mostly (85%) angular, fine to coarse grained sand; few silty (10%) fines; sand is quartz and feldspar.		

CB&I MEDIUM LOG GEORGEII.GPJ SHAWEI.GDT 4/18/17

BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2855		SW	**WELL-GRADED SAND** ; light gray (10YR 7/2); dry; loose; few (5%) fine gravel; mostly fine to coarse grained sand; few silty (5%) fines.		
0900	OT071-MW-162-35			NR	35	2850		GP	**POORLY GRADED GRAVEL WITH SAND** ; light gray (10YR 7/2); dry; loose; mostly fine gravel; some fine to coarse grained sand; few silty (5%) fines.		@35 ft: Gravel; 2.832 mm; Porosity = 33.8; TOC = <100 mg/kg.
				NR	40	2845		SW	**WELL-GRADED SAND** ; light gray (10YR 7/2); dry; loose; few (5%) fine gravel; mostly fine to coarse grained sand; few silty (5%) fines.		
				NR	45	2840					
				NR	50	2835		ML	**SANDY SILT** ; brown (10YR 5/3); dry; hard; no gravel; some (30%) fine to medium grained sand; mostly (70%) fines with low plasticity, low toughness, rapid dilatancy.		
				NR	55	2830		SW	**WELL-GRADED SAND** ; light gray (10YR 7/2); dry; loose; few (10%) subangular gravel; mostly (85%) angular, fine to coarse grained sand; few (5%) fines.		
				NR	60	2825		ML	**SILT** ; interbedded with WELL GRADED SAND (SM), beds are between 0.8 and 1.4-feet thick.		
				NR							

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
					65	2820		ML	**SILT** ; brown (10YR 5/3); moist; firm; few (10%) fine grained sand; mostly (90%) fines with no plasticity, low toughness, rapid dilatancy.		
					70	2815		ML	As above.		Driller adds water to aid cutting return.
					75	2810			Interbedded SILTY SAND (SM) and SANDY SILT (ML), brown (10YR 5/3), dry to moist, medium dense..		Hard drilling.
					80	2805		ML	**SILT** ; brown (10YR 5/3); moist; firm; few (10%) fine grained sand; mostly (90%) fines with no plasticity, low toughness, rapid dilatancy.		
					85	2800		CL SM	**LEAN CLAY** ; brown (10YR 5/3); moist; firm; mostly (100%) fines with medium plasticity, medium toughness, no to slow dilatancy. **SILTY SAND** ; yellowish brown (10YR 5/4); moist; loose; mostly (70%) sand.		
					90	2795			As above ; SILTY SAND (SM).		
					95	2790		CL	**LEAN CLAY** ; brown (10YR 5/3); dry to moist; mostly (100%) fines with medium plasticity, medium toughness, no to slow dilatancy.		

BORING LOG

Boring/Well ID: OT071-MW-162
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
					100	2785		SW-SM	**WELL-GRADED SAND WITH SILT** ; brown (7.5YR 5/3); moist; loose; mostly (90%) fine to coarse grained sand; few silty (10%) fines.		
					105						
						2780		ML-SM	**SILT** ; brown (7.5YR 5/3); moist; hard; with low plasticity, low toughness, rapid dilatancy; interbedded with SILTY SAND (SM); fine grained sand (60%), and silty fines (40%).		
					110						
						2775					
					115						
1430									As above ; SILT (ML) interbedded with SILTY SAND (SM).		
						2770					
					120						
0600									As above ; SILT (ML) interbedded with SILTY SAND (SM), thinner bedding.		End of Day: June 23, 2016; Depth of boring: 120-feet bgs.
						2765					
					125						
						2760					
								SM	**SILTY SAND** ; mostly (60%) angular, fine to coarse grained sand; some silty (40%) fines.		
					130						
						2755					

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Location: Former George AFB, Victorville, CA

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BORING LOG

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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
				NR	135	2750					
				NR	140	2745		SW-SM	**SILTY SAND** ; fine to coarse grained sand; interbedded with WELL-GRADED SAND (SW) and SANDY SILT (ML); predominately SILTY SAND, beds are 2-inches to 6-inches thick..		
0740				NR	145	2740					
0758				NR					As above ; WELL GRADED SAND (SW) interbedded with SILTY SAND (SM) and SILT (ML).		
				NR	150	2735		CL	**LEAN CLAY** ; olive brown (2.5Y 4/4); moist; mostly (100%) fines with medium plasticity, medium toughness, no to slow dilatancy.		Driller stops adding water.
				NR	155	2730		SW-SM	**WELL-GRADED SAND WITH SILT**.		
									From 155 to 156: wet, coarse grained sand, possibly slough from driller adding water at shallower depths..		
								ML	**SILT** ; olive brown (2.5Y 4/4); moist; soft; with low plasticity, low toughness, rapid dilatancy.		
				NR	160	2725		SW-SM	**SILTY SAND** ; wet; interbedded with WELL GRADED SAND (SW), fine to coarse grained sand..		
									No Recovery: 160 to 165-feet bgs, possibly a gravel bed..		
				NR	165	2720		CL	**LEAN CLAY** ; olive brown (2.5Y 4/4); moist; hard; with high		

BORING LOG

Boring/Well ID: OT071-MW-162
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									plasticity, high toughness, no dilatancy.		
					170	2715		SW-SM	**SILTY SAND** ; wet; From 169.5 to 173-feet bgs; as at 165-feet bgs.. From 170 to 170.5: drilling slough in corebarrel?.		
					175	2710		ML	**SILT** ; olive brown (2.5Y 4/4); moist; with no plasticity, low toughness, rapid dilatancy; some 'grit' in sample..		From surface to 190-feet bgs soil samples were collected with a 5-foot long 2 1/2-inch diameter, split spoon core-barrel in hollow stem augers (continuous core).
					180	2705			**SILT** ; interbedded with CLAY (CL), WELL GRADED SAND (SW), and SILTY SAND (SM)..		
					185	2700		SM	**SILTY SAND**.		Below the bottom of the isolation casing the borehole was drilled with an 8-inch diameter bit.
								ML	**SILT**.		
1130	OT071-MW-162-188				190			CL/ML	**LEAN CLAY** ; olive brown (2.5Y 4/4); dry to moist; very hard; with high plasticity, high toughness, no dilatancy; fissured; traces of what appear to be caliche in fissures..		@188 ft: Silt; 0.046 mm; Porosity = 45.8; TOC = <100 mg/kg.
0900						2695		SM	**SILTY SAND** ; brown (7.5YR 5/4); moist; medium dense; mostly (70%) fine grained sand; some silty (30%) fines.		
					195	2690		CL	**LEAN CLAY** ; moist; very hard; with high plasticity, medium toughness, no dilatancy.		From 190 to 305-feet bgs, the total depth of the boring, soil samples were collected with a 5-foot long HQ core barrel (continuously cored).
								CL	**LEAN CLAY WITH SAND** ; little (20%) fine grained sand; mostly (80%) fines; as at 195-feet bgs with transition to approximately 20% fine grained sand.		
					200			SM	**SILTY SAND** ; light yellowish brown (10YR 6/4); moist; very dense; trace gravel; mostly (70%) angular, fine to coarse grained sand; little		

CB&I MEDIUM LOG GEORGEII.GPJ SHAWEI.GDT 4/18/17

BORING LOG

Boring/Well ID: OT071-MW-162
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2685			silty (25% - 30%) fines.		
				NR	205			SM	As above ; mostly (60%) sand; some silty (40%) fines.		
						2680					
					210						
1000								SM	As above ; brown (10YR 5/3).		
						2675					
1000	OT071-MW-162-214								As above ; mostly medium grained sand; little silty fines.		
					215			ML	**SANDY SILT** ; very pale brown (10YR 8/2); moist; hard; some (40%) fine to coarse grained sand; mostly (60%) fines with low plasticity, low toughness, rapid dilatancy.		@214 ft: Medium Sand; 0.752 mm; Porosity = 35.9; TOC = 410 mg/kg. Ash layer from 214 to 217-feet bgs.
						2670					
				NR				SM	**SILTY SAND** ; light olive brown (2.5Y 5/3); moist; dense; trace fine angular gravel; mostly fine to coarse grained sand; some silty fines.		
					220						
						2665					
				NR	225				As above ; with thin (approximately 1-inch thick) beds of WELL GRADED SAND (SW) with SILT and GRAVEL every 1.5 to 2-feet bgs.		
						2660					
				NR							
					230			SM	**SILTY SAND** ; light olive brown (2.5Y 5/3); wet; dense; trace fine gravel; mostly (60%) fine grained sand; some silty (40%) fines; sand includes a trace of coarse grained sand.		
						2655					
				NR							
					235				As above ; yellowish brown (10YR 5/4); moist; dense; mostly (65%) fine		

BORING LOG

Boring/Well ID: OT071-MW-162
Sheet: 8 **of** 10

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									grained sand; some silty (35%) fines.		
						2650					
					240			SM	**SILTY SAND** ; light olive brown (2.5Y 5/3); mostly (70%) fine to coarse grained sand; some silty (30%) fines.		
						2645					
					245						
						2640					
								GM	**SILTY GRAVEL WITH SAND**.		
								SM	**SILTY SAND** ; yellowish brown (10YR 5/4); moist; dense; trace fine gravel; mostly (65%) fine to coarse grained sand; some silty (35%) fines.		
1400					250						
						2635					
					255						
									SILTY GRAVEL ; Gravel in drilling mud.		
								SW	**WELL-GRADED SAND** ; pale brown (10YR 6/3); wet; trace (to 5%) fine angular gravel; mostly (90%) angular, fine to coarse grained sand; few silty (to 5%) fines.		End of Day: June 27, 2016; Bottom of boring: 255-feet bgs.
						2630					
					260						
						2625		CL	**LEAN CLAY** ; strong brown (7.5YR 5/6); very hard; with high plasticity, medium toughness, no dilatancy.		
									CLAYEY SAND ; strong brown (7.5YR 5/6); very dense; mostly (60%) fine grained sand; some silty (40%) fines; interbedded with SILTY SAND (SM).		
					265			SM	**SILTY SAND WITH GRAVEL**.		
0620											
						2620		SW-SM	**SILTY SAND** ; medium dense; interbedded with loose WELL-GRADED SAND (SW).		
					270						

BORING LOG

Boring/Well ID: OT071-MW-162
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						2615					Transition Seal: time release bentonite pellets and #60 sand.
								SW	**WELL-GRADED SAND WITH GRAVEL**.		
0705					275						
								SM	**SILTY SAND** ; strong brown (7.5YR 5/6); wet; very dense; mostly (65%) fine grained sand; some silty (35%) fines.		
						2610					
								SW	**WELL-GRADED SAND**.		
								SM	**SILTY SAND**.		
					280						
								SC	**CLAYEY SAND**.		
						2605					
								SM	**SILTY SAND** ; strong brown (7.5YR 5/6); moist to wet; dense; mostly (70%) fine to medium grained sand; some silty (30%) fines.		
					285						
						2600					
					290						
0810											
						2595		SC	**CLAYEY SAND** ; mostly (55%) fine grained sand; some clayey (45%) fines.		Screen: 4-inch diameter, flush threaded, 6-row machine cut, 0.020-inch slot, PVC.
								SM	**SILTY SAND** ; mostly (55%) fine grained sand; some silty (45%) fines.		
								SM	**SILTY SAND** ; mostly (75%) medium to coarse grained sand; little silty (25%) fines.		
					295						
0900								SW	**WELL-GRADED SAND**.		
								SM	**SILTY SAND**.		
						2590					
								CL	**LEAN CLAY**.		
								CL	**SANDY LEAN CLAY** ; brown (10YR 5/3); moist to wet; very dense; approximately propotional (50/50) fine grained sand and plastic (clayey) fines.		
					300						
						2585		SM	**SILTY SAND** ; brown (10YR 5/3); moist to wet; loose; no gravel; mostly fine to medium grained sand; some silty fines; little (10%) coarse grained sand.		Well Cap: 6-inch long, 4-inch diameter, flush threaded Schedule 80 PVC.

BORING LOG

Boring/Well ID: OT071-MW-162
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
						305			CL	**LEAN CLAY** ; brown (10YR 5/3); moist; hard; no gravel; no sand; mostly (100%) fines with high plasticity, high toughness, no dilatancy.		
							2580			**Boring was terminated at approximately 305 feet bgs.**		
						310						
							2575					
						315						
							2570					
						320						
							2565					
						325						
							2560					
						330						
							2555					
						335						
							2550					

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-162
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BORING LOG

Boring/Well ID: OT071-MW-163
Sheet: 1 **of** 5

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/20/2013
Ended: 5/25/2015
Surface Elevation: 2733.03 **ft**

Drilling Co.: Tri-County Drilling, Inc.
Drill Rig Model: CME-75
Driller: William O
Drlling Method: Hollow-Stem Auger
Hole Diameter: 8 & 10 **(inches)**
TOC Elevation: 2736.08 **ft**

Logged By: C.Lind/M. Curtis
Edited By: Carl J. Lind
Checked By: Mark Unruh
Number: CEG1176
Northing: 2031853.72
Easting: 6757719.81

First Water: 120.5 ft bgs on 23-May-15 at 1400 hrs
Static Water: 75.02 ft bgs on 01-Sep-16 at 0930 hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
								SM	**SILTY SAND**.		Hand auger from 0 to 5 feet bgs to clear subsurface utilities. Well head/surface seal: protected with a yellow above ground standpipe set in a 3 by 3-foot, 6-inch thick, concrete pad; and 4 yellow bollards.
						2730					
					5						
								CL	**LEAN CLAY**.		
						2725		SM	**SILTY SAND**.		
					10						**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
						2720		SM	**SILTY SAND**.		
					15						
						2715					
					20						
								GM	**SILTY GRAVEL** ; fine subangular gravel; gravel is granitic.		
								SM	**SILTY SAND** ; yellowish red (5YR 5/6); dry; loose.		
						2710					
					25						
						2705					
					30						

CB&I MEDIUM LOG GEORGEII.GPJ SHAWEI.GDT 4/17/17

BORING LOG

Boring/Well ID: OT071-MW-163
Sheet: 2 **of** 5

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									SM	**SILTY SAND** ; olive gray (5Y 5/2); dry; medium dense; mostly (65%) fine to coarse grained sand; some silty (35%) fines.		
0950							2700		ML	**SILT** ; yellowish brown (10YR 5/4); moist; hard; with low plasticity, low toughness, rapid dilatancy.		
						35			SM	**SILTY SAND WITH GRAVEL** ; light brownish gray (10YR 6/2); dry; loose; little (20%) fine subangular gravel; mostly (50%) fine to coarse grained sand; some silty (30%) fines; gravel is granitic.		
									SM	**SILTY SAND** ; light brownish gray (10YR 6/2); dry; loose; no gravel; mostly subangular, fine to coarse grained sand; some silty fines.		
							2695		ML	**SILT** ; olive (5Y 5/4); moist; very hard; mostly (100%) fines with low plasticity, low toughness, rapid dilatancy.		
						40			SM	**SILTY SAND** ; trace fine gravel; interbedded with SILT (ML): mostly (60%) fined to coarse grained sand, with some (40%) silty fines..		
1045									SW	**WELL-GRADED SAND WITH GRAVEL**.		
							2690		GW	**WELL-GRADED GRAVEL WITH SAND**.		
						45						
							2685		SM	**SILTY SAND** ; brown (10YR 5/3); moist to wet; medium dense; mostly (65%) fine grained sand; some silty (35%) fines; may have local layers of medium to coarse grained sand.		Annular Backfill: 97% neat cement/3% bentonite.
						50			ML	**SILT** ; brown (10YR 5/3); moist; hard to very hard; with low plasticity, low toughness, no to slow dilatancy.		
							2680		ML-SM	@ 50.5-feet bgs, a thin layer of coarse grained sand. **SILTY SAND** ; brown (7.5YR 4/3); moist; medium dense; mostly (70%) angular, fine to coarse grained sand; some silty (30%) fines; interbedded with SILT (ML), 70 % low plastic fines, with approximately 30% fine grained sand; beds are approximately 6 to 8-inches thick, beds may be occasionally moist to wet.		
						55						
							2675					
						60				As above ; interbedded SILTY SAND (SM) and SILT (ML), brown (7.5YR 4/3), hard/medium dense, moist to wet.		
							2670					

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-163
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BORING LOG

Boring/Well ID: OT071-MW-163
Sheet: 3 **of** 5

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
					65						
						2665		SM	**SILTY SAND** ; wet; loose; mostly (75%) angular, fine to coarse grained sand; little silty (25%) fines; sand is quartz and feldspar.		Heaving sand?
					70						Heaving sand?
						2660					
					75 ▼			ML	**SANDY SILT** ; brown (10YR 5/3); moist; very hard; some (35%) fine grained sand; mostly (65%) fines with low plasticity, low toughness, rapid dilatancy.		Heaving sand?
				NR				SW-SM	**WELL-GRADED SAND WITH SILT** ; wet.		
								CL	**SANDY LEAN CLAY** ; brown (10YR 5/3); moist; very hard; some (45%) fine to coarse grained sand; mostly (55%) fines with medium plasticity.		Heaving sand?
						2655		SM	**SILTY SAND** ; no apparent bedding, except as noted.		
				NR							
					80			ML	**SILT** ; brown (10YR 5/3); moist; very hard; trace fine grained sand; mostly (>95%) fines with low plasticity, low toughness, rapid dilatancy.		Casing: 4-inch diameter, flush threaded, Schedule 80 PVC.
								SM	**SILTY SAND**.		
								ML	**SILT** ; brown (10YR 5/3); moist; hard; mostly (100%) fines with low plasticity, medium toughness, rapid dilatancy.		
						2650		SM	**SILTY SAND**.		
								ML	**SILT** ; grading to LEAN CLAY (CL).		
								CL	**SILTY SAND** ; thin layer of sand.		
								SM			
					85						
1530				NR				CL	**LEAN CLAY** ; brown (10YR 5/3); moist; very hard; mostly (100%) fines with high plasticity, medium to high toughness, no dilatancy.		
								ML	**SANDY SILT** ; brown (10YR 5/3); moist; very hard; some fine grained sand; mostly fines with low plasticity, rapid dilatancy.		
								CL	**LEAN CLAY** ; brown (10YR 5/3); moist; very hard; with high plasticity, medium toughness, no dilatancy.		
1028				NR		2645		ML-SM	**SANDY SILT** ; brown (10YR 5/3); moist; medium dense.		
					90			SM	@ 89.5-feet bgs: scattered light gray, gravel sized pods filled with fine grained sand.		
									SILTY SAND ; brown (10YR 5/3); moist to wet; medium dense; fine to medium grained sand; some silty fines.		
						2640		ML	**SILT** ; brown (10YR 5/3); moist; very hard; with low plasticity, medium toughness.		
					95			SW-SM	**WELL-GRADED SAND WITH SILT** ; medium to coarse grained sand.		
								SP	**POORLY GRADED SAND** ; moist to wet; medium dense; mostly fine to medium grained sand; trace fines; thin interbeds of silt.		
						2635					

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-163
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BORING LOG

Boring/Well ID: OT071-MW-163
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TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	COMMENTS OR NOTES
					100		SW	**WELL-GRADED SAND** ; moist to wet; medium dense; fine to coarse grained sand; trace fines.	
							ML	**SILT** ; moist; very hard; with low plasticity.	
						2630		@ 103-feet bgs: color change to brown, grades to some fine grained sand, low to no plasticity, slow dilatancy.	
					105				
							CL	**LEAN CLAY** ; brown (10YR 5/3); moist; very hard; with medium to high plasticity, medium toughness, no dilatancy.	
						2625		Silt and silty sand laminae.	
					110				
1230	OT071-MW-163-111			NR			SC	**CLAYEY SAND** ; brown (10YR 5/3); moist; mostly fine grained sand; some clayey fines with medium plasticity, medium toughness, slow dilatancy; laminated; micaceous.	
1230				NR		2620			FIlter Pack: #3 sand.
					115				
1300							SW-SM	**SAND**.	
							CL	As above ; LEAN CLAY (CL).	
						2615	SM	**SILTY SAND**.	
							CL	As above ; LEAN CLAY (CL).	
					120		ML	**SILT** ; with medium plasticity; micaceous.	
							SM	**SILTY SAND** ; wet; loose; mostly fine grained sand; some silty fines; laminated; micaceous.	
1400						2610			
1500	OT071-MW-163-124			NR	125		SP	**POORLY GRADED SAND** ; yellowish brown (10YR 5/4); wet; medium grained sand; no fines.	@124 ft: Medium Sand; 0.801 mm; Porosity = 38.6; TOC = <100 mg/kg
						2605	SW	**WELL-GRADED SAND** ; yellowish brown (10YR 5/4); wet; fine to coarse grained sand; no fines.	Screen: 4-inch diameter, flush threaded, Schedule 80 PVC with 6-row, maching cut, 0.020-inch slot perforations.
					130				
				NR					

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-163
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BORING LOG

Boring/Well ID: OT071-MW-163
Sheet: 5 **of** 5

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
1500									CL	**LEAN CLAY**.		
									SW	As above ; WELL GRADED SAND (SW).		
						135			CL	**LEAN CLAY**.		
									SM	**SILTY SAND**.		Well Cap: 6-inch long, 4-inch diameter, flush threaded Schedule 80 PVC.
							2595			**Boring was terminated at approximately 137.1 feet bgs.**		
						140						
							2590					
						145						
							2585					
						150						
							2580					
						155						
							2575					
						160						
							2570					
						165						

Project No.: 145981
Location: Former George AFB, Victorville, CA

Boring/Well ID: OT071-MW-163
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BORING LOG

Boring/Well ID: OT071-SB02
Sheet: 1 **of** 1

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/16/2016
Ended: 5/16/2016

Drilling Co.: Kehoe Testing & Engineering
Drill Rig Model: Limited Access
Driller: Rudy
Drlling Method: Direct Push
Hole Diameter: 2.25 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559

First Water: ft bgs on at hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
11:40	OT071 00001				NR					5" concrete over 5" gravel base.		**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
									SM	**SILTY SAND** ; gray (10YR 5/1); dry; loose; mostly fine to medium grained sand; some silty fines.		
11:45	OT071 00003				NR							
					NR					Gradational contact.		
						5			SP-SM	**POORLY GRADED SAND WITH SILT** ; gray (10YR 5/1); dry; soft to firm; mostly medium grained sand; some silty fines with no plasticity.		
11:50	OT071 00004				NR							@ 5.1 ft: Medium Sand; 0.359 mm; TOC = 790 mg/kg; Total Porosity = 45.4.
11:55	OT071 00005											@7.5 ft: Medium Sand; 1.106 mm; TOC = 710 mg/kg; Total Porosity = 39.9
					NR	10			SP	**POORLY GRADED SAND WITH GRAVEL** ; yellowish brown (10YR 5/4); dry; medium dense; little fine to medium subangular gravel; mostly medium grained sand; few silty fines.		@10.9 ft: Medium Sand; 1.189 mm; TOC = 320 mg/kg; Total Porosity = 39.9.
										Terminated by refusal. **Boring was terminated at approximately 11.5 feet bgs.**		Groundwater was not encountered. Boring was backfilled with neat cement and bentonite grout.
						15						
						20						

CB&I SHORT LOG GEORGEII.GPJ SHAWEI.GDT 4/13/17

BORING LOG

Boring/Well ID: OT071-SB03
Sheet: 1 **of** 1

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/13/2016
Ended: 5/13/2016

Drilling Co.: Gregg Drilling & Testing
Drill Rig Model: GeoProbe
Driller:
Drlling Method: Direct Push
Hole Diameter: 2.25 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559

First Water: ft bgs on at hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
									Very soft top soil.		**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
0730	OT071 00008							SP-SM	**POORLY GRADED SAND WITH SILT** ; light brownish gray (10YR 6/2); dry; loose; mostly medium grained sand; some silty fines.		
0745	OT071 00009				5						@3.7 ft: Medium Sand; 0.350mm; Porosity = 40.3; TOC = 1,850 mg/kg.
0800	OT071 00010								@7': color changes to brown (10YR 5/3).		
0810	OT071 00011				10				@9': color changes to light grayish brown (10YR 6/2).		@8.8 ft: Medium Sand; 0.700 mm; Porosity = 39.1; TOC = 510 mg/kg.
											@11.4 ft: Medium Sand; 0.280 mm; Porosity = 51.3; TOC = 910 mg/kg.
									@13': grades to medium dense.		
0820	OT071 00012				15			ML	**SILT** ; light brownish gray (10YR 6/2); dry; soft; with low plasticity; @14': grades to fine grained sand.		@14 ft: Fine Sand; 0.149 mm; Porosity = 47.6; TOC = 620 mg/kg.
									Boring was terminated at approximately 16 feet bgs.		Groundwater was not encountered Boring was backfilled with neat cement and bentonite grout.
					20						

CB&I SHORT LOG GEORGEII.GPJ SHAWEI.GDT 4/13/17

BORING LOG

Boring/Well ID: OT071-SB04
Sheet: 1 **of** 1

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/16/2016
Ended: 5/16/2016

Drilling Co.: Kehoe Testing & Engineering
Drill Rig Model: Limited Access
Driller: Rudy
Drlling Method: Direct Push
Hole Diameter: 2.25 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559

First Water: ft bgs on at hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
					NR					Very soft top soil.		
0914	OT071 00013								SP-SM	**POORLY GRADED SAND WITH SILT** ; pale brown (10YR 6/3); dry; loose; trace fine angular gravel; mostly angular, medium grained sand; some silty fines.		**Geotechnical Sample Results:**
0909	OT071 00014											Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
					NR	5						
0845	OT071 00015											@3.1 ft: Medium Sand; 0.460 mm; Porosity = 38.2; TOC = 880 mg/kg.
										@7': grades to very dense.		
0920	OT071 00016											@7.8 ft: Medium Sand; 0.625 mm; Porosity = 38.8; TOC = 700 mg/kg.
						10						
												@10.2 ft: Medium Sand; 0.955 mm; Porosity = 38.8; TOC = 230 mg/kg.
0927	OT071 00017											During the first sample run, the acetate sleeve crinkled and was rerun after the sample in the second run was collected.
						15						Boring was backfilled with neat cement and bentonite grout.
										Boring was terminated at approximately 16 feet bgs.		Groundwater was not encountered.
						20						

BORING LOG

Boring/Well ID: OT071-SB05
Sheet: 1 **of** 1

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/16/2016
Ended: 5/16/2016

Drilling Co.: Kehoe Testing & Engineering
Drill Rig Model: Limited Access
Driller: Rudy
Drlling Method: Direct Push
Hole Diameter: 2.25 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559

First Water: ft bgs on at hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL / RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
				NR					Very soft top soil.		**Geotechnical Sample Results:** Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
1040	OT71 OT71 000190001 8							SM	**SILTY SAND** ; gray (10YR 6/1); dry; loose; mostly angular, fine grained sand; some silty fines with no dilatancy.		
1045											
				NR	5						
1050	0T71 00021								@5.5': color change to brown (10YR 5/4).		
									@7.5': grades to medium grained sand.		
				NR				SW	**WELL-GRADED SAND** ; brown (10YR 5/3); dry; medium dense; mostly fine to coarse grained sand; trace silty fines.		@7.5 ft: Medium Sand; 0.418 mm; Porosity = 44.5; TOC = 320 mg/kg.
1055	OT71 00022							SM	**SILTY SAND** ; gray (10YR 6/1); dry; medium dense; mostly fine to medium grained sand; some silty fines.		
					10						
									@11': grades to medium grained sand.		@11 ft: Medium Sand; 0.874 mm; Porosity = 43.7; TOC = 320 mg/kg.
				NR							
1100	OT71 00023							SC	**CLAYEY SAND** ; gray (10YR 5/1); moist; medium dense; mostly fine to medium grained sand; some clayey fines with medium plasticity.		
					15				@15': grades to silt.		@15 ft: Silt; 0.047 mm; Porosity = 47.0; TOC = 420 mg/kg.
									Boring was terminated at approximately 16 feet bgs.		Boring was backfilled with neat cement and bentonite grout. Groundwater was not encountered.
					20						

CB&I SHORT LOG GEORGEII.GPJ SHAWEI.GDT 4/13/17

BORING LOG

Boring/Well ID: OT071-SB06
Sheet: 1 **of** 1

Project No.: 145981
Client: Air Force
Location: Former George AFB
Started: 5/13/2016
Ended: 5/16/2016

Drilling Co.: Gregg Drilling & Testing
Drill Rig Model: GeoProbe
Driller:
Drlling Method: Direct Push
Hole Diameter: 2.25 **(inches)**

Logged By: Carl J. Lind
Edited By: Matthew Curtis
Checked By: Homayoun Daftary
Number: CHG559

First Water: ft bgs on at hrs
Static Water: ft bgs on at hrs

TIME	SAMPLE NUMBER	PID (ppm)	BLOWS (per 6 inch)	INTERVAL	RECOVERY	DEPTH (feet)	ELEVATION (feet msl)	GRAPHIC LOG	SOIL/ROCK SYMBOL	SOIL / ROCK DESCRIPTION	WELL DETAIL	COMMENTS OR NOTES
										Very soft top soil.		
0900	OT071 00024								SW	**WELL-GRADED SAND WITH SILT** ; pale brown (10YR 6/3); dry; loose; mostly fine to coarse grained sand; some silty fines.		**Geotechnical Sample Results:**
0905	OT071 00025								ML	**SANDY SILT** ; pale brown (10YR 6/3); dry; soft; some fine to medium grained sand; mostly silty fines with low plasticity.		Mean Grain Size USCS/ASTM Description, Median Grain Size, Total Porosity, and Total Organic Carbon (TOC) results are presented below.
	OT071 00026					5						@4.5 ft: Silt; 0.021 mm; Porosity = 45.3; TOC = 620 mg/kg.
0930	OT071 00027								SM	**SILTY SAND** ; yellowish brown (10YR 5/4); dry to moist; mostly medium grained sand; some silty fines.		@7.1 ft: Medium Sand; 0.391 mm; Porosity = 43.5; TOC = 420 mg/kg.
						10			SW-SM	**WELL-GRADED SAND WITH SILT** ; pale brown (10YR 6/3); dry; dense; mostly angular, fine to coarse grained sand; little silty fines.		
0945	OT071 00028									@14': grades to trace angular fine gravel.		
						15						Boring was backfilled with neat cement and bentonite grout.
										Boring was terminated at approximately 16 feet bgs.		Groundwater was not encountered.
						20						

Appendix C
Well Development Logs

Contract No. FA8903-09-D-8580, Task Order 0018• Final • Revision 0 • September 2017

JOB NUMBER: 17014

WELL NO.: MW 159

JOB NAME: GEORGE A.F.B.

JOB LOCATION: VICTORVILLE

TEST DATE: 2-26-16

TIME	DEPTH TO BOTTOM	DEPTH TO WATER	NTU TURBIDITY	PH	MS/CM CONDUCTIVITY	TDS	TEMP C	VOLUME (GALLONS)	Dissolve Oxygen
8:20	109.57	97.83'	57.7	7.05	1.43	.913	20.08°	.90	13.07
8:30		101.27'	32.2	7.01	1.43	.914	20.32°	.90	11.69
8:40		101.28'	84.9	7.00	1.46	.932	21.19°	.90	8.82
8:50		101.65'	93.7	7.04	1.46	.932	21.32°	.90	7.97
9:00		101.55'	17.9	7.07	1.49	.956	22.15°	.90	7.80
9:10		101.63'	4.41	7.09	1.51	.965	22.35°	.90	7.76
9:20		101.74'	4.53	7.10	1.51	.967	22.35°	.90	7.70
9:30		101.79'	5.24	7.11	1.52	.971	22.36°	.90	7.60
9:40		101.85'	3.58	7.11	1.52	.976	22.44°	.90	7.54
9:50		101.96'	5.09	7.12	1.53	.979	22.47°	.90	7.48
10:00	109.57'	102.83'	4.62	7.12	1.53	.981	22.47°	.90	7.43
Stop Test									

Clear Water →

APPROX TOTAL GALS REMOVED 185

Scanned by CamScanner

DO is too
readings a

Groundwater Purge Log

Former George Air Force Base, California

P 1/4

Technician Name: Carl Lind (CB&I)
Randy Johnson (T.C.D.)

PROJECT: 145981

Date: 6-30-16 **SITE ID:** GAFB/CT71 **LOCATION ID:** MW-160 (Well Number) **SAMPLE #:** NA / dewater + purge Pump set at depth: 185'

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): 4" Sch 80 PVC Unit Casing Volume: _____ Weather conditions: Clear, hot

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): 174.61 **Screen Length:** 20'

Date 7-1-16	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	% Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
~~6-30-16~~	08 00	2.5	174.61'		20.50	8.59	.409	40.8	13.77	218		CLEAN MURKY
	08 :15	2.5	174.61'		19.28	8.63	.419	3.78	13.18	206		CLEAR
	08 :30	2.5	174.61'		18.56	8.91	.430	1000+NA	13.32	166		DIRTY
	08 :45	2.5	174.61'		18.70	8.99	.430	225	13.14	143		CLEAN MURKY
	09 :00	2.5	174.61'		16.60	8.99	.423	151	12.84	128		" "
	09 :15	2.5	174.61'		18.68	8.98	.423	75.4	12.96	123		CLEAR
	09 :30	2.5	174.61'		19.09	9.00	.423	83.2	11.39	118		CLEAR
	09 :45	2.5	174.61'		19.43	9.01	.419	459	12.87	110		CLOUDY
	10 :00	2.5	174.61'		19.14	9.04	.417	33.3	13.13	111		CLEAR
	10 :15	2.5	174.61'		19.61	9.03	.420	167	12.88	108		MURKY
	10 :30	2.5	174.61'		19.50	9.07	0.417	260	12.69	97		MURKY
	10 :45	2.5	174.61'		19.42	9.07	0.417	105	11.98	99		CLOUDY
	11 :00	2.5	174.61'		19.86	9.05	0.415	42.9	12.83	99		CLEAR
	11 :15	2.5	174.61'		19.79	9.03	0.416	219	12.97	98		CLOUDY

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS.

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____

* Taken As Final Water Level Reading and Time after sampling is complete and well has recovered

P 2/4

Groundwater Purge Log

Former George Air Force Base, California

Technician Name: _____

PROJECT: 145981

Date: _____ **SITE ID:** _____ **LOCATION ID:** _____ (Well Number) **SAMPLE #:** _____ Pump set at depth: 180'

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): _____ Unit Casing Volume: _____ Weather conditions: _____

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____ **Screen Length:** _____

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
7-1-16	11 :30	2.5	174.61'		18.46	8.94	.420	152	13.03	65		CLOUDY
	11 :45	2.5	174.61'		19.40	8.92	.421	125	12.75	108		CLOUDY
	12 :00	2.5	174.61'		20.42	9.00	.423	91.7	12.15	171		SLIGHTY CLOUDY
	12 :15	2.5	174.61'		19.80	8.91	.410	75.9	13.30	159		SLIGHT CLOUDY
7-5-16	06 :45	1.5	158.45'		~~16.17~~			~~73.8~~				
	07 :00	1.5	164.82'		16.17	14.00	.305	73.8	13.07	159		HAZEY
	07 :15	1.5	164.97'		16.94	8.95	.436	203	12.40	141		CLOUDY
	07 :30	1.5	165.81'		17.25	8.98	.433	17.4	12.14	130		CLEAR
	07 :45	1.5	165.98'		17.75	8.96	.431	8.34	11.74	112		SLIGHT MURKY
	08 :00	1.5	166.21'		16.23	8.41	.319	37.3	11.90	150		CLEAR
	08 :15	1.5	166.2'		16.61	9.74	.335	34.2	11.90	176		CLEAR
	08 :30	1.5	166.32'		17.97	9.08	.437	39.3	10.73	135		CLEAR
	08 :45	1.5	166.44'		18.45	9.08	.431	37.1	10.76	120		CLEAR
	09 :00	1.5	166.57'		16.76	14.00	.319	47.3	12.04	88		CLEAR

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS.

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____

* Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

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Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: _____ Team: _____

PROJECT: 145981

Date: _____ **SITE ID:** _____ **LOCATION ID:** MW 160 (Well Number) **SAMPLE #:** _____ Pump set at depth: 180'

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): _____ Unit Casing Volume: _____ Weather conditions: _____

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____ **Screen Length:** _____

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Descriptio 1
7-5-16	09:15	1.5	166.67'	1025	18.77	8.89	.437	10.0	11.57	88		CLEAR
	09:30	1.5	166.77'		19.32	9.13	.426	5.49	11.34	156		CLEAR
	09:45	1.5	166.84'		19.30	9.12	.424	0.00	11.55	171		CLEAR
	10:00	1.5	166.89'		19.31	9.05	.424	37.2	11.79	193		CLEAR
	10:15	1.5	166.96'		19.69	7.84	.424	0.00	11.79	117		CLEAR
	10:30	1.5	167.00'		19.79	8.64	.420	0.00	11.74	119		CLEAR
	10:45	1.5	167.09'		19.37	9.10	.422	22.3	11.58	125		CLEAR
	11:00	1.5+	167.89'		19.21	9.06	.421	129	11.38	147		CLEAR
	11:15	1.5+	168.19'		19.68	9.10	.419	83.3	11.61	143		CLEAR
	11:30	1.5	167.65'		19.76	9.08	.423	30.7	11.22	140		CLEAR
	11:45	1.5	167.72'		20.19	9.26	.420	84.5	11.93	181		CLEAR
	12:00	1.5	167.61'		20.47	9.33	.421	56.1	11.99	148		CLEAR
	12:15	1.5	167.71'		20.90	9.36	.420	83.0	12.00	124		CLEAR
	12:30	1.5	167.76'	1275	21.07	9.07	.416	44.4	11.88	161		CLEAR

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS. FERROUS IRON READING _____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered

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Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: _____ Team: _____

PROJECT: 145981

Date: 7-5-16 **SITE ID:** _____ **LOCATION ID:** MW 160 (Well Number) **SAMPLE #:** _____ Pump set at depth: 180

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): _____ Unit Casing Volume: _____ Weather conditions: _____

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____ **Screen Length:** _____

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
7-5-16	12:45	1.5	167.83'		21.07	9.27	.416	86.4	11.28	115		CLEAR
	13:00	1.5	167.87'		21.14	9.34	.416	78.6	11.16	103		CLEAR
	13:15	1.5	167.88'		20.92	9.96	.333	40.4	11.32	161		CLEAR
	13:30	1.5	167.90'		21.29	9.20	.417	0.05	11.21	152		CLEAR
	13:45	1.5	167.95'		21.29	9.34	.415	69.2	11.41	146		CLEAR
	14:00	1.5	167.97'		21.52	9.40	.416	6.76	11.70	115		CLEAR
	14:15	1.5	167.97'		21.51	9.40	.415	13.9	11.64	148		CLEAR
	14:30	1.5	167.98'		21.59	9.40	.414	~~000~~ 9.84	11.55	182		CLEAR
	14:45	1.5	167.99'		21.56	9.28	.414	8.98	11.38	169		CLEAR
	15:00	1.5	168.01'		21.64	9.41	.384	7.64	10.71	199		CLEAR
	15:15	1.5	168.03'		21.56	11.61	.362	7.36	11.10	129		CLEAR
	15:30	1.5	168.04'	16.00+-	21.50	9.67	.362	6.68	11.07	190		CLEAR
	:											
	:											

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS FERROUS IRON READING_____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ **Final Recovery Time*** (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered

mw-161
p1/

Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: Carl Lind Team: _____

PROJECT: 145981

Date: 7-13-16 **SITE ID:** OT071 **LOCATION ID:** mw-161 (Well Number) **SAMPLE #:** NA Pump set at depth: _____

Purging Method/Equipment: ~~MICRO PURGE~~ Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: HDPE

Well Casing Diameter (in): 4" Unit Casing Volume: ~~0.59~~ 0.59 gal/ft Weather conditions: Clear, calm; 66°F

Sounding (Depth to Well Bottom): ~~310.8'~~ 311.35' bgs **Static Water Level** (Depth to Water): 287.98 7-13-2016 0800 **Screen Length:** 20 : 290-310

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal) +50 gal	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
7-13-16	09:00	18 gal	bailed dry	-200 gal	250 prior to 7-13							[illegible]
~~7-13-16~~	~~12:07~~			-268 gal								
7-14-16	08:30		288'									
	09:30	Bail	306.72'	13 out								
	12:50	Pull Surge Block										
	13:05	Surge w/Bailer		12 in								
	13:50	Bail	308.22'	16 out								
	15:00	Surge	281.60'	15 in								
	15:45	Bail	305.98'	16 out								
	:											
	:											
	:											
	:											

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS. FERROUS IRON READING _____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: Randy & Howard Team: _____

Tri-County Drilling Inc

PROJECT: 145981

Date: 7-15-16 **SITE ID:** _____ **LOCATION ID:** MW161 (Well Number) **SAMPLE #:** _____ Pump set at depth: _____

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): _____ Unit Casing Volume: _____ Weather conditions: _____

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____ **Screen Length:** _____

DO is too high The readings are suspect.

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	(mV) ± 10 millivolts	Prepared By:	Water Description
7 15 16	09:23		286.12'									
	09:45	INSTALL	BAILER	RETRIVE								
	:	H_2O SAMPLE										
	09:59	1 BAILER	TOP OF H_2O COLUMN		19.25	9.92	.762	112	13.46	31		CLEAR/HAZE
	10:05	SURGE W/	BAILER									
	10:40	BAIL	303.32'	12 GAL								
	10:50	ADD	287.39'	12 IN								
	10:55	SURGE W/	BAILER									
	11:20	BAIL	309.12'	13 GAL								
	11:35	ALLOW BAILED H_2O TO	SETTLE		23.59	10.32	.764	UNTESTABLE TO DIRTY	15.00	125		CLOUDY DIRTY TAN
	11:50	SAMPLE LAST BAIL										
	:											
	:											
	:											

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS. FERROUS IRON READING _____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

MW-162

Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: C. Lind Team: Randy & Richard Tri-County Drilling OT#71

PROJECT: 145981

Date: 7-13-16 SITE ID: MW-162 LOCATION ID: MW-162 (Well Number) SAMPLE #: _____ Pump set at depth: INLET 293'

Purging Method/Equipment: ~~MICRO PURGE~~ Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. Grundfos) Type of tubing: HDPE

Well Casing Diameter (in): 4" Unit Casing Volume: 0.59 gal/foot Weather conditions: Clear, dry, 66°F windy

Sounding (Depth to Well Bottom): ~~302~~ 301.82' bgs ~0.8' of casing stick-up Static Water Level (Depth to Water): 273.18' btoc 7-13-16 272.38' bgs Screen Length: 20' 281-301' bgs

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft) ~~A.G.S~~	Volume Purged (gal) + 50 gal	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
7-12	N:A	NA	NA	-65 gal	NA	NA	NA	NA	NA	NA	CA	Muddy.
7-13	06:00	NA		-20/85 est								Complete surge + bail
	:			35 net								
	07:40		283.40	Above ~~top~~ ground surface								
	07:40		285.08	Above top of sounding tube.								
7-13	12:07		285.38									
	12:15	~0.38/m	start	pumping								Hazy
	12:18	20cf/27 gls.	286.14	~~240 gal~~	} see	FR.	for	additional	data			
7-13	15:00	0.61 gpm	290.15	240 gal								clear
7-14	09:35		284.79'									
start time	09:40	.5	286.90'									
	09:55	.12	286.52'									
	10:10	.42	286.34'									
	10:20	.60	287.03									

7-14-16

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS. FERROUS IRON READING _____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ Final Recovery Time* (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

Groundwater Purge Log

Former George Air Force Base, California

Sampler Name: Robert Mell / RANDY & HOWARD Team: _____
Tri-County Drilling, Inc

PROJECT: 145981

Date: 7-14-16 **SITE ID:** _____ **LOCATION ID:** MW162 (Well Number) **SAMPLE #:** _____ Pump set at depth: INLET 298'

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: _____

Well Casing Diameter (in): _____ Unit Casing Volume: _____ Weather conditions: _____

Sounding (Depth to Well Bottom): _____ **Static Water Level** (Depth to Water): _____ **Screen Length:** _____

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	ORP (mV) ± 10 millivolts	Prepared By:	Water Description
7-14	10:30	.60	287.09'		23.36	8.79	.602	.395	8.84	110		CLEAR
	10:45	.60	287.03'		24.96	8.81	.655	0.00	8.23	115		CLEAR
	11:00	.54	287.05'		24.79	8.86	.627	0.00	8.35	117		CLEAR
FLOW ADJUST	11:05	.64	287.26'									
	11:15	.64	287.37'		24.59	8.87	.617	0.00	8.16	119		CLEAR
FLOW ADJUST	11:20	.68	287.58'									
	11:30	.68	287.72'		24.80	8.88	.623	0.00	8.18	120		CLEAR
	11:45	.68	287.89'		24.95	8.75	.645	0.00	9.68	129		CLEAR
	12:00	.68	287.90'		24.96	9.03	.649	0.00	10.29	125		CLEAR
	12:15	.68	287.89'	PUMPED 100 GAL	24.64	9.02	.642	0.00	10.56	126		CLEAR
	:	Recovery Lost 1st 2nd 3rd sec. A Prior										
	:		287.30'	0	286.9'	9.57 sec		286.6'	9.96 sec	286.3'	12.56 sec	286.0 1355
	:		287.20'	7.86 sec	286.8'	12.43 sec		286.5'	13.34 sec	286.2'	14.28 sec	
	:		287.06'	19.85 sec	286.7'	12.86 sec		286.4'	13.7 sec	286.1'	15.44 sec	

IRRIGATION FLOW THRU

AGITATE IN CUP

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS. FERROUS IRON READING_____ HYDROGEN SULFIDE READING _____

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____ * Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

DO is too high The readings are suspect.

Groundwater Purge Log

Former George Air Force Base, California

Page 1 of 2

Technician Name: Matt Curtis

PROJECT: 145981

Date: 6/1/16 **SITE ID:** 07071 **LOCATION ID:** ~~AA~~ (Well Number) **SAMPLE #:** MW-163 Pump set at depth: 133 btoc

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: Steel pipe

Well Casing Diameter (in): 4 Unit Casing Volume: _____ Weather conditions: Hot ~ 100°F

Sounding (Depth to Well Bottom): 137 btoc **Static Water Level** (Depth to Water): ~70 **Screen Length:** 20 (115-135) bgs

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3% *	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	~~ORP (mV) ± 10 millivolts~~ TDS	Prepared By:	Water Description
6/1/16	11:00	0.6			27.07	8.73	0.402	814	0.64	0.261	TRI	
"	11:05				28.22	8.83	0.411	—	0.39	0.267	COUNTY	
"	11:13		95.59		28.00	9.00	0.412	849	0.22	0.268	Drilling	
"	11:15		95.54		29.22	8.84	0.412	559	0.15	0.268		
"	11:25		93.71		29.26	8.97	0.414	559	0.12	0.269		
"	11:30		94.50		29.33	8.87	0.408	314	0.09	0.265		
"	11:35		94.48		29.54	8.86	0.408	839	0.07	0.265		
"	11:45		94.76		29.85	8.94	0.412	1000	0.05	0.265		
"	11:50		94.68		30.02	8.96	0.417	1000	0.04	0.271		
"	12:00		—		30.16	8.99	0.416	1000	0.02	0.270		
"	12:30		95.04		30.10	—	0.487	—	0.11	0.317		x Recalibrate
"	12:35		95.31		30.49	8.78	0.430	6.24	0.01	0.280		
"	12:40		95.43		30.51	8.77	0.428	5.38	0.00	0.279		
"	12:45	0.6	95.54		30.49	8.75	0.427	4.53	0.00	0.277		

NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS

* Meter in sunlight so temps elevated

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____

* Taken As Final Water Level Reading and Time after sampling is complete and well has recovered.

Groundwater Purge Log

Former George Air Force Base, California

Page 2 of 2

Technician Name: Matt Curtis

PROJECT: 145981

Date: 06/1/16 **SITE ID:** OT071 **LOCATION ID:** _____ (Well Number) **SAMPLE #:** MW-163 Pump set at depth: 133 btoc

Purging Method/Equipment: MICRO PURGE Sampling Equipment/ID No: SUBMERSIBLE PUMP (Serial No. _____) Type of tubing: Steel pipe

Well Casing Diameter (in): 4 Unit Casing Volume: _____ Weather conditions: Hot ~100°F

Sounding (Depth to Well Bottom): 137 btoc **Static Water Level** (Depth to Water): ~70 **Screen Length:** 20 (115-135 bgs)

Date	Time 24hr	Purge Rate (gal/min)	Dynamic H2O Level (ft)	Volume Purged (gal)	Temp C° ± 3%	pH ± 0.1	Specific Cond. (µS/cm) ± 3%	Turbidity (NTU) ± 10% or <10 NTU	Dissolved oxygen (mg/L) ± .3 milligram per liter	~~ORP (mV) ± 10 millivolts~~ TDS	Prepared By:	Water Description
6/1/16	12:50	0.6	95.65		30.50	8.76	0.427	4.18	0.00	0.277	TriCounty	
	12:55	0.6	95.73	135	30.50	8.76	0.427	4.14	0.00	0.277	Drilling	
	:											
	:											
	:											
	:											
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	:											
	:											
	:											
	:											
	:											
	:											
	:											

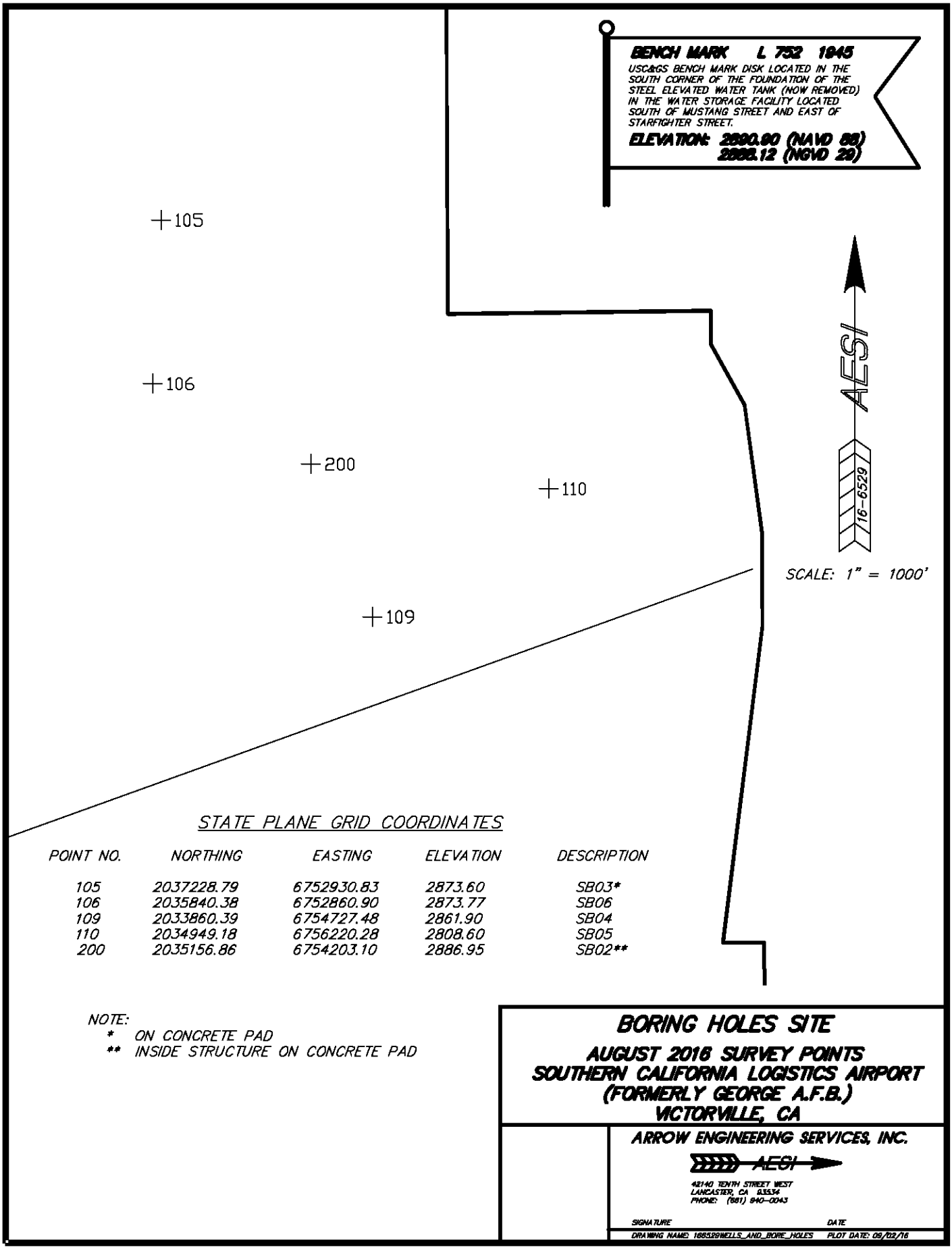
NOTE - DO NOT FORGET TO INCLUDE THE UNITS FOR THE CONDUCTIVITY READINGS

Recovery Depth* (ft from TOC) : _____ Final **Recovery Time*** (min) : _____

* Taken As Final Water Level Reading and Time after sampling is complete and well has recovered

Appendix D
Survey Report

Contract No. FA8903-09-D-8580, Task Order 0018• Final • Revision 0 • September 2017



STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
105	2037228.79	6752930.83	2873.60	SB03*
106	2035840.38	6752860.90	2873.77	SB06
109	2033860.39	6754727.48	2861.90	SB04
110	2034949.18	6756220.28	2808.60	SB05
200	2035156.86	6754203.10	2886.95	SB02**

NOTE:
* ON CONCRETE PAD
** INSIDE STRUCTURE ON CONCRETE PAD

BORING HOLES SITE

AUGUST 2016 SURVEY POINTS
SOUTHERN CALIFORNIA LOGISTICS AIRPORT
(FORMERLY GEORGE A.F.B.)
VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.

AESI

42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

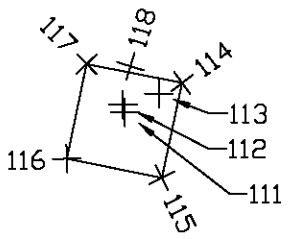
SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

BENCH MARK L 752 1945

USC&GS BENCH MARK DISK LOCATED IN THE SOUTH CORNER OF THE FOUNDATION OF THE STEEL ELEVATED WATER TANK (NOW REMOVED) IN THE WATER STORAGE FACILITY LOCATED SOUTH OF MUSTANG STREET AND EAST OF STARFIGHTER STREET.

ELEVATION: 2890.90 (NAVD 88)
2888.12 (NGVD 29)



SCALE: 1" = 5'

STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
111	2033256.96	6756204.29	2837.04	INTERIOR CASING
112	2033257.18	6756204.24	2837.64	EXTERIOR VAULT
113	2033257.49	6756205.27	2834.41	TAG
114	2033257.80	6756205.93	2834.35	CC NE
115	2033255.08	6756205.35	2834.32	CC SE
116	2033255.63	6756202.63	2834.37	CC SW
117	2033258.34	6756203.20	2834.33	CC HW
118	2033258.28	6756204.45	2833.74	GRND

NOTES:

- BRASS TAG WAS PUNCHED AT SURVEYED POSITION.
- INTERIOR CASING WAS NOTCHED WITH A FILE AND MARKED WITH BLACK MARKER AT SURVEYED POSITION.
- EXTERIOR VAULT WAS MARKED WITH PUNCHED AND MARKED WITH A HI-VIS GREEN MARKER AT SURVEYED POSITION.

MW-159 WELL SITE

AUGUST 2016 SURVEY POINTS
SOUTHERN CALIFORNIA LOGISTICS AIRPORT
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VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.

AESI

42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

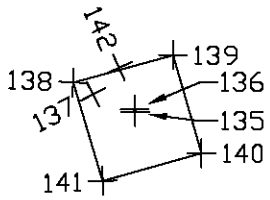
SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

BENCH MARK L 752 1945

USC&GS BENCH MARK DISK LOCATED IN THE SOUTH CORNER OF THE FOUNDATION OF THE STEEL ELEVATED WATER TANK (NOW REMOVED) IN THE WATER STORAGE FACILITY LOCATED SOUTH OF MUSTANG STREET AND EAST OF STARFIGHTER STREET.

ELEVATION: 2890.90 (NAVD 88)
2888.12 (NGVD 29)



SCALE: 1" = 5'

STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
135	2030853.43	6754941.99	2893.08	INTERIOR CASING
136	2030853.51	6754941.98	2893.46	EXTERIOR VAULT
137	2030853.95	6754940.78	2890.68	TAG
138	2030854.29	6754940.21	2890.66	CC NW
139	2030855.07	6754943.08	2890.68	CC NE
140	2030852.26	6754943.89	2890.67	CC SE
141	2030851.46	6754941.06	2890.72	CC SW
142	2030854.72	6754941.53	2890.25	GND

NOTES:

- BRASS TAG WAS PUNCHED AT SURVEYED POSITION.
- INTERIOR CASING WAS NOTCHED WITH A FILE AND MARKED WITH BLACK MARKER AT SURVEYED POSITION.
- EXTERIOR VAULT WAS MARKED WITH PUNCHED AND MARKED WITH A HI-VIS GREEN MARKER AT SURVEYED POSITION.

MW-160 WELL SITE

AUGUST 2016 SURVEY POINTS
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VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.

AESI

42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

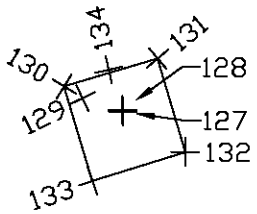
SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

BENCH MARK L 752 1945

USC&GS BENCH MARK DISK LOCATED IN THE SOUTH CORNER OF THE FOUNDATION OF THE STEEL ELEVATED WATER TANK (NOW REMOVED) IN THE WATER STORAGE FACILITY LOCATED SOUTH OF MUSTANG STREET AND EAST OF STARFIGHTER STREET.

ELEVATION: 2890.90 (NAVD 88)
2888.12 (NGVD 29)



SCALE: 1" = 5'

STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
127	2030837.42	6754947.03	2892.87	INTERIOR CASING
128	2030837.48	6754947.03	2893.14	EXTERIOR VAULT
129	2030837.82	6754945.88	2890.38	TAG
130	2030838.15	6754945.35	2890.36	CC NW
131	2030838.95	6754948.03	2890.37	CC NE
132	2030836.27	6754948.83	2890.35	CC SE
133	2030835.44	6754946.16	2890.34	CC SW
134	2030838.63	6754946.63	2889.78	GND

NOTES:

- BRASS TAG WAS PUNCHED AT SURVEYED POSITION.
- INTERIOR CASING WAS NOTCHED WITH A FILE AND MARKED WITH BLACK MARKER AT SURVEYED POSITION.
- EXTERIOR VAULT WAS MARKED WITH PUNCHED AND MARKED WITH A HI-VIS GREEN MARKER AT SURVEYED POSITION.

MW-161 WELL SITE

AUGUST 2016 SURVEY POINTS
SOUTHERN CALIFORNIA LOGISTICS AIRPORT
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VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.
AESI
42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

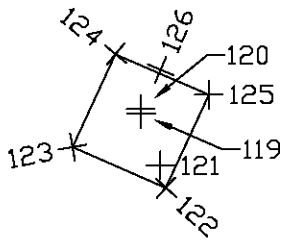
SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

BENCH MARK L 752 1945

USC&GS BENCH MARK DISK LOCATED IN THE SOUTH CORNER OF THE FOUNDATION OF THE STEEL ELEVATED WATER TANK (NOW REMOVED) IN THE WATER STORAGE FACILITY LOCATED SOUTH OF MUSTANG STREET AND EAST OF STARFIGHTER STREET.

ELEVATION: 2890.90 (NAVD 88)
2888.12 (NGVD 29)



SCALE: 1" = 5'

STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
119	2031876.89	6755156.92	2889.93	INTERIOR CASING
120	2031877.03	6755156.91	2890.18	EXTERIOR VAULT
121	2031875.43	6755157.47	2887.41	TAG
122	2031874.79	6755157.63	2887.40	CC SE
123	2031875.95	6755154.95	2887.40	CC SW
124	2031878.60	6755155.18	2887.38	CC NW
125	2031877.45	6755158.86	2887.40	CC NE
126	2031878.17	6755157.48	2886.89	GRND

NOTES:

- BRASS TAG WAS PUNCHED AT SURVEYED POSITION.
- INTERIOR CASING WAS NOTCHED WITH A FILE AND MARKED WITH BLACK MARKER AT SURVEYED POSITION.
- EXTERIOR VAULT WAS MARKED WITH PUNCHED AND MARKED WITH A HI-VIS GREEN MARKER AT SURVEYED POSITION.

MW-162 WELL SITE

AUGUST 2016 SURVEY POINTS
SOUTHERN CALIFORNIA LOGISTICS AIRPORT
(FORMERLY GEORGE A.F.B.)
VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.

AESI

42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

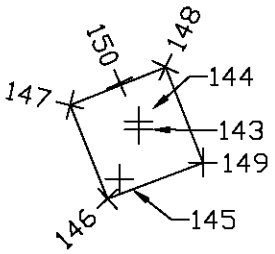
SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

BENCH MARK L 752 1945

USC&GS BENCH MARK DISK LOCATED IN THE SOUTH CORNER OF THE FOUNDATION OF THE STEEL ELEVATED WATER TANK (NOW REMOVED) IN THE WATER STORAGE FACILITY LOCATED SOUTH OF MUSTANG STREET AND EAST OF STARFIGHTER STREET.

ELEVATION: 2890.90 (NAVD 88)
2888.12 (NGVD 29)



SCALE: 1" = 5'

STATE PLANE GRID COORDINATES

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
143	2031852.38	6757720.35	2736.08	INTERIOR CASING
144	2031852.62	6757720.36	2736.50	EXTERIOR VAULT
145	2031850.96	6757719.81	2733.61	TAG
146	2031850.41	6757719.46	2733.56	CC SW
147	2031853.09	6757718.39	2733.53	CC NW
148	2031854.17	6757721.12	2733.53	CC NE
149	2031851.43	6757722.20	2733.57	CC SE
150	2031853.72	6757719.81	2733.03	GRND

NOTES:

- BRASS TAG WAS PUNCHED AT SURVEYED POSITION.
- INTERIOR CASING WAS NOTCHED WITH A FILE AND MARKED WITH BLACK MARKER AT SURVEYED POSITION.
- EXTERIOR VAULT WAS MARKED WITH PUNCHED AND MARKED WITH A HI-VIS GREEN MARKER AT SURVEYED POSITION.

MW-163 WELL SITE

AUGUST 2016 SURVEY POINTS
SOUTHERN CALIFORNIA LOGISTICS AIRPORT
(FORMERLY GEORGE A.F.B.)
VICTORVILLE, CA

ARROW ENGINEERING SERVICES, INC.

AESI

42140 TENTH STREET WEST
LANCASTER, CA 93534
PHONE: (661) 940-0043

SIGNATURE DATE

DRAWING NAME: 1665129WELLS_AND_BORE_HOLES PLOT DATE: 08/02/16

Appendix E
Analytical Report for Investigation-Derived Waste and Waste Manifests

Contract No. FA8903-09-D-8580, Task Order 0018• Final • Revision 0 • September 2017

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WORK ORDER NUMBER: 16-08-2041

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CB&I

Client Project Name: Former George AFB, CA / 145981

Attention: Tim Roth
2410 Cherahala Blvd
Knoxville, TN 37932-1566

Approved for release on 09/07/2016 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 16-08-2041

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Work Order Narrative

Work Order: 16-08-2041 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/27/16. They were assigned to Work Order 16-08-2041.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Return to Contents

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Sample Summary

Client:	CB&I 2410 Cherahala Blvd Knoxville, TN 37932-1566	Work Order:	16-08-2041
		Project Name:	Former George AFB, CA / 145981
		PO Number:	
		Date/Time Received:	08/27/16 10:40
		Number of Containers:	10
Attn:	Tim Roth		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
OT071-90001	16-08-2041-1	08/25/16 11:20	2	Solid
OT071-90002	16-08-2041-2	08/25/16 11:30	2	Solid
OT071-90003	16-08-2041-3	08/25/16 11:40	2	Solid
OT071-90004	16-08-2041-4	08/25/16 12:00	2	Solid
OT071-90005	16-08-2041-5	08/25/16 10:20	2	Solid

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
		Units:	%
Project: Former George AFB, CA / 145981			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-B**	**08/25/16 11:20**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	22	0.10	0.10	0.10	1.00	

OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	16	0.10	0.10	0.10	1.00	

OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	32	0.10	0.10	0.10	1.00	

OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	33	0.10	0.10	0.10	1.00	

OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	70	0.10	0.10	0.10	1.00	

Method Blank	**099-05-014-6256**	**N/A**	**Solid**	**N/A**	**08/31/16**	**08/31/16 17:00**	**G0831MOIB1**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	ND	0.10	0.10	0.10	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:50**	**160831B08**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	23	1.5	2.5	6.3	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	79	62-152	

OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:34**	**160831B08**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	ND	1.4	2.4	6.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	67	62-152	

OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:18**	**160831B08**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	23	1.7	2.9	7.3	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	91	62-152	

OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:02**	**160831B08**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	27	1.7	2.9	7.3	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	82	62-152	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 19:46**	**160831B08**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	ND	3.8	6.6	16	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	74	62-152	

Method Blank	**099-15-512-315**	**N/A**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 19:14**	**160831B08**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Diesel	ND	1.2	2.0	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	86	62-152	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-B**	**08/25/16 11:20**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 04:48**	**160901L046**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.17	0.33	0.66	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	37	39-129	2,6

OT071-90002	**16-08-2041-2-B**	**08/25/16 11:30**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 03:13**	**160901L046**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.15	0.30	0.60	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	39-129	

OT071-90003	**16-08-2041-3-B**	**08/25/16 11:40**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 05:20**	**160901L046**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.19	0.38	0.76	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	82	39-129	

OT071-90004	**16-08-2041-4-B**	**08/25/16 12:00**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 05:52**	**160901L046**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.18	0.35	0.71	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	49	39-129	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-B**	**08/25/16 10:20**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 06:23**	**160901L046**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.40	0.80	1.6	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	91	39-129	

Method Blank	**099-14-493-63**	**N/A**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 02:10**	**160901L046**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
TPH as Gasoline	ND	0.13	0.25	0.50	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	39-129	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:37**	**160902L04D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.190	0.191	0.955	1.00	U
Arsenic	0.679	0.330	0.382	0.637	1.00	
Barium	77.8	0.197	0.318	0.637	1.00	
Beryllium	0.507	0.174	0.318	0.637	1.00	J
Cadmium	0.326	0.172	0.318	0.637	1.00	J
Chromium	33.9	0.181	0.318	0.637	1.00	
Cobalt	6.48	0.189	0.318	0.637	1.00	
Copper	9.12	0.172	0.318	0.637	1.00	
Lead	3.78	0.168	0.318	0.637	1.00	
Molybdenum	ND	0.168	0.318	0.637	1.00	U
Nickel	7.05	0.184	0.318	0.637	1.00	
Selenium	ND	0.382	0.478	0.955	1.00	U
Silver	ND	0.109	0.159	0.318	1.00	U
Thallium	ND	0.193	0.478	0.955	1.00	U
Vanadium	32.0	0.180	0.318	0.637	1.00	
Zinc	40.7	0.226	0.318	0.637	1.00	
Aluminum	8450	0.455	0.637	3.18	1.00	
Calcium	7540	0.485	1.27	6.37	1.00	
Iron	12600	0.169	0.318	6.37	1.00	
Magnesium	5440	0.216	0.318	6.37	1.00	B
Manganese	330	0.177	0.191	0.318	1.00	
Potassium	2910	2.24	6.37	31.8	1.00	
Sodium	318	2.31	6.37	31.8	1.00	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:38**	**160902L04D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.179	0.180	0.899	1.01	U
Arsenic	0.677	0.311	0.360	0.600	1.01	
Barium	41.3	0.185	0.300	0.600	1.01	
Beryllium	ND	0.164	0.300	0.600	1.01	U
Cadmium	ND	0.162	0.300	0.600	1.01	U
Chromium	2.68	0.171	0.300	0.600	1.01	
Cobalt	1.77	0.178	0.300	0.600	1.01	
Copper	2.46	0.162	0.300	0.600	1.01	
Lead	1.23	0.158	0.300	0.600	1.01	
Molybdenum	ND	0.158	0.300	0.600	1.01	U
Nickel	1.97	0.174	0.300	0.600	1.01	
Selenium	0.436	0.359	0.450	0.899	1.01	J
Silver	ND	0.103	0.150	0.300	1.01	U
Thallium	ND	0.182	0.450	0.899	1.01	U
Vanadium	9.55	0.169	0.300	0.600	1.01	
Zinc	10.2	0.213	0.300	0.600	1.01	
Aluminum	1950	0.429	0.600	3.00	1.01	
Calcium	2730	0.456	1.20	6.00	1.01	
Iron	3510	0.159	0.300	6.00	1.01	
Magnesium	1340	0.203	0.300	6.00	1.01	B
Manganese	108	0.167	0.180	0.300	1.01	
Potassium	746	2.10	6.00	30.0	1.01	
Sodium	264	2.18	6.00	30.0	1.01	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:39**	**160902L04D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.221	0.222	1.11	1.01	U
Arsenic	2.68	0.384	0.444	0.741	1.01	
Barium	143	0.229	0.370	0.741	1.01	
Beryllium	0.586	0.203	0.370	0.741	1.01	J
Cadmium	0.429	0.201	0.370	0.741	1.01	J
Chromium	10.2	0.211	0.370	0.741	1.01	
Cobalt	7.03	0.219	0.370	0.741	1.01	
Copper	14.2	0.200	0.370	0.741	1.01	
Lead	4.99	0.195	0.370	0.741	1.01	
Molybdenum	0.239	0.195	0.370	0.741	1.01	J
Nickel	7.47	0.214	0.370	0.741	1.01	
Selenium	ND	0.444	0.555	1.11	1.01	U
Silver	ND	0.127	0.185	0.370	1.01	U
Thallium	ND	0.225	0.555	1.11	1.01	U
Vanadium	31.9	0.209	0.370	0.741	1.01	
Zinc	41.2	0.263	0.370	0.741	1.01	
Aluminum	9330	0.530	0.741	3.70	1.01	
Calcium	25700	0.564	1.48	7.41	1.01	
Iron	13200	0.197	0.370	7.41	1.01	
Magnesium	5550	0.251	0.370	7.41	1.01	B
Manganese	465	0.206	0.222	0.370	1.01	
Potassium	3160	2.60	7.41	37.0	1.01	
Sodium	1550	2.69	7.41	37.0	1.01	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:40**	**160902L04D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.211	0.213	1.06	0.957	U
Arsenic	2.22	0.368	0.426	0.710	0.957	
Barium	102	0.219	0.355	0.710	0.957	
Beryllium	0.437	0.194	0.355	0.710	0.957	J
Cadmium	0.336	0.192	0.355	0.710	0.957	J
Chromium	7.82	0.202	0.355	0.710	0.957	
Cobalt	5.22	0.210	0.355	0.710	0.957	
Copper	9.89	0.191	0.355	0.710	0.957	
Lead	4.04	0.187	0.355	0.710	0.957	
Molybdenum	0.247	0.187	0.355	0.710	0.957	J
Nickel	5.55	0.206	0.355	0.710	0.957	
Selenium	0.896	0.425	0.532	1.06	0.957	J
Silver	ND	0.122	0.177	0.355	0.957	U
Thallium	ND	0.215	0.532	1.06	0.957	U
Vanadium	24.3	0.201	0.355	0.710	0.957	
Zinc	31.0	0.252	0.355	0.710	0.957	
Aluminum	6710	0.508	0.710	3.55	0.957	
Calcium	18000	0.540	1.42	7.10	0.957	
Iron	9940	0.189	0.355	7.10	0.957	
Magnesium	4160	0.240	0.355	7.10	0.957	B
Manganese	360	0.197	0.213	0.355	0.957	
Potassium	2260	2.49	7.10	35.5	0.957	
Sodium	945	2.58	7.10	35.5	0.957	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:41**	**160902L04D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.493	0.497	2.48	1.01	U
Arsenic	5.72	0.858	0.994	1.66	1.01	
Barium	218	0.511	0.828	1.66	1.01	
Beryllium	1.45	0.453	0.828	1.66	1.01	J
Cadmium	0.768	0.448	0.828	1.66	1.01	J
Chromium	21.2	0.471	0.828	1.66	1.01	
Cobalt	13.7	0.490	0.828	1.66	1.01	
Copper	30.1	0.446	0.828	1.66	1.01	
Lead	14.1	0.436	0.828	1.66	1.01	
Molybdenum	ND	0.437	0.828	1.66	1.01	U
Nickel	14.7	0.479	0.828	1.66	1.01	
Selenium	ND	0.992	1.24	2.48	1.01	U
Silver	ND	0.284	0.414	0.828	1.01	U
Thallium	ND	0.502	1.24	2.48	1.01	U
Vanadium	52.1	0.468	0.828	1.66	1.01	
Zinc	81.6	0.588	0.828	1.66	1.01	
Aluminum	15600	1.18	1.66	8.28	1.01	
Calcium	33400	1.26	3.31	16.6	1.01	
Iron	23200	0.440	0.828	16.6	1.01	
Magnesium	10500	0.560	0.828	16.6	1.01	B
Manganese	975	0.461	0.497	0.828	1.01	
Potassium	6100	5.81	16.6	82.8	1.01	
Sodium	3170	6.01	16.6	82.8	1.01	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-481-287**	**N/A**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:15**	**160902L04D**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Antimony	ND	0.147	0.149	0.743	0.990	U
Arsenic	ND	0.257	0.297	0.495	0.990	U
Barium	ND	0.153	0.248	0.495	0.990	U
Beryllium	ND	0.136	0.248	0.495	0.990	U
Cadmium	ND	0.134	0.248	0.495	0.990	U
Chromium	ND	0.141	0.248	0.495	0.990	U
Cobalt	ND	0.147	0.248	0.495	0.990	U
Copper	ND	0.133	0.248	0.495	0.990	U
Lead	ND	0.130	0.248	0.495	0.990	U
Molybdenum	ND	0.131	0.248	0.495	0.990	U
Nickel	ND	0.143	0.248	0.495	0.990	U
Selenium	ND	0.297	0.371	0.743	0.990	U
Silver	ND	0.0849	0.124	0.248	0.990	U
Thallium	ND	0.150	0.371	0.743	0.990	U
Vanadium	ND	0.140	0.248	0.495	0.990	U
Zinc	ND	0.176	0.248	0.495	0.990	U
Aluminum	ND	0.354	0.495	2.48	0.990	U
Calcium	ND	0.377	0.990	4.95	0.990	U
Iron	ND	0.132	0.248	4.95	0.990	U
Magnesium	0.487	0.168	0.248	4.95	0.990	J
Manganese	ND	0.138	0.149	0.248	0.990	U
Potassium	ND	1.74	4.95	24.8	0.990	U
Sodium	ND	1.80	4.95	24.8	0.990	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:22**	**160906L02D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	ND	0.00761	0.0216	0.108	1.00	U

OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:29**	**160906L02D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	ND	0.00678	0.0192	0.0962	1.00	U

OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:35**	**160906L02D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	0.0104	0.00875	0.0249	0.124	1.00	J

OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:38**	**160906L02D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	0.0115	0.00843	0.0239	0.120	1.00	J

OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:40**	**160906L02D**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	ND	0.0183	0.0520	0.260	1.00	U

Method Blank	**099-16-280-124**	**N/A**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:18**	**160906L02D**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Mercury	ND	0.00578	0.0164	0.0820	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:03**	**160901L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	4.7	5.7	13	1.00	U
Gamma-BHC	ND	2.8	5.7	6.4	1.00	U
Beta-BHC	ND	3.2	5.7	6.4	1.00	U
Heptachlor	ND	2.8	5.7	6.4	1.00	U
Delta-BHC	ND	5.6	5.7	13	1.00	U
Aldrin	ND	2.8	5.7	6.4	1.00	U
Heptachlor Epoxide	ND	4.7	5.7	13	1.00	U
Endosulfan I	ND	2.5	5.7	6.4	1.00	U
Dieldrin	ND	2.8	5.7	6.4	1.00	U
4,4'-DDE	ND	2.8	5.7	6.4	1.00	U
Endrin	ND	3.0	5.7	6.4	1.00	U
Endrin Aldehyde	ND	3.9	5.7	6.4	1.00	U
4,4'-DDD	ND	3.0	5.7	6.4	1.00	U
Endosulfan II	ND	3.0	5.7	6.4	1.00	U
4,4'-DDT	ND	2.8	5.7	6.4	1.00	U
Endosulfan Sulfate	ND	3.3	5.7	6.4	1.00	U
Methoxychlor	ND	3.5	5.7	6.4	1.00	U
Chlordane	ND	33	51	64	1.00	U
Toxaphene	ND	57	64	130	1.00	U
Endrin Ketone	ND	3.2	5.7	6.4	1.00	U
Alpha Chlordane	ND	2.6	5.7	6.4	1.00	U
Gamma Chlordane	ND	5.3	5.7	13	1.00	U
Hexachlorobenzene	ND	2.6	5.7	6.4	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	121	55-130	
2,4,5,6-Tetrachloro-m-Xylene	109	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:33**	**160901L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	4.4	5.3	12	1.00	U
Gamma-BHC	ND	2.6	5.3	5.9	1.00	U
Beta-BHC	ND	2.9	5.3	5.9	1.00	U
Heptachlor	ND	2.6	5.3	5.9	1.00	U
Delta-BHC	ND	5.2	5.3	12	1.00	U
Aldrin	ND	2.6	5.3	5.9	1.00	U
Heptachlor Epoxide	ND	4.4	5.3	12	1.00	U
Endosulfan I	ND	2.4	5.3	5.9	1.00	U
Dieldrin	ND	2.6	5.3	5.9	1.00	U
4,4'-DDE	ND	2.6	5.3	5.9	1.00	U
Endrin	ND	2.8	5.3	5.9	1.00	U
Endrin Aldehyde	ND	3.6	5.3	5.9	1.00	U
4,4'-DDD	ND	2.8	5.3	5.9	1.00	U
Endosulfan II	ND	2.8	5.3	5.9	1.00	U
4,4'-DDT	ND	2.6	5.3	5.9	1.00	U
Endosulfan Sulfate	ND	3.1	5.3	5.9	1.00	U
Methoxychlor	ND	3.2	5.3	5.9	1.00	U
Chlordane	ND	31	47	59	1.00	U
Toxaphene	ND	53	59	120	1.00	U
Endrin Ketone	ND	3.0	5.3	5.9	1.00	U
Alpha Chlordane	ND	2.4	5.3	5.9	1.00	U
Gamma Chlordane	ND	4.9	5.3	12	1.00	U
Hexachlorobenzene	ND	2.4	5.3	5.9	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	55-130	
2,4,5,6-Tetrachloro-m-Xylene	91	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:47**	**160901L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	5.5	6.6	15	1.00	U
Gamma-BHC	ND	3.3	6.6	7.4	1.00	U
Beta-BHC	ND	3.7	6.6	7.4	1.00	U
Heptachlor	ND	3.2	6.6	7.4	1.00	U
Delta-BHC	ND	6.5	6.6	15	1.00	U
Aldrin	ND	3.2	6.6	7.4	1.00	U
Heptachlor Epoxide	ND	5.4	6.6	15	1.00	U
Endosulfan I	ND	2.9	6.6	7.4	1.00	U
Dieldrin	ND	3.2	6.6	7.4	1.00	U
4,4'-DDE	ND	3.3	6.6	7.4	1.00	U
Endrin	ND	3.5	6.6	7.4	1.00	U
Endrin Aldehyde	ND	4.5	6.6	7.4	1.00	U
4,4'-DDD	ND	3.5	6.6	7.4	1.00	U
Endosulfan II	ND	3.5	6.6	7.4	1.00	U
4,4'-DDT	ND	3.2	6.6	7.4	1.00	U
Endosulfan Sulfate	ND	3.8	6.6	7.4	1.00	U
Methoxychlor	ND	4.0	6.6	7.4	1.00	U
Chlordane	ND	38	59	74	1.00	U
Toxaphene	ND	66	74	150	1.00	U
Endrin Ketone	ND	3.7	6.6	7.4	1.00	U
Alpha Chlordane	ND	3.0	6.6	7.4	1.00	U
Gamma Chlordane	ND	6.1	6.6	15	1.00	U
Hexachlorobenzene	ND	3.0	6.6	7.4	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	55-130	
2,4,5,6-Tetrachloro-m-Xylene	100	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 16:01**	**160901L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	5.5	6.6	15	1.00	U
Gamma-BHC	ND	3.3	6.6	7.4	1.00	U
Beta-BHC	ND	3.7	6.6	7.4	1.00	U
Heptachlor	ND	3.2	6.6	7.4	1.00	U
Delta-BHC	ND	6.5	6.6	15	1.00	U
Aldrin	ND	3.2	6.6	7.4	1.00	U
Heptachlor Epoxide	ND	5.5	6.6	15	1.00	U
Endosulfan I	ND	2.9	6.6	7.4	1.00	U
Dieldrin	ND	3.2	6.6	7.4	1.00	U
4,4'-DDE	ND	3.3	6.6	7.4	1.00	U
Endrin	ND	3.5	6.6	7.4	1.00	U
Endrin Aldehyde	ND	4.5	6.6	7.4	1.00	U
4,4'-DDD	ND	3.5	6.6	7.4	1.00	U
Endosulfan II	ND	3.5	6.6	7.4	1.00	U
4,4'-DDT	ND	3.2	6.6	7.4	1.00	U
Endosulfan Sulfate	ND	3.9	6.6	7.4	1.00	U
Methoxychlor	ND	4.0	6.6	7.4	1.00	U
Chlordane	ND	39	59	74	1.00	U
Toxaphene	ND	66	74	150	1.00	U
Endrin Ketone	ND	3.7	6.6	7.4	1.00	U
Alpha Chlordane	ND	3.0	6.6	7.4	1.00	U
Gamma Chlordane	ND	6.1	6.6	15	1.00	U
Hexachlorobenzene	ND	3.0	6.6	7.4	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	127	55-130	
2,4,5,6-Tetrachloro-m-Xylene	116	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 16:16**	**160901L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	12	15	33	1.00	U
Gamma-BHC	ND	7.3	15	16	1.00	U
Beta-BHC	ND	8.1	15	16	1.00	U
Heptachlor	ND	7.1	15	16	1.00	U
Delta-BHC	ND	14	15	33	1.00	U
Aldrin	ND	7.2	15	16	1.00	U
Heptachlor Epoxide	ND	12	15	33	1.00	U
Endosulfan I	ND	6.5	15	16	1.00	U
Dieldrin	ND	7.2	15	16	1.00	U
4,4'-DDE	ND	7.3	15	16	1.00	U
Endrin	ND	7.7	15	16	1.00	U
Endrin Aldehyde	ND	9.9	15	16	1.00	U
4,4'-DDD	ND	7.7	15	16	1.00	U
Endosulfan II	ND	7.7	15	16	1.00	U
4,4'-DDT	ND	7.2	15	16	1.00	U
Endosulfan Sulfate	ND	8.6	15	16	1.00	U
Methoxychlor	ND	8.9	15	16	1.00	U
Chlordane	ND	86	130	160	1.00	U
Toxaphene	ND	150	160	330	1.00	U
Endrin Ketone	ND	8.2	15	16	1.00	U
Alpha Chlordane	ND	6.6	15	16	1.00	U
Gamma Chlordane	ND	14	15	33	1.00	U
Hexachlorobenzene	ND	6.6	15	16	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	119	55-130	
2,4,5,6-Tetrachloro-m-Xylene	104	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-471-103**	**N/A**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 13:23**	**160901L05**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.5	10	1.00	U
Gamma-BHC	ND	2.2	4.5	5.0	1.00	U
Beta-BHC	ND	2.5	4.5	5.0	1.00	U
Heptachlor	ND	2.2	4.5	5.0	1.00	U
Delta-BHC	ND	4.4	4.5	10	1.00	U
Aldrin	ND	2.2	4.5	5.0	1.00	U
Heptachlor Epoxide	ND	3.7	4.5	10	1.00	U
Endosulfan I	ND	2.0	4.5	5.0	1.00	U
Dieldrin	ND	2.2	4.5	5.0	1.00	U
4,4'-DDE	ND	2.2	4.5	5.0	1.00	U
Endrin	ND	2.4	4.5	5.0	1.00	U
Endrin Aldehyde	ND	3.0	4.5	5.0	1.00	U
4,4'-DDD	ND	2.4	4.5	5.0	1.00	U
Endosulfan II	ND	2.4	4.5	5.0	1.00	U
4,4'-DDT	ND	2.2	4.5	5.0	1.00	U
Endosulfan Sulfate	ND	2.6	4.5	5.0	1.00	U
Methoxychlor	ND	2.7	4.5	5.0	1.00	U
Chlordane	ND	26	40	50	1.00	U
Toxaphene	ND	45	50	100	1.00	U
Endrin Ketone	ND	2.5	4.5	5.0	1.00	U
Alpha Chlordane	ND	2.0	4.5	5.0	1.00	U
Gamma Chlordane	ND	4.2	4.5	10	1.00	U
Hexachlorobenzene	ND	2.0	4.5	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	55-130	
2,4,5,6-Tetrachloro-m-Xylene	115	70-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:28**	**160901L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	27	57	64	1.00	U
Aroclor-1221	ND	54	57	64	1.00	U
Aroclor-1232	ND	32	57	64	1.00	U
Aroclor-1242	ND	47	57	64	1.00	U
Aroclor-1248	ND	41	57	64	1.00	U
Aroclor-1254	ND	40	57	64	1.00	U
Aroclor-1260	ND	39	57	64	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	94	60-125	
2,4,5,6-Tetrachloro-m-Xylene	90	50-130	

OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:47**	**160901L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	25	53	59	1.00	U
Aroclor-1221	ND	50	53	59	1.00	U
Aroclor-1232	ND	30	53	59	1.00	U
Aroclor-1242	ND	44	53	59	1.00	U
Aroclor-1248	ND	38	53	59	1.00	U
Aroclor-1254	ND	38	53	59	1.00	U
Aroclor-1260	ND	36	53	59	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	65	60-125	
2,4,5,6-Tetrachloro-m-Xylene	73	50-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 12:05**	**160901L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	31	66	74	1.00	U
Aroclor-1221	ND	62	66	74	1.00	U
Aroclor-1232	ND	37	66	74	1.00	U
Aroclor-1242	ND	55	66	74	1.00	U
Aroclor-1248	ND	47	66	74	1.00	U
Aroclor-1254	ND	47	66	74	1.00	U
Aroclor-1260	ND	45	66	74	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	60	60-125	
2,4,5,6-Tetrachloro-m-Xylene	79	50-130	

OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 17:29**	**160901L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	31	66	74	1.00	U
Aroclor-1221	ND	62	66	74	1.00	U
Aroclor-1232	ND	37	66	74	1.00	U
Aroclor-1242	ND	55	66	74	1.00	U
Aroclor-1248	ND	47	66	74	1.00	U
Aroclor-1254	ND	47	66	74	1.00	U
Aroclor-1260	ND	45	66	74	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	84	60-125	
2,4,5,6-Tetrachloro-m-Xylene	97	50-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 17:46**	**160901L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	68	150	160	1.00	U
Aroclor-1221	ND	140	150	160	1.00	U
Aroclor-1232	ND	83	150	160	1.00	U
Aroclor-1242	250	120	150	160	1.00	
Aroclor-1248	ND	100	150	160	1.00	U
Aroclor-1254	ND	100	150	160	1.00	U
Aroclor-1260	ND	100	150	160	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	60-125	
2,4,5,6-Tetrachloro-m-Xylene	92	50-130	

