

Phase II Environmental Site Assessment
**Kekaha Residential Lots,
Unit 4 Subdivision**
Kekaha, Kauai, Hawaii



Prepared for

**State of Hawai'i
Department of Hawaiian Homelands**

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
COPC	chemical of potential concern
DHHL	Department of Hawaiian Home Lands
DOH	Department of Health, State of Hawaii
DU	decision unit
EAL	environmental action level
EHE	environmental hazard evaluation
EHMP	environmental hazard management plan
EPA	Environmental Protection Agency, United States
ESA	environmental site assessment
ft	foot or feet
HEER	Hazard Evaluation and Emergency Response
mg/kg	milligram per kilogram
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RRO	residual range organics
site	Kekaha Residential Lots, Unit 4 Subdivision, Kekaha, Kauai, HI
TPH	total petroleum hydrocarbons

1.0 INTRODUCTION

This report provides a summary of the Phase II Environmental Site Assessment (ESA) at the Kekaha Residential Lots, Unit 4 Subdivision, Kekaha, Kauai, HI (site). The purpose of this Phase II ESA was to investigate recognized environmental conditions (RECs) identified in the Phase I ESA for the site (AECOM 2014) and evaluate the presence of potential contaminants in the surface soil, subsurface soil, and groundwater at the subject property.

Copies of supporting information are included in the following attachments:

- *Attachment A:* Figures
- *Attachment B:* Soil Boring and Photo Logs
- *Attachment C:* Analytical Data Tables
- *Attachment D:* Analytical Laboratory Reports

2.0 BACKGROUND

The subject property, consisting of approximately 19 acres of land west of Keola Street and north of Kaunualii Highway in Kekaha, Kaua'i, Hawai'i (Attachment A, Figure 1), is currently a residential neighborhood with common areas comprised of 51 separate parcels owned by the Department of Hawaiian Home Lands (DHHL). The subject property is further described as located in Division 4 (Island of Kaua'i), Zone 1, Section 2, Plat 017 and Parcel numbers 01-57. According to the Hawai'i State Land Use Commission, the State Land Use designation is "Urban." According to the DHHL, the planned long-term use for the subject property is residential. The RECs identified in the Phase I ESA report (AECOM 2014) for the site include the historic use of the site for unregulated dumping and the presence of buried and exposed metallic debris in the soil throughout the site and a tar-like substance in the surface soil in Lots 3 and 4 (Attachment A, Figure 2). The waste and debris found at the site included rusted metal debris (e.g., mechanical parts, sheet metal, and cables), automotive parts, melted plastic, glass, and tar. Large patties of a tar-like substance were seen along the eroding embankment on the northern portion of Lot 3 (Attachment B: Soil Boring and Photo Logs, Photograph 20), and buried tar patties are assumed to be also present along the grass-covered embankments of adjacent lots to the west. The tar was found to contain total petroleum hydrocarbons (TPH) as diesel and residual range organics (RRO) at concentrations above the State of Hawaii Department of Health (DOH) environmental action levels (EALs) for site residential land use. Potential contaminants at the site included metals, TPH diesel and RRO, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), organochlorine pesticides, and dioxins. Based on the results of the Phase I ESA, a Phase II ESA investigation was recommended to evaluate the presence or absence of potential contaminants in the soil and groundwater at the site.

An initial Phase II investigation was conducted in April 2014, consisting of site wide surface soil and groundwater sampling, and isolated subsurface soil sampling. The results of the initial investigation were reviewed by DHHL and the DOH Hazard Evaluation and Emergency Response (HEER) office, and further investigation of the shallow subsurface soil throughout the site was recommended (DOH 2014). A brief work plan for the second Phase II investigation was submitted to the DOH and was approved in February 2015. The procedures and results of the April 2014 investigation and the subsequent May 2015 investigation are presented below.

3.0 SAMPLING PROCEDURES

The Phase II ESA investigation was conducted in two iterations under two separate mobilizations.

Investigation under the first mobilization was conducted in April 2014, and involved collecting surface soil, discrete subsurface soil, and groundwater samples at various locations on the site and submitting the samples for analysis (Attachment A, Figure 3). The surface soil samples were collected using the incremental sampling method, and the groundwater samples were grab samples from temporary wells constructed in four borings. Incremental surface soil samples were collected between 0 and 6 inches below ground surface (bgs) from a total of 9 separate lateral decision units (DUs) based on historic site information, exposure areas, geographic location, and observed debris types (Attachment A, Figure 3). Except for DU4 and DU9, all DUs were comprised of multiple individual lots. DU4 sampled surface soil from Lot 26, while DU9 was from Lot 51. Each surface soil sample was comprised of 50 increments. Borings were located near the boundaries of the property to evaluate whether groundwater contamination is migrating on or off the property. The subsurface soil samples were collected as discrete samples from three of the borings at relatively shallow depths (less than 5 feet [ft] bgs) from dark brown silty soil that was observed to contain plastic, rusted metal, and melted glass debris. The samples were collected in accordance with the DOH Technical Guidance Manual (DOH 2009) by using disposable equipment where possible. Boring logs and photographs of the field sampling effort are presented in Attachment B.

An incremental surface soil sample was collected from each DU, one groundwater sample was collected from each monitoring well, and discrete subsurface soil samples were collected from three of the four soil borings. As part of the field quality assurance and quality control (QA/QC) sampling, two replicate surface soil samples were collected from DU9 and one duplicate groundwater sample was collected from MW04. The samples were placed in laboratory provided containers, labelled, and placed into a cooler with wet ice for delivery to the laboratory.

Investigation under the second mobilization was conducted in May 2015 at the direction of the DOH in order to address potential contamination in the subsurface soil. The second mobilization involved the collection of two primary incremental subsurface samples from the entire neighborhood from two deeper DUs. This additional incremental subsurface sampling was conducted to further investigate the presence of the eight Resource Conservation and Recovery Act (RCRA) metals. As recommended by the DOH (2015), each sample included a total of 20 subsurface increments from across the site. The increments were collected from direct push cores that were advanced to 3 ft bgs. A light brown sand layer was categorized as the first vertical DU (identified as Layer A). This layer is considered native to the area and was used as fill on the site in areas that needed soil added to achieve final grade. The thickness of Layer A and its position, when observed within the direct push core, was noted. When Layer A was present, a 5 gram plug of soil was collected from every 2 inch vertical section of it by using a Terracore sampler.

The dark brown layer observed below Layer A in the first mobilization was designated as the other vertical DU (and identified as Layer B). The thickness of Layer B and its position, when observed within the direct push core, was noted in the boring logs. Increments were collected from every 2-inch vertical section of Layer B with a 5 gram Terracore sampler. In addition to the primary sample, duplicate and triplicate samples were collected from Layer B for QA/QC purposes. The primary, duplicate, and triplicate increments were obtained from three different direct push cores, which were advanced approximately 10 ft apart from each other (as illustrated on Attachment A, Figure 4). Fill soil not classified as Layer A or Layer B was not sampled.

4.0 ANALYTICAL TESTING AND PROJECT SCREENING CRITERIA

The samples from the first mobilization were shipped to TestAmerica Laboratories, Inc. in West Sacramento, California. The laboratory analyzed the incremental surface soil, discrete subsurface soil, and groundwater samples for the following: metals by the United States Environmental Protection Agency (EPA) Method 6010B, mercury by EPA 7470A/7471A, TPH by EPA 8015B, organochlorine pesticides by EPA 8081A, PCBs by EPA 8082, PAHs by EPA 8270C SIM, and dioxins by EPA 8290A. The 2005 World Health Organization toxicity equivalency factors (Van den