Method Blank	**099-14-473-200**	**N/A**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 10:21**	**160901L06**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Aroclor-1016	ND	21	45	50	1.00	U
Aroclor-1221	ND	42	45	50	1.00	U
Aroclor-1232	ND	25	45	50	1.00	U
Aroclor-1242	ND	37	45	50	1.00	U
Aroclor-1248	ND	32	45	50	1.00	U
Aroclor-1254	ND	32	45	50	1.00	U
Aroclor-1260	ND	30	45	50	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	60-125	
2,4,5,6-Tetrachloro-m-Xylene	90	50-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 14:41**	**160902L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.36	0.50	0.63	1.00	U
Azinphos Methyl	ND	0.28	0.50	0.63	1.00	U
Bolstar	ND	0.22	0.50	0.63	1.00	U
Chlorpyrifos	ND	0.21	0.50	0.63	1.00	U
Coumaphos	ND	0.19	0.50	0.63	1.00	U
Diazinon	ND	0.20	0.50	0.63	1.00	U
Dichlorvos	ND	0.35	0.50	0.63	1.00	U
Disulfoton	ND	0.19	0.50	0.63	1.00	U
Ethoprop	ND	0.21	0.50	0.63	1.00	U
Fensulfothion	ND	0.23	0.50	0.63	1.00	U
Fenthion	ND	0.23	0.50	0.63	1.00	U
Merphos	ND	0.24	0.50	0.63	1.00	U
Methyl Parathion	ND	0.27	0.50	0.63	1.00	U
Mevinphos	ND	0.30	0.50	0.63	1.00	U
Naled	ND	2.2	4.0	5.0	1.00	U
Phorate	ND	0.28	0.50	0.63	1.00	U
Ronnel	ND	0.20	0.50	0.63	1.00	U
Stirophos	ND	0.75	2.0	2.5	1.00	U
Tokuthion	ND	0.21	0.50	0.63	1.00	U
Trichloronate	ND	0.19	0.50	0.63	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	89	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 15:30**	**160902L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.34	0.47	0.59	1.00	U
Azinphos Methyl	ND	0.27	0.47	0.59	1.00	U
Bolstar	ND	0.21	0.47	0.59	1.00	U
Chlorpyrifos	ND	0.20	0.47	0.59	1.00	U
Coumaphos	ND	0.18	0.47	0.59	1.00	U
Diazinon	ND	0.19	0.47	0.59	1.00	U
Dichlorvos	ND	0.33	0.47	0.59	1.00	U
Disulfoton	ND	0.18	0.47	0.59	1.00	U
Ethoprop	ND	0.20	0.47	0.59	1.00	U
Fensulfothion	ND	0.21	0.47	0.59	1.00	U
Fenthion	ND	0.22	0.47	0.59	1.00	U
Merphos	ND	0.23	0.47	0.59	1.00	U
Methyl Parathion	ND	0.25	0.47	0.59	1.00	U
Mevinphos	ND	0.29	0.47	0.59	1.00	U
Naled	ND	2.0	3.8	4.7	1.00	U
Phorate	ND	0.27	0.47	0.59	1.00	U
Ronnel	ND	0.18	0.47	0.59	1.00	U
Stirophos	ND	0.71	1.9	2.4	1.00	U
Tokuthion	ND	0.20	0.47	0.59	1.00	U
Trichloronate	ND	0.18	0.47	0.59	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	90	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 16:18**	**160902L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.42	0.59	0.73	1.00	U
Azinphos Methyl	ND	0.33	0.59	0.73	1.00	U
Bolstar	ND	0.26	0.59	0.73	1.00	U
Chlorpyrifos	ND	0.24	0.59	0.73	1.00	U
Coumaphos	ND	0.22	0.59	0.73	1.00	U
Diazinon	ND	0.23	0.59	0.73	1.00	U
Dichlorvos	ND	0.40	0.59	0.73	1.00	U
Disulfoton	ND	0.22	0.59	0.73	1.00	U
Ethoprop	ND	0.24	0.59	0.73	1.00	U
Fensulfothion	ND	0.27	0.59	0.73	1.00	U
Fenthion	ND	0.27	0.59	0.73	1.00	U
Merphos	ND	0.28	0.59	0.73	1.00	U
Methyl Parathion	ND	0.31	0.59	0.73	1.00	U
Mevinphos	ND	0.35	0.59	0.73	1.00	U
Naled	ND	2.5	4.7	5.9	1.00	U
Phorate	ND	0.33	0.59	0.73	1.00	U
Ronnel	ND	0.23	0.59	0.73	1.00	U
Stirophos	ND	0.88	2.3	2.9	1.00	U
Tokuthion	ND	0.25	0.59	0.73	1.00	U
Trichloronate	ND	0.22	0.59	0.73	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	89	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 17:05**	**160902L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.42	0.59	0.74	1.00	U
Azinphos Methyl	ND	0.33	0.59	0.74	1.00	U
Bolstar	ND	0.26	0.59	0.74	1.00	U
Chlorpyrifos	ND	0.25	0.59	0.74	1.00	U
Coumaphos	ND	0.22	0.59	0.74	1.00	U
Diazinon	ND	0.24	0.59	0.74	1.00	U
Dichlorvos	ND	0.41	0.59	0.74	1.00	U
Disulfoton	ND	0.23	0.59	0.74	1.00	U
Ethoprop	ND	0.25	0.59	0.74	1.00	U
Fensulfothion	ND	0.27	0.59	0.74	1.00	U
Fenthion	ND	0.28	0.59	0.74	1.00	U
Merphos	ND	0.28	0.59	0.74	1.00	U
Methyl Parathion	ND	0.32	0.59	0.74	1.00	U
Mevinphos	ND	0.36	0.59	0.74	1.00	U
Naled	ND	2.6	4.8	5.9	1.00	U
Phorate	ND	0.33	0.59	0.74	1.00	U
Ronnel	ND	0.23	0.59	0.74	1.00	U
Stirophos	ND	0.89	2.4	3.0	1.00	U
Tokuthion	ND	0.25	0.59	0.74	1.00	U
Trichloronate	ND	0.23	0.59	0.74	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	95	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 17:54**	**160902L03**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.93	1.3	1.6	1.00	U
Azinphos Methyl	ND	0.73	1.3	1.6	1.00	U
Bolstar	ND	0.58	1.3	1.6	1.00	U
Chlorpyrifos	ND	0.54	1.3	1.6	1.00	U
Coumaphos	ND	0.49	1.3	1.6	1.00	U
Diazinon	ND	0.52	1.3	1.6	1.00	U
Dichlorvos	ND	0.89	1.3	1.6	1.00	U
Disulfoton	ND	0.50	1.3	1.6	1.00	U
Ethoprop	ND	0.54	1.3	1.6	1.00	U
Fensulfothion	ND	0.59	1.3	1.6	1.00	U
Fenthion	ND	0.60	1.3	1.6	1.00	U
Merphos	ND	0.62	1.3	1.6	1.00	U
Methyl Parathion	ND	0.69	1.3	1.6	1.00	U
Mevinphos	ND	0.78	1.3	1.6	1.00	U
Naled	ND	5.6	10	13	1.00	U
Phorate	ND	0.73	1.3	1.6	1.00	U
Ronnel	ND	0.50	1.3	1.6	1.00	U
Stirophos	ND	1.9	5.2	6.5	1.00	U
Tokuthion	ND	0.55	1.3	1.6	1.00	U
Trichloronate	ND	0.49	1.3	1.6	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	92	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-979-11**	**N/A**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 13:54**	**160902L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Demeton-o/s	ND	0.29	0.40	0.50	1.00	U
Azinphos Methyl	ND	0.23	0.40	0.50	1.00	U
Bolstar	ND	0.18	0.40	0.50	1.00	U
Chlorpyrifos	ND	0.17	0.40	0.50	1.00	U
Coumaphos	ND	0.15	0.40	0.50	1.00	U
Diazinon	ND	0.16	0.40	0.50	1.00	U
Dichlorvos	ND	0.28	0.40	0.50	1.00	U
Disulfoton	ND	0.15	0.40	0.50	1.00	U
Ethoprop	ND	0.17	0.40	0.50	1.00	U
Fensulfothion	ND	0.18	0.40	0.50	1.00	U
Fenthion	ND	0.19	0.40	0.50	1.00	U
Merphos	ND	0.19	0.40	0.50	1.00	U
Methyl Parathion	ND	0.21	0.40	0.50	1.00	U
Mevinphos	ND	0.24	0.40	0.50	1.00	U
Naled	ND	1.7	3.2	4.0	1.00	U
Phorate	ND	0.22	0.40	0.50	1.00	U
Ronnel	ND	0.16	0.40	0.50	1.00	U
Stirophos	ND	0.60	1.6	2.0	1.00	U
Tokuthion	ND	0.17	0.40	0.50	1.00	U
Trichloronate	ND	0.15	0.40	0.50	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tributylphosphate	88	30-130	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 17:00**	**160830L12**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	92	160	320	1.00	U
Dicamba	ND	1.6	3.2	13	1.00	U
MCPP	ND	4000	6400	13000	1.00	U
MCPA	ND	2600	3200	13000	1.00	U
Dichlorprop	ND	21	32	130	1.00	U
2,4-D	ND	18	32	130	1.00	U
2,4,5-TP (Silvex)	ND	3.0	3.2	13	1.00	U
2,4,5-T	ND	1.4	3.2	13	1.00	U
2,4-DB	ND	20	32	130	1.00	U
Dinoseb	ND	6.5	16	64	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	62	25-135	

OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 17:23**	**160830L12**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	87	150	300	1.00	U
Dicamba	ND	1.5	3.0	12	1.00	U
MCPP	ND	3800	6000	12000	1.00	U
MCPA	ND	2500	3000	12000	1.00	U
Dichlorprop	ND	20	30	120	1.00	U
2,4-D	ND	17	30	120	1.00	U
2,4,5-TP (Silvex)	ND	2.8	3.0	12	1.00	U
2,4,5-T	ND	1.4	3.0	12	1.00	U
2,4-DB	ND	19	30	120	1.00	U
Dinoseb	ND	6.1	15	60	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	61	25-135	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 17:46**	**160830L12**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	110	180	370	1.00	U
Dicamba	ND	1.8	3.7	15	1.00	U
MCPP	ND	4600	7300	15000	1.00	U
MCPA	ND	3000	3700	15000	1.00	U
Dichlorprop	ND	24	37	150	1.00	U
2,4-D	ND	21	37	150	1.00	U
2,4,5-TP (Silvex)	ND	3.4	3.7	15	1.00	U
2,4,5-T	ND	1.7	3.7	15	1.00	U
2,4-DB	ND	23	37	150	1.00	U
Dinoseb	ND	7.4	18	73	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	62	25-135	

OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 18:10**	**160830L12**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	110	190	370	1.00	U
Dicamba	ND	1.8	3.7	15	1.00	U
MCPP	ND	4700	7400	15000	1.00	U
MCPA	ND	3000	3700	15000	1.00	U
Dichlorprop	ND	25	37	150	1.00	U
2,4-D	ND	21	37	150	1.00	U
2,4,5-TP (Silvex)	ND	3.5	3.7	15	1.00	U
2,4,5-T	ND	1.7	3.7	15	1.00	U
2,4-DB	ND	24	37	150	1.00	U
Dinoseb	ND	7.5	19	74	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	68	25-135	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 18:33**	**160830L12**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	240	410	820	1.00	U
Dicamba	ND	4.1	8.2	33	1.00	U
MCPP	ND	10000	16000	33000	1.00	U
MCPA	ND	6700	8200	33000	1.00	U
Dichlorprop	ND	55	82	330	1.00	U
2,4-D	ND	47	82	330	1.00	U
2,4,5-TP (Silvex)	ND	7.7	8.2	33	1.00	U
2,4,5-T	ND	3.7	8.2	33	1.00	U
2,4-DB	ND	52	82	330	1.00	U
Dinoseb	ND	17	41	160	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	70	25-135	

Method Blank	**099-02-026-46**	**N/A**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 15:03**	**160830L12**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dalapon	ND	73	120	250	1.00	U
Dicamba	ND	1.2	2.5	10	1.00	U
MCPP	ND	3200	5000	10000	1.00	U
MCPA	ND	2100	2500	10000	1.00	U
Dichlorprop	ND	17	25	100	1.00	U
2,4-D	ND	14	25	100	1.00	U
2,4,5-TP (Silvex)	ND	2.3	2.5	10	1.00	U
2,4,5-T	ND	1.1	2.5	10	1.00	U
2,4-DB	ND	16	25	100	1.00	U
Dinoseb	ND	5.1	12	50	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2,4-Dichlorophenylacetic acid	69	25-135	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 17:04**	**160830L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.10	0.19	0.64	1.00	U
Acenaphthene	ND	0.081	0.19	0.64	1.00	U
Acenaphthylene	ND	0.076	0.19	0.64	1.00	U
Aniline	ND	0.076	0.19	0.64	1.00	U
Anthracene	ND	0.080	0.19	0.64	1.00	U
Azobenzene	ND	0.069	0.19	0.64	1.00	U
Benzidine	ND	1.1	2.5	6.4	1.00	U
Benzo (a) Anthracene	ND	0.072	0.19	0.64	1.00	U
Benzo (a) Pyrene	ND	0.069	0.19	0.64	1.00	U
Benzo (b) Fluoranthene	ND	0.081	0.19	0.64	1.00	U
Benzo (g,h,i) Perylene	ND	0.070	0.19	0.64	1.00	U
Benzo (k) Fluoranthene	ND	0.083	0.19	0.64	1.00	U
Benzoic Acid	ND	0.63	1.0	2.5	1.00	U
Benzyl Alcohol	ND	0.084	0.19	0.64	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.072	0.19	0.64	1.00	U
Bis(2-Chloroethyl) Ether	ND	0.52	1.0	2.5	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.073	0.19	0.64	1.00	U
Bis(2-Ethylhexyl) Phthalate	ND	0.068	0.19	0.64	1.00	U
4-Bromophenyl-Phenyl Ether	ND	0.078	0.19	0.64	1.00	U
Butyl Benzyl Phthalate	ND	0.069	0.19	0.64	1.00	U
4-Chloro-3-Methylphenol	ND	0.085	0.19	0.64	1.00	U
4-Chloroaniline	ND	0.083	0.19	0.64	1.00	U
2-Chloronaphthalene	ND	0.075	0.19	0.64	1.00	U
2-Chlorophenol	ND	0.085	0.19	0.64	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.082	0.19	0.64	1.00	U
Chrysene	ND	0.082	0.19	0.64	1.00	U
Di-n-Butyl Phthalate	ND	0.076	0.19	0.64	1.00	U
Di-n-Octyl Phthalate	ND	0.13	0.19	0.64	1.00	U
Dibenz (a,h) Anthracene	ND	0.059	0.19	0.64	1.00	U
Dibenzofuran	ND	0.077	0.19	0.64	1.00	U
1,2-Dichlorobenzene	ND	0.081	0.19	0.64	1.00	U
1,3-Dichlorobenzene	ND	0.093	0.19	0.64	1.00	U
1,4-Dichlorobenzene	ND	0.096	0.19	0.64	1.00	U
3,3'-Dichlorobenzidine	ND	0.46	1.0	2.5	1.00	U
2,4-Dichlorophenol	ND	0.074	0.19	0.64	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Diethyl Phthalate	ND	0.074	0.19	0.64	1.00	U
Dimethyl Phthalate	0.27	0.14	0.19	0.64	1.00	J
2,4-Dimethylphenol	ND	0.34	0.38	0.64	1.00	U
4,6-Dinitro-2-Methylphenol	ND	0.80	1.0	2.5	1.00	U
2,4-Dinitrophenol	ND	0.43	1.0	2.5	1.00	U
2,4-Dinitrotoluene	ND	0.085	0.19	0.64	1.00	U
2,6-Dinitrotoluene	ND	0.093	0.19	0.64	1.00	U
Fluoranthene	ND	0.079	0.19	0.64	1.00	U
Fluorene	ND	0.081	0.19	0.64	1.00	U
Hexachloro-1,3-Butadiene	ND	0.080	0.19	0.64	1.00	U
Hexachlorobenzene	ND	0.085	0.19	0.64	1.00	U
Hexachlorocyclopentadiene	ND	0.64	1.0	2.5	1.00	U
Hexachloroethane	ND	0.10	0.19	0.64	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.068	0.19	0.64	1.00	U
Isophorone	ND	0.072	0.19	0.64	1.00	U
2-Methylnaphthalene	ND	0.077	0.19	0.64	1.00	U
1-Methylnaphthalene	ND	0.072	0.19	0.64	1.00	U
2-Methylphenol	ND	0.11	0.19	0.64	1.00	U
3/4-Methylphenol	ND	0.21	0.38	1.3	1.00	U
N-Nitroso-di-n-propylamine	ND	0.11	0.19	0.64	1.00	U
N-Nitrosodimethylamine	ND	0.060	0.19	0.64	1.00	U
N-Nitrosodiphenylamine	ND	0.17	0.19	0.64	1.00	U
Naphthalene	ND	0.075	0.19	0.64	1.00	U
4-Nitroaniline	ND	0.083	0.19	0.64	1.00	U
3-Nitroaniline	ND	0.089	0.19	0.64	1.00	U
2-Nitroaniline	ND	0.066	0.19	0.64	1.00	U
Nitrobenzene	ND	0.41	1.0	2.5	1.00	U
4-Nitrophenol	ND	0.069	0.19	0.64	1.00	U
2-Nitrophenol	ND	0.086	0.19	0.64	1.00	U
Pentachlorophenol	ND	0.49	1.0	2.5	1.00	U
Phenanthrene	ND	0.087	0.19	0.64	1.00	U
Phenol	ND	0.061	0.19	0.64	1.00	U
Pyrene	ND	0.098	0.19	0.64	1.00	U
Pyridine	ND	0.070	0.19	0.64	1.00	U
1,2,4-Trichlorobenzene	ND	0.075	0.19	0.64	1.00	U
2,4,6-Trichlorophenol	ND	0.098	0.19	0.64	1.00	U
2,4,5-Trichlorophenol	ND	0.081	0.19	0.64	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	77	45-105	
2-Fluorophenol	79	35-105	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 3 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	73	35-100	
p-Terphenyl-d14	93	30-125	
Phenol-d6	84	40-100	
2,4,6-Tribromophenol	91	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 4 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 17:23**	**160830L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.094	0.18	0.60	1.00	U
Acenaphthene	ND	0.076	0.18	0.60	1.00	U
Acenaphthylene	ND	0.071	0.18	0.60	1.00	U
Aniline	ND	0.071	0.18	0.60	1.00	U
Anthracene	ND	0.075	0.18	0.60	1.00	U
Azobenzene	ND	0.065	0.18	0.60	1.00	U
Benzidine	ND	0.98	2.4	6.0	1.00	U
Benzo (a) Anthracene	ND	0.068	0.18	0.60	1.00	U
Benzo (a) Pyrene	ND	0.065	0.18	0.60	1.00	U
Benzo (b) Fluoranthene	ND	0.076	0.18	0.60	1.00	U
Benzo (g,h,i) Perylene	ND	0.066	0.18	0.60	1.00	U
Benzo (k) Fluoranthene	ND	0.077	0.18	0.60	1.00	U
Benzoic Acid	ND	0.59	0.95	2.4	1.00	U
Benzyl Alcohol	ND	0.079	0.18	0.60	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.067	0.18	0.60	1.00	U
Bis(2-Chloroethyl) Ether	ND	0.49	0.95	2.4	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.069	0.18	0.60	1.00	U
Bis(2-Ethylhexyl) Phthalate	ND	0.064	0.18	0.60	1.00	U
4-Bromophenyl-Phenyl Ether	ND	0.073	0.18	0.60	1.00	U
Butyl Benzyl Phthalate	ND	0.064	0.18	0.60	1.00	U
4-Chloro-3-Methylphenol	ND	0.079	0.18	0.60	1.00	U
4-Chloroaniline	ND	0.078	0.18	0.60	1.00	U
2-Chloronaphthalene	ND	0.071	0.18	0.60	1.00	U
2-Chlorophenol	ND	0.080	0.18	0.60	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.077	0.18	0.60	1.00	U
Chrysene	ND	0.077	0.18	0.60	1.00	U
Di-n-Butyl Phthalate	ND	0.072	0.18	0.60	1.00	U
Di-n-Octyl Phthalate	ND	0.12	0.18	0.60	1.00	U
Dibenz (a,h) Anthracene	ND	0.055	0.18	0.60	1.00	U
Dibenzofuran	ND	0.072	0.18	0.60	1.00	U
1,2-Dichlorobenzene	ND	0.076	0.18	0.60	1.00	U
1,3-Dichlorobenzene	ND	0.088	0.18	0.60	1.00	U
1,4-Dichlorobenzene	ND	0.090	0.18	0.60	1.00	U
3,3'-Dichlorobenzidine	ND	0.43	0.95	2.4	1.00	U
2,4-Dichlorophenol	ND	0.069	0.18	0.60	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 5 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Diethyl Phthalate	ND	0.069	0.18	0.60	1.00	U
Dimethyl Phthalate	0.29	0.14	0.18	0.60	1.00	J
2,4-Dimethylphenol	ND	0.32	0.36	0.60	1.00	U
4,6-Dinitro-2-Methylphenol	ND	0.75	0.95	2.4	1.00	U
2,4-Dinitrophenol	ND	0.40	0.95	2.4	1.00	U
2,4-Dinitrotoluene	ND	0.080	0.18	0.60	1.00	U
2,6-Dinitrotoluene	ND	0.087	0.18	0.60	1.00	U
Fluoranthene	ND	0.074	0.18	0.60	1.00	U
Fluorene	ND	0.076	0.18	0.60	1.00	U
Hexachloro-1,3-Butadiene	ND	0.075	0.18	0.60	1.00	U
Hexachlorobenzene	ND	0.079	0.18	0.60	1.00	U
Hexachlorocyclopentadiene	ND	0.60	0.95	2.4	1.00	U
Hexachloroethane	ND	0.094	0.18	0.60	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.064	0.18	0.60	1.00	U
Isophorone	0.085	0.068	0.18	0.60	1.00	J
2-Methylnaphthalene	ND	0.072	0.18	0.60	1.00	U
1-Methylnaphthalene	ND	0.067	0.18	0.60	1.00	U
2-Methylphenol	ND	0.10	0.18	0.60	1.00	U
3/4-Methylphenol	ND	0.19	0.36	1.2	1.00	U
N-Nitroso-di-n-propylamine	ND	0.10	0.18	0.60	1.00	U
N-Nitrosodimethylamine	ND	0.056	0.18	0.60	1.00	U
N-Nitrosodiphenylamine	ND	0.16	0.18	0.60	1.00	U
Naphthalene	ND	0.070	0.18	0.60	1.00	U
4-Nitroaniline	ND	0.078	0.18	0.60	1.00	U
3-Nitroaniline	ND	0.083	0.18	0.60	1.00	U
2-Nitroaniline	ND	0.062	0.18	0.60	1.00	U
Nitrobenzene	ND	0.39	0.95	2.4	1.00	U
4-Nitrophenol	ND	0.065	0.18	0.60	1.00	U
2-Nitrophenol	ND	0.080	0.18	0.60	1.00	U
Pentachlorophenol	ND	0.46	0.95	2.4	1.00	U
Phenanthrene	ND	0.082	0.18	0.60	1.00	U
Phenol	ND	0.057	0.18	0.60	1.00	U
Pyrene	ND	0.091	0.18	0.60	1.00	U
Pyridine	ND	0.065	0.18	0.60	1.00	U
1,2,4-Trichlorobenzene	ND	0.071	0.18	0.60	1.00	U
2,4,6-Trichlorophenol	ND	0.092	0.18	0.60	1.00	U
2,4,5-Trichlorophenol	ND	0.076	0.18	0.60	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	78	45-105	
2-Fluorophenol	87	35-105	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 6 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	76	35-100	
p-Terphenyl-d14	92	30-125	
Phenol-d6	89	40-100	
2,4,6-Tribromophenol	88	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 7 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 17:42**	**160830L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.12	0.22	0.74	1.00	U
Acenaphthene	ND	0.093	0.22	0.74	1.00	U
Acenaphthylene	ND	0.088	0.22	0.74	1.00	U
Aniline	ND	0.088	0.22	0.74	1.00	U
Anthracene	ND	0.093	0.22	0.74	1.00	U
Azobenzene	ND	0.080	0.22	0.74	1.00	U
Benzidine	ND	1.2	2.9	7.4	1.00	U
Benzo (a) Anthracene	ND	0.084	0.22	0.74	1.00	U
Benzo (a) Pyrene	ND	0.080	0.22	0.74	1.00	U
Benzo (b) Fluoranthene	ND	0.094	0.22	0.74	1.00	U
Benzo (g,h,i) Perylene	ND	0.081	0.22	0.74	1.00	U
Benzo (k) Fluoranthene	ND	0.096	0.22	0.74	1.00	U
Benzoic Acid	ND	0.73	1.2	2.9	1.00	U
Benzyl Alcohol	ND	0.097	0.22	0.74	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.083	0.22	0.74	1.00	U
Bis(2-Chloroethyl) Ether	ND	0.60	1.2	2.9	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.085	0.22	0.74	1.00	U
Bis(2-Ethylhexyl) Phthalate	0.43	0.079	0.22	0.74	1.00	J
4-Bromophenyl-Phenyl Ether	ND	0.090	0.22	0.74	1.00	U
Butyl Benzyl Phthalate	ND	0.080	0.22	0.74	1.00	U
4-Chloro-3-Methylphenol	ND	0.098	0.22	0.74	1.00	U
4-Chloroaniline	ND	0.096	0.22	0.74	1.00	U
2-Chloronaphthalene	ND	0.087	0.22	0.74	1.00	U
2-Chlorophenol	ND	0.098	0.22	0.74	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.095	0.22	0.74	1.00	U
Chrysene	ND	0.095	0.22	0.74	1.00	U
Di-n-Butyl Phthalate	ND	0.088	0.22	0.74	1.00	U
Di-n-Octyl Phthalate	ND	0.15	0.22	0.74	1.00	U
Dibenz (a,h) Anthracene	ND	0.068	0.22	0.74	1.00	U
Dibenzofuran	ND	0.089	0.22	0.74	1.00	U
1,2-Dichlorobenzene	ND	0.094	0.22	0.74	1.00	U
1,3-Dichlorobenzene	ND	0.11	0.22	0.74	1.00	U
1,4-Dichlorobenzene	ND	0.11	0.22	0.74	1.00	U
3,3'-Dichlorobenzidine	ND	0.54	1.2	2.9	1.00	U
2,4-Dichlorophenol	ND	0.086	0.22	0.74	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 8 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Diethyl Phthalate	ND	0.086	0.22	0.74	1.00	U
Dimethyl Phthalate	0.31	0.17	0.22	0.74	1.00	J
2,4-Dimethylphenol	ND	0.39	0.44	0.74	1.00	U
4,6-Dinitro-2-Methylphenol	ND	0.93	1.2	2.9	1.00	U
2,4-Dinitrophenol	ND	0.50	1.2	2.9	1.00	U
2,4-Dinitrotoluene	ND	0.098	0.22	0.74	1.00	U
2,6-Dinitrotoluene	ND	0.11	0.22	0.74	1.00	U
Fluoranthene	ND	0.092	0.22	0.74	1.00	U
Fluorene	ND	0.094	0.22	0.74	1.00	U
Hexachloro-1,3-Butadiene	ND	0.093	0.22	0.74	1.00	U
Hexachlorobenzene	ND	0.098	0.22	0.74	1.00	U
Hexachlorocyclopentadiene	ND	0.74	1.2	2.9	1.00	U
Hexachloroethane	ND	0.12	0.22	0.74	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.079	0.22	0.74	1.00	U
Isophorone	ND	0.084	0.22	0.74	1.00	U
2-Methylnaphthalene	ND	0.089	0.22	0.74	1.00	U
1-Methylnaphthalene	ND	0.083	0.22	0.74	1.00	U
2-Methylphenol	ND	0.13	0.22	0.74	1.00	U
3/4-Methylphenol	ND	0.24	0.44	1.5	1.00	U
N-Nitroso-di-n-propylamine	ND	0.12	0.22	0.74	1.00	U
N-Nitrosodimethylamine	ND	0.069	0.22	0.74	1.00	U
N-Nitrosodiphenylamine	ND	0.20	0.22	0.74	1.00	U
Naphthalene	ND	0.086	0.22	0.74	1.00	U
4-Nitroaniline	ND	0.096	0.22	0.74	1.00	U
3-Nitroaniline	ND	0.10	0.22	0.74	1.00	U
2-Nitroaniline	ND	0.076	0.22	0.74	1.00	U
Nitrobenzene	ND	0.48	1.2	2.9	1.00	U
4-Nitrophenol	ND	0.080	0.22	0.74	1.00	U
2-Nitrophenol	ND	0.099	0.22	0.74	1.00	U
Pentachlorophenol	ND	0.57	1.2	2.9	1.00	U
Phenanthrene	ND	0.10	0.22	0.74	1.00	U
Phenol	ND	0.071	0.22	0.74	1.00	U
Pyrene	ND	0.11	0.22	0.74	1.00	U
Pyridine	ND	0.081	0.22	0.74	1.00	U
1,2,4-Trichlorobenzene	ND	0.087	0.22	0.74	1.00	U
2,4,6-Trichlorophenol	ND	0.11	0.22	0.74	1.00	U
2,4,5-Trichlorophenol	ND	0.094	0.22	0.74	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	78	45-105	
2-Fluorophenol	85	35-105	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 9 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	75	35-100	
p-Terphenyl-d14	87	30-125	
Phenol-d6	89	40-100	
2,4,6-Tribromophenol	71	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 10 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:01**	**160830L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.12	0.22	0.75	1.00	U
Acenaphthene	ND	0.095	0.22	0.75	1.00	U
Acenaphthylene	ND	0.089	0.22	0.75	1.00	U
Aniline	ND	0.089	0.22	0.75	1.00	U
Anthracene	ND	0.094	0.22	0.75	1.00	U
Azobenzene	ND	0.081	0.22	0.75	1.00	U
Benzidine	ND	1.2	3.0	7.5	1.00	U
Benzo (a) Anthracene	ND	0.085	0.22	0.75	1.00	U
Benzo (a) Pyrene	ND	0.081	0.22	0.75	1.00	U
Benzo (b) Fluoranthene	ND	0.095	0.22	0.75	1.00	U
Benzo (g,h,i) Perylene	ND	0.082	0.22	0.75	1.00	U
Benzo (k) Fluoranthene	ND	0.097	0.22	0.75	1.00	U
Benzoic Acid	ND	0.74	1.2	3.0	1.00	U
Benzyl Alcohol	ND	0.099	0.22	0.75	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.084	0.22	0.75	1.00	U
Bis(2-Chloroethyl) Ether	ND	0.61	1.2	3.0	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.086	0.22	0.75	1.00	U
Bis(2-Ethylhexyl) Phthalate	0.42	0.080	0.22	0.75	1.00	J
4-Bromophenyl-Phenyl Ether	ND	0.091	0.22	0.75	1.00	U
Butyl Benzyl Phthalate	ND	0.080	0.22	0.75	1.00	U
4-Chloro-3-Methylphenol	ND	0.099	0.22	0.75	1.00	U
4-Chloroaniline	ND	0.097	0.22	0.75	1.00	U
2-Chloronaphthalene	ND	0.088	0.22	0.75	1.00	U
2-Chlorophenol	ND	0.10	0.22	0.75	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.096	0.22	0.75	1.00	U
Chrysene	ND	0.096	0.22	0.75	1.00	U
Di-n-Butyl Phthalate	ND	0.090	0.22	0.75	1.00	U
Di-n-Octyl Phthalate	ND	0.15	0.22	0.75	1.00	U
Dibenz (a,h) Anthracene	ND	0.069	0.22	0.75	1.00	U
Dibenzofuran	ND	0.090	0.22	0.75	1.00	U
1,2-Dichlorobenzene	ND	0.095	0.22	0.75	1.00	U
1,3-Dichlorobenzene	ND	0.11	0.22	0.75	1.00	U
1,4-Dichlorobenzene	ND	0.11	0.22	0.75	1.00	U
3,3'-Dichlorobenzidine	ND	0.54	1.2	3.0	1.00	U
2,4-Dichlorophenol	ND	0.087	0.22	0.75	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 11 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Diethyl Phthalate	ND	0.087	0.22	0.75	1.00	U
Dimethyl Phthalate	0.38	0.17	0.22	0.75	1.00	J
2,4-Dimethylphenol	ND	0.40	0.45	0.75	1.00	U
4,6-Dinitro-2-Methylphenol	ND	0.94	1.2	3.0	1.00	U
2,4-Dinitrophenol	ND	0.50	1.2	3.0	1.00	U
2,4-Dinitrotoluene	ND	0.10	0.22	0.75	1.00	U
2,6-Dinitrotoluene	ND	0.11	0.22	0.75	1.00	U
Fluoranthene	ND	0.093	0.22	0.75	1.00	U
Fluorene	ND	0.095	0.22	0.75	1.00	U
Hexachloro-1,3-Butadiene	ND	0.094	0.22	0.75	1.00	U
Hexachlorobenzene	ND	0.099	0.22	0.75	1.00	U
Hexachlorocyclopentadiene	ND	0.75	1.2	3.0	1.00	U
Hexachloroethane	ND	0.12	0.22	0.75	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.080	0.22	0.75	1.00	U
Isophorone	ND	0.085	0.22	0.75	1.00	U
2-Methylnaphthalene	ND	0.090	0.22	0.75	1.00	U
1-Methylnaphthalene	ND	0.084	0.22	0.75	1.00	U
2-Methylphenol	ND	0.13	0.22	0.75	1.00	U
3/4-Methylphenol	ND	0.24	0.45	1.5	1.00	U
N-Nitroso-di-n-propylamine	ND	0.12	0.22	0.75	1.00	U
N-Nitrosodimethylamine	ND	0.070	0.22	0.75	1.00	U
N-Nitrosodiphenylamine	ND	0.20	0.22	0.75	1.00	U
Naphthalene	ND	0.087	0.22	0.75	1.00	U
4-Nitroaniline	ND	0.097	0.22	0.75	1.00	U
3-Nitroaniline	ND	0.10	0.22	0.75	1.00	U
2-Nitroaniline	ND	0.077	0.22	0.75	1.00	U
Nitrobenzene	ND	0.48	1.2	3.0	1.00	U
4-Nitrophenol	ND	0.081	0.22	0.75	1.00	U
2-Nitrophenol	ND	0.10	0.22	0.75	1.00	U
Pentachlorophenol	ND	0.58	1.2	3.0	1.00	U
Phenanthrene	ND	0.10	0.22	0.75	1.00	U
Phenol	ND	0.071	0.22	0.75	1.00	U
Pyrene	ND	0.11	0.22	0.75	1.00	U
Pyridine	ND	0.082	0.22	0.75	1.00	U
1,2,4-Trichlorobenzene	ND	0.088	0.22	0.75	1.00	U
2,4,6-Trichlorophenol	ND	0.11	0.22	0.75	1.00	U
2,4,5-Trichlorophenol	ND	0.095	0.22	0.75	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	79	45-105	
2-Fluorophenol	86	35-105	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 12 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	76	35-100	
p-Terphenyl-d14	95	30-125	
Phenol-d6	92	40-100	
2,4,6-Tribromophenol	74	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 13 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:20**	**160830L05**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.26	0.49	1.6	1.00	U
Acenaphthene	ND	0.21	0.49	1.6	1.00	U
Acenaphthylene	ND	0.19	0.49	1.6	1.00	U
Aniline	ND	0.19	0.49	1.6	1.00	U
Anthracene	ND	0.21	0.49	1.6	1.00	U
Azobenzene	ND	0.18	0.49	1.6	1.00	U
Benzidine	ND	2.7	6.5	16	1.00	U
Benzo (a) Anthracene	ND	0.19	0.49	1.6	1.00	U
Benzo (a) Pyrene	ND	0.18	0.49	1.6	1.00	U
Benzo (b) Fluoranthene	ND	0.21	0.49	1.6	1.00	U
Benzo (g,h,i) Perylene	ND	0.18	0.49	1.6	1.00	U
Benzo (k) Fluoranthene	ND	0.21	0.49	1.6	1.00	U
Benzoic Acid	ND	1.6	2.6	6.5	1.00	U
Benzyl Alcohol	ND	0.22	0.49	1.6	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.18	0.49	1.6	1.00	U
Bis(2-Chloroethyl) Ether	ND	1.3	2.6	6.5	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.19	0.49	1.6	1.00	U
Bis(2-Ethylhexyl) Phthalate	ND	0.17	0.49	1.6	1.00	U
4-Bromophenyl-Phenyl Ether	ND	0.20	0.49	1.6	1.00	U
Butyl Benzyl Phthalate	ND	0.18	0.49	1.6	1.00	U
4-Chloro-3-Methylphenol	ND	0.22	0.49	1.6	1.00	U
4-Chloroaniline	ND	0.21	0.49	1.6	1.00	U
2-Chloronaphthalene	ND	0.19	0.49	1.6	1.00	U
2-Chlorophenol	ND	0.22	0.49	1.6	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.21	0.49	1.6	1.00	U
Chrysene	ND	0.21	0.49	1.6	1.00	U
Di-n-Butyl Phthalate	ND	0.20	0.49	1.6	1.00	U
Di-n-Octyl Phthalate	ND	0.33	0.49	1.6	1.00	U
Dibenz (a,h) Anthracene	ND	0.15	0.49	1.6	1.00	U
Dibenzofuran	ND	0.20	0.49	1.6	1.00	U
1,2-Dichlorobenzene	ND	0.21	0.49	1.6	1.00	U
1,3-Dichlorobenzene	ND	0.24	0.49	1.6	1.00	U
1,4-Dichlorobenzene	ND	0.25	0.49	1.6	1.00	U
3,3'-Dichlorobenzidine	ND	1.2	2.6	6.5	1.00	U
2,4-Dichlorophenol	ND	0.19	0.49	1.6	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 14 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Diethyl Phthalate	ND	0.19	0.49	1.6	1.00	U
Dimethyl Phthalate	0.69	0.37	0.49	1.6	1.00	J
2,4-Dimethylphenol	ND	0.86	0.98	1.6	1.00	U
4,6-Dinitro-2-Methylphenol	ND	2.1	2.6	6.5	1.00	U
2,4-Dinitrophenol	ND	1.1	2.6	6.5	1.00	U
2,4-Dinitrotoluene	ND	0.22	0.49	1.6	1.00	U
2,6-Dinitrotoluene	ND	0.24	0.49	1.6	1.00	U
Fluoranthene	ND	0.20	0.49	1.6	1.00	U
Fluorene	ND	0.21	0.49	1.6	1.00	U
Hexachloro-1,3-Butadiene	ND	0.21	0.49	1.6	1.00	U
Hexachlorobenzene	ND	0.22	0.49	1.6	1.00	U
Hexachlorocyclopentadiene	ND	1.6	2.6	6.5	1.00	U
Hexachloroethane	ND	0.26	0.49	1.6	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.17	0.49	1.6	1.00	U
Isophorone	ND	0.19	0.49	1.6	1.00	U
2-Methylnaphthalene	ND	0.20	0.49	1.6	1.00	U
1-Methylnaphthalene	ND	0.18	0.49	1.6	1.00	U
2-Methylphenol	ND	0.28	0.49	1.6	1.00	U
3/4-Methylphenol	ND	0.53	0.98	3.3	1.00	U
N-Nitroso-di-n-propylamine	ND	0.27	0.49	1.6	1.00	U
N-Nitrosodimethylamine	ND	0.15	0.49	1.6	1.00	U
N-Nitrosodiphenylamine	ND	0.45	0.49	1.6	1.00	U
Naphthalene	ND	0.19	0.49	1.6	1.00	U
4-Nitroaniline	ND	0.21	0.49	1.6	1.00	U
3-Nitroaniline	ND	0.23	0.49	1.6	1.00	U
2-Nitroaniline	ND	0.17	0.49	1.6	1.00	U
Nitrobenzene	ND	1.1	2.6	6.5	1.00	U
4-Nitrophenol	ND	0.18	0.49	1.6	1.00	U
2-Nitrophenol	ND	0.22	0.49	1.6	1.00	U
Pentachlorophenol	ND	1.3	2.6	6.5	1.00	U
Phenanthrene	ND	0.22	0.49	1.6	1.00	U
Phenol	ND	0.16	0.49	1.6	1.00	U
Pyrene	ND	0.25	0.49	1.6	1.00	U
Pyridine	ND	0.18	0.49	1.6	1.00	U
1,2,4-Trichlorobenzene	ND	0.19	0.49	1.6	1.00	U
2,4,6-Trichlorophenol	ND	0.25	0.49	1.6	1.00	U
2,4,5-Trichlorophenol	ND	0.21	0.49	1.6	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	67	45-105	
2-Fluorophenol	77	35-105	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 15 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	65	35-100	
p-Terphenyl-d14	84	30-125	
Phenol-d6	85	40-100	
2,4,6-Tribromophenol	64	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 16 of 18

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-503-93**	**N/A**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 10:10**	**160830L05**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
2,6-Dichlorophenol	ND	0.079	0.15	0.50	1.00	U
Acenaphthene	ND	0.063	0.15	0.50	1.00	U
Acenaphthylene	ND	0.060	0.15	0.50	1.00	U
Aniline	ND	0.060	0.15	0.50	1.00	U
Anthracene	ND	0.063	0.15	0.50	1.00	U
Azobenzene	ND	0.054	0.15	0.50	1.00	U
Benzidine	ND	0.83	2.0	5.0	1.00	U
Benzo (a) Anthracene	ND	0.057	0.15	0.50	1.00	U
Benzo (a) Pyrene	ND	0.054	0.15	0.50	1.00	U
Benzo (b) Fluoranthene	ND	0.064	0.15	0.50	1.00	U
Benzo (g,h,i) Perylene	ND	0.055	0.15	0.50	1.00	U
Benzo (k) Fluoranthene	ND	0.065	0.15	0.50	1.00	U
Benzoic Acid	ND	0.50	0.80	2.0	1.00	U
Benzyl Alcohol	ND	0.066	0.15	0.50	1.00	U
Bis(2-Chloroethoxy) Methane	ND	0.056	0.15	0.50	1.00	U
Bis(2-Chloroethyl) Ether	ND	0.41	0.80	2.0	1.00	U
Bis(2-Chloroisopropyl) Ether	ND	0.057	0.15	0.50	1.00	U
Bis(2-Ethylhexyl) Phthalate	ND	0.053	0.15	0.50	1.00	U
4-Bromophenyl-Phenyl Ether	ND	0.061	0.15	0.50	1.00	U
Butyl Benzyl Phthalate	ND	0.054	0.15	0.50	1.00	U
4-Chloro-3-Methylphenol	ND	0.066	0.15	0.50	1.00	U
4-Chloroaniline	ND	0.065	0.15	0.50	1.00	U
2-Chloronaphthalene	ND	0.059	0.15	0.50	1.00	U
2-Chlorophenol	ND	0.067	0.15	0.50	1.00	U
4-Chlorophenyl-Phenyl Ether	ND	0.064	0.15	0.50	1.00	U
Chrysene	ND	0.064	0.15	0.50	1.00	U
Di-n-Butyl Phthalate	ND	0.060	0.15	0.50	1.00	U
Di-n-Octyl Phthalate	ND	0.10	0.15	0.50	1.00	U
Dibenz (a,h) Anthracene	ND	0.046	0.15	0.50	1.00	U
Dibenzofuran	ND	0.060	0.15	0.50	1.00	U
1,2-Dichlorobenzene	ND	0.064	0.15	0.50	1.00	U
1,3-Dichlorobenzene	ND	0.073	0.15	0.50	1.00	U
1,4-Dichlorobenzene	ND	0.075	0.15	0.50	1.00	U
3,3'-Dichlorobenzidine	ND	0.36	0.80	2.0	1.00	U
2,4-Dichlorophenol	ND	0.058	0.15	0.50	1.00	U
Diethyl Phthalate	ND	0.058	0.15	0.50	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 17 of 18

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dimethyl Phthalate	ND	0.11	0.15	0.50	1.00	U
2,4-Dimethylphenol	ND	0.27	0.30	0.50	1.00	U
4,6-Dinitro-2-Methylphenol	ND	0.63	0.80	2.0	1.00	U
2,4-Dinitrophenol	ND	0.34	0.80	2.0	1.00	U
2,4-Dinitrotoluene	ND	0.067	0.15	0.50	1.00	U
2,6-Dinitrotoluene	ND	0.073	0.15	0.50	1.00	U
Fluoranthene	ND	0.062	0.15	0.50	1.00	U
Fluorene	ND	0.063	0.15	0.50	1.00	U
Hexachloro-1,3-Butadiene	ND	0.063	0.15	0.50	1.00	U
Hexachlorobenzene	ND	0.067	0.15	0.50	1.00	U
Hexachlorocyclopentadiene	ND	0.50	0.80	2.0	1.00	U
Hexachloroethane	ND	0.078	0.15	0.50	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.053	0.15	0.50	1.00	U
Isophorone	ND	0.057	0.15	0.50	1.00	U
2-Methylnaphthalene	ND	0.060	0.15	0.50	1.00	U
1-Methylnaphthalene	ND	0.056	0.15	0.50	1.00	U
2-Methylphenol	ND	0.087	0.15	0.50	1.00	U
3/4-Methylphenol	ND	0.16	0.30	1.0	1.00	U
N-Nitroso-di-n-propylamine	ND	0.084	0.15	0.50	1.00	U
N-Nitrosodimethylamine	ND	0.047	0.15	0.50	1.00	U
N-Nitrosodiphenylamine	ND	0.14	0.15	0.50	1.00	U
Naphthalene	ND	0.059	0.15	0.50	1.00	U
4-Nitroaniline	ND	0.065	0.15	0.50	1.00	U
3-Nitroaniline	ND	0.070	0.15	0.50	1.00	U
2-Nitroaniline	ND	0.052	0.15	0.50	1.00	U
Nitrobenzene	ND	0.32	0.80	2.0	1.00	U
4-Nitrophenol	ND	0.054	0.15	0.50	1.00	U
2-Nitrophenol	ND	0.067	0.15	0.50	1.00	U
Pentachlorophenol	ND	0.39	0.80	2.0	1.00	U
Phenanthrene	ND	0.069	0.15	0.50	1.00	U
Phenol	ND	0.048	0.15	0.50	1.00	U
Pyrene	ND	0.077	0.15	0.50	1.00	U
Pyridine	ND	0.055	0.15	0.50	1.00	U
1,2,4-Trichlorobenzene	ND	0.059	0.15	0.50	1.00	U
2,4,6-Trichlorophenol	ND	0.077	0.15	0.50	1.00	U
2,4,5-Trichlorophenol	ND	0.064	0.15	0.50	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	83	45-105	
2-Fluorophenol	90	35-105	
Nitrobenzene-d5	85	35-100	

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Analytical Report

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Former George AFB, CA / 145981		Page 18 of 18

Surrogate	Rec. (%)	Control Limits	Qualifiers
p-Terphenyl-d14	83	30-125	
Phenol-d6	87	40-100	
2,4,6-Tribromophenol	90	35-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-A**	**08/25/16 11:20**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 12:05**	**160830L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.0065	0.013	0.025	1.00	U
2-Methylnaphthalene	ND	0.0069	0.013	0.025	1.00	U
1-Methylnaphthalene	ND	0.0099	0.013	0.025	1.00	U
Acenaphthylene	ND	0.0061	0.0064	0.025	1.00	U
Acenaphthene	ND	0.0053	0.0064	0.025	1.00	U
Fluorene	ND	0.0083	0.013	0.025	1.00	U
Phenanthrene	ND	0.0051	0.0064	0.025	1.00	U
Anthracene	ND	0.0039	0.0064	0.025	1.00	U
Fluoranthene	ND	0.0092	0.013	0.025	1.00	U
Pyrene	ND	0.010	0.013	0.025	1.00	U
Benzo (a) Anthracene	ND	0.0057	0.0064	0.025	1.00	U
Chrysene	ND	0.0060	0.0064	0.025	1.00	U
Benzo (k) Fluoranthene	ND	0.0074	0.013	0.025	1.00	U
Benzo (b) Fluoranthene	ND	0.0062	0.0064	0.025	1.00	U
Benzo (a) Pyrene	ND	0.0052	0.0064	0.025	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.0049	0.0064	0.025	1.00	U
Dibenz (a,h) Anthracene	ND	0.0072	0.013	0.025	1.00	U
Benzo (g,h,i) Perylene	ND	0.0096	0.013	0.025	1.00	U
Dibenzofuran	ND	0.0057	0.0064	0.025	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	74	45-105	
Nitrobenzene-d5	70	35-100	
p-Terphenyl-d14	88	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-A**	**08/25/16 11:30**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 12:25**	**160830L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.0060	0.012	0.024	1.00	U
2-Methylnaphthalene	ND	0.0064	0.012	0.024	1.00	U
1-Methylnaphthalene	ND	0.0092	0.012	0.024	1.00	U
Acenaphthylene	ND	0.0057	0.0059	0.024	1.00	U
Acenaphthene	ND	0.0049	0.0059	0.024	1.00	U
Fluorene	ND	0.0077	0.012	0.024	1.00	U
Phenanthrene	ND	0.0047	0.0059	0.024	1.00	U
Anthracene	ND	0.0036	0.0059	0.024	1.00	U
Fluoranthene	ND	0.0086	0.012	0.024	1.00	U
Pyrene	ND	0.0094	0.012	0.024	1.00	U
Benzo (a) Anthracene	ND	0.0053	0.0059	0.024	1.00	U
Chrysene	ND	0.0056	0.0059	0.024	1.00	U
Benzo (k) Fluoranthene	ND	0.0069	0.012	0.024	1.00	U
Benzo (b) Fluoranthene	ND	0.0058	0.0059	0.024	1.00	U
Benzo (a) Pyrene	ND	0.0048	0.0059	0.024	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.0046	0.0059	0.024	1.00	U
Dibenz (a,h) Anthracene	ND	0.0067	0.012	0.024	1.00	U
Benzo (g,h,i) Perylene	ND	0.0089	0.012	0.024	1.00	U
Dibenzofuran	ND	0.0052	0.0059	0.024	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	78	45-105	
Nitrobenzene-d5	75	35-100	
p-Terphenyl-d14	90	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-A**	**08/25/16 11:40**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 12:45**	**160830L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.0075	0.015	0.029	1.00	U
2-Methylnaphthalene	ND	0.0080	0.015	0.029	1.00	U
1-Methylnaphthalene	ND	0.011	0.015	0.029	1.00	U
Acenaphthylene	ND	0.0071	0.0073	0.029	1.00	U
Acenaphthene	ND	0.0060	0.0073	0.029	1.00	U
Fluorene	ND	0.0096	0.015	0.029	1.00	U
Phenanthrene	ND	0.0059	0.0073	0.029	1.00	U
Anthracene	ND	0.0045	0.0073	0.029	1.00	U
Fluoranthene	ND	0.011	0.015	0.029	1.00	U
Pyrene	ND	0.012	0.015	0.029	1.00	U
Benzo (a) Anthracene	ND	0.0065	0.0073	0.029	1.00	U
Chrysene	ND	0.0069	0.0073	0.029	1.00	U
Benzo (k) Fluoranthene	ND	0.0086	0.015	0.029	1.00	U
Benzo (b) Fluoranthene	ND	0.0072	0.0073	0.029	1.00	U
Benzo (a) Pyrene	ND	0.0060	0.0073	0.029	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.0057	0.0073	0.029	1.00	U
Dibenz (a,h) Anthracene	ND	0.0083	0.015	0.029	1.00	U
Benzo (g,h,i) Perylene	ND	0.011	0.015	0.029	1.00	U
Dibenzofuran	ND	0.0065	0.0073	0.029	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	62	45-105	
Nitrobenzene-d5	66	35-100	
p-Terphenyl-d14	88	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-A**	**08/25/16 12:00**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 13:05**	**160830L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.0075	0.015	0.029	1.00	U
2-Methylnaphthalene	ND	0.0080	0.015	0.029	1.00	U
1-Methylnaphthalene	ND	0.011	0.015	0.029	1.00	U
Acenaphthylene	ND	0.0071	0.0073	0.029	1.00	U
Acenaphthene	ND	0.0061	0.0073	0.029	1.00	U
Fluorene	ND	0.0096	0.015	0.029	1.00	U
Phenanthrene	ND	0.0059	0.0073	0.029	1.00	U
Anthracene	ND	0.0045	0.0073	0.029	1.00	U
Fluoranthene	ND	0.011	0.015	0.029	1.00	U
Pyrene	ND	0.012	0.015	0.029	1.00	U
Benzo (a) Anthracene	ND	0.0065	0.0073	0.029	1.00	U
Chrysene	ND	0.0069	0.0073	0.029	1.00	U
Benzo (k) Fluoranthene	ND	0.0086	0.015	0.029	1.00	U
Benzo (b) Fluoranthene	ND	0.0072	0.0073	0.029	1.00	U
Benzo (a) Pyrene	ND	0.0060	0.0073	0.029	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.0057	0.0073	0.029	1.00	U
Dibenz (a,h) Anthracene	ND	0.0083	0.015	0.029	1.00	U
Benzo (g,h,i) Perylene	ND	0.011	0.015	0.029	1.00	U
Dibenzofuran	ND	0.0065	0.0073	0.029	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	63	45-105	
Nitrobenzene-d5	60	35-100	
p-Terphenyl-d14	80	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-A**	**08/25/16 10:20**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 13:25**	**160830L06**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.017	0.033	0.066	1.00	U
2-Methylnaphthalene	ND	0.018	0.033	0.066	1.00	U
1-Methylnaphthalene	ND	0.026	0.033	0.066	1.00	U
Acenaphthylene	ND	0.016	0.016	0.066	1.00	U
Acenaphthene	ND	0.014	0.016	0.066	1.00	U
Fluorene	ND	0.021	0.033	0.066	1.00	U
Phenanthrene	ND	0.013	0.016	0.066	1.00	U
Anthracene	ND	0.010	0.016	0.066	1.00	U
Fluoranthene	ND	0.024	0.033	0.066	1.00	U
Pyrene	ND	0.026	0.033	0.066	1.00	U
Benzo (a) Anthracene	0.049	0.015	0.016	0.066	1.00	J
Chrysene	0.071	0.016	0.016	0.066	1.00	
Benzo (k) Fluoranthene	0.085	0.019	0.033	0.066	1.00	
Benzo (b) Fluoranthene	0.080	0.016	0.016	0.066	1.00	
Benzo (a) Pyrene	0.068	0.013	0.016	0.066	1.00	
Indeno (1,2,3-c,d) Pyrene	0.11	0.013	0.016	0.066	1.00	
Dibenz (a,h) Anthracene	0.063	0.019	0.033	0.066	1.00	J
Benzo (g,h,i) Perylene	0.13	0.025	0.033	0.066	1.00	
Dibenzofuran	ND	0.015	0.016	0.066	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	57	45-105	
Nitrobenzene-d5	57	35-100	
p-Terphenyl-d14	76	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Former George AFB, CA / 145981			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-150-174**	**N/A**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 11:25**	**160830L06**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Naphthalene	ND	0.0051	0.010	0.020	1.00	U
2-Methylnaphthalene	ND	0.0054	0.010	0.020	1.00	U
1-Methylnaphthalene	ND	0.0078	0.010	0.020	1.00	U
Acenaphthylene	ND	0.0048	0.0050	0.020	1.00	U
Acenaphthene	ND	0.0041	0.0050	0.020	1.00	U
Fluorene	ND	0.0065	0.010	0.020	1.00	U
Phenanthrene	ND	0.0040	0.0050	0.020	1.00	U
Anthracene	ND	0.0031	0.0050	0.020	1.00	U
Fluoranthene	ND	0.0072	0.010	0.020	1.00	U
Pyrene	ND	0.0080	0.010	0.020	1.00	U
Benzo (a) Anthracene	ND	0.0045	0.0050	0.020	1.00	U
Chrysene	ND	0.0047	0.0050	0.020	1.00	U
Benzo (k) Fluoranthene	ND	0.0058	0.010	0.020	1.00	U
Benzo (b) Fluoranthene	ND	0.0049	0.0050	0.020	1.00	U
Benzo (a) Pyrene	ND	0.0041	0.0050	0.020	1.00	U
Indeno (1,2,3-c,d) Pyrene	ND	0.0039	0.0050	0.020	1.00	U
Dibenz (a,h) Anthracene	ND	0.0057	0.010	0.020	1.00	U
Benzo (g,h,i) Perylene	ND	0.0075	0.010	0.020	1.00	U
Dibenzofuran	ND	0.0044	0.0050	0.020	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	78	45-105	
Nitrobenzene-d5	66	35-100	
p-Terphenyl-d14	83	30-125	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90001	**16-08-2041-1-B**	**08/25/16 11:20**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 18:57**	**160830L014**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	ND	7.9	13	25	1.00	U
Benzene	ND	0.16	0.25	0.63	1.00	U
Bromobenzene	ND	0.27	0.63	6.3	1.00	U
Bromochloromethane	ND	0.87	2.5	6.3	1.00	U
Bromodichloromethane	ND	0.29	0.63	6.3	1.00	U
Bromoform	ND	1.0	2.5	13	1.00	U
Bromomethane	ND	12	13	25	1.00	U
2-Butanone	ND	4.8	6.3	13	1.00	U
n-Butylbenzene	ND	0.20	0.25	13	1.00	U
sec-Butylbenzene	ND	0.73	2.5	6.3	1.00	U
tert-Butylbenzene	ND	0.19	0.25	13	1.00	U
Carbon Disulfide	ND	0.39	0.63	6.3	1.00	U
Carbon Tetrachloride	ND	0.36	0.63	6.3	1.00	U
Chlorobenzene	ND	0.28	0.63	6.3	1.00	U
Chloroethane	ND	1.9	2.5	13	1.00	U
Chloroform	ND	0.30	0.63	6.3	1.00	U
Chloromethane	ND	0.39	0.63	13	1.00	U
2-Chlorotoluene	ND	0.29	0.63	6.3	1.00	U
4-Chlorotoluene	ND	0.27	0.63	13	1.00	U
Dibromochloromethane	ND	0.72	2.5	13	1.00	U
1,2-Dibromo-3-Chloropropane	ND	2.2	2.5	13	1.00	U
1,2-Dibromoethane	ND	0.32	0.63	6.3	1.00	U
Dibromomethane	ND	0.98	2.5	6.3	1.00	U
1,2-Dichlorobenzene	ND	0.29	0.63	13	1.00	U
1,3-Dichlorobenzene	ND	0.22	0.63	6.3	1.00	U
1,4-Dichlorobenzene	ND	0.28	0.63	6.3	1.00	U
Dichlorodifluoromethane	ND	0.56	0.63	6.3	1.00	U
1,1-Dichloroethane	ND	0.27	0.63	6.3	1.00	U
1,2-Dichloroethane	ND	0.40	0.63	6.3	1.00	U
1,1-Dichloroethene	ND	0.44	0.63	6.3	1.00	U
c-1,2-Dichloroethene	ND	0.35	0.63	6.3	1.00	U
t-1,2-Dichloroethene	ND	0.64	2.5	6.3	1.00	U
1,2-Dichloropropane	ND	0.55	0.63	6.3	1.00	U
1,3-Dichloropropane	ND	0.32	0.63	6.3	1.00	U
2,2-Dichloropropane	ND	0.42	0.63	6.3	1.00	U,IH

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
1,1-Dichloropropene	ND	0.42	0.63	6.3	1.00	U
c-1,3-Dichloropropene	ND	0.32	0.63	6.3	1.00	U
t-1,3-Dichloropropene	ND	0.77	2.5	13	1.00	U
Ethylbenzene	ND	0.19	0.25	6.3	1.00	U
2-Hexanone	ND	2.2	2.5	13	1.00	U
Isopropylbenzene	ND	0.69	2.5	13	1.00	U
p-Isopropyltoluene	ND	0.80	2.5	13	1.00	U
Methylene Chloride	ND	1.7	2.5	6.3	1.00	U
4-Methyl-2-Pentanone	ND	5.5	6.3	13	1.00	U
Naphthalene	ND	1.0	2.5	6.3	1.00	U
n-Propylbenzene	ND	0.64	2.5	6.3	1.00	U
Styrene	ND	0.77	2.5	13	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.30	0.63	13	1.00	U
1,1,2,2-Tetrachloroethane	ND	0.44	0.63	6.3	1.00	U
Tetrachloroethene	ND	0.27	0.63	6.3	1.00	U
Toluene	ND	0.65	2.5	6.3	1.00	U
1,2,3-Trichlorobenzene	ND	1.2	2.5	6.3	1.00	U
1,2,4-Trichlorobenzene	ND	0.39	0.63	25	1.00	U
1,1,1-Trichloroethane	ND	0.29	0.63	6.3	1.00	U
Hexachloro-1,3-Butadiene	ND	0.41	0.63	6.3	1.00	U
1,1,2-Trichloroethane	ND	0.45	0.63	6.3	1.00	U
Trichloroethene	ND	0.38	0.63	6.3	1.00	U
Trichlorofluoromethane	ND	0.48	0.63	6.3	1.00	U
1,2,3-Trichloropropane	ND	1.1	2.5	6.3	1.00	U
1,2,4-Trimethylbenzene	ND	0.74	2.5	13	1.00	U
1,3,5-Trimethylbenzene	ND	0.70	2.5	6.3	1.00	U
Vinyl Acetate	ND	6.0	6.3	25	1.00	U
Vinyl Chloride	ND	0.64	2.5	13	1.00	U
p/m-Xylene	ND	0.34	0.51	13	1.00	U
o-Xylene	ND	0.70	2.5	13	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.37	0.63	6.3	1.00	U
Tert-Butyl Alcohol (TBA)	ND	6.6	13	32	1.00	U
Diisopropyl Ether (DIPE)	ND	0.61	0.63	6.3	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.64	2.5	6.3	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.45	0.63	6.3	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	85-120	
Dibromofluoromethane	108	76-142	
1,2-Dichloroethane-d4	121	77-155	
Toluene-d8	100	85-115	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90002	**16-08-2041-2-B**	**08/25/16 11:30**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 20:46**	**160830L014**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	ND	7.5	12	24	1.00	U
Benzene	0.43	0.16	0.24	0.60	1.00	J
Bromobenzene	ND	0.25	0.60	6.0	1.00	U
Bromochloromethane	ND	0.83	2.4	6.0	1.00	U
Bromodichloromethane	ND	0.28	0.60	6.0	1.00	U
Bromoform	ND	0.96	2.4	12	1.00	U
Bromomethane	ND	11	12	24	1.00	U
2-Butanone	ND	4.5	6.0	12	1.00	U
n-Butylbenzene	ND	0.19	0.24	12	1.00	U
sec-Butylbenzene	ND	0.70	2.4	6.0	1.00	U
tert-Butylbenzene	ND	0.18	0.24	12	1.00	U
Carbon Disulfide	ND	0.37	0.60	6.0	1.00	U
Carbon Tetrachloride	ND	0.34	0.60	6.0	1.00	U
Chlorobenzene	ND	0.27	0.60	6.0	1.00	U
Chloroethane	ND	1.8	2.4	12	1.00	U
Chloroform	ND	0.29	0.60	6.0	1.00	U
Chloromethane	ND	0.37	0.60	12	1.00	U
2-Chlorotoluene	ND	0.28	0.60	6.0	1.00	U
4-Chlorotoluene	ND	0.26	0.60	12	1.00	U
Dibromochloromethane	ND	0.69	2.4	12	1.00	U
1,2-Dibromo-3-Chloropropane	ND	2.1	2.4	12	1.00	U
1,2-Dibromoethane	ND	0.31	0.60	6.0	1.00	U
Dibromomethane	ND	0.93	2.4	6.0	1.00	U
1,2-Dichlorobenzene	ND	0.28	0.60	12	1.00	U
1,3-Dichlorobenzene	ND	0.21	0.60	6.0	1.00	U
1,4-Dichlorobenzene	ND	0.27	0.60	6.0	1.00	U
Dichlorodifluoromethane	ND	0.53	0.60	6.0	1.00	U
1,1-Dichloroethane	ND	0.25	0.60	6.0	1.00	U
1,2-Dichloroethane	ND	0.38	0.60	6.0	1.00	U
1,1-Dichloroethene	ND	0.42	0.60	6.0	1.00	U
c-1,2-Dichloroethene	ND	0.34	0.60	6.0	1.00	U
t-1,2-Dichloroethene	ND	0.61	2.4	6.0	1.00	U
1,2-Dichloropropane	ND	0.53	0.60	6.0	1.00	U
1,3-Dichloropropane	ND	0.30	0.60	6.0	1.00	U
2,2-Dichloropropane	ND	0.40	0.60	6.0	1.00	U,IH

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 4 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
1,1-Dichloropropene	ND	0.40	0.60	6.0	1.00	U
c-1,3-Dichloropropene	ND	0.31	0.60	6.0	1.00	U
t-1,3-Dichloropropene	ND	0.73	2.4	12	1.00	U
Ethylbenzene	ND	0.18	0.24	6.0	1.00	U
2-Hexanone	ND	2.1	2.4	12	1.00	U
Isopropylbenzene	ND	0.66	2.4	12	1.00	U
p-Isopropyltoluene	ND	0.76	2.4	12	1.00	U
Methylene Chloride	ND	1.6	2.4	6.0	1.00	U
4-Methyl-2-Pentanone	ND	5.2	6.0	12	1.00	U
Naphthalene	ND	0.98	2.4	6.0	1.00	U
n-Propylbenzene	ND	0.60	2.4	6.0	1.00	U
Styrene	ND	0.73	2.4	12	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.29	0.60	12	1.00	U
1,1,2,2-Tetrachloroethane	ND	0.42	0.60	6.0	1.00	U
Tetrachloroethene	ND	0.25	0.60	6.0	1.00	U
Toluene	ND	0.62	2.4	6.0	1.00	U
1,2,3-Trichlorobenzene	ND	1.1	2.4	6.0	1.00	U
1,2,4-Trichlorobenzene	ND	0.37	0.60	24	1.00	U
1,1,1-Trichloroethane	ND	0.27	0.60	6.0	1.00	U
Hexachloro-1,3-Butadiene	ND	0.39	0.60	6.0	1.00	U
1,1,2-Trichloroethane	ND	0.43	0.60	6.0	1.00	U
Trichloroethene	ND	0.36	0.60	6.0	1.00	U
Trichlorofluoromethane	ND	0.45	0.60	6.0	1.00	U
1,2,3-Trichloropropane	ND	1.0	2.4	6.0	1.00	U
1,2,4-Trimethylbenzene	ND	0.71	2.4	12	1.00	U
1,3,5-Trimethylbenzene	ND	0.66	2.4	6.0	1.00	U
Vinyl Acetate	ND	5.7	6.0	24	1.00	U
Vinyl Chloride	ND	0.61	2.4	12	1.00	U
p/m-Xylene	ND	0.32	0.48	12	1.00	U
o-Xylene	ND	0.67	2.4	12	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.36	0.60	6.0	1.00	U
Tert-Butyl Alcohol (TBA)	ND	6.2	12	30	1.00	U
Diisopropyl Ether (DIPE)	ND	0.58	0.60	6.0	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.61	2.4	6.0	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.42	0.60	6.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	85-120	
Dibromofluoromethane	101	76-142	
1,2-Dichloroethane-d4	111	77-155	
Toluene-d8	100	85-115	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 5 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90003	**16-08-2041-3-B**	**08/25/16 11:40**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 21:13**	**160830L014**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	ND	9.6	15	31	1.00	U
Benzene	ND	0.20	0.31	0.77	1.00	U
Bromobenzene	ND	0.32	0.77	7.7	1.00	U
Bromochloromethane	ND	1.1	3.1	7.7	1.00	U
Bromodichloromethane	ND	0.36	0.77	7.7	1.00	U
Bromoform	ND	1.2	3.1	15	1.00	U
Bromomethane	ND	14	15	31	1.00	U
2-Butanone	ND	5.8	7.7	15	1.00	U
n-Butylbenzene	ND	0.24	0.31	15	1.00	U
sec-Butylbenzene	ND	0.89	3.1	7.7	1.00	U
tert-Butylbenzene	ND	0.23	0.31	15	1.00	U
Carbon Disulfide	ND	0.47	0.77	7.7	1.00	U
Carbon Tetrachloride	ND	0.43	0.77	7.7	1.00	U
Chlorobenzene	ND	0.34	0.77	7.7	1.00	U
Chloroethane	ND	2.3	3.1	15	1.00	U
Chloroform	ND	0.37	0.77	7.7	1.00	U
Chloromethane	ND	0.47	0.77	15	1.00	U
2-Chlorotoluene	ND	0.35	0.77	7.7	1.00	U
4-Chlorotoluene	ND	0.33	0.77	15	1.00	U
Dibromochloromethane	ND	0.87	3.1	15	1.00	U
1,2-Dibromo-3-Chloropropane	ND	2.7	3.1	15	1.00	U
1,2-Dibromoethane	ND	0.39	0.77	7.7	1.00	U
Dibromomethane	ND	1.2	3.1	7.7	1.00	U
1,2-Dichlorobenzene	ND	0.35	0.77	15	1.00	U
1,3-Dichlorobenzene	ND	0.27	0.77	7.7	1.00	U
1,4-Dichlorobenzene	ND	0.34	0.77	7.7	1.00	U
Dichlorodifluoromethane	ND	0.68	0.77	7.7	1.00	U
1,1-Dichloroethane	ND	0.32	0.77	7.7	1.00	U
1,2-Dichloroethane	ND	0.48	0.77	7.7	1.00	U
1,1-Dichloroethene	ND	0.53	0.77	7.7	1.00	U
c-1,2-Dichloroethene	ND	0.43	0.77	7.7	1.00	U
t-1,2-Dichloroethene	ND	0.78	3.1	7.7	1.00	U
1,2-Dichloropropane	ND	0.67	0.77	7.7	1.00	U
1,3-Dichloropropane	ND	0.39	0.77	7.7	1.00	U
2,2-Dichloropropane	ND	0.51	0.77	7.7	1.00	U,IH

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 6 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
1,1-Dichloropropene	ND	0.50	0.77	7.7	1.00	U
c-1,3-Dichloropropene	ND	0.39	0.77	7.7	1.00	U
t-1,3-Dichloropropene	ND	0.93	3.1	15	1.00	U
Ethylbenzene	ND	0.23	0.31	7.7	1.00	U
2-Hexanone	ND	2.7	3.1	15	1.00	U
Isopropylbenzene	ND	0.84	3.1	15	1.00	U
p-Isopropyltoluene	ND	0.97	3.1	15	1.00	U
Methylene Chloride	ND	2.1	3.1	7.7	1.00	U
4-Methyl-2-Pentanone	ND	6.6	7.7	15	1.00	U
Naphthalene	ND	1.2	3.1	7.7	1.00	U
n-Propylbenzene	ND	0.77	3.1	7.7	1.00	U
Styrene	ND	0.93	3.1	15	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.37	0.77	15	1.00	U
1,1,2,2-Tetrachloroethane	ND	0.53	0.77	7.7	1.00	U
Tetrachloroethene	ND	0.32	0.77	7.7	1.00	U
Toluene	ND	0.79	3.1	7.7	1.00	U
1,2,3-Trichlorobenzene	ND	1.4	3.1	7.7	1.00	U
1,2,4-Trichlorobenzene	ND	0.48	0.77	31	1.00	U
1,1,1-Trichloroethane	ND	0.35	0.77	7.7	1.00	U
Hexachloro-1,3-Butadiene	ND	0.49	0.77	7.7	1.00	U
1,1,2-Trichloroethane	ND	0.54	0.77	7.7	1.00	U
Trichloroethene	ND	0.46	0.77	7.7	1.00	U
Trichlorofluoromethane	ND	0.58	0.77	7.7	1.00	U
1,2,3-Trichloropropane	ND	1.3	3.1	7.7	1.00	U
1,2,4-Trimethylbenzene	ND	0.90	3.1	15	1.00	U
1,3,5-Trimethylbenzene	ND	0.84	3.1	7.7	1.00	U
Vinyl Acetate	ND	7.3	7.7	31	1.00	U
Vinyl Chloride	ND	0.77	3.1	15	1.00	U
p/m-Xylene	ND	0.41	0.61	15	1.00	U
o-Xylene	ND	0.85	3.1	15	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.45	0.77	7.7	1.00	U
Tert-Butyl Alcohol (TBA)	ND	7.9	15	38	1.00	U
Diisopropyl Ether (DIPE)	ND	0.74	0.77	7.7	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	3.1	7.7	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.54	0.77	7.7	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	85-120	
Dibromofluoromethane	107	76-142	
1,2-Dichloroethane-d4	123	77-155	
Toluene-d8	102	85-115	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 7 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90004	**16-08-2041-4-B**	**08/25/16 12:00**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 21:40**	**160830L014**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	ND	9.6	15	31	1.00	U
Benzene	0.23	0.20	0.31	0.77	1.00	J
Bromobenzene	ND	0.32	0.77	7.7	1.00	U
Bromochloromethane	ND	1.1	3.1	7.7	1.00	U
Bromodichloromethane	ND	0.36	0.77	7.7	1.00	U
Bromoform	ND	1.2	3.1	15	1.00	U
Bromomethane	ND	14	15	31	1.00	U
2-Butanone	ND	5.8	7.7	15	1.00	U
n-Butylbenzene	ND	0.24	0.31	15	1.00	U
sec-Butylbenzene	ND	0.89	3.1	7.7	1.00	U
tert-Butylbenzene	ND	0.23	0.31	15	1.00	U
Carbon Disulfide	ND	0.47	0.77	7.7	1.00	U
Carbon Tetrachloride	ND	0.43	0.77	7.7	1.00	U
Chlorobenzene	ND	0.34	0.77	7.7	1.00	U
Chloroethane	ND	2.3	3.1	15	1.00	U
Chloroform	ND	0.37	0.77	7.7	1.00	U
Chloromethane	ND	0.47	0.77	15	1.00	U
2-Chlorotoluene	ND	0.35	0.77	7.7	1.00	U
4-Chlorotoluene	ND	0.33	0.77	15	1.00	U
Dibromochloromethane	ND	0.87	3.1	15	1.00	U
1,2-Dibromo-3-Chloropropane	ND	2.7	3.1	15	1.00	U
1,2-Dibromoethane	ND	0.39	0.77	7.7	1.00	U
Dibromomethane	ND	1.2	3.1	7.7	1.00	U
1,2-Dichlorobenzene	ND	0.35	0.77	15	1.00	U
1,3-Dichlorobenzene	ND	0.27	0.77	7.7	1.00	U
1,4-Dichlorobenzene	ND	0.34	0.77	7.7	1.00	U
Dichlorodifluoromethane	ND	0.68	0.77	7.7	1.00	U
1,1-Dichloroethane	ND	0.32	0.77	7.7	1.00	U
1,2-Dichloroethane	ND	0.48	0.77	7.7	1.00	U
1,1-Dichloroethene	ND	0.53	0.77	7.7	1.00	U
c-1,2-Dichloroethene	ND	0.43	0.77	7.7	1.00	U
t-1,2-Dichloroethene	ND	0.78	3.1	7.7	1.00	U
1,2-Dichloropropane	ND	0.67	0.77	7.7	1.00	U
1,3-Dichloropropane	ND	0.39	0.77	7.7	1.00	U
2,2-Dichloropropane	ND	0.51	0.77	7.7	1.00	U,IH

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 8 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
1,1-Dichloropropene	ND	0.50	0.77	7.7	1.00	U
c-1,3-Dichloropropene	ND	0.39	0.77	7.7	1.00	U
t-1,3-Dichloropropene	ND	0.93	3.1	15	1.00	U
Ethylbenzene	ND	0.23	0.31	7.7	1.00	U
2-Hexanone	ND	2.7	3.1	15	1.00	U
Isopropylbenzene	ND	0.84	3.1	15	1.00	U
p-Isopropyltoluene	ND	0.97	3.1	15	1.00	U
Methylene Chloride	ND	2.1	3.1	7.7	1.00	U
4-Methyl-2-Pentanone	ND	6.6	7.7	15	1.00	U
Naphthalene	ND	1.2	3.1	7.7	1.00	U
n-Propylbenzene	ND	0.77	3.1	7.7	1.00	U
Styrene	ND	0.93	3.1	15	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.37	0.77	15	1.00	U
1,1,2,2-Tetrachloroethane	ND	0.53	0.77	7.7	1.00	U
Tetrachloroethene	ND	0.32	0.77	7.7	1.00	U
Toluene	ND	0.79	3.1	7.7	1.00	U
1,2,3-Trichlorobenzene	ND	1.4	3.1	7.7	1.00	U
1,2,4-Trichlorobenzene	ND	0.48	0.77	31	1.00	U
1,1,1-Trichloroethane	ND	0.35	0.77	7.7	1.00	U
Hexachloro-1,3-Butadiene	ND	0.49	0.77	7.7	1.00	U
1,1,2-Trichloroethane	ND	0.54	0.77	7.7	1.00	U
Trichloroethene	ND	0.46	0.77	7.7	1.00	U
Trichlorofluoromethane	ND	0.58	0.77	7.7	1.00	U
1,2,3-Trichloropropane	ND	1.3	3.1	7.7	1.00	U
1,2,4-Trimethylbenzene	ND	0.90	3.1	15	1.00	U
1,3,5-Trimethylbenzene	ND	0.84	3.1	7.7	1.00	U
Vinyl Acetate	ND	7.3	7.7	31	1.00	U
Vinyl Chloride	ND	0.77	3.1	15	1.00	U
p/m-Xylene	ND	0.41	0.61	15	1.00	U
o-Xylene	ND	0.85	3.1	15	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.45	0.77	7.7	1.00	U
Tert-Butyl Alcohol (TBA)	ND	7.9	15	38	1.00	U
Diisopropyl Ether (DIPE)	ND	0.74	0.77	7.7	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	3.1	7.7	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.54	0.77	7.7	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	85-120	
Dibromofluoromethane	103	76-142	
1,2-Dichloroethane-d4	119	77-155	
Toluene-d8	102	85-115	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 9 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-90005	**16-08-2041-5-B**	**08/25/16 10:20**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 22:07**	**160830L014**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	22	20	33	66	1.00	J
Benzene	2.7	0.43	0.66	1.6	1.00	
Bromobenzene	ND	0.69	1.6	16	1.00	U
Bromochloromethane	ND	2.3	6.6	16	1.00	U
Bromodichloromethane	ND	0.76	1.6	16	1.00	U
Bromoform	ND	2.6	6.6	33	1.00	U
Bromomethane	ND	31	33	66	1.00	U
2-Butanone	ND	12	16	33	1.00	U
n-Butylbenzene	ND	0.51	0.66	33	1.00	U
sec-Butylbenzene	ND	1.9	6.6	16	1.00	U
tert-Butylbenzene	ND	0.49	0.66	33	1.00	U
Carbon Disulfide	ND	1.0	1.6	16	1.00	U
Carbon Tetrachloride	ND	0.93	1.6	16	1.00	U
Chlorobenzene	ND	0.73	1.6	16	1.00	U
Chloroethane	ND	4.9	6.6	33	1.00	U
Chloroform	ND	0.78	1.6	16	1.00	U
Chloromethane	ND	1.0	1.6	33	1.00	U
2-Chlorotoluene	ND	0.76	1.6	16	1.00	U
4-Chlorotoluene	ND	0.70	1.6	33	1.00	U
Dibromochloromethane	ND	1.9	6.6	33	1.00	U
1,2-Dibromo-3-Chloropropane	ND	5.7	6.6	33	1.00	U
1,2-Dibromoethane	ND	0.84	1.6	16	1.00	U
Dibromomethane	ND	2.5	6.6	16	1.00	U
1,2-Dichlorobenzene	ND	0.75	1.6	33	1.00	U
1,3-Dichlorobenzene	ND	0.58	1.6	16	1.00	U
1,4-Dichlorobenzene	ND	0.73	1.6	16	1.00	U
Dichlorodifluoromethane	ND	1.5	1.6	16	1.00	U
1,1-Dichloroethane	ND	0.69	1.6	16	1.00	U
1,2-Dichloroethane	ND	1.0	1.6	16	1.00	U
1,1-Dichloroethene	ND	1.1	1.6	16	1.00	U
c-1,2-Dichloroethene	ND	0.92	1.6	16	1.00	U
t-1,2-Dichloroethene	ND	1.7	6.6	16	1.00	U
1,2-Dichloropropane	ND	1.4	1.6	16	1.00	U
1,3-Dichloropropane	ND	0.83	1.6	16	1.00	U
2,2-Dichloropropane	ND	1.1	1.6	16	1.00	U,IH

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 10 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
1,1-Dichloropropene	ND	1.1	1.6	16	1.00	U
c-1,3-Dichloropropene	ND	0.83	1.6	16	1.00	U
t-1,3-Dichloropropene	ND	2.0	6.6	33	1.00	U
Ethylbenzene	ND	0.50	0.66	16	1.00	U
2-Hexanone	ND	5.8	6.6	33	1.00	U
Isopropylbenzene	ND	1.8	6.6	33	1.00	U
p-Isopropyltoluene	ND	2.1	6.6	33	1.00	U
Methylene Chloride	ND	4.4	6.6	16	1.00	U
4-Methyl-2-Pentanone	ND	14	16	33	1.00	U
Naphthalene	ND	2.7	6.6	16	1.00	U
n-Propylbenzene	ND	1.6	6.6	16	1.00	U
Styrene	ND	2.0	6.6	33	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.79	1.6	33	1.00	U
1,1,2,2-Tetrachloroethane	ND	1.1	1.6	16	1.00	U
Tetrachloroethene	ND	0.69	1.6	16	1.00	U
Toluene	3.4	1.7	6.6	16	1.00	J
1,2,3-Trichlorobenzene	ND	3.0	6.6	16	1.00	U
1,2,4-Trichlorobenzene	ND	1.0	1.6	66	1.00	U
1,1,1-Trichloroethane	ND	0.74	1.6	16	1.00	U
Hexachloro-1,3-Butadiene	ND	1.1	1.6	16	1.00	U
1,1,2-Trichloroethane	ND	1.2	1.6	16	1.00	U
Trichloroethene	ND	0.99	1.6	16	1.00	U
Trichlorofluoromethane	ND	1.2	1.6	16	1.00	U
1,2,3-Trichloropropane	ND	2.7	6.6	16	1.00	U
1,2,4-Trimethylbenzene	ND	1.9	6.6	33	1.00	U
1,3,5-Trimethylbenzene	ND	1.8	6.6	16	1.00	U
Vinyl Acetate	ND	16	16	66	1.00	U
Vinyl Chloride	ND	1.6	6.6	33	1.00	U
p/m-Xylene	ND	0.88	1.3	33	1.00	U
o-Xylene	ND	1.8	6.6	33	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.97	1.6	16	1.00	U
Tert-Butyl Alcohol (TBA)	ND	17	33	82	1.00	U
Diisopropyl Ether (DIPE)	ND	1.6	1.6	16	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	1.7	6.6	16	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.6	16	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	85-120	
Dibromofluoromethane	102	76-142	
1,2-Dichloroethane-d4	111	77-155	
Toluene-d8	99	85-115	

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 11 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-507-90**	**N/A**	**Solid**	**GC/MS OO**	**08/30/16**	**08/30/16 17:15**	**160830L014**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Acetone	ND	6.2	10	20	1.00	U
Benzene	ND	0.13	0.20	0.50	1.00	U
Bromobenzene	ND	0.21	0.50	5.0	1.00	U
Bromochloromethane	ND	0.69	2.0	5.0	1.00	U
Bromodichloromethane	ND	0.23	0.50	5.0	1.00	U
Bromoform	ND	0.79	2.0	10	1.00	U
Bromomethane	ND	9.4	10	20	1.00	U
2-Butanone	ND	3.8	5.0	10	1.00	U
n-Butylbenzene	ND	0.16	0.20	10	1.00	U
sec-Butylbenzene	ND	0.58	2.0	5.0	1.00	U
tert-Butylbenzene	ND	0.15	0.20	10	1.00	U
Carbon Disulfide	ND	0.31	0.50	5.0	1.00	U
Carbon Tetrachloride	ND	0.28	0.50	5.0	1.00	U
Chlorobenzene	ND	0.22	0.50	5.0	1.00	U
Chloroethane	ND	1.5	2.0	10	1.00	U
Chloroform	ND	0.24	0.50	5.0	1.00	U
Chloromethane	ND	0.30	0.50	10	1.00	U
2-Chlorotoluene	ND	0.23	0.50	5.0	1.00	U
4-Chlorotoluene	ND	0.21	0.50	10	1.00	U
Dibromochloromethane	ND	0.57	2.0	10	1.00	U
1,2-Dibromo-3-Chloropropane	ND	1.7	2.0	10	1.00	U
1,2-Dibromoethane	ND	0.26	0.50	5.0	1.00	U
Dibromomethane	ND	0.77	2.0	5.0	1.00	U
1,2-Dichlorobenzene	ND	0.23	0.50	10	1.00	U
1,3-Dichlorobenzene	ND	0.18	0.50	5.0	1.00	U
1,4-Dichlorobenzene	ND	0.22	0.50	5.0	1.00	U
Dichlorodifluoromethane	ND	0.44	0.50	5.0	1.00	U
1,1-Dichloroethane	ND	0.21	0.50	5.0	1.00	U
1,2-Dichloroethane	ND	0.31	0.50	5.0	1.00	U
1,1-Dichloroethene	ND	0.35	0.50	5.0	1.00	U
c-1,2-Dichloroethene	ND	0.28	0.50	5.0	1.00	U
t-1,2-Dichloroethene	ND	0.51	2.0	5.0	1.00	U
1,2-Dichloropropane	ND	0.44	0.50	5.0	1.00	U
1,3-Dichloropropane	ND	0.25	0.50	5.0	1.00	U
2,2-Dichloropropane	ND	0.33	0.50	5.0	1.00	U
1,1-Dichloropropene	ND	0.33	0.50	5.0	1.00	U

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Analytical Report

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 12 of 12

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
c-1,3-Dichloropropene	ND	0.25	0.50	5.0	1.00	U
t-1,3-Dichloropropene	ND	0.61	2.0	10	1.00	U
Ethylbenzene	ND	0.15	0.20	5.0	1.00	U
2-Hexanone	ND	1.8	2.0	10	1.00	U
Isopropylbenzene	ND	0.55	2.0	10	1.00	U
p-Isopropyltoluene	ND	0.63	2.0	10	1.00	U
Methylene Chloride	ND	1.3	2.0	5.0	1.00	U
4-Methyl-2-Pentanone	ND	4.3	5.0	10	1.00	U
Naphthalene	ND	0.81	2.0	5.0	1.00	U
n-Propylbenzene	ND	0.50	2.0	5.0	1.00	U
Styrene	ND	0.60	2.0	10	1.00	U
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	10	1.00	U
1,1,2,2-Tetrachloroethane	ND	0.35	0.50	5.0	1.00	U
Tetrachloroethene	ND	0.21	0.50	5.0	1.00	U
Toluene	ND	0.52	2.0	5.0	1.00	U
1,2,3-Trichlorobenzene	ND	0.91	2.0	5.0	1.00	U
1,2,4-Trichlorobenzene	ND	0.31	0.50	20	1.00	U
1,1,1-Trichloroethane	ND	0.23	0.50	5.0	1.00	U
Hexachloro-1,3-Butadiene	ND	0.32	0.50	5.0	1.00	U
1,1,2-Trichloroethane	ND	0.35	0.50	5.0	1.00	U
Trichloroethene	ND	0.30	0.50	5.0	1.00	U
Trichlorofluoromethane	ND	0.38	0.50	5.0	1.00	U
1,2,3-Trichloropropane	ND	0.83	2.0	5.0	1.00	U
1,2,4-Trimethylbenzene	ND	0.59	2.0	10	1.00	U
1,3,5-Trimethylbenzene	ND	0.55	2.0	5.0	1.00	U
Vinyl Acetate	ND	4.7	5.0	20	1.00	U
Vinyl Chloride	ND	0.50	2.0	10	1.00	U
p/m-Xylene	ND	0.27	0.40	10	1.00	U
o-Xylene	ND	0.56	2.0	10	1.00	U
Methyl-t-Butyl Ether (MTBE)	ND	0.30	0.50	5.0	1.00	U
Tert-Butyl Alcohol (TBA)	ND	5.2	10	25	1.00	U
Diisopropyl Ether (DIPE)	ND	0.48	0.50	5.0	1.00	U
Ethyl-t-Butyl Ether (ETBE)	ND	0.51	2.0	5.0	1.00	U
Tert-Amyl-Methyl Ether (TAME)	ND	0.35	0.50	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	85-120	
Dibromofluoromethane	105	76-142	
1,2-Dichloroethane-d4	117	77-155	
Toluene-d8	101	85-115	

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 1 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:50**	**160831S08**
OT071-90001	**Matrix Spike**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 21:06**	**160831S08**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 21:22**	**160831S08**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	18.02	400.0	324.0	76	258.0	60	71-125	23	0-12	3,4

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 2 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 20:50**	**160831S08**
OT071-90001	**Matrix Spike**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 21:06**	**160831S08**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 21:22**	**160831S08**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
n-Octacosane	50.00	35.30	71	33.10	66	62-152	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 3 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 03:13**	**160901S020**
OT071-90002	**Matrix Spike**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 03:45**	**160901S020**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 04:17**	**160901S020**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	10.00	10.12	101	11.03	110	66-108	9	0-18	3

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 4 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 03:13**	**160901S020**
OT071-90002	**Matrix Spike**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 03:45**	**160901S020**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 04:17**	**160901S020**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	0.5000	0.1149	115	0.1111	111	39-129	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Former George AFB, CA / 145981			Page 5 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:37**	**160902S04**
OT071-90001	**Matrix Spike**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:43**	**160902S04**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:44**	**160902S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	7.046	28	7.430	30	80-120	5	0-20	3
Arsenic	0.5329	25.00	26.06	102	26.72	105	80-120	2	0-20	
Barium	61.05	25.00	96.40	141	95.27	137	80-120	1	0-20	3
Beryllium	ND	25.00	27.20	109	27.28	109	80-120	0	0-20	
Cadmium	ND	25.00	25.57	102	25.63	103	80-120	0	0-20	
Chromium	26.61	25.00	57.65	124	62.99	146	80-120	9	0-20	3
Cobalt	5.089	25.00	31.16	104	31.27	105	80-120	0	0-20	
Copper	7.160	25.00	34.97	111	34.67	110	80-120	1	0-20	
Lead	2.970	25.00	28.40	102	28.63	103	80-120	1	0-20	
Molybdenum	ND	25.00	22.76	91	22.93	92	80-120	1	0-20	
Nickel	5.532	25.00	31.91	106	32.16	107	80-120	1	0-20	
Selenium	ND	25.00	23.84	95	24.84	99	80-120	4	0-20	
Silver	ND	12.50	12.85	103	13.07	105	80-120	2	0-20	
Thallium	ND	25.00	23.09	92	15.89	64	80-120	37	0-20	3,4
Vanadium	25.15	25.00	53.00	111	53.19	112	80-120	0	0-20	
Zinc	31.95	25.00	65.51	134	63.73	127	80-120	3	0-20	3
Aluminum	6633	25.00	8214	4X	8240	4X	80-120	4X	0-20	Q
Calcium	5921	25.00	7331	4X	7105	4X	80-120	4X	0-20	Q
Iron	9917	25.00	11030	4X	11300	4X	80-120	4X	0-20	Q
Magnesium	4273	25.00	5079	4X	5041	4X	80-120	4X	0-20	Q
Manganese	259.1	25.00	319.2	4X	319.1	4X	80-120	4X	0-20	Q
Potassium	2281	250.0	2944	4X	2865	4X	80-120	4X	0-20	Q
Sodium	249.9	250.0	568.7	127	559.3	124	80-120	2	0-20	3

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Former George AFB, CA / 145981			Page 6 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:22**	**160906S02**
OT071-90001	**Matrix Spike**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:24**	**160906S02**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:27**	**160906S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.7134	85	0.7831	94	80-120	9	0-15	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 7 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:33**	**160901S05**
OT071-90002	**Matrix Spike**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 13:37**	**160901S05**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 13:52**	**160901S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Alpha-BHC	ND	25.00	28.26	113	28.46	114	60-125	1	0-20	
Gamma-BHC	ND	25.00	30.02	120	29.58	118	60-125	1	0-20	
Beta-BHC	ND	25.00	29.14	117	28.46	114	60-125	2	0-20	
Heptachlor	ND	25.00	29.52	118	28.86	115	50-140	2	0-20	
Delta-BHC	ND	25.00	33.85	135	31.40	126	55-130	8	0-20	3
Aldrin	ND	25.00	28.68	115	27.72	111	45-140	3	0-20	
Heptachlor Epoxide	ND	25.00	29.00	116	28.19	113	65-130	3	0-20	
Endosulfan I	ND	25.00	29.94	120	29.08	116	15-135	3	0-20	
Dieldrin	ND	25.00	30.72	123	30.04	120	65-125	2	0-20	
4,4'-DDE	ND	25.00	31.18	125	29.70	119	70-125	5	0-20	
Endrin	ND	25.00	20.95	84	22.36	89	60-135	6	0-20	
Endrin Aldehyde	ND	25.00	22.27	89	20.62	82	35-145	8	0-20	
4,4'-DDD	ND	25.00	31.78	127	30.65	123	30-135	4	0-20	
Endosulfan II	ND	25.00	33.29	133	32.50	130	35-140	2	0-20	
4,4'-DDT	ND	25.00	31.62	126	29.82	119	45-140	6	0-20	
Endosulfan Sulfate	ND	25.00	29.54	118	29.36	117	60-135	1	0-20	
Methoxychlor	ND	25.00	28.48	114	28.96	116	55-145	2	0-20	
Endrin Ketone	ND	25.00	36.32	145	35.30	141	65-135	3	0-20	3
Alpha Chlordane	ND	25.00	29.34	117	28.17	113	65-120	4	0-20	
Gamma Chlordane	ND	25.00	29.38	118	28.30	113	65-125	4	0-20	
Hexachlorobenzene	ND	25.00	27.76	111	27.78	111	60-130	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 8 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:33**	**160901S05**
OT071-90002	**Matrix Spike**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 13:37**	**160901S05**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 13:52**	**160901S05**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	60.64	121	59.20	118	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	55.96	112	57.20	114	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Former George AFB, CA / 145981			Page 9 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:47**	**160901S06**
OT071-90002	**Matrix Spike**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 10:54**	**160901S06**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:10**	**160901S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	107.5	107	117.4	117	50-135	9	0-20	
Aroclor-1260	ND	100.0	85.07	85	86.07	86	50-135	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:47**	**160901S06**
OT071-90002	**Matrix Spike**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 10:54**	**160901S06**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 11:10**	**160901S06**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	45.15	90	44.30	89	60-125	
2,4,5,6-Tetrachloro-m-Xylene	25.00	50.00	100	45.90	92	50-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
Project: Former George AFB, CA / 145981			Page 11 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 15:30**	**160902S03**
OT071-90002	**Matrix Spike**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 19:18**	**160902S03**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 20:07**	**160902S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Azinphos Methyl	ND	4.000	3.357	84	3.241	81	30-130	4	0-30	
Bolstar	ND	4.000	3.736	93	4.026	101	30-130	7	0-30	
Chlorpyrifos	ND	4.000	3.310	83	3.495	87	30-130	5	0-30	
Coumaphos	ND	4.000	3.470	87	3.713	93	30-130	7	0-30	
Diazinon	ND	4.000	3.390	85	3.607	90	30-130	6	0-30	
Disulfoton	ND	4.000	3.194	80	3.390	85	30-130	6	0-30	
Ethoprop	ND	4.000	3.313	83	3.514	88	30-130	6	0-30	
Fensulfothion	ND	4.000	3.639	91	3.887	97	30-130	7	0-30	
Fenthion	ND	4.000	3.208	80	3.405	85	30-130	6	0-30	
Merphos	ND	4.000	4.198	105	4.412	110	30-130	5	0-30	
Methyl Parathion	ND	4.000	2.995	75	3.193	80	30-130	6	0-30	
Phorate	ND	4.000	3.918	98	4.184	105	30-130	7	0-30	
Ronnel	ND	4.000	2.913	73	3.094	77	30-130	6	0-30	
Stirophos	ND	4.000	3.245	81	3.412	85	30-130	5	0-30	
Tokuthion	ND	4.000	3.131	78	3.303	83	30-130	5	0-30	
Trichloronate	ND	4.000	3.237	81	3.430	86	30-130	6	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 15:30**	**160902S03**
OT071-90002	**Matrix Spike**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 19:18**	**160902S03**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 20:07**	**160902S03**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Tributylphosphate	4.000	3.179	79	3.390	85	30-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 17:00**	**160830S12**
OT071-90001	**Matrix Spike**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 15:50**	**160830S12**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 16:13**	**160830S12**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Dalapon	ND	1000	595.0	60	619.0	62	30-150	4	0-30	
Dicamba	ND	40.00	24.00	60	26.00	65	50-150	8	0-30	
MCPP	ND	40000	24860	62	26480	66	25-135	6	0-30	
MCPA	ND	40000	24840	62	25830	65	25-135	4	0-30	
Dichlorprop	ND	400.0	248.0	62	258.0	64	50-150	4	0-30	
2,4-D	ND	400.0	238.0	60	251.0	63	30-150	5	0-30	
2,4,5-TP (Silvex)	ND	40.00	26.00	65	26.00	65	30-130	0	0-30	
2,4,5-T	ND	40.00	25.00	62	25.00	62	30-130	0	0-30	
2,4-DB	ND	400.0	263.0	66	277.0	69	40-150	5	0-30	
Dinoseb	ND	200.0	161.0	80	170.0	85	5-130	5	0-30	

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RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 17:00**	**160830S12**
OT071-90001	**Matrix Spike**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 15:50**	**160830S12**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 16:13**	**160830S12**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2,4-Dichlorophenylacetic acid	20000	130.0	65	140.0	70	25-135	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: Former George AFB, CA / 145981			Page 15 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 17:23**	**160830S05**
OT071-90002	**Matrix Spike**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:39**	**160830S05**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:58**	**160830S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
2,6-Dichlorophenol	ND	5.000	4.566	91	4.436	89	45-100	3	0-30	
Acenaphthene	ND	5.000	4.465	89	4.307	86	45-110	4	0-30	
Acenaphthylene	ND	5.000	4.318	86	4.184	84	45-105	3	0-30	
Aniline	ND	5.000	5.688	114	5.521	110	60-140	3	0-30	
Anthracene	ND	5.000	4.569	91	4.464	89	55-105	2	0-30	
Azobenzene	ND	5.000	4.374	87	4.302	86	60-140	2	0-30	
Benzidine	ND	5.000	4.846	97	4.479	90	60-140	8	0-30	
Benzo (a) Anthracene	ND	5.000	4.874	97	4.727	95	50-110	3	0-30	
Benzo (a) Pyrene	ND	5.000	5.258	105	5.113	102	50-110	3	0-30	
Benzo (b) Fluoranthene	ND	5.000	4.686	94	4.670	93	45-115	0	0-30	
Benzo (g,h,i) Perylene	ND	5.000	5.226	105	5.181	104	40-125	1	0-30	
Benzo (k) Fluoranthene	ND	5.000	5.245	105	4.905	98	45-125	7	0-30	
Benzoic Acid	ND	5.000	0.6563	13	0.5238	10	30-140	22	0-30	3
Benzyl Alcohol	ND	5.000	4.321	86	4.250	85	20-125	2	0-30	
Bis(2-Chloroethoxy) Methane	ND	5.000	4.079	82	3.972	79	45-110	3	0-30	
Bis(2-Chloroethyl) Ether	ND	5.000	3.769	75	3.676	74	40-105	2	0-30	
Bis(2-Chloroisopropyl) Ether	ND	5.000	3.687	74	3.622	72	20-115	2	0-30	
Bis(2-Ethylhexyl) Phthalate	ND	5.000	4.946	99	4.793	96	45-125	3	0-30	
4-Bromophenyl-Phenyl Ether	ND	5.000	4.341	87	4.191	84	45-115	4	0-30	
Butyl Benzyl Phthalate	ND	5.000	4.976	100	4.854	97	50-125	2	0-30	
4-Chloro-3-Methylphenol	ND	5.000	4.638	93	4.558	91	45-115	2	0-30	
4-Chloroaniline	ND	5.000	6.620	132	6.602	132	60-140	0	0-30	
2-Chloronaphthalene	ND	5.000	4.205	84	4.095	82	45-105	3	0-30	
2-Chlorophenol	ND	5.000	4.422	88	4.285	86	45-105	3	0-30	
4-Chlorophenyl-Phenyl Ether	ND	5.000	4.259	85	4.099	82	45-110	4	0-30	
Chrysene	ND	5.000	4.755	95	4.674	93	55-110	2	0-30	
Di-n-Butyl Phthalate	ND	5.000	4.778	96	4.630	93	55-110	3	0-30	
Di-n-Octyl Phthalate	ND	5.000	5.228	105	5.016	100	40-130	4	0-30	
Dibenz (a,h) Anthracene	ND	5.000	5.042	101	4.968	99	40-125	1	0-30	
Dibenzofuran	ND	5.000	4.391	88	4.265	85	50-105	3	0-30	
1,2-Dichlorobenzene	ND	5.000	3.460	69	3.304	66	45-100	5	0-30	
1,3-Dichlorobenzene	ND	5.000	3.171	63	2.996	60	40-100	6	0-30	
1,4-Dichlorobenzene	ND	5.000	3.306	66	3.150	63	35-105	5	0-30	
3,3'-Dichlorobenzidine	ND	5.000	8.370	167	8.221	164	60-140	2	0-30	3
2,4-Dichlorophenol	ND	5.000	4.451	89	4.402	88	45-100	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: Former George AFB, CA / 145981			Page 16 of 22

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diethyl Phthalate	ND	5.000	4.281	86	4.246	85	50-115	1	0-30	
Dimethyl Phthalate	ND	5.000	4.629	93	4.545	91	50-110	2	0-30	
2,4-Dimethylphenol	ND	5.000	4.617	92	4.487	90	30-105	3	0-30	
4,6-Dinitro-2-Methylphenol	ND	5.000	4.374	87	4.407	88	60-135	1	0-30	
2,4-Dinitrophenol	ND	5.000	2.554	51	2.467	49	15-130	3	0-30	
2,4-Dinitrotoluene	ND	5.000	4.666	93	4.551	91	50-115	3	0-30	
2,6-Dinitrotoluene	ND	5.000	4.941	99	4.664	93	50-110	6	0-30	
Fluoranthene	ND	5.000	4.846	97	4.772	95	55-115	2	0-30	
Fluorene	ND	5.000	4.351	87	4.220	84	50-110	3	0-30	
Hexachloro-1,3-Butadiene	ND	5.000	3.517	70	3.262	65	40-115	8	0-30	
Hexachlorobenzene	ND	5.000	4.183	84	4.056	81	45-120	3	0-30	
Hexachlorocyclopentadiene	ND	5.000	3.167	63	2.887	58	60-140	9	0-30	3
Hexachloroethane	ND	5.000	3.028	61	2.928	59	35-110	3	0-30	
Indeno (1,2,3-c,d) Pyrene	ND	5.000	5.028	101	4.936	99	40-120	2	0-30	
Isophorone	ND	5.000	4.071	81	4.011	80	45-110	1	0-30	
2-Methylnaphthalene	ND	5.000	4.420	88	4.239	85	45-105	4	0-30	
1-Methylnaphthalene	ND	5.000	3.968	79	3.823	76	45-105	4	0-30	
2-Methylphenol	ND	5.000	4.599	92	4.532	91	40-105	1	0-30	
3/4-Methylphenol	ND	10.00	9.869	99	9.520	95	40-105	4	0-30	
N-Nitroso-di-n-propylamine	ND	5.000	4.158	83	4.056	81	40-115	2	0-30	
N-Nitrosodimethylamine	ND	5.000	3.915	78	3.956	79	20-115	1	0-30	
N-Nitrosodiphenylamine	ND	5.000	5.352	107	5.282	106	50-115	1	0-30	
Naphthalene	ND	5.000	4.021	80	3.872	77	40-105	4	0-30	
4-Nitroaniline	ND	5.000	4.762	95	4.800	96	35-115	1	0-30	
3-Nitroaniline	ND	5.000	4.553	91	4.568	91	25-110	0	0-30	
2-Nitroaniline	ND	5.000	4.641	93	4.728	95	45-120	2	0-30	
Nitrobenzene	ND	5.000	3.912	78	3.849	77	60-115	2	0-30	
4-Nitrophenol	ND	5.000	4.697	94	4.791	96	15-140	2	0-30	
2-Nitrophenol	ND	5.000	4.460	89	4.438	89	40-110	0	0-30	
Pentachlorophenol	ND	5.000	2.829	57	2.949	59	25-120	4	0-30	
Phenanthrene	ND	5.000	4.780	96	4.644	93	50-100	3	0-30	
Phenol	ND	5.000	4.673	93	4.544	91	40-100	3	0-30	
Pyrene	ND	5.000	4.498	90	4.444	89	45-125	1	0-30	
Pyridine	ND	5.000	2.835	57	2.905	58	60-140	2	0-30	3
1,2,4-Trichlorobenzene	ND	5.000	3.728	75	3.617	72	45-100	3	0-30	
2,4,6-Trichlorophenol	ND	5.000	4.462	89	4.470	89	45-110	0	0-30	
2,4,5-Trichlorophenol	ND	5.000	4.511	90	4.388	88	50-100	3	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: Former George AFB, CA / 145981			Page 17 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 17:23**	**160830S05**
OT071-90002	**Matrix Spike**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:39**	**160830S05**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 18:58**	**160830S05**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.5000	8.183	82	8.217	82	45-105	
2-Fluorophenol	0.5000	9.089	91	9.237	92	35-105	
Nitrobenzene-d5	0.5000	7.919	79	8.054	81	35-100	
p-Terphenyl-d14	0.5000	9.100	91	9.262	93	30-125	
Phenol-d6	0.5000	9.429	94	9.639	96	40-100	
2,4,6-Tribromophenol	0.5000	9.699	97	9.711	97	35-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Former George AFB, CA / 145981			Page 18 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 12:25**	**160830S06**
OT071-90002	**Matrix Spike**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 13:45**	**160830S06**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 14:05**	**160830S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.2000	0.1808	90	0.1174	59	15-171	42	0-44	
2-Methylnaphthalene	ND	0.2000	0.2061	103	0.1352	68	28-160	42	0-39	4
1-Methylnaphthalene	ND	0.2000	0.1791	90	0.1168	58	28-154	42	0-40	4
Acenaphthylene	ND	0.2000	0.1894	95	0.1277	64	27-153	39	0-41	
Acenaphthene	ND	0.2000	0.1922	96	0.1288	64	33-147	40	0-38	4
Fluorene	ND	0.2000	0.1906	95	0.1317	66	12-180	37	0-33	4
Phenanthrene	ND	0.2000	0.1824	91	0.1431	72	26-152	24	0-29	
Anthracene	ND	0.2000	0.1704	85	0.1339	67	10-145	24	0-25	
Fluoranthene	ND	0.2000	0.1947	97	0.1441	72	20-158	30	0-31	
Pyrene	ND	0.2000	0.2269	113	0.1741	87	11-191	26	0-31	
Benzo (a) Anthracene	ND	0.2000	0.2011	101	0.1553	78	36-150	26	0-32	
Chrysene	ND	0.2000	0.1988	99	0.1578	79	21-189	23	0-29	
Benzo (k) Fluoranthene	ND	0.2000	0.2023	101	0.1688	84	40-148	18	0-32	
Benzo (b) Fluoranthene	ND	0.2000	0.2045	102	0.1569	78	39-147	26	0-28	
Benzo (a) Pyrene	ND	0.2000	0.2030	101	0.1612	81	36-168	23	0-26	
Indeno (1,2,3-c,d) Pyrene	ND	0.2000	0.2092	105	0.1671	84	22-160	22	0-26	
Dibenz (a,h) Anthracene	ND	0.2000	0.2158	108	0.1764	88	27-147	20	0-30	
Benzo (g,h,i) Perylene	ND	0.2000	0.2188	109	0.1762	88	10-152	22	0-28	
Dibenzofuran	ND	0.2000	0.1898	95	0.1298	65	32-143	38	0-20	4

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Former George AFB, CA / 145981			Page 19 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90002	**Sample**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 12:25**	**160830S06**
OT071-90002	**Matrix Spike**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 13:45**	**160830S06**
OT071-90002	**Matrix Spike Duplicate**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 14:05**	**160830S06**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.04000	0.1679	84	0.1144	57	45-105	
Nitrobenzene-d5	0.04000	0.1732	87	0.1211	61	35-100	
p-Terphenyl-d14	0.04000	0.2058	103	0.1551	78	30-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Former George AFB, CA / 145981			Page 20 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 18:57**	**160830S012**
OT071-90001	**Matrix Spike**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 19:24**	**160830S012**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 19:52**	**160830S012**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	56.46	113	63.13	126	70-130	11	0-20	
Benzene	ND	50.00	47.56	95	47.71	95	76-124	0	0-15	
Bromobenzene	ND	50.00	48.02	96	48.15	96	70-130	0	0-20	
Bromochloromethane	ND	50.00	49.82	100	48.66	97	70-130	2	0-20	
Bromodichloromethane	ND	50.00	52.97	106	54.68	109	70-130	3	0-20	
Bromoform	ND	50.00	48.02	96	48.26	97	70-130	1	0-20	
Bromomethane	ND	50.00	52.64	105	47.23	94	70-130	11	0-20	
2-Butanone	ND	50.00	49.19	98	52.81	106	70-130	7	0-20	
n-Butylbenzene	ND	50.00	46.94	94	45.29	91	70-130	4	0-25	
sec-Butylbenzene	ND	50.00	47.76	96	46.61	93	70-130	2	0-20	
tert-Butylbenzene	ND	50.00	46.90	94	45.57	91	70-130	3	0-20	
Carbon Disulfide	ND	50.00	40.18	80	39.84	80	70-130	1	0-20	
Carbon Tetrachloride	ND	50.00	49.47	99	50.48	101	66-137	2	0-16	
Chlorobenzene	ND	50.00	47.93	96	47.89	96	72-129	0	0-21	
Chloroethane	ND	50.00	50.11	100	48.83	98	70-130	3	0-20	
Chloroform	ND	50.00	49.67	99	49.02	98	70-130	1	0-20	
Chloromethane	ND	50.00	50.62	101	50.96	102	70-130	1	0-20	
2-Chlorotoluene	ND	50.00	49.28	99	48.55	97	70-130	2	0-20	
4-Chlorotoluene	ND	50.00	48.29	97	47.61	95	70-130	1	0-20	
Dibromochloromethane	ND	50.00	50.76	102	51.17	102	70-130	1	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	48.49	97	49.35	99	70-130	2	0-20	
1,2-Dibromoethane	ND	50.00	51.43	103	52.18	104	70-130	1	0-20	
Dibromomethane	ND	50.00	50.72	101	51.81	104	70-130	2	0-20	
1,2-Dichlorobenzene	ND	50.00	45.79	92	45.22	90	79-121	1	0-20	
1,3-Dichlorobenzene	ND	50.00	46.51	93	45.04	90	70-130	3	0-20	
1,4-Dichlorobenzene	ND	50.00	45.60	91	44.61	89	70-130	2	0-20	
Dichlorodifluoromethane	ND	50.00	54.85	110	53.97	108	70-130	2	0-20	
1,1-Dichloroethane	ND	50.00	47.12	94	47.22	94	70-130	0	0-20	
1,2-Dichloroethane	ND	50.00	52.49	105	52.22	104	70-130	1	0-20	
1,1-Dichloroethene	ND	50.00	40.49	81	40.26	81	59-131	1	0-14	
c-1,2-Dichloroethene	ND	50.00	45.56	91	45.89	92	70-130	1	0-20	
t-1,2-Dichloroethene	ND	50.00	44.94	90	45.34	91	70-130	1	0-20	
1,2-Dichloropropane	ND	50.00	50.08	100	49.95	100	70-130	0	0-25	
1,3-Dichloropropane	ND	50.00	50.40	101	49.99	100	70-130	1	0-20	
2,2-Dichloropropane	ND	50.00	49.84	100	50.25	100	70-130	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Former George AFB, CA / 145981			Page 21 of 22

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	47.25	94	46.82	94	70-130	1	0-20	
c-1,3-Dichloropropene	ND	50.00	47.02	94	47.97	96	70-130	2	0-20	
t-1,3-Dichloropropene	ND	50.00	47.31	95	47.20	94	70-130	0	0-20	
Ethylbenzene	ND	50.00	49.38	99	49.66	99	70-130	1	0-20	
2-Hexanone	ND	50.00	50.15	100	50.11	100	70-130	0	0-20	
Isopropylbenzene	ND	50.00	50.66	101	50.00	100	70-130	1	0-20	
p-Isopropyltoluene	ND	50.00	48.20	96	47.36	95	70-130	2	0-20	
Methylene Chloride	ND	50.00	45.75	91	44.50	89	70-130	3	0-20	
4-Methyl-2-Pentanone	ND	50.00	48.16	96	49.36	99	70-130	2	0-20	
Naphthalene	ND	50.00	43.19	86	43.43	87	70-130	1	0-20	
n-Propylbenzene	ND	50.00	50.38	101	49.58	99	70-130	2	0-20	
Styrene	ND	50.00	50.80	102	49.94	100	70-130	2	0-20	
1,1,1,2-Tetrachloroethane	ND	50.00	52.93	106	52.79	106	70-130	0	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	45.96	92	45.57	91	70-130	1	0-20	
Tetrachloroethene	ND	50.00	63.91	128	67.00	134	70-130	5	0-20	3
Toluene	ND	50.00	49.92	100	50.47	101	72-130	1	0-16	
1,2,3-Trichlorobenzene	ND	50.00	41.11	82	39.52	79	70-130	4	0-20	
1,2,4-Trichlorobenzene	ND	50.00	42.91	86	41.06	82	70-130	4	0-20	
1,1,1-Trichloroethane	ND	50.00	48.86	98	50.17	100	70-130	3	0-20	
Hexachloro-1,3-Butadiene	ND	50.00	43.08	86	39.48	79	80-120	9	0-20	3
1,1,2-Trichloroethane	ND	50.00	49.31	99	48.16	96	70-130	2	0-20	
Trichloroethene	ND	50.00	51.16	102	51.81	104	69-130	1	0-18	
Trichlorofluoromethane	ND	50.00	54.88	110	53.46	107	70-130	3	0-20	
1,2,3-Trichloropropane	ND	50.00	48.98	98	49.31	99	70-130	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	48.73	97	47.68	95	70-130	2	0-20	
1,3,5-Trimethylbenzene	ND	50.00	50.74	101	49.89	100	70-130	2	0-20	
Vinyl Acetate	ND	50.00	8.278	17	6.318	13	70-130	27	0-20	3,4
Vinyl Chloride	ND	50.00	52.21	104	52.84	106	51-136	1	0-21	
p/m-Xylene	ND	100.0	100.5	100	99.70	100	70-130	1	0-20	
o-Xylene	ND	50.00	50.43	101	50.08	100	70-130	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	47.86	96	48.29	97	69-149	1	0-17	
Tert-Butyl Alcohol (TBA)	ND	250.0	256.0	102	262.9	105	49-145	3	0-25	
Diisopropyl Ether (DIPE)	ND	50.00	51.68	103	51.82	104	73-133	0	0-25	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	49.11	98	49.72	99	73-132	1	0-25	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	48.36	97	49.99	100	82-120	3	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Former George AFB, CA / 145981			Page 22 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-90001	**Sample**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 18:57**	**160830S012**
OT071-90001	**Matrix Spike**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 19:24**	**160830S012**
OT071-90001	**Matrix Spike Duplicate**	**Solid**	**GC/MS OO**	**08/29/16**	**08/30/16 19:52**	**160830S012**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	250.0	52.89	106	52.91	106	85-120	
Dibromofluoromethane	250.0	52.33	105	51.08	102	76-142	
1,2-Dichloroethane-d4	250.0	56.67	113	55.34	111	77-155	
Toluene-d8	250.0	50.43	101	50.82	102	85-115	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
OT071-90001	**Sample**	**Solid**	**ICP 7300**	**09/02/16 00:00**	**09/06/16 14:37**	**160902S04**
OT071-90001	**PDS**	**Solid**	**ICP 7300**	**09/02/16 00:00**	**09/06/16 14:45**	**160902S04**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Antimony	ND	25.00	27.85	111	75-125	
Arsenic	0.5329	25.00	29.07	114	75-125	
Barium	61.05	25.00	89.13	112	75-125	
Beryllium	ND	25.00	29.64	119	75-125	
Cadmium	ND	25.00	27.41	110	75-125	
Chromium	26.61	25.00	54.04	110	75-125	
Cobalt	5.089	25.00	33.00	112	75-125	
Copper	7.160	25.00	35.28	112	75-125	
Lead	2.970	25.00	30.77	111	75-125	
Molybdenum	ND	25.00	28.16	113	75-125	
Nickel	5.532	25.00	33.71	113	75-125	
Selenium	ND	25.00	28.71	115	75-125	
Silver	ND	12.50	13.68	109	75-125	
Thallium	ND	25.00	28.14	113	75-125	
Vanadium	25.15	25.00	52.26	108	75-125	
Zinc	31.95	25.00	59.04	108	75-125	
Aluminum	6633	25.00	6688	4X	75-125	Q
Calcium	5921	25.00	6312	4X	75-125	Q
Iron	9917	25.00	10000	4X	75-125	Q
Magnesium	4273	25.00	4363	4X	75-125	Q
Manganese	259.1	25.00	289.3	4X	75-125	Q
Potassium	2281	250.0	2670	4X	75-125	Q
Sodium	249.9	250.0	546.9	119	75-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
OT071-90001	**Sample**	**Solid**	**Mercury 05**	**09/06/16 00:00**	**09/06/16 14:22**	**160906S02**
OT071-90001	**PDS**	**Solid**	**Mercury 05**	**09/06/16 00:00**	**09/06/16 14:42**	**160906S02**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Mercury	ND	0.8350	0.6803	81	75-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Former George AFB, CA / 145981			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
OT071-90005	**Sample**	**Solid**	**N/A**	**08/31/16 00:00**	**08/31/16 17:00**	**G0831MOID1**
OT071-90005	**Sample Duplicate**	**Solid**	**N/A**	**08/31/16 00:00**	**08/31/16 17:00**	**G0831MOID1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	69.50	70.10	1	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 1 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-512-315	**LCS**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 19:30**	**160831B08**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	347.8	87	71-119	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 2 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-512-315	**LCS**	**Solid**	**GC 45**	**08/31/16**	**08/31/16 19:30**	**160831B08**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
n-Octacosane	50.00	39.27	79	62-152	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 3 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-493-63	**LCS**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 01:38**	**160901L046**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	10.00	9.765	98	70-124	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Former George AFB, CA / 145981			Page 4 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-493-63	**LCS**	**Solid**	**GC 57**	**09/01/16**	**09/02/16 01:38**	**160901L046**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	0.5000	0.1018	102	39-129	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Former George AFB, CA / 145981			Page 5 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-481-287	**LCS**	**Solid**	**ICP 7300**	**09/02/16**	**09/06/16 14:16**	**160902L04D**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Antimony	25.00	23.37	93	80-120	
Arsenic	25.00	24.87	99	80-120	
Barium	25.00	27.07	108	80-120	
Beryllium	25.00	24.14	97	80-120	
Cadmium	25.00	25.69	103	80-120	
Chromium	25.00	26.26	105	80-120	
Cobalt	25.00	26.98	108	80-120	
Copper	25.00	25.79	103	80-120	
Lead	25.00	26.35	105	80-120	
Molybdenum	25.00	25.48	102	80-120	
Nickel	25.00	27.44	110	80-120	
Selenium	25.00	24.48	98	80-120	
Silver	12.50	12.83	103	80-120	
Thallium	25.00	26.69	107	80-120	
Vanadium	25.00	25.18	101	80-120	
Zinc	25.00	25.77	103	80-120	
Aluminum	25.00	25.74	103	80-120	
Calcium	25.00	25.67	103	80-120	
Iron	25.00	26.79	107	80-120	
Magnesium	25.00	26.00	104	80-120	
Manganese	25.00	26.23	105	80-120	
Potassium	250.0	262.9	105	80-120	
Sodium	250.0	271.7	109	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Former George AFB, CA / 145981			Page 6 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-280-124	**LCS**	**Solid**	**Mercury 05**	**09/06/16**	**09/06/16 14:20**	**160906L02D**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.9562	115	80-120	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 7 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-103	**LCS**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:19**	**160901L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Alpha-BHC	25.00	24.20	97	60-125	
Gamma-BHC	25.00	24.52	98	60-125	
Beta-BHC	25.00	23.02	92	60-125	
Heptachlor	25.00	24.20	97	50-140	
Delta-BHC	25.00	24.74	99	55-130	
Aldrin	25.00	23.68	95	45-140	
Heptachlor Epoxide	25.00	23.23	93	65-130	
Endosulfan I	25.00	23.78	95	15-135	
Dieldrin	25.00	24.42	98	65-125	
4,4'-DDE	25.00	24.76	99	70-125	
Endrin	25.00	21.76	87	60-135	
Endrin Aldehyde	25.00	25.55	102	35-145	
4,4'-DDD	25.00	25.46	102	30-135	
Endosulfan II	25.00	25.94	104	35-140	
4,4'-DDT	25.00	23.85	95	45-140	
Endosulfan Sulfate	25.00	23.18	93	60-135	
Methoxychlor	25.00	23.08	92	55-145	
Endrin Ketone	25.00	26.19	105	65-135	
Alpha Chlordane	25.00	23.33	93	65-120	
Gamma Chlordane	25.00	23.61	94	65-125	
Hexachlorobenzene	25.00	25.28	101	60-130	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 8 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-103	**LCS**	**Solid**	**GC 44**	**09/01/16**	**09/02/16 15:19**	**160901L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	51.60	103	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	49.94	100	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Former George AFB, CA / 145981			Page 9 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-473-200	**LCS**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 10:37**	**160901L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	93.50	94	50-135	
Aroclor-1260	100.0	88.50	88	60-130	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Former George AFB, CA / 145981			Page 10 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-473-200	**LCS**	**Solid**	**GC 31**	**09/01/16**	**09/02/16 10:37**	**160901L06**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	47.00	94	60-125	
2,4,5,6-Tetrachloro-m-Xylene	25.00	47.00	94	50-130	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
Project: Former George AFB, CA / 145981			Page 11 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-979-11	**LCS**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 13:05**	**160902L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Azinphos Methyl	4.000	3.360	84	30-130	
Bolstar	4.000	3.767	94	30-130	
Chlorpyrifos	4.000	3.352	84	30-130	
Coumaphos	4.000	3.667	92	30-130	
Diazinon	4.000	3.698	92	30-130	
Disulfoton	4.000	3.515	88	30-130	
Ethoprop	4.000	3.723	93	30-130	
Fensulfothion	4.000	3.678	92	30-130	
Fenthion	4.000	3.394	85	30-130	
Merphos	4.000	4.748	119	30-130	
Methyl Parathion	4.000	3.277	82	30-130	
Phorate	4.000	4.346	109	30-130	
Ronnel	4.000	3.155	79	30-130	
Stirophos	4.000	3.519	88	30-130	
Tokuthion	4.000	3.348	84	30-130	
Trichloronate	4.000	3.484	87	30-130	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8141A
Project: Former George AFB, CA / 145981			Page 12 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-979-11	**LCS**	**Solid**	**GC 68**	**09/02/16**	**09/06/16 13:05**	**160902L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Tributylphosphate	4.000	3.845	96	30-130	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
Project: Former George AFB, CA / 145981			Page 13 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-02-026-46	**LCS**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 16:36**	**160830L12**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Dalapon	1000	943.0	94	30-130	
Dicamba	40.00	37.00	92	55-110	
MCPP	40000	35440	89	30-130	
MCPA	40000	34920	87	30-130	
Dichlorprop	400.0	364.0	91	75-140	
2,4-D	400.0	353.0	88	35-145	
2,4,5-TP (Silvex)	40.00	38.00	95	45-125	
2,4,5-T	40.00	36.00	90	45-155	
2,4-DB	400.0	351.0	88	50-155	
Dinoseb	200.0	229.0	114	5-130	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 8151A
		Method:	EPA 8151A
Project: Former George AFB, CA / 145981			Page 14 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-02-026-46	**LCS**	**Solid**	**GC 40**	**08/30/16**	**08/31/16 16:36**	**160830L12**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
2,4-Dichlorophenylacetic acid	20000	158.0	79	25-135	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: Former George AFB, CA / 145981			Page 15 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-503-93	**LCS**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 10:34**	**160830L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
2,6-Dichlorophenol	5.000	4.152	83	45-100	
Acenaphthene	5.000	4.133	83	45-110	
Acenaphthylene	5.000	4.013	80	45-105	
Aniline	5.000	5.317	106	60-140	
Anthracene	5.000	4.082	82	55-105	
Azobenzene	5.000	3.924	78	60-140	
Benzidine	5.000	4.613	92	40-105	
Benzo (a) Anthracene	5.000	4.148	83	50-110	
Benzo (a) Pyrene	5.000	4.402	88	50-110	
Benzo (b) Fluoranthene	5.000	4.401	88	45-115	
Benzo (g,h,i) Perylene	5.000	4.379	88	40-125	
Benzo (k) Fluoranthene	5.000	4.256	85	45-125	
Benzoic Acid	5.000	3.387	68	30-140	
Benzyl Alcohol	5.000	3.782	76	20-125	
Bis(2-Chloroethoxy) Methane	5.000	3.811	76	45-110	
Bis(2-Chloroethyl) Ether	5.000	3.736	75	40-105	
Bis(2-Chloroisopropyl) Ether	5.000	3.552	71	20-115	
Bis(2-Ethylhexyl) Phthalate	5.000	4.111	82	45-125	
4-Bromophenyl-Phenyl Ether	5.000	4.067	81	45-115	
Butyl Benzyl Phthalate	5.000	4.220	84	50-125	
4-Chloro-3-Methylphenol	5.000	4.155	83	45-115	
4-Chloroaniline	5.000	5.779	116	60-140	
2-Chloronaphthalene	5.000	3.960	79	45-105	
2-Chlorophenol	5.000	4.120	82	45-105	
4-Chlorophenyl-Phenyl Ether	5.000	3.932	79	45-110	
Chrysene	5.000	4.120	82	55-110	
Di-n-Butyl Phthalate	5.000	4.086	82	55-110	
Di-n-Octyl Phthalate	5.000	4.227	85	40-130	
Dibenz (a,h) Anthracene	5.000	4.227	85	40-125	
Dibenzofuran	5.000	4.057	81	50-105	
1,2-Dichlorobenzene	5.000	3.928	79	45-100	
1,3-Dichlorobenzene	5.000	3.976	80	40-100	
1,4-Dichlorobenzene	5.000	3.946	79	35-105	
3,3'-Dichlorobenzidine	5.000	6.913	138	60-140	
2,4-Dichlorophenol	5.000	4.129	83	45-100	
Diethyl Phthalate	5.000	3.683	74	50-115	
Dimethyl Phthalate	5.000	3.927	79	50-110	
2,4-Dimethylphenol	5.000	4.292	86	30-105	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 3545
	Method:	EPA 8270C
Project: Former George AFB, CA / 145981		Page 16 of 22

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
4,6-Dinitro-2-Methylphenol	5.000	4.106	82	60-135	
2,4-Dinitrophenol	5.000	3.423	68	15-130	
2,4-Dinitrotoluene	5.000	4.309	86	50-115	
2,6-Dinitrotoluene	5.000	4.298	86	50-110	
Fluoranthene	5.000	4.172	83	55-115	
Fluorene	5.000	3.986	80	50-110	
Hexachloro-1,3-Butadiene	5.000	4.023	80	40-115	
Hexachlorobenzene	5.000	4.004	80	45-120	
Hexachlorocyclopentadiene	5.000	4.274	85	60-140	
Hexachloroethane	5.000	3.872	77	35-110	
Indeno (1,2,3-c,d) Pyrene	5.000	4.201	84	40-120	
Isophorone	5.000	3.824	76	45-110	
2-Methylnaphthalene	5.000	4.214	84	45-105	
1-Methylnaphthalene	5.000	3.849	77	45-105	
2-Methylphenol	5.000	4.101	82	40-105	
3/4-Methylphenol	10.00	8.215	82	40-105	
N-Nitroso-di-n-propylamine	5.000	3.760	75	40-115	
N-Nitrosodimethylamine	5.000	3.863	77	20-115	
N-Nitrosodiphenylamine	5.000	4.684	94	50-115	
Naphthalene	5.000	4.018	80	40-105	
4-Nitroaniline	5.000	3.938	79	35-115	
3-Nitroaniline	5.000	3.906	78	25-110	
2-Nitroaniline	5.000	4.317	86	45-120	
Nitrobenzene	5.000	4.011	80	60-115	
4-Nitrophenol	5.000	4.158	83	15-140	
2-Nitrophenol	5.000	4.440	89	40-110	
Pentachlorophenol	5.000	2.282	46	25-120	
Phenanthrene	5.000	4.278	86	50-110	
Phenol	5.000	4.104	82	40-100	
Pyrene	5.000	3.994	80	45-125	
Pyridine	5.000	3.600	72	60-140	
1,2,4-Trichlorobenzene	5.000	4.051	81	45-100	
2,4,6-Trichlorophenol	5.000	4.079	82	45-110	
2,4,5-Trichlorophenol	5.000	4.049	81	50-100	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C
Project: Former George AFB, CA / 145981			Page 17 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-503-93	**LCS**	**Solid**	**GC/MS TT**	**08/30/16**	**08/31/16 10:34**	**160830L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.5000	7.458	75	45-105	
2-Fluorophenol	0.5000	8.296	83	35-105	
Nitrobenzene-d5	0.5000	7.786	78	35-100	
p-Terphenyl-d14	0.5000	7.741	77	30-125	
Phenol-d6	0.5000	8.080	81	40-100	
2,4,6-Tribromophenol	0.5000	8.302	83	35-125	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Former George AFB, CA / 145981			Page 18 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-150-174	**LCS**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 11:45**	**160830L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Naphthalene	0.2000	0.1814	91	40-105	
2-Methylnaphthalene	0.2000	0.2033	102	45-105	
1-Methylnaphthalene	0.2000	0.1762	88	45-105	
Acenaphthylene	0.2000	0.1884	94	45-105	
Acenaphthene	0.2000	0.1916	96	45-110	
Fluorene	0.2000	0.1899	95	50-110	
Phenanthrene	0.2000	0.1951	98	50-110	
Anthracene	0.2000	0.1784	89	55-105	
Fluoranthene	0.2000	0.1917	96	55-115	
Pyrene	0.2000	0.1921	96	45-125	
Benzo (a) Anthracene	0.2000	0.1874	94	50-110	
Chrysene	0.2000	0.1943	97	55-110	
Benzo (k) Fluoranthene	0.2000	0.1949	97	45-125	
Benzo (b) Fluoranthene	0.2000	0.2028	101	45-115	
Benzo (a) Pyrene	0.2000	0.1928	96	50-110	
Indeno (1,2,3-c,d) Pyrene	0.2000	0.1935	97	40-120	
Dibenz (a,h) Anthracene	0.2000	0.1965	98	40-125	
Benzo (g,h,i) Perylene	0.2000	0.2042	102	40-125	
Dibenzofuran	0.2000	0.1898	95	32-143	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Former George AFB, CA / 145981			Page 19 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-150-174	**LCS**	**Solid**	**GC/MS AAA**	**08/30/16**	**08/31/16 11:45**	**160830L06**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
2-Fluorobiphenyl	0.04000	0.1783	89	45-105	
Nitrobenzene-d5	0.04000	0.1910	96	35-100	
p-Terphenyl-d14	0.04000	0.1704	85	30-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Former George AFB, CA / 145981			Page 20 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-507-90	**LCS**	**Solid**	**GC/MS OO**	**08/30/16**	**08/30/16 14:35**	**160830L014**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Acetone	50.00	56.50	113	20-160	
Benzene	50.00	50.34	101	75-125	
Bromobenzene	50.00	53.16	106	65-120	
Bromochloromethane	50.00	52.08	104	70-125	
Bromodichloromethane	50.00	60.37	121	70-130	
Bromoform	50.00	57.46	115	55-135	
Bromomethane	50.00	49.99	100	30-160	
2-Butanone	50.00	56.91	114	30-160	
n-Butylbenzene	50.00	55.00	110	65-140	
sec-Butylbenzene	50.00	54.07	108	65-130	
tert-Butylbenzene	50.00	51.80	104	65-130	
Carbon Disulfide	50.00	42.65	85	45-160	
Carbon Tetrachloride	50.00	57.83	116	65-135	
Chlorobenzene	50.00	52.53	105	75-125	
Chloroethane	50.00	51.87	104	40-155	
Chloroform	50.00	53.79	108	70-125	
Chloromethane	50.00	54.25	108	50-130	
2-Chlorotoluene	50.00	54.88	110	70-130	
4-Chlorotoluene	50.00	55.21	110	75-125	
Dibromochloromethane	50.00	58.01	116	65-130	
1,2-Dibromo-3-Chloropropane	50.00	59.30	119	40-135	
1,2-Dibromoethane	50.00	55.59	111	70-125	
Dibromomethane	50.00	55.52	111	75-130	
1,2-Dichlorobenzene	50.00	52.77	106	75-120	
1,3-Dichlorobenzene	50.00	52.74	105	70-125	
1,4-Dichlorobenzene	50.00	51.11	102	70-125	
Dichlorodifluoromethane	50.00	56.85	114	35-135	
1,1-Dichloroethane	50.00	50.32	101	65-135	
1,2-Dichloroethane	50.00	56.62	113	70-135	
1,1-Dichloroethene	50.00	43.67	87	70-135	
c-1,2-Dichloroethene	50.00	50.01	100	65-125	
t-1,2-Dichloroethene	50.00	47.38	95	65-135	
1,2-Dichloropropane	50.00	54.56	109	70-120	
1,3-Dichloropropane	50.00	54.59	109	75-125	
2,2-Dichloropropane	50.00	57.33	115	65-135	
1,1-Dichloropropene	50.00	50.41	101	60-135	
c-1,3-Dichloropropene	50.00	52.65	105	70-125	
t-1,3-Dichloropropene	50.00	53.29	107	65-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I	Date Received:	08/27/16
2410 Cherahala Blvd	Work Order:	16-08-2041
Knoxville, TN 37932-1566	Preparation:	EPA 5030C
	Method:	EPA 8260B
Project: Former George AFB, CA / 145981		Page 21 of 22

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Ethylbenzene	50.00	54.57	109	77-125	
2-Hexanone	50.00	55.26	111	45-145	
Isopropylbenzene	50.00	55.70	111	75-130	
p-Isopropyltoluene	50.00	55.32	111	75-135	
Methylene Chloride	50.00	47.64	95	55-140	
4-Methyl-2-Pentanone	50.00	51.87	104	45-145	
Naphthalene	50.00	51.99	104	40-125	
n-Propylbenzene	50.00	55.15	110	65-135	
Styrene	50.00	54.63	109	75-125	
1,1,1,2-Tetrachloroethane	50.00	61.21	122	75-125	
1,1,2,2-Tetrachloroethane	50.00	51.69	103	55-130	
Tetrachloroethene	50.00	54.07	108	65-140	
Toluene	50.00	52.51	105	70-125	
1,2,3-Trichlorobenzene	50.00	52.61	105	60-130	
1,2,4-Trichlorobenzene	50.00	53.77	108	65-130	
1,1,1-Trichloroethane	50.00	54.53	109	70-135	
Hexachloro-1,3-Butadiene	50.00	55.57	111	55-140	
1,1,2-Trichloroethane	50.00	52.77	106	75-125	
Trichloroethene	50.00	53.19	106	75-125	
Trichlorofluoromethane	50.00	56.80	114	25-185	
1,2,3-Trichloropropane	50.00	53.79	108	65-130	
1,2,4-Trimethylbenzene	50.00	55.06	110	65-135	
1,3,5-Trimethylbenzene	50.00	56.68	113	65-135	
Vinyl Acetate	50.00	28.51	57	70-130	X
Vinyl Chloride	50.00	54.67	109	60-125	
p/m-Xylene	100.0	109.6	110	80-125	
o-Xylene	50.00	55.36	111	75-125	
Methyl-t-Butyl Ether (MTBE)	50.00	52.77	106	75-129	
Tert-Butyl Alcohol (TBA)	250.0	274.6	110	66-126	
Diisopropyl Ether (DIPE)	50.00	56.76	114	77-125	
Ethyl-t-Butyl Ether (ETBE)	50.00	55.42	111	72-132	
Tert-Amyl-Methyl Ether (TAME)	50.00	54.34	109	77-125	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	08/27/16
2410 Cherahala Blvd		Work Order:	16-08-2041
Knoxville, TN 37932-1566		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Former George AFB, CA / 145981			Page 22 of 22

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-507-90	**LCS**	**Solid**	**GC/MS OO**	**08/30/16**	**08/30/16 14:35**	**160830L014**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	50.00	52.41	105	85-120	
Dibromofluoromethane	50.00	52.52	105	76-142	
1,2-Dichloroethane-d4	50.00	56.21	112	77-155	
Toluene-d8	50.00	50.26	101	85-115	

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 16-08-2041

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1009	N/A	1
EPA 6010B	EPA 3050B	771	ICP 7300	1
EPA 7471A	EPA 7471A Total	776	Mercury 05	1
EPA 8015B (M)	EPA 3550B	682	GC 45	1
EPA 8015B (M)	EPA 5030C	933	GC 57	2
EPA 8081A	EPA 3545	421	GC 44	1
EPA 8081A	EPA 3545	669	GC 44	1
EPA 8082	EPA 3545	944	GC 31	1
EPA 8141A	EPA 3545	421	GC 68	1
EPA 8151A	EPA 8151A	944	GC 40	1
EPA 8260B	EPA 5030C	849	GC/MS OO	2
EPA 8270C	EPA 3545	923	GC/MS TT	1
EPA 8270C SIM PAHs	EPA 3545	907	GC/MS AAA	1

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Glossary of Terms and Qualifiers

Work Order: 16-08-2041

Qualifiers	Definition
*	See applicable analysis comment.
{	Analyte is a suspected lab contaminant. Analyte presence was not confirmed during reanalysis. See narrative.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

Ref. Document # OT071-082516-12

16-08-2041

Page 1 of 1

Site ID: OT071 Well Installation IDW
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917*
(Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 8/26/2016
Waybill/Airbill Number: *GSO 524276727*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

Sampler's Name(s): Robert Mall

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: TCLP Pesticides by SW846 1311 8081A	TCLP Herbicides by SW846 1311 8151A	TCLP SVOCs by SW846 1311 8270C	TCLP Metals by SW846 1311 6010B/7470A	TCLP VOCs by SW846 1311 8260B				Turn Around Time Requested
1	OT071-90001	OT071-IDW01	08/25/16	11:20	C	SO	2					X		X	X	X	X	X				10
2	OT071-90002	OT071-IDW02	08/25/16	11:30	C	SO	2					X		X	X	X	X	X				10
3	OT071-90003	OT071-IDW03	08/25/16	11:40	C	SO	2					X		X	X	X	X	X				10
4	OT071-90004	OT071-IDW04	08/25/16	12:00	C	SO	2					X		X	X	X	X	X				10
5	OT071-90005	OT071-IDW05	08/25/16	10:20	C	SO	2					X		X	X	X	X	X				10

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required: I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By:	Date: 8/26/15 Time: 1500	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By: ECI	Date: 8/27/16 Time: 1040
Relinquished By:	Date: Time:	Received By:	Date: Time:

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

George AR # 564580

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Linda Ta

From: Roth, Tim [Tim.Roth@CBIFederalServices.com]
Sent: Tuesday, August 30, 2016 5:39 AM
To: Richard Villafania; Linda Ta
Cc: Mall, Robert; Unruh, Mark
Subject: RE: Sample Receipt for Former George AFB, CA / 145981 / ECI 16-08-2041
Attachments: Amended CoC for 16-08-2041.pdf

Categories: Important

Richard,

Attached is the amended CoC for 16-08-2041.

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Monday, August 29, 2016 3:12 PM
To: Roth, Tim; Linda Ta
Cc: Mall, Robert; Unruh, Mark
Subject: RE: Sample Receipt for Former George AFB, CA / 145981 / ECI 16-08-2041

Tim,

I will add the tests as requested, please note that the lab is over capacity for the EPA 8141 & 8151 analyses and may not be able to meet the 5 day TAT for these tests. Thanks.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494
Website: www.eurofinsUS.com/Calscience

From: Roth, Tim [mailto:Tim.Roth@CBIFederalServices.com]
Sent: Monday, August 29, 2016 11:56 AM
To: Linda Ta
Cc: Richard Villafania; Mall, Robert; Unruh, Mark
Subject: RE: Sample Receipt for Former George AFB, CA / 145981 / ECI 16-08-2041

Linda/Richard,

Let's plan to run all samples (OT071-90001 through -90005) associated with SDG 16-08-2041 for the analyses listed below. Let me know if there is sufficient sample volume shipped to the laboratory. Also, shorten the TAT to 5 Days.

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Soil Characterization Analyses to Dispose On-Site
Percent Moisture
TPH-g by SW846 8015B (Mod)
TPH-d by SW846 8015B (Mod)
Organochlorinated Pesticides by SW846 8081
PCBs by SW846 8082
Organophosphorus Pesticides by SW846 8141
Chlorinated Herbicides by SW846 8151
VOCs by SW846 8260
SVOCs by SW846 8270
PAHs by SW846 8270 LL [SIM]
Metals by SW846 6010/7471

Regards,
Tim

From: Linda Ta [mailto:LindaTa@eurofinsUS.com]
Sent: Monday, August 29, 2016 11:52 AM
To: Roth, Tim
Cc: Richard Villafania
Subject: Sample Receipt for Former George AFB, CA / 145981 / ECI 16-08-2041

Good morning Tim,

Per your request, all samples have been placed on hold.

Thanks!

Linda Ta
Project Manager Assistant

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841
USA
P: +1 714 895 5494
F: +1 714 894 7501

Email: LindaTa@eurofinsus.com
Website: www.eurofinsUS.com/Calscience

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CHAIN OF CUSTODY

Ref. Document # OT071-082516-12

16-08-2041

Page 1 of 1

Site ID: OT071 Well Installation IDW
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917*
(Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 8/26/2016
Waybill/Airbill Number: *GSO 524276727*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

Sampler's Name(s): Robert Mall

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	TCLP Pesticides by SW846 1311 8081A	TCLP Herbicides by SW846 1311 8151A	TCLP SVOCs by SW846 1311 8270C	TCLP Metals by SW846 1311 6010B/7470A	TCLP VOCs by SW846 1311 8260B				Turn Around Time Requested
1	OT071-90001	OT071-IDW01	08/25/16	11:20	C	SO	2					X		X	X	X	X	X				10
2	OT071-90002	OT071-IDW02	08/25/16	11:30	C	SO	2					X		X	X	X	X	X				10
3	OT071-90003	OT071-IDW03	08/25/16	11:40	C	SO	2					X		X	X	X	X	X				10
4	OT071-90004	OT071-IDW04	08/25/16	12:00	C	SO	2					X		X	X	X	X	X				10
5	OT071-90005	OT071-IDW05	08/25/16	10:20	C	SO	2					X		X	X	X	X	X				10

Analyses Requested

Analyze all samples for
VOCs by SW8260 Herbicides by SW8151
SVOCs by SW8270 OP Pesticides by SW8141
Pesticides by SW8081 TPH-g by SW8015
PCBs by SW8082 TPH-d by SW8015
Metals by SW6010 SW7470
PAHs by SW8270 SIM

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required: I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Relinquished By	Date	Time	Received By	Date	Time
[signature]	8/26/15	1500			
			2 ECI	8/27/16	1040

TR 8/26/16

TR 3/29/16

George AR # 564580

Return to Contents

5

GSO GOLDEN STATE OVERNIGHT

< WebShip > > > > >

800-322-5555 www.gso.com

2041

Ship From:
BOB MALL
SHAW E&I-BOB MALL
18374 PHANTOM STREET
VICTOVILLE, CA 92394

Ship To:
SAMPLE RECEIVING
CALSCIENCE
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
GEORGE AFB APRIL 2014

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 524276727

NPS

ORC

A

GARDEN GROVE

D92843A

22806404

Print Date : 03/31/14 13:26 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.
Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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eurofins | Calscience

WORK ORDER NUMBER: 16-08- 2041

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CBI

DATE: 08 / 27 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2.8 °C (w/ CF): 2.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: SR

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: SR

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: SR

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☑ 8ozCGJ (2) ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH. **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: SR

s = H_2SO_4, **u** = ultra-pure, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: ZR

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Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
10-19-16	HAZ MAT TRANS INC			46523	

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIBW 3411 OLSON STREET MCCLELLAN AFB CA 95652	Generator's Phone #: 916-643-0830	
	Person to Contact: MICHAEL SWART	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS INC 230 EAST DUMAS STREET SAN BERNARDINO CA 92408	Consultant's Phone #: 909-889-5607	
	Person to Contact: MIKE HAMMER	
	FAX#:	Customer Account Number 1000167
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB SITE OT071 - Non CERCLA VICTORVILLE CA	Site Phone #: 916-643-0830	
	Person to Contact: MICHAEL SWART	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE 12828 HIBISCOUS AVENUE ADELANTO CA 92301	Facility Phone #: 760-246-8001	
	Person to Contact: JOE PROVANSAL	
	FAX#: 760-246-8004	
Transporter Name and Mailing Address: HAZ MAT TRANS INC. 230 E DUMAS STREET SAN BERNARDINO CA 92408	Transporter's Phone #: 909-889-5607	CAT080012800
	Person to Contact: MIKE HAMMER	325235
	FAX#: 909-884-6966	Customer Account Number 1000167

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☑ Organic ☐ Clay ☑ Other ☐	0 - 10% ☑ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	14	Base Soil	37960	37160	800
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					16 55

List any exception to items listed above: Scale Ticket # 108

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☐ | Signature and date: | Month | Day | Year

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: | Signature and date: | Month 10 | Day 17 | Year 16

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above.

Print or Type Name: | Signature and date: 10-17-16

Please print or type.

GENERATOR/CONSULTANTS COPY

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
[illegible]	HAZ MAT TRANS INC			[illegible]	[illegible]

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIB MILSON STREET MCCLELLAN AFB CA 95652	Generator's Phone #: [illegible]	
	Person to Contact: MICHAEL SWART	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS INC. 230 EAST DUMAS STREET SAN BERNARDINO CA 92408	Consultant's Phone #: [illegible]	
	Person to Contact: MIKE HAMMER	
	FAX#:	Customer Account Number 1000167
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB SITE OT071 - Non CERCLA VICTORVILLE, CA	Site Phone #: [illegible]	
	Person to Contact: MICHAEL SWART	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE 12328 HIBISCOUS AVENUE ADELANTO CA 92301	Facility Phone #: [illegible]	
	Person to Contact: JOE PROVANSAL	
	FAX#: 760-246-8004	
Transporter Name and Mailing Address: HAZ MAT TRANS, INC 230 E DUMAS STREET SAN BERNARDINO, CA 92408	Transporter's Phone #: [illegible]	[illegible]
	Person to Contact: MIKE HAMMER	326238
	FAX#: [illegible]	Customer Account Number [illegible]

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☑ Organic ☐ Clay ☐ Other ☐	0 - 10% ☑ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ | Signature and date: Month Day Year

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: | Signature and date: Month Day Year

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: | Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

Manifest

SOIL SAFE OF CA - TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
10-19-16	HAZ MAT TRANS. INC.			48573	

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIBW, 3411 OLSON STREET, MCCLELLAN AFB CA 95652	Generator's Phone #: 916-643-0320	
	Person to Contact: MICHAEL SWART	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS. INC., 230 EAST DUMAS STREET, SAN BERNARDINO CA 92408	Consultant's Phone #: 909-889-5807	
	Person to Contact: MIKE HAMMER	
	FAX#:	Customer Account Number 1000187
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB, SITE OT071 - Non CERCLA, VICTORVILLE, CA	Site Phone #: 916-643-0320	
	Person to Contact: MICHAEL SWART	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE, 12328 HIBISCOUS AVENUE, ADELANTO CA 92301	Facility Phone #: 760-246-8001	
	Person to Contact: JOE PROVANSAL	
	FAX#: 760-246-8004	
Transporter Name and Mailing Address: HAZ MAT TRANS. INC., 230 E DUMAS STREET, SAN BERNARDINO CA 92408	Transporter's Phone #: 909-889-5807	CAT000112800
	Person to Contact: MIKE HAMMER	326235
	FAX#: 909-884-6086	Customer Account Number 1000187

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☑ Organic ☐ Clay ☐ Other ☐	0-10% ☑ 10-20% ☐ 20%-over ☐	Gas ☐ Diesel ☐ Other ☐					
Sand ☐ Organic ☐ Clay ☐ Other ☐	0-10% ☐ 10-20% ☐ 20%-over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ | Signature and date: | Month 10 Day 19 Year 16

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: | Signature and date: | Month 10 Day 19 Year 16

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: | Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

Manifest

SOIL SAFE OF CA - TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
10 31 16	HAZ MAT TRANS INC	15		16523	0 0 4

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIBW, 3411 OLSON STREET, MCCLELLAN AFB CA 95652	Generator's Phone #: 916-643-0930	
	Person to Contact: MICHAEL SWART	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS, INC., 230 EAST DUMAS STREET, SAN BERNARDINO CA 92408	Consultant's Phone #: 909-889-5607	
	Person to Contact: MIKE HAMMER	
	FAX#:	Customer Account Number 1000187
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB, SITE OT071 - Non CERCLA, VICTORVILLE CA	Site Phone #: 916-643-0930	
	Person to Contact: MICHAEL SWART	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE, 12325 HIBISCOUS AVENUE, ADELANTO CA 92301	Facility Phone #: 760-246-8004	
	Person to Contact: JOE PROVANSAL	
	FAX#: 760-246-8004	
Transporter Name and Mailing Address: HAZ MAT TRANS, INC., 230 E DUMAS STREET, SAN BERNARDINO CA 92408	Transporter's Phone #: 909-889-5607	CAT000012800
	Person to Contact: MIKE HAMMER	325235
	FAX#: 909-884-9266	Customer Account Number 1000187

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	8 yds	Bulk			
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ | Signature and date: | Month 10 Day 31 Year 16

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Alex Alvarez | Signature and date: | Month 10 Day 31 Year 16

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: | Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
10-18-16	HAZ MAT TRANS. INC	3		46523	0 0 5

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIBW, 3411 OLSON STREET, MCCLELLAN AFB CA 95652	Generator's Phone #: 916-643-0830	
	Person to Contact: MICHAEL SWART	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS. INC, 230 EAST DUMAS STREET, SAN BERNARDINO CA 92408	Consultant's Phone #: 909-889-5607	
	Person to Contact: MIKE HAMMER	
	FAX#:	Customer Account Number 1000187
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB, SITE OT071 - Non CERCLA, VICTORVILLE CA	Site Phone #: 916-643-0830	
	Person to Contact: MICHAEL SWART	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE, 12328 HIBISCOUS AVENUE, ADELANTO CA 92301	Facility Phone #: 760-246-6001	
	Person to Contact: JOE PROVANSAL	
	FAX#: 760-246-6004	
Transporter Name and Mailing Address: HAZ MAT TRANS. INC, 230 E DUMAS STREET, SAN BERNARDINO CA 92408	Transporter's Phone #: 909-889-5607	CAT080012800
	Person to Contact: MIKE HAMMER	525235
	FAX#: 909-884-8966	Customer Account Number 1000187

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☑ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	10	SOIL			
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ | Signature and date: | Month 10 Day 18 Year 16

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: | Signature and date: | Month Day Year

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: | Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
10-19-16	HAZ MAT TRANS, INC				

Generator and/or Consultant

Generator's Name and Billing Address: AFCEC/CIBV 3411 OLSON STREET MCCLELLAN AFB CA 95652	Generator's Phone #: 916-643-3930 Person to Contact: MICHAEL SWART FAX#:	Customer Account Number
Consultant's Name and Billing Address: HAZ MAT TRANS, INC 230 EAST DUMAS STREET SAN BERNARDINO CA 92408	Consultant's Phone #: 909-889-5007 Person to Contact: MIKE HAMMER FAX#:	Customer Account Number 1000187
Generation Site (Transport from): *(name & address)* FORMER GEORGE AFB SITE OT07 - Non CERCLA VICTORVILLE, CA	Site Phone #: 760-243-2230 Person to Contact: MICHAEL SWART FAX#:	
Designated Facility (Transport to): *(name & address)* SOILS SAFE 12328 HIBISCOUS AVENUE ADELANTO CA 92301	Facility Phone #: 760-246-8001 Person to Contact: JOE PROVANSAL FAX#: 760-246-8004	
Transporter Name and Mailing Address: HAZ MAT TRANS INC 230 E DUMAS STREET SAN BERNARDINO CA 92408	Transporter's Phone #: 909-889-5007 Person to Contact: MIKE HAMMER FAX#: 909-884-3968	CAT000613939 325236 Customer Account Number 1000187

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☑ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☑ | Signature and date: Month Day Year

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: | Signature and date: Month Day Year

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: | Signature and date:

Please print or type.

GENERATOR/CONSULTANTS COPY

Appendix F
Chemical Laboratory Reports

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Supplemental Report 2

Additional requested analyses have been added to the original report.

WORK ORDER NUMBER: 16-05-1056

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CB&I

Client Project Name: Former George AFB, CA / 145981

Attention: Tim Roth
2410 Cherahala Blvd
Knoxville, TN 37932-1566

Approved for release on 05/27/2016 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 16-05-1056

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Work Order Narrative

Work Order: 16-05-1056 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/13/16. They were assigned to Work Order 16-05-1056.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

QC Batch ID 160524L04 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160524L03 is associated with SW8081A SPLP 0.45 micron extraction.

MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160524L03 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included the associated data package.

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
		Units:	%
Project: Former George AFB, CA / 145981			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00008	**16-05-1056-1-A**	**05/13/16 07:30**	**Solid**	**N/A**	**05/18/16**	**05/18/16 21:00**	**G0518MOIB9**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	3.3	0.10	0.10	0.10	1.00	

OT071-00009	**16-05-1056-2-A**	**05/13/16 07:45**	**Solid**	**N/A**	**05/18/16**	**05/19/16 12:00**	**G0519MOIB4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	4.7	0.10	0.10	0.10	1.00	

OT071-00010	**16-05-1056-3-A**	**05/13/16 08:00**	**Solid**	**N/A**	**05/18/16**	**05/19/16 12:00**	**G0519MOIB4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	2.1	0.10	0.10	0.10	1.00	

OT071-00011	**16-05-1056-4-A**	**05/13/16 08:10**	**Solid**	**N/A**	**05/18/16**	**05/19/16 12:00**	**G0519MOIB4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	1.5	0.10	0.10	0.10	1.00	

OT071-00024	**16-05-1056-6-A**	**05/13/16 09:00**	**Solid**	**N/A**	**05/18/16**	**05/18/16 21:00**	**G0518MOIB9**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	2.1	0.10	0.10	0.10	1.00	

OT071-00025	**16-05-1056-7-A**	**05/13/16 09:05**	**Solid**	**N/A**	**05/18/16**	**05/19/16 12:00**	**G0519MOIB4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	4.2	0.10	0.10	0.10	1.00	

Method Blank	**099-05-014-5965**	**N/A**	**Solid**	**N/A**	**05/18/16**	**05/18/16 21:00**	**G0518MOIB9**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	ND	0.10	0.10	0.10	1.00	U

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
		Units:	%
Project: Former George AFB, CA / 145981			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-014-5983**	**N/A**	**Solid**	**N/A**	**05/18/16**	**05/19/16 12:00**	**G0519MOIB4**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	ND	0.10	0.10	0.10	1.00	U

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00008	**16-05-1056-1-A**	**05/13/16 07:30**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:25**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.8	4.6	10	1.00	U
Gamma-BHC	ND	2.3	4.6	5.1	1.00	U
Beta-BHC	ND	2.5	4.6	5.1	1.00	U
Heptachlor	ND	2.2	4.6	5.1	1.00	U
Delta-BHC	ND	4.5	4.6	10	1.00	U
Aldrin	13	2.2	4.6	5.1	1.00	
Heptachlor Epoxide	ND	3.8	4.6	10	1.00	U
Endosulfan I	ND	2.0	4.6	5.1	1.00	U
4,4'-DDE	ND	2.3	4.6	5.1	1.00	U
Endrin	ND	2.4	4.6	5.1	1.00	U
Endrin Aldehyde	ND	3.1	4.6	5.1	1.00	U
4,4'-DDD	ND	2.4	4.6	5.1	1.00	U
Endosulfan II	ND	2.4	4.6	5.1	1.00	U
4,4'-DDT	ND	2.2	4.6	5.1	1.00	U
Endosulfan Sulfate	ND	2.7	4.6	5.1	1.00	U
Methoxychlor	ND	2.8	4.6	5.1	1.00	U
Chlordane	ND	27	41	51	1.00	U
Toxaphene	ND	46	51	100	1.00	U
Endrin Ketone	4.7	2.6	4.6	5.1	1.00	J
Alpha Chlordane	ND	2.1	4.6	5.1	1.00	U
Gamma Chlordane	ND	4.3	4.6	10	1.00	U
Hexachlorobenzene	ND	2.1	4.6	5.1	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	55-130	
2,4,5,6-Tetrachloro-m-Xylene	107	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00008	**16-05-1056-1-A**	**05/13/16 07:30**	**Solid**	**GC 44**	**05/20/16**	**05/24/16 11:10**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dieldrin	1000	110	230	260	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	121	55-130	
2,4,5,6-Tetrachloro-m-Xylene	119	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00009	**16-05-1056-2-A**	**05/13/16 07:45**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:40**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.9	4.7	10	1.00	U
Gamma-BHC	ND	2.3	4.7	5.2	1.00	U
Beta-BHC	ND	2.6	4.7	5.2	1.00	U
Heptachlor	ND	2.3	4.7	5.2	1.00	U
Delta-BHC	ND	4.6	4.7	10	1.00	U
Aldrin	27	2.3	4.7	5.2	1.00	
Heptachlor Epoxide	ND	3.9	4.7	10	1.00	U
Endosulfan I	ND	2.1	4.7	5.2	1.00	U
4,4'-DDE	ND	2.3	4.7	5.2	1.00	U
Endrin	5.4	2.5	4.7	5.2	1.00	
Endrin Aldehyde	ND	3.2	4.7	5.2	1.00	U
4,4'-DDD	ND	2.5	4.7	5.2	1.00	U
Endosulfan II	ND	2.5	4.7	5.2	1.00	U
4,4'-DDT	ND	2.3	4.7	5.2	1.00	U
Endosulfan Sulfate	ND	2.7	4.7	5.2	1.00	U
Methoxychlor	ND	2.8	4.7	5.2	1.00	U
Chlordane	ND	27	42	52	1.00	U
Toxaphene	ND	47	52	100	1.00	U
Endrin Ketone	13	2.6	4.7	5.2	1.00	
Alpha Chlordane	ND	2.1	4.7	5.2	1.00	U
Gamma Chlordane	ND	4.3	4.7	10	1.00	U
Hexachlorobenzene	ND	2.1	4.7	5.2	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	89	55-130	
2,4,5,6-Tetrachloro-m-Xylene	99	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 4 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00009	**16-05-1056-2-A**	**05/13/16 07:45**	**Solid**	**GC 44**	**05/20/16**	**05/24/16 11:24**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Dieldrin	1200	110	230	260	50.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	55-130	
2,4,5,6-Tetrachloro-m-Xylene	100	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 5 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00010	**16-05-1056-3-A**	**05/13/16 08:00**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:54**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.6	10	1.00	U
Gamma-BHC	ND	2.3	4.6	5.1	1.00	U
Beta-BHC	ND	2.5	4.6	5.1	1.00	U
Heptachlor	ND	2.2	4.6	5.1	1.00	U
Delta-BHC	ND	4.4	4.6	10	1.00	U
Aldrin	ND	2.2	4.6	5.1	1.00	U
Heptachlor Epoxide	ND	3.7	4.6	10	1.00	U
Endosulfan I	ND	2.0	4.6	5.1	1.00	U
Dieldrin	ND	2.2	4.6	5.1	1.00	U
4,4'-DDE	ND	2.2	4.6	5.1	1.00	U
Endrin	ND	2.4	4.6	5.1	1.00	U
Endrin Aldehyde	ND	3.1	4.6	5.1	1.00	U
4,4'-DDD	ND	2.4	4.6	5.1	1.00	U
Endosulfan II	ND	2.4	4.6	5.1	1.00	U
4,4'-DDT	ND	2.2	4.6	5.1	1.00	U
Endosulfan Sulfate	ND	2.6	4.6	5.1	1.00	U
Methoxychlor	ND	2.7	4.6	5.1	1.00	U
Chlordane	ND	26	40	51	1.00	U
Toxaphene	ND	45	51	100	1.00	U
Endrin Ketone	ND	2.5	4.6	5.1	1.00	U
Alpha Chlordane	ND	2.1	4.6	5.1	1.00	U
Gamma Chlordane	ND	4.2	4.6	10	1.00	U
Hexachlorobenzene	ND	2.0	4.6	5.1	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	89	55-130	
2,4,5,6-Tetrachloro-m-Xylene	100	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 6 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00011	**16-05-1056-4-A**	**05/13/16 08:10**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 19:08**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.5	10	1.00	U
Gamma-BHC	ND	2.2	4.5	5.0	1.00	U
Beta-BHC	ND	2.5	4.5	5.0	1.00	U
Heptachlor	ND	2.2	4.5	5.0	1.00	U
Delta-BHC	ND	4.4	4.5	10	1.00	U
Aldrin	ND	2.2	4.5	5.0	1.00	U
Heptachlor Epoxide	ND	3.7	4.5	10	1.00	U
Endosulfan I	ND	2.0	4.5	5.0	1.00	U
Dieldrin	ND	2.2	4.5	5.0	1.00	U
4,4'-DDE	ND	2.2	4.5	5.0	1.00	U
Endrin	ND	2.4	4.5	5.0	1.00	U
Endrin Aldehyde	ND	3.0	4.5	5.0	1.00	U
4,4'-DDD	ND	2.4	4.5	5.0	1.00	U
Endosulfan II	ND	2.4	4.5	5.0	1.00	U
4,4'-DDT	ND	2.2	4.5	5.0	1.00	U
Endosulfan Sulfate	ND	2.6	4.5	5.0	1.00	U
Methoxychlor	ND	2.7	4.5	5.0	1.00	U
Chlordane	ND	26	40	50	1.00	U
Toxaphene	ND	45	50	100	1.00	U
Endrin Ketone	ND	2.5	4.5	5.0	1.00	U
Alpha Chlordane	ND	2.0	4.5	5.0	1.00	U
Gamma Chlordane	ND	4.2	4.5	10	1.00	U
Hexachlorobenzene	ND	2.0	4.5	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	89	55-130	
2,4,5,6-Tetrachloro-m-Xylene	89	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 7 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00024	**16-05-1056-6-A**	**05/13/16 09:00**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 19:37**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.6	10	1.00	U
Gamma-BHC	ND	2.3	4.6	5.1	1.00	U
Beta-BHC	ND	2.5	4.6	5.1	1.00	U
Heptachlor	ND	2.2	4.6	5.1	1.00	U
Delta-BHC	ND	4.4	4.6	10	1.00	U
Aldrin	ND	2.2	4.6	5.1	1.00	U
Heptachlor Epoxide	ND	3.7	4.6	10	1.00	U
Endosulfan I	ND	2.0	4.6	5.1	1.00	U
Dieldrin	ND	2.2	4.6	5.1	1.00	U
4,4'-DDE	ND	2.2	4.6	5.1	1.00	U
Endrin	ND	2.4	4.6	5.1	1.00	U
Endrin Aldehyde	ND	3.1	4.6	5.1	1.00	U
4,4'-DDD	ND	2.4	4.6	5.1	1.00	U
Endosulfan II	ND	2.4	4.6	5.1	1.00	U
4,4'-DDT	ND	2.2	4.6	5.1	1.00	U
Endosulfan Sulfate	ND	2.6	4.6	5.1	1.00	U
Methoxychlor	ND	2.7	4.6	5.1	1.00	U
Chlordane	ND	26	40	51	1.00	U
Toxaphene	ND	45	51	100	1.00	U
Endrin Ketone	ND	2.5	4.6	5.1	1.00	U
Alpha Chlordane	ND	2.1	4.6	5.1	1.00	U
Gamma Chlordane	ND	4.2	4.6	10	1.00	U
Hexachlorobenzene	ND	2.0	4.6	5.1	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	91	55-130	
2,4,5,6-Tetrachloro-m-Xylene	100	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 8 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00025	**16-05-1056-7-A**	**05/13/16 09:05**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 20:02**	**160520L15**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.8	4.7	10	1.00	U
Gamma-BHC	ND	2.3	4.7	5.2	1.00	U
Beta-BHC	ND	2.6	4.7	5.2	1.00	U
Heptachlor	ND	2.2	4.7	5.2	1.00	U
Delta-BHC	ND	4.5	4.7	10	1.00	U
Aldrin	ND	2.3	4.7	5.2	1.00	U
Heptachlor Epoxide	ND	3.8	4.7	10	1.00	U
Endosulfan I	ND	2.1	4.7	5.2	1.00	U
Dieldrin	ND	2.3	4.7	5.2	1.00	U
4,4'-DDE	ND	2.3	4.7	5.2	1.00	U
Endrin	ND	2.4	4.7	5.2	1.00	U
Endrin Aldehyde	ND	3.1	4.7	5.2	1.00	U
4,4'-DDD	ND	2.4	4.7	5.2	1.00	U
Endosulfan II	ND	2.4	4.7	5.2	1.00	U
4,4'-DDT	ND	2.3	4.7	5.2	1.00	U
Endosulfan Sulfate	ND	2.7	4.7	5.2	1.00	U
Methoxychlor	ND	2.8	4.7	5.2	1.00	U
Chlordane	ND	27	41	52	1.00	U
Toxaphene	ND	46	52	100	1.00	U
Endrin Ketone	ND	2.6	4.7	5.2	1.00	U
Alpha Chlordane	ND	2.1	4.7	5.2	1.00	U
Gamma Chlordane	ND	4.3	4.7	10	1.00	U
Hexachlorobenzene	ND	2.1	4.7	5.2	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	90	55-130	
2,4,5,6-Tetrachloro-m-Xylene	94	70-125	

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 9 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-471-94**	**N/A**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:11**	**160520L15**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.5	10	1.00	U
Gamma-BHC	ND	2.2	4.5	5.0	1.00	U
Beta-BHC	ND	2.5	4.5	5.0	1.00	U
Heptachlor	ND	2.2	4.5	5.0	1.00	U
Delta-BHC	ND	4.4	4.5	10	1.00	U
Aldrin	ND	2.2	4.5	5.0	1.00	U
Heptachlor Epoxide	ND	3.7	4.5	10	1.00	U
Endosulfan I	ND	2.0	4.5	5.0	1.00	U
Dieldrin	ND	2.2	4.5	5.0	1.00	U
4,4'-DDE	ND	2.2	4.5	5.0	1.00	U
Endrin	ND	2.4	4.5	5.0	1.00	U
Endrin Aldehyde	ND	3.0	4.5	5.0	1.00	U
4,4'-DDD	ND	2.4	4.5	5.0	1.00	U
Endosulfan II	ND	2.4	4.5	5.0	1.00	U
4,4'-DDT	ND	2.2	4.5	5.0	1.00	U
Endosulfan Sulfate	ND	2.6	4.5	5.0	1.00	U
Methoxychlor	ND	2.7	4.5	5.0	1.00	U
Chlordane	ND	26	40	50	1.00	U
Toxaphene	ND	45	50	100	1.00	U
Endrin Ketone	ND	2.5	4.5	5.0	1.00	U
Alpha Chlordane	ND	2.0	4.5	5.0	1.00	U
Gamma Chlordane	ND	4.2	4.5	10	1.00	U
Hexachlorobenzene	ND	2.0	4.5	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	55-130	
2,4,5,6-Tetrachloro-m-Xylene	99	70-125	

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00008	**Sample**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:25**	**160520S15**
OT071-00008	**Matrix Spike**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 20:59**	**160520S15**
OT071-00008	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 21:14**	**160520S15**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Alpha-BHC	ND	25.00	25.00	100	24.68	99	60-125	1	0-20	
Gamma-BHC	ND	25.00	25.99	104	25.55	102	60-125	2	0-20	
Beta-BHC	ND	25.00	20.71	83	20.19	81	60-125	3	0-20	
Heptachlor	ND	25.00	28.64	115	28.23	113	50-140	1	0-20	
Delta-BHC	ND	25.00	26.31	105	25.97	104	55-130	1	0-20	
Aldrin	12.43	25.00	34.08	87	34.07	87	45-140	0	0-20	
Heptachlor Epoxide	ND	25.00	25.66	103	24.74	99	65-130	4	0-20	
Endosulfan I	ND	25.00	26.24	105	25.92	104	15-135	1	0-20	
Dieldrin	1013	25.00	1321	1231	1358	1380	65-125	3	0-20	3
4,4'-DDE	ND	25.00	26.91	108	26.51	106	70-125	2	0-20	
Endrin	ND	25.00	32.48	130	31.81	127	60-135	2	0-20	
Endrin Aldehyde	ND	25.00	25.57	102	25.29	101	35-145	1	0-20	
4,4'-DDD	ND	25.00	26.37	105	25.51	102	30-135	3	0-20	
Endosulfan II	ND	25.00	26.20	105	25.74	103	35-140	2	0-20	
4,4'-DDT	ND	25.00	31.47	126	31.07	124	45-140	1	0-20	
Endosulfan Sulfate	ND	25.00	26.88	108	26.46	106	60-135	2	0-20	
Methoxychlor	ND	25.00	29.63	119	29.25	117	55-145	1	0-20	
Endrin Ketone	ND	25.00	28.87	115	28.57	114	65-135	1	0-20	
Alpha Chlordane	ND	25.00	26.15	105	25.75	103	65-120	2	0-20	
Gamma Chlordane	ND	25.00	25.28	101	24.87	99	65-125	2	0-20	
Hexachlorobenzene	ND	25.00	22.62	90	22.51	90	60-130	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00008	**Sample**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 18:25**	**160520S15**
OT071-00008	**Matrix Spike**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 20:59**	**160520S15**
OT071-00008	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 21:14**	**160520S15**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	50.85	102	50.45	101	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	51.84	104	51.23	102	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
OT071-00008	**Sample**	**Solid**	**N/A**	**05/18/16 00:00**	**05/18/16 21:00**	**G0518MOID9**
OT071-00008	**Sample Duplicate**	**Solid**	**N/A**	**05/18/16 00:00**	**05/18/16 21:00**	**G0518MOID9**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	3.300	3.600	9	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
OT071-00009	**Sample**	**Solid**	**N/A**	**05/18/16 00:00**	**05/19/16 12:00**	**G0519MOID4**
OT071-00009	**Sample Duplicate**	**Solid**	**N/A**	**05/18/16 00:00**	**05/19/16 12:00**	**G0519MOID4**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	4.700	4.600	2	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-94	**LCS**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 21:28**	**160520L15**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Alpha-BHC	25.00	26.12	104	60-125	
Gamma-BHC	25.00	26.73	107	60-125	
Beta-BHC	25.00	21.36	85	60-125	
Heptachlor	25.00	28.36	113	50-140	
Delta-BHC	25.00	27.02	108	55-130	
Aldrin	25.00	25.10	100	45-140	
Heptachlor Epoxide	25.00	24.37	97	65-130	
Endosulfan I	25.00	26.63	107	15-135	
Dieldrin	25.00	26.65	107	65-125	
4,4'-DDE	25.00	25.64	103	70-125	
Endrin	25.00	28.76	115	60-135	
Endrin Aldehyde	25.00	24.62	98	35-145	
4,4'-DDD	25.00	25.40	102	30-135	
Endosulfan II	25.00	26.86	107	35-140	
4,4'-DDT	25.00	29.55	118	45-140	
Endosulfan Sulfate	25.00	25.61	102	60-135	
Methoxychlor	25.00	27.45	110	55-145	
Endrin Ketone	25.00	25.63	103	65-135	
Alpha Chlordane	25.00	25.55	102	65-120	
Gamma Chlordane	25.00	25.04	100	65-125	
Hexachlorobenzene	25.00	23.06	92	60-130	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-94	**LCS**	**Solid**	**GC 44**	**05/20/16**	**05/23/16 21:28**	**160520L15**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	50.16	100	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	53.35	107	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 16-05-1056

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	650	N/A	1
ASTM D-2216 (M)	N/A	977	N/A	1
EPA 8081A	EPA 3545	669	GC 44	1

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Glossary of Terms and Qualifiers

Work Order: 16-05-1056 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
{	Analyte is a suspected lab contaminant. Analyte presence was not confirmed during reanalysis. See narrative.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

Ref. Document # **16-05-1056**

OT071-051316-07

Page 1 of 1

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: Tim Roth 865.560.7917
(Name & Phone #)

Send Report To: Tim Roth
Phone/Fax Number: 865.560.7917
Address: 2410 Cherahala Blvd.
City: Knoxville, TN 37932

Project Number: 145981
Project Name / Location: Former George AFB, California
Project Manager: Mr. David Daftary
Purchase Order #:
Shipment Date: 5/13/16
Waybill/Airbill Number: Calscience Laboratories, Inc.
Lab Destination: Calscience Laboratories, Inc.
Address: 7440 Lincoln Way
City: Garden Grove, CA 92841
Lab Contact Name / ph. #: Richard Villafania 714.895.5494

Sampler's Name(s): Carl Lind

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW846 8081A (1 x ~~8 oz CWM Jar~~) Acetate sleeve								Turn Around Time Requested
1	OT071-00008	OT071-SB03 - 24"	05/13/16	7:30	G	SO	1					X		X								21
2	OT071-00009	OT071-SB03 - 72"	05/13/16	7:45	G	SO	1					X										21
3	OT071-00010	OT071-SB03 - 84"	05/13/16	8:00	G	SO	1					X										21
4	OT071-00011	OT071-SB03 - 120"	05/13/16	8:10	G	SO	1					X										21
5	OT071-00012	OT071-SB03 - 150"	05/13/16	8:20	G	SO	1					X										21
6	OT071-00024	OT071-SB06 - 24"	05/13/16	9:00	G	SO	1					X		X								21
7	OT071-00025	OT071-SB06 - 48"	05/13/16	9:05	G	SO	1					X										21
8	OT071-00026	OT071-SB06 - 7'	05/13/16	9:15	G	SO	1					X										21
9	OT071-00027	OT071-SB06 - 10'	05/13/16	9:30	G	SO	1					X										21
10	OT071-00028	OT071-SB06 - 15'	05/13/16	9:45	G	SO	1					X										21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:
I II III IV

Project Specific: Level IV Hardcopy
Envirodata EDD

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Relinquished By	Date	Time	Received By	Date	Time
[signature]	5-13-16	17:15	[signature]	5/13/16	1745

Linda Ta

From: Mall, Robert [robert.mall@CBIFederalServices.com]
Sent: Thursday, May 19, 2016 1:05 PM
To: Linda Ta
Cc: Roth, Tim
Subject: Revised CoC's OT071 sampling
Attachments: COC - OT071-051316-07 - May 19, 2016 - Revision 2.pdf

Hello Linda,

Please find attached a copy of a revised CoC for the samples that were hand delivered to the Laboratory by Carl Lind on May 13, 2016.

Please contact myself or Mr. Tim Roth should there be any questions.

Regards,

Robert "Bob" Mall
Site Manager
CB&I Federal Services, LLC
(760) 246-3867 office
(760) 987-2244 cell
Robert.Mall@cbifederalservices.com

George Air Force Base
18374 W. Phantom Street
Victorville, CA 92394
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16-05-1056

CHAIN OF CUSTODY

OT071-051316-07

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917*
(Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/13/2016
Waybill/Airbill Number: *Calscience Laboratories, Inc.*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

Sampler's Name(s): Carl Lind

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW846 8081A (1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.7 micron filter)(1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.45 micron filter)(1 x Acetate Sleeve)				Turn Around Time Requested
1	OT071-00008	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
	OT071-00008-MS	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
	OT071-00008-MSD	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
2	OT071-00009	OT071-SB03 - 4'	05/13/16	7:45	G	SO	1					X		X	X	X				21
3	OT071-00010	OT071-SB03 - 7'	05/13/16	8:00	G	SO	1					X		Extract and Hold						21
4	OT071-00011	OT071-SB03 - 10'	05/13/16	8:10	G	SO	1					X		Extract and Hold						21
5	OT071-00012	OT071-SB03 - 15'	05/13/16	8:20	G	SO	1					X		Extract and Hold						21
6	OT071-00024	OT071-SB06 - 2'	05/13/16	9:00	G	SO	1					X		X	X	X				21
7	OT071-00025	OT071-SB06 - 4'	05/13/16	9:05	G	SO	1					X		X	X	X				21
8	OT071-00026	OT071-SB06 - 7'	05/13/16	9:15	G	SO	1					X		Extract and Hold						21
9	OT071-00027	OT071-SB06 - 10'	05/13/16	9:30	G	SO	1					X		Extract and Hold						21
10	OT071-00028	OT071-SB06 - 15'	05/13/16	9:45	G	SO	1					X		Extract and Hold						21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:
I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Relinquished By	Date	Time	Received By	Date	Time
Carl Lind	5-13-16	17:45			

George AR # 564580

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Linda Ta

From: Roth, Tim [Tim.Roth@CBIFederalServices.com]
Sent: Friday, May 27, 2016 5:16 AM
To: Richard Villafania; Linda Ta
Cc: Mall, Robert; Unruh, Mark
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1056 Report

Richard/Linda,

Based on the results reported please proceed with all analyses scheduled for the following samples:

OT071-00010
OT071-00011

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Thursday, May 26, 2016 5:44 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1056 Report

Tim,

FYI – the SW8081A SPLP sample data is in the supplement report, in the MDL/RL format. Please review the case narrative which identifies the batch IDs for the (2) SPLP extractions to differentiate between the two sets of data.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
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WORK ORDER NUMBER: 16-0583-6

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

DATE: 05 / 13 / 2016

CLIENT: CBF

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 3.4 °C (w/ CF): 3.4 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 1017

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1017
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1058

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (P) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1058

Reviewed by: 728

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Supplemental Report 3

Additional requested analyses have been added to the original report.

WORK ORDER NUMBER: 16-05-1056

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CB&I

Client Project Name: Former George AFB, CA / 145981

Attention: Tim Roth
2410 Cherahala Blvd
Knoxville, TN 37932-1566

Approved for release on 05/27/2016 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: Former George AFB, CA / 145981
Work Order Number: 16-05-1056

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Work Order Narrative

Work Order: 16-05-1056 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/13/16. They were assigned to Work Order 16-05-1056.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

QC Batch ID 160524L04 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160524L03 is associated with SW8081A SPLP 0.45 micron extraction.

MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160524L03 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included the associated data package.

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00008	**16-05-1056-1-A**	**05/13/16 07:30**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:49**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	98	24-168	
2,4,5,6-Tetrachloro-m-Xylene	100	25-145	

OT071-00008	**16-05-1056-1-A**	**05/13/16 07:30**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 15:39**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	2.4	0.50	0.29	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	112	24-168	
2,4,5,6-Tetrachloro-m-Xylene	115	25-145	

OT071-00009	**16-05-1056-2-A**	**05/13/16 07:45**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 12:03**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	100	24-168	
2,4,5,6-Tetrachloro-m-Xylene	103	25-145	

OT071-00009	**16-05-1056-2-A**	**05/13/16 07:45**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 15:53**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	117	24-168	
2,4,5,6-Tetrachloro-m-Xylene	116	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00010	**16-05-1056-3-A**	**05/13/16 08:00**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 12:17**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	24-168	
2,4,5,6-Tetrachloro-m-Xylene	102	25-145	

OT071-00010	**16-05-1056-3-A**	**05/13/16 08:00**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 16:08**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	116	24-168	
2,4,5,6-Tetrachloro-m-Xylene	121	25-145	

OT071-00011	**16-05-1056-4-A**	**05/13/16 08:10**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 12:32**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	24-168	
2,4,5,6-Tetrachloro-m-Xylene	103	25-145	

OT071-00011	**16-05-1056-4-A**	**05/13/16 08:10**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 16:22**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	110	24-168	
2,4,5,6-Tetrachloro-m-Xylene	109	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00024	**16-05-1056-6-A**	**05/13/16 09:00**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 13:00**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	98	24-168	
2,4,5,6-Tetrachloro-m-Xylene	102	25-145	

OT071-00024	**16-05-1056-6-A**	**05/13/16 09:00**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 16:50**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	116	24-168	
2,4,5,6-Tetrachloro-m-Xylene	125	25-145	

OT071-00025	**16-05-1056-7-A**	**05/13/16 09:05**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 13:14**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	24-168	
2,4,5,6-Tetrachloro-m-Xylene	105	25-145	

OT071-00025	**16-05-1056-7-A**	**05/13/16 09:05**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 17:05**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	117	24-168	
2,4,5,6-Tetrachloro-m-Xylene	125	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-584-11**	**N/A**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:06**	**160524L03**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	24-168	
2,4,5,6-Tetrachloro-m-Xylene	101	25-145	

Method Blank	**099-15-584-12**	**N/A**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 14:56**	**160524L04**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	113	24-168	
2,4,5,6-Tetrachloro-m-Xylene	109	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00008	**Sample**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:49**	**160524S03**
OT071-00008	**Matrix Spike**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:20**	**160524S03**
OT071-00008	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:34**	**160524S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Dieldrin	ND	5.000	4.972	99	4.994	100	50-135	0	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00008	**Sample**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:49**	**160524S03**
OT071-00008	**Matrix Spike**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:20**	**160524S03**
OT071-00008	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 11:34**	**160524S03**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	2.000	19.51	98	19.75	99	24-168	
2,4,5,6-Tetrachloro-m-Xylene	2.000	20.09	100	20.14	101	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-11	**LCS**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 10:52**	**160524L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Dieldrin	5.000	5.211	104	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-11	**LCS**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 10:52**	**160524L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	4.000	20.18	101	24-168	
2,4,5,6-Tetrachloro-m-Xylene	4.000	20.52	103	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-12	**LCS**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 14:42**	**160524L04**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Dieldrin	10.00	10.98	110	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/13/16
2410 Cherahala Blvd		Work Order:	16-05-1056
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-12	**LCS**	**Solid**	**GC 44**	**05/18/16**	**05/25/16 14:42**	**160524L04**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	4.000	11.11	56	24-168	
2,4,5,6-Tetrachloro-m-Xylene	4.000	10.88	54	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 16-05-1056

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8081A	EPA 1312	669	GC 44	1

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Glossary of Terms and Qualifiers

Work Order: 16-05-1056 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
{	Analyte is a suspected lab contaminant. Analyte presence was not confirmed during reanalysis. See narrative.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

Ref. Document # **16-05-1056**

OT071-051316-07

Page 1 of 1

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: Tim Roth 865.560.7917
(Name & phone #)

Send Report To: Tim Roth
Phone/Fax Number: 865.560.7917
Address: 2410 Cherahala Blvd.
City: Knoxville, TN 37932

Project Number: 145981
Project Name / Location: Former George AFB, California
Project Manager: Mr. David Daftary
Purchase Order #:
Shipment Date: 5/13/16
Waybill/Airbill Number: Calscience Laboratories, Inc.
Lab Destination: Calscience Laboratories, Inc.
Address: 7440 Lincoln Way
City: Garden Grove, CA 92841
Lab Contact Name / ph. #: Richard Villafania 714.895.5494

Sampler's Name(s): Carl Lind

Sample ID Number	Sample Description	Collection Information Date	Time	G / C	Matrix	# of containers	Preservative HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW8465 8081A (1 x 8 oz. CLAM-Jar) Accept 2 of 22 VOC								Turn Around Time Requested
OT071-00008	OT071-SB03 - 24"	05/13/16	7:30	G	SO	1					X		X								21
OT071-00009	OT071-SB03 - 72"	05/13/16	7:45	G	SO	1					X										21
OT071-00010	OT071-SB03 - 84"	05/13/16	8:00	G	SO	1					X										21
OT071-00011	OT071-SB03 - 120"	05/13/16	8:10	G	SO	1					X										21
OT071-00012	OT071-SB03 - 150"	05/13/16	8:20	G	SO	1					X										21
OT071-00024	OT071-SB06 - 24"	05/13/16	9:00	G	SO	1					X		X								21
OT071-00025	OT071-SB06 - 48"	05/13/16	9:05	G	SO	1					X										21
OT071-00026	OT071-SB06 - 7'	05/13/16	9:15	G	SO	1					X										21
OT071-00027	OT071-SB06 - 10'	05/13/16	9:30	G	SO	1					X										21
OT071-00028	OT071-SB06 - 15'	05/13/16	9:45	G	SO	1					X										21

Special Instructions: Envirodata EDD
21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required: I II III IV
Project Specific: Level IV Hardcopy
Envirodata EDD

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Relinquished By	Date / Time	Received By	Date / Time
[signature]	Date 5/13/16 Time 17:15	[signature]	Date 5/13/16 Time 1745
Relinquished By:	Date / Time	Received By:	Date: / Time
Relinquished By	Date / Time	Received By	Date: / Time:

George AR # 564580

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Linda Ta

From: Mall, Robert [robert.mall@CBIFederalServices.com]
Sent: Thursday, May 19, 2016 1:05 PM
To: Linda Ta
Cc: Roth, Tim
Subject: Revised CoC's OT071 sampling
Attachments: COC - OT071-051316-07 - May 19, 2016 - Revision 2.pdf

Hello Linda,

Please find attached a copy of a revised CoC for the samples that were hand delivered to the Laboratory by Carl Lind on May 13, 2016.

Please contact myself or Mr. Tim Roth should there be any questions.

Regards,

Robert "Bob" Mall
Site Manager
CB&I Federal Services, LLC
(760) 246-3867 office
(760) 987-2244 cell
Robert.Mall@cbifederalservices.com

George Air Force Base
18374 W. Phantom Street
Victorville, CA 92394
www.CBI.com

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16-05-1056

CHAIN OF CUSTODY

OT071-051316-07

Page 1 of 1

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917*
(Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/13/2016
Waybill/Airbill Number: *Calscience Laboratories, Inc.*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

Sampler's Name(s): Carl Lind

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW846 8081A (1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.7 micron filter)(1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.45 micron filter)(1 x Acetate Sleeve)				Turn Around Time Requested
1	OT071-00008	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
	OT071-00008-MS	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
	OT071-00008-MSD	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		X	X	X				21
2	OT071-00009	OT071-SB03 - 4'	05/13/16	7:45	G	SO	1					X		X	X	X				21
3	OT071-00010	OT071-SB03 - 7'	05/13/16	8:00	G	SO	1					X		Extract and Hold						21
4	OT071-00011	OT071-SB03 - 10'	05/13/16	8:10	G	SO	1					X		Extract and Hold						21
5	OT071-00012	OT071-SB03 - 15'	05/13/16	8:20	G	SO	1					X		Extract and Hold						21
6	OT071-00024	OT071-SB06 - 2'	05/13/16	9:00	G	SO	1					X		X	X	X				21
7	OT071-00025	OT071-SB06 - 4'	05/13/16	9:05	G	SO	1					X		X	X	X				21
8	OT071-00026	OT071-SB06 - 7'	05/13/16	9:15	G	SO	1					X		Extract and Hold						21
9	OT071-00027	OT071-SB06 - 10'	05/13/16	9:30	G	SO	1					X		Extract and Hold						21
10	OT071-00028	OT071-SB06 - 15'	05/13/16	9:45	G	SO	1					X		Extract and Hold						21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:
I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Relinquished By	Date	Time	Received By	Date	Time
Carl Lind	5-13-16	17:45			

George AR # 564580

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Linda Ta

From: Roth, Tim [Tim.Roth@CBIFederalServices.com]
Sent: Friday, May 27, 2016 5:16 AM
To: Richard Villafania; Linda Ta
Cc: Mall, Robert; Unruh, Mark
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1056 Report

Richard/Linda,

Based on the results reported please proceed with all analyses scheduled for the following samples:

OT071-00010
OT071-00011

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Thursday, May 26, 2016 5:44 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1056 Report

Tim,

FYI – the SW8081A SPLP sample data is in the supplement report, in the MDL/RL format. Please review the case narrative which identifies the batch IDs for the (2) SPLP extractions to differentiate between the two sets of data.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494
RichardVillafania@eurofinsUS.com
Website: www.eurofinsUS.com/Calscience

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WORK ORDER NUMBER: 16-05-1056

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

DATE: 05 / 13 / 2016

CLIENT: CBF

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 3.4 °C (w/ CF): 3.4 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 1017

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1017
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1058

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (P) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1058

Reviewed by: 778

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Supplemental Report 4

Additional requested analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 16-05-1567

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CB&I

Client Project Name: Former George AFB, CA / 145981

Attention: Tim Roth
2410 Cherahala Blvd
Knoxville, TN 37932-1566

Approved for release on 06/15/2016 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 16-05-1567

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Work Order Narrative

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/20/16. They were assigned to Work Order 16-05-1567.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Due to insufficient sample quantity, the requested analyses for sample OT071-00020 (16-05-1567-08) and sample OT071-00002 (16-05-1567-13) were not performed.

Due to insufficient sample quantity, the requested MS/MSD analyses for sample OT071-00018 (16-05-1567-06) were not performed.

QC Batch ID 160525L17 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160525L16 is associated with SW8081A SPLP 0.45 micron extraction.

MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160525L16/160525S16 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included in the associated data package.

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Work Order Narrative

For the additional analyses, QC Batch ID 160601L10 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160601L09 is associated with SW8081A SPLP 0.45 micron extraction.

For the additional analyses, MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160601L09/160601S09 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included in the associated data package.

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
		Units:	%
Project: Former George AFB, CA / 145981			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00017	**16-05-1567-5-A**	**05/16/16 09:27**	**Solid**	**N/A**	**05/24/16**	**05/24/16 22:00**	**G0524MOIB5**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	7.6	0.10	0.10	0.10	1.00	

OT071-00005	**16-05-1567-16-A**	**05/16/16 11:55**	**Solid**	**N/A**	**05/24/16**	**05/24/16 22:00**	**G0524MOIB5**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	0.90	0.10	0.10	0.10	1.00	

Method Blank	**099-05-014-5989**	**N/A**	**Solid**	**N/A**	**05/24/16**	**05/24/16 22:00**	**G0524MOIB5**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Moisture	ND	0.10	0.10	0.10	1.00	U

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00017	**16-05-1567-5-A**	**05/16/16 09:27**	**Solid**	**GC 51**	**05/25/16**	**06/14/16 11:55**	**160525L25**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	4.0	4.9	11	1.00	U
Gamma-BHC	ND	2.4	4.9	5.5	1.00	U
Beta-BHC	ND	2.7	4.9	5.5	1.00	U
Heptachlor	ND	2.4	4.9	5.5	1.00	U
Delta-BHC	ND	4.8	4.9	11	1.00	U
Aldrin	ND	2.4	4.9	5.5	1.00	U
Heptachlor Epoxide	ND	4.0	4.9	11	1.00	U
Endosulfan I	ND	2.2	4.9	5.5	1.00	U
Dieldrin	ND	2.4	4.9	5.5	1.00	U
4,4'-DDE	ND	2.4	4.9	5.5	1.00	U
Endrin	ND	2.6	4.9	5.5	1.00	U
Endrin Aldehyde	ND	3.3	4.9	5.5	1.00	U
4,4'-DDD	ND	2.6	4.9	5.5	1.00	U
Endosulfan II	ND	2.6	4.9	5.5	1.00	U
4,4'-DDT	ND	2.4	4.9	5.5	1.00	U
Endosulfan Sulfate	ND	2.9	4.9	5.5	1.00	U
Methoxychlor	ND	3.0	4.9	5.5	1.00	U
Chlordane	ND	29	44	55	1.00	U
Toxaphene	ND	49	55	110	1.00	U
Endrin Ketone	ND	2.7	4.9	5.5	1.00	U
Alpha Chlordane	ND	2.2	4.9	5.5	1.00	U
Gamma Chlordane	ND	4.5	4.9	11	1.00	U
Hexachlorobenzene	ND	2.2	4.9	5.5	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	95	55-130	
2,4,5,6-Tetrachloro-m-Xylene	98	70-125	

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00005	**16-05-1567-16-A**	**05/16/16 11:55**	**Solid**	**GC 51**	**05/25/16**	**06/14/16 12:09**	**160525L25**

Comment(s): - Results are reported on a dry weight basis.
- Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.5	10	1.00	U
Gamma-BHC	ND	2.2	4.5	5.0	1.00	U
Beta-BHC	ND	2.5	4.5	5.0	1.00	U
Heptachlor	ND	2.2	4.5	5.0	1.00	U
Delta-BHC	ND	4.4	4.5	10	1.00	U
Aldrin	ND	2.2	4.5	5.0	1.00	U
Heptachlor Epoxide	ND	3.7	4.5	10	1.00	U
Endosulfan I	ND	2.0	4.5	5.0	1.00	U
Dieldrin	ND	2.2	4.5	5.0	1.00	U
4,4'-DDE	ND	2.2	4.5	5.0	1.00	U
Endrin	ND	2.4	4.5	5.0	1.00	U
Endrin Aldehyde	ND	3.0	4.5	5.0	1.00	U
4,4'-DDD	ND	2.4	4.5	5.0	1.00	U
Endosulfan II	ND	2.4	4.5	5.0	1.00	U
4,4'-DDT	ND	2.2	4.5	5.0	1.00	U
Endosulfan Sulfate	ND	2.6	4.5	5.0	1.00	U
Methoxychlor	ND	2.7	4.5	5.0	1.00	U
Chlordane	ND	26	40	50	1.00	U
Toxaphene	ND	45	50	100	1.00	U
Endrin Ketone	ND	2.5	4.5	5.0	1.00	U
Alpha Chlordane	ND	2.0	4.5	5.0	1.00	U
Gamma Chlordane	ND	4.2	4.5	10	1.00	U
Hexachlorobenzene	ND	2.0	4.5	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	95	55-130	
2,4,5,6-Tetrachloro-m-Xylene	103	70-125	

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Former George AFB, CA / 145981			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-471-95**	**N/A**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:28**	**160525L25**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	DL	LOD	LOQ	DF	Qualifiers
Alpha-BHC	ND	3.7	4.5	10	1.00	U
Gamma-BHC	ND	2.2	4.5	5.0	1.00	U
Beta-BHC	ND	2.5	4.5	5.0	1.00	U
Heptachlor	ND	2.2	4.5	5.0	1.00	U
Delta-BHC	ND	4.4	4.5	10	1.00	U
Aldrin	ND	2.2	4.5	5.0	1.00	U
Heptachlor Epoxide	ND	3.7	4.5	10	1.00	U
Endosulfan I	ND	2.0	4.5	5.0	1.00	U
Dieldrin	ND	2.2	4.5	5.0	1.00	U
4,4'-DDE	ND	2.2	4.5	5.0	1.00	U
Endrin	ND	2.4	4.5	5.0	1.00	U
Endrin Aldehyde	ND	3.0	4.5	5.0	1.00	U
4,4'-DDD	ND	2.4	4.5	5.0	1.00	U
Endosulfan II	ND	2.4	4.5	5.0	1.00	U
4,4'-DDT	ND	2.2	4.5	5.0	1.00	U
Endosulfan Sulfate	ND	2.6	4.5	5.0	1.00	U
Methoxychlor	ND	2.7	4.5	5.0	1.00	U
Chlordane	ND	26	40	50	1.00	U
Toxaphene	ND	45	50	100	1.00	U
Endrin Ketone	ND	2.5	4.5	5.0	1.00	U
Alpha Chlordane	ND	2.0	4.5	5.0	1.00	U
Gamma Chlordane	ND	4.2	4.5	10	1.00	U
Hexachlorobenzene	ND	2.0	4.5	5.0	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	113	55-130	
2,4,5,6-Tetrachloro-m-Xylene	112	70-125	

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00013	**Sample**	**Solid**	**GC 44**	**05/27/16**	**05/27/16 18:43**	**160525S25**
OT071-00013	**Matrix Spike**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:42**	**160525S25**
OT071-00013	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:56**	**160525S25**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Alpha-BHC	ND	25.00	19.84	79	15.89	64	60-125	22	0-20	4
Gamma-BHC	ND	25.00	25.64	103	20.58	82	60-125	22	0-20	4
Beta-BHC	ND	25.00	22.38	90	18.25	73	60-125	20	0-20	
Heptachlor	ND	25.00	25.36	101	20.33	81	50-140	22	0-20	4
Delta-BHC	ND	25.00	23.14	93	19.00	76	55-130	20	0-20	
Aldrin	ND	25.00	26.67	107	19.66	79	45-140	30	0-20	4
Heptachlor Epoxide	ND	25.00	22.53	90	17.66	71	65-130	24	0-20	4
Endosulfan I	ND	25.00	23.21	93	17.87	71	15-135	26	0-20	4
Dieldrin	2699	25.00	1936	0	1758	0	65-125	10	0-20	3
4,4'-DDE	ND	25.00	26.48	106	20.59	82	70-125	25	0-20	4
Endrin	13.36	25.00	43.91	122	32.01	75	60-135	31	0-20	4
Endrin Aldehyde	ND	25.00	20.28	81	16.60	66	35-145	20	0-20	
4,4'-DDD	ND	25.00	25.68	103	19.89	80	30-135	25	0-20	4
Endosulfan II	ND	25.00	25.71	103	19.68	79	35-140	27	0-20	4
4,4'-DDT	ND	25.00	34.48	138	26.43	106	45-140	26	0-20	4
Endosulfan Sulfate	ND	25.00	26.39	106	20.61	82	60-135	25	0-20	4
Methoxychlor	ND	25.00	27.40	110	22.88	92	55-145	18	0-20	
Endrin Ketone	5.808	25.00	31.36	102	23.56	71	65-135	28	0-20	4
Alpha Chlordane	ND	25.00	29.32	117	21.81	87	65-120	29	0-20	4
Gamma Chlordane	ND	25.00	24.56	98	18.87	75	65-125	26	0-20	4
Hexachlorobenzene	ND	25.00	23.17	93	19.15	77	60-130	19	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00013	**Sample**	**Solid**	**GC 44**	**05/27/16**	**05/27/16 18:43**	**160525S25**
OT071-00013	**Matrix Spike**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:42**	**160525S25**
OT071-00013	**Matrix Spike Duplicate**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:56**	**160525S25**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	54.38	109	41.54	83	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	48.74	97	38.10	76	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Former George AFB, CA / 145981			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
16-05-1580-2	**Sample**	**Solid**	**N/A**	**05/24/16 00:00**	**05/24/16 22:00**	**G0524MOID5**
16-05-1580-2	**Sample Duplicate**	**Solid**	**N/A**	**05/24/16 00:00**	**05/24/16 22:00**	**G0524MOID5**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	52.00	53.50	3	0-10	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-95	**LCS**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:14**	**160525L25**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Alpha-BHC	25.00	29.64	119	60-125	
Gamma-BHC	25.00	31.21	125	60-125	
Beta-BHC	25.00	23.24	93	60-125	
Heptachlor	25.00	30.68	123	50-140	
Delta-BHC	25.00	29.19	117	55-130	
Aldrin	25.00	27.36	109	45-140	
Heptachlor Epoxide	25.00	27.48	110	65-130	
Endosulfan I	25.00	30.35	121	15-135	
Dieldrin	25.00	28.03	112	65-125	
4,4'-DDE	25.00	24.76	99	70-125	
Endrin	25.00	27.92	112	60-135	
Endrin Aldehyde	25.00	27.56	110	35-145	
4,4'-DDD	25.00	24.96	100	30-135	
Endosulfan II	25.00	28.16	113	35-140	
4,4'-DDT	25.00	28.82	115	45-140	
Endosulfan Sulfate	25.00	28.98	116	60-135	
Methoxychlor	25.00	27.75	111	55-145	
Endrin Ketone	25.00	29.42	118	65-135	
Alpha Chlordane	25.00	27.83	111	65-120	
Gamma Chlordane	25.00	28.04	112	65-125	
Hexachlorobenzene	25.00	25.85	103	60-130	

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RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 3545
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-471-95	**LCS**	**Solid**	**GC 44**	**05/25/16**	**05/26/16 17:14**	**160525L25**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	25.00	54.38	109	55-130	
2,4,5,6-Tetrachloro-m-Xylene	25.00	57.74	115	70-125	

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 16-05-1567

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	689	N/A	1
EPA 8081A	EPA 3545	669	GC 51	1

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Glossary of Terms and Qualifiers

Work Order: 16-05-1567 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
{	Analyte is a suspected lab contaminant. Analyte presence was not confirmed during reanalysis. See narrative.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

Ref. Document # OT071-051616-09

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Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917* (Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/19/2016
Waybill/Airbill Number: *Calscience Laboratories, Inc.*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

16-05-1567

Sampler's Name(s): Carl Lind

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW846 8081A (1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.7 micron filter)(1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.45 micron filter)(1 x Acetate Sleeve)					Turn Around Time Requested
1	OT071-00013	OT071-SB04 - 2'	05/16/16	9:14	G	SO	1					X		X	X	X					21
2	OT071-00014	OT071-SB04 - 4'	05/16/16	9:09	G	SO	1					X		X	X	X					21
3	OT071-00015	OT071-SB04 - 7'	05/16/16	8:45	G	SO	1					X		Extract and Hold							21
4	OT071-00016	OT071-SB04 - 10'	05/16/16	9:20	G	SO	1					X		Extract and Hold							21
5	OT071-00017	OT071-SB04 - 15'	05/16/16	9:27	G	SO	1					X		Extract and Hold							21
	OT071-00018	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
6	OT071-00018-MS	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
	OT071-00018-MSD	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
7	OT071-00019	OT071-SB05 - 4'	05/16/16	10:45	G	SO	1					X		X	X	X					21
8	OT071-00020	OT071-SB05 - 4'	05/16/16	10:45	G	SO	1					X		X	X	X					21
9	OT071-00021	OT071-SB05 - 7'	05/16/16	10:55	G	SO	1					X		Extract and Hold							21
10	OT071-00022	OT071-SB05 - 10'	05/16/16	11:00	G	SO	1					X		Extract and Hold							21
11	OT071-00023	OT071-SB05 - 15'	05/16/16	11:05	G	SO	1					X		Extract and Hold							21
12	OT071-00001	OT071-SB02 - 2'	05/16/16	11:40	G	SO	1					X		X	X	X					21
13	OT071-00002	OT071-SB02 - 2'	05/16/16	11:40	G	SO	1					X		X	X	X					21
14	OT071-00003	OT071-SB02 - 4'	05/16/16	11:45	G	SO	1					X		X	X	X					21
15	OT071-00004	OT071-SB02 - 7'	05/16/16	11:50	G	SO	1					X		Extract and Hold							21
16	OT071-00005	OT071-SB02 - 10'	05/16/16	11:55	G	SO	1					X		Extract and Hold							21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:

I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By	Date / Time	Received By	Date / Time
Carl Lind	5-13-16 12:30	Robert Mall	5/13/16 12:30
Robert Mall	5/20/16 1110	Chao Hui	5/20/16 11:10
Chao Hui	5/20/16 15:50	Dannyle Ell	5/20/16 15:50

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

George AR # 564580

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Linda Ta

From: Richard Villafania
Sent: Wednesday, June 01, 2016 8:01 AM
To: Linda Ta
Subject: Additional tests for 16-05-1567

Categories: Bottle Orders

Please generate change order and include email in COC. Thanks.

Regards.

Richard Villafania
Project Manager

From: Roth, Tim [mailto:Tim.Roth@CBIFederalServices.com]
Sent: Wednesday, June 01, 2016 5:16 AM
To: Richard Villafania; Unruh, Mark; Mall, Robert
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Richard,

Yes, Analyze the following samples:

OT071-00004 (16-05-1567-15)
OT071-00015 (16-05-1567-3)
OT071-00016 (16-05-1567-4)
OT071-00021 (16-05-1567-9)

Also, we're trying to send additional material for samples OT071-00002 and OT071-00020 to extract and analyze.

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, May 31, 2016 8:35 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Tim,

Please advise of any additional tests for this event.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.

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Richard Villafania

From: Roth, Tim <Tim.Roth@CBIFederalServices.com>
Sent: Wednesday, June 08, 2016 4:53 AM
To: Richard Villafania; Linda Ta
Cc: Unruh, Mark
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Supplement Reports

Richard,

Please analyze the following samples:

OT071-00005 (16-05-1567-16)
OT071-00017 (16-05-1567-05)

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, June 07, 2016 4:59 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Supplement Reports

Tim,

Please see the attached supplement reports regarding the additional analyses. Barring any further testing, I will generate the associated EDDs.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494
Website: www.eurofinsUS.com/Calscience

From: Roth, Tim [mailto:Tim.Roth@CBIFederalServices.com]
Sent: Wednesday, June 01, 2016 5:16 AM
To: Richard Villafania; Unruh, Mark; Mall, Robert
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Richard,

Yes, Analyze the following samples:

OT071-00004 (16-05-1567-15)
OT071-00015 (16-05-1567-3)

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OT071-00016 (16-05-1567-4)
OT071-00021 (16-05-1567-9)

Also, we're trying to send additional material for samples OT071-00002 and OT071-00020 to extract and analyze.

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, May 31, 2016 8:35 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Tim,

Please advise of any additional tests for this event.

Regards.

Richard Villafania
Project Manager

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WORK ORDER NUMBER: 16-05-1567

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CBI

DATE: 05 / 20 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2-6 °C (w/ CF): 2-6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 810

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 810

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑ 5/20/16	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 500PB ☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (P) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 659

Reviewed by: 1017

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WORK ORDER NUMBER: 16-0567

SAMPLE ANOMALY REPORT

DATE: 05 / 20 / 2016

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

* Received 1 container attached with 2 labels for the following sample:

-(-7), (-8) in 1 container

-(-12), (-13) in 1 container.

MISCELLANEOUS: (Describe)

* 2 Samples in one container.

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: 1017

Reviewed by: 659

** Record the total number of containers (i.e.. vials or bottles) for the affected sample.

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Supplemental Report 5

Additional requested analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 16-05-1567

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: CB&I

Client Project Name: Former George AFB, CA / 145981

Attention: Tim Roth
2410 Cherahala Blvd
Knoxville, TN 37932-1566

Approved for release on 06/15/2016 by:
Richard Villafania
Project Manager

ResultLink ▸

Email your PM ▸

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 16-05-1567

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/20/16. They were assigned to Work Order 16-05-1567.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Due to insufficient sample quantity, the requested analyses for sample OT071-00020 (16-05-1567-08) and sample OT071-00002 (16-05-1567-13) were not performed.

Due to insufficient sample quantity, the requested MS/MSD analyses for sample OT071-00018 (16-05-1567-06) were not performed.

QC Batch ID 160525L17 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160525L16 is associated with SW8081A SPLP 0.45 micron extraction.

MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160525L16/160525S16 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included in the associated data package.

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Work Order Narrative

For the additional analyses, QC Batch ID 160601L10 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160601L09 is associated with SW8081A SPLP 0.45 micron extraction.

For the additional analyses, MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160601L09/160601S09 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included in the associated data package.

For the supplement additional analyses, QC Batch ID 160610L05 is associated with SW8081A SPLP 0.70 micron extraction, QC Batch ID 160610L06 is associated with SW8081A SPLP 0.45 micron extraction.

For the supplement additional analyses, MS/MSD was performed for both SW8081A SPLP extractions though due to a LIMS limitation, only the MS/MSD for QC Batch ID 160610L06/160610S06 was reported. Raw data for both sets of SW8081A SPLP MS/MSD will be included in the associated data package.

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OT071-00017	**16-05-1567-5-A**	**05/16/16 09:27**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 14:09**	**160610L06**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	46	24-168	
2,4,5,6-Tetrachloro-m-Xylene	45	25-145	

OT071-00017	**16-05-1567-5-A**	**05/16/16 09:27**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 17:41**	**160610L05**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	40	24-168	
2,4,5,6-Tetrachloro-m-Xylene	41	25-145	

OT071-00005	**16-05-1567-16-A**	**05/16/16 11:55**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 14:23**	**160610L06**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	47	24-168	
2,4,5,6-Tetrachloro-m-Xylene	46	25-145	

OT071-00005	**16-05-1567-16-A**	**05/16/16 11:55**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 17:55**	**160610L05**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	0.44	0.50	0.29	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	34	24-168	
2,4,5,6-Tetrachloro-m-Xylene	35	25-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
		Units:	ug/L
Project: Former George AFB, CA / 145981			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-584-18**	**N/A**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 15:06**	**160610L05**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	45	24-168	
2,4,5,6-Tetrachloro-m-Xylene	44	25-145	

Method Blank	**099-15-584-17**	**N/A**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 12:52**	**160610L06**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dieldrin	ND	0.50	0.29	1.00	U

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	45	24-168	
2,4,5,6-Tetrachloro-m-Xylene	49	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00017	**Sample**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 17:41**	**160610S06**
OT071-00017	**Matrix Spike**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 13:40**	**160610S06**
OT071-00017	**Matrix Spike Duplicate**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 13:54**	**160610S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Dieldrin	ND	5.000	4.443	89	4.594	92	50-135	3	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Spike/Spike Duplicate - Surrogate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
OT071-00017	**Sample**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 17:41**	**160610S06**
OT071-00017	**Matrix Spike**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 13:40**	**160610S06**
OT071-00017	**Matrix Spike Duplicate**	**Solid**	**GC 51**	**05/24/16**	**06/14/16 13:54**	**160610S06**

Parameter	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	2.000	8.983	45	9.328	47	24-168	
2,4,5,6-Tetrachloro-m-Xylene	2.000	9.067	45	9.212	46	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-18	**LCS**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 14:52**	**160610L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Dieldrin	5.000	4.969	99	50-135	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-18	**LCS**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 14:52**	**160610L05**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	2.000	9.926	50	24-168	
2,4,5,6-Tetrachloro-m-Xylene	2.000	9.805	49	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-17	**LCS**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 14:37**	**160610L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Dieldrin	5.000	4.545	91	50-135	

RPD: Relative Percent Difference. CL: Control Limits

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LCS Only - Surrogate

CB&I		Date Received:	05/20/16
2410 Cherahala Blvd		Work Order:	16-05-1567
Knoxville, TN 37932-1566		Preparation:	EPA 1312
		Method:	EPA 8081A
Project: Former George AFB, CA / 145981			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-584-17	**LCS**	**Solid**	**GC 51**	**06/10/16**	**06/14/16 14:37**	**160610L06**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	2.000	9.320	47	24-168	
2,4,5,6-Tetrachloro-m-Xylene	2.000	9.159	46	25-145	

RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 16-05-1567

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8081A	EPA 1312	669	GC 51	1

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Glossary of Terms and Qualifiers

Work Order: 16-05-1567

Qualifiers	Definition
*	See applicable analysis comment.
{	Analyte is a suspected lab contaminant. Analyte presence was not confirmed during reanalysis. See narrative.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DL	The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
ICH	Initial calibration verification recovery is above the control limit for this analyte.
ICJ	Initial calibration verification recovery is below the control limit for this analyte.
IH	Calibration verification recovery is above the control limit for this analyte.
IJ	Calibration verification recovery is below the control limit for this analyte.
J	Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LOD	The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at 99% confidence level.
LOQ	The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
U	Undetected at Detection Limit (DL) and is reported as less than the Limit of Detection (LOD).
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

Ref. Document # OT071-051616-09

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16-05-1567

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917* (Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/19/2016
Waybill/Airbill Number: *Calscience Laboratories, Inc.*
Lab Destination: *Calscience Laboratories, Inc.*
Address: *7440 Lincoln Way*
City: *Garden Grove, CA 92841*
Lab Contact Name / ph. #: *Richard Villafania 714.895.5494*

Sampler's Name(s): Carl Lind

	Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Organochlorinated Pesticides by SW846 8081A (1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.7 micron filter)(1 x Acetate Sleeve)	SPLP Dieldrin by SW846 1312 8081A (Filter leachate through 0.45 micron filter)(1 x Acetate Sleeve)					Turn Around Time Requested
1	OT071-00013	OT071-SB04 - 2'	05/16/16	9:14	G	SO	1					X		X	X	X					21
2	OT071-00014	OT071-SB04 - 4'	05/16/16	9:09	G	SO	1					X		X	X	X					21
3	OT071-00015	OT071-SB04 - 7'	05/16/16	8:45	G	SO	1					X		Extract and Hold							21
4	OT071-00016	OT071-SB04 - 10'	05/16/16	9:20	G	SO	1					X		Extract and Hold							21
5	OT071-00017	OT071-SB04 - 15'	05/16/16	9:27	G	SO	1					X		Extract and Hold							21
	OT071-00018	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
6	OT071-00018-MS	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
	OT071-00018-MSD	OT071-SB05 - 2'	05/16/16	10:40	G	SO	1					X		X	X	X					21
7	OT071-00019	OT071-SB05 - 4'	05/16/16	10:45	G	SO	1					X		X	X	X					21
8	OT071-00020	OT071-SB05 - 4'	05/16/16	10:45	G	SO	1					X		X	X	X					21
9	OT071-00021	OT071-SB05 - 7'	05/16/16	10:55	G	SO	1					X		Extract and Hold							21
10	OT071-00022	OT071-SB05 - 10'	05/16/16	11:00	G	SO	1					X		Extract and Hold							21
11	OT071-00023	OT071-SB05 - 15'	05/16/16	11:05	G	SO	1					X		Extract and Hold							21
12	OT071-00001	OT071-SB02 - 2'	05/16/16	11:40	G	SO	1					X		X	X	X					21
13	OT071-00002	OT071-SB02 - 2'	05/16/16	11:40	G	SO	1					X		X	X	X					21
14	OT071-00003	OT071-SB02 - 4'	05/16/16	11:45	G	SO	1					X		X	X	X					21
15	OT071-00004	OT071-SB02 - 7'	05/16/16	11:50	G	SO	1					X		Extract and Hold							21
16	OT071-00005	OT071-SB02 - 10'	05/16/16	11:55	G	SO	1					X		Extract and Hold							21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy & EDD
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:

I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By	Date	Time	Received By	Date	Time
Carl Lind	5-13-16	12:30	Robert Mall	5/13/16	12:30
Robert Mall	5/20/16	1110	Chao Hui	5/20/16	11:10
Chao Hui	5/20/16	15:50	Dannyle Ell	5/20/16	15:50

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

George AR # 564580

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Linda Ta

From: Richard Villafania
Sent: Wednesday, June 01, 2016 8:01 AM
To: Linda Ta
Subject: Additional tests for 16-05-1567

Categories: Bottle Orders

Please generate change order and include email in COC. Thanks.

Regards.

Richard Villafania
Project Manager

From: Roth, Tim [mailto:Tim.Roth@CBIFederalServices.com]
Sent: Wednesday, June 01, 2016 5:16 AM
To: Richard Villafania; Unruh, Mark; Mall, Robert
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Richard,

Yes, Analyze the following samples:

OT071-00004 (16-05-1567-15)
OT071-00015 (16-05-1567-3)
OT071-00016 (16-05-1567-4)
OT071-00021 (16-05-1567-9)

Also, we're trying to send additional material for samples OT071-00002 and OT071-00020 to extract and analyze.

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, May 31, 2016 8:35 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Tim,

Please advise of any additional tests for this event.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.

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Richard Villafania

From: Roth, Tim <Tim.Roth@CBIFederalServices.com>
Sent: Wednesday, June 08, 2016 4:53 AM
To: Richard Villafania; Linda Ta
Cc: Unruh, Mark
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Supplement Reports

Richard,

Please analyze the following samples:

OT071-00005 (16-05-1567-16)
OT071-00017 (16-05-1567-05)

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, June 07, 2016 4:59 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Supplement Reports

Tim,

Please see the attached supplement reports regarding the additional analyses. Barring any further testing, I will generate the associated EDDs.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494
Website: www.eurofinsUS.com/Calscience

From: Roth, Tim [mailto:Tim.Roth@CBIFederalServices.com]
Sent: Wednesday, June 01, 2016 5:16 AM
To: Richard Villafania; Unruh, Mark; Mall, Robert
Subject: RE: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Richard,

Yes, Analyze the following samples:

OT071-00004 (16-05-1567-15)
OT071-00015 (16-05-1567-3)

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OT071-00016 (16-05-1567-4)
OT071-00021 (16-05-1567-9)

Also, we're trying to send additional material for samples OT071-00002 and OT071-00020 to extract and analyze.

Regards,
Tim

From: Richard Villafania [mailto:RichardVillafania@eurofinsUS.com]
Sent: Tuesday, May 31, 2016 8:35 PM
To: Roth, Tim
Subject: Former George AFB, CA / 145981 / ECI 16-05-1567 Report

Tim,

Please advise of any additional tests for this event.

Regards.

Richard Villafania
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
GARDEN GROVE, CA 92841
USA
Phone: +1 714 895 5494
RichardVillafania@eurofinsUS.com
Website: www.eurofinsUS.com/Calscience

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Notify us here to report this email as spam.

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eurofins Calscience

WORK ORDER NUMBER: 16-05-1567

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CBI

DATE: 05 / 20 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2-6 °C (w/ CF): 2-6 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 810

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 810

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 659

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑ 5/10/16	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGBh ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (P) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 659

Reviewed by: 1017

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eurofins | Calscience

WORK ORDER NUMBER: 16-0567

SAMPLE ANOMALY REPORT

DATE: 05 / 20 / 2016

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

* Received 1 container attached with 2 labels for the following sample:

-(-7), (-8) in 1 container

-(-12), (-13) in 1 container.

MISCELLANEOUS: (Describe)

* 2 Samples in one container.

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: 1017

Reviewed by: 659

** Record the total number of containers (i.e.. vials or bottles) for the affected sample.

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Data Quality Summary Report for George Air Force Base

OT071 Data Gap Investigation

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Attachment	Title
1	Summary of Analytical Results
2	Summary of Analytical Results greater than the Detection Limit
3	Data Validation Qualifier Reason Code Definitions

List of Acronyms

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
AFCEC	Air Force Civil Engineering Center
AR/COC	Analysis Request/Chain of Custody
CB&I	Chicago Bridge, and Iron, Federal Services LLC
CCV	continuing calibration verification
CLP	Contract Laboratory Program
DL	detection limit
DOD	United States Department of Defense
DQO	data quality objectives
DQSR	Data Quality Summary Report
EPA	United States Environmental Protection Agency
Eurofins Calscience	Eurofins-Calscience, Inc.
ft bgs	feet below ground surface
GAFB	George Air Force Base

ICAL	initial calibration
ID	identification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
MS	matrix spike
MSD	matrix spike duplicate
N	normal field sample
QA/QC	quality assurance/quality control
QSM	Quality Systems Manual
RPD	relative percent difference
SDG	sample delivery group
SOP	standard operating procedure
SPLP	Synthetic Precipitation Leaching Procedure
U.S.	United States

1.0 Introduction

This appendix presents the Analytical Data Quality Summary Report (DQSR) for former George Air Force Base (GAFB) OT071 Data Gap Investigation. This DQSR will discuss results of the quality assurance / quality control (QA/QC) measures implemented during the OT071 well installation activities. Former GAFB is located in San Bernardino County, California, approximately 70 miles northeast of Los Angeles, in the Victor Valley portion of the Upper Mojave River Basin. Site OT071 encompasses approximately 900 acres and consists of pesticides in groundwater beneath the former housing areas and the Westwinds Golf Course.

The quality indicators from every aspect of the data collection have been reviewed, and an assessment of the data with regard to project-specific objectives is presented. Successful execution of project-specific objectives and procedures provides strong support for the acceptance of the data as adequate for the purpose of evaluating site conditions at OT071. The data review process presented in this report compares sample results to pre-established criteria referenced in Chicago Bridge, and Iron, Federal Services LLC (CB&I) *2016, Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April),* to confirm that the data are of acceptable technical quality. Eurofins Calscience, Inc. (Eurofins Calscience) provided CB&I with a Level 4 data package including "Contract Laboratory Program (CLP)-Like" summary forms for all sample delivery groups (SDG). CB&I conducted a data assessment on all samples collected in support of this sampling event. One-hundred percent of the analytical data have been reviewed and validation qualifiers assigned based on United States (U.S.) Environmental Protection Agency (EPA) *CLP National Functional Guidelines for Superfund Organic Methods Data Review,* August 2014. Data were evaluated against specific criteria to verify the achievement of all precision, accuracy, representativeness, completeness, comparability, and sensitivity goals established to meet the project data quality objectives (DQO).

To verify that these DQOs were met, field measurements, sampling and handling procedures, laboratory analysis and reporting, and all non-conformances and discrepancies in the data were examined to determine compliance with the appropriate and applicable procedures. The results of this review are presented in the following sections, with all outliers or non-conformances discussed where they occurred. This report is divided into three sections. Section 2.0 discusses the overall field investigation and QC procedures used by CB&I during the sampling effort. Section 3.0 outlines the analytical program and the associated QC activities as specified in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville,*

California (April 2016). The final part of this document, Section 4.0, summarizes the data findings and their overall impact on the usability of the analytical data.

2.0 Field Sampling and QC Activities

CB&I is responsible for conducting the OT071 Data Gaps Investigation at former GAFB, California, under Air Force Civil Engineering Center (AFCEC) Contract Number FA8903-09-D-8580, Task Order 0018. Field activities at OT071 included the collection of soil samples from 5 locations in accordance with CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016).*

Eurofins Calscience performed the following analyses on soil samples:

- Organochlorinated Pesticides by SW-846 8081A (preparation method SW-846 3545)
- Synthetic Precipitation Leaching Procedure (SPLP) dieldrin by SW-846 1312 8081A (preparation methods SW-846 1312 / SW-846 3510)
- SPLP dieldrin by SW-846 1312 8270D (TQ) Modified (preparation methods SW-846 1312 / SW-846 3510)

SPLP extraction fluid for all samples was passed through a 0.70 micron filter paper and a 0.45 micron filter paper resulting in two separate extractions and analyses for each sample. **Table 1** summarizes the station name (or location), the field sample identification (ID), sample purpose, sample matrix, date of collection, laboratory sample ID, and the specific analytical program for each sample collected during the OT071 data gap investigation. Sample shipments from the field were performed under custody and documented using standard CB&I Analysis Request/Chain of Custody (AR/COC) forms. These forms provide project-specific analytical specifications and QC instructions to the laboratory. Summary of amendments made to the original AR/COCs associated with the OT071 Data Gap Investigation are referenced in **Table 2**.

2.1 Laboratory Audit

An audit of Eurofins Calscience – Garden Grove, California facility was performed by CB&I, formerly Shaw Environmental, Inc., on April 3rd, 2013. The objective of the audit was to verify Eurofins Calscience's capability in meeting QC elements established in the U.S. Department of Defense (DOD) Quality Systems Manual (QSM), Version 4.2 (DOD, 2010). No major findings were identified by CB&I during the audit. The following QC elements were verified for several methods:

- Standards and Reference Materials
- Instrument calibration
- Limit of detection (LOD) determination and verification
- Limit of quantitation (LOQ) establishment and verification
- Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)
- Matrix spike (MS)/matrix spike duplicate (MSD)

A complete summary of the April 2013 audit can be made available upon request.

2.2 Field Duplicates

Field duplicate samples are collected and submitted "blind" to the laboratory for analysis along with their corresponding parent sample. The data generated from the analysis of field duplicate samples are used to evaluate the precision of the sample collection and analysis procedures. Field duplicate samples are collected at a frequency of approximately one for every twenty samples collected (5 percent) per matrix.

A high relative percent difference (RPD) value between a parent sample's result and its corresponding field duplicate's result may be attributed to the difference in sample matrix or distribution of the constituent within the sample, rather than the lack of precision of the collection process. Also, when estimated results are reported, there is a potential for increased variability between the parent and duplicate sample results. At low concentrations the relative difference in results is magnified by the RPD calculation even though the results are comparable in absolute terms. There is also increased uncertainty in the results as the lower limit of detection is approached, because of decreasing analytical accuracy. RPD is calculated by using the following formula:

$$\text{RPD} = \frac{(V_1 - V_2)}{\frac{(V_1 + V_2)}{2}} \times 100$$

where:
RPD = relative percent difference
V1 = value 1; V2 = value 2

Field duplicate samples are collected in immediate succession after the initial parent samples employing identical recovery techniques. In cases where duplicates were performed and both results are less than the detection limit (DL) and cases where one result is greater than the DL, and the

second result is non-detect, the RPD is not calculated. Precision evaluation criteria for field duplicate comparison was established at RPD≤50% for soil samples.

No field duplicate samples were collected and analyzed due to poor recovery in the field and the additional SPLP analysis performed by the laboratory.

2.3 AFCEC Split Samples

No AFCEC field split samples were collected during the OT071 Data Gap Investigation.

2.4 Equipment Rinsates

Equipment rinsates (or equipment blanks) are used to assess the effectiveness of the decontamination procedures used by the sampling team on reusable sampling equipment. Disposable equipment was used in the field during the OT071 Data Gap Investigation, therefore no equipment rinsates were collected.

3.0 Analytical Program and QC Activities

The project QA/QC program described in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* was followed for the collection and laboratory analysis of samples associated with this sampling event. Each of the analytical methods used require that method-specific QA/QC protocols be followed during sample analysis. These protocols are a critical part of the methods employed and were followed by the laboratory during sample analysis. Specific measures included detailed record keeping procedures, instrument calibrations, and analysis of method blanks, blank spikes, and MS. **Attachment 1** and **Attachment 2** to this report contain both a summary of analytical results and a summary of analytical results greater than the DL, respectively. These data summaries also include the assigned data validation qualifier and data validation qualifier reason codes. A summary of data validation reason codes definitions is provided in **Attachment 3**.

Laboratory data qualifiers are defined as follows:

- U denotes the analyte was undetected at the DL.
- J denotes the analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.
- D denotes the analyte was reported at a dilution.
- " " denotes the analyte was detected in the associated sample.

CB&I's data validation qualifiers are defined as follows:

- J denotes the analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed
- R denotes the reported sample results are rejected due to the following: 1. Severe deficiencies in the supporting quality control data, 2. Anomalies noted in the sampling and/or analysis process which could affect the validity of the reported data, 3. The presence or absence of the constituent cannot be verified based on the data provided, 4. To indicate not to use a particular result in the event of a reanalysis
- U denotes the analyte was not detected. The compound/analyte was analyzed for, but not detected above the associated DL; or above the reported concentration due to blank contamination.

- UJ denotes the compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the reporting limit may be inaccurate or imprecise. The non-detect result should be estimated.
- nv denotes the result was not validated.

3.1 Laboratory QA/QC Procedures

The following sections discuss a few of the QA/QC protocols required and performed by the laboratory during the OT071 Data Gap Investigation.

3.1.1 Method Blanks

Method blanks were analyzed with each analytical "batch" processed on a per matrix (i.e., soil and water) basis. These blanks were carried step-wise through the same analytical procedure as the field samples including the addition of solvents, surrogate and standard spikes, and reagents as required in the analysis process. The purpose of the blank is to identify any possible contaminants that may be introduced to the sample as a result of the analytical process. During validation, the data validators evaluated all blank data associated with each sample. Data were evaluated based on U.S. EPA *CLP National Functional Guidelines for Superfund Organic Methods Data Review,* August 2014 guidance document.

Target compounds detected in associated blanks increase the uncertainty regarding the presence of the same constituents in field samples. For a compound identified in both a blank and field sample, it must be present at a concentration of five times higher in the field sample to be considered a "hit." Common laboratory contaminants such as acetone, methylene chloride, and toluene are not assumed present until sample concentrations exceed ten times the associated blank value. This is referred to as the "5x/10x" rule. Field sample concentrations were evaluated during data validation to determine if the sample results could have been biased by the presence of any contamination measured in associated method blanks. No sample results were impacted by contamination reported in associated method blanks.

3.1.2 Surrogate Spikes

Spiked surrogate compounds were used in the analytical program to monitor the efficiency of the sample preparation and accuracy of the analysis of organochlorinated pesticides by SW-846 8081A, SPLP dieldrin by SW-846 1312 8081A, and SPLP dieldrin by SW-846 1312 8270D (TQ) Modified , on a sample-by-sample basis. The compounds used as surrogates, and the target acceptance limits

for their recovery, were those specified in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* **Worksheet No. 15**. No sample results were impacted by spiked surrogates reported outside the established acceptance criteria.

3.1.3 Internal Standards

Internal standards are known amounts of standards added to an aliquot of sample or sample extract and carried through the entire analytical procedure. Internal standards are added to all field samples, laboratory controls, and blanks in accordance with the referenced method requirements. They are used as a basis for quantitation of target analytes by SW-846 1312 8270D (TQ) Modified. Internal standard retention times and recoveries are compared against acceptance limits presented in the CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* **Worksheet No. 28**. Acceptable internal standard performance criteria ensure that method sensitivity and instrument response are stable during every analytical run. All spiked internal standard recoveries met the established acceptance criteria.

3.1.4 Matrix Spikes and Laboratory Control Spikes

Two types of spikes were generally performed for all analyses: those spikes applied to the sample matrix, identified as MS, and those applied to a "blank" matrix known as a LCS. The spiked compounds are target analytes that are quantified during performance of the method. Spikes are introduced during sample preparation on an aliquot of the sample, or a blank matrix. Results of these spiked aliquots are then compared to the native concentrations of the same analytes and a recovery calculated. Recovery of the spiked compound is used as an assessment of analytical accuracy on the sample matrix analyzed. These results are useful in distinguishing sample matrix interference from analysis interference through a comparison of MS and blank spike recovery data. Often, MSs are performed in duplicate [MSD or LCSD] on prepared sample aliquots. In this manner, an assessment of precision can be quantified as the RPD of the original and duplicate spike. The target acceptance limits are presented in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* **Worksheet No. 15**.

Matrix spikes are assigned at a frequency of approximately 5%, or 1 for every 20 field samples collected. If a sample is designated for analysis as an MS/MSD, additional sample volume is provided to the laboratory. This sampling meets the collection criteria as specified in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016).* One MS/MSD pair was collected in the field and analyzed for

the following analytical suite: The laboratory selected additional OT071 samples for MS/MSD analyses which are summarized below:

Field Sample ID	Sample Station	Sample Date	Analytical Suite
OT071-00008	OT071-SB03	05/13/16	• Organochlorinated Pesticides by SW-846 8081A • SPLP Dieldrin by SW-846 1312 8081A (0.45 micron filter) • SPLP Dieldrin by SW-846 1312 8081A (0.70 micron filter)
OT071-00032	OT071-SB03	05/13/16	• SPLP Dieldrin by SW-846 1312 8270D (TQ) Modified (0.70 micron filter)
OT071-00013	OT071-SB04	05/16/16	• Organochlorinated Pesticides by SW-846 8081A • SPLP Dieldrin by SW-846 1312 8081A (0.45 micron filter)
OT071-00015	OT071-SB04	05/16/16	• SPLP Dieldrin by SW-846 1312 8081A (0.45 micron filter)
OT071-00017	OT071-SB04	05/16/16	• SPLP Dieldrin by SW-846 1312 8081A (0.45 micron filter)
OT071-00031	OT071-SB06	05/13/16	• SPLP Dieldrin by SW-846 1312 8270D (TQ) Modified (0.45 micron filter)

All results qualified due to MS/MSD percent recovery and/or RPD reported outside QC criteria are summarized in **Table 3**.

LCS results are used to evaluate laboratory method performance in the same manner as the MS/MSD results, except the LCS is not performed on an actual field sample matrix. An LCS is prepared for each analytical batch for each parameter and matrix analyzed. LCS target acceptance criteria are established in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* **Worksheet No. 15**. No results were qualified due to LCS/LCSD recovery and/or RPD exceeding QC criteria.

3.1.5 Calibrations

Initial calibration information is verified to demonstrate that reported results are comparable to known concentrations of target compounds. A series of standard reference solutions containing all target constituents are analyzed using the type of instrumentation specified by the method. The standards are used to determine the sensitivity of the analysis and the effective analytical (i.e. linear) range for which data can be accurately reported. High initial calibration (ICAL) percent relative standard deviation indicates that a nonlinear response was obtained during the initial calibration. A

low ICAL mean relative response factor indicates the compound exhibits poor response to the selected method (or detector). ICAL and continuing calibration verification (CCV) target acceptance criteria are established in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* **Worksheet No. 28**. All ICALs and/or CCVs were within QC criteria.

3.2 Reporting Limits

The analytical program executed required the use of SW-846 methods, which specify the procedure for calculating the LOQ. Each laboratory is required to demonstrate method performance through detection limit studies for every method employed. These studies are required to be laboratory-specific so that individual laboratory variables such as equipment brands, reagent suppliers, and chemist technique are factored into the performance study. DLs are established using controlled matrices (i.e., deionized water). The LOQ calculation adjusts the limit by a predetermined mathematical factor for the analysis of actual environmental sample matrices (i.e. soil, groundwater, etc.). The actual values reported have been corrected for all necessary dilutions, dryness, and interference factors as applicable based on the resulting analytical data for a sample. DLs, LODs, and LOQs are generally defined as follows:

- ***DL.*** The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence.
- ***LOD.*** Is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a 99% confidence level
- ***LOQ.*** Is the smallest concentration of a substance that produces a quantitative result within specified limits of precision and bias. The LOQ is typically larger than the LOD but may be equal to the LOD, depending upon the acceptance limits for precision and bias. The LOQ is set at the lowest standard used in the ICAL or higher for each target analyte.

The DL is the lower limit at which the laboratory can differentiate a measurement from background. The DL is determined in accordance with the procedures in 40 Code of Federal Regulations Part 136. A LOD is the lower limit at which a measurement becomes meaningful. The LOQ is generally a multiple of two to five times the LOD. Actual sample LOQs can be reviewed on a sample by sample basis by reviewing the data summary presented in **Attachment 1**.

3.3 Holding Times

All laboratory results submitted for this sampling event have been reviewed with respect to laboratory adherence to extraction and analysis holding times. Maximum sample extraction and analysis hold times are presented in **Worksheet #19** of CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)*. All sample shipments were received by Eurofins Calscience in good condition and within the required temperature criteria (4±2°C).

Additional soil samples were submitted to the laboratory for SPLP analyses after the referenced analytical hold time had expired. Samples were originally collected in plastic sleeves on 05/13/16 and 05/16/16 and received by the laboratory on 07/22/16 at 3.8°C. All samples were extracted >60 days past the recommended maximum hold time of 14 days. Based on literature review, dieldrin is considered to be fairly stable in soil and binds strongly to soil particles. However, possible degradation may have occurred. Based on professional judgment, all results are considered estimated (J/UJ qualified). **Table 4** summarized impacted results due to samples extracted past the recommended maximum extraction hold time.

4.0 Data Evaluation and Usability

The data review process identified multiple QC exceedances that were noted during this sampling event. These exceedances have been discussed in the text of this DQSR. The following definitions are used for defining precision, accuracy, representativeness, completeness, comparability, and sensitivity as they have been applied to this evaluation:

Precision. Precision is a measurement of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions. For this project, precision data were obtained through the analysis and evaluation of MS/MSD samples as RPD. RPD is calculated as follows:

$$\text{RPD} = \frac{(V_1 - V_2)}{\frac{(V_1 + V_2)}{2}} \times 100$$

Where:
RPD = relative percent difference
V1 = value 1; V2 = value 2

Precision was evaluated through the comparison of MS and MSD or LCS and LCSD results. The spiked samples (MS, MSD, LCS, LCSD) RPDs are evaluated during data validation and data are qualified accordingly. RPD within the acceptance criteria indicates that the laboratory is performing adequately and that the results are reproducible for the analytes of interest at this site. Acceptance criteria are defined in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* for each analyte of concern. These data and all necessary qualifications are discussed in **Section 3** and **Table 3**. In respect to precision, the data are usable for their intended purpose.

Accuracy. Accuracy is a measurement of bias in a system and is expressed as a percent recovery. Accuracy is typically determined through the analysis and evaluation of blanks, spiked surrogates, internal standards, LCSs, and MS/MSD samples. Percent recovery is calculated as follows:

$$\%\ \text{Recovery} = 100 \times \frac{\text{measured value}}{\text{true value}}$$

MS/MSDs, LCS, surrogate, internal standards, ICAL, and CCV results and all data qualifications are summarized in **Section 3** and **Table 3**. In respect to accuracy, all data are usable for their intended purpose.

Representativeness. Representativeness is a qualitative parameter that expresses the degree to which sample data actually represent the matrix and site conditions. General requirements and procedures referenced in CB&I's *Data Gap Investigation Work Plan Non-CERCLA Site OT071, Former George Air Force Base, Victorville, California (April 2016)* and corporate standard operating procedures (SOP) for sample collection and handling are designed to maximize sample representativeness. Representativeness also can be monitored by reviewing field documentation and by performing field audits. All samples were collected using SOPs and were fully documented through the use of standard field forms. Samples are representative of the matrix and site sampled.

Completeness. Completeness is a measure of the amount of valid data obtained during a sampling event as compared to the amount of data planned for collection and determined to be usable for the intended purpose. An overall completeness goal of 90 percent is set for this sampling event. Completeness is calculated as follows:

$$\%C = (U/T) \times 100$$

where:
%C = Percent completeness;
U = Number of measurements judged usable; and
T = Total number of measurements.

During this sampling event, 26 samples were collected and reported resulting in a total of 430 records. No results were rejected during the data quality evaluation. Using the above calculation, 100 % (430 / 430 = 100%) analytical completeness was achieved for this sampling event. A summary of results with the assigned data validation qualifier and the data validation qualifier reasons codes is presented in **Attachment 1**.

Comparability. Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability ensures that results for the sampling event can be compared with data from past and future sampling programs. Comparability for this sampling event was achieved through the use of established and recognized techniques and through the laboratory's use of standard U.S. EPA methodology. All samples collected for this task were

subjected to the same sampling, handling, preparation, analysis, reporting, and validation criteria for the purpose of achieving comparability goals within the data set.

Sensitivity. Sensitivity is defined as the ability of the laboratory's established LOQ/DL to meet project-specific DQOs. The DL is defined as the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. The LOQ is a threshold value based upon the sensitivity capability of method and instrument. LOQs are normally set at a minimum of two times the DL. DLs/LOQs are adjusted based on the sample matrix, moisture (solids only), and any necessary sample dilutions. The laboratory cannot reliably quantitate values reported above the DL but below the LOQ. Therefore, these analyte values must be flagged as estimated quantities ("J" flagged).

4.1 Statement of Data Usability

One-hundred percent of the analytical data have been reviewed and validation qualifiers assigned based on U.S. EPA *CLP National Functional Guidelines for Superfund Organic Methods Data Review,* August 2014. Results of the analyses, as discussed in this evaluation, suggest that the results are indicative of the media analyzed, with the exception of the QC exceedances summarized in **Table 3** and **Table 4**. Overall these data reflect expected site conditions and are fully usable for their intended purpose.

5.0 References

CB&I. 2016. *Data Gap Investigation Work Plan Non-CERCLA Site OT071*, *Former George Air Force Base, Victorville, California,* Chicago Bridge & Iron, Inc. Federal Services, LLC (CB&I), formerly Shaw Environmental, Inc. (Shaw). (2016).

USEPA. 2014. *National Functional Guidelines for Superfund Organic Methods Data Review, U.S. Environmental Protection Agency,* August 2014, EPA-540-R-014-002 .

Table 1

Summary of Samples Collected and Sample Tracking Information
Former George AFB
OT071 Data Gap Investigation
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Parameter
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	Organochlorinated Pesticides by SW-846 8081A.
OT071-00001-LEACH-SPLP-0.45µm	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00001-LEACH-SPLP-0.70µm	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	Organochlorinated Pesticides by SW-846 8081A.
OT071-00003-LEACH-SPLP-0.45µm	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00003-LEACH-SPLP-0.70µm	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	Organochlorinated Pesticides by SW-846 8081A.
OT071-00004-LEACH-SPLP-0.45µm	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00004-LEACH-SPLP-0.70µm	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00036-LEACH-SPLP-0.45µm	OT071-SB02	05/16/2016	SO	N	8.41	8.83	16-07-1529-1	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00036-LEACH-SPLP-0.70µm	OT071-SB02	05/13/2016	SO	N	8.41	8.83	16-07-1529-1	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	Organochlorinated Pesticides by SW-846 8081A.
OT071-00005-LEACH-SPLP-0.45µm	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00005-LEACH-SPLP-0.70µm	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	Organochlorinated Pesticides by SW-846 8081A.
OT071-00008-MS	OT071-SB03	05/13/2016	SO	MS	2	2	16-05-1056-1MS	Organochlorinated Pesticides by SW-846 8081A.
OT071-00008-MSD	OT071-SB03	05/13/2016	SO	SD	2	2	16-05-1056-1MSD	Organochlorinated Pesticides by SW-846 8081A.
OT071-00008-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00008-LEACH-SPLP-0.45µm-MS	OT071-SB03	05/13/2016	SO	MS	2	2	16-05-1056-1MS	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00008-LEACH-SPLP-0.45µm-MSD	OT071-SB03	05/13/2016	SO	SD	2	2	16-05-1056-1MSD	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00008-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	Organochlorinated Pesticides by SW-846 8081A.
OT071-00009-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00009-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00032-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00032-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).

Table 1

Summary of Samples Collected and Sample Tracking Information
Former George AFB
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Parameter
OT071-00032-LEACH-SPLP-0.70µm-MS	OT071-SB03	05/13/2016	SO	MS	5.92	6.67	16-07-1529-2MS	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00032-LEACH-SPLP-0.70µm-MSD	OT071-SB03	05/13/2016	SO	SD	5.92	6.67	16-07-1529-2MSD	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	Organochlorinated Pesticides by SW-846 8081A.
OT071-00010-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00010-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	Organochlorinated Pesticides by SW-846 8081A.
OT071-00011-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00011-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00033-LEACH-SPLP-0.45µm	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00033-LEACH-SPLP-0.70µm	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	Organochlorinated Pesticides by SW-846 8081A.
OT071-00013-MS	OT071-SB04	05/16/2016	SO	MS	2	2	16-05-1567-1MS	Organochlorinated Pesticides by SW-846 8081A.
OT071-00013-MSD	OT071-SB04	05/16/2016	SO	SD	2	2	16-05-1567-1MSD	Organochlorinated Pesticides by SW-846 8081A.
OT071-00013-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00013-LEACH-SPLP-0.45µm-MS	OT071-SB04	05/16/2016	SO	MS	2	2	16-05-1567-1MS	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00013-LEACH-SPLP-0.45µm-MSD	OT071-SB04	05/16/2016	SO	SD	2	2	16-05-1567-1MSD	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00013-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	Organochlorinated Pesticides by SW-846 8081A.
OT071-00014-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00014-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00034-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00034-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	Organochlorinated Pesticides by SW-846 8081A.
OT071-00015-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00015-LEACH-SPLP-0.45µm-MS	OT071-SB04	05/16/2016	SO	MS	7	7	16-05-1567-3MS	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00015-LEACH-SPLP-0.45µm-MSD	OT071-SB04	05/16/2016	SO	SD	7	7	16-05-1567-3MSD	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.

Table 1

Summary of Samples Collected and Sample Tracking Information
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Parameter
OT071-00015-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	Organochlorinated Pesticides by SW-846 8081A.
OT071-00016-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00016-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00035-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00035-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	Organochlorinated Pesticides by SW-846 8081A.
OT071-00017-LEACH-SPLP-0.45µm	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00017-LEACH-SPLP-0.45µm-MS	OT071-SB04	05/16/2016	SO	MS	15	15	16-05-1567-5MS	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00017-LEACH-SPLP-0.45µm-MSD	OT071-SB04	05/16/2016	SO	SD	15	15	16-05-1567-5MSD	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00017-LEACH-SPLP-0.70µm	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	Organochlorinated Pesticides by SW-846 8081A.
OT071-00018-LEACH-SPLP-0.45µm	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00018-LEACH-SPLP-0.70µm	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	Organochlorinated Pesticides by SW-846 8081A.
OT071-00019-LEACH-SPLP-0.45µm	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00019-LEACH-SPLP-0.70µm	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	Organochlorinated Pesticides by SW-846 8081A.
OT071-00021-LEACH-SPLP-0.45µm	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00021-LEACH-SPLP-0.70µm	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00029-LEACH-SPLP-0.45µm	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00029-LEACH-SPLP-0.70µm	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	Organochlorinated Pesticides by SW-846 8081A.
OT071-00024-LEACH-SPLP-0.45µm	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00024-LEACH-SPLP-0.70µm	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00030-LEACH-SPLP-0.45µm	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).

Table 1

Summary of Samples Collected and Sample Tracking Information
Former George AFB
OT071 Data Gap Investigation
4 of 4

Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Parameter
OT071-00030-LEACH-SPLP-0.70µm	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	Organochlorinated Pesticides by SW-846 8081A.
OT071-00025-LEACH-SPLP-0.45µm	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8081A.
OT071-00025-LEACH-SPLP-0.70µm	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8081A.
OT071-00031-LEACH-SPLP-0.45µm	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00031-LEACH-SPLP-0.45µm-MS	OT071-SB06	05/13/2016	SO	MS	8	9.67	16-07-1529-8MS	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00031-LEACH-SPLP-0.45µm-MSD	OT071-SB06	05/13/2016	SO	SD	8	9.67	16-07-1529-8MSD	SPLP Dieldrin (0.45 micron filter) by SW-846 1312 8270D TQ (Modified).
OT071-00031-LEACH-SPLP-0.70µm	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SPLP Dieldrin (0.70 micron filter) by SW-846 1312 8270D TQ (Modified).

Notes:

µm denotes micron.
ft bgs denotes feet below ground surface.
ID denotes identification.
MS denotes matrix spike sample.
N denotes regular field sample.
SD denotes matrix spike duplicate sample.
SO denotes soil.
SPLP denotes Synthetic Precipitation Leaching Procedure.

Table 2

Summary of Analysis Request/Chain of Custody (AR/COC) Amendments
Former George AFB
OT071 Data Gap Investigation
(1 of 1)

Impacted SDG	AR / COC Number	Amendment	Affected Sample(s)	Reason for Amendment
15-05-1056	OT071-051316-07	SPLP Dieldrin by SW846 1312 8081A (Leachated filtered through 0.70 µm filter) and SPLP Dieldrin by SW846 1312 8081A (Leachated filtered through 0.45µm filter) analyses added to the analytical request for samples OT071-00008, OT071-00009, OT071-00010, OT071-00011, OT071-00012, OT071-00024, OT071-00025, OT071-00026, OT071-00027, OT071-00028.	OT071-00008 OT071-00009 OT071-00010 OT071-00011 OT071-00012 OT071-00024 OT071-00025 OT071-00026 OT071-00027 OT071-00008	Analyses added to AR / COC per client request.
		Matrix Spike and Matrix Spike Duplicate analyses added to field sample OT071-00008	OT071-00008	MS/MSD analyses added to AR / COC.
		The following sample descriptions were amended: OT071-SB03 - 24" amended to OT071-SB03 - 2' OT071-SB03 - 72" amended to OT071-SB03 - 4' OT071-SB03 - 84" amended to OT071-SB03 - 7' OT071-SB03 - 120" amended to OT071-SB03 - 10' OT071-SB03 - 150" amended to OT071-SB03 - 15' OT071-SB06 - 24" amended to OT071-SB06 - 2' OT071-SB06 - 48" amended to OT071-SB06 - 4'	OT071-00008 OT071-00009 OT071-00010 OT071-00011 OT071-00012 OT071-00024 OT071-00025	Sample descriptions were updated to amend transcription errors on the AR / COC.
16-07-1529	OT071-072116-11	The following sample numbers were amended: OT071-00024 amended to OT071-00036 OT071-00025 amended to OT071-00032 OT071-00026 amended to OT071-00033 OT071-00027 amended to OT071-00034 OT071-00028 amended to OT071-00035	OT071-00036 OT071-00032 OT071-00033 OT071-00034 OT071-00035	Sample numbers were updated to amend transcription errors on the AR / COC.

Notes:
AR/COC denotes analytical request / chain of custody.
SDG denotes sample delivery group.

Table 3

Summary of Impacted Results due to MS/MSD Recovery and/or RPD Exceeding QC Criteria
Former George AFB
OT071 Data Gap Investigation
1 of 2

Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00032-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.035	µg/L	0.02	0.02	0.006		J	02A	08A	08B	1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	5103-71-9	Alpha-Chlordane	4.1	µg/kg	5.1	4.6	2.1	J	J	15	08B		1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.6	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-20-8	Endrin	14	µg/kg	5.1	4.6	2.4		J	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	53494-70-5	Endrin Ketone	5.9	µg/kg	5.1	4.6	2.6		J	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.3	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00031-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A	08A		1

Table 3

Summary of Impacted Results due to MS/MSD Recovery and/or RPD Exceeding QC Criteria
Former George AFB
OT071 Data Gap Investigation
2 of 2

Notes:
DL denotes detection limit.
ft bgs denotes feet below ground surface.
ID denotes identification.
LOD denotes limit of detection.
LOQ denotes limit of quantitation.
LQ denotes laboratory qualifier.
N denotes regular field sample.
R1 denotes data validation reason code No. 1.
R2 denotes data validation reason code No. 2.
R3 denotes data validation reason code No. 3.
SO denotes soil matrix.
µg/kg denotes micrograms per kilogram.
µg/L denotes micrograms per liter.
VQ denotes validation qualifier.

Laboratory Data Qualifier Definitions
U denotes the analyte was undetected at the detection limit.
J denotes the analyte was detected at a concentration below the limit of quantitation and above the detection limit. Reported value is estimated
D denotes the analyte was reported at a dilution.
" " denotes the analyte was detected in the associated sample.

Data Validation Qualifier Definitions
U - Not detected. The compound/analyte was analyzed for, but not detected above the associated DL; or above the reported concentration due to blank contamination
J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed
R - The reported sample results are rejected due to the following: 1. Severe deficiencies in the supporting quality control data, 2. Anomalies noted in the sampling and/or analysis process which could affect the validity of the reported data, 3. The presence o
absence of the constituent cannot be verified based on the data provided, 4. To indicate not to use a particular result in the event of a reanalysis.
UJ - The compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the reporting limit may be inaccurate o
imprecise. The nondetect result should be estimated.
" " - Analyte was detected in the associated sample.

Data Validation Reason Code Definitions
02A denotes extraction hold time exceeded.
08A denotes matrix spike (MS) and/or matrix spike duplicate (MSD) recovery not within QC criteria (accuracy).
08B denotes MS / MSD relative percent difference (RPD) outside acceptance criteria (precision).
15 denotes result is quantitified between the laboratory's LOQ and DL.

Table 4

Summary of Impacted Results due to Extraction Hold Time Exceeding QC Criteria
Former George AFB
OT071 Data Gap Investigation
1 of 2

Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00036-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.036	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00036-LEACH-SPLP-0.70um	OT071-SB02	05/13/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.39	µg/L	0.08	0.08	0.024		J	02A			4
OT071-00032-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00032-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.035	µg/L	0.02	0.02	0.006		J	02A	08A	08B	1
OT071-00033-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00033-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00034-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00034-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SW8270D	60-57-1	Dieldrin	0.19	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00035-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00035-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00029-LEACH-SPLP-0.45um	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00029-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SW8270D	60-57-1	Dieldrin	0.013	µg/L	0.02	0.02	0.006	J	J	15	02A		1
OT071-00030-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00030-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00031-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A	08A		1
OT071-00031-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1

Table 4

Summary of Impacted Results due to Extraction Hold Time Exceeding QC Criteria
Former George AFB
OT071 Data Gap Investigation
2 of 2

Notes:
DL denotes detection limit.
ft bgs denotes feet below ground surface.
ID denotes identification.
LOD denotes limit of detection.
LOQ denotes limit of quantitation.
LQ denotes laboratory qualifier.
N denotes regular field sample.
R1 denotes data validation reason code No. 1.
R2 denotes data validation reason code No. 2.
R3 denotes data validation reason code No. 3.
SO denotes soil matrix.
µg/kg denotes micrograms per kilogram.
µg/L denotes micrograms per liter.
VQ denotes validation qualifier.

Laboratory Data Qualifier Definitions
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absence of the constituent cannot be verified based on the data provided, 4. To indicate not to use a particular result in the event of a reanalysis.
UJ - The compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the reporting limit may be inaccurate o
imprecise. The nondetect result should be estimated.
" " - Analyte was detected in the associated sample.

Data Validation Reason Code Definitions
02A denotes extraction hold time exceeded.
08A denotes matrix spike (MS) and/or matrix spike duplicate (MSD) recovery not within QC criteria (accuracy).
08B denotes MS / MSD relative percent difference (RPD) outside acceptance criteria (precision).
15 denotes result is quantitified between the laboratory's LOQ and DL.

ATTACHMENT 1

Summary of Analytical Results

Attachment 1

Summary of Analytical Results
Former George AFB
OT071 Data Gap Investigation
1 of 15

Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	309-00-2	Aldrin	250	µg/kg	54	49	24	D					10
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	319-84-6	Alpha BHC	11	µg/kg	11	4.9	4	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	959-98-8	Alpha Endosulfan	5.4	µg/kg	5.4	4.9	2.1	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	5103-71-9	Alpha-Chlordane	5.4	µg/kg	5.4	4.9	2.2	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	319-85-7	Beta BHC	5.4	µg/kg	5.4	4.9	2.7	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	33213-65-9	Beta Endosulfan	5.4	µg/kg	5.4	4.9	2.5	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	319-86-8	Delta BHC	11	µg/kg	11	4.9	4.7	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	60-57-1	Dieldrin	700	µg/kg	540	490	240	D					100
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	1031-07-8	Endosulfan Sulfate	5.4	µg/kg	5.4	4.9	2.8	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	72-20-8	Endrin	5.4	µg/kg	5.4	4.9	2.5	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	7421-93-4	Endrin Aldehyde	5.4	µg/kg	5.4	4.9	3.3	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	53494-70-5	Endrin Ketone	4.4	µg/kg	5.4	4.9	2.7	J	J	15			1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	58-89-9	Gamma BHC	5.4	µg/kg	5.4	4.9	2.4	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	5566-34-7	Gamma-Chlordane	11	µg/kg	11	4.9	4.5	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	76-44-8	Heptachlor	5.4	µg/kg	5.4	4.9	2.3	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	1024-57-3	Heptachlor Epoxide	11	µg/kg	11	4.9	4	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	72-43-5	Methoxychlor	5.4	µg/kg	5.4	4.9	2.9	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	72-54-8	p,p'-DDD	5.4	µg/kg	5.4	4.9	2.6	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	72-55-9	p,p'-DDE	5.4	µg/kg	5.4	4.9	2.4	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	50-29-3	p,p'-DDT	5.4	µg/kg	5.4	4.9	2.4	U	U				1
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	8001-35-2	Toxaphene	110	µg/kg	110	54	48	U	U				1
OT071-00001-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00001-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	60-57-1	Dieldrin	4	µg/L	0.5	0.5	0.29						1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.4	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	60-57-1	Dieldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.6	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	53494-70-5	Endrin Ketone	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.8	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00003	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	45	U	U				1
OT071-00003-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00003-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	4	4	16-05-1567-14	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	309-00-2	Aldrin	2.8	µg/kg	5	4.5	2.2	J	J	15			1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	959-98-8	Alpha Endosulfan	5	µg/kg	5	4.5	2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	5103-71-9	Alpha-Chlordane	5	µg/kg	5	4.5	2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	319-85-7	Beta BHC	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	33213-65-9	Beta Endosulfan	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.5	4.4	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	60-57-1	Dieldrin	3.8	µg/kg	5	4.5	2.2	J	J	15			1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	1031-07-8	Endosulfan Sulfate	5	µg/kg	5	4.5	2.6	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	72-20-8	Endrin	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	7421-93-4	Endrin Aldehyde	5	µg/kg	5	4.5	3	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	53494-70-5	Endrin Ketone	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	58-89-9	Gamma BHC	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.5	4.2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	76-44-8	Heptachlor	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	72-43-5	Methoxychlor	5	µg/kg	5	4.5	2.7	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	72-54-8	p,p'-DDD	5	µg/kg	5	4.5	2.4	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	72-55-9	p,p'-DDE	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	50-29-3	p,p'-DDT	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	50	45	U	U				1
OT071-00004-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00004-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00036-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.036	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00036-LEACH-SPLP-0.70um	OT071-SB02	05/13/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.39	µg/L	0.08	0.08	0.024		J	02A			4
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	309-00-2	Aldrin	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	959-98-8	Alpha Endosulfan	5	µg/kg	5	4.5	2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	5103-71-9	Alpha-Chlordane	5	µg/kg	5	4.5	2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	319-85-7	Beta BHC	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	33213-65-9	Beta Endosulfan	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.5	4.4	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	60-57-1	Dieldrin	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	1031-07-8	Endosulfan Sulfate	5	µg/kg	5	4.5	2.6	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	72-20-8	Endrin	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	7421-93-4	Endrin Aldehyde	5	µg/kg	5	4.5	3	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	53494-70-5	Endrin Ketone	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	58-89-9	Gamma BHC	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.5	4.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	76-44-8	Heptachlor	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	72-43-5	Methoxychlor	5	µg/kg	5	4.5	2.7	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	72-54-8	p,p'-DDD	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	72-55-9	p,p'-DDE	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	50-29-3	p,p'-DDT	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00005	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	50	45	U	U				1
OT071-00005-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00005-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	60-57-1	Dieldrin	0.44	µg/L	0.5	0.5	0.29						1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	309-00-2	Aldrin	13	µg/kg	5.1	4.6	2.2						1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.5	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	60-57-1	Dieldrin	1000	µg/kg	260	230	110	D					50
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.7	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	53494-70-5	Endrin Ketone	4.7	µg/kg	5.1	4.6	2.6	J	J	15			1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.3	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.8	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	46	U	U				1
OT071-00008-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00008-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	60-57-1	Dieldrin	2.4	µg/L	0.5	0.5	0.29						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	309-00-2	Aldrin	27	µg/kg	5.2	4.7	2.3						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.7	3.9	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	959-98-8	Alpha Endosulfan	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	5103-71-9	Alpha-Chlordane	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	319-85-7	Beta BHC	5.2	µg/kg	5.2	4.7	2.6	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	33213-65-9	Beta Endosulfan	5.2	µg/kg	5.2	4.7	2.5	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.7	4.6	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	60-57-1	Dieldrin	1200	µg/kg	260	230	110	D					50
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	1031-07-8	Endosulfan Sulfate	5.2	µg/kg	5.2	4.7	2.7	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	72-20-8	Endrin	5.4	µg/kg	5.2	4.7	2.5						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	7421-93-4	Endrin Aldehyde	5.2	µg/kg	5.2	4.7	3.2	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	53494-70-5	Endrin Ketone	13	µg/kg	5.2	4.7	2.6						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	58-89-9	Gamma BHC	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.7	4.3	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	76-44-8	Heptachlor	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.7	3.9	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	72-43-5	Methoxychlor	5.2	µg/kg	5.2	4.7	2.8	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	72-54-8	p,p'-DDD	5.2	µg/kg	5.2	4.7	2.5	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	72-55-9	p,p'-DDE	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	50-29-3	p,p'-DDT	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	52	47	U	U				1
OT071-00009-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00009-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00032-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00032-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.035	µg/L	0.02	0.02	0.006		J	02A	08A	08B	1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.4	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	60-57-1	Dieldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.6	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	53494-70-5	Endrin Ketone	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.7	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00010	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	45	U	U				1
OT071-00010-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00010-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	7	7	16-05-1056-3	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	309-00-2	Aldrin	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	959-98-8	Alpha Endosulfan	5	µg/kg	5	4.5	2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	5103-71-9	Alpha-Chlordane	5	µg/kg	5	4.5	2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	319-85-7	Beta BHC	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	33213-65-9	Beta Endosulfan	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.5	4.4	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	60-57-1	Dieldrin	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	1031-07-8	Endosulfan Sulfate	5	µg/kg	5	4.5	2.6	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	72-20-8	Endrin	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	7421-93-4	Endrin Aldehyde	5	µg/kg	5	4.5	3	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	53494-70-5	Endrin Ketone	5	µg/kg	5	4.5	2.5	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	58-89-9	Gamma BHC	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.5	4.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	76-44-8	Heptachlor	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.5	3.7	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	72-43-5	Methoxychlor	5	µg/kg	5	4.5	2.7	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	72-54-8	p,p'-DDD	5	µg/kg	5	4.5	2.4	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	72-55-9	p,p'-DDE	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	50-29-3	p,p'-DDT	5	µg/kg	5	4.5	2.2	U	U				1
OT071-00011	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	50	45	U	U				1
OT071-00011-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00011-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	10	10	16-05-1056-4	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00033-LEACH-SPLP-0.45um	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00033-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	12	13	16-07-1529-3	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	UJ	08B			1

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Summary of Analytical Results
Former George AFB
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	5103-71-9	Alpha-Chlordane	4.1	µg/kg	5.1	4.6	2.1	J	J	15	08B		1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.5	U	U				1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	60-57-1	Dieldrin	2500	µg/kg	510	460	220	D					100
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.6	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-20-8	Endrin	14	µg/kg	5.1	4.6	2.4		J	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	53494-70-5	Endrin Ketone	5.9	µg/kg	5.1	4.6	2.6		J	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.8	U	U				1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.3	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	UJ	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	46	U	U				1
OT071-00013-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00013-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	60-57-1	Dieldrin	9.1	µg/L	2.5	2.5	1.4	D					5
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	309-00-2	Aldrin	5.2	µg/kg	5.2	4.6	2.3	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	959-98-8	Alpha Endosulfan	5.2	µg/kg	5.2	4.6	2	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	5103-71-9	Alpha-Chlordane	5.2	µg/kg	5.2	4.6	2.1	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	319-85-7	Beta BHC	5.2	µg/kg	5.2	4.6	2.6	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	33213-65-9	Beta Endosulfan	5.2	µg/kg	5.2	4.6	2.4	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.5	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	60-57-1	Dieldrin	52	µg/kg	26	23	11	D					5
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	1031-07-8	Endosulfan Sulfate	5.2	µg/kg	5.2	4.6	2.7	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	72-20-8	Endrin	5.2	µg/kg	5.2	4.6	2.4	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	7421-93-4	Endrin Aldehyde	5.2	µg/kg	5.2	4.6	3.1	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	53494-70-5	Endrin Ketone	5.2	µg/kg	5.2	4.6	2.6	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	58-89-9	Gamma BHC	5.2	µg/kg	5.2	4.6	2.3	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.3	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	76-44-8	Heptachlor	5.2	µg/kg	5.2	4.6	2.2	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	72-43-5	Methoxychlor	5.2	µg/kg	5.2	4.6	2.8	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	72-54-8	p,p'-DDD	5.2	µg/kg	5.2	4.6	2.4	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	72-55-9	p,p'-DDE	5.2	µg/kg	5.2	4.6	2.3	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	50-29-3	p,p'-DDT	5.2	µg/kg	5.2	4.6	2.3	U	U				1
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	52	46	U	U				1
OT071-00014-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00014-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00034-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00034-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SW8270D	60-57-1	Dieldrin	0.19	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	309-00-2	Aldrin	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.7	3.8	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	959-98-8	Alpha Endosulfan	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	5103-71-9	Alpha-Chlordane	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	319-85-7	Beta BHC	5.2	µg/kg	5.2	4.7	2.6	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	33213-65-9	Beta Endosulfan	5.2	µg/kg	5.2	4.7	2.4	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.7	4.5	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	60-57-1	Dieldrin	16	µg/kg	5.2	4.7	2.3						1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	1031-07-8	Endosulfan Sulfate	5.2	µg/kg	5.2	4.7	2.7	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	72-20-8	Endrin	5.2	µg/kg	5.2	4.7	2.4	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	7421-93-4	Endrin Aldehyde	5.2	µg/kg	5.2	4.7	3.1	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	53494-70-5	Endrin Ketone	5.2	µg/kg	5.2	4.7	2.6	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	58-89-9	Gamma BHC	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.7	4.3	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	76-44-8	Heptachlor	5.2	µg/kg	5.2	4.7	2.2	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.7	3.8	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	72-43-5	Methoxychlor	5.2	µg/kg	5.2	4.7	2.8	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	72-54-8	p,p'-DDD	5.2	µg/kg	5.2	4.7	2.4	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	72-55-9	p,p'-DDE	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	50-29-3	p,p'-DDT	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	52	46	U	U				1
OT071-00015-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00015-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.5	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	60-57-1	Dieldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.7	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	53494-70-5	Endrin Ketone	5.1	µg/kg	5.1	4.6	2.6	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.8	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00016	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	46	U	U				1
OT071-00016-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00016-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	10	10	16-05-1567-4	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00035-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00035-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	13.83	14.67	16-07-1529-5	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	309-00-2	Aldrin	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	319-84-6	Alpha BHC	11	µg/kg	11	4.9	4	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	959-98-8	Alpha Endosulfan	5.5	µg/kg	5.5	4.9	2.2	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	5103-71-9	Alpha-Chlordane	5.5	µg/kg	5.5	4.9	2.2	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	319-85-7	Beta BHC	5.5	µg/kg	5.5	4.9	2.7	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	33213-65-9	Beta Endosulfan	5.5	µg/kg	5.5	4.9	2.6	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	319-86-8	Delta BHC	11	µg/kg	11	4.9	4.8	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	60-57-1	Dieldrin	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	1031-07-8	Endosulfan Sulfate	5.5	µg/kg	5.5	4.9	2.9	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	72-20-8	Endrin	5.5	µg/kg	5.5	4.9	2.6	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	7421-93-4	Endrin Aldehyde	5.5	µg/kg	5.5	4.9	3.3	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	53494-70-5	Endrin Ketone	5.5	µg/kg	5.5	4.9	2.7	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	58-89-9	Gamma BHC	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	5566-34-7	Gamma-Chlordane	11	µg/kg	11	4.9	4.5	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	76-44-8	Heptachlor	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	1024-57-3	Heptachlor Epoxide	11	µg/kg	11	4.9	4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	72-43-5	Methoxychlor	5.5	µg/kg	5.5	4.9	3	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	72-54-8	p,p'-DDD	5.5	µg/kg	5.5	4.9	2.6	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	72-55-9	p,p'-DDE	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	50-29-3	p,p'-DDT	5.5	µg/kg	5.5	4.9	2.4	U	U				1
OT071-00017	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	8001-35-2	Toxaphene	110	µg/kg	110	55	49	U	U				1
OT071-00017-LEACH-SPLP-0.45um	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00017-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	15	15	16-05-1567-5	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	309-00-2	Aldrin	11	µg/kg	5.8	5.2	2.5						1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	319-84-6	Alpha BHC	12	µg/kg	12	5.2	4.3	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	959-98-8	Alpha Endosulfan	5.8	µg/kg	5.8	5.2	2.3	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	5103-71-9	Alpha-Chlordane	7.6	µg/kg	5.8	5.2	2.3						1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	319-85-7	Beta BHC	5.8	µg/kg	5.8	5.2	2.9	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	33213-65-9	Beta Endosulfan	5.8	µg/kg	5.8	5.2	2.7	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	319-86-8	Delta BHC	12	µg/kg	12	5.2	5.1	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	60-57-1	Dieldrin	620	µg/kg	580	520	250	D					100
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	1031-07-8	Endosulfan Sulfate	5.8	µg/kg	5.8	5.2	3	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	72-20-8	Endrin	5.8	µg/kg	5.8	5.2	2.7	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	7421-93-4	Endrin Aldehyde	5.8	µg/kg	5.8	5.2	3.5	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	53494-70-5	Endrin Ketone	5.8	µg/kg	5.8	5.2	2.9	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	58-89-9	Gamma BHC	5.8	µg/kg	5.8	5.2	2.6	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	5566-34-7	Gamma-Chlordane	7	µg/kg	12	5.2	4.8	J	J	15			1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	76-44-8	Heptachlor	5.8	µg/kg	5.8	5.2	2.5	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	1024-57-3	Heptachlor Epoxide	12	µg/kg	12	5.2	4.3	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	72-43-5	Methoxychlor	5.8	µg/kg	5.8	5.2	3.2	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	72-54-8	p,p'-DDD	5.8	µg/kg	5.8	5.2	2.7	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	72-55-9	p,p'-DDE	3.7	µg/kg	5.8	5.2	2.6	J	J	15			1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	50-29-3	p,p'-DDT	5.8	µg/kg	5.8	5.2	2.5	U	U				1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	8001-35-2	Toxaphene	120	µg/kg	120	58	52	U	U				1
OT071-00018-LEACH-SPLP-0.45um	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00018-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	309-00-2	Aldrin	5.4	µg/kg	5.4	4.8	2.4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	319-84-6	Alpha BHC	11	µg/kg	11	4.8	4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	959-98-8	Alpha Endosulfan	5.4	µg/kg	5.4	4.8	2.1	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	5103-71-9	Alpha-Chlordane	5.4	µg/kg	5.4	4.8	2.2	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	319-85-7	Beta BHC	5.4	µg/kg	5.4	4.8	2.7	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	33213-65-9	Beta Endosulfan	5.4	µg/kg	5.4	4.8	2.5	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	319-86-8	Delta BHC	11	µg/kg	11	4.8	4.7	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	60-57-1	Dieldrin	5.4	µg/kg	5.4	4.8	2.4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	1031-07-8	Endosulfan Sulfate	5.4	µg/kg	5.4	4.8	2.8	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	72-20-8	Endrin	5.4	µg/kg	5.4	4.8	2.5	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	7421-93-4	Endrin Aldehyde	5.4	µg/kg	5.4	4.8	3.3	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	53494-70-5	Endrin Ketone	5.4	µg/kg	5.4	4.8	2.7	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	58-89-9	Gamma BHC	5.4	µg/kg	5.4	4.8	2.4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	5566-34-7	Gamma-Chlordane	11	µg/kg	11	4.8	4.5	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	76-44-8	Heptachlor	5.4	µg/kg	5.4	4.8	2.3	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	1024-57-3	Heptachlor Epoxide	11	µg/kg	11	4.8	4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	72-43-5	Methoxychlor	5.4	µg/kg	5.4	4.8	2.9	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	72-54-8	p,p'-DDD	5.4	µg/kg	5.4	4.8	2.5	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	72-55-9	p,p'-DDE	5.4	µg/kg	5.4	4.8	2.4	U	U				1
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	50-29-3	p,p'-DDT	5.4	µg/kg	5.4	4.8	2.4	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00019	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	8001-35-2	Toxaphene	110	µg/kg	110	54	48	U	U				1
OT071-00019-LEACH-SPLP-0.45um	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00019-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	4	4	16-05-1567-7	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.5	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	60-57-1	Dieldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.7	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	53494-70-5	Endrin Ketone	5.1	µg/kg	5.1	4.6	2.6	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.3	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.8	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.8	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00021	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	46	U	U				1
OT071-00021-LEACH-SPLP-0.45um	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00021-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	7	7	16-05-1567-9	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00029-LEACH-SPLP-0.45um	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00029-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SW8270D	60-57-1	Dieldrin	0.013	µg/L	0.02	0.02	0.006	J	J	15	02A		1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	309-00-2	Aldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	959-98-8	Alpha Endosulfan	5.1	µg/kg	5.1	4.6	2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	5103-71-9	Alpha-Chlordane	5.1	µg/kg	5.1	4.6	2.1	U	U				1

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Summary of Analytical Results
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	319-85-7	Beta BHC	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	33213-65-9	Beta Endosulfan	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.6	4.4	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	60-57-1	Dieldrin	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	1031-07-8	Endosulfan Sulfate	5.1	µg/kg	5.1	4.6	2.6	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	72-20-8	Endrin	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	7421-93-4	Endrin Aldehyde	5.1	µg/kg	5.1	4.6	3.1	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	53494-70-5	Endrin Ketone	5.1	µg/kg	5.1	4.6	2.5	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	58-89-9	Gamma BHC	5.1	µg/kg	5.1	4.6	2.3	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.6	4.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	76-44-8	Heptachlor	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.6	3.7	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	72-43-5	Methoxychlor	5.1	µg/kg	5.1	4.6	2.7	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	72-54-8	p,p'-DDD	5.1	µg/kg	5.1	4.6	2.4	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	72-55-9	p,p'-DDE	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	50-29-3	p,p'-DDT	5.1	µg/kg	5.1	4.6	2.2	U	U				1
OT071-00024	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	51	45	U	U				1
OT071-00024-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00024-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	2	2	16-05-1056-6	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00030-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00030-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	2.33	3.67	16-07-1529-7	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	309-00-2	Aldrin	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	319-84-6	Alpha BHC	10	µg/kg	10	4.7	3.8	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	959-98-8	Alpha Endosulfan	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	5103-71-9	Alpha-Chlordane	5.2	µg/kg	5.2	4.7	2.1	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	319-85-7	Beta BHC	5.2	µg/kg	5.2	4.7	2.6	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	33213-65-9	Beta Endosulfan	5.2	µg/kg	5.2	4.7	2.4	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	319-86-8	Delta BHC	10	µg/kg	10	4.7	4.5	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	60-57-1	Dieldrin	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	1031-07-8	Endosulfan Sulfate	5.2	µg/kg	5.2	4.7	2.7	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	72-20-8	Endrin	5.2	µg/kg	5.2	4.7	2.4	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	7421-93-4	Endrin Aldehyde	5.2	µg/kg	5.2	4.7	3.1	U	U				1

Attachment 1

Summary of Analytical Results
Former George AFB
OT071 Data Gap Investigation
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Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	53494-70-5	Endrin Ketone	5.2	µg/kg	5.2	4.7	2.6	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	58-89-9	Gamma BHC	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	5566-34-7	Gamma-Chlordane	10	µg/kg	10	4.7	4.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	76-44-8	Heptachlor	5.2	µg/kg	5.2	4.7	2.2	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	1024-57-3	Heptachlor Epoxide	10	µg/kg	10	4.7	3.8	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	72-43-5	Methoxychlor	5.2	µg/kg	5.2	4.7	2.8	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	72-54-8	p,p'-DDD	5.2	µg/kg	5.2	4.7	2.4	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	72-55-9	p,p'-DDE	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	50-29-3	p,p'-DDT	5.2	µg/kg	5.2	4.7	2.3	U	U				1
OT071-00025	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	8001-35-2	Toxaphene	100	µg/kg	100	52	46	U	U				1
OT071-00025-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00025-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	4	4	16-05-1056-7	SW8081A	60-57-1	Dieldrin	0.5	µg/L	0.5	0.5	0.29	U	U				1
OT071-00031-LEACH-SPLP-0.45um	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A	08A		1
OT071-00031-LEACH-SPLP-0.70um	OT071-SB06	05/13/2016	SO	N	8	9.67	16-07-1529-8	SW8270D	60-57-1	Dieldrin	0.02	µg/L	0.02	0.02	0.006	U	UJ	02A			1

Attachment 1

Summary of Analytical Results
Former George AFB
OT071 Data Gap Investigation
15 of 15

Notes:
DL denotes detection limit.
ft bgs denotes feet below ground surface.
ID denotes identification.
LOD denotes limit of detection.
LOQ denotes limit of quantitation.
LQ denotes laboratory qualifier.
N denotes regular field sample.
R1 denotes data validation reason code No. 1.
R2 denotes data validation reason code No. 2.
R3 denotes data validation reason code No. 3.
SO denotes soil matrix.
µg/kg denotes micrograms per kilogram.
µg/L denotes micrograms per liter.
VQ denotes validation qualifier.

Laboratory Data Qualifier Definitions
U denotes the analyte was undetected at the detection limit.
J denotes the analyte was detected at a concentration below the limit of quantitation and above the detection limit. Reported value is estimated
D denotes the analyte was reported at a dilution.
" " denotes the analyte was detected in the associated sample.

Data Validation Qualifier Definitions
U - Not detected. The compound/analyte was analyzed for, but not detected above the associated DL; or above the reported concentration due to blank contamination
J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed
R - The reported sample results are rejected due to the following: 1. Severe deficiencies in the supporting quality control data, 2. Anomalies noted in the sampling and/or analysis process which could affect the validity of the reported data, 3. The presence o
absence of the constituent cannot be verified based on the data provided, 4. To indicate not to use a particular result in the event of a reanalysis.
UJ - The compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the reporting limit may be inaccurate o
imprecise. The nondetect result should be estimated.
" " - Analyte was detected in the associated sample.

Data Validation Reason Code Definitions
02A denotes extraction hold time exceeded.
08A denotes matrix spike (MS) and/or matrix spike duplicate (MSD) recovery not within QC criteria (accuracy).
08B denotes MS / MSD relative percent difference (RPD) outside acceptance criteria (precision).
15 denotes result is quantitified between the laboratory's LOQ and DL.

ATTACHMENT 2

Summary of Analytical Results greater than the Detection Limit

Attachment 2

Summary of Analytical Results greater than the Detection Limit
Former George AFB
OT071 Data Gap Investigation
1 of 2

Field Sample ID	Station Name	Sample Date	Sample Type Code	Sample Purpose	Start Depth (ft bgs)	End Depth (ft bgs)	Laboratory Sample ID	Laboratory Method	Cas Number	Parameter	Result	Units	LOQ	LOD	DL	LQ	VQ	R1	R2	R3	Dilution
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	309-00-2	Aldrin	250	µg/kg	54	49	24	D					10
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	60-57-1	Dieldrin	700	µg/kg	540	490	240	D					100
OT071-00001	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	53494-70-5	Endrin Ketone	4.4	µg/kg	5.4	4.9	2.7	J	J	15			1
OT071-00001-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	2	2	16-05-1567-12	SW8081A	60-57-1	Dieldrin	4	µg/L	0.5	0.5	0.29						1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	309-00-2	Aldrin	2.8	µg/kg	5	4.5	2.2	J	J	15			1
OT071-00004	OT071-SB02	05/16/2016	SO	N	7	7	16-05-1567-15	SW8081A	60-57-1	Dieldrin	3.8	µg/kg	5	4.5	2.2	J	J	15			1
OT071-00036-LEACH-SPLP-0.45um	OT071-SB02	05/16/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.036	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00036-LEACH-SPLP-0.70um	OT071-SB02	05/13/2016	SO	N	8.41	8.83	16-07-1529-1	SW8270D	60-57-1	Dieldrin	0.39	µg/L	0.08	0.08	0.024		J	02A			4
OT071-00005-LEACH-SPLP-0.70um	OT071-SB02	05/16/2016	SO	N	10	10	16-05-1567-16	SW8081A	60-57-1	Dieldrin	0.44	µg/L	0.5	0.5	0.29						1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	309-00-2	Aldrin	13	µg/kg	5.1	4.6	2.2						1
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	60-57-1	Dieldrin	1000	µg/kg	260	230	110	D					50
OT071-00008	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	53494-70-5	Endrin Ketone	4.7	µg/kg	5.1	4.6	2.6	J	J	15			1
OT071-00008-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	2	2	16-05-1056-1	SW8081A	60-57-1	Dieldrin	2.4	µg/L	0.5	0.5	0.29						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	309-00-2	Aldrin	27	µg/kg	5.2	4.7	2.3						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	60-57-1	Dieldrin	1200	µg/kg	260	230	110	D					50
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	72-20-8	Endrin	5.4	µg/kg	5.2	4.7	2.5						1
OT071-00009	OT071-SB03	05/13/2016	SO	N	4	4	16-05-1056-2	SW8081A	53494-70-5	Endrin Ketone	13	µg/kg	5.2	4.7	2.6						1
OT071-00032-LEACH-SPLP-0.70um	OT071-SB03	05/13/2016	SO	N	5.92	6.67	16-07-1529-2	SW8270D	60-57-1	Dieldrin	0.035	µg/L	0.02	0.02	0.006		J	02A	08A	08B	1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	5103-71-9	Alpha-Chlordane	4.1	µg/kg	5.1	4.6	2.1	J	J	15	08B		1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	60-57-1	Dieldrin	2500	µg/kg	510	460	220	D					100
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	72-20-8	Endrin	14	µg/kg	5.1	4.6	2.4		J	08B			1
OT071-00013	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	53494-70-5	Endrin Ketone	5.9	µg/kg	5.1	4.6	2.6		J	08B			1
OT071-00013-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	2	2	16-05-1567-1	SW8081A	60-57-1	Dieldrin	9.1	µg/L	2.5	2.5	1.4	D					5
OT071-00014	OT071-SB04	05/16/2016	SO	N	4	4	16-05-1567-2	SW8081A	60-57-1	Dieldrin	52	µg/kg	26	23	11	D					5
OT071-00034-LEACH-SPLP-0.70um	OT071-SB04	05/16/2016	SO	N	5.67	6.67	16-07-1529-4	SW8270D	60-57-1	Dieldrin	0.19	µg/L	0.02	0.02	0.006		J	02A			1
OT071-00015	OT071-SB04	05/16/2016	SO	N	7	7	16-05-1567-3	SW8081A	60-57-1	Dieldrin	16	µg/kg	5.2	4.7	2.3						1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	309-00-2	Aldrin	11	µg/kg	5.8	5.2	2.5						1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	5103-71-9	Alpha-Chlordane	7.6	µg/kg	5.8	5.2	2.3						1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	60-57-1	Dieldrin	620	µg/kg	580	520	250	D					100
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	5566-34-7	Gamma-Chlordane	7	µg/kg	12	5.2	4.8	J	J	15			1
OT071-00018	OT071-SB05	05/16/2016	SO	N	2	2	16-05-1567-6	SW8081A	72-55-9	p,p'-DDE	3.7	µg/kg	5.8	5.2	2.6	J	J	15			1
OT071-00029-LEACH-SPLP-0.70um	OT071-SB05	05/16/2016	SO	N	9	9.67	16-07-1529-6	SW8270D	60-57-1	Dieldrin	0.013	µg/L	0.02	0.02	0.006	J	J	15	02A		1

Attachment 2

Summary of Analytical Results greater than the Detection Limit
Former George AFB
OT071 Data Gap Investigation
2 of 2

Notes:
DL denotes detection limit.
ft bgs denotes feet below ground surface.
ID denotes identification.
LOD denotes limit of detection.
LOQ denotes limit of quantitation.
LQ denotes laboratory qualifier.
N denotes regular field sample.
R1 denotes data validation reason code No. 1.
R2 denotes data validation reason code No. 2.
R3 denotes data validation reason code No. 3.
SO denotes soil matrix.
µg/kg denotes micrograms per kilogram.
µg/L denotes micrograms per liter.
VQ denotes validation qualifier.

Laboratory Data Qualifier Definitions
U denotes the analyte was undetected at the detection limit.
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Data Validation Qualifier Definitions
U - Not detected. The compound/analyte was analyzed for, but not detected above the associated DL; or above the reported concentration due to blank contamination
J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed
R - The reported sample results are rejected due to the following: 1. Severe deficiencies in the supporting quality control data, 2. Anomalies noted in the sampling and/or analysis process which could affect the validity of the reported data, 3. The presence o
absence of the constituent cannot be verified based on the data provided, 4. To indicate not to use a particular result in the event of a reanalysis.
UJ - The compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the reporting limit may be inaccurate o
imprecise. The nondetect result should be estimated.
" " - Analyte was detected in the associated sample.

Data Validation Reason Code Definitions
02A denotes extraction hold time exceeded.
08A denotes matrix spike (MS) and/or matrix spike duplicate (MSD) recovery not within QC criteria (accuracy).
08B denotes MS / MSD relative percent difference (RPD) outside acceptance criteria (precision).
15 denotes result is quantitified between the laboratory's LOQ and DL.

ATTACHMENT 3

Data Validation Qualifier Reason Code Definitions

Data Validation Qualifier Reason Code Definitions

Reason Code	Definition
01	Sample received outside of 4+/-2 degrees Celsius
01A	Improper sample preservation
02	Holding time exceeded
02A	Extraction
02B	Analysis
03	Instrument performance – outside criteria
03A	BFB
03B	DFTPP
03C	DDT and/or Endrin % breakdown exceeds criteria
03D	Retention time windows
03E	Resolution
04	Initial calibration results outside specified criteria
04A	Compound mean RRF QC criteria not met
04B	Individual % RSD criteria not met
04C	Correlation coefficient < 0.995
05	Continuing calibration results outside specified criteria
05A	Compound mean RRF QC criteria not met
05B	Compound % D QC criteria not met
06	Result qualified as a result of the 5x/10x blank correction
06A	Method or preparation blank
06B	ICB or CCB
06C	ER
06D	TB
06E	FB
07	Surrogate recoveries outside control limits
07A	Sample
07B	Associated method blank or LCS
08	MS/MSD/Duplicate results outside criteria
08A	MS and/or MSD recovery not within control limits (accuracy)
08B	RPD outside acceptance criteria (precision)
09	Post digestion spike outside criteria (GFAA)
10	Internal standards outside specified control limits
10A	Recovery
10B	Retention time
11	Laboratory control sample recoveries outside specified limits
11A	Recovery
11B	RPD (if run in duplicate)
12	Interference check standard
13	Serial dilution
14	Tentatively identified compounds
15	Quantitation
16	Multiple results available; alternate analysis preferred
17	Field duplicate RPD criteria is exceeded
18	Percent difference between original and second column exceeds QC criteria
19	Professional judgment was used to qualify the data
20	Pesticide clean-up checks
21	Target compound identification
22	Radiological calibration
23	Radiological quantitation
24	Reported result and/or lab qualifier revised to reflect validation findings

Appendix G
Geotechnical Laboratory Analyses

Contract No. FA8903-09-D-8580, Task Order 0018• Final • Revision 0 • September 2017

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

September 1, 2016

Mark Unruh
CB&I
1230 Columbia Street, Suite 1200
San Diego, CA 92101

Re: PTS File No: 46296, 46306, 46419
Test Method Procedures Inquiry
Former George AFB, California; 145981

Dear Mr. Unruh:

This letter is in response to your request for additional information on test methods used to analyze samples from the referenced project.

1. Moisture Content: Moisture Content is the weight of water present in a given soil mass (sample) divided by the weight of the dry soil.

The test specimen is dried in an oven at a standard temperature to a constant mass. The loss of mass due to drying is considered to be water. The water content is calculated using the mass of water and the mass of the dry specimen. This method is described in ASTM D2216-10 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass and is applied to plug samples (right cylinders) taken from cores instead of loose grab samples. The same method is also found in API RP40 section 4.6.5 (calculate moisture content of coal samples).

2. A) Dry Bulk Density: The dry bulk density of soils is determined by dividing the measured dry mass of the soil by the volume of the soil, typically a right cylinder.

Using calipers, the diameter and length of the sample are determined in centimeters. These dimensions are used to calculate the volume of the right cylinder of the sample which is equal to the sample bulk volume. The soil mass is determined by drying in an oven at a standard temperature. This method is described in ASTM D2937-10 Standard Test Methods for Density of Soil in Place by the Drive-Cylinder Method and is applied to plug samples (right cylinders) taken from cores instead of drive samples. Calipering to determine bulk volume is also listed in API RP40 section 5.2 Bulk Volume Measurement (plug size).

2. B) Grain Density: Density = Mass/Volume. The grain density of soils is determined by dividing the measured dry mass of the soil by the measured volume of the soil grains, typically obtained using a Double Cell Bolyle's Law Helium Porosimeter.

Though grain volume data is not normally utilized in its raw form to directly aid the geologist or engineer in determining soil characteristics, it is utilized routinely in the laboratory to determine two primary sample characteristics: 1) to calculate sample pore volume and porosity in combination with bulk volume measurements, and 2) to determine sample grain density in combination with sample weight.

Pore volume and porosity can be determined from grain volume data if an accurate bulk volume measurement of the core sample is available. Pore volume is determined by subtracting grain volume from bulk volume. Porosity in fractional form is calculated by dividing the pore volume by the bulk volume. Porosity in percent form can be calculated by multiplying the fractional porosity by 100.

Grain density is calculated by dividing the sample dry weight (in grams) by the grain volume. Grain density can be utilized to aid in the determination of the rock type. Major rock type categories such as sandstone, limestone, shale, dolomite, etc. fall into specific grain density ranges. Sometimes grain density can be utilized to determine if unexpected minerals or other components exist in the rock fabric. Grain density is often used as a quality control check between tests to insure the sample is clean and not contaminated with salts, oils, etc.

Determining grain volume using a Bolyle's Law Double-Cell (Matrix Cup) is listed in API RP40 section 5.3.2.1.1.

3. Porosity (total and air-filled): Porosity is the ratio of the void space volume to the bulk volume of the soil and is expressed as; N = (BV – GV) / BV

Total porosity values were calculated using the measured grain volume and pore volume data as described above. Air-filled porosity is determined by subtracting the volume of pore space occupied by fluids from the total pore volume.

4. Pore Fluid Saturation: Water saturation is determined by drying (Moisture Content test) to remove pore fluids (water) from the plug samples and material balance (gravimetric and volumetric methods) to relate the water to the sample. Sample basic properties (pore volume, bulk volume) must be determined separately in order to report the water saturation as percent pore space or percent bulk volume.

5. Permeability: The permeability of soils is determined by flowing gas (or liquid) through plug samples confined at in-situ or other overburden conditions in a flexible wall permeameter. Pressure drop and flow rate are measured until steady-state conditions exist.

Steady-state permeability to gas was determined using a flexible wall permeameter. Nitrogen at a known rate was injected through the sample while upstream and downstream pressures were monitored. Steady-state flow was considered achieved when a constant pressure drop across the sample was measured. Permeability was calculated using steady state flow equations derived from Darcy's Law for linear gaseous flow.

Permeability measurements are based on API RP40; refer to section 6.3 for a detailed description.

6. Particle size distribution – Laser Diffraction Method: Particle size is determined by using laser light diffraction to measure the amount and patterns of light scattered by a particle's surface.

For soils or sediments a native state (as-received) aliquot is introduced directly into the instrument. A representative portion of the sample, 0.5-10 grams, is introduced into the fluid module of the analyzer and is continuously circulated through the laser beam. The circulation fluid is filtered to 0.2 µm and contains a dispersant to prevent coagulation along with an internal sonification unit to further separate the particles.

The laser beam passes through the sample cell where the suspended particles scatter the incident light. Fourier optics collect the diffracted light and focus it on to three sets of detectors, one for low-angle scattering, the second for mid-angle scattering and the third for high-angle scattering. The composite, time-averaged diffraction pattern is measured by 126 detectors placed at angles to ~35° from the optical axis. Sizes are computed by the Fraunhofer Model for Light Scattering and summed into normal ASTM, USCS or Wentworth distribution classifications for 0.375-2000 µm.

7. Grain size distribution – Dry Sieve Method: Grain size distribution is determined by dry sieving which consists of using a set of standard square-mesh, woven-wire cloth sieves in conjunction with a Ro-Tap mechanical shaker unit.

This method is ran in accordance with the dry sieve only portion of ASTM D 422-63 (reapproved 1998). The soil sample is dried and gently disaggregated using a rubber tipped mortar and pestle. A representative portion of the sample, 50-1000 grams (dependent on individual grain size), is introduced into a stack of sieves beginning with U.S. Standard Sieve number 1 (0.9844") and is continuously shaken on the Ro-Tap shaker unit for a period of no less than 5 minutes and no greater than 20 minutes. Weights of the sample retained on each standard sieve number are recorded and percentage passing for each sieve calculated

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

August 9, 2016

Tim Roth
CB&I Federal Services, LLC
2410 Cherahala Blvd.
Knoxville, TN 37932

Re: PTS File No: 46296
Physical Properties Data
Former George AFB, California; 145981

Dear Mr. Roth:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Former George AFB, California; 145981 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

Project Name: Former George AFB, California
Project Number: 145981

PTS File No: 46296
Client: CB&I Federal Services, LLC

TEST PROGRAM - 20160719

CORE ID	Date	Time	Core Recovery ft.	Slab and Core Photo	Grain Size Analyses	Soil Properties Pkg.	TOC/foc Walkley-Black		CBI Sample ID Number	CBI Sample Description
			Plugs:	1/4:3/4	Grab	Vert. 1"	Grab			
Date Received: 20160513										
OT071-SB03 28"-48"	5/13	0730	1.65	2	3.7'	3.5'	3.9'		OT071-00008	OT071-SB03 - 2'
OT071-SB03 84"-96"	5/13	0745	1.0	1					OT071-00009	OT071-SB03 - 4'
OT071-SB03 96"-120"	5/13	0800	1.45	2	8.8'	8.6'	8.0'		OT071-00010	OT071-SB03 - 7'
OT071-SB03 124"-144"	5/13	0810	1.65	2	11.4'	11.6'	11.8'		OT071-00011	OT071-SB03 - 10'
OT071-SB03 156"-14'8"	5/13	0820	1.65	2	14.0'	14.2'	13.8		OT071-00012	OT071-SB03 - 15'
OT071-SB06 12"-24"	5/13	0900	1.1	2					OT071-00024	OT071-SB06 - 2'
OT071-SB06 4'-5'5"	5/13	0905	1.2	2	4.5'	4.3'	4.7'		OT071-00025	OT071-SB06 - 4'
OT071-SB06 7'-8'	5/13	0915	0.9	1	7.1'	7.5'	7.3'		OT071-00026	OT071-SB06 - 7'
OT071-SB06 10'-10'5"	5/13	0930	0.4	1					OT071-00027	OT071-SB06 - 10'
OT071-SB06 14'-14'8"	5/13	0945	0.65	1					OT071-00028	OT071-SB06 - 15'
TOTALS:		10 cores	11.65	16	6	6	6	0	10	

Laboratory Test Program Notes

Contaminant identification: Dieldrin

Samples received cryogenically preserved will be stored frozen at standard core storage rates from sample date of receipt. Core storage charges will be billed monthly or quarterly depending upon project.
Standard TAT for basic analysis is 15 business days. Advanced tests require additional time. Steel or stainless steel core sleeves require additional processing surcharge.
Sample locations to be selected by CB&I personnel from core photography. All cores received are 1.5" diameter.
Grain Size Analysis: Laser method; includes tabular data, graphics and statistical sorting in Excel format.
Soil Properties Package: Native state permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation (water only).
Soil from areas under California Exterior Quarantine will be handled as regulated domestic quarantine soil.
Geologic samples are exempt from quarantine; soil lower boundary is set at 91 cm (3 ft depth).

PTS Laboratories

PTS File No: 46296
Client: CB&I Federal Services, LLC
Report Date: 08/09/16

PHYSICAL PROPERTIES DATA - SOIL PROPERTIES PACKAGE (VADOSE ZONE)

Project Name: Former George AFB, California
Project No: 145981

		METHODS:	API RP 40 / ASTM D2216	API RP 40		API RP 40		API RP 40	API RP 40
									25 PSI CONFINING STRESS
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	DENSITY		POROSITY, %Vb (2)		TOTAL PORE FLUID SATURATIONS (3), % Pv	EFFECTIVE PERMEABILITY TO AIR (4), millidarcy
				DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR-FILLED		
OT071-SB03 28"-48"	3.5	V	4.5	1.58	2.64	40.3	33.2	17.6	1400
OT071-SB03 96"-120"	8.6	V	3.0	1.61	2.64	39.1	34.3	12.2	10200
OT071-SB03 124"-144"	11.6	V	12.5	1.29	2.65	51.3	35.2	31.3	256
OT071-SB03 156"-14'8"	14.2	V	10.0	1.40	2.68	47.6	33.5	29.6	883
OT071-SB06 4'-5'5"	4.3	V	14.0	1.46	2.67	45.3	24.8	45.2	89.6
OT071-SB06 7'-8'	7.5	V	11.1	1.49	2.64	43.5	26.9	38.1	276

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
(3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc.
(4) Effective (Native) = With as-received pore fluids in place.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; Air = Nitrogen gas.

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

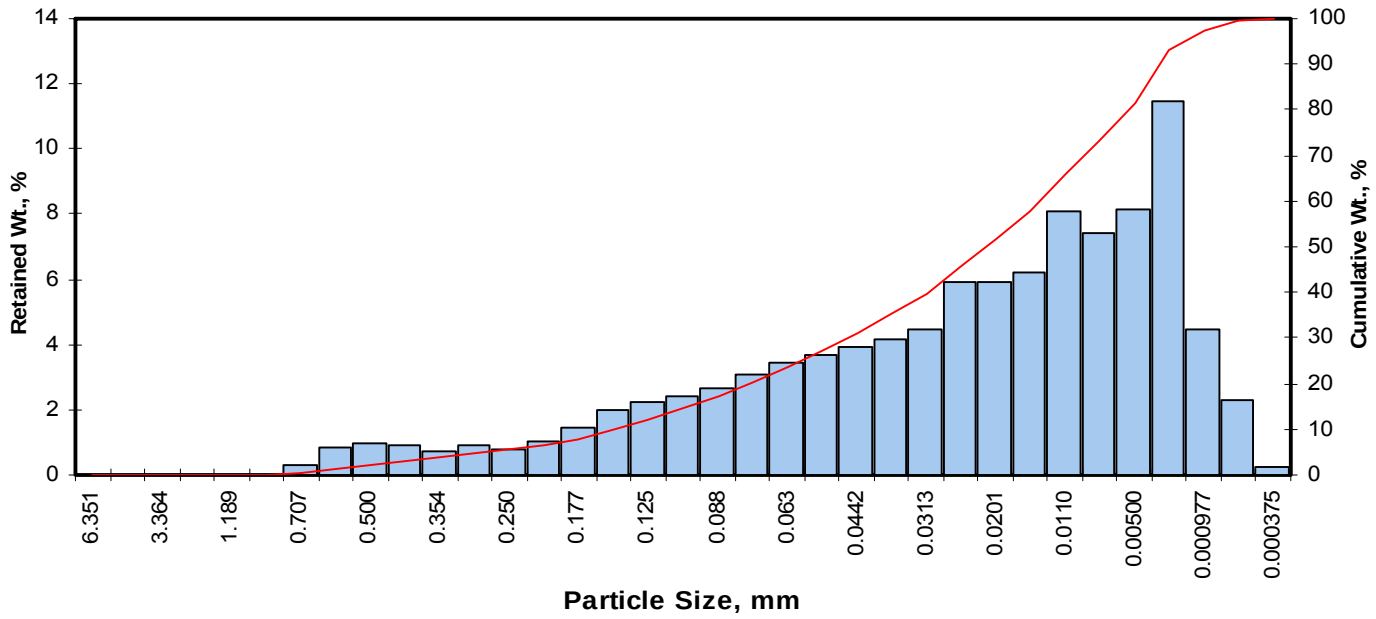
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
OT071-SB06 4'-5'5"	4.5	Silt	0.021	0.00	0.00	3.03	17.15	61.34	18.49	79.82

(1) Based on Mean from Trask

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46296
Project:	Former George AFB, California	**Sample ID:**	OT071-SB06 4'-5'5"
Project No:	145981	**Depth, ft:**	4.5

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.02	0.02	0.02
0.0278	0.707	0.50	25	0.32	0.32	0.34
0.0234	0.595	0.75	30	0.84	0.84	1.18
0.0197	0.500	1.00	35	0.94	0.94	2.12
0.0166	0.420	1.25	40	0.91	0.91	3.03
0.0139	0.354	1.50	45	0.71	0.71	3.74
0.0117	0.297	1.75	50	0.90	0.90	4.64
0.0098	0.250	2.00	60	0.78	0.78	5.42
0.0083	0.210	2.25	70	1.00	1.00	6.42
0.0070	0.177	2.50	80	1.45	1.45	7.87
0.0059	0.149	2.75	100	1.98	1.98	9.85
0.0049	0.125	3.00	120	2.26	2.26	12.10
0.0041	0.105	3.25	140	2.39	2.39	14.49
0.0035	0.088	3.50	170	2.64	2.64	17.13
0.0029	0.074	3.75	200	3.05	3.05	20.18
0.0025	0.063	4.00	230	3.43	3.43	23.61
0.0021	0.053	4.25	270	3.68	3.68	27.28
0.00174	0.0442	4.50	325	3.90	3.90	31.18
0.00146	0.0372	4.75	400	4.15	4.15	35.33
0.00123	0.0313	5.00	450	4.44	4.44	39.76
0.000986	0.0250	5.32	500	5.93	5.93	45.69
0.000790	0.0201	5.64	635	5.93	5.93	51.62
0.000615	0.0156	6.00		6.25	6.25	57.86
0.000435	0.0110	6.50		8.10	8.09	65.95
0.000308	0.00781	7.00		7.40	7.39	73.35
0.000197	0.00500	7.65		8.17	8.16	81.51
0.000077	0.00195	9.00		11.50	11.49	93.01
0.000038	0.000977	10.00		4.47	4.47	97.47
0.000019	0.000488	11.00		2.29	2.29	99.76
0.000015	0.000375	11.38		0.24	0.24	100.00
TOTALS				**100.10**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.87	0.0108	0.274
10	2.77	0.0058	0.147
16	3.39	0.0037	0.095
25	4.09	0.0023	0.059
40	5.01	0.0012	0.031
50	5.55	0.0008	0.021
60	6.13	0.0006	0.014
75	7.13	0.0003	0.007
84	7.94	0.0002	0.004
90	8.65	0.0001	0.002
95	9.45	0.0001	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	5.55	5.55	5.55
Median, in.	0.0008	0.0008	0.0008
Median, mm	0.021	0.021	0.021
Mean, phi	4.93	5.67	5.63
Mean, in.	0.0013	0.0008	0.0008
Mean, mm	0.033	0.020	0.020
Sorting	2.864	2.273	2.285
Skewness	0.959	0.050	0.038
Kurtosis	0.178	0.668	1.024
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	3.03
Fine Sand	200	17.15
Silt	>0.005 mm	61.34
Clay	<0.005 mm	18.49
	Total	**100**

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
OT071-SB03 28"-48"	3.7	Medium sand	0.350	1.62	8.96	35.32	39.96	14.14
OT071-SB03 96"-120"	8.8	Medium sand	0.700	3.80	13.11	48.94	29.92	4.23
OT071-SB03 124"-144"	11.4	Medium sand	0.280	7.83	7.99	27.82	31.03	25.34
OT071-SB03 156"-14'8"	14.0	Fine sand	0.149	0.00	1.40	26.95	38.34	33.31
OT071-SB06 7-8	7.1	Medium sand	0.391	0.12	3.43	43.99	42.27	10.18

(1) Based on Mean fromTrask

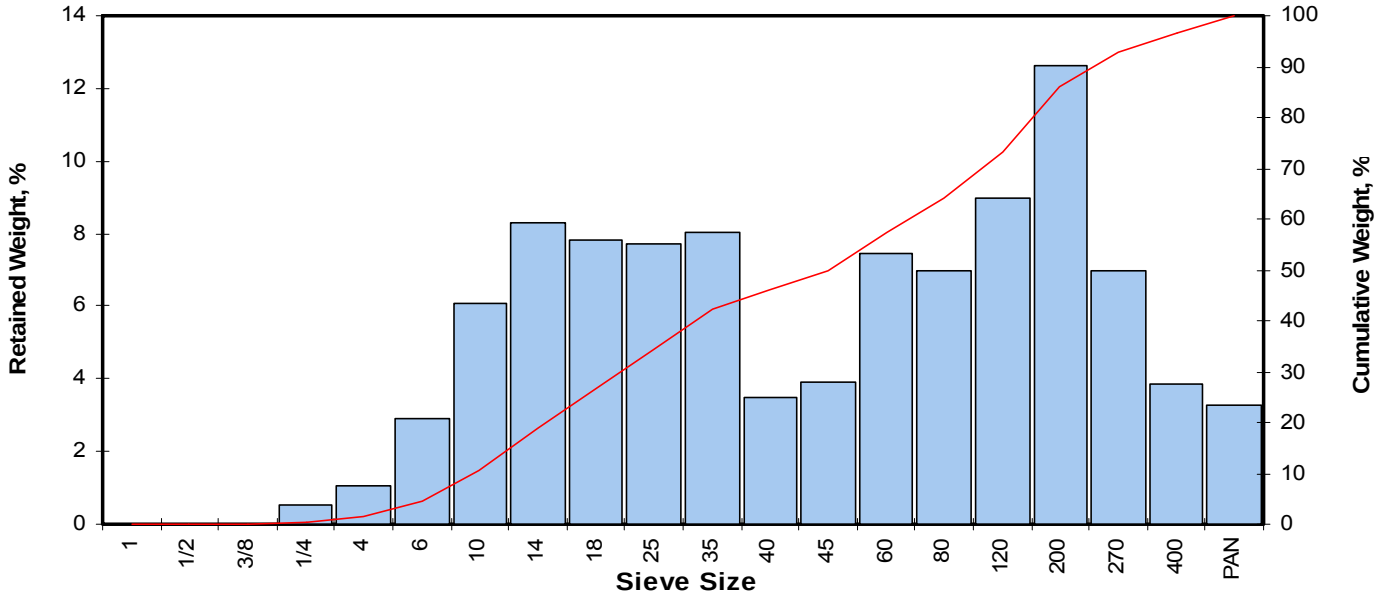
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46296
Sample ID: OT071-SB03 28"-48"
Depth, ft: 3.7

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.66	0.54	0.54
0.1873	4.757	-2.25	4	1.31	1.07	1.62
0.1324	3.364	-1.75	6	3.54	2.90	4.52
0.0787	2.000	-1.00	10	7.38	6.05	10.57
0.0557	1.414	-0.50	14	10.08	8.27	18.84
0.0394	1.000	0.00	18	9.56	7.84	26.69
0.0278	0.707	0.50	25	9.41	7.72	34.41
0.0197	0.500	1.00	35	9.76	8.01	42.41
0.0166	0.420	1.25	40	4.25	3.49	45.90
0.0139	0.354	1.50	45	4.76	3.90	49.80
0.0098	0.250	2.00	60	9.08	7.45	57.25
0.0070	0.177	2.50	80	8.52	6.99	64.24
0.0049	0.125	3.00	120	10.93	8.97	73.21
0.0029	0.074	3.75	200	15.42	12.65	85.86
0.0021	0.053	4.25	270	8.49	6.96	92.82
0.0015	0.037	4.75	400	4.73	3.88	96.70
			PAN	4.02	3.30	100.00
TOTALS				121.90	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.69	0.1271	3.228
10	-1.07	0.0827	2.101
16	-0.67	0.0627	1.593
25	-0.11	0.0424	1.077
40	0.85	0.0219	0.555
50	1.51	0.0138	0.350
60	2.20	0.0086	0.218
75	3.11	0.0046	0.116
84	3.64	0.0032	0.080
90	4.05	0.0024	0.060
95	4.53	0.0017	0.043

Measure	Trask	Inman	Folk-Ward
Median, phi	1.51	1.51	1.51
Median, in.	0.0138	0.0138	0.0138
Median, mm	0.350	0.350	0.350
Mean, phi	0.74	1.48	1.49
Mean, in.	0.0235	0.0141	0.0140
Mean, mm	0.597	0.358	0.355
Sorting	3.046	2.156	2.021
Skewness	1.010	-0.014	-0.022
Kurtosis	0.236	0.443	0.793

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	1.62
Coarse Sand	10	8.96
Medium Sand	40	35.32
Fine Sand	200	39.96
Silt/Clay	<200	14.14
	Total	100

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Phone: (562) 907-3607 Fax: (562) 907-3610

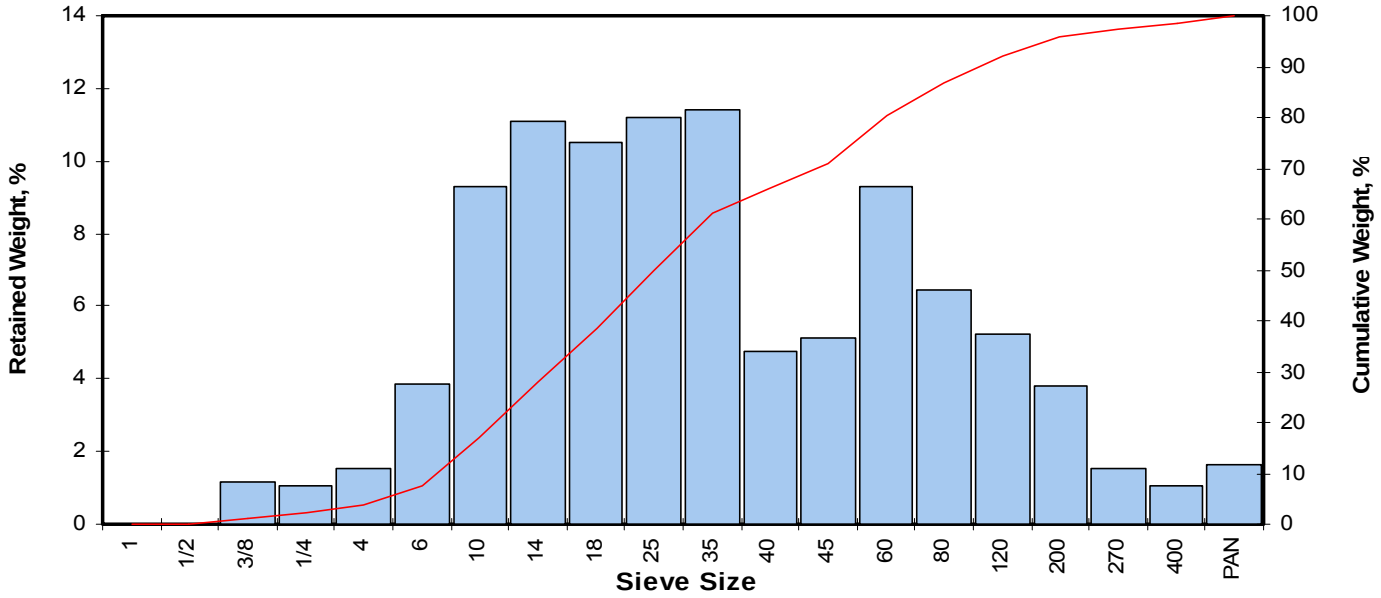
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46296
Sample ID: OT071-SB03 96"-120"
Depth, ft: 8.8

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	1.50	1.18	1.18
0.2500	6.351	-2.67	1/4	1.37	1.08	2.26
0.1873	4.757	-2.25	4	1.95	1.54	3.80
0.1324	3.364	-1.75	6	4.87	3.83	7.63
0.0787	2.000	-1.00	10	11.78	9.28	16.91
0.0557	1.414	-0.50	14	14.09	11.09	28.00
0.0394	1.000	0.00	18	13.32	10.49	38.49
0.0278	0.707	0.50	25	14.21	11.19	49.68
0.0197	0.500	1.00	35	14.52	11.43	61.11
0.0166	0.420	1.25	40	6.02	4.74	65.85
0.0139	0.354	1.50	45	6.49	5.11	70.96
0.0098	0.250	2.00	60	11.81	9.30	80.26
0.0070	0.177	2.50	80	8.20	6.46	86.72
0.0049	0.125	3.00	120	6.66	5.24	91.96
0.0029	0.074	3.75	200	4.84	3.81	95.77
0.0021	0.053	4.25	270	1.93	1.52	97.29
0.0015	0.037	4.75	400	1.37	1.08	98.37
			PAN	2.07	1.63	100.00
TOTALS				127.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-2.09	0.1680	4.266
10	-1.56	0.1160	2.945
16	-1.07	0.0828	2.104
25	-0.64	0.0611	1.553
40	0.07	0.0376	0.954
50	0.51	0.0276	0.700
60	0.95	0.0204	0.517
75	1.72	0.0120	0.304
84	2.29	0.0081	0.205
90	2.81	0.0056	0.142
95	3.60	0.0033	0.083

Measure	Trask	Inman	Folk-Ward
Median, phi	0.51	0.51	0.51
Median, in.	0.0276	0.0276	0.0276
Median, mm	0.700	0.700	0.700
Mean, phi	0.11	0.61	0.58
Mean, in.	0.0366	0.0258	0.0264
Mean, mm	0.929	0.656	0.670
Sorting	2.260	1.681	1.703
Skewness	0.982	0.056	0.070
Kurtosis	0.223	0.692	0.992

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	3.80
Coarse Sand	10	13.11
Medium Sand	40	48.94
Fine Sand	200	29.92
Silt/Clay	<200	4.23
	Total	100

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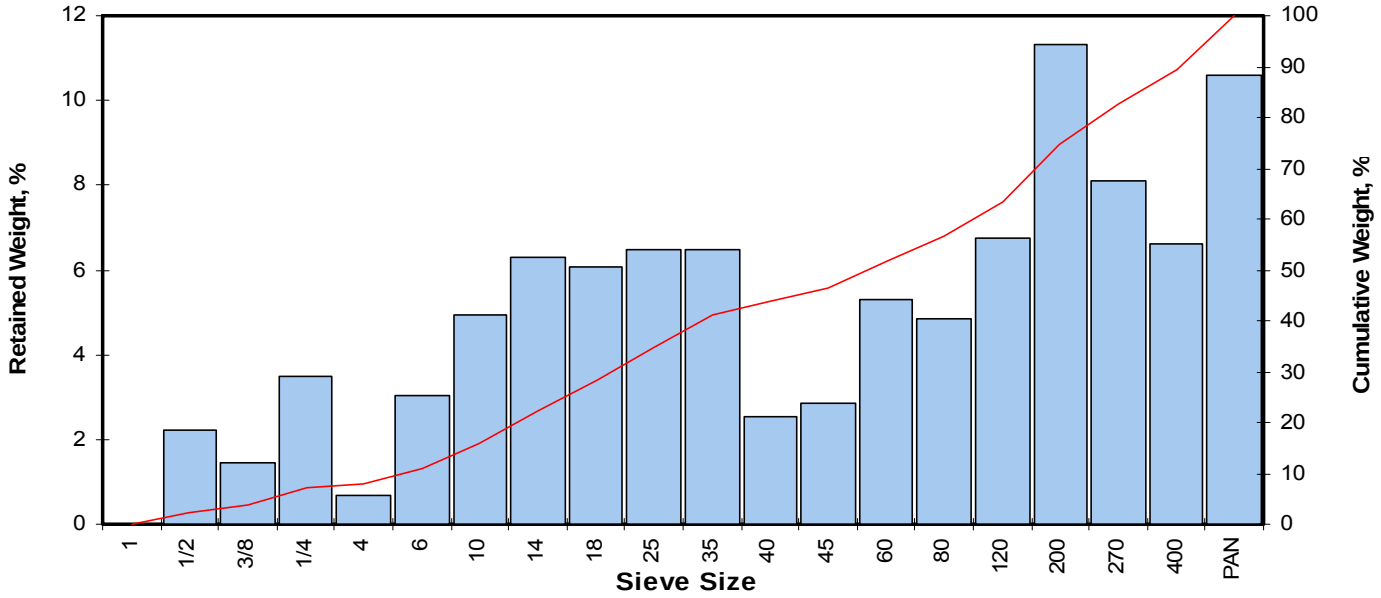
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46296
Project:	Former George AFB, California	**Sample ID:**	DT071-SB03 124"-144"
Project No:	145981	**Depth, ft:**	11.4

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	1.81	2.24	2.24
0.3740	9.500	-3.25	3/8	1.16	1.43	3.67
0.2500	6.351	-2.67	1/4	2.81	3.47	7.15
0.1873	4.757	-2.25	4	0.55	0.68	7.83
0.1324	3.364	-1.75	6	2.45	3.03	10.85
0.0787	2.000	-1.00	10	4.01	4.96	15.81
0.0557	1.414	-0.50	14	5.10	6.30	22.12
0.0394	1.000	0.00	18	4.90	6.06	28.17
0.0278	0.707	0.50	25	5.22	6.45	34.63
0.0197	0.500	1.00	35	5.23	6.47	41.09
0.0166	0.420	1.25	40	2.05	2.53	43.63
0.0139	0.354	1.50	45	2.29	2.83	46.46
0.0098	0.250	2.00	60	4.27	5.28	51.74
0.0070	0.177	2.50	80	3.93	4.86	56.60
0.0049	0.125	3.00	120	5.44	6.73	63.32
0.0029	0.074	3.75	200	9.17	11.34	74.66
0.0021	0.053	4.25	270	6.56	8.11	82.77
0.0015	0.037	4.75	400	5.36	6.63	89.39
			PAN	8.58	10.61	100.00
TOTALS				80.89	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-3.03	0.3207	8.145
10	-1.89	0.1460	3.709
16	-0.99	0.0779	1.979
25	-0.26	0.0472	1.199
40	0.92	0.0209	0.530
50	1.84	0.0110	0.280
60	2.75	0.0058	0.148
75	3.77	0.0029	0.073
84	4.34	0.0019	0.049
90			
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	1.84	1.84	1.84
Median, in.	0.0110	0.0110	0.0110
Median, mm	0.280	0.280	0.280
Mean, phi	0.65	1.68	1.73
Mean, in.	0.0250	0.0123	0.0119
Mean, mm	0.636	0.312	0.301
Sorting	4.046	2.664	
Skewness	1.058	-0.059	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

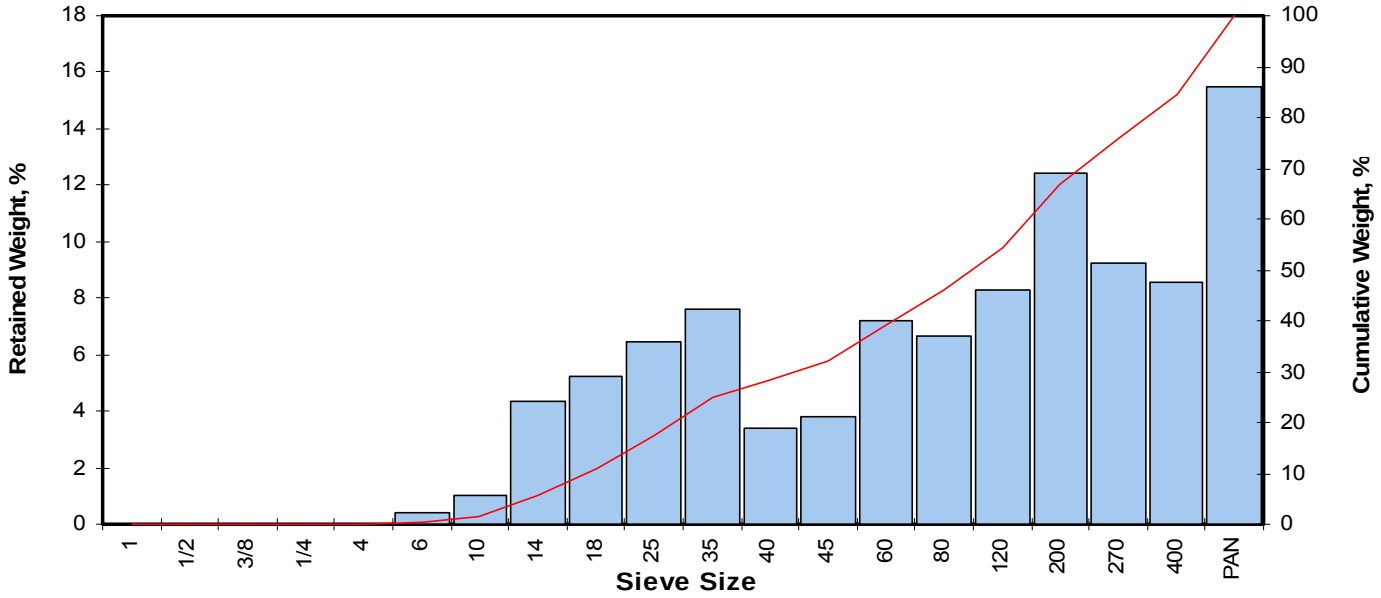
Description	Retained on Sieve #	Weight Percent
Gravel	4	7.83
Coarse Sand	10	7.99
Medium Sand	40	27.82
Fine Sand	200	31.03
Silt/Clay	<200	25.34
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46296
Project:	Former George AFB, California	**Sample ID:**	T071-SB03 156"-14'8"
Project No:	145981	**Depth, ft:**	14.0

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.39	0.38	0.38
0.0787	2.000	-1.00	10	1.06	1.03	1.40
0.0557	1.414	-0.50	14	4.47	4.33	5.73
0.0394	1.000	0.00	18	5.37	5.20	10.94
0.0278	0.707	0.50	25	6.67	6.46	17.40
0.0197	0.500	1.00	35	7.82	7.57	24.97
0.0166	0.420	1.25	40	3.49	3.38	28.35
0.0139	0.354	1.50	45	3.94	3.82	32.17
0.0098	0.250	2.00	60	7.42	7.19	39.35
0.0070	0.177	2.50	80	6.85	6.64	45.99
0.0049	0.125	3.00	120	8.55	8.28	54.27
0.0029	0.074	3.75	200	12.82	12.42	66.69
0.0021	0.053	4.25	270	9.51	9.21	75.90
0.0015	0.037	4.75	400	8.87	8.59	84.49
			PAN	16.01	15.51	100.00
TOTALS				103.24	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.58	0.0590	1.500
10	-0.09	0.0419	1.064
16	0.39	0.0300	0.762
25	1.00	0.0197	0.499
40	2.05	0.0095	0.242
50	2.74	0.0059	0.149
60	3.35	0.0039	0.098
75	4.20	0.0021	0.054
84	4.72	0.0015	0.038
90			
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	2.74	2.74	2.74
Median, in.	0.0059	0.0059	0.0059
Median, mm	0.149	0.149	0.149
Mean, phi	1.85	2.56	2.62
Mean, in.	0.0109	0.0067	0.0064
Mean, mm	0.277	0.170	0.163
Sorting	3.030	2.165	
Skewness	1.102	-0.086	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

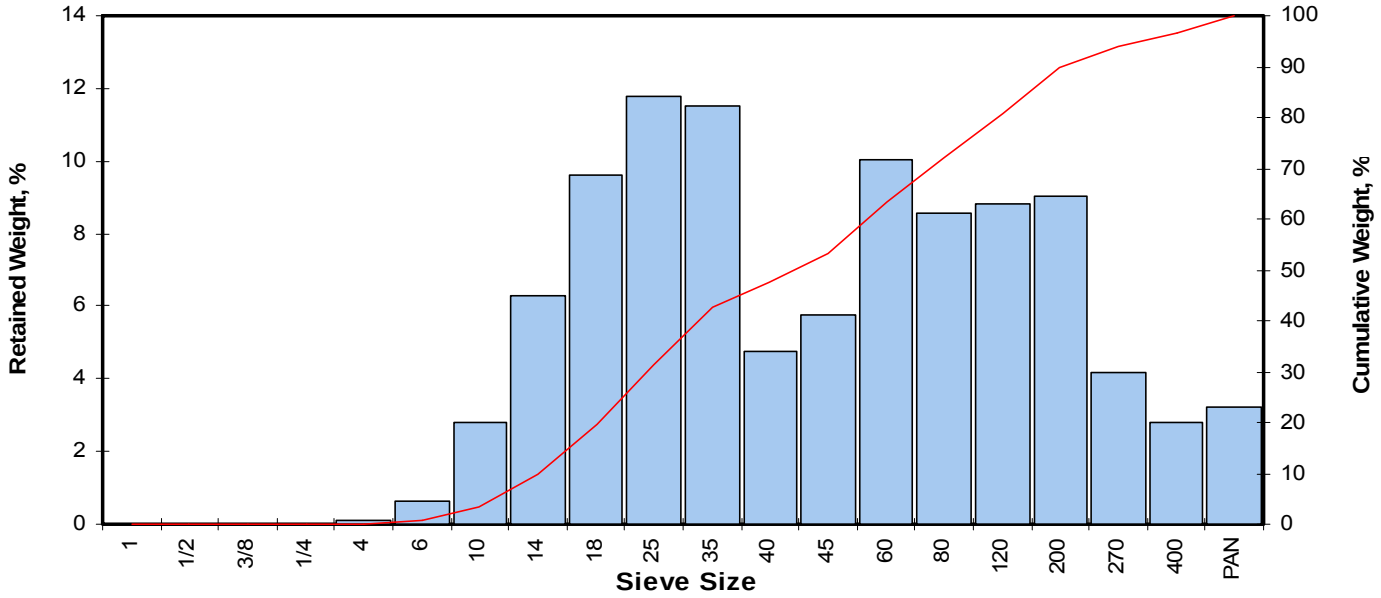
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	1.40
Medium Sand	40	26.95
Fine Sand	200	38.34
Silt/Clay	<200	33.31
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46296
Project:	Former George AFB, California	**Sample ID:**	OT071-SB06 7'-8'
Project No:	145981	**Depth, ft:**	7.1

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.14	0.12	0.12
0.1324	3.364	-1.75	6	0.74	0.65	0.78
0.0787	2.000	-1.00	10	3.15	2.78	3.55
0.0557	1.414	-0.50	14	7.13	6.29	9.84
0.0394	1.000	0.00	18	10.90	9.61	19.45
0.0278	0.707	0.50	25	13.39	11.81	31.26
0.0197	0.500	1.00	35	13.06	11.52	42.77
0.0166	0.420	1.25	40	5.41	4.77	47.54
0.0139	0.354	1.50	45	6.55	5.78	53.32
0.0098	0.250	2.00	60	11.39	10.04	63.36
0.0070	0.177	2.50	80	9.71	8.56	71.92
0.0049	0.125	3.00	120	10.03	8.84	80.77
0.0029	0.074	3.75	200	10.26	9.05	89.82
0.0021	0.053	4.25	270	4.73	4.17	93.99
0.0015	0.037	4.75	400	3.17	2.80	96.78
			PAN	3.65	3.22	100.00
TOTALS				113.41	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.88	0.0727	1.847
10	-0.49	0.0554	1.406
16	-0.18	0.0446	1.133
25	0.23	0.0335	0.850
40	0.88	0.0214	0.544
50	1.36	0.0154	0.391
60	1.83	0.0111	0.281
75	2.67	0.0062	0.157
84	3.27	0.0041	0.104
90	3.77	0.0029	0.073
95	4.43	0.0018	0.046

Measure	Trask	Inman	Folk-Ward
Median, phi	1.36	1.36	1.36
Median, in.	0.0154	0.0154	0.0154
Median, mm	0.391	0.391	0.391
Mean, phi	0.99	1.54	1.48
Mean, in.	0.0198	0.0135	0.0141
Mean, mm	0.503	0.343	0.358
Sorting	2.329	1.724	1.667
Skewness	0.934	0.109	0.133
Kurtosis	0.260	0.542	0.893
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.12
Coarse Sand	10	3.43
Medium Sand	40	43.99
Fine Sand	200	42.27
Silt/Clay	<200	10.18
	Total	100

© PTS Laboratories, Inc.
Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories

PTS File No: 46296
Client: CB&I Federal Services, LLC
Report Date: 08/09/16

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: Former George AFB, California
Project No: 145981

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
OT071-SB03 28"-48"	3.9	20160808	1250	SOIL	1850	1.85E-03
OT071-SB03 96"-120"	8.0	20160808	1250	SOIL	510	5.10E-04
OT071-SB03 124"-144"	11.8	20160808	1250	SOIL	910	9.10E-04
OT071-SB03 156"-14'8"	13.8	20160808	1250	SOIL	620	6.20E-04
OT071-SB06 4'-5'5"	4.7	20160808	1250	SOIL	620	6.20E-04
OT071-SB06 7'-8'	7.3	20160808	1250	SOIL	420	4.20E-04
Blank	N/A	20160808	1250	BLANK	ND	ND
SRM D090-542	N/A	20160808	1250	SRM	6120	6.12E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg Lower	Upper
SRM D090-542	105	75-125	5820	4365	7275

ND = Not Detected

CHAIN OF CUSTODY

Ref. Document # OT071-051316-07

Page 1 of 1

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917*
(Name & Phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/13/2016
Waybill/Airbill Number: *Courier*
Lab Destination: *PTS Laboratories, Inc.*
Address: *8100 Secura Way*
City: *Santa Fe Springs, CA 90670*
Lab Contact Name / ph. #: *Michael Mark Brady, 562.347.2502*

Sampler's Name(s): Carl Lind

Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Soil Properties Package (Vadose Zone) – native permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation by methods API RP40 and ASTM D2216 (1 x 12 in Acetate Sleeve)	Grain-size analysis by Laser Particle Size Analyzer by ASTM D4464 (1 x 12 in Acetate Sleeve)	Full-scale Digital Core Photography by ASTM D5079 (1 x 12 in Acetate Sleeve)	TOC by Walkley-Black Method (1 x 12 in Acetate Sleeve)			Turn Around Time Requested
OT071-00008	OT071-SB03 - 2'	05/13/16	7:30	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00009	OT071-SB03 - 4'	05/13/16	7:45	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00010	OT071-SB03 - 7'	05/13/16	8:00	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00011	OT071-SB03 - 10'	05/13/16	8:10	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00012	OT071-SB03 - 15'	05/13/16	8:20	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00024	OT071-SB06 - 2'	05/13/16	9:00	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00025	OT071-SB06 - 4'	05/13/16	9:05	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00026	OT071-SB06 - 7'	05/13/16	9:15	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00027	OT071-SB06 - 10'	05/13/16	9:30	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00028	OT071-SB06 - 15'	05/13/16	9:45	G	SO	1					X		Hold	Hold	X	Hold			21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy
Tim Roth (tim.roth@cblfederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required: I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By	Date	Time	Received By	Date	Time
Carl Lind	5-13-16	1745			
Relinquished By:			Received By:		
Relinquished By:			Received By:		

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

August 9, 2016

Tim Roth
CB&I Federal Services, LLC
2410 Cherahala Blvd.
Knoxville, TN 37932

Re: PTS File No: 46306
Physical Properties Data
Former George AFB, California; 145981

Dear Mr. Roth:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Former George AFB, California; 145981 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

Project Name: Former George AFB, California
Project Number: 145981

PTS File No: 46306
Client: CB&I Federal Services, LLC

TEST PROGRAM - 20160719

CORE ID	Date	Time	Core Recovery ft.	Slab and Core Photo	Grain Size Analyses	Soil Properties Pkg.	TOC/foc Walkley-Black		CBI Sample ID Number	CBI Sample Description
			Plugs:	1/4:3/4	Grab	Vert. 1"	Grab			
Date Received: 20160517										
OT071-SB04-0.7"-1'8"	5/16/2016	9:14	1.15	2					OT071-00013	OT071-SB04 - 2'
OT071-SB04-2'8"-3'8"	5/16/2016	9:09	1.6	3	3.1'	2.9'	3.3'		OT071-00014	OT071-SB04 - 4'
OT071-SB04-7.0'-8.0'	5/16/2016	8:45	1.0	1	7.8'	8.0'	7.6'		OT071-00015	OT071-SB04 - 7'
OT071-SB04-10.0'-11.0'	5/16/2016	9:20	1.0	1	10.2'	10.4'	10.6'		OT071-00016	OT071-SB04 - 10'
OT071-SB04-15.0'-16.0'	5/16/2016	9:27	0.95	1					OT071-00017	OT071-SB04 - 15'
OT071-SB05-7.0'-8.0'	5/16/2016	10:55	1.0	1	7.5'	7.3'	7.7'		OT071-00021	OT071-SB05 - 7'
OT071-SB05-10.0'-12.0'	5/16/2016	11:00	2.0	2	11.0'	11.2'	10.8'		OT071-00022	OT071-SB05 - 10'
OT071-SB05-15.0'-16.0'	5/16/2016	11:05	1.0	1	15.0'	15.2'	15.4'		OT071-00023	OT071-SB05 - 15'
OT071-SB02-4'5.5"-5'7.5"	5/16/2016	11:50	1.3	2	5.1'	5.0'	5.3'		OT071-00003	OT071-SB02 - 4' Core diam. = 1.0"
OT071-SB02-7.0'-8.0'	5/16/2016	11:50	1.0	1	7.5'	7.7'	7.3'		OT071-00004	OT071-SB02 - 7' Core diam. = 1.0"
OT071-SB02-10.0'-11'6"	5/16/2016	11:55	1.45	2	10.9'	11.1'	10.7'		OT071-00005	OT071-SB02 - 10' Core diam. = 1.0"
TOTALS:		11 cores	10.7	17	9	9	9		11	

Laboratory Test Program Notes
Contaminant identification: Dieldrin

Samples received cryogenically preserved will be stored frozen at standard core storage rates from sample date of receipt. Core storage charges will be billed monthly or quarterly depending upon project.
Standard TAT for basic analysis is 15 business days. Advanced tests require additional time. Steel or stainless steel core sleeves require additional processing surcharge.
Sample locations to be selected by CB&I personnel from core photography. All cores received are 1.5" diameter except OT071-00001 through OT071-00004 which are 1.0" diameter.
Note: 1.0" diameter cores not suitable for standard core photography.
Grain Size Analysis: Laser method; includes tabular data, graphics and statistical sorting in Excel format.
Soil Properties Package: Native state permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation (water only).
Sample OT071-SB04-2'8"-3'8" was received with sample ID: OT071-SB04-2'0"-3'8"

PTS Laboratories

PTS File No: 46306
Client: CB&I Federal Services, LLC
Report Date: 08/09/16

PHYSICAL PROPERTIES DATA - SOIL PROPERTIES PACKAGE (VADOSE ZONE)

Project Name: Former George AFB, California
Project No: 145981

		METHODS:	API RP 40 / ASTM D2216	API RP 40		API RP 40		API RP 40	API RP 40
									25 PSI CONFINING STRESS
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	DENSITY		POROSITY, %Vb (2)		TOTAL PORE FLUID SATURATIONS (3), % Pv	EFFECTIVE PERMEABILITY TO AIR (4), millidarcy
				DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR-FILLED		
OT071-SB04-2'8"-3'8"	2.9	V	2.8	1.64	2.65	38.2	33.6	12.1	10000
OT071-SB04-7.0'-8.0'	8.0	V	3.4	1.61	2.63	38.8	33.3	14.3	5550
OT071-SB04-10.0'-11.0'	10.4	V	1.7	1.58	2.61	39.7	37.1	6.6	17200
OT071-SB05-7.0'-8.0'	7.3	V	6.1	1.47	2.64	44.5	35.6	20.0	10400
OT071-SB05-10.0'-12.0'	11.2	V	2.8	1.48	2.62	43.7	39.7	9.3	17800
OT071-SB05-15.0'-16.0'	15.2	V	24.2	1.40	2.65	47.0	13.0	72.3	0.02
OT071-SB02-4'5.5"-5'7.5"	5.0	V	4.1	1.45	2.65	45.4	39.4	13.2	250
OT071-SB02-7.0'-8.0'	7.7	V	0.9	1.58	2.63	39.9	38.5	3.5	12400
OT071-SB02-10.0'-11'6"	11.1	V	3.1	1.58	2.63	39.9	34.9	12.5	4380

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
(3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc.
(4) Effective (Native) = With as-received pore fluids in place.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; Air = Nitrogen gas.

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

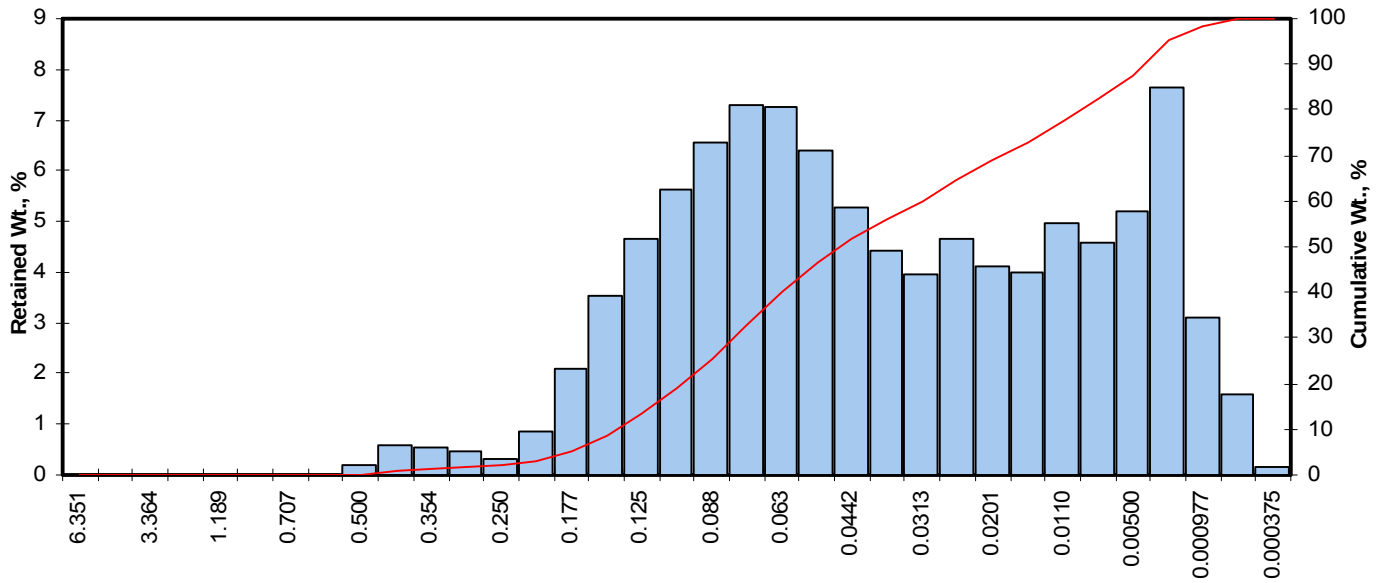
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
OT071-SB05-15.0-16.0	15.0	Silt	0.047	0.00	0.00	0.77	31.95	54.78	12.50	67.28

(1) Based on Mean from Trask

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB05-15.0-16.0
Project No:	145981	**Depth, ft:**	15.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.01	0.01	0.01
0.0197	0.500	1.00	35	0.18	0.18	0.19
0.0166	0.420	1.25	40	0.58	0.58	0.77
0.0139	0.354	1.50	45	0.56	0.56	1.33
0.0117	0.297	1.75	50	0.48	0.48	1.81
0.0098	0.250	2.00	60	0.31	0.31	2.12
0.0083	0.210	2.25	70	0.85	0.85	2.97
0.0070	0.177	2.50	80	2.09	2.09	5.06
0.0059	0.149	2.75	100	3.54	3.54	8.60
0.0049	0.125	3.00	120	4.65	4.65	13.25
0.0041	0.105	3.25	140	5.61	5.61	18.87
0.0035	0.088	3.50	170	6.57	6.57	25.44
0.0029	0.074	3.75	200	7.28	7.28	32.72
0.0025	0.063	4.00	230	7.26	7.26	39.99
0.0021	0.053	4.25	270	6.40	6.40	46.39
0.00174	0.0442	4.50	325	5.26	5.26	51.65
0.00146	0.0372	4.75	400	4.41	4.41	56.06
0.00123	0.0313	5.00	450	3.97	3.97	60.03
0.000986	0.0250	5.32	500	4.66	4.66	64.70
0.000790	0.0201	5.64	635	4.11	4.11	68.81
0.000615	0.0156	6.00		3.98	3.98	72.79
0.000435	0.0110	6.50		4.95	4.95	77.74
0.000308	0.00781	7.00		4.56	4.56	82.30
0.000197	0.00500	7.65		5.20	5.20	87.50
0.000077	0.00195	9.00		7.64	7.64	95.15
0.000038	0.000977	10.00		3.10	3.10	98.25
0.000019	0.000488	11.00		1.59	1.59	99.84
0.000015	0.000375	11.38		0.16	0.16	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than

Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.49	0.0070	0.178
10	2.83	0.0056	0.141
16	3.12	0.0045	0.115
25	3.48	0.0035	0.089
40	4.00	0.0025	0.062
50	4.42	0.0018	0.047
60	5.00	0.0012	0.031
75	6.22	0.0005	0.013
84	7.21	0.0003	0.007
90	8.09	0.0001	0.004
95	8.97	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.42	4.42	4.42
Median, in.	0.0018	0.0018	0.0018
Median, mm	0.047	0.047	0.047
Mean, phi	4.28	5.17	4.92
Mean, in.	0.0020	0.0011	0.0013
Mean, mm	0.051	0.028	0.033
Sorting	2.585	2.044	2.004
Skewness	0.741	0.364	0.385
Kurtosis	0.277	0.585	0.969

Grain Size Description (ASTM-USCS Scale)	Silt (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.77
Fine Sand	200	31.95
Silt	>0.005 mm	54.78
Clay	<0.005 mm	12.50
	Total	**100**

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

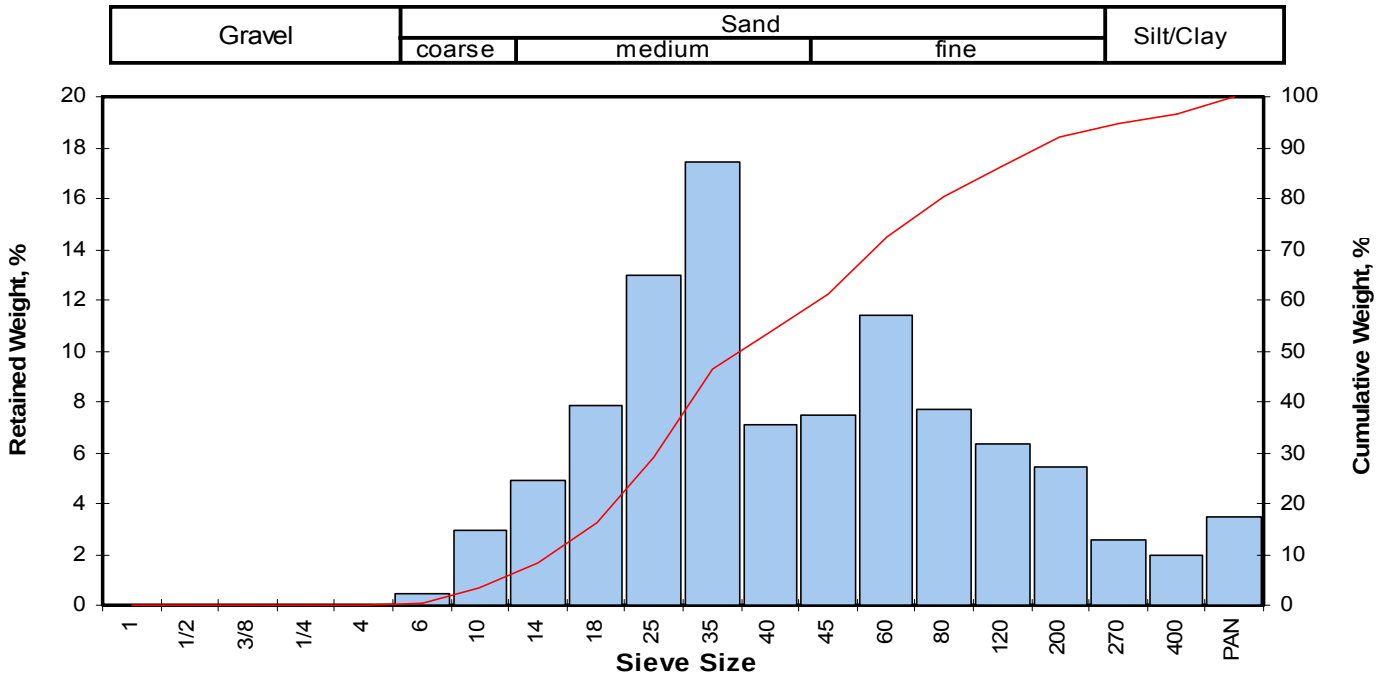
Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
OT071-SB04-2'8"-3'8"	3.1	Medium sand	0.460	0.00	3.40	50.27	38.37	7.96
OT071-SB04-7.0'-8.0'	7.8	Medium sand	0.625	8.12	11.68	41.72	31.63	6.84
OT071-SB04-10.0'-11.0'	10.2	Medium sand	0.955	6.28	12.62	58.56	19.14	3.41
OT071-SB05-7.0'-8.0'	7.5	Medium sand	0.418	0.36	1.83	47.55	45.70	4.56
OT071-SB05-10.0'-12.0'	11.0	Medium sand	0.874	4.39	11.46	63.13	17.74	3.28
OT071-SB02-4'5.5"-5'7.5"	5.1	Medium sand	0.359	3.48	12.72	31.11	25.37	27.32
OT071-SB02-7.0'-8.0'	7.5	Medium sand	1.106	2.00	22.35	54.90	18.41	2.34
OT071-SB02-10.0'-11'6"	10.9	Medium sand	1.189	10.50	19.48	47.16	18.74	4.11

(1) Based on Mean fromTrask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB04-2'8"-3'8"
Project No:	145981	**Depth, ft:**	3.1



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.65	0.46	0.46
0.0787	2.000	-1.00	10	4.14	2.94	3.40
0.0557	1.414	-0.50	14	6.89	4.89	8.29
0.0394	1.000	0.00	18	11.08	7.86	16.15
0.0278	0.707	0.50	25	18.26	12.96	29.11
0.0197	0.500	1.00	35	24.58	17.44	46.55
0.0166	0.420	1.25	40	10.03	7.12	53.67
0.0139	0.354	1.50	45	10.57	7.50	61.17
0.0098	0.250	2.00	60	16.05	11.39	72.56
0.0070	0.177	2.50	80	10.85	7.70	80.26
0.0049	0.125	3.00	120	8.90	6.32	86.57
0.0029	0.074	3.75	200	7.70	5.46	92.04
0.0021	0.053	4.25	270	3.64	2.58	94.62
0.0015	0.037	4.75	400	2.73	1.94	96.56
			PAN	4.85	3.44	100.00
TOTALS				140.92	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.84	0.0703	1.785
10	-0.39	0.0516	1.311
16	-0.01	0.0396	1.007
25	0.34	0.0311	0.789
40	0.81	0.0224	0.570
50	1.12	0.0181	0.460
60	1.46	0.0143	0.363
75	2.16	0.0088	0.224
84	2.80	0.0057	0.144
90	3.47	0.0036	0.090
95	4.35	0.0019	0.049

Measure	Trask	Inman	Folk-Ward
Median, phi	1.12	1.12	1.12
Median, in.	0.0181	0.0181	0.0181
Median, mm	0.460	0.460	0.460
Mean, phi	0.98	1.39	1.30
Mean, in.	0.0199	0.0150	0.0160
Mean, mm	0.507	0.381	0.405
Sorting	1.877	1.403	1.487
Skewness	0.915	0.194	0.219
Kurtosis	0.231	0.848	1.169
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

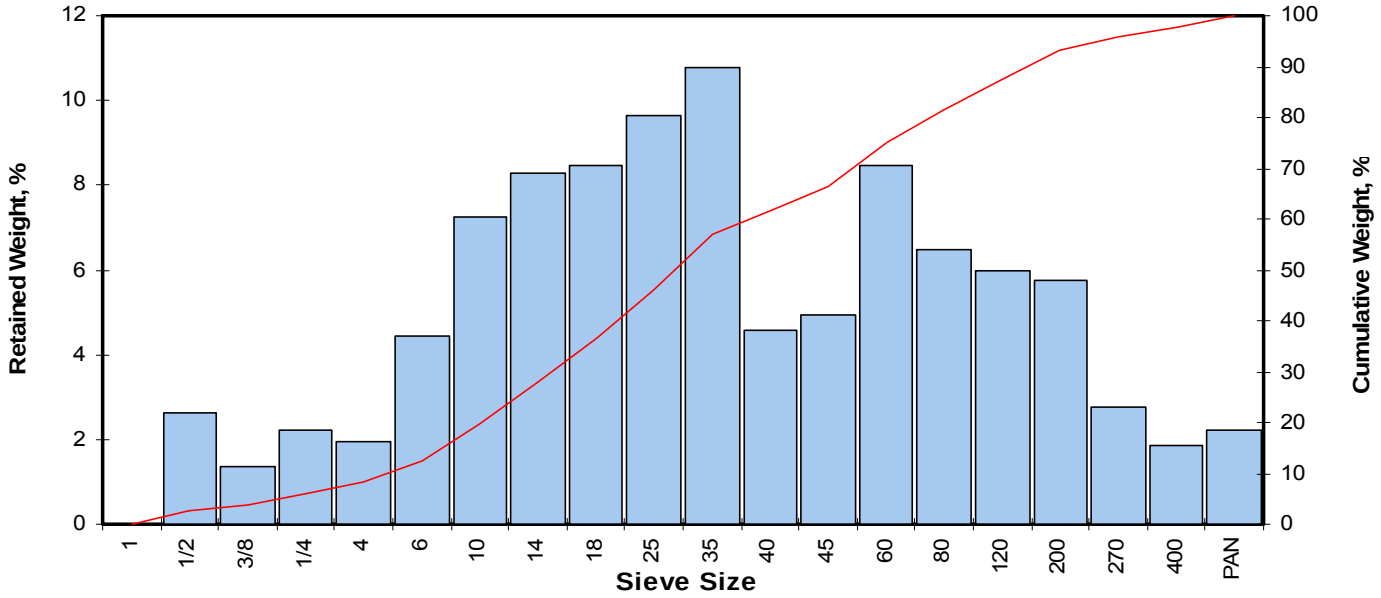
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	3.40
Medium Sand	40	50.27
Fine Sand	200	38.37
Silt/Clay	<200	7.96
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB04-7.0'-8.0'
Project No:	145981	**Depth, ft:**	7.8

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	4.46	2.61	2.61
0.3740	9.500	-3.25	3/8	2.29	1.34	3.95
0.2500	6.351	-2.67	1/4	3.75	2.20	6.15
0.1873	4.757	-2.25	4	3.36	1.97	8.12
0.1324	3.364	-1.75	6	7.56	4.43	12.55
0.0787	2.000	-1.00	10	12.38	7.25	19.80
0.0557	1.414	-0.50	14	14.16	8.30	28.10
0.0394	1.000	0.00	18	14.43	8.45	36.55
0.0278	0.707	0.50	25	16.44	9.63	46.18
0.0197	0.500	1.00	35	18.37	10.76	56.95
0.0166	0.420	1.25	40	7.82	4.58	61.53
0.0139	0.354	1.50	45	8.41	4.93	66.45
0.0098	0.250	2.00	60	14.49	8.49	74.94
0.0070	0.177	2.50	80	11.08	6.49	81.43
0.0049	0.125	3.00	120	10.23	5.99	87.43
0.0029	0.074	3.75	200	9.78	5.73	93.16
0.0021	0.053	4.25	270	4.71	2.76	95.92
0.0015	0.037	4.75	400	3.18	1.86	97.78
			PAN	3.79	2.22	100.00
TOTALS				170.69	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-2.97	0.3088	7.844
10	-2.04	0.1617	4.106
16	-1.39	0.1034	2.627
25	-0.69	0.0634	1.610
40	0.18	0.0348	0.883
50	0.68	0.0246	0.625
60	1.17	0.0175	0.445
75	2.00	0.0098	0.249
84	2.71	0.0060	0.152
90	3.34	0.0039	0.099
95	4.08	0.0023	0.059

Measure	Trask	Inman	Folk-Ward
Median, phi	0.68	0.68	0.68
Median, in.	0.0246	0.0246	0.0246
Median, mm	0.625	0.625	0.625
Mean, phi	0.11	0.66	0.67
Mean, in.	0.0366	0.0249	0.0248
Mean, mm	0.929	0.633	0.630
Sorting	2.541	2.054	2.096
Skewness	1.013	-0.008	-0.021
Kurtosis	0.170	0.718	1.074

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	8.12
Coarse Sand	10	11.68
Medium Sand	40	41.72
Fine Sand	200	31.63
Silt/Clay	<200	6.84
	Total	100

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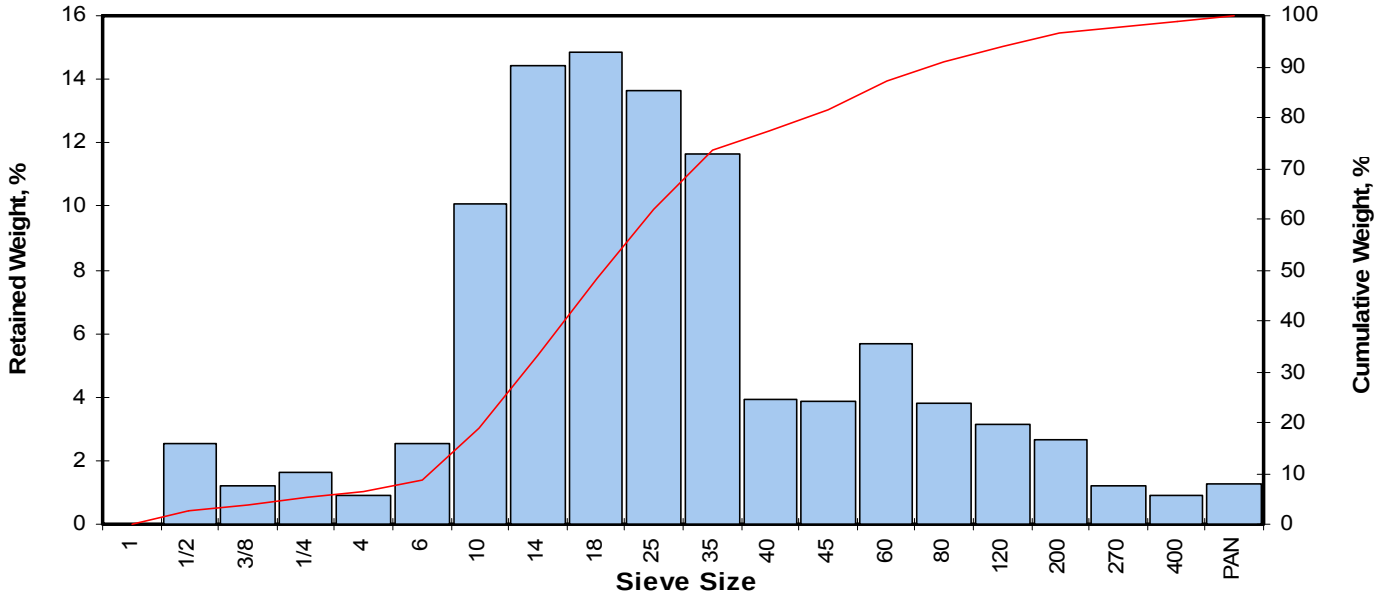
Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB04-10.0'-11.0'
Project No:	145981	**Depth, ft:**	10.2

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	4.30	2.53	2.53
0.3740	9.500	-3.25	3/8	2.08	1.22	3.75
0.2500	6.351	-2.67	1/4	2.80	1.65	5.40
0.1873	4.757	-2.25	4	1.49	0.88	6.28
0.1324	3.364	-1.75	6	4.31	2.54	8.81
0.0787	2.000	-1.00	10	17.13	10.08	18.89
0.0557	1.414	-0.50	14	24.52	14.43	33.32
0.0394	1.000	0.00	18	25.23	14.85	48.17
0.0278	0.707	0.50	25	23.23	13.67	61.84
0.0197	0.500	1.00	35	19.83	11.67	73.51
0.0166	0.420	1.25	40	6.70	3.94	77.45
0.0139	0.354	1.50	45	6.58	3.87	81.32
0.0098	0.250	2.00	60	9.62	5.66	86.98
0.0070	0.177	2.50	80	6.50	3.82	90.81
0.0049	0.125	3.00	120	5.34	3.14	93.95
0.0029	0.074	3.75	200	4.49	2.64	96.59
0.0021	0.053	4.25	270	2.08	1.22	97.82
0.0015	0.037	4.75	400	1.54	0.91	98.72
			PAN	2.17	1.28	100.00
TOTALS				169.94	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-2.81	0.2759	7.007
10	-1.66	0.1246	3.164
16	-1.22	0.0914	2.322
25	-0.79	0.0680	1.727
40	-0.28	0.0476	1.210
50	0.07	0.0376	0.955
60	0.43	0.0292	0.741
75	1.09	0.0184	0.468
84	1.74	0.0118	0.300
90	2.39	0.0075	0.190
95	3.30	0.0040	0.102

Measure	Trask	Inman	Folk-Ward
Median, phi	0.07	0.07	0.07
Median, in.	0.0376	0.0376	0.0376
Median, mm	0.955	0.955	0.955
Mean, phi	-0.13	0.26	0.20
Mean, in.	0.0432	0.0329	0.0344
Mean, mm	1.098	0.835	0.873
Sorting	1.921	1.476	1.663
Skewness	0.942	0.131	0.095
Kurtosis	0.212	1.069	1.329

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	6.28
Coarse Sand	10	12.62
Medium Sand	40	58.56
Fine Sand	200	19.14
Silt/Clay	<200	3.41
	Total	100

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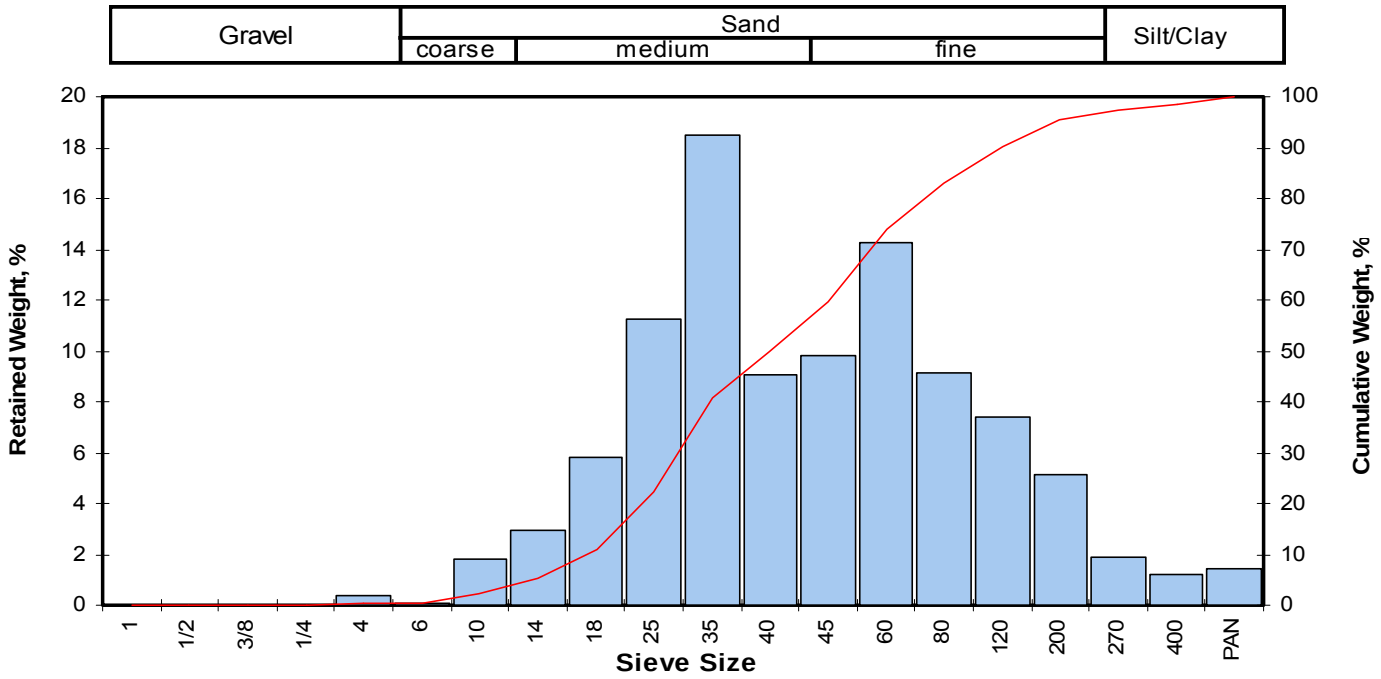
Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB05-7.0'-8.0'
Project No:	145981	**Depth, ft:**	7.5



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.45	0.36	0.36
0.1324	3.364	-1.75	6	0.07	0.06	0.41
0.0787	2.000	-1.00	10	2.24	1.78	2.19
0.0557	1.414	-0.50	14	3.69	2.93	5.12
0.0394	1.000	0.00	18	7.29	5.79	10.91
0.0278	0.707	0.50	25	14.17	11.25	22.16
0.0197	0.500	1.00	35	23.29	18.50	40.66
0.0166	0.420	1.25	40	11.43	9.08	49.74
0.0139	0.354	1.50	45	12.31	9.78	59.51
0.0098	0.250	2.00	60	17.99	14.29	73.80
0.0070	0.177	2.50	80	11.48	9.12	82.92
0.0049	0.125	3.00	120	9.31	7.39	90.31
0.0029	0.074	3.75	200	6.46	5.13	95.44
0.0021	0.053	4.25	270	2.41	1.91	97.36
0.0015	0.037	4.75	400	1.48	1.18	98.53
			PAN	1.85	1.47	100.00
TOTALS				125.92	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.52	0.0565	1.435
10	-0.08	0.0416	1.056
16	0.23	0.0337	0.855
25	0.58	0.0264	0.671
40	0.98	0.0199	0.506
50	1.26	0.0165	0.418
60	1.52	0.0138	0.349
75	2.07	0.0094	0.239
84	2.57	0.0066	0.168
90	2.98	0.0050	0.127
95	3.69	0.0031	0.078

Measure	Trask	Inman	Folk-Ward
Median, phi	1.26	1.26	1.26
Median, in.	0.0165	0.0165	0.0165
Median, mm	0.418	0.418	0.418
Mean, phi	1.14	1.40	1.35
Mean, in.	0.0179	0.0149	0.0154
Mean, mm	0.455	0.379	0.392
Sorting	1.675	1.174	1.224
Skewness	0.956	0.122	0.138
Kurtosis	0.232	0.792	1.158

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

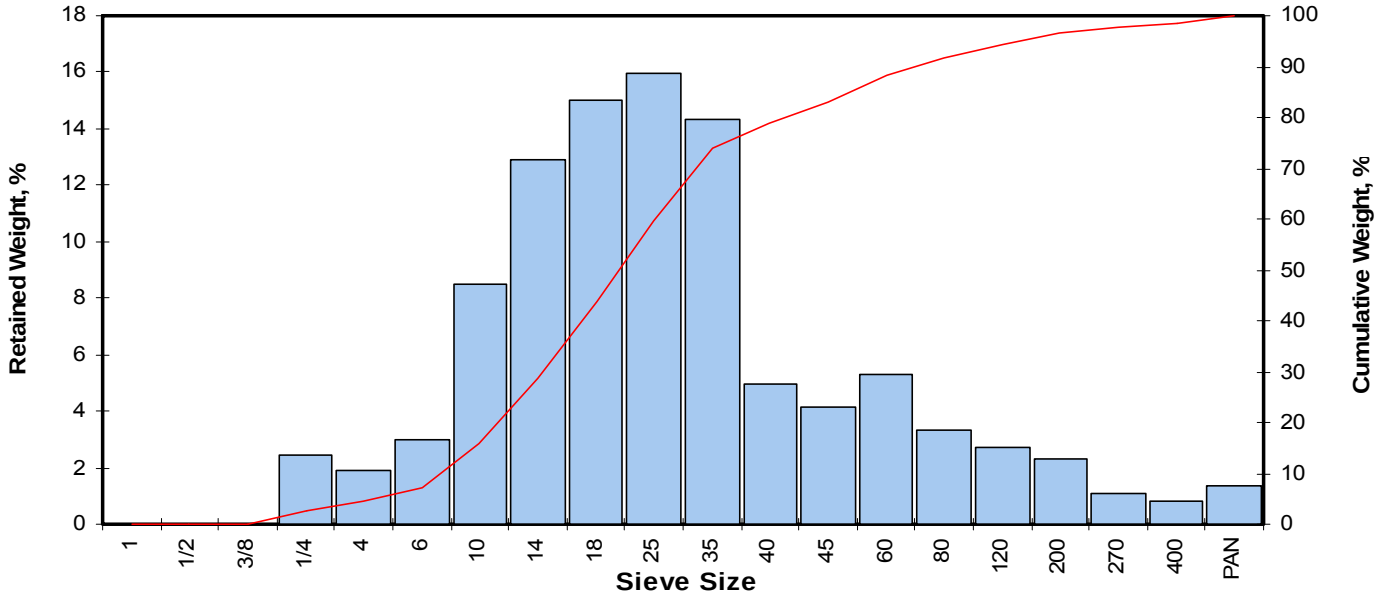
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.36
Coarse Sand	10	1.83
Medium Sand	40	47.55
Fine Sand	200	45.70
Silt/Clay	<200	4.56
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB05-10.0'-12.0'
Project No:	145981	**Depth, ft:**	11.0

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	4.70	2.46	2.46
0.1873	4.757	-2.25	4	3.68	1.93	4.39
0.1324	3.364	-1.75	6	5.64	2.96	7.35
0.0787	2.000	-1.00	10	16.23	8.51	15.85
0.0557	1.414	-0.50	14	24.63	12.91	28.76
0.0394	1.000	0.00	18	28.70	15.04	43.80
0.0278	0.707	0.50	25	30.44	15.95	59.75
0.0197	0.500	1.00	35	27.29	14.30	74.05
0.0166	0.420	1.25	40	9.40	4.93	78.98
0.0139	0.354	1.50	45	7.92	4.15	83.13
0.0098	0.250	2.00	60	10.05	5.27	88.40
0.0070	0.177	2.50	80	6.32	3.31	91.71
0.0049	0.125	3.00	120	5.20	2.73	94.43
0.0029	0.074	3.75	200	4.37	2.29	96.72
0.0021	0.053	4.25	270	2.06	1.08	97.80
0.0015	0.037	4.75	400	1.56	0.82	98.62
			PAN	2.63	1.38	100.00
TOTALS				190.82	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-2.15	0.1744	4.429
10	-1.52	0.1126	2.860
16	-0.99	0.0784	1.992
25	-0.65	0.0616	1.564
40	-0.13	0.0430	1.092
50	0.19	0.0344	0.874
60	0.51	0.0277	0.703
75	1.05	0.0190	0.484
84	1.58	0.0131	0.334
90	2.24	0.0083	0.211
95	3.19	0.0043	0.110

Measure	Trask	Inman	Folk-Ward
Median, phi	0.19	0.19	0.19
Median, in.	0.0344	0.0344	0.0344
Median, mm	0.874	0.874	0.874
Mean, phi	-0.03	0.29	0.26
Mean, in.	0.0403	0.0321	0.0329
Mean, mm	1.024	0.816	0.835
Sorting	1.799	1.288	1.452
Skewness	0.995	0.077	0.100
Kurtosis	0.204	1.069	1.290

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.39
Coarse Sand	10	11.46
Medium Sand	40	63.13
Fine Sand	200	17.74
Silt/Clay	<200	3.28
	Total	100

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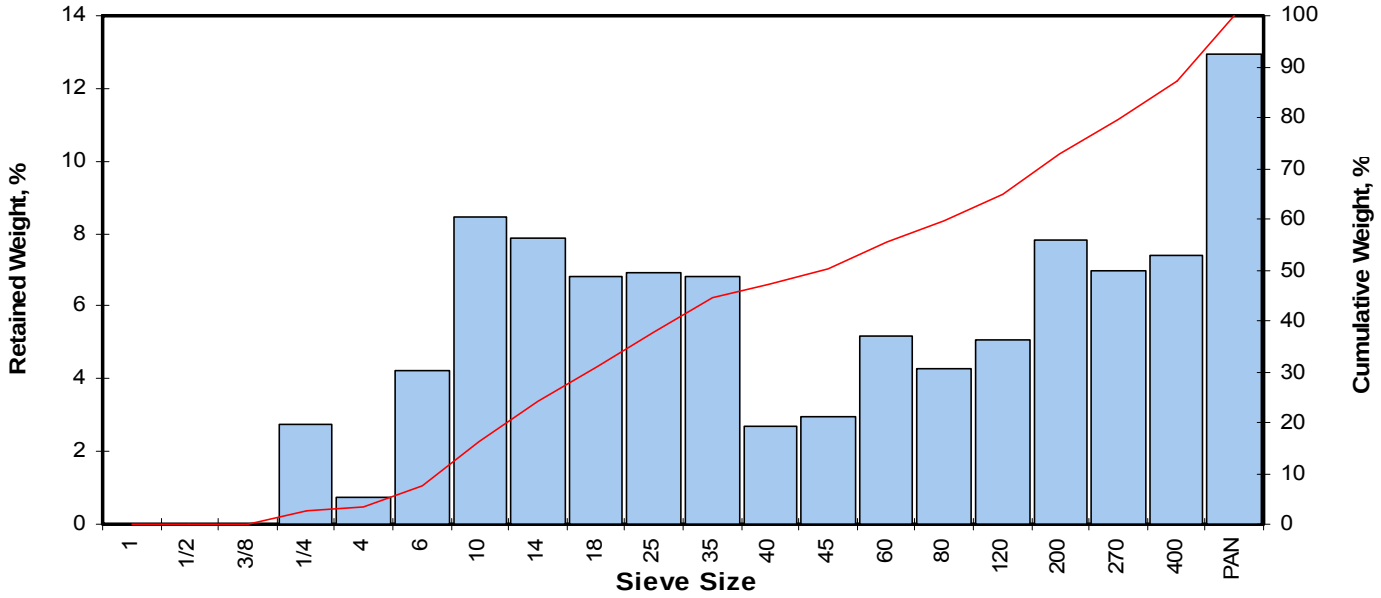
Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB02-4'5.5"-5'7.5"
Project No:	145981	**Depth, ft:**	5.1

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	2.24	2.75	2.75
0.1873	4.757	-2.25	4	0.59	0.72	3.48
0.1324	3.364	-1.75	6	3.46	4.25	7.73
0.0787	2.000	-1.00	10	6.90	8.47	16.20
0.0557	1.414	-0.50	14	6.40	7.86	24.06
0.0394	1.000	0.00	18	5.53	6.79	30.85
0.0278	0.707	0.50	25	5.63	6.91	37.77
0.0197	0.500	1.00	35	5.56	6.83	44.60
0.0166	0.420	1.25	40	2.21	2.71	47.31
0.0139	0.354	1.50	45	2.42	2.97	50.28
0.0098	0.250	2.00	60	4.22	5.18	55.47
0.0070	0.177	2.50	80	3.49	4.29	59.75
0.0049	0.125	3.00	120	4.15	5.10	64.85
0.0029	0.074	3.75	200	6.38	7.84	72.68
0.0021	0.053	4.25	270	5.66	6.95	79.64
0.0015	0.037	4.75	400	6.04	7.42	87.05
			PAN	10.54	12.95	100.00
TOTALS				81.42	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-2.07	0.1654	4.201
10	-1.55	0.1152	2.926
16	-1.02	0.0797	2.025
25	-0.43	0.0531	1.348
40	0.66	0.0249	0.631
50	1.48	0.0142	0.359
60	2.52	0.0068	0.174
75	3.92	0.0026	0.066
84	4.54	0.0017	0.043
90			
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	1.48	1.48	1.48
Median, in.	0.0142	0.0142	0.0142
Median, mm	0.359	0.359	0.359
Mean, phi	0.50	1.76	1.67
Mean, in.	0.0278	0.0116	0.0124
Mean, mm	0.707	0.295	0.315
Sorting	4.512	2.781	
Skewness	0.831	0.103	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

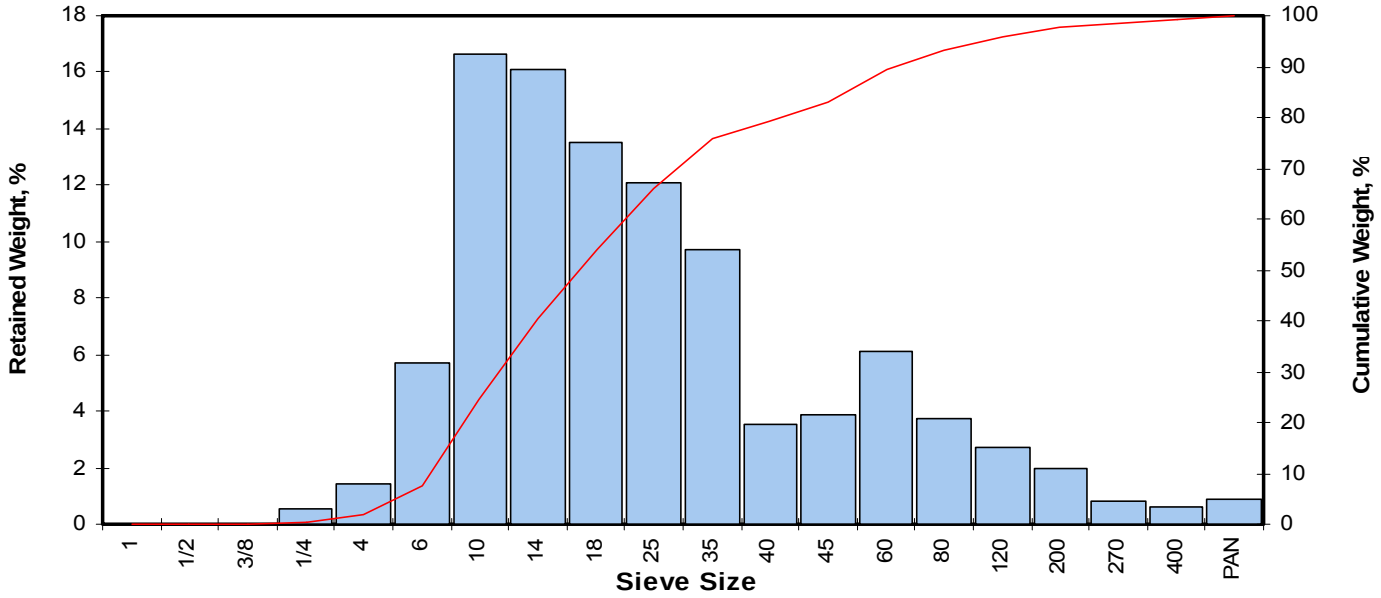
Description	Retained on Sieve #	Weight Percent
Gravel	4	3.48
Coarse Sand	10	12.72
Medium Sand	40	31.11
Fine Sand	200	25.37
Silt/Clay	<200	27.32
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB02-7.0'-8.0'
Project No:	145981	**Depth, ft:**	7.5

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.62	0.55	0.55
0.1873	4.757	-2.25	4	1.62	1.44	2.00
0.1324	3.364	-1.75	6	6.39	5.70	7.69
0.0787	2.000	-1.00	10	18.68	16.65	24.35
0.0557	1.414	-0.50	14	18.04	16.08	40.43
0.0394	1.000	0.00	18	15.14	13.50	53.93
0.0278	0.707	0.50	25	13.54	12.07	66.00
0.0197	0.500	1.00	35	10.92	9.74	75.74
0.0166	0.420	1.25	40	3.94	3.51	79.25
0.0139	0.354	1.50	45	4.37	3.90	83.15
0.0098	0.250	2.00	60	6.87	6.13	89.27
0.0070	0.177	2.50	80	4.22	3.76	93.04
0.0049	0.125	3.00	120	3.01	2.68	95.72
0.0029	0.074	3.75	200	2.18	1.94	97.66
0.0021	0.053	4.25	270	0.94	0.84	98.50
0.0015	0.037	4.75	400	0.71	0.63	99.14
			PAN	0.97	0.86	100.00
TOTALS				112.16	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.99	0.1560	3.963
10	-1.65	0.1232	3.130
16	-1.38	0.1022	2.595
25	-0.98	0.0776	1.972
40	-0.51	0.0562	1.427
50	-0.15	0.0436	1.106
60	0.25	0.0331	0.840
75	0.96	0.0202	0.513
84	1.57	0.0133	0.337
90	2.10	0.0092	0.234
95	2.87	0.0054	0.137

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.15	-0.15	-0.15
Median, in.	0.0436	0.0436	0.0436
Median, mm	1.106	1.106	1.106
Mean, phi	-0.31	0.10	0.02
Mean, in.	0.0489	0.0368	0.0389
Mean, mm	1.243	0.935	0.989
Sorting	1.960	1.473	1.472
Skewness	0.910	0.165	0.203
Kurtosis	0.252	0.647	1.024

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

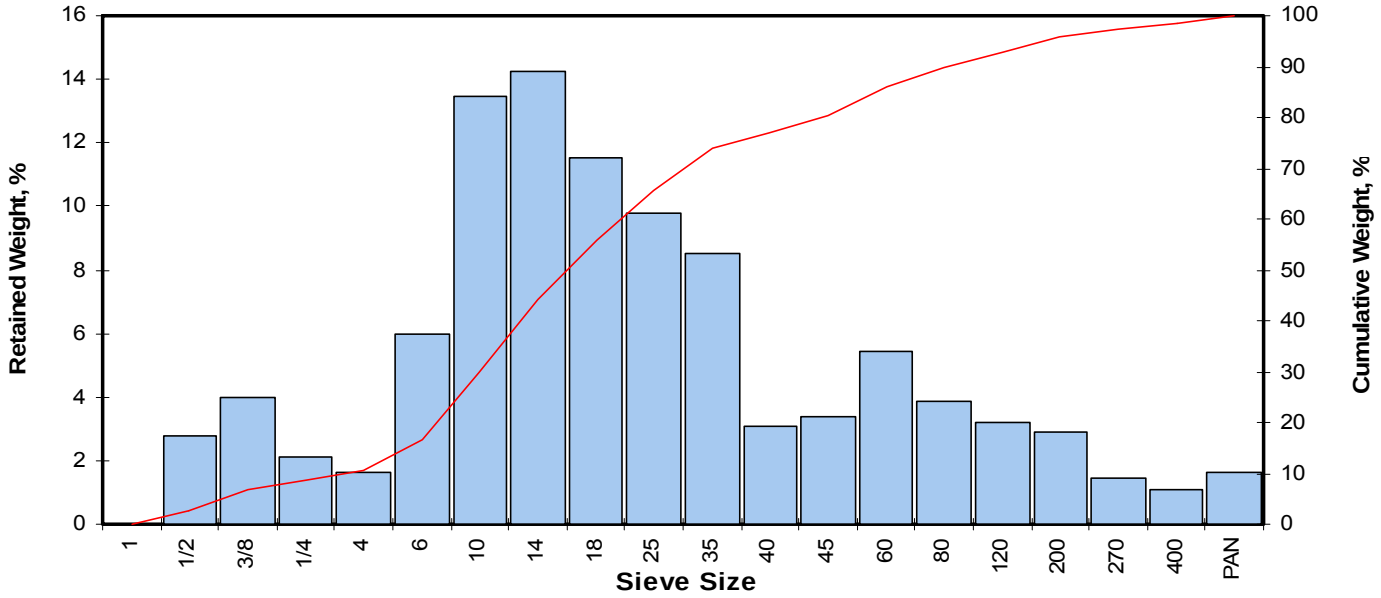
Description	Retained on Sieve #	Weight Percent
Gravel	4	2.00
Coarse Sand	10	22.35
Medium Sand	40	54.90
Fine Sand	200	18.41
Silt/Clay	<200	2.34
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46306
Project:	Former George AFB, California	**Sample ID:**	OT071-SB02-10.0'-11'6"
Project No:	145981	**Depth, ft:**	10.9

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	3.43	2.79	2.79
0.3740	9.500	-3.25	3/8	4.88	3.97	6.76
0.2500	6.351	-2.67	1/4	2.58	2.10	8.86
0.1873	4.757	-2.25	4	2.01	1.64	10.50
0.1324	3.364	-1.75	6	7.37	6.00	16.50
0.0787	2.000	-1.00	10	16.57	13.49	29.98
0.0557	1.414	-0.50	14	17.50	14.24	44.23
0.0394	1.000	0.00	18	14.17	11.53	55.76
0.0278	0.707	0.50	25	12.04	9.80	65.56
0.0197	0.500	1.00	35	10.43	8.49	74.05
0.0166	0.420	1.25	40	3.81	3.10	77.15
0.0139	0.354	1.50	45	4.13	3.36	80.51
0.0098	0.250	2.00	60	6.65	5.41	85.92
0.0070	0.177	2.50	80	4.73	3.85	89.77
0.0049	0.125	3.00	120	3.93	3.20	92.97
0.0029	0.074	3.75	200	3.59	2.92	95.89
0.0021	0.053	4.25	270	1.77	1.44	97.33
0.0015	0.037	4.75	400	1.30	1.06	98.39
			PAN	1.98	1.61	100.00
TOTALS				122.87	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-3.42	0.4225	10.732
10	-2.38	0.2045	5.195
16	-1.79	0.1363	3.462
25	-1.28	0.0954	2.424
40	-0.65	0.0617	1.567
50	-0.25	0.0468	1.189
60	0.22	0.0339	0.861
75	1.08	0.0187	0.474
84	1.82	0.0111	0.283
90	2.54	0.0068	0.172
95	3.52	0.0034	0.087

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.25	-0.25	-0.25
Median, in.	0.0468	0.0468	0.0468
Median, mm	1.189	1.189	1.189
Mean, phi	-0.53	0.02	-0.07
Mean, in.	0.0570	0.0389	0.0414
Mean, mm	1.449	0.989	1.052
Sorting	2.261	1.807	1.956
Skewness	0.902	0.147	0.116
Kurtosis	0.194	0.922	1.209

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	10.50
Coarse Sand	10	19.48
Medium Sand	40	47.16
Fine Sand	200	18.74
Silt/Clay	<200	4.11
	Total	100

PTS Laboratories

PTS File No: 46306
Client: CB&I Federal Services, LLC
Report Date: 08/09/16

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: Former George AFB, California
Project No: 145981

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
OT071-SB04-2'8"-3'8"	3.3	20160808	1250	SOIL	880	8.80E-04
OT071-SB04-7.0'-8.0'	7.6	20160808	1250	SOIL	700	7.00E-04
OT071-SB04-10.0'-11.0'	10.6	20160808	1250	SOIL	230	2.30E-04
OT071-SB05-7.0'-8.0'	7.7	20160808	1250	SOIL	320	3.20E-04
OT071-SB05-10.0'-12.0'	10.8	20160808	1250	SOIL	320	3.20E-04
OT071-SB05-15.0'-16.0'	15.4	20160808	1250	SOIL	420	4.20E-04
OT071-SB02-4'5.5"-5'7.5"	5.3	20160808	1250	SOIL	790	7.90E-04
OT071-SB02-7.0'-8.0'	7.3	20160808	1250	SOIL	710	7.10E-04
OT071-SB02-10.0'-11'6"	10.7	20160808	1250	SOIL	320	3.20E-04
Blank	N/A	20160808	1250	BLANK	ND	ND
SRM D090-542	N/A	20160808	1250	SRM	6120	6.12E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg Lower	Upper
SRM D090-542	105	75-125	5820	4365	7275

ND = Not Detected

CHAIN OF CUSTODY

Ref. Document # OT071-051616-08

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: Tim Roth 865.560.7917
(Name & phone #)

Send Report To: Tim Roth
Phone/Fax Number: 865.560.7917
Address: 2410 Cherahala Blvd.
City: Knoxville, TN 37932

Project Number: 145981
Project Name / Location: Former George AFB, California
Project Manager: Mr. David Daftary
Purchase Order #:
Shipment Date: 5/17/2016
Waybill/Airbill Number: Courier
Lab Destination: PTS Laboratories, Inc.
Address: 8100 Secura Way
City: Santa Fe Springs, CA 90670
Lab Contact Name / ph. #: Michael Mark Brady, 562.347.2602

Sampler's Name(s): Carl Lind

Sample ID Number	Sample Description	Collection Information Date	Time	G / C	Matrix	# of containers	Preservative HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Soil Properties Package (Vadose Zone) – native permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation by methods API RP40 and ASTM D2216 (1 x 12 in Acetate Sleeve)	Grain-size analysis by Laser Particle Size Analyzer by ASTM D4464 (1 x 12 in Acetate Sleeve)	Full-scale Digital Core Photography by ASTM D5079 (1 x 12 in Acetate Sleeve)	TOC by Walkley-Black Method (1 x 12 in Acetate Sleeve)			Turn Around Time Requested
OT071-00013	OT071-SB04 - 2'	05/16/16	9:14	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00014	OT071-SB04 - 4'	05/16/16	9:09	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00015	OT071-SB04 - 7'	05/16/16	8:45	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00016	OT071-SB04 - 10'	05/16/16	9:20	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00017	OT071-SB04 - 15'	05/16/16	9:27	G	SO	1					X		Hold	Hold	X	Hold			21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:
I II III IV

Project Specific: Level IV Hardcopy
Envirodata EDD

Relinquished By:	Date: 5-17-16 Time: 0930	Received By:	Date: 5-17-16 Time: 0930
Relinquished By:	Date: Time:	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By:	Date: Time:

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

CHAIN OF CUSTODY

Ref. Document # OT071-051616-08

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: Tim Roth 865.560.7917
(Name & phone #)

Send Report To: Tim Roth
Phone/Fax Number: 865.560.7917
Address: 2410 Cherahala Blvd.
City: Knoxville, TN 37932

Project Number: 145981
Project Name / Location: Former George AFB, California
Project Manager: Mr. David Daftary
Purchase Order #:
Shipment Date: 5/17/2016
Waybill/Airbill Number: Courier
Lab Destination: PTS Laboratories, Inc.
Address: 8100 Secura Way
City: Santa Fe Springs, CA 90670
Lab Contact Name / ph. #: Michael Mark Brady, 562.347.2502

Sampler's Name(s): Carl Lind

Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Soil Properties Package (Vadose Zone) – native permeability to air, total porosity, air-filled porosity, grain and bulk density moisture content, total pore fluid saturation by methods API RP40 and ASTM D2216 (1 x 12 in Acetate Sleeve)	Grain-size analysis by Laser Particle Size Analyzer by ASTM D4464 (1 x 12 in Acetate Sleeve)	Full-scale Digital Core Photography by ASTM D5079 (1 x 12 in Acetate Sleeve)	TOC by Walkley-Black Method (1 x 12 in Acetate Sleeve)			Turn Around Time Requested
~~OT071-00018~~	~~OT071-SB05 - 2'~~	~~05/16/16~~	~~10:40~~	~~G~~	~~SO~~	~~1~~					~~X~~		~~Hold~~	~~Hold~~	~~X~~	~~Hold~~			~~21~~
~~OT071-00019~~	~~OT071-SB05 - 4'~~	~~05/16/16~~	~~10:45~~	~~G~~	~~SO~~	~~1~~					~~X~~		~~Hold~~	~~Hold~~	~~X~~	~~Hold~~			~~21~~
~~OT071-00020~~	~~OT071-SB05 - 4'~~	~~05/16/16~~	~~10:45~~	~~G~~	~~SO~~	~~1~~					~~X~~		~~Hold~~	~~Hold~~	~~X~~	~~Hold~~			~~21~~
OT071-00021	OT071-SB05 - 7'	05/16/16	10:55	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00022	OT071-SB05 - 10'	05/16/16	11:00	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00023	OT071-SB05 - 15'	05/16/16	11:05	G	SO	1					X		Hold	Hold	X	Hold			21

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:

I II III **IV** Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Carl Lind	5-17-16	0930	[illegible]	5-17-16	0930

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

Opened / Logged / Analyst. Sample
AR # 564580
MS/MSD
5/17/16

George AR # 564580

Cancel Geotech Analysis - Sample
B & FD TRL 7-1-16

CHAIN OF CUSTODY

Ref. Document # OT071-051616-08

Page 3 of 3

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: *Tim Roth 865.560.7917* (Name & phone #)

Send Report To: *Tim Roth*
Phone/Fax Number: *865.560.7917*
Address: *2410 Cherahala Blvd.*
City: *Knoxville, TN 37932*

Project Number: *145981*
Project Name / Location: *Former George AFB, California*
Project Manager: *Mr. David Daftary*
Purchase Order #:
Shipment Date: 5/17/2016
Waybill/Airbill Number: *Courier*
Lab Destination: *PTS Laboratories, Inc.*
Address: *8100 Secura Way*
City: *Santa Fe Springs, CA 90670*
Lab Contact Name / ph. #: *Michael Mark Brady, 562.347.2502*

Sampler's Name(s): Carl Lind

Sample ID Number	Sample Description	Collection Information: Date	Time	G / C	Matrix	# of containers	Preservative: HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Analyses Requested: Soil Properties Package (Vadose Zone) – native permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation by methods API RP40 and ASTM D2216 (1 x 12 In Acetate Sleeve)	Grain-size analysis by Laser Particle Size Analyzer by ASTM D4464 (1 x 12 In Acetate Sleeve)	Full-scale Digital Core Photography by ASTM D5079 (1 x 12 In Acetate Sleeve)	TOC by Walkley-Black Method (1 x 12 In Acetate Sleeve)			Turn Around Time Requested
~~OT071-00001~~	~~OT071-SB02 - 2'~~	~~05/16/16~~	~~11:40~~	~~G~~	~~SO~~	~~1~~					~~X~~		~~Hold~~	~~Hold~~	~~X~~	~~Hold~~			~~21~~
~~OT071-00002~~	~~OT071-SB02 - 2'~~	~~05/16/16~~	~~11:40~~	~~G~~	~~SO~~	~~1~~					~~X~~		~~Hold~~	~~Hold~~	~~X~~	~~Hold~~			~~21~~
OT071-00003	OT071-SB02 - 4'	05/16/16	11:45	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00004	OT071-SB02 - 7'	05/16/16	11:50	G	SO	1					X		Hold	Hold	X	Hold			21
OT071-00005	OT071-SB02 - 10'	05/16/16	11:55	G	SO	1					X		Hold	Hold	X	Hold			21

Special Instructions: Envirodata EDD
21 Business Day TAT for Hardcopy
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required:
I II III **IV** Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Carl Lind	5-17-16	0930	[signature]	5-17-16	0930

G/C Codes
C = Composite G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

August 22, 2016

Tim Roth
CB&I Federal Services, LLC
2410 Cherahala Blvd.
Knoxville, TN 37932

Re: PTS File No: 46419
Physical Properties Data
Former George AFB, California; 145981

Dear Mr. Roth:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Former George AFB, California; 145981 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

Project Name: Former George AFB, California
Project Number: 145981

PTS File No: 46419
Client: CB&I Federal Services, LLC

TEST PROGRAM - 20160711

CBI SAMPLE ID NUMBER	Date	Time	Core Recovery ft.	Custom Core Photo	Grain Size Analyses	Soil Properties Pkg.	TOC/foc Walkley-Black		CBI Sample Description
			Plugs:	1/4:3/4	Grab	Vert. 1"	Grab		
Date Received: 20160711									
OT071-MW-159-92	5/17/16	0845	N/A	1	X	X	X		OT071-MW-159
OT071-MW-159-100	5/17/16	1030	N/A	1	X	X	X		OT071-MW-159
OT071-MW-163-111	5/17/16	1230	N/A	1	X	X	X		OT071-MW-163
OT071-MW-163-124	5/17/16	1500	N/A	1	X	X	X		OT071-MW-163
OT071-MW-160-33	5/26/16	1600	N/A	1	X	X	X		OT071-MW-160
OT071-MW-160-39	5/26/16	1615	N/A	1	X	X	X		OT071-MW-160
OT071-MW-160-164	6/02/16	0955	N/A	1	X	X	X		OT071-MW-160
OT071-MW-160-184	6/02/16	1230	N/A	1	X	X	X		OT071-MW-160
OT071-MW-161-210	6/16/16	0930	N/A	1	X	X	X		OT071-MW-161
OT071-MW-162-35	6/23/16	0900	N/A	1	X	X	X		OT071-MW-162
OT071-MW-162-188	6/24/16	1130	N/A	1	X	X	X		OT071-MW-162
OT071-MW-162-214	6/27/16	1000	N/A	1	X	X	X		OT071-MW-162
TOTALS:			12 Bags	12	12	12	12		12

Laboratory Test Program Notes
Contaminant identification: Dieldrin
Standard TAT for basic analysis is 15 business days.
Sample locations to be selected by CB&I personnel from core photography.
Grain Size Analysis: Laser method; includes tabular data, graphics and statistical sorting in Excel format.
Soil Properties Package: Native state permeability to air, total porosity, air-filled porosity, grain and bulk density, moisture content, total pore fluid saturation (water only).
Soil from areas under California Exterior Quarantine will be handled as regulated domestic quarantine soil.
Geologic samples are exempt from quarantine; soil lower boundary is set at 91 cm (3 ft depth).
Samples received in 1-gal. Ziploc bags. All twelve (12) samples are to be analyzed as listed on the COC per M. Unruh/CB&I 20160720.

PTS Laboratories

PTS File No: 46419
Client: CB&I Federal Services, LLC
Report Date: 08/22/16

PHYSICAL PROPERTIES DATA - SOIL PROPERTIES PACKAGE (VADOSE ZONE)

Project Name: Former George AFB, California
Project No: 145981

		METHODS:	API RP 40 / ASTM D2216	API RP 40		API RP 40		API RP 40	API RP 40
									25 PSI CONFINING STRESS
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	DENSITY		POROSITY, %Vb (2)		TOTAL PORE FLUID SATURATIONS (3), % Pv	EFFECTIVE PERMEABILITY TO AIR (4), millidarcy
				DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR-FILLED		
OT071-MW-159-92	N/A	R	18.9	1.45	2.65	45.2	17.8	60.6	83.7
OT071-MW-159-100	N/A	R	26.6	1.37	2.63	47.9	11.4	76.2	0.29
OT071-MW-163-111	N/A	R	23.1	1.40	2.65	47.1	14.6	68.9	52.7
OT071-MW-163-124	N/A	R	16.0	1.61	2.63	38.6	12.7	67.2	0.02
OT071-MW-160-33	N/A	R	1.0	1.67	2.63	36.3	34.7	4.4	19900
OT071-MW-160-39	N/A	R	13.4	1.60	2.64	39.3	17.7	54.9	10.3
OT071-MW-160-164	N/A	R	18.9	1.59	2.66	40.1	10.0	75.0	0.41
OT071-MW-160-184	N/A	R	19.2	1.57	2.63	40.2	10.0	75.2	0.03
OT071-MW-161-210	N/A	R	10.6	1.81	2.64	31.5	12.2	61.2	706
OT071-MW-162-35	N/A	R	1.0	1.74	2.63	33.8	32.2	4.9	655
OT071-MW-162-188	N/A	R	15.0	1.45	2.67	45.8	24.0	47.4	58.8
OT071-MW-162-214	N/A	R	9.1	1.70	2.65	35.9	20.5	42.8	649

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
(3) Fluid density used to calculate pore fluid saturations: Water = 0.9996 g/cc.
(4) Effective (Native) = With as-received pore fluids in place.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; Air = Nitrogen gas.

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

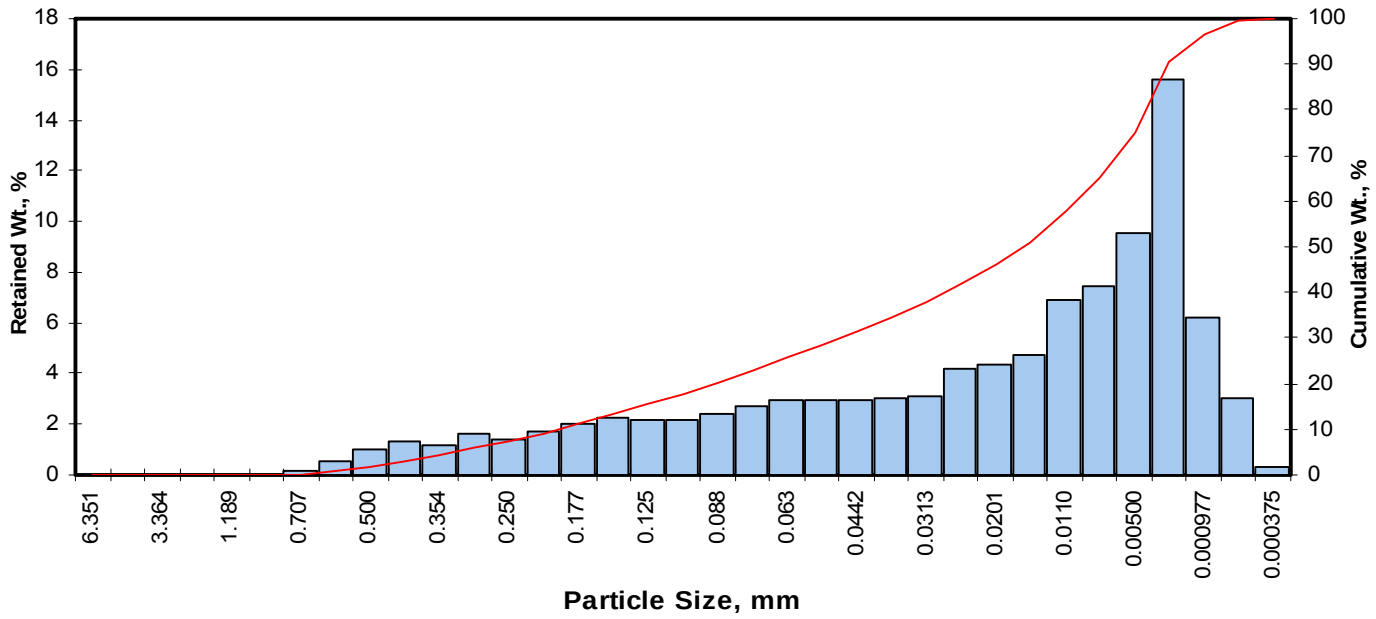
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
OT071-MW-159-92	N/A	Silt	0.016	0.00	0.00	3.10	19.64	52.05	25.20	77.26
OT071-MW-159-100	N/A	Fine sand	0.037	0.00	0.00	10.06	28.06	45.03	16.85	61.88
OT071-MW-160-164	N/A	Silt	0.032	0.00	0.00	8.01	22.65	53.14	16.21	69.35
OT071-MW-162-188	N/A	Silt	0.046	0.00	0.00	0.60	32.06	58.18	9.17	67.35

(1) Based on Mean from Trask

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-159-92
Project No:	145981	**Depth, ft:**	N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.01	0.01	0.01
0.0278	0.707	0.50	25	0.18	0.18	0.19
0.0234	0.595	0.75	30	0.57	0.57	0.76
0.0197	0.500	1.00	35	0.99	0.99	1.75
0.0166	0.420	1.25	40	1.35	1.35	3.10
0.0139	0.354	1.50	45	1.20	1.20	4.30
0.0117	0.297	1.75	50	1.61	1.61	5.91
0.0098	0.250	2.00	60	1.43	1.43	7.34
0.0083	0.210	2.25	70	1.70	1.70	9.04
0.0070	0.177	2.50	80	2.05	2.05	11.09
0.0059	0.149	2.75	100	2.23	2.23	13.32
0.0049	0.125	3.00	120	2.18	2.18	15.50
0.0041	0.105	3.25	140	2.16	2.16	17.66
0.0035	0.088	3.50	170	2.38	2.38	20.04
0.0029	0.074	3.75	200	2.70	2.70	22.74
0.0025	0.063	4.00	230	2.92	2.92	25.66
0.0021	0.053	4.25	270	2.97	2.97	28.63
0.00174	0.0442	4.50	325	2.97	2.97	31.60
0.00146	0.0372	4.75	400	3.01	3.01	34.61
0.00123	0.0313	5.00	450	3.12	3.12	37.74
0.000986	0.0250	5.32	500	4.17	4.17	41.91
0.000790	0.0201	5.64	635	4.31	4.31	46.22
0.000615	0.0156	6.00		4.75	4.75	50.97
0.000435	0.0110	6.50		6.88	6.88	57.85
0.000308	0.00781	7.00		7.42	7.42	65.27
0.000197	0.00500	7.65		9.53	9.53	74.80
0.000077	0.00195	9.00		15.60	15.60	90.40
0.000038	0.000977	10.00		6.23	6.23	96.63
0.000019	0.000488	11.00		3.06	3.06	99.69
0.000015	0.000375	11.38		0.31	0.31	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.61	0.0129	0.328
10	2.37	0.0076	0.194
16	3.06	0.0047	0.120
25	3.94	0.0026	0.065
40	5.17	0.0011	0.028
50	5.93	0.0006	0.016
60	6.65	0.0004	0.010
75	7.66	0.0002	0.005
84	8.44	0.0001	0.003
90	8.97	0.0001	0.002
95	9.74	0.0000	0.001

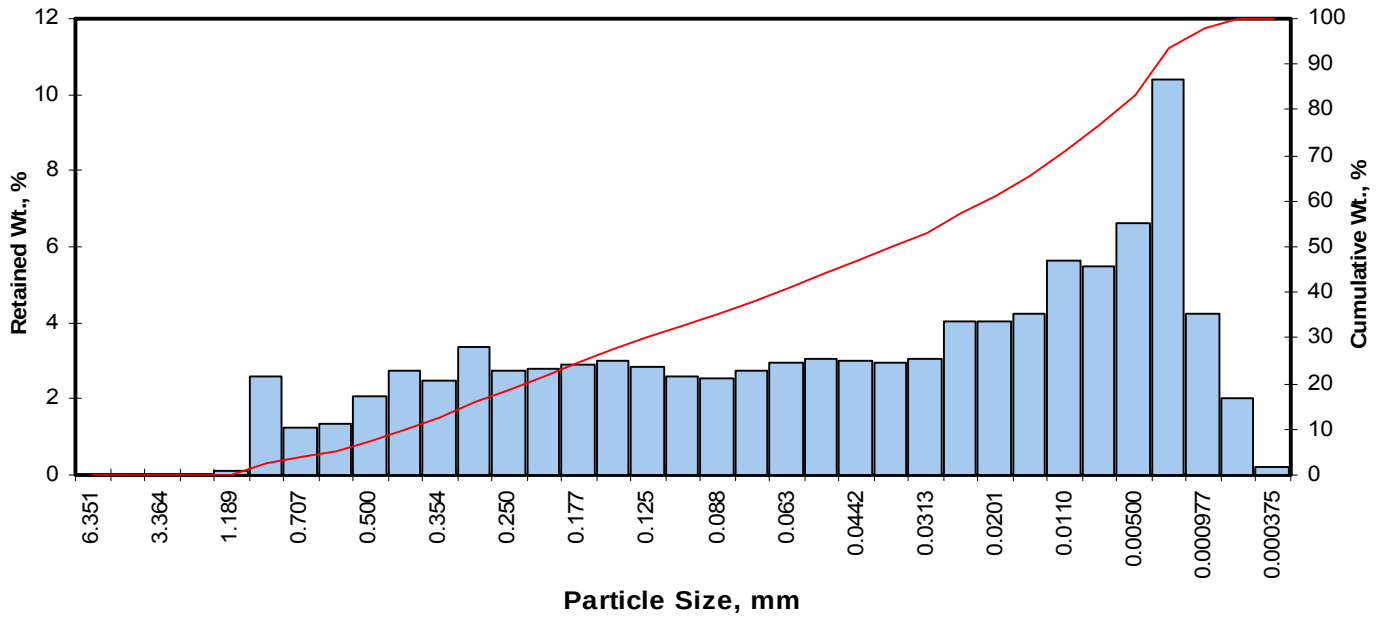
Measure	Trask	Inman	Folk-Ward
Median, phi	5.93	5.93	5.93
Median, in.	0.0006	0.0006	0.0006
Median, mm	0.016	0.016	0.016
Mean, phi	4.84	5.75	5.81
Mean, in.	0.0014	0.0007	0.0007
Mean, mm	0.035	0.019	0.018
Sorting	3.629	2.693	2.579
Skewness	1.090	-0.065	-0.064
Kurtosis	0.157	0.509	0.896
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	3.10
Fine Sand	200	19.64
Silt	>0.005 mm	52.05
Clay	<0.005 mm	25.20
	Total	**100**

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-159-100
Project No:	145981	**Depth, ft:**	N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.10	0.10	0.10
0.0331	0.841	0.25	20	2.57	2.57	2.67
0.0278	0.707	0.50	25	1.25	1.25	3.92
0.0234	0.595	0.75	30	1.33	1.33	5.25
0.0197	0.500	1.00	35	2.06	2.06	7.31
0.0166	0.420	1.25	40	2.75	2.75	10.06
0.0139	0.354	1.50	45	2.49	2.49	12.55
0.0117	0.297	1.75	50	3.36	3.36	15.91
0.0098	0.250	2.00	60	2.76	2.76	18.68
0.0083	0.210	2.25	70	2.79	2.79	21.47
0.0070	0.177	2.50	80	2.92	2.92	24.39
0.0059	0.149	2.75	100	3.01	3.01	27.40
0.0049	0.125	3.00	120	2.86	2.86	30.26
0.0041	0.105	3.25	140	2.60	2.60	32.86
0.0035	0.088	3.50	170	2.53	2.53	35.39
0.0029	0.074	3.75	200	2.73	2.73	38.12
0.0025	0.063	4.00	230	2.97	2.97	41.10
0.0021	0.053	4.25	270	3.05	3.05	44.15
0.00174	0.0442	4.50	325	3.00	3.00	47.15
0.00146	0.0372	4.75	400	2.97	2.97	50.12
0.00123	0.0313	5.00	450	3.05	3.05	53.17
0.000986	0.0250	5.32	500	4.01	4.01	57.18
0.000790	0.0201	5.64	635	4.02	4.02	61.20
0.000615	0.0156	6.00		4.24	4.24	65.45
0.000435	0.0110	6.50		5.62	5.62	71.07
0.000308	0.00781	7.00		5.48	5.48	76.55
0.000197	0.00500	7.65		6.60	6.60	83.15
0.000077	0.00195	9.00		10.40	10.40	93.56
0.000038	0.000977	10.00		4.22	4.22	97.78
0.000019	0.000488	11.00		2.02	2.02	99.80
0.000015	0.000375	11.38		0.20	0.20	100.00
TOTALS				**100.00**	**100.00**	**100.00**

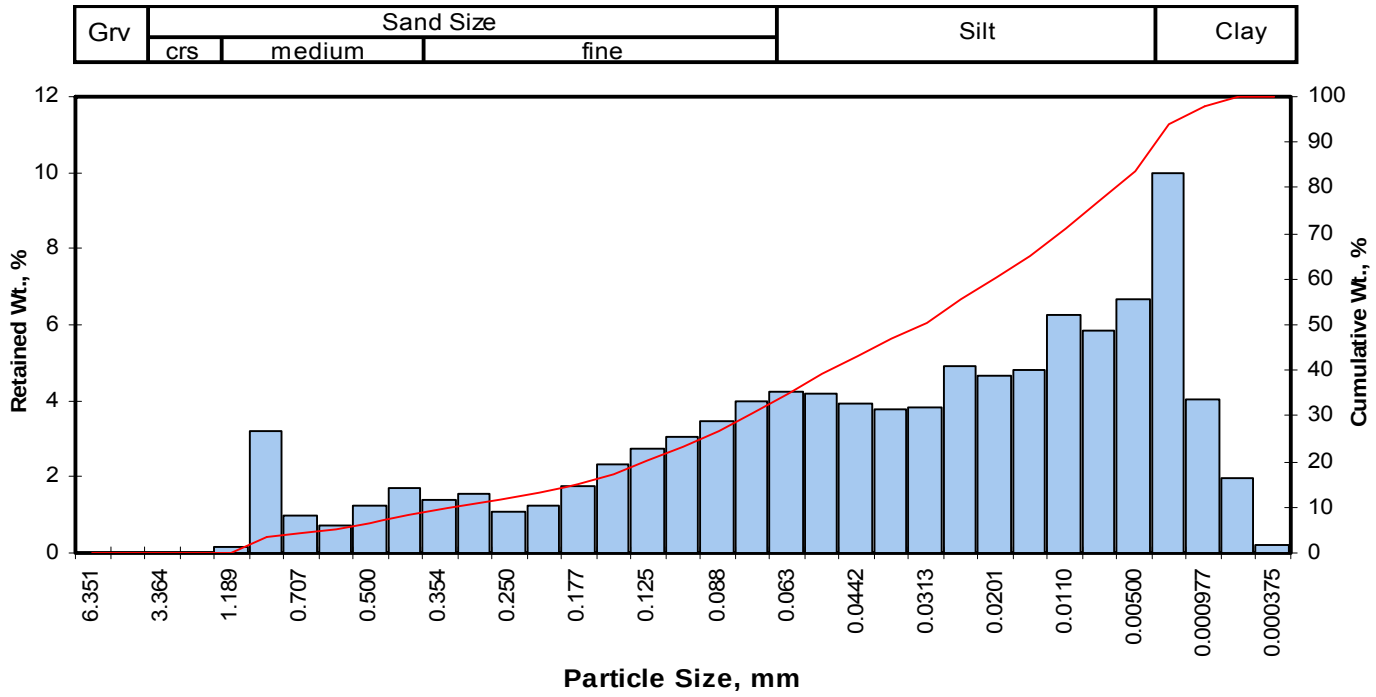
Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.70	0.0242	0.614
10	1.24	0.0166	0.422
16	1.76	0.0116	0.296
25	2.55	0.0067	0.171
40	3.91	0.0026	0.067
50	4.74	0.0015	0.037
60	5.54	0.0008	0.021
75	6.86	0.0003	0.009
84	7.76	0.0002	0.005
90	8.54	0.0001	0.003
95	9.34	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.74	4.74	4.74
Median, in.	0.0015	0.0015	0.0015
Median, mm	0.037	0.037	0.037
Mean, phi	3.48	4.76	4.75
Mean, in.	0.0035	0.0015	0.0015
Mean, mm	0.090	0.037	0.037
Sorting	4.450	2.999	2.808
Skewness	1.025	0.006	0.035
Kurtosis	0.193	0.440	0.822
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	10.06
Fine Sand	200	28.06
Silt	>0.005 mm	45.03
Clay	<0.005 mm	16.85
	Total	**100**

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-160-164
Project No:	145981	**Depth, ft:**	N/A



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.15	0.15	0.15
0.0331	0.841	0.25	20	3.23	3.23	3.38
0.0278	0.707	0.50	25	0.96	0.96	4.34
0.0234	0.595	0.75	30	0.74	0.74	5.08
0.0197	0.500	1.00	35	1.23	1.23	6.31
0.0166	0.420	1.25	40	1.70	1.70	8.01
0.0139	0.354	1.50	45	1.41	1.41	9.42
0.0117	0.297	1.75	50	1.56	1.56	10.98
0.0098	0.250	2.00	60	1.09	1.09	12.07
0.0083	0.210	2.25	70	1.26	1.26	13.33
0.0070	0.177	2.50	80	1.75	1.75	15.08
0.0059	0.149	2.75	100	2.34	2.34	17.42
0.0049	0.125	3.00	120	2.74	2.74	20.16
0.0041	0.105	3.25	140	3.06	3.06	23.22
0.0035	0.088	3.50	170	3.48	3.48	26.69
0.0029	0.074	3.75	200	3.96	3.96	30.65
0.0025	0.063	4.00	230	4.25	4.25	34.90
0.0021	0.053	4.25	270	4.18	4.18	39.08
0.00174	0.0442	4.50	325	3.93	3.93	43.01
0.00146	0.0372	4.75	400	3.79	3.79	46.80
0.00123	0.0313	5.00	450	3.82	3.82	50.62
0.000986	0.0250	5.32	500	4.89	4.89	55.51
0.000790	0.0201	5.64	635	4.68	4.68	60.19
0.000615	0.0156	6.00		4.81	4.81	65.00
0.000435	0.0110	6.50		6.26	6.26	71.26
0.000308	0.00781	7.00		5.85	5.85	77.10
0.000197	0.00500	7.65		6.69	6.69	83.79
0.000077	0.00195	9.00		9.98	9.98	93.77
0.000038	0.000977	10.00		4.05	4.05	97.82
0.000019	0.000488	11.00		1.98	1.98	99.80
0.000015	0.000375	11.38		0.20	0.20	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than

Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.72	0.0238	0.606
10	1.59	0.0130	0.331
16	2.60	0.0065	0.165
25	3.38	0.0038	0.096
40	4.31	0.0020	0.050
50	4.96	0.0013	0.032
60	5.63	0.0008	0.020
75	6.82	0.0003	0.009
84	7.67	0.0002	0.005
90	8.49	0.0001	0.003
95	9.30	0.0001	0.002

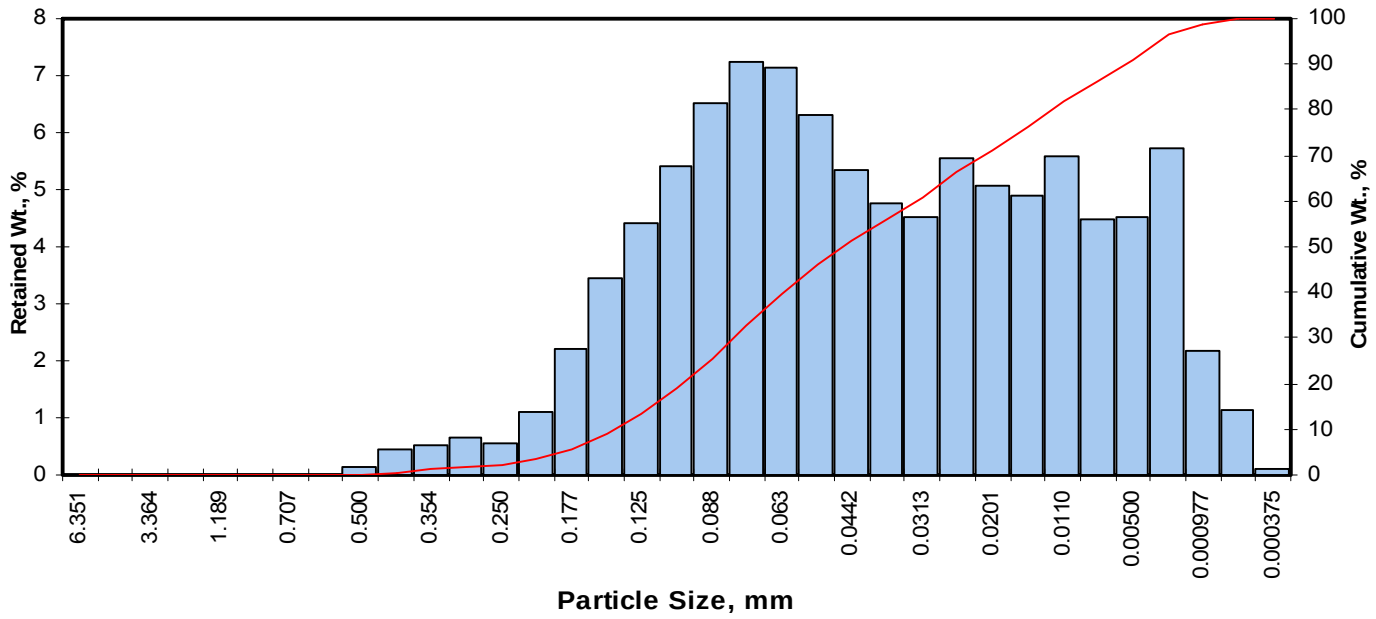
Measure	Trask	Inman	Folk-Ward
Median, phi	4.96	4.96	4.96
Median, in.	0.0013	0.0013	0.0013
Median, mm	0.032	0.032	0.032
Mean, phi	4.25	5.14	5.08
Mean, in.	0.0021	0.0011	0.0012
Mean, mm	0.053	0.028	0.030
Sorting	3.296	2.537	2.569
Skewness	0.908	0.070	0.041
Kurtosis	0.133	0.691	1.022
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	8.01
Fine Sand	200	22.65
Silt	>0.005 mm	53.14
Clay	<0.005 mm	16.21
	Total	**100**

Particle Size Analysis - ASTM D4464M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-162-188
Project No:	145981	**Depth, ft:**	N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.01	0.01	0.01
0.0197	0.500	1.00	35	0.13	0.13	0.14
0.0166	0.420	1.25	40	0.46	0.46	0.60
0.0139	0.354	1.50	45	0.53	0.53	1.13
0.0117	0.297	1.75	50	0.64	0.64	1.77
0.0098	0.250	2.00	60	0.56	0.56	2.33
0.0083	0.210	2.25	70	1.10	1.10	3.43
0.0070	0.177	2.50	80	2.20	2.20	5.62
0.0059	0.149	2.75	100	3.44	3.44	9.06
0.0049	0.125	3.00	120	4.42	4.42	13.48
0.0041	0.105	3.25	140	5.43	5.43	18.91
0.0035	0.088	3.50	170	6.51	6.51	25.42
0.0029	0.074	3.75	200	7.23	7.23	32.65
0.0025	0.063	4.00	230	7.13	7.13	39.78
0.0021	0.053	4.25	270	6.30	6.30	46.08
0.00174	0.0442	4.50	325	5.35	5.35	51.43
0.00146	0.0372	4.75	400	4.75	4.75	56.18
0.00123	0.0313	5.00	450	4.52	4.52	60.70
0.000986	0.0250	5.32	500	5.55	5.55	66.25
0.000790	0.0201	5.64	635	5.08	5.08	71.32
0.000615	0.0156	6.00		4.90	4.90	76.22
0.000435	0.0110	6.50		5.59	5.59	81.81
0.000308	0.00781	7.00		4.50	4.50	86.31
0.000197	0.00500	7.65		4.52	4.52	90.83
0.000077	0.00195	9.00		5.74	5.74	96.57
0.000038	0.000977	10.00		2.17	2.17	98.74
0.000019	0.000488	11.00		1.14	1.14	99.88
0.000015	0.000375	11.38		0.12	0.12	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.43	0.0073	0.186
10	2.80	0.0056	0.143
16	3.12	0.0045	0.115
25	3.48	0.0035	0.089
40	4.01	0.0024	0.062
50	4.43	0.0018	0.046
60	4.96	0.0013	0.032
75	5.91	0.0007	0.017
84	6.74	0.0004	0.009
90	7.53	0.0002	0.005
95	8.63	0.0001	0.003

Measure	Trask	Inman	Folk-Ward
Median, phi	4.43	4.43	4.43
Median, in.	0.0018	0.0018	0.0018
Median, mm	0.046	0.046	0.046
Mean, phi	4.24	4.93	4.76
Mean, in.	0.0021	0.0013	0.0014
Mean, mm	0.053	0.033	0.037
Sorting	2.318	1.814	1.846
Skewness	0.833	0.274	0.314
Kurtosis	0.264	0.709	1.047
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.60
Fine Sand	200	32.06
Silt	>0.005 mm	58.18
Clay	<0.005 mm	9.17
	Total	**100**

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422M)

PROJECT NAME: Former George AFB, California
PROJECT NO: 145981

Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
OT071-MW-163-111	N/A	Fine sand	0.268	0.00	0.24	35.79	46.54	17.43
OT071-MW-163-124	N/A	Medium sand	0.801	0.86	15.32	52.40	23.06	8.37
OT071-MW-160-33	N/A	Gravel	5.496	52.09	16.90	26.31	4.00	0.70
OT071-MW-160-39	N/A	Medium sand	0.386	0.00	2.57	45.06	35.85	16.52
OT071-MW-160-184	N/A	Fine sand	0.302	0.00	2.07	39.05	42.51	16.37
OT071-MW-161-210	N/A	Coarse sand	1.956	28.46	21.09	32.23	14.39	3.82
OT071-MW-162-35	N/A	Gravel	2.832	45.15	8.53	29.46	15.68	1.18
OT071-MW-162-214	N/A	Medium sand	0.752	2.44	11.79	56.47	24.46	4.84

(1) Based on Mean fromTrask

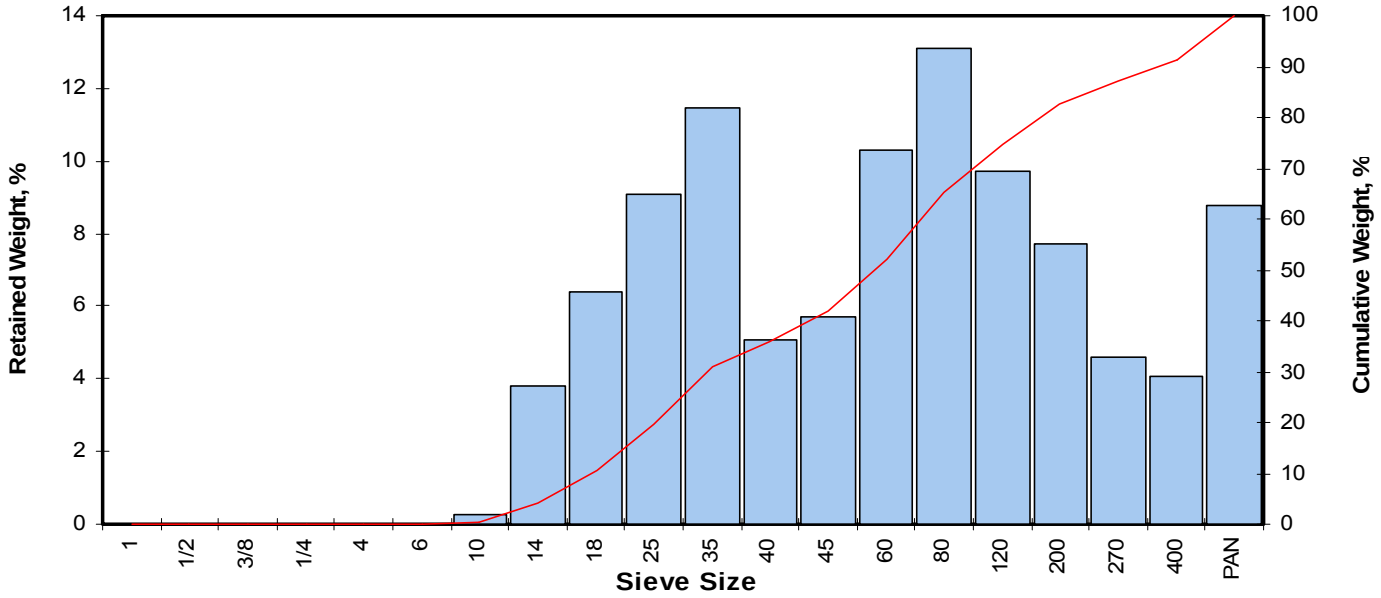
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46419
Sample ID: OT071-MW-163-111
Depth, ft: N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.26	0.24	0.24
0.0557	1.414	-0.50	14	4.09	3.80	4.04
0.0394	1.000	0.00	18	6.87	6.38	10.41
0.0278	0.707	0.50	25	9.80	9.10	19.51
0.0197	0.500	1.00	35	12.33	11.44	30.95
0.0166	0.420	1.25	40	5.47	5.08	36.03
0.0139	0.354	1.50	45	6.12	5.68	41.71
0.0098	0.250	2.00	60	11.12	10.32	52.03
0.0070	0.177	2.50	80	14.13	13.11	65.15
0.0049	0.125	3.00	120	10.48	9.73	74.87
0.0029	0.074	3.75	200	8.29	7.69	82.57
0.0021	0.053	4.25	270	4.97	4.61	87.18
0.0015	0.037	4.75	400	4.37	4.06	91.24
			PAN	9.44	8.76	100.00
TOTALS				107.74	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.42	0.0528	1.342
10	-0.03	0.0403	1.023
16	0.31	0.0318	0.808
25	0.74	0.0236	0.599
40	1.42	0.0147	0.373
50	1.90	0.0105	0.268
60	2.30	0.0080	0.203
75	3.01	0.0049	0.124
84	3.91	0.0026	0.067
90	4.60	0.0016	0.041
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	1.90	1.90	1.90
Median, in.	0.0105	0.0105	0.0105
Median, mm	0.268	0.268	0.268
Mean, phi	1.47	2.11	2.04
Mean, in.	0.0142	0.0091	0.0096
Mean, mm	0.361	0.232	0.244
Sorting	2.198	1.799	
Skewness	1.018	0.114	
Kurtosis	0.242		

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

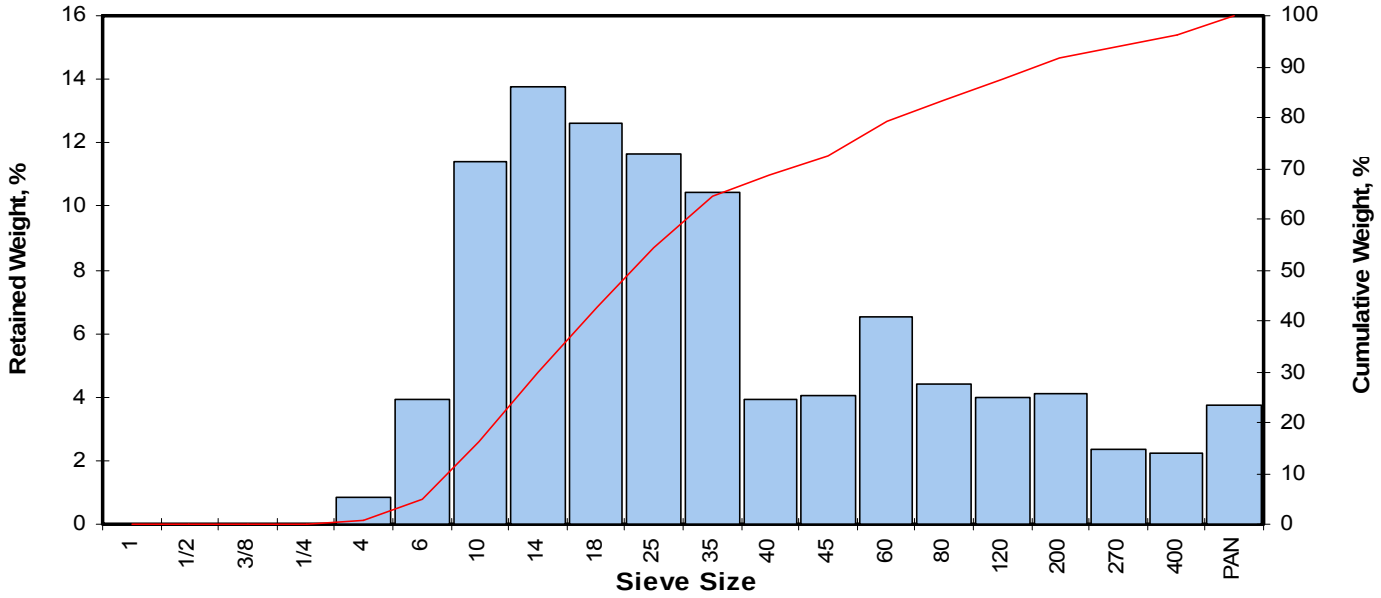
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.24
Medium Sand	40	35.79
Fine Sand	200	46.54
Silt/Clay	<200	17.43
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	145981	**Sample ID:**	OT071-MW-163-124
Project No:	Former George AFB, California	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	1.07	0.86	0.86
0.1324	3.364	-1.75	6	4.87	3.90	4.75
0.0787	2.000	-1.00	10	14.27	11.42	16.17
0.0557	1.414	-0.50	14	17.17	13.74	29.91
0.0394	1.000	0.00	18	15.78	12.63	42.54
0.0278	0.707	0.50	25	14.59	11.67	54.21
0.0197	0.500	1.00	35	13.05	10.44	64.66
0.0166	0.420	1.25	40	4.89	3.91	68.57
0.0139	0.354	1.50	45	5.06	4.05	72.62
0.0098	0.250	2.00	60	8.16	6.53	79.15
0.0070	0.177	2.50	80	5.52	4.42	83.56
0.0049	0.125	3.00	120	4.95	3.96	87.53
0.0029	0.074	3.75	200	5.13	4.10	91.63
0.0021	0.053	4.25	270	2.98	2.38	94.01
0.0015	0.037	4.75	400	2.79	2.23	96.25
			PAN	4.69	3.75	100.00
TOTALS				124.97	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.73	0.1309	3.326
10	-1.41	0.1043	2.649
16	-1.01	0.0794	2.016
25	-0.68	0.0630	1.601
40	-0.10	0.0422	1.072
50	0.32	0.0315	0.801
60	0.78	0.0230	0.584
75	1.68	0.0123	0.312
84	2.56	0.0067	0.170
90	3.45	0.0036	0.091
95	4.47	0.0018	0.045

Measure	Trask	Inman	Folk-Ward
Median, phi	0.32	0.32	0.32
Median, in.	0.0315	0.0315	0.0315
Median, mm	0.801	0.801	0.801
Mean, phi	0.06	0.77	0.62
Mean, in.	0.0376	0.0231	0.0256
Mean, mm	0.956	0.586	0.650
Sorting	2.267	1.783	1.832
Skewness	0.881	0.254	0.296
Kurtosis	0.252	0.740	1.077

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

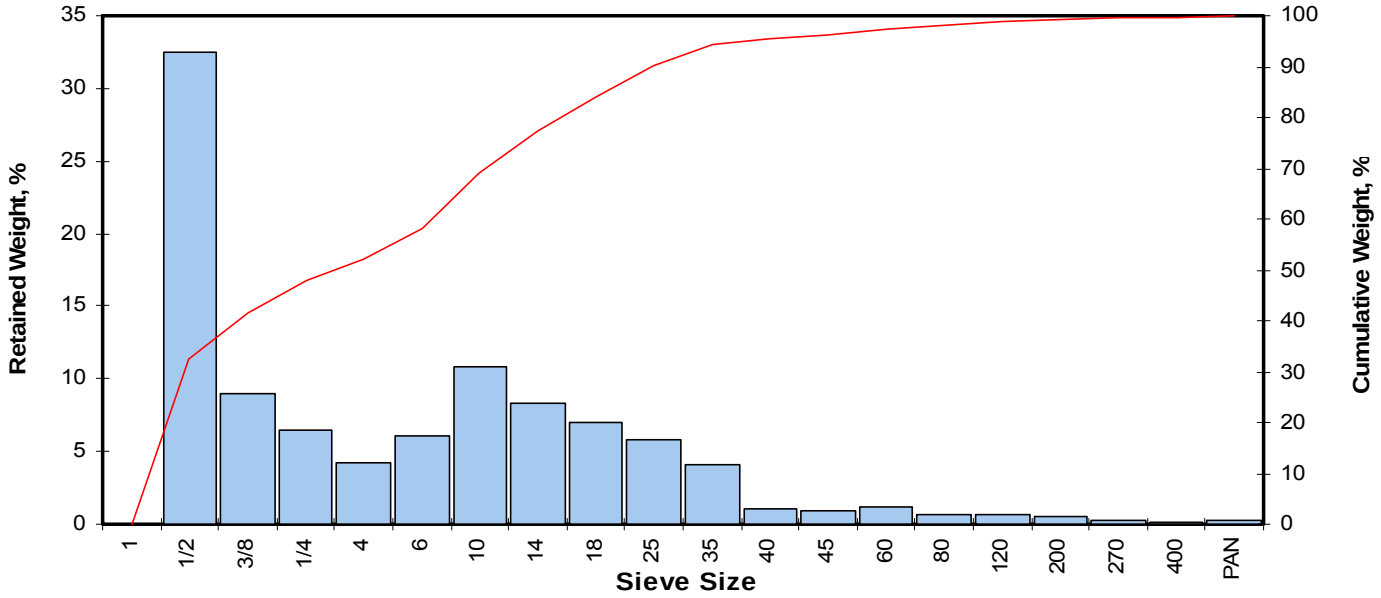
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.86
Coarse Sand	10	15.32
Medium Sand	40	52.40
Fine Sand	200	23.06
Silt/Clay	<200	8.37
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-160-33
Project No:	145981	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	106.93	32.49	32.49
0.3740	9.500	-3.25	3/8	29.56	8.98	41.47
0.2500	6.351	-2.67	1/4	21.18	6.44	47.91
0.1873	4.757	-2.25	4	13.76	4.18	52.09
0.1324	3.364	-1.75	6	20.07	6.10	58.19
0.0787	2.000	-1.00	10	35.55	10.80	68.99
0.0557	1.414	-0.50	14	27.52	8.36	77.35
0.0394	1.000	0.00	18	22.93	6.97	84.32
0.0278	0.707	0.50	25	19.30	5.86	90.18
0.0197	0.500	1.00	35	13.40	4.07	94.25
0.0166	0.420	1.25	40	3.45	1.05	95.30
0.0139	0.354	1.50	45	2.95	0.90	96.20
0.0098	0.250	2.00	60	4.08	1.24	97.44
0.0070	0.177	2.50	80	2.39	0.73	98.16
0.0049	0.125	3.00	120	1.99	0.60	98.77
0.0029	0.074	3.75	200	1.75	0.53	99.30
0.0021	0.053	4.25	270	0.86	0.26	99.56
0.0015	0.037	4.75	400	0.63	0.19	99.75
			PAN	0.81	0.25	100.00
TOTALS				329.11	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-4.49	0.8848	22.473
10	-4.34	0.7952	20.199
16	-4.15	0.6997	17.772
25	-3.87	0.5775	14.667
40	-3.31	0.3913	9.938
50	-2.46	0.2164	5.496
60	-1.62	0.1214	3.083
75	-0.64	0.0614	1.559
84	-0.02	0.0400	1.016
90	0.48	0.0281	0.715
95	1.18	0.0174	0.442

Measure	Trask	Inman	Folk-Ward
Median, phi	-2.46	-2.46	-2.46
Median, in.	0.2164	0.2164	0.2164
Median, mm	5.496	5.496	5.496
Mean, phi	-3.02	-2.09	-2.21
Mean, in.	0.3194	0.1673	0.1823
Mean, mm	8.113	4.249	4.630
Sorting	3.067	2.064	1.891
Skewness	0.870	0.180	0.231
Kurtosis	0.336	0.373	0.718

Grain Size Description (ASTM-USCS Scale)	Gravel (based on Mean from Trask)

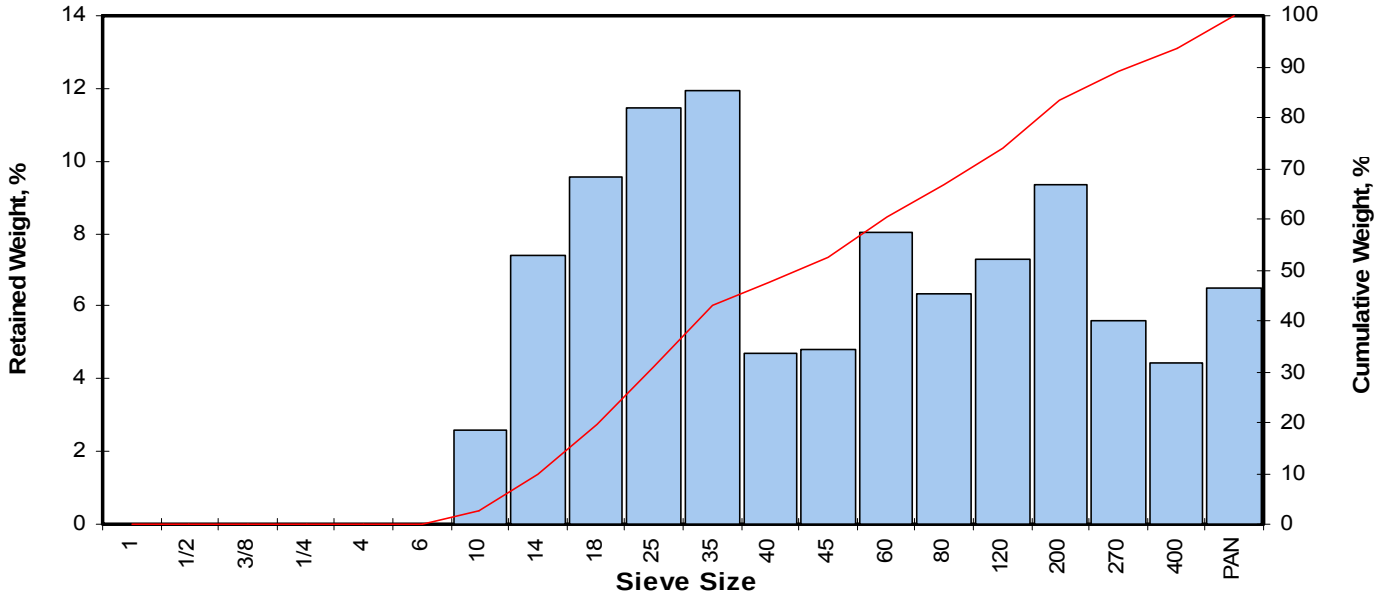
Description	Retained on Sieve #	Weight Percent
Gravel	4	52.09
Coarse Sand	10	16.90
Medium Sand	40	26.31
Fine Sand	200	4.00
Silt/Clay	<200	0.70
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-160-39
Project No:	145981	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	2.63	2.57	2.57
0.0557	1.414	-0.50	14	7.57	7.38	9.95
0.0394	1.000	0.00	18	9.83	9.59	19.54
0.0278	0.707	0.50	25	11.73	11.44	30.98
0.0197	0.500	1.00	35	12.26	11.96	42.93
0.0166	0.420	1.25	40	4.81	4.69	47.63
0.0139	0.354	1.50	45	4.94	4.82	52.44
0.0098	0.250	2.00	60	8.26	8.06	60.50
0.0070	0.177	2.50	80	6.50	6.34	66.84
0.0049	0.125	3.00	120	7.49	7.31	74.14
0.0029	0.074	3.75	200	9.57	9.33	83.48
0.0021	0.053	4.25	270	5.74	5.60	89.08
0.0015	0.037	4.75	400	4.53	4.42	93.49
			PAN	6.67	6.51	100.00
TOTALS				102.53	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.84	0.0702	1.784
10	-0.50	0.0556	1.412
16	-0.18	0.0447	1.136
25	0.24	0.0334	0.847
40	0.88	0.0214	0.544
50	1.37	0.0152	0.386
60	1.97	0.0101	0.255
75	3.07	0.0047	0.119
84	3.80	0.0028	0.072
90	4.35	0.0019	0.049
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	1.37	1.37	1.37
Median, in.	0.0152	0.0152	0.0152
Median, mm	0.386	0.386	0.386
Mean, phi	1.05	1.81	1.66
Mean, in.	0.0190	0.0113	0.0124
Mean, mm	0.483	0.286	0.316
Sorting	2.667	1.991	
Skewness	0.823	0.217	
Kurtosis	0.267		

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	2.57
Medium Sand	40	45.06
Fine Sand	200	35.85
Silt/Clay	<200	16.52
	Total	100

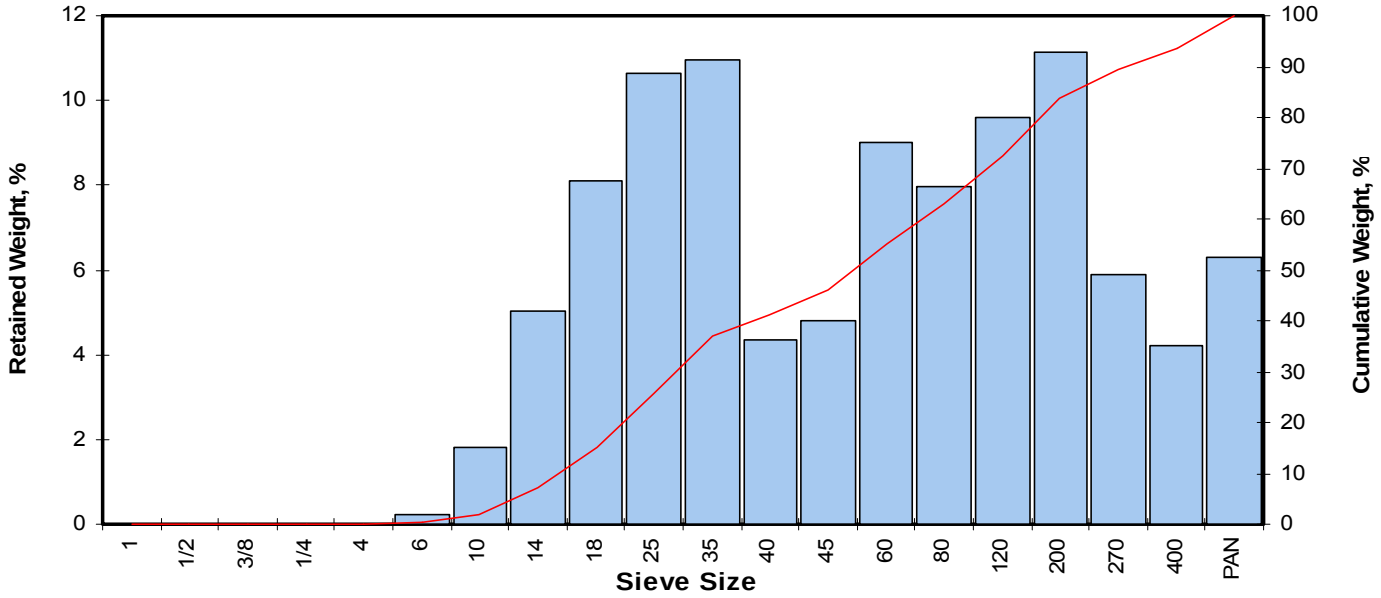
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46419
Sample ID: OT071-MW-160-184
Depth, ft: N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.23	0.25	0.25
0.0787	2.000	-1.00	10	1.69	1.82	2.07
0.0557	1.414	-0.50	14	4.65	5.01	7.07
0.0394	1.000	0.00	18	7.51	8.09	15.16
0.0278	0.707	0.50	25	9.90	10.66	25.82
0.0197	0.500	1.00	35	10.19	10.97	36.79
0.0166	0.420	1.25	40	4.02	4.33	41.12
0.0139	0.354	1.50	45	4.47	4.81	45.94
0.0098	0.250	2.00	60	8.37	9.01	54.95
0.0070	0.177	2.50	80	7.39	7.96	62.91
0.0049	0.125	3.00	120	8.92	9.60	72.51
0.0029	0.074	3.75	200	10.33	11.12	83.63
0.0021	0.053	4.25	270	5.45	5.87	89.50
0.0015	0.037	4.75	400	3.91	4.21	93.71
			PAN	5.84	6.29	100.00
TOTALS				92.87	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.71	0.0643	1.633
10	-0.32	0.0491	1.248
16	0.04	0.0383	0.973
25	0.46	0.0286	0.726
40	1.19	0.0173	0.440
50	1.73	0.0119	0.302
60	2.32	0.0079	0.201
75	3.17	0.0044	0.111
84	3.78	0.0029	0.073
90	4.31	0.0020	0.050
95			

Measure	Trask	Inman	Folk-Ward
Median, phi	1.73	1.73	1.73
Median, in.	0.0119	0.0119	0.0119
Median, mm	0.302	0.302	0.302
Mean, phi	1.26	1.91	1.85
Mean, in.	0.0165	0.0105	0.0109
Mean, mm	0.419	0.266	0.278
Sorting	2.555	1.871	
Skewness	0.940	0.099	
Kurtosis	0.257		

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	2.07
Medium Sand	40	39.05
Fine Sand	200	42.51
Silt/Clay	<200	16.37
	Total	100

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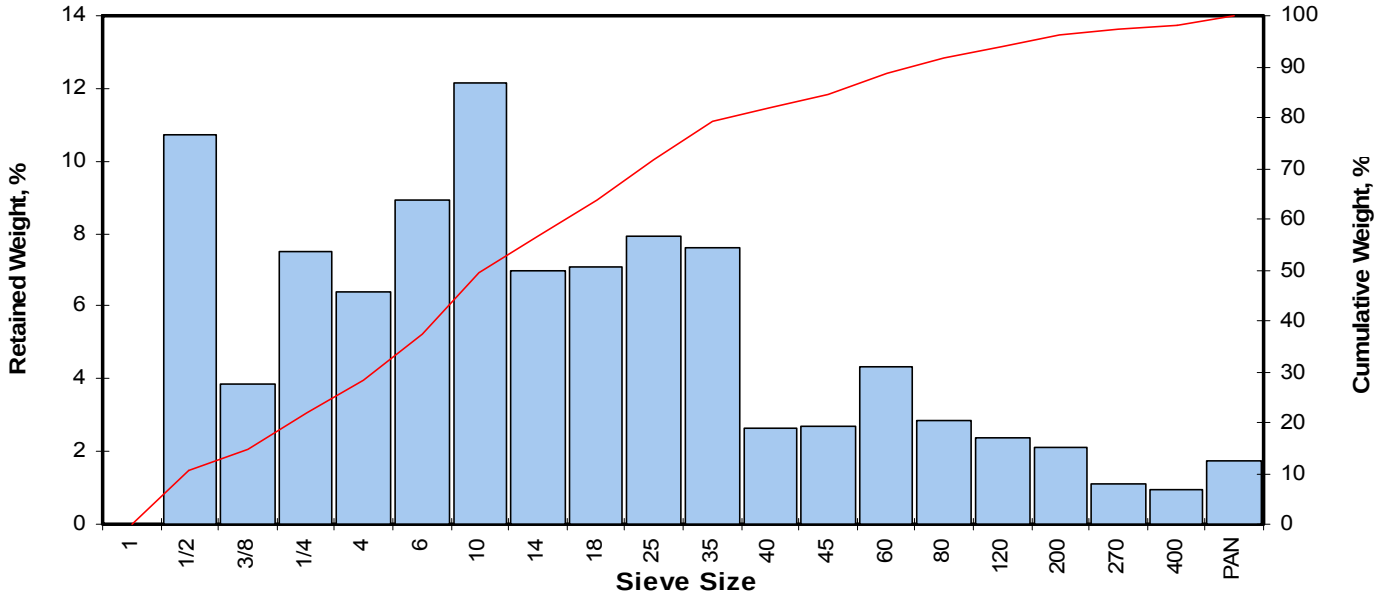
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46419
Sample ID: OT071-MW-161-210
Depth, ft: N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	19.53	10.70	10.70
0.3740	9.500	-3.25	3/8	7.03	3.85	14.55
0.2500	6.351	-2.67	1/4	13.68	7.50	22.05
0.1873	4.757	-2.25	4	11.71	6.42	28.46
0.1324	3.364	-1.75	6	16.28	8.92	37.38
0.0787	2.000	-1.00	10	22.21	12.17	49.55
0.0557	1.414	-0.50	14	12.73	6.97	56.53
0.0394	1.000	0.00	18	12.92	7.08	63.61
0.0278	0.707	0.50	25	14.49	7.94	71.55
0.0197	0.500	1.00	35	13.86	7.59	79.14
0.0166	0.420	1.25	40	4.83	2.65	81.79
0.0139	0.354	1.50	45	4.88	2.67	84.46
0.0098	0.250	2.00	60	7.93	4.34	88.81
0.0070	0.177	2.50	80	5.19	2.84	91.65
0.0049	0.125	3.00	120	4.37	2.39	94.04
0.0029	0.074	3.75	200	3.90	2.14	96.18
0.0021	0.053	4.25	270	2.01	1.10	97.28
0.0015	0.037	4.75	400	1.73	0.95	98.23
			PAN	3.23	1.77	100.00
TOTALS				182.51	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-4.18	0.7120	18.085
10	-3.71	0.5150	13.082
16	-3.14	0.3461	8.790
25	-2.48	0.2189	5.560
40	-1.59	0.1184	3.008
50	-0.97	0.0770	1.956
60	-0.25	0.0470	1.193
75	0.73	0.0238	0.604
84	1.46	0.0143	0.364
90	2.21	0.0085	0.216
95	3.34	0.0039	0.099

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.97	-0.97	-0.97
Median, in.	0.0770	0.0770	0.0770
Median, mm	1.956	1.956	1.956
Mean, phi	-1.62	-0.84	-0.88
Mean, in.	0.1213	0.0704	0.0726
Mean, mm	3.082	1.789	1.843
Sorting	3.034	2.296	2.286
Skewness	0.937	0.056	0.101
Kurtosis	0.193	0.636	0.961

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

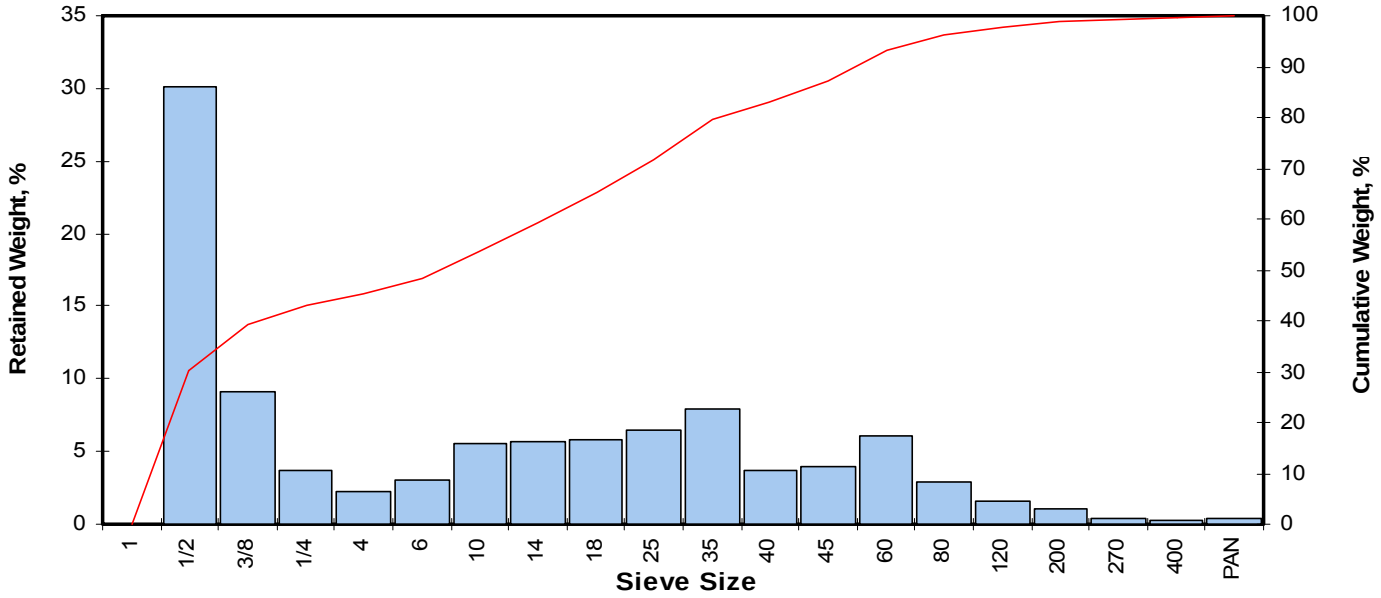
Description	Retained on Sieve #	Weight Percent
Gravel	4	28.46
Coarse Sand	10	21.09
Medium Sand	40	32.23
Fine Sand	200	14.39
Silt/Clay	<200	3.82
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	CB&I Federal Services, LLC	**PTS File No:**	46419
Project:	Former George AFB, California	**Sample ID:**	OT071-MW-162-35
Project No:	145981	**Depth, ft:**	N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	80.40	30.14	30.14
0.3740	9.500	-3.25	3/8	24.37	9.14	39.28
0.2500	6.351	-2.67	1/4	9.71	3.64	42.92
0.1873	4.757	-2.25	4	5.95	2.23	45.15
0.1324	3.364	-1.75	6	8.09	3.03	48.18
0.0787	2.000	-1.00	10	14.66	5.50	53.68
0.0557	1.414	-0.50	14	15.05	5.64	59.32
0.0394	1.000	0.00	18	15.59	5.84	65.16
0.0278	0.707	0.50	25	17.25	6.47	71.63
0.0197	0.500	1.00	35	20.97	7.86	79.49
0.0166	0.420	1.25	40	9.73	3.65	83.14
0.0139	0.354	1.50	45	10.65	3.99	87.13
0.0098	0.250	2.00	60	16.37	6.14	93.27
0.0070	0.177	2.50	80	7.66	2.87	96.14
0.0049	0.125	3.00	120	4.36	1.63	97.77
0.0029	0.074	3.75	200	2.78	1.04	98.82
0.0021	0.053	4.25	270	1.17	0.44	99.25
0.0015	0.037	4.75	400	0.84	0.31	99.57
			PAN	1.15	0.43	100.00
TOTALS				266.75	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-4.48	0.8774	22.287
10	-4.31	0.7821	19.866
16	-4.11	0.6813	17.305
25	-3.81	0.5539	14.070
40	-3.13	0.3453	8.770
50	-1.50	0.1115	2.832
60	-0.44	0.0535	1.358
75	0.71	0.0240	0.609
84	1.30	0.0159	0.405
90	1.73	0.0118	0.301
95	2.30	0.0080	0.203

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.50	-1.50	-1.50
Median, in.	0.1115	0.1115	0.1115
Median, mm	2.832	2.832	2.832
Mean, phi	-2.88	-1.40	-1.44
Mean, in.	0.2890	0.1042	0.1066
Mean, mm	7.340	2.647	2.707
Sorting	4.805	2.709	2.382
Skewness	1.034	0.036	0.079
Kurtosis	0.344	0.252	0.614
Grain Size Description (ASTM-USCS Scale)		Gravel (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	45.15
Coarse Sand	10	8.53
Medium Sand	40	29.46
Fine Sand	200	15.68
Silt/Clay	<200	1.18
	Total	100

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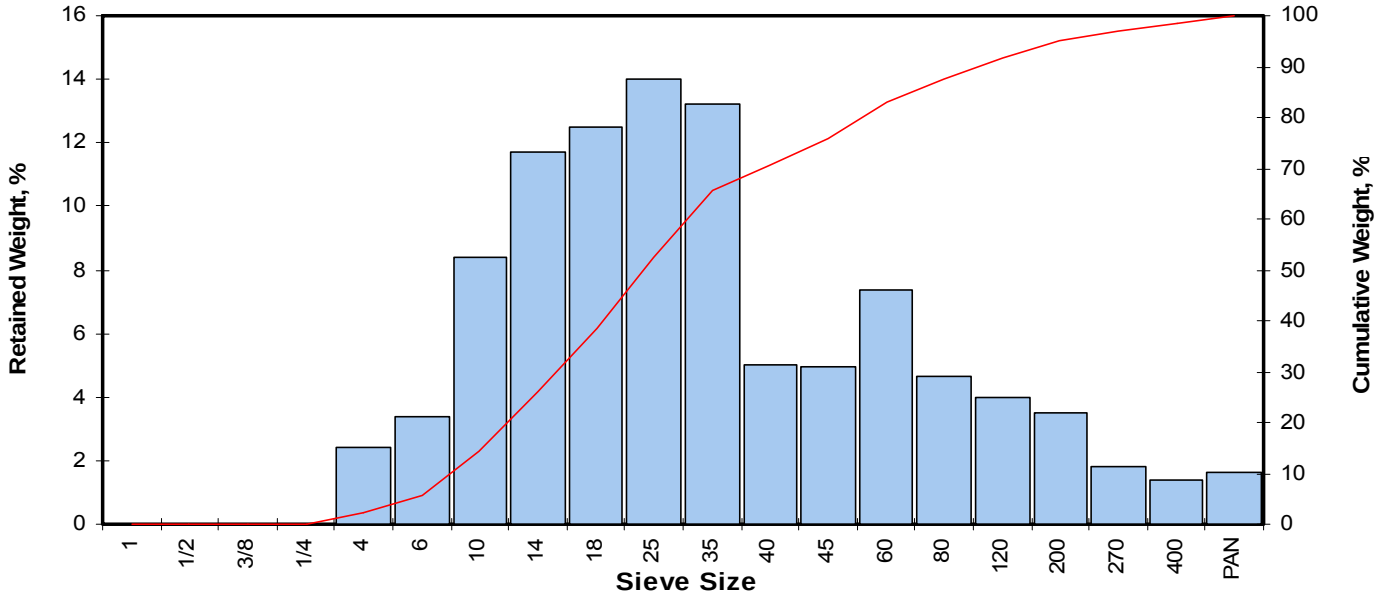
PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: CB&I Federal Services, LLC
Project: Former George AFB, California
Project No: 145981

PTS File No: 46419
Sample ID: OT071-MW-162-214
Depth, ft: N/A

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	4.10	2.44	2.44
0.1324	3.364	-1.75	6	5.69	3.38	5.82
0.0787	2.000	-1.00	10	14.14	8.41	14.23
0.0557	1.414	-0.50	14	19.74	11.74	25.97
0.0394	1.000	0.00	18	21.02	12.50	38.47
0.0278	0.707	0.50	25	23.55	14.00	52.47
0.0197	0.500	1.00	35	22.20	13.20	65.67
0.0166	0.420	1.25	40	8.46	5.03	70.70
0.0139	0.354	1.50	45	8.36	4.97	75.67
0.0098	0.250	2.00	60	12.43	7.39	83.06
0.0070	0.177	2.50	80	7.84	4.66	87.73
0.0049	0.125	3.00	120	6.66	3.96	91.69
0.0029	0.074	3.75	200	5.84	3.47	95.16
0.0021	0.053	4.25	270	3.02	1.80	96.96
0.0015	0.037	4.75	400	2.34	1.39	98.35
			PAN	2.78	1.65	100.00
TOTALS				168.17	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-1.87	0.1440	3.659
10	-1.38	0.1023	2.598
16	-0.92	0.0747	1.898
25	-0.54	0.0573	1.455
40	0.05	0.0379	0.963
50	0.41	0.0296	0.752
60	0.79	0.0228	0.580
75	1.47	0.0143	0.362
84	2.10	0.0092	0.233
90	2.79	0.0057	0.145
95	3.72	0.0030	0.076

Measure	Trask	Inman	Folk-Ward
Median, phi	0.41	0.41	0.41
Median, in.	0.0296	0.0296	0.0296
Median, mm	0.752	0.752	0.752
Mean, phi	0.14	0.59	0.53
Mean, in.	0.0358	0.0262	0.0273
Mean, mm	0.909	0.665	0.693
Sorting	2.005	1.512	1.603
Skewness	0.965	0.116	0.150
Kurtosis	0.223	0.847	1.141

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	2.44
Coarse Sand	10	11.79
Medium Sand	40	56.47
Fine Sand	200	24.46
Silt/Clay	<200	4.84
	Total	100

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PTS File No: 46419
Client: CB&I Federal Services, LLC
Report Date: 08/22/16

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: Former George AFB, California
Project No: 145981

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
OT071-MW-159-92	N/A	20160815	1250	SOIL	430	4.30E-04
OT071-MW-159-100	N/A	20160815	1250	SOIL	320	3.20E-04
OT071-MW-163-111	N/A	20160815	1250	SOIL	330	3.30E-04
OT071-MW-163-124	N/A	20160815	1250	SOIL	<100	<1.00E-04
OT071-MW-160-33	N/A	20160815	1250	SOIL	<100	<1.00E-04
OT071-MW-160-39	N/A	20160815	1250	SOIL	330	3.30E-04
OT071-MW-160-164	N/A	20160815	1250	SOIL	230	2.30E-04
OT071-MW-160-184	N/A	20160815	1250	SOIL	<100	<1.00E-04
OT071-MW-161-210	N/A	20160815	1250	SOIL	140	1.40E-04
OT071-MW-162-35	N/A	20160815	1250	SOIL	<100	<1.00E-04
OT071-MW-162-188	N/A	20160815	1250	SOIL	<100	<1.00E-04
OT071-MW-162-214	N/A	20160815	1250	SOIL	410	4.10E-04
Blank	N/A	20160815	1250	BLANK	ND	ND
SRM D090-542	N/A	20160815	1250	SRM	6090	6.09E-03
				Reporting Limit:	100	1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg Lower	Upper
SRM D090-542	105	75-125	5820	4365	7275

ND = Not Detected

4619

CHAIN OF CUSTODY

Ref. Document # OT071-051716-10

Site ID: OT071 Well Installation
(Standard TAT)

Project Contact: Tim Roth 865.560.7917
(Name & phone #)

Send Report To: Tim Roth
Phone/Fax Number: 865.560.7917
Address: 2410 Cherahala Blvd.
City: Knoxville, TN 37932

Project Number: 145981
Project Name / Location: Former George AFB, California
Project Manager: Mr. David Daftary
Purchase Order #:
Shipment Date: ~~7/6/2016~~ 7/8/16
Waybill/Airbill Number: J459 520 8468 90
Lab Destination: PTS Laboratories, Inc.
Address: 8100 Secura Way
City: Santa Fe Springs, CA 90670
Lab Contact Name / ph. #: Michael Mark Brady, 562.347.2502

Sampler's Name(s): Carl Lind / Matt Curtis

Sample ID Number	Sample Description	Collection Information Date	Time	G / C	Matrix	# of containers	Preservative HCl	NaOH	HNO_3	H_2SO_4	Ice	Filtered	Soil Properties Package (Vadose Zone) – native permeability to air, total porosity, air filled porosity, grain and bulk density, moisture content, total pore fluid saturation by methods API RP40 and ASTM D2216 (1 x Zip-Lock Bags)	Grain-size analysis by Laser Particle Size Analyzer by ASTM D4464 (1 x Zip-Lock Bags)	Full-scale Digital Core Photography by ASTM D5079 (1 x Zip-Lock Bags)	TOC by Walkley-Black Method (1 x Zip-Lock Bags)			Turn Around Time Requested
OT071-MW-159-92	OT071-MW-159	05/17/16	8:45	G	SO	1					X		X	X	X	X			21
OT071-MW-159-100	OT071-MW-159	05/17/16	10:30	G	SO	1					X		X	X	X	X			21
OT071-MW-163-111	OT071-MW-163	05/17/16	12:30	G	SO	1					X		X	X	X	X			21
OT071-MW-163-124	OT071-MW-163	05/17/16	15:00	G	SO	1					X		X	X	X	X			21
OT071-MW-160-33	OT071-MW-160	05/26/16	16:00	G	SO	1					X		X	X	X	X			21
OT071-MW-160-39	OT071-MW-160	05/26/16	16:15	G	SO	1					X		X	X	X	X			21
OT071-MW-160-164	OT071-MW-160	06/02/16	9:55	G	SO	1					X		X	X	X	X			21
OT071-MW-161-210	OT071-MW-161	06/16/16	9:30	G	SO	1					X		X	X	X	X			21
OT071-MW-162-35	OT071-MW-162	06/23/16	9:00	G	SO	1					X		X	X	X	X			21
OT071-MW-162-188	OT071-MW-162	06/24/16	11:30	G	SO	1					X		X	X	X	X			21
OT071-MW-162-214	OT071-MW-162	06/27/16	10:00	G	SO	1					X		X	X	X	X			21
OT071-MW-160-184	OT071-MW-160	06/02/16	12:30	G	SO	1					X		X	X	X	X			21

George AR # 564580

Special Instructions: Envirodata EDD

21 Business Day TAT for Hardcopy
Tim Roth (tim.roth@cbifederalservices.com) copied on sample receipt logs only.

QC/Data Package Level Required: I II III **IV**

Project Specific: *Level IV Hardcopy*
Envirodata EDD

Relinquished By:	Date: 7-6-16 Time: 1500	Received By:	Date: 7/6/16 Time: 1500
Relinquished By:	Date: 7/8/16 Time: 1500	Received By: PTS LABS	Date: 7-11-16 Time: 10:40
Relinquished By:	Date: Time:	Received By:	Date: Time:

G/C Codes
C = Composite
G = Grab

Matrix Codes
SO = Soil
SS = Surface Soil
WQ = Field QC Water
WW = Waste Water

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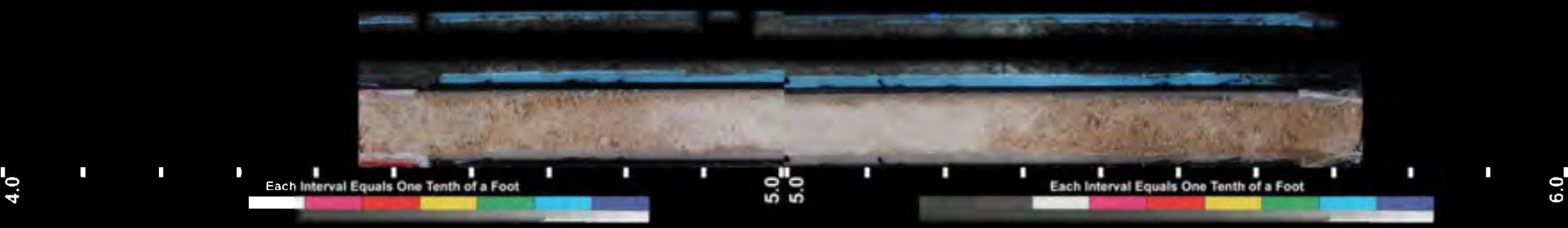
PTS File No.: 46306



Project: Former George AFB, California

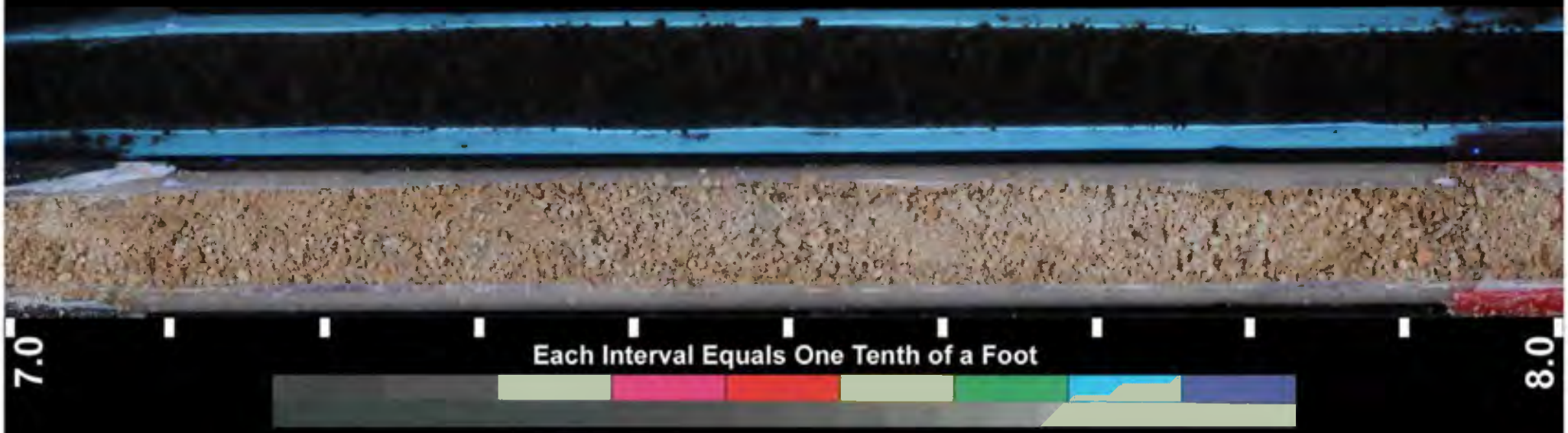
Project No.: 145981 CBI Sample ID Number: OT071-00003

PTS Laboratories
PTS File No.: 46306

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00003

PTS Laboratories
PTS File No.: 46306



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00004

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Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00005

PTS Laboratories
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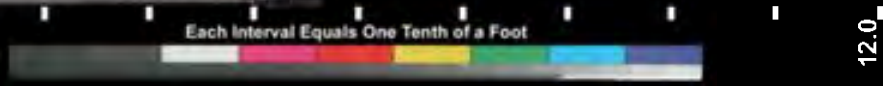

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00005

PTS Laboratories
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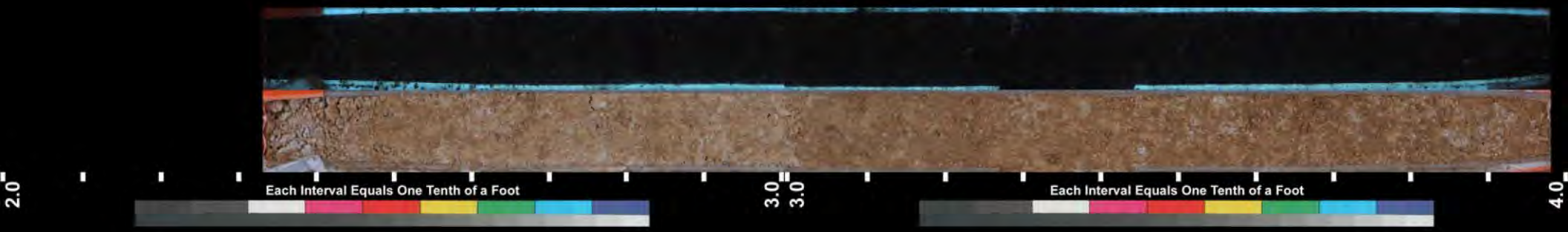

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00008

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PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00008

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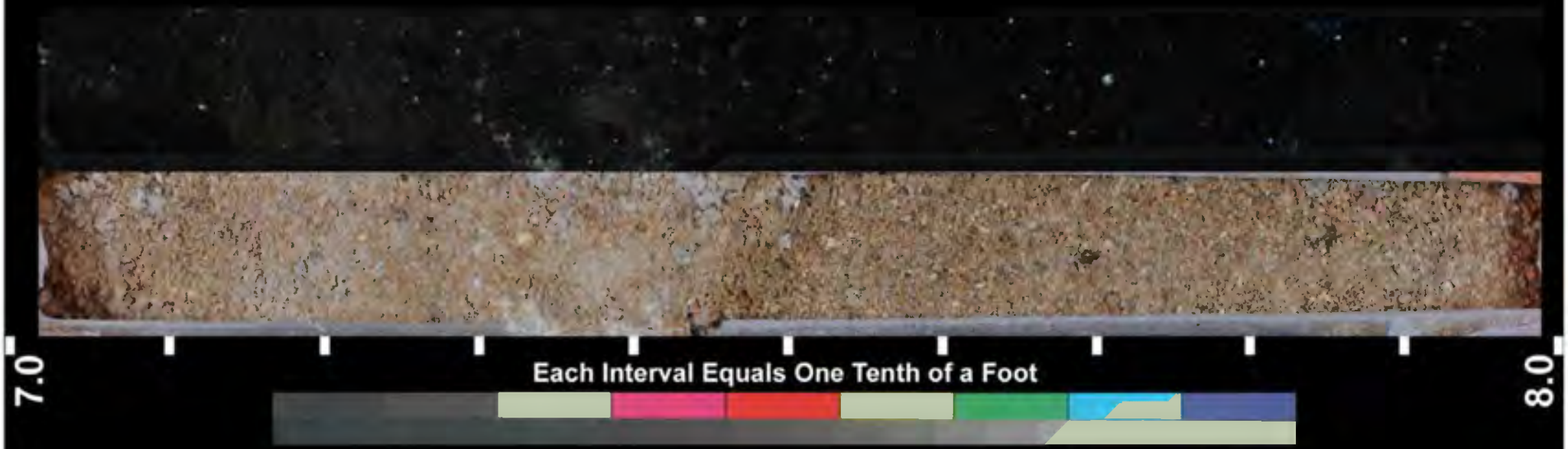
PTS File No.: 46296



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00009

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PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00010

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00010

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

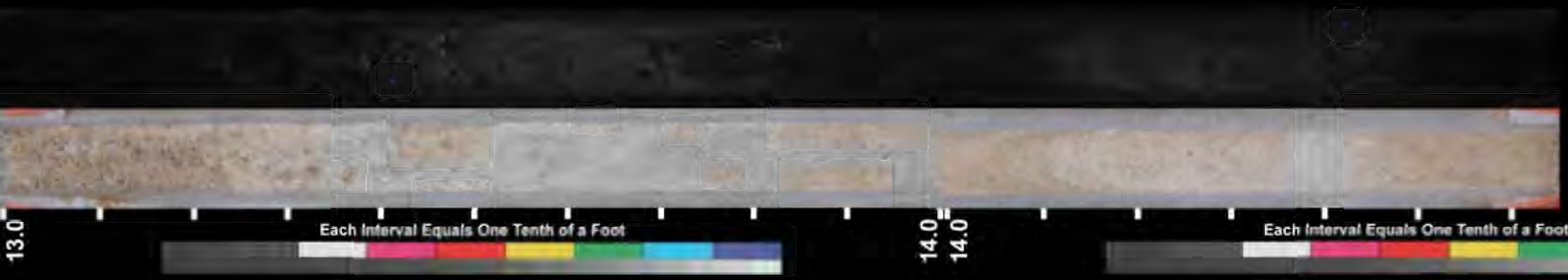
Project No.: 145981 CBI Sample ID Number: OT071-00011

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00011

PTS Laboratories
PTS File No.: 46296



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00012

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

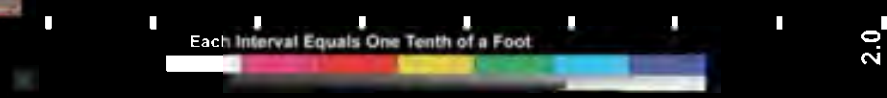
Project No.: 145981 CBI Sample ID Number: OT071-00012

PTS Laboratories
PTS File No.: 46306

Project: Former George AFB, California

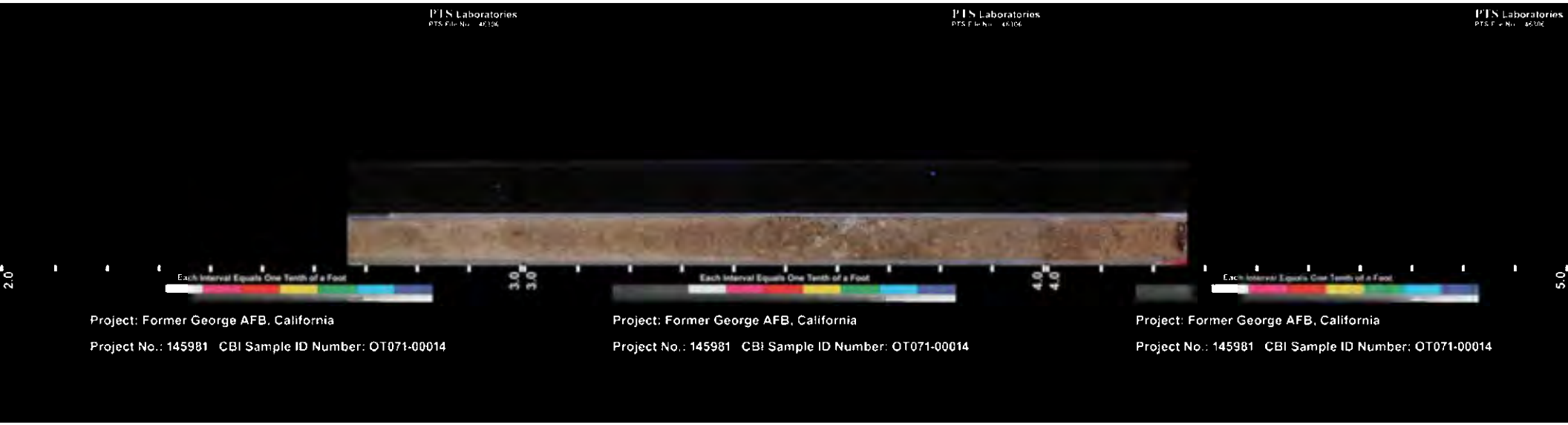
Project No.: 145981 CBI Sample ID Number: OT071-00013

PTS Laboratories
PTS File No.: 46306



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00013


PTS Laboratories
2.0
Each Interval Equals One Tenth of a Foot
Project: Former George AFB, California
Project No.: 145981 CBI Sample ID Number: OT071-00014
PTS Laboratories
3.0
3.0
Each Interval Equals One Tenth of a Foot
Project: Former George AFB, California
Project No.: 145981 CBI Sample ID Number: OT071-00014
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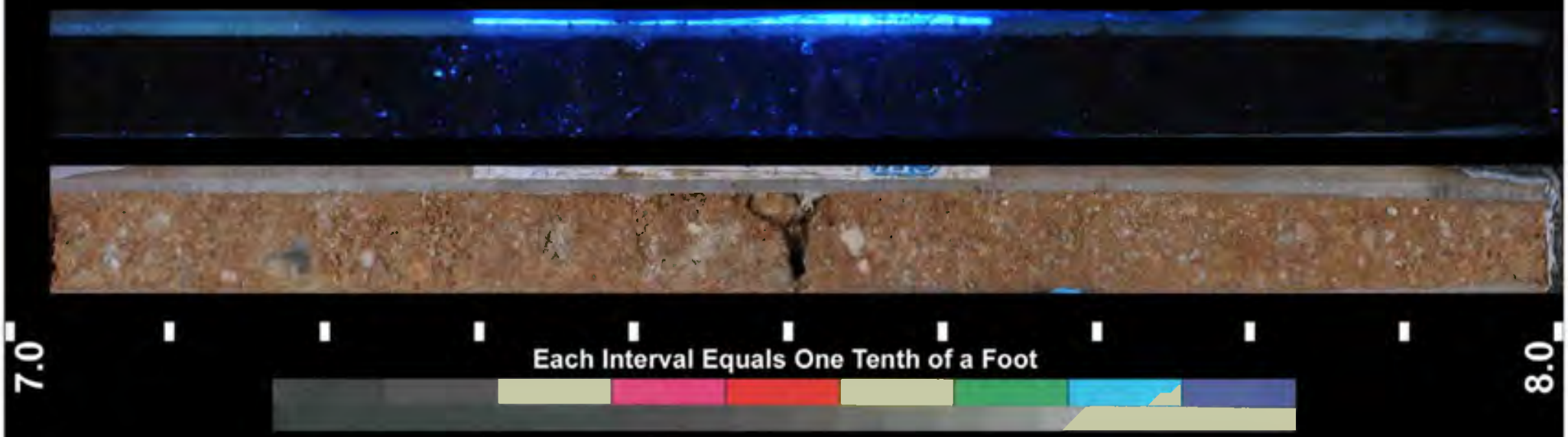
Project: Former George AFB, California
Project No.: 145981 CBI Sample ID Number: OT071-00014

PTS Laboratories
PTS File No.: 66306



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00015

PTS Laboratories
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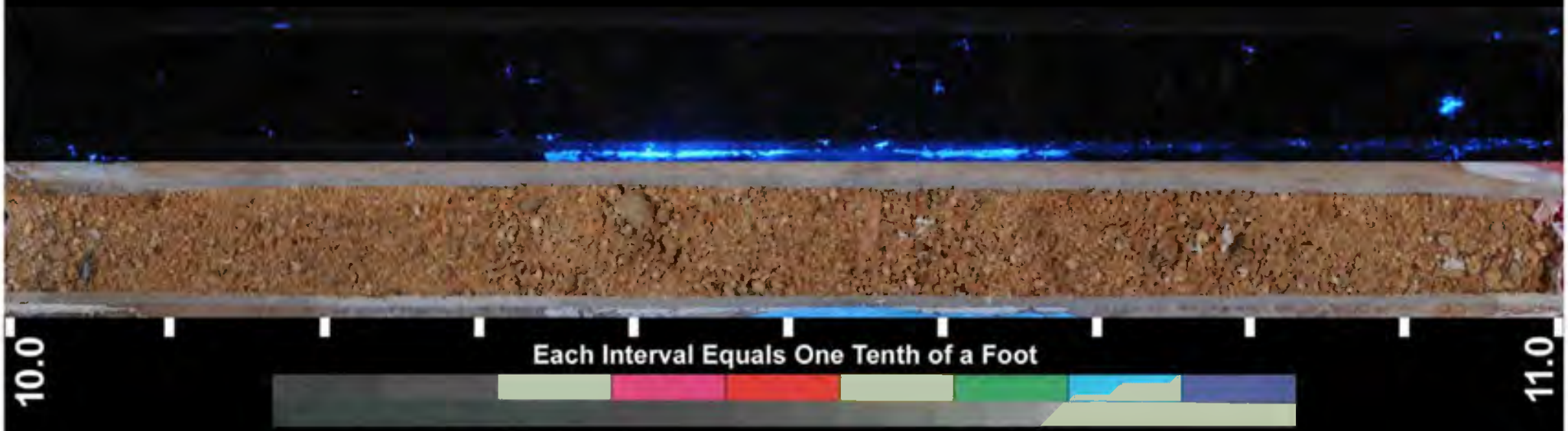


Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00016

PTS Laboratories
PTS File No.: 66306

Project: Former George AFB, California

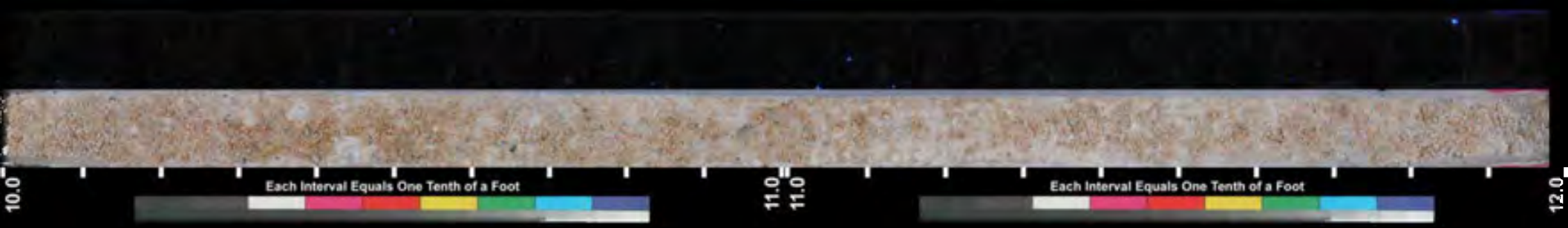
Project No.: 145981 CBI Sample ID Number: OT071-00017

PTS Laboratories
PTS File No.: 66306

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00021

PTS Laboratories
PTS File No.: 46306



Project: Former George AFB, California

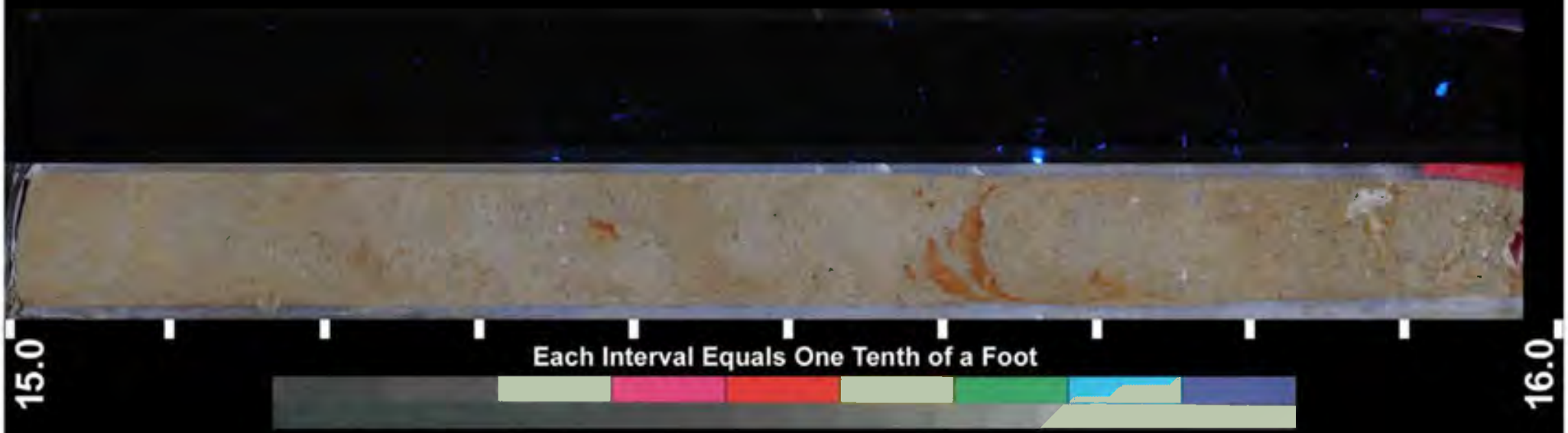
Project No.: 145981 CBI Sample ID Number: OT071-00022

PTS Laboratories
PTS File No.: 46306

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00022

PTS Laboratories
PTS File No.: 66306



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00023

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00024

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00024

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00025

PTS Laboratories
PTS File No.: 46296

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00025

PTS Laboratories
PTS File No.: 66296

7.0

Each Interval Equals One Tenth of a Foot

8.0

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00026

PTS Laboratories
PTS File No.: 46296

10.0

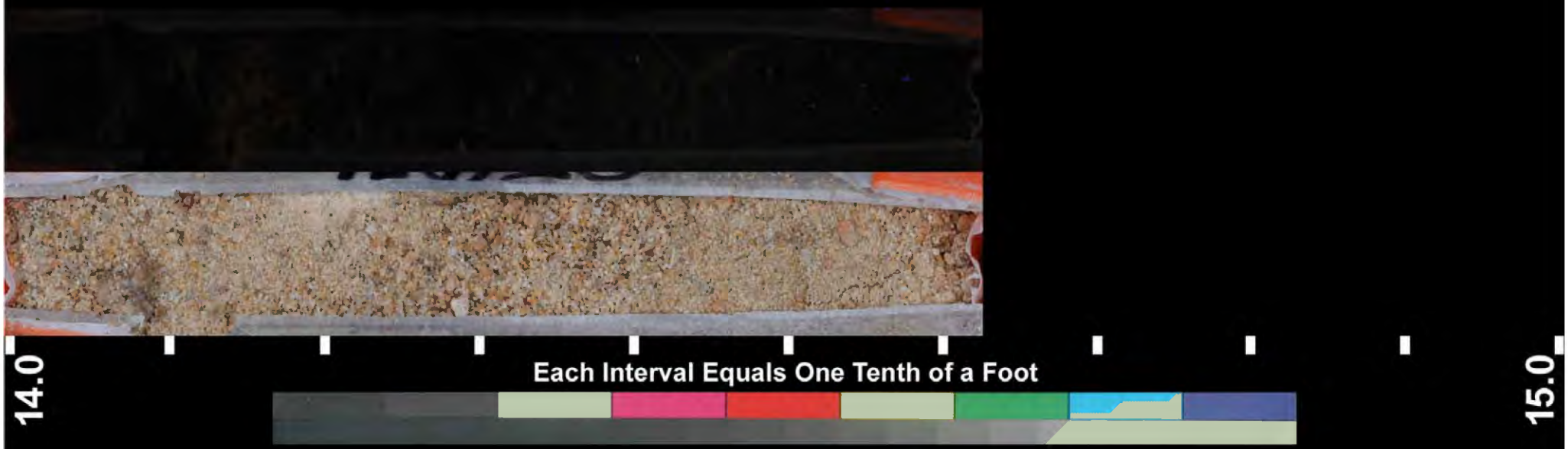
Each Interval Equals One Tenth of a Foot

11.0

Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00027

PTS Laboratories
PTS File No.: 46296



Project: Former George AFB, California

Project No.: 145981 CBI Sample ID Number: OT071-00028

PTS Laboratories
PTS File No.: 46419

92.0

Each Interval Equals One Tenth of a Foot

93.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-159-92

PTS Laboratories
PTS File No.: 46419

100.0

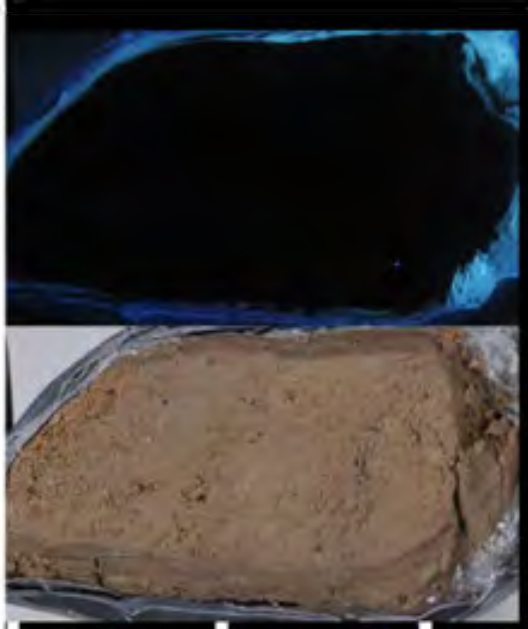
Each Interval Equals One Tenth of a Foot

101.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-159-100

PTS Laboratories
PTS File No.: 46419



164.0

Each Interval Equals One Tenth of a Foot

165.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-160-164

PTS Laboratories
PTS File No.: 46419

184.0

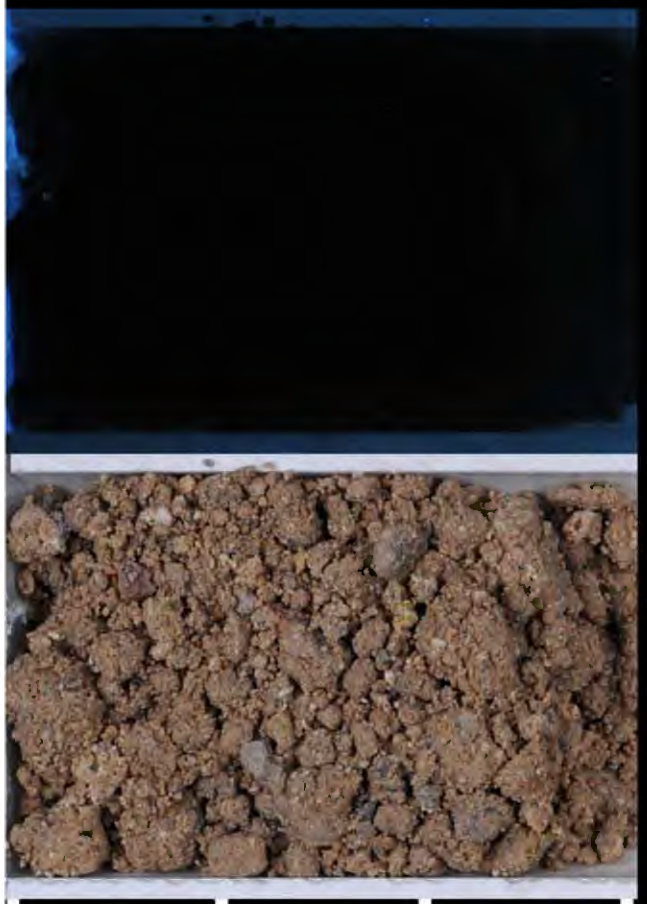
Each Interval Equals One Tenth of a Foot

185.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-160-184

PTS Laboratories
PTS File No.: 46419



210.0

Each Interval Equals One Tenth of a Foot

211.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-161-210

PTS Laboratories
PTS File No.: 46419

35.0

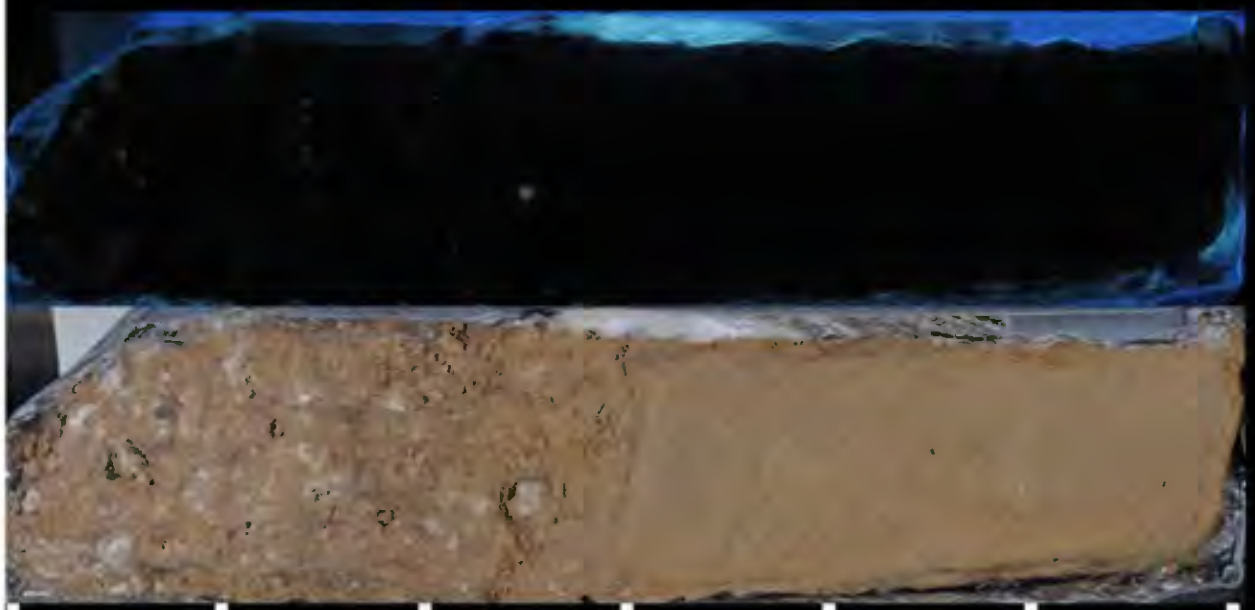
Each Interval Equals One Tenth of a Foot

36.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-162-35

PTS Laboratories
PTS File No.: 46419



188.0

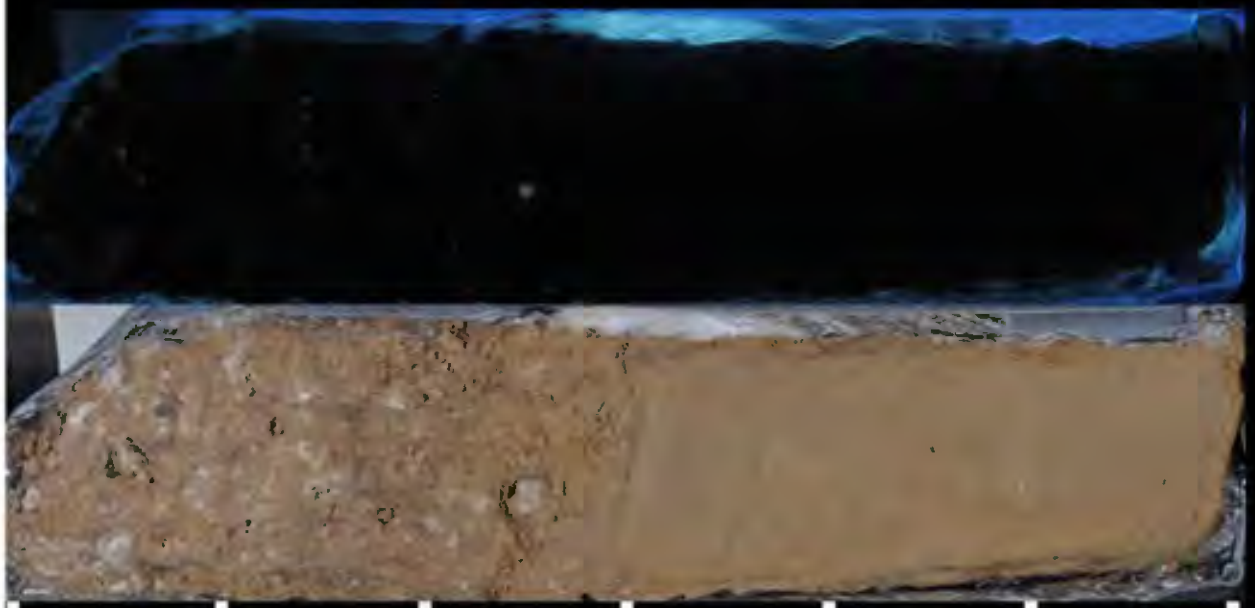
Each Interval Equals One Tenth of a Foot

189.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-162-188

PTS Laboratories
PTS File No.: 46419



188.0 Each Interval Equals One Tenth of a Foot 189.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-162-188

PTS Laboratories
PTS File No.: 46419

214.0

Each Interval Equals One Tenth of a Foot

215.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-162-214

111.0

Each Interval Equals One Tenth of a Foot

112.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-163-111

PTS Laboratories
PTS File No.: 46419

124.0

Each Interval Equals One Tenth of a Foot

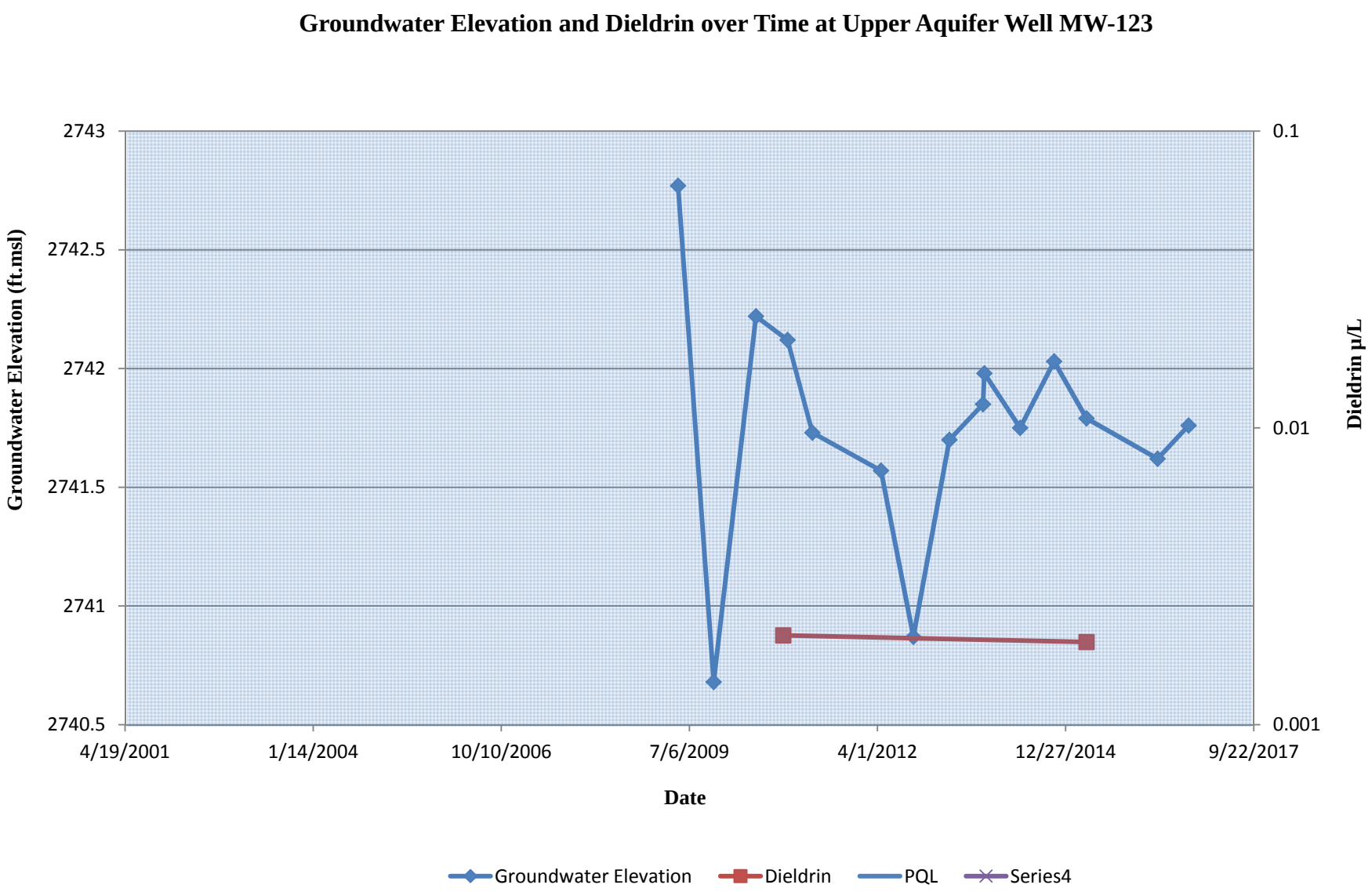
125.0

Project: Former George AFB, California

Project No.: 145981 Boring ID: OT071-MW-163-124

Appendix H
Time-Series Plots

Contract No. FA8903-09-D-8580, Task Order 0018• Final • Revision 0 • September 2017



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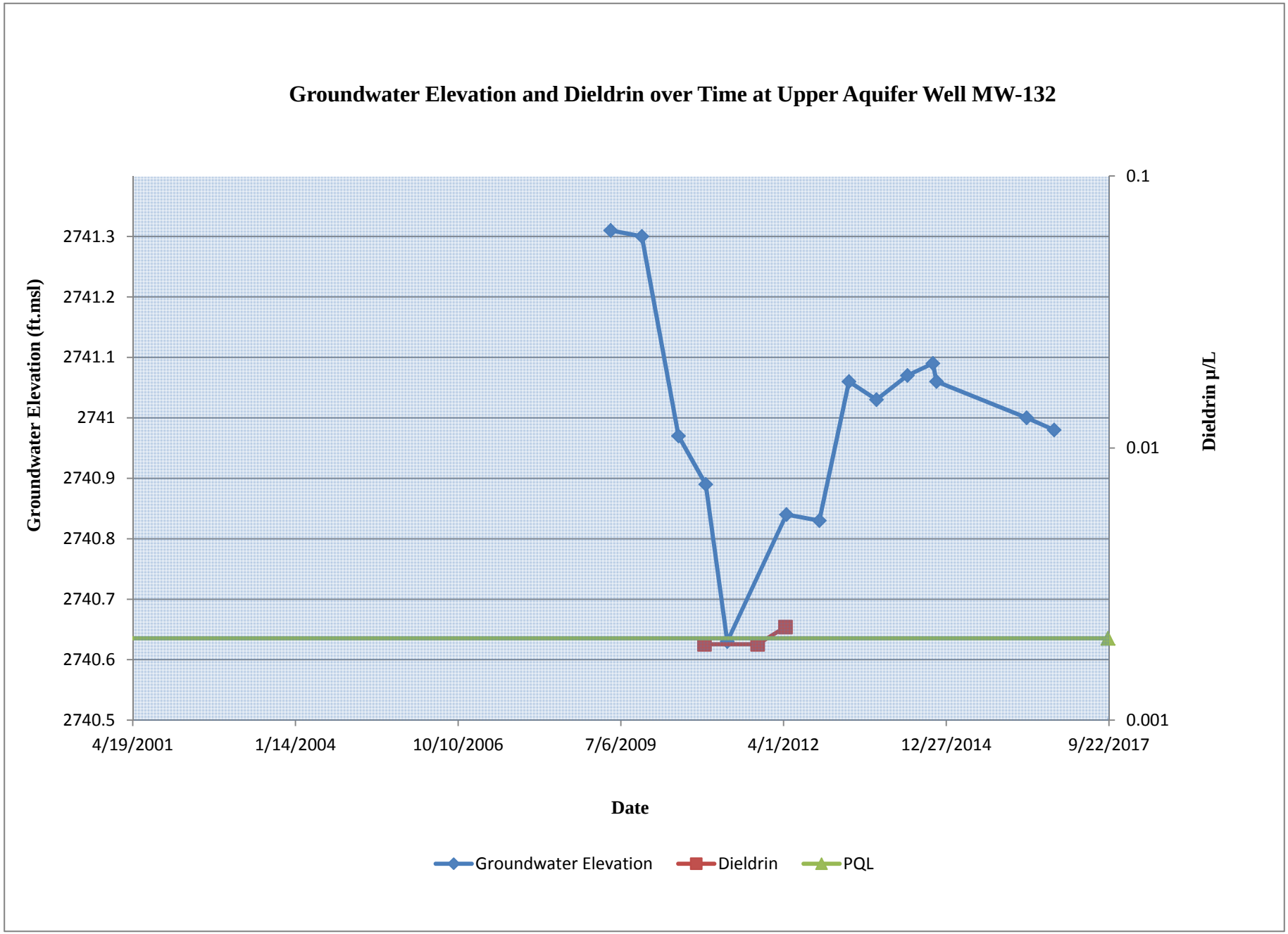
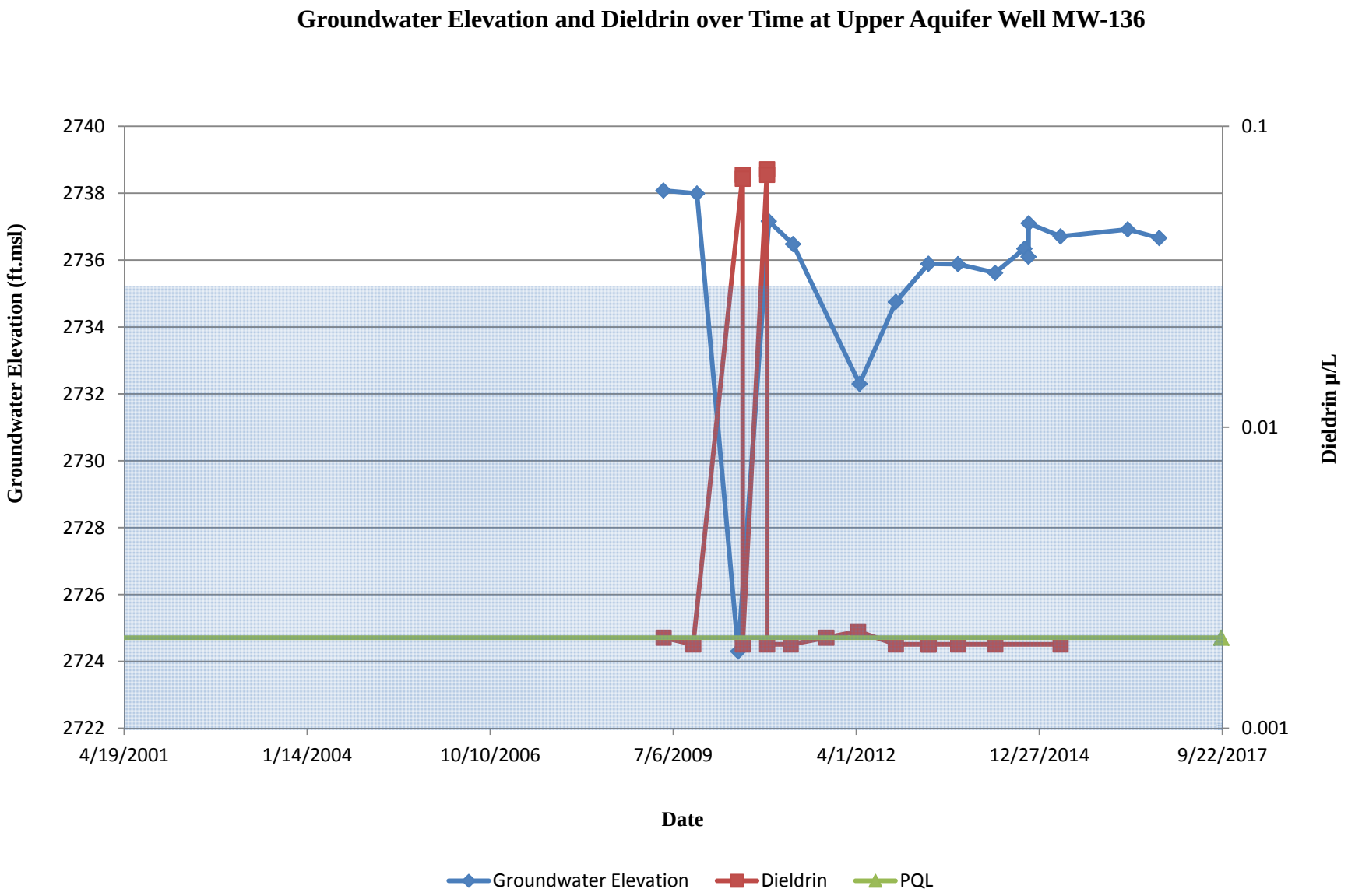

Groundwater Elevation and Dieldrin over Time at Upper Aquifer Well MW-132
Groundwater Elevation (ft.msl)
2741.3
2741.2
2741.1
2741
2740.9
2740.8
2740.7
2740.6
2740.5
0.1
0.01
0.001
Dieldrin µ/L
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
Groundwater Elevation
Dieldrin
PQL



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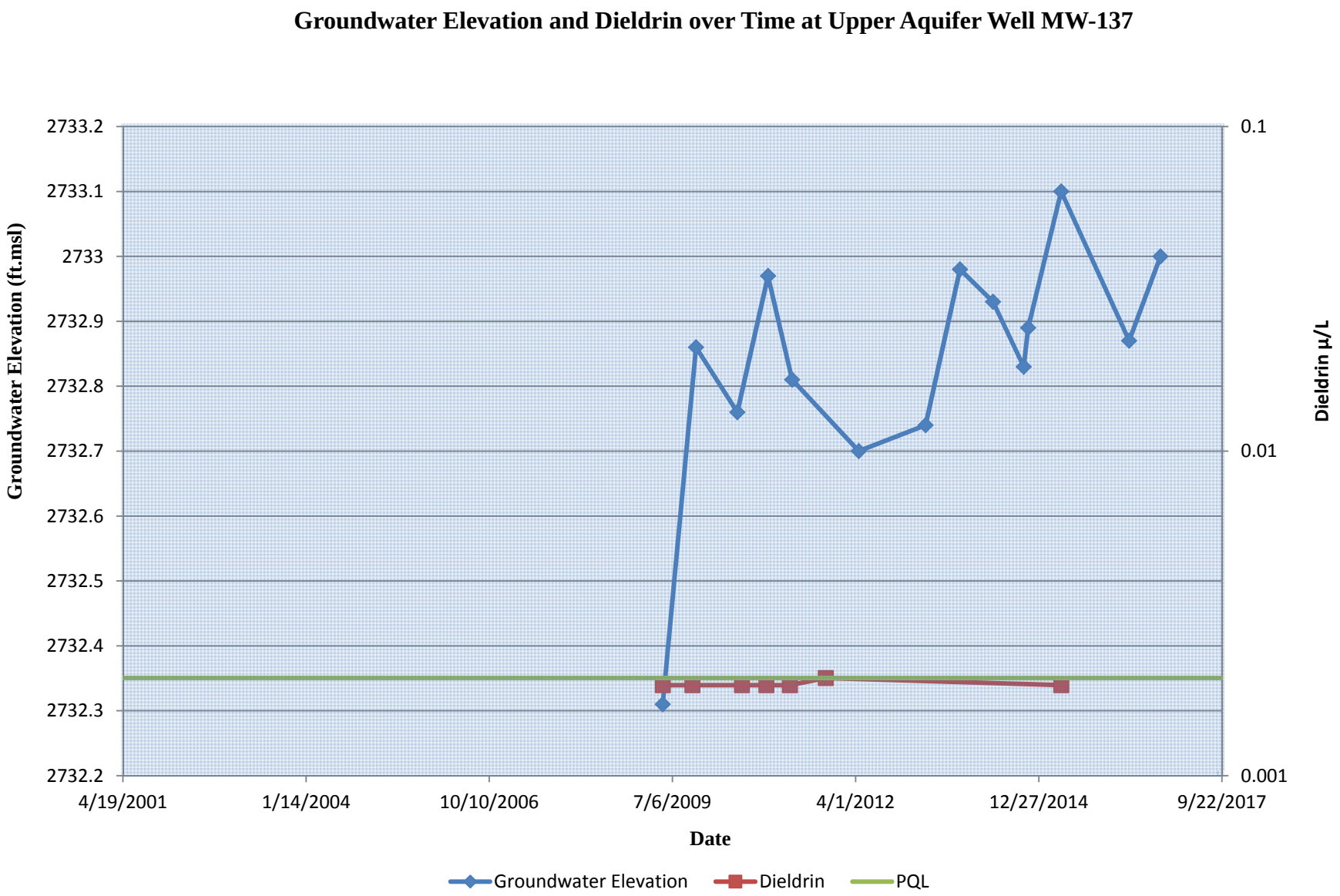

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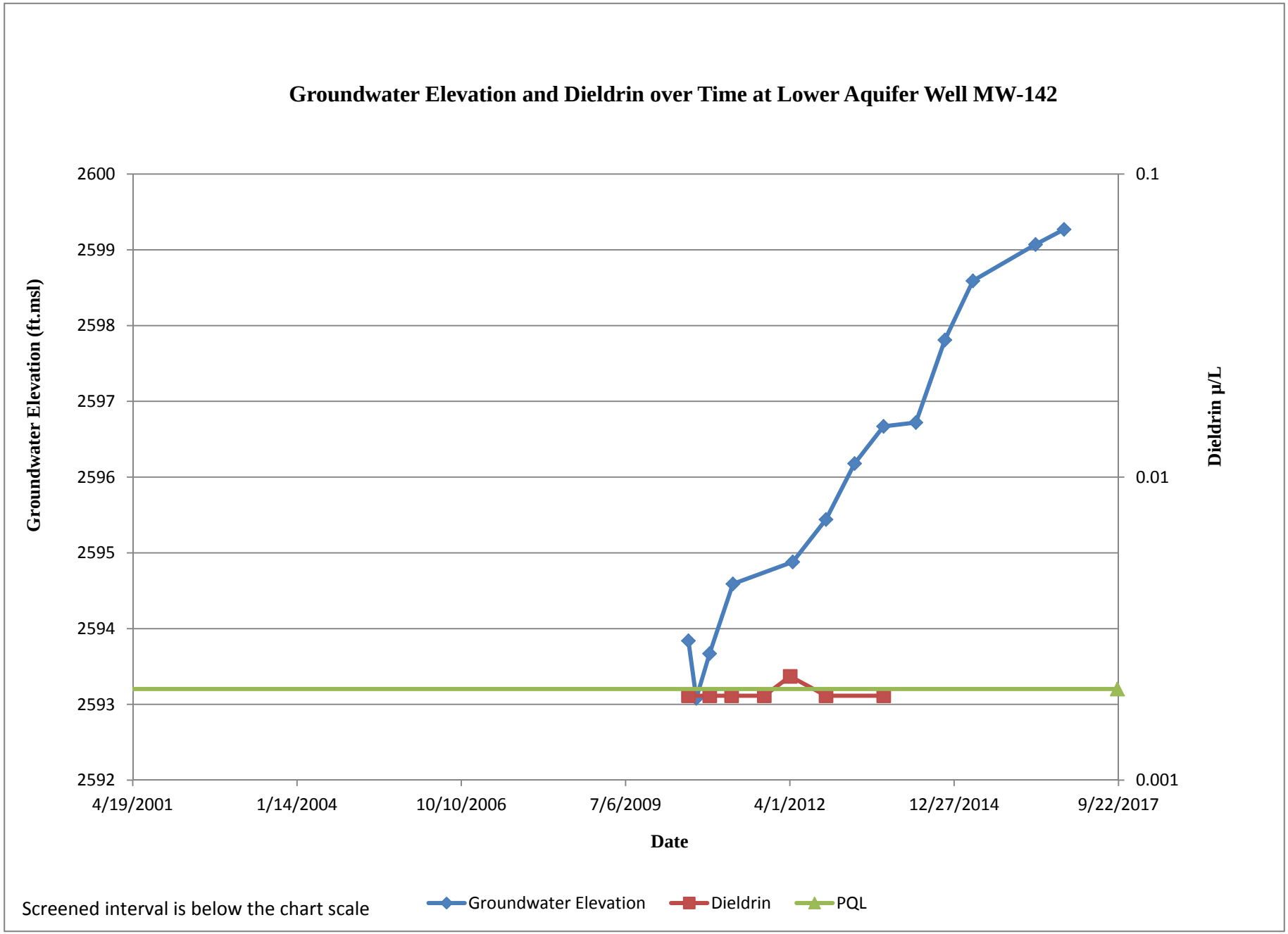
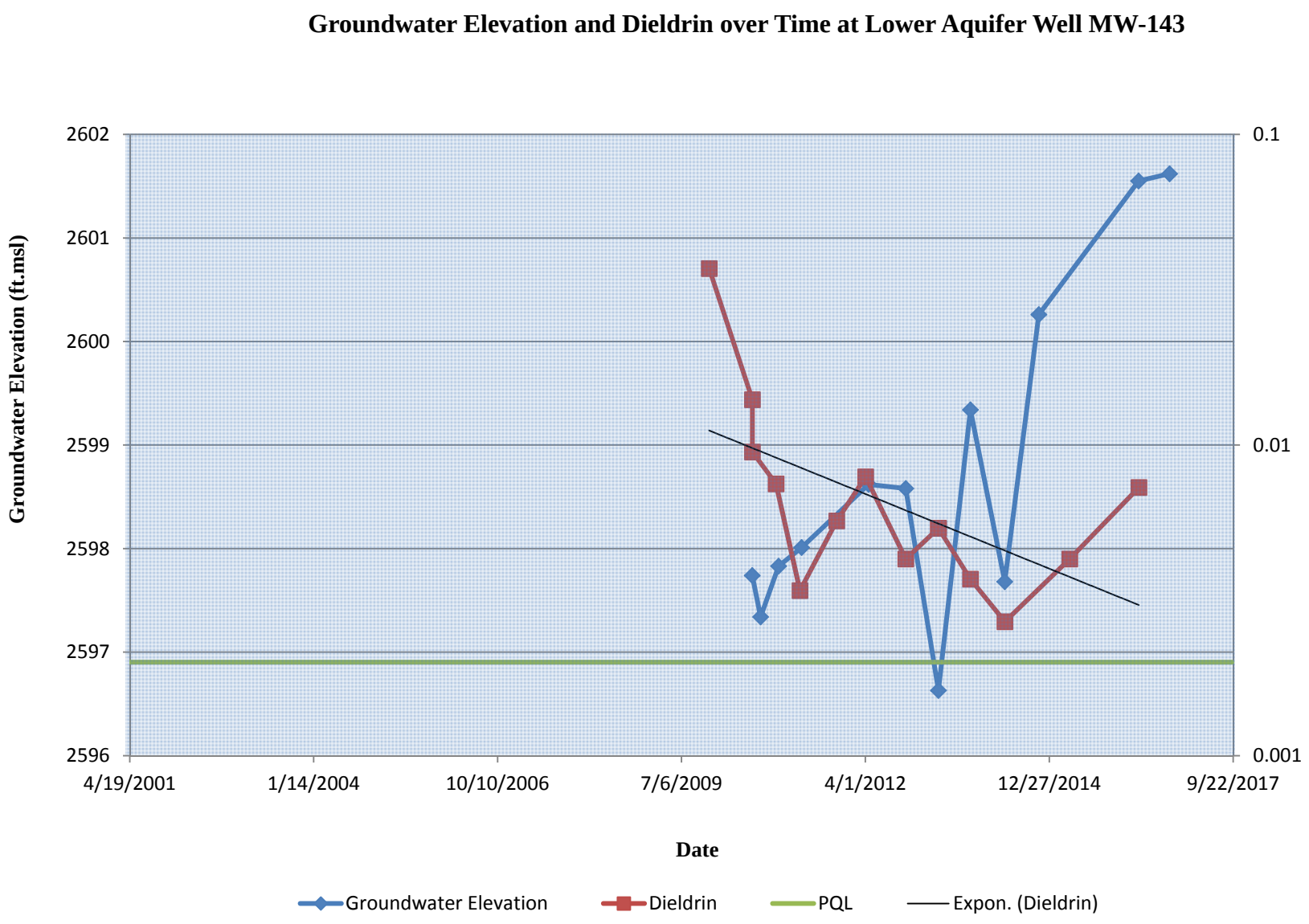

Groundwater Elevation and Dieldrin over Time at Lower Aquifer Well MW-142
Groundwater Elevation (ft.msl)
2600
2599
2598
2597
2596
2595
2594
2593
2592
Dieldrin µ/L
0.1
0.01
0.001
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
Screened interval is below the chart scale
Groundwater Elevation
Dieldrin
PQL



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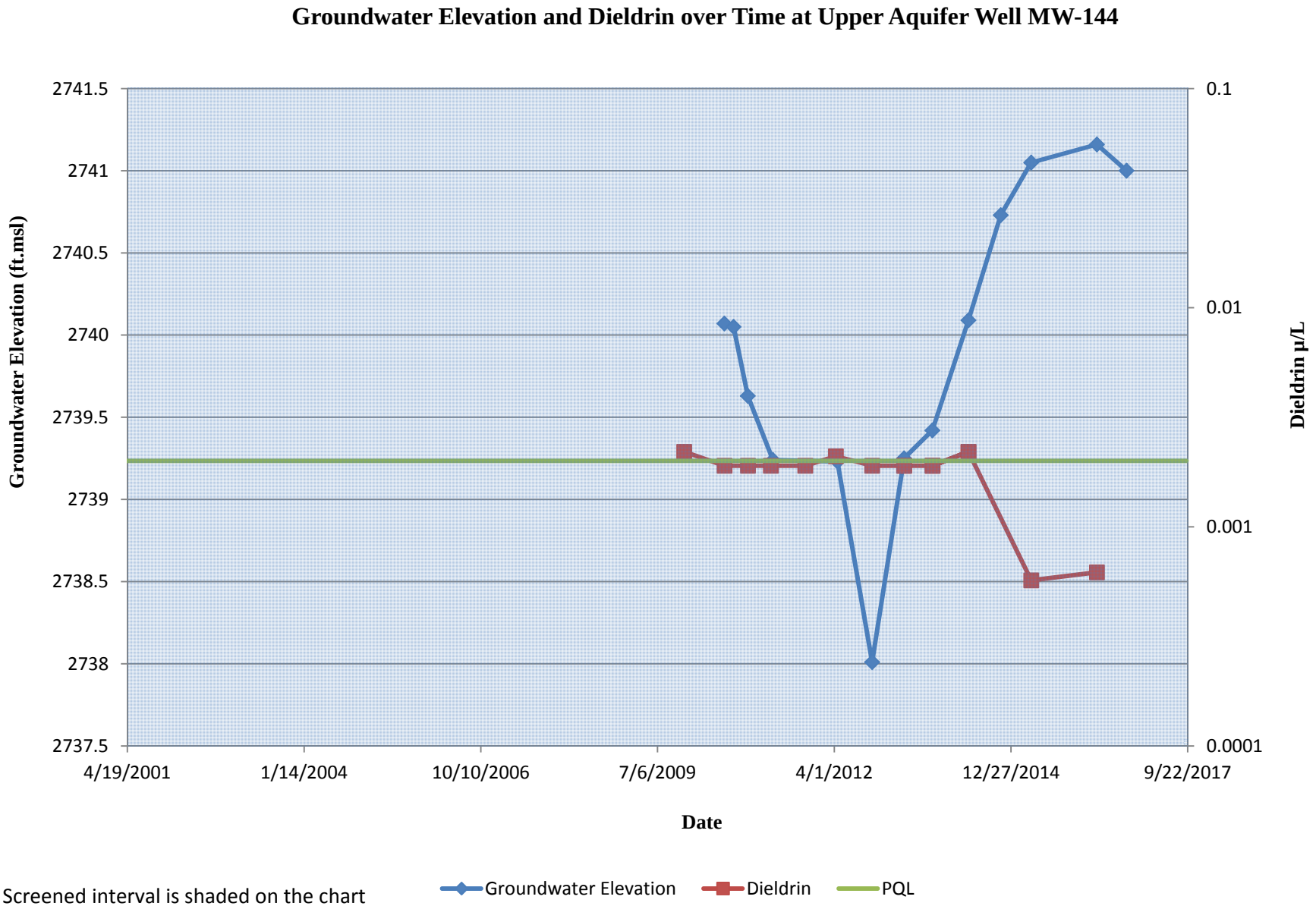

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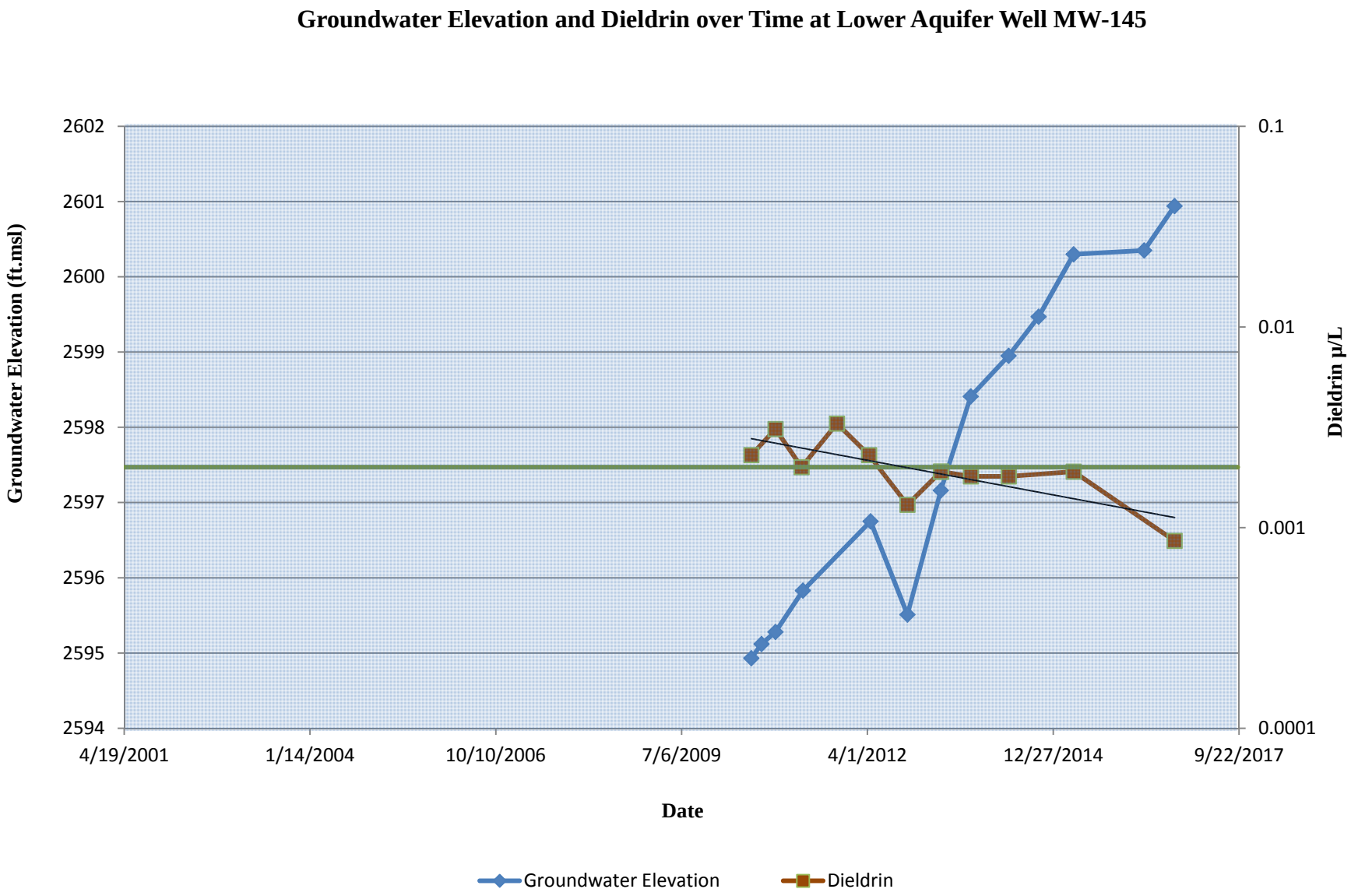

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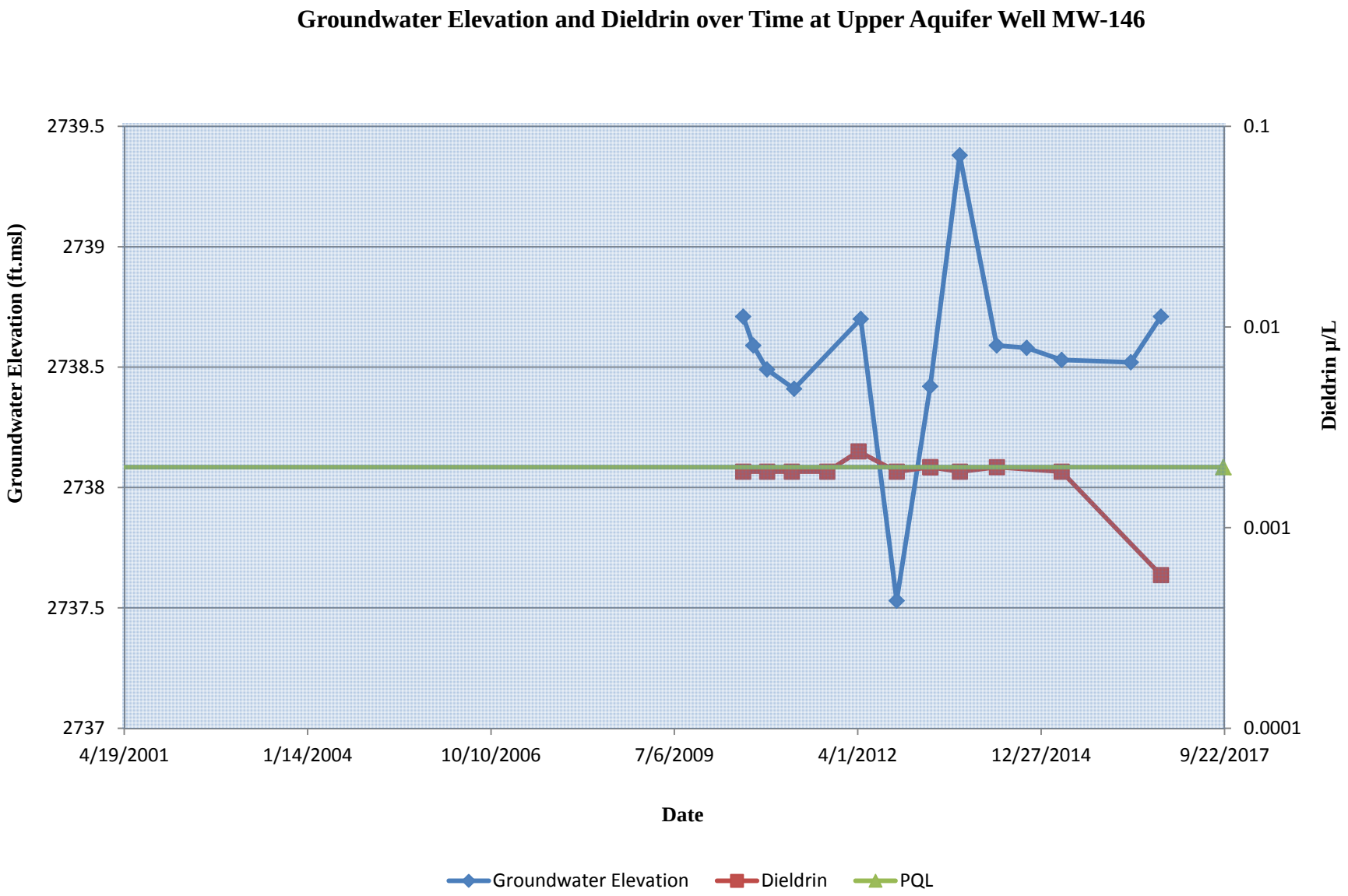

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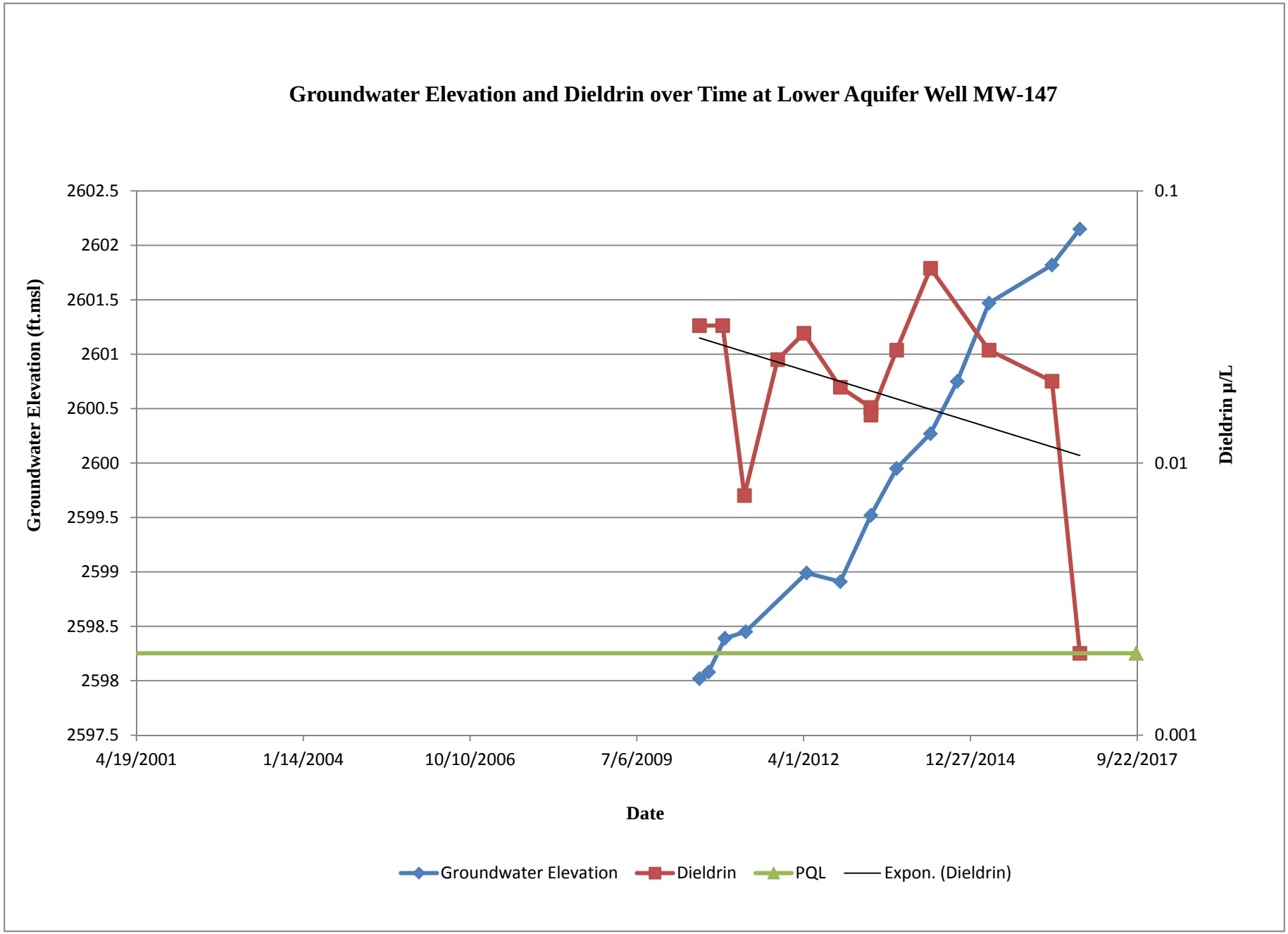
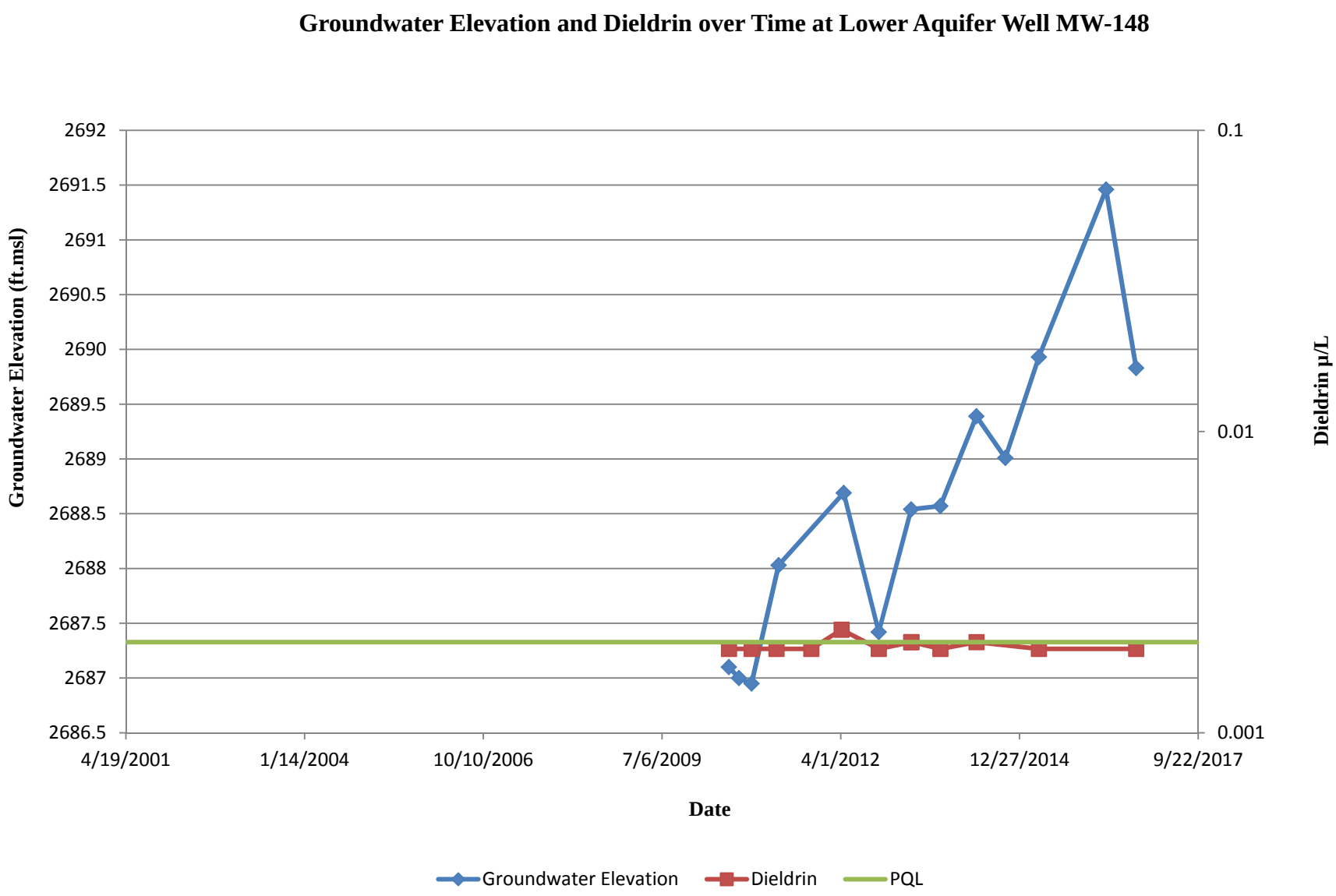
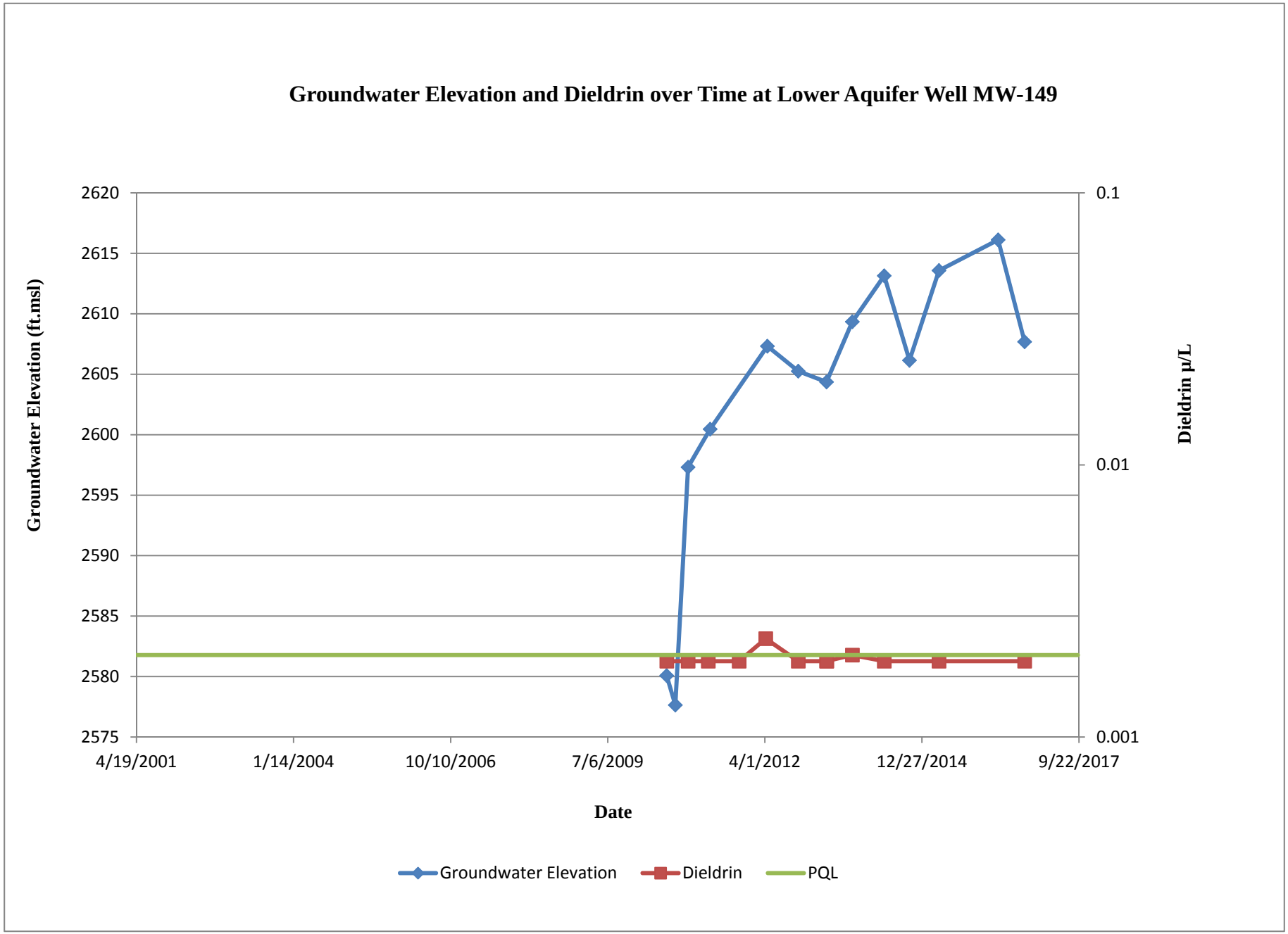
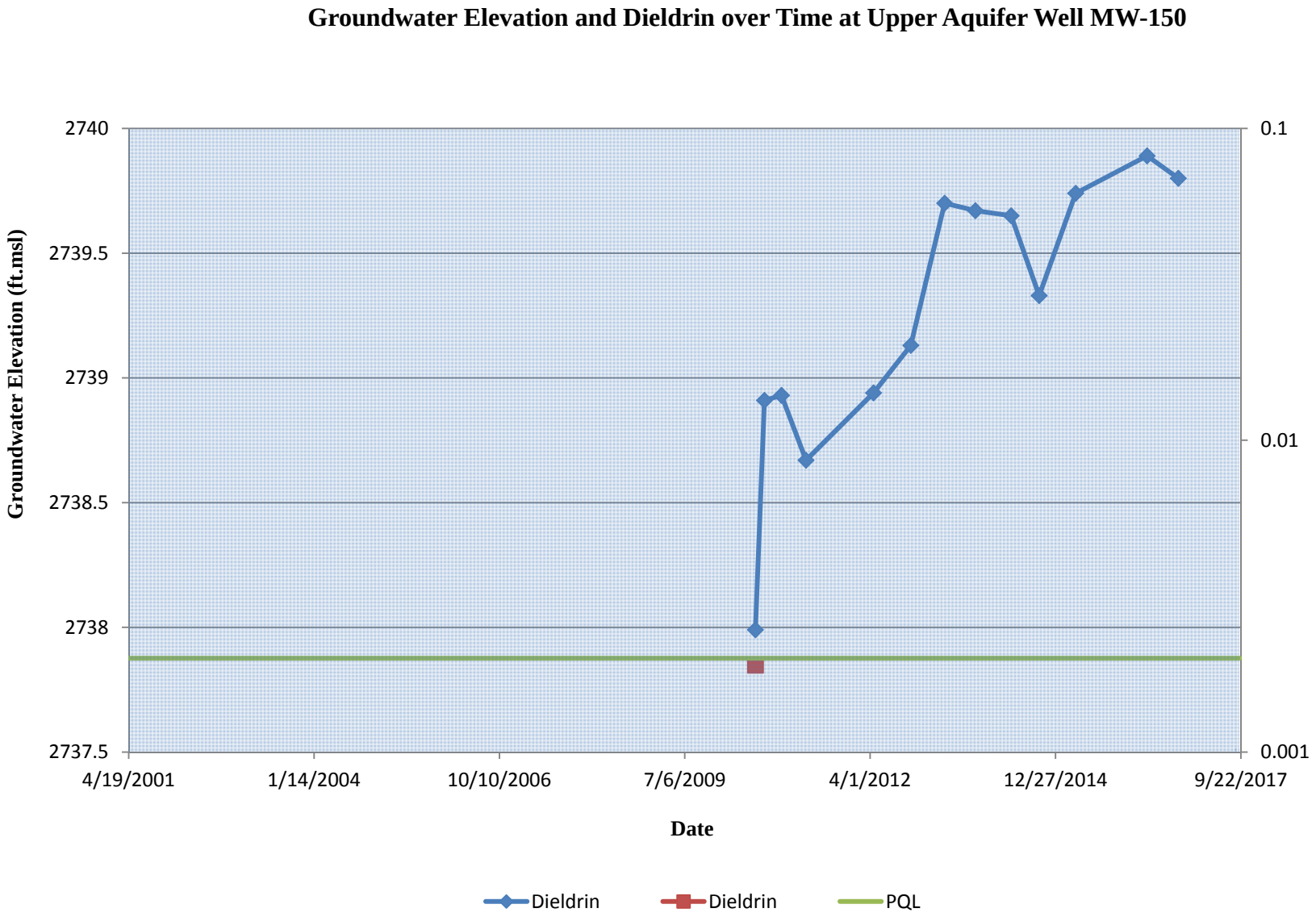

Groundwater Elevation and Dieldrin over Time at Lower Aquifer Well MW-147
Groundwater Elevation (ft.msl)
2602.5
2602
2601.5
2601
2600.5
2600
2599.5
2599
2598.5
2598
2597.5
0.1
0.01
0.001
Dieldrin µ/L
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
Groundwater Elevation
Dieldrin
PQL
Expon. (Dieldrin)



Screened interval is shaded on the chart


Groundwater Elevation and Dieldrin over Time at Lower Aquifer Well MW-149
Groundwater Elevation (ft.msl)
2620
2615
2610
2605
2600
2595
2590
2585
2580
2575
0.1
0.01
0.001
Dieldrin µ/L
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
Groundwater Elevation
Dieldrin
PQL



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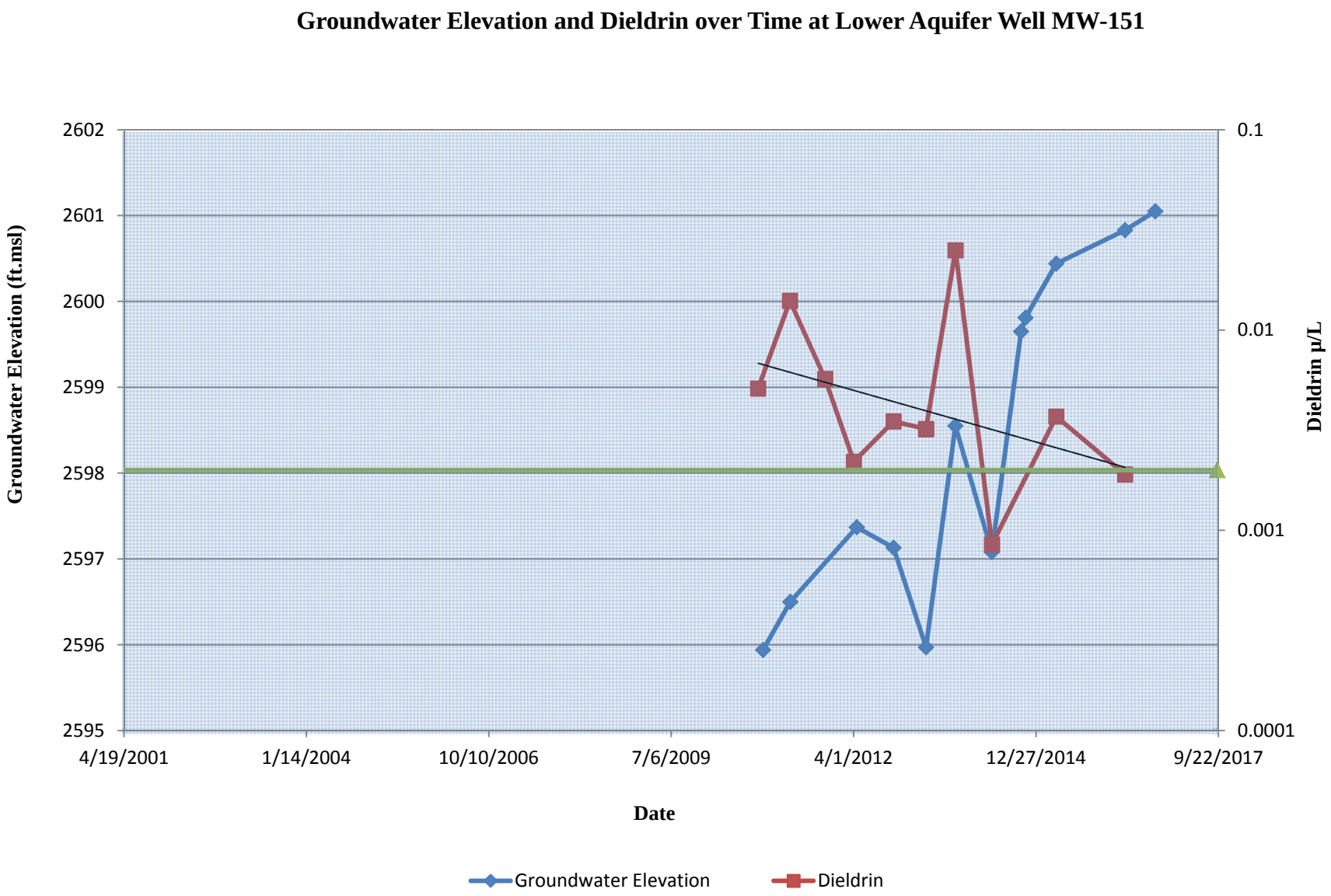

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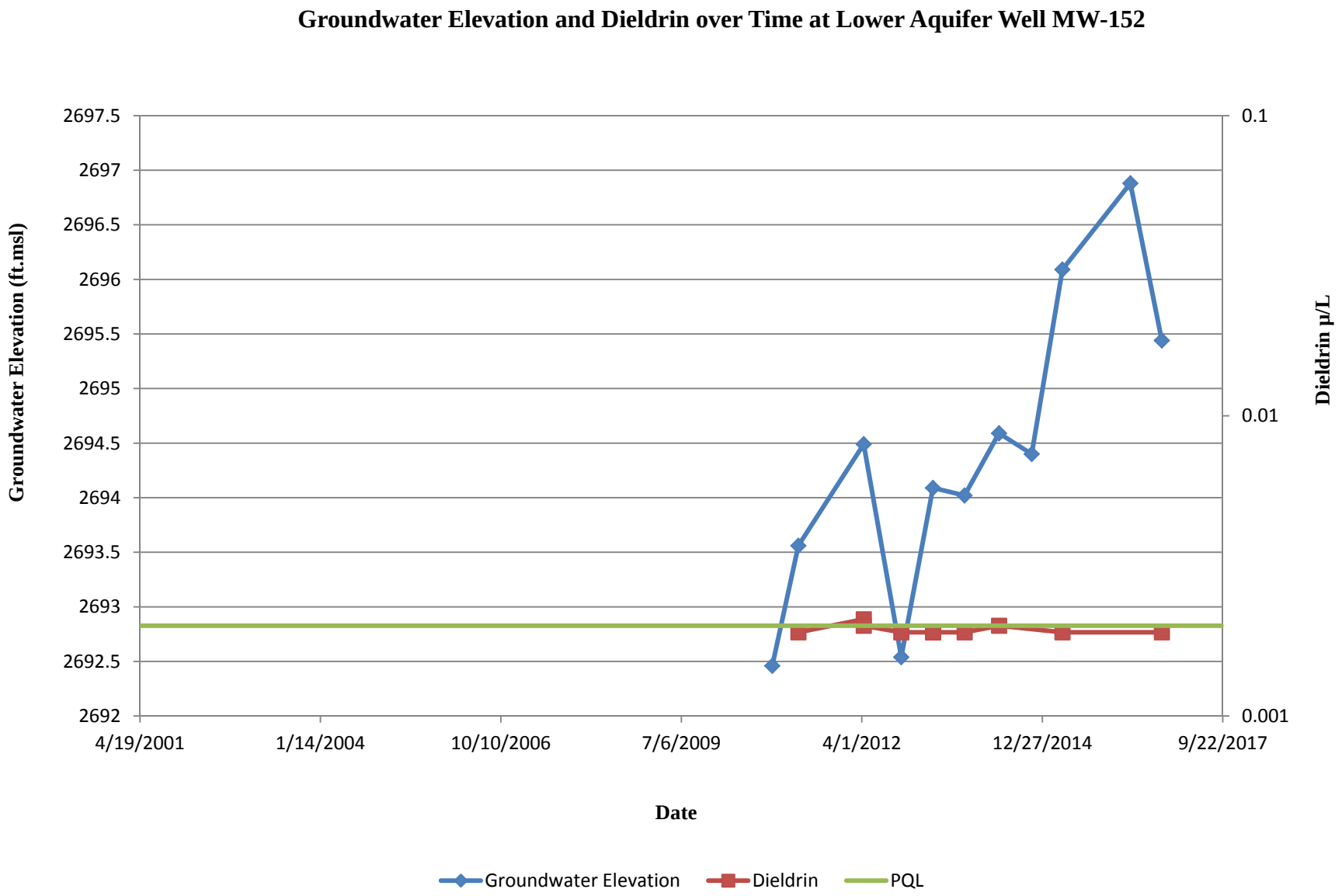

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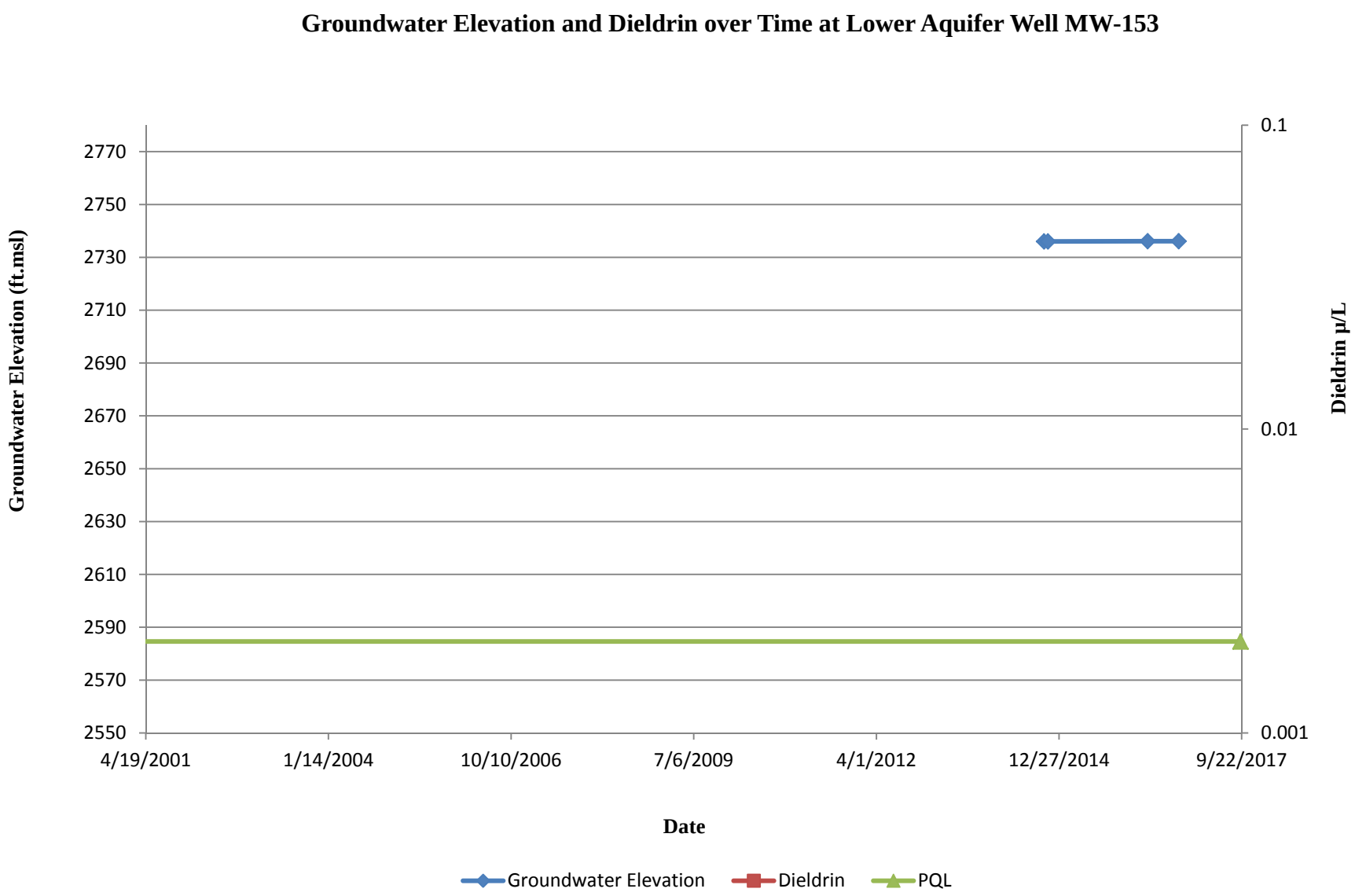

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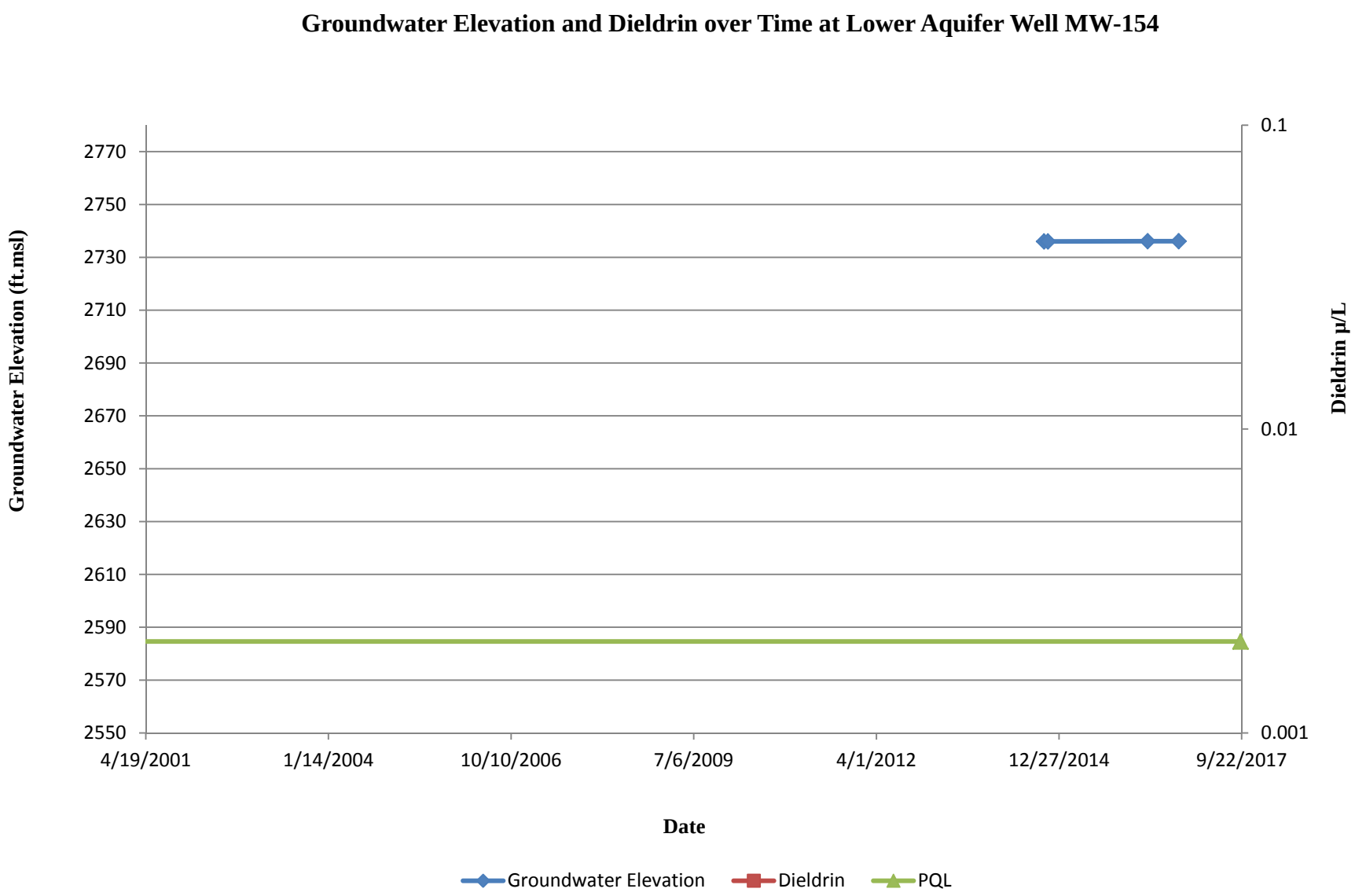

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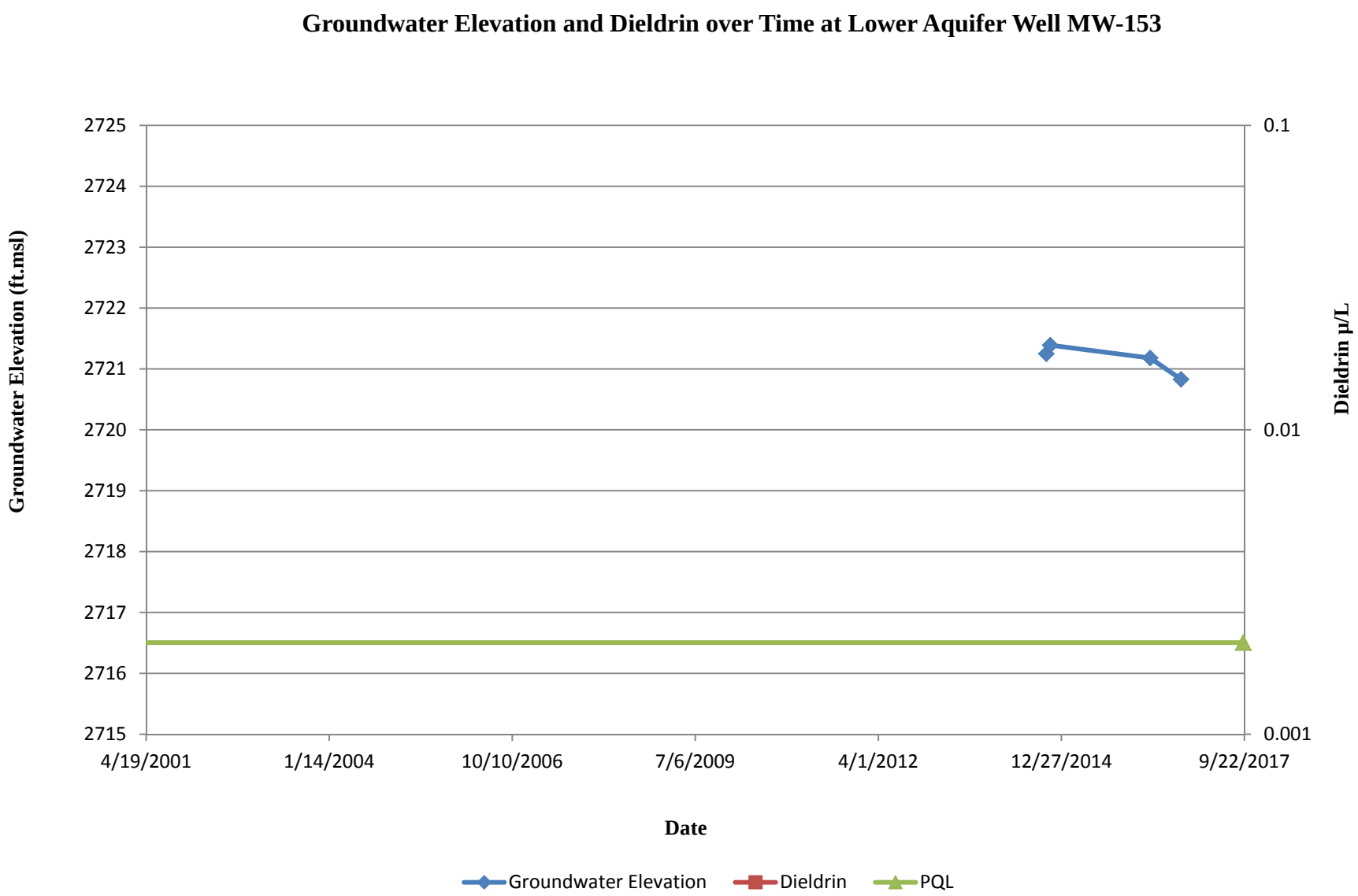
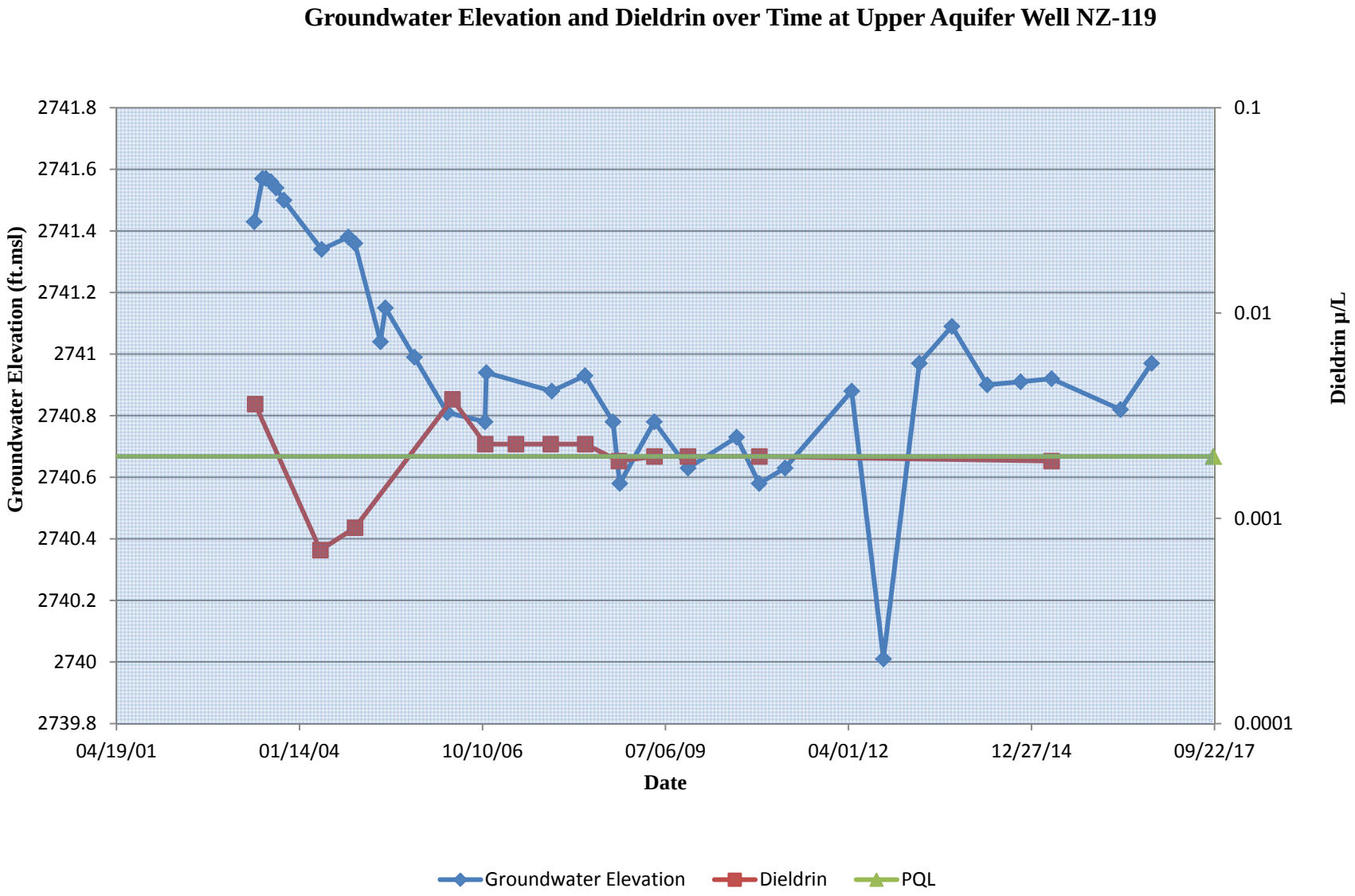
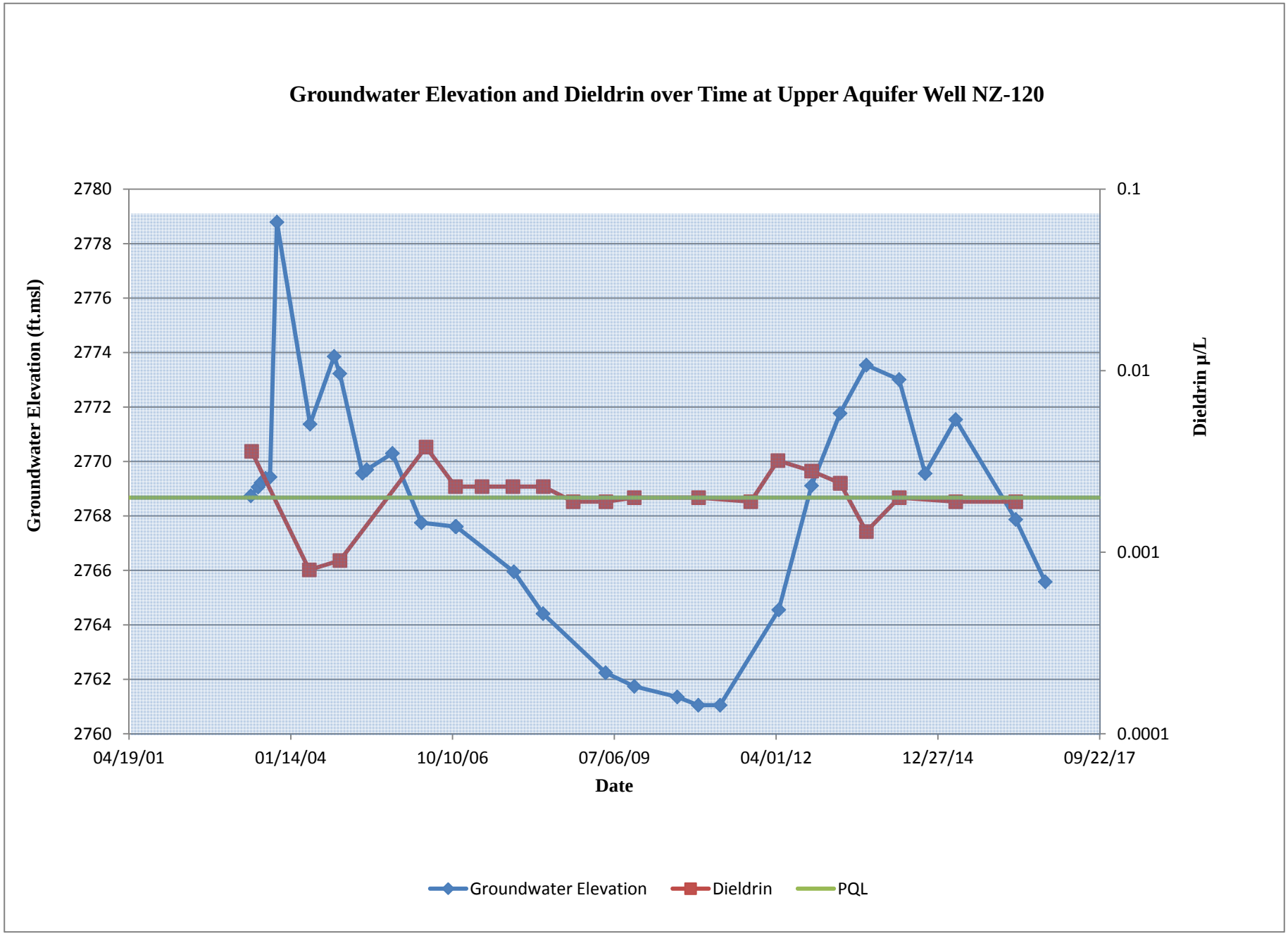
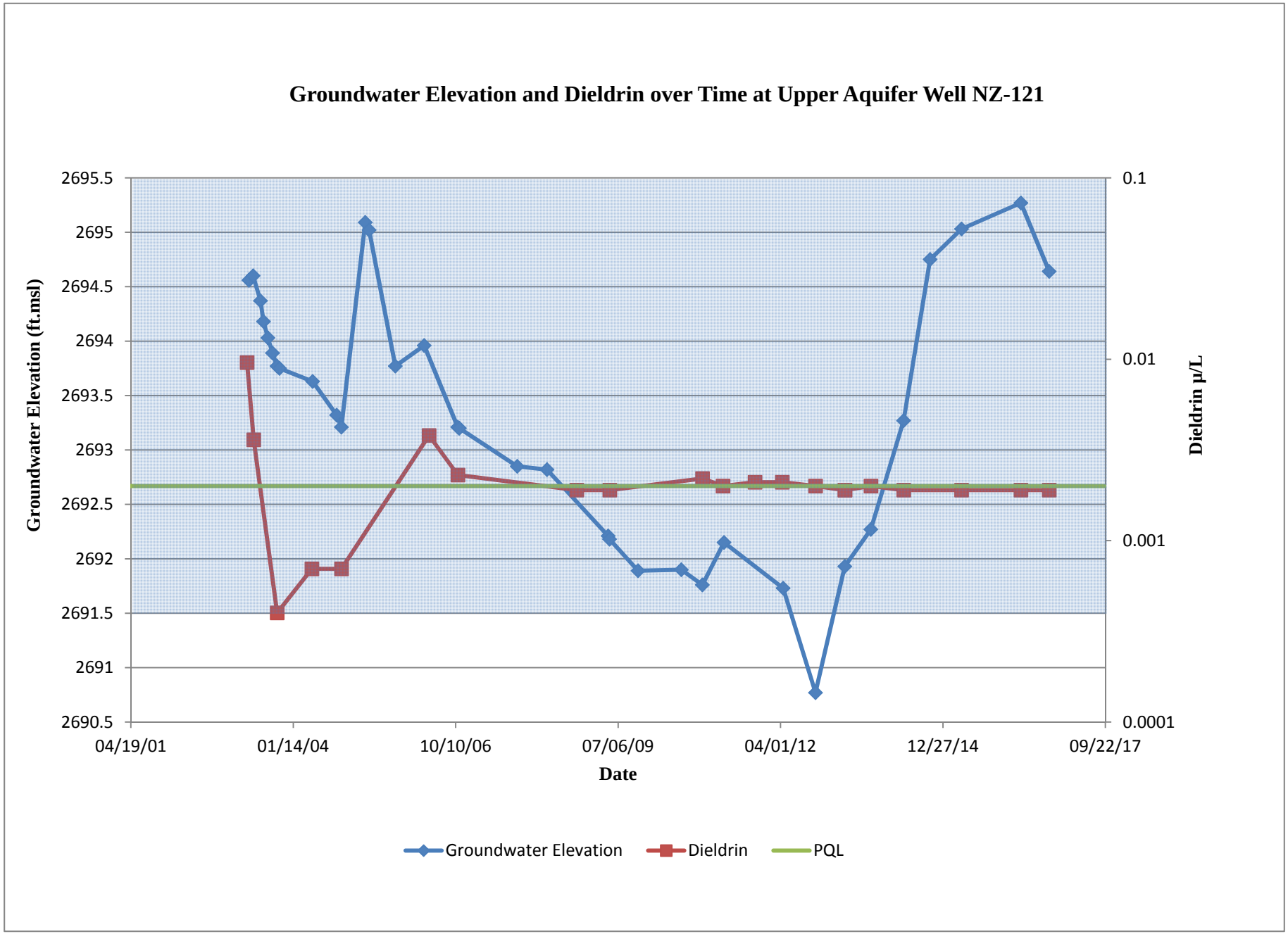
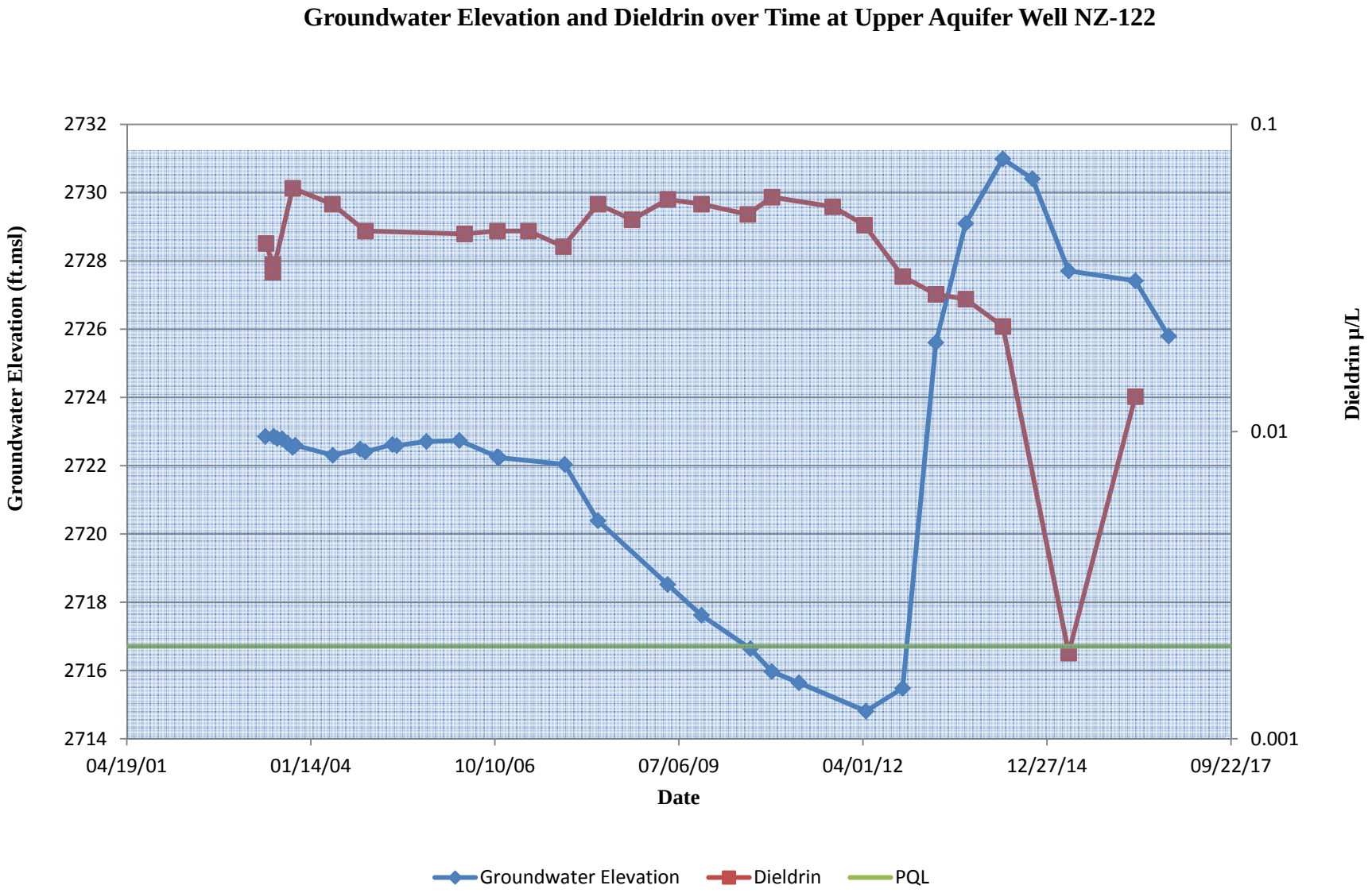


Screened interval is shaded on the chart


Groundwater Elevation and Dieldrin over Time at Upper Aquifer Well NZ-119
Groundwater Elevation (ft.msl)
2741.8
2741.6
2741.4
2741.2
2741
2740.8
2740.6
2740.4
2740.2
2740
2739.8
0.1
0.01
0.001
0.0001
Dieldrin µ/L
04/19/01
01/14/04
10/10/06
07/06/09
04/01/12
12/27/14
09/22/17
Date
Groundwater Elevation
Dieldrin
PQL


Groundwater Elevation and Dieldrin over Time at Upper Aquifer Well NZ-120
Groundwater Elevation (ft.msl)
2780
2778
2776
2774
2772
2770
2768
2766
2764
2762
2760
0.1
0.01
0.001
0.0001
Dieldrin µ/L
04/19/01
01/14/04
10/10/06
07/06/09
04/01/12
12/27/14
09/22/17
Date
Groundwater Elevation
Dieldrin
PQL


Groundwater Elevation and Dieldrin over Time at Upper Aquifer Well NZ-121
Groundwater Elevation (ft.msl)
2695.5
2695
2694.5
2694
2693.5
2693
2692.5
2692
2691.5
2691
2690.5
0.1
0.01
0.001
0.0001
Dieldrin µ/L
04/19/01
01/14/04
10/10/06
07/06/09
04/01/12
12/27/14
09/22/17
Date
Groundwater Elevation
Dieldrin
PQL



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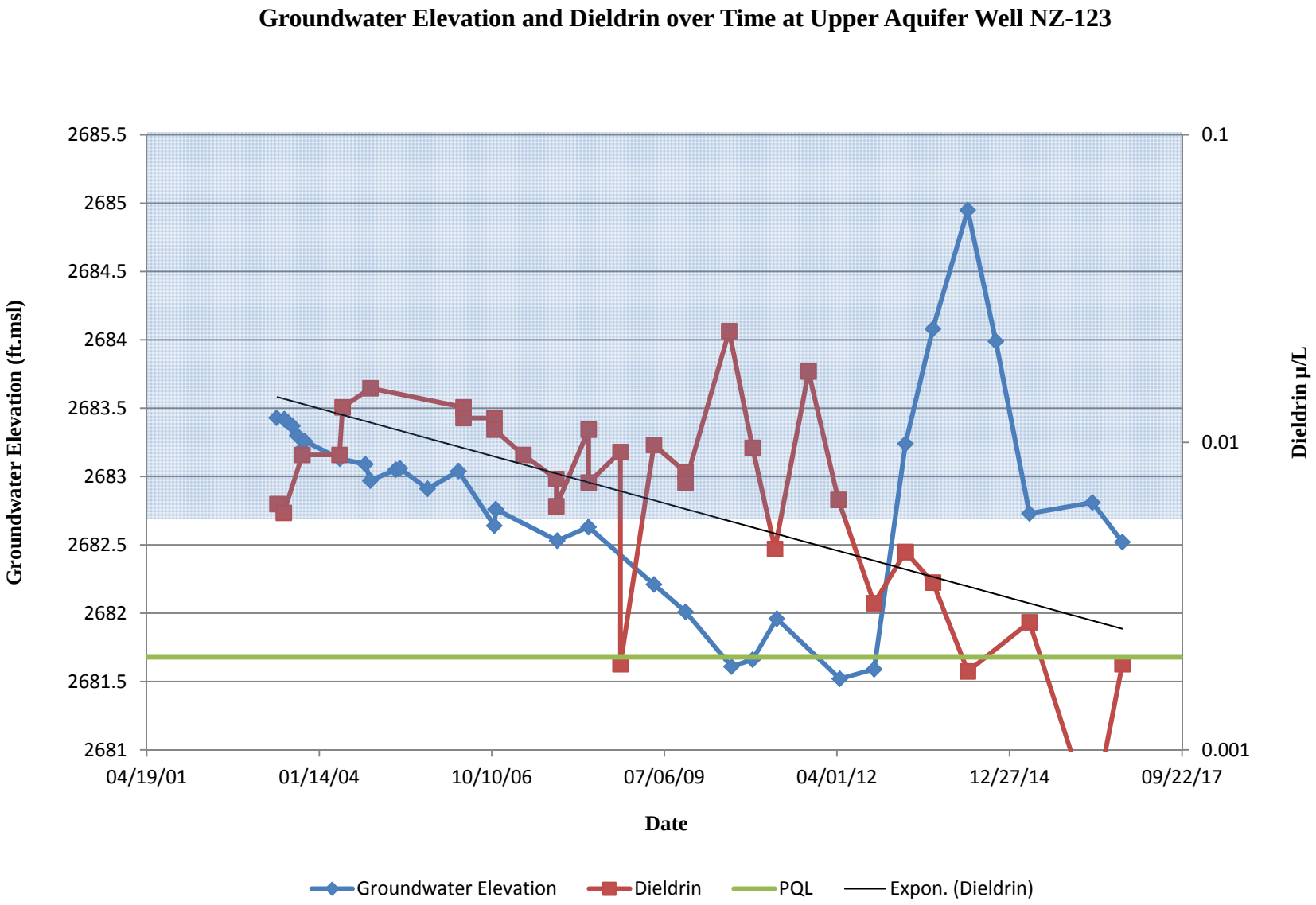

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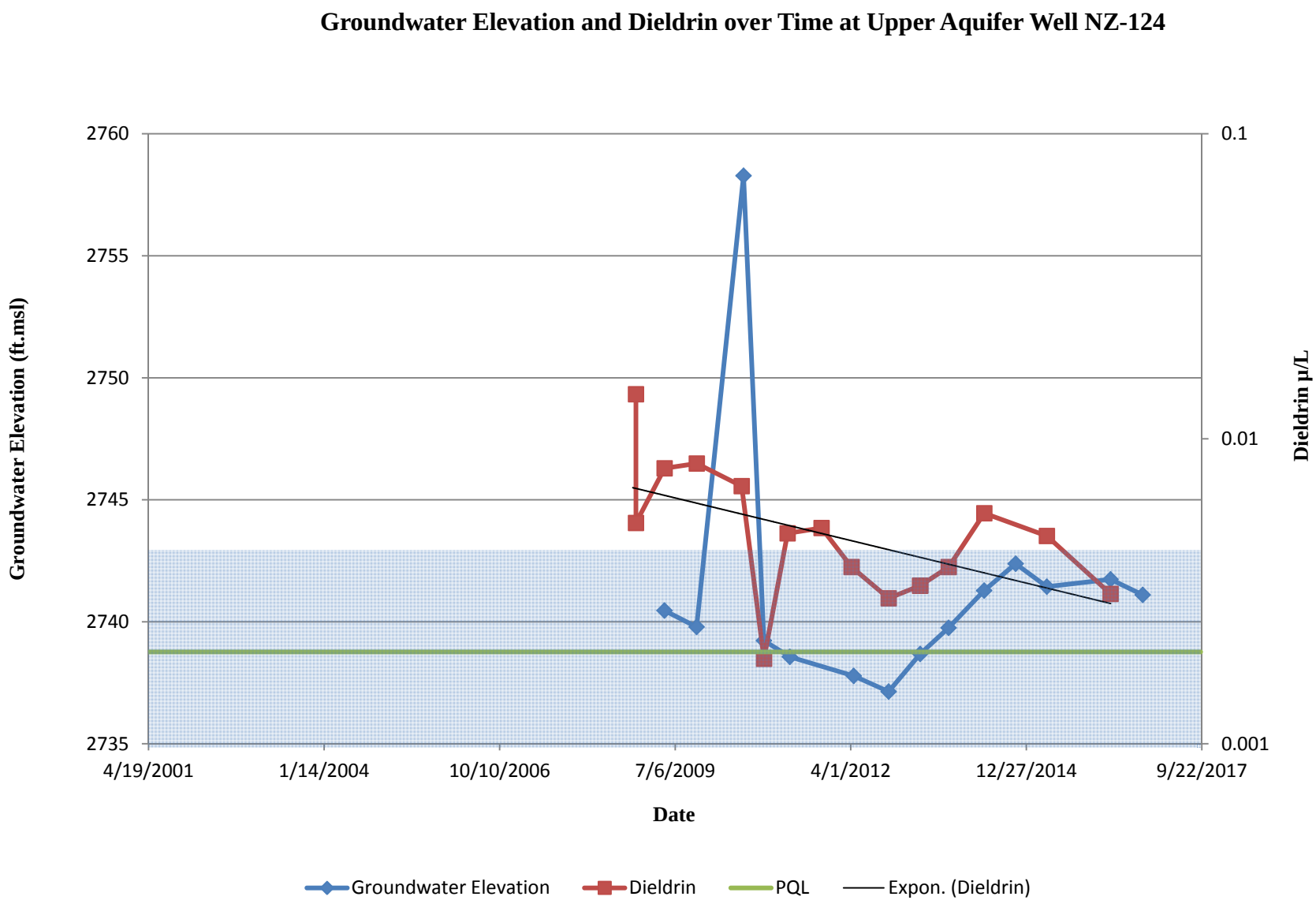

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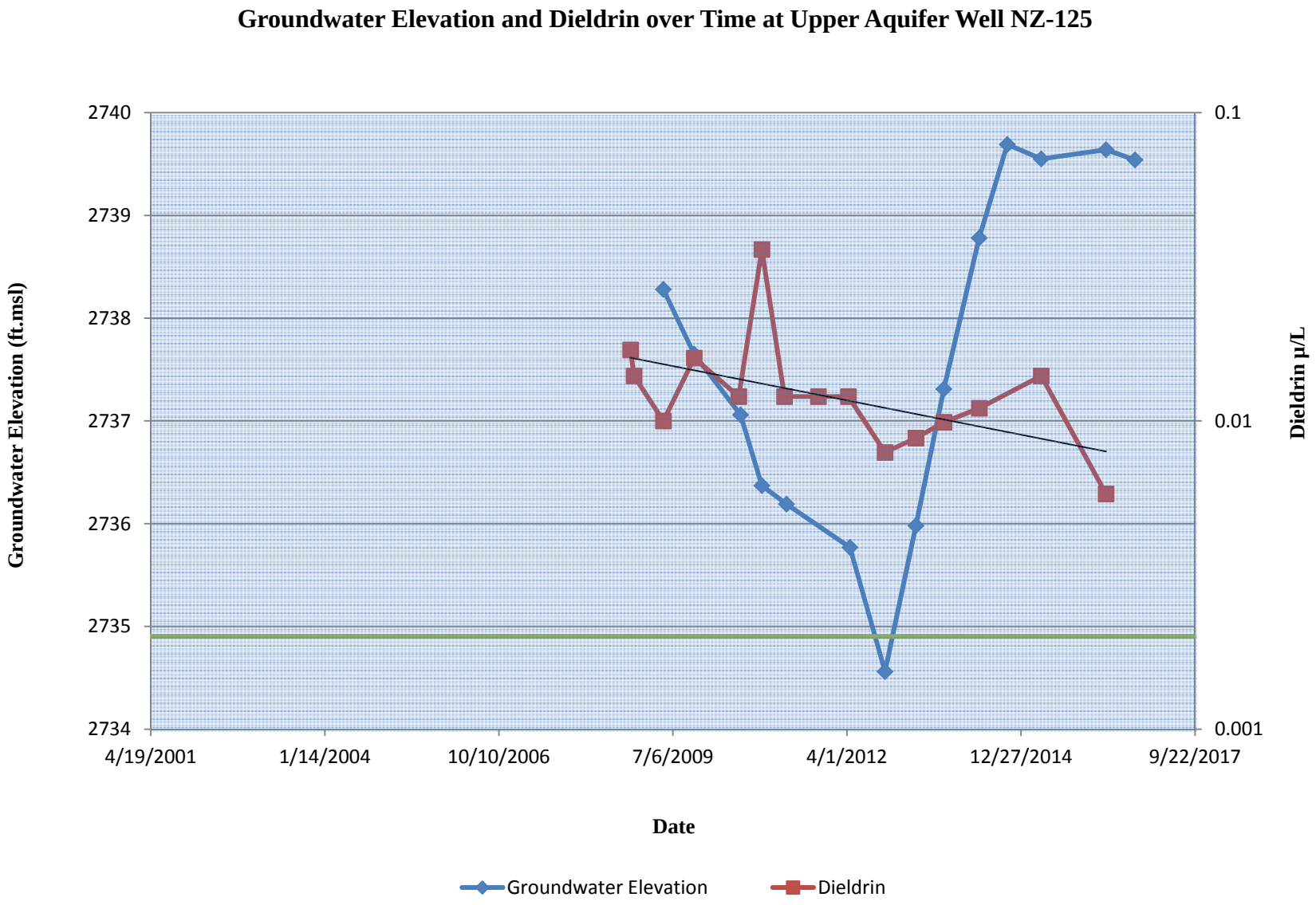

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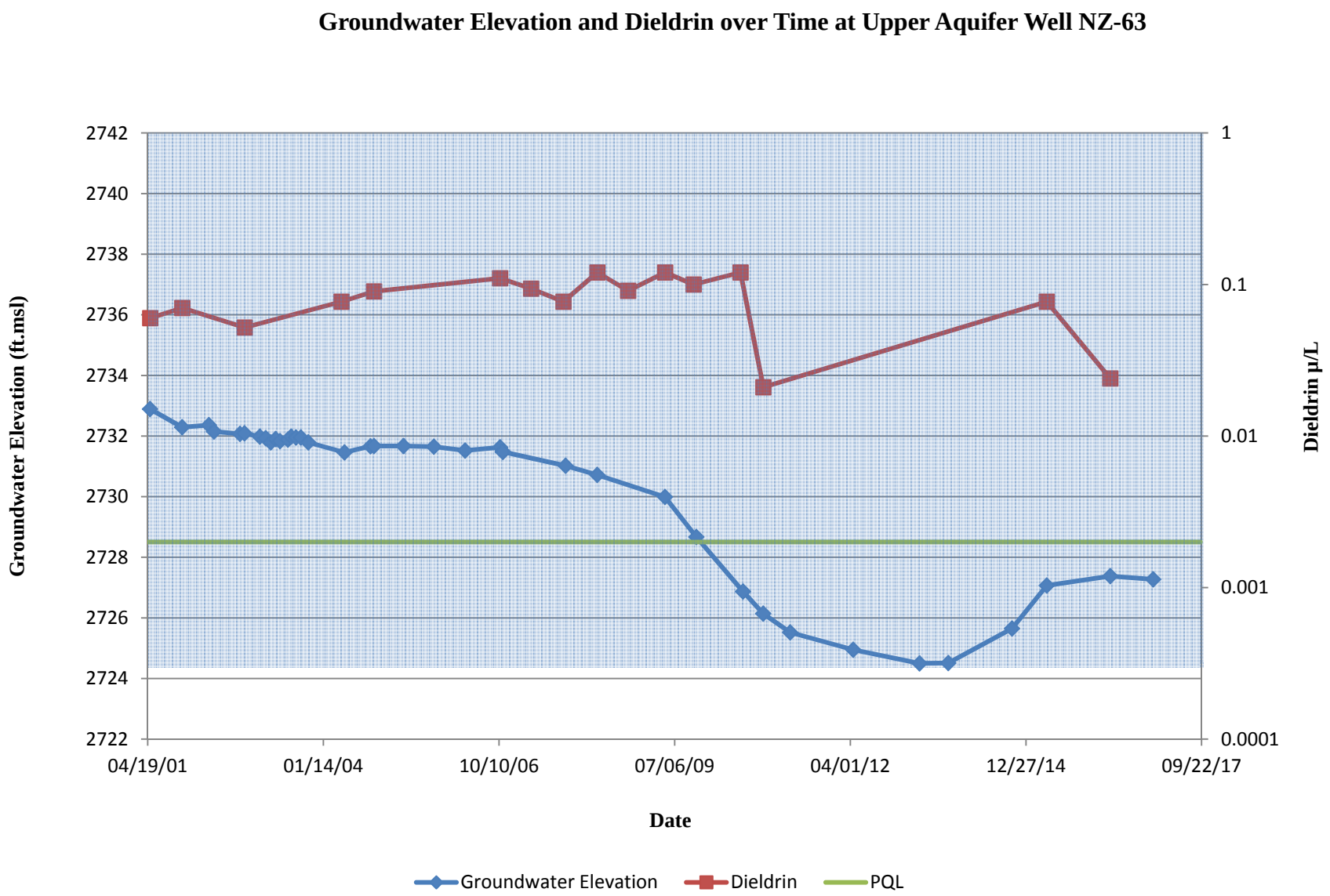

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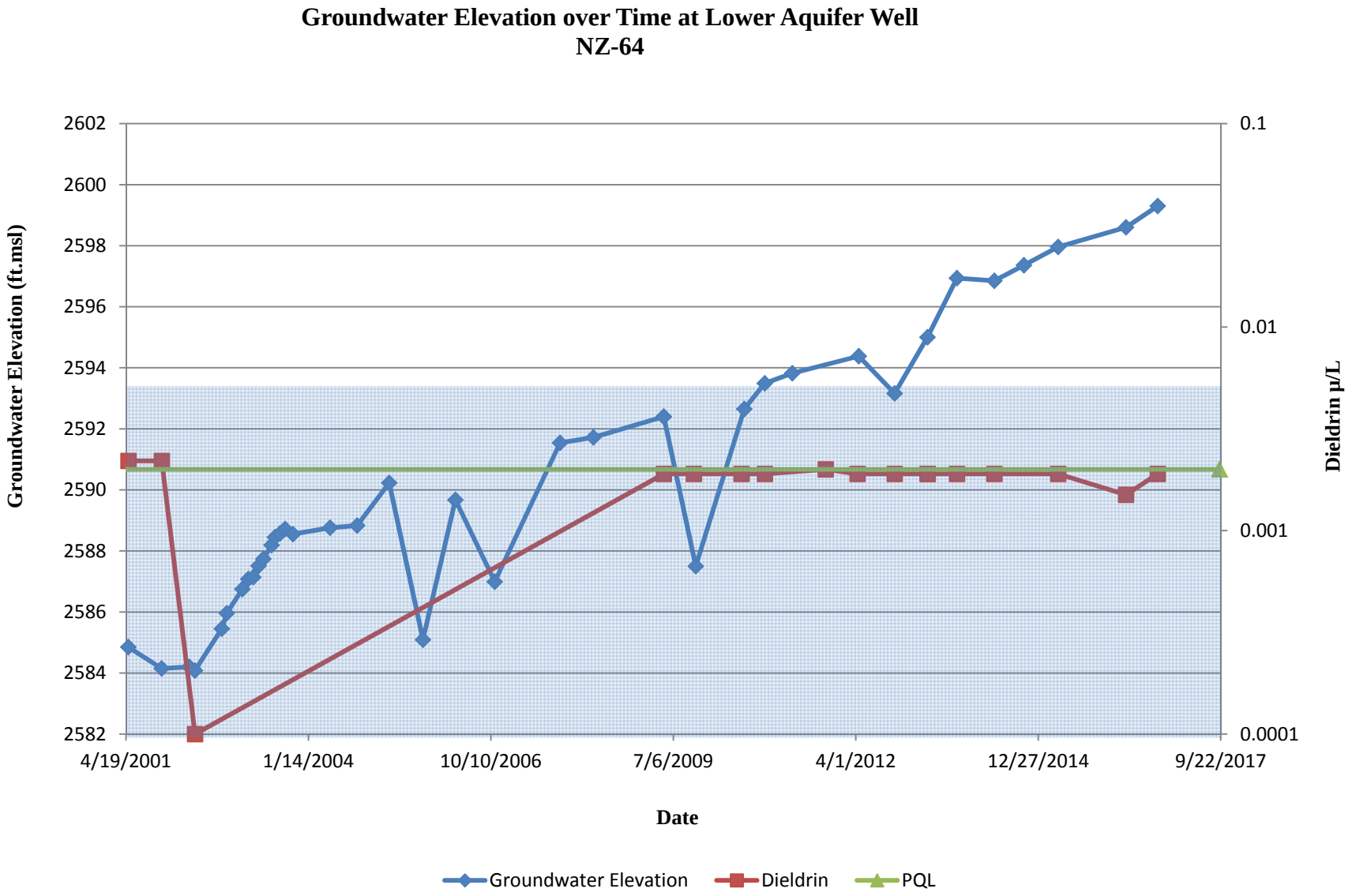

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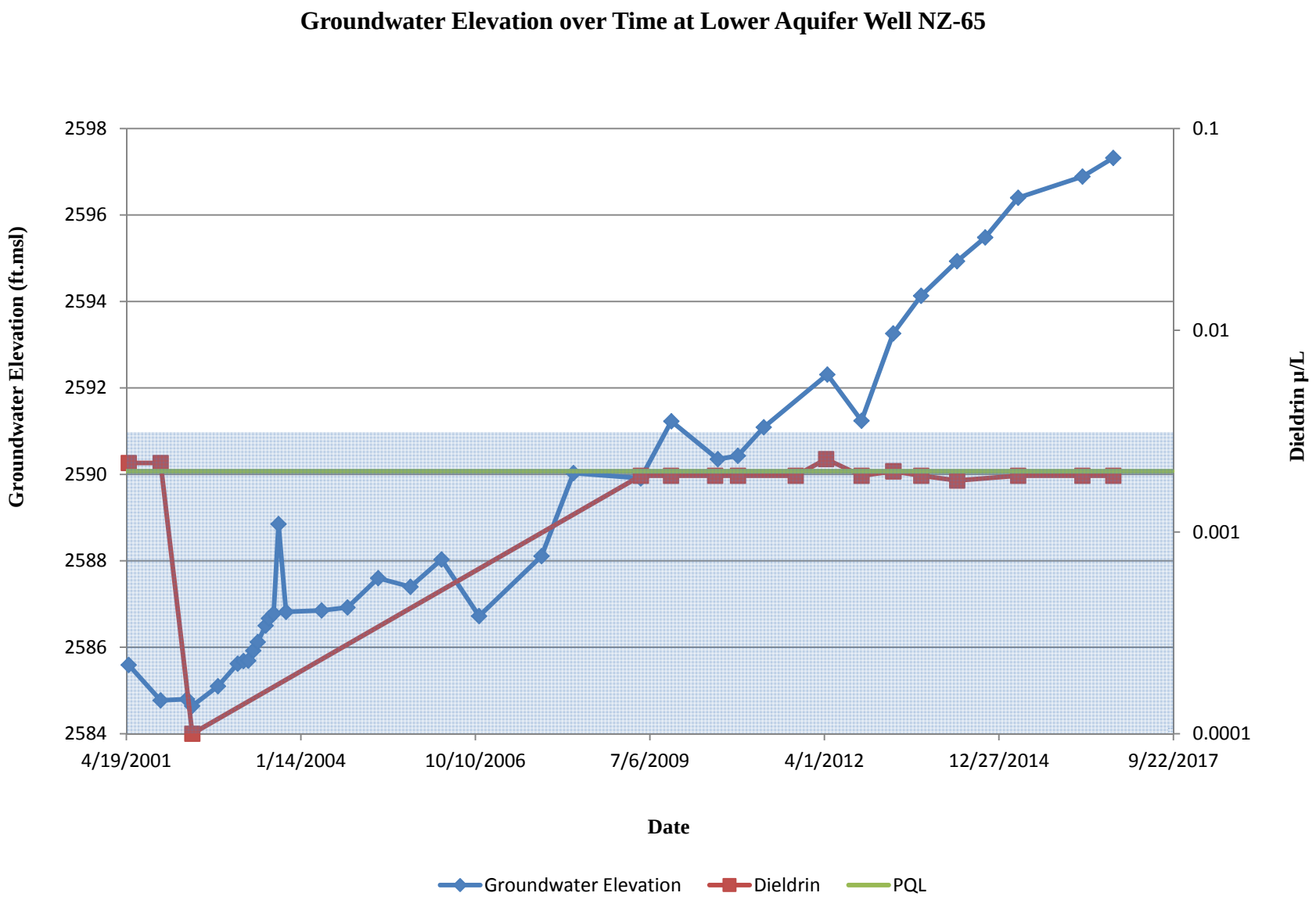

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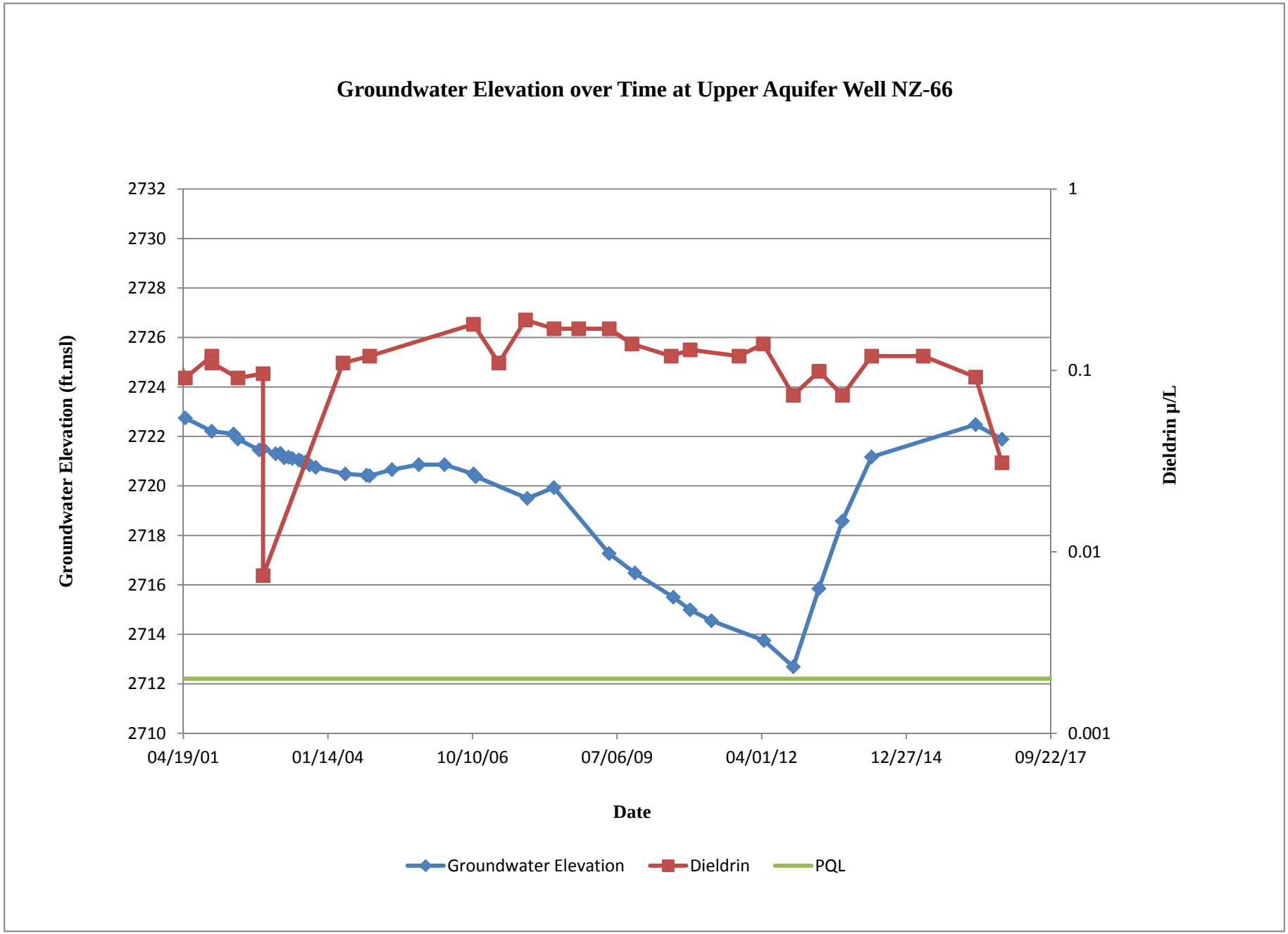
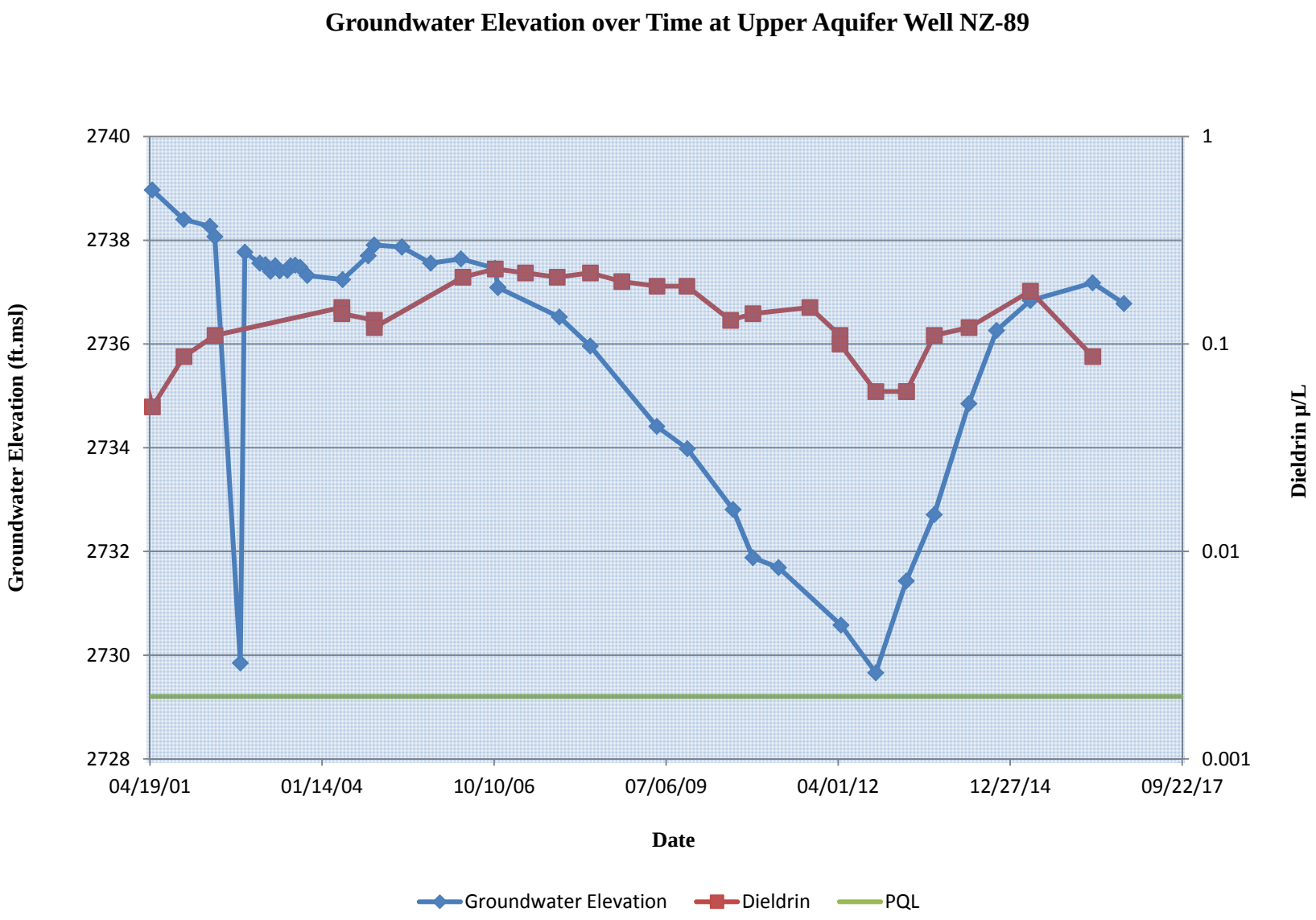

Groundwater Elevation over Time at Upper Aquifer Well NZ-66
Groundwater Elevation (ft.msl)
2732
2730
2728
2726
2724
2722
2720
2718
2716
2714
2712
2710
1
0.1
0.01
0.001
Dieldrin µ/L
04/19/01
01/14/04
10/10/06
07/06/09
04/01/12
12/27/14
09/22/17
Date
Groundwater Elevation
Dieldrin
PQL



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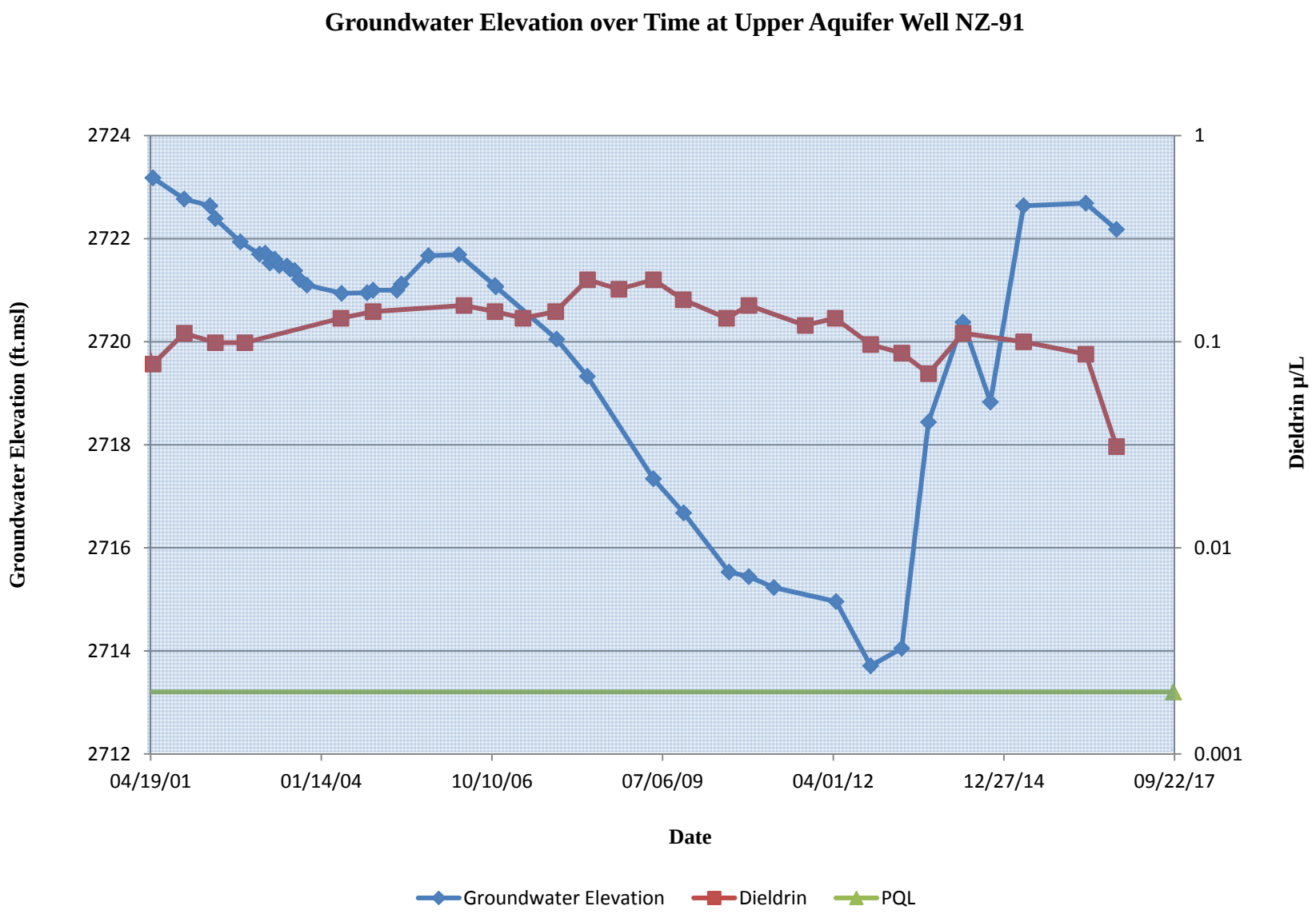

Screened interval is shaded on the chart

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE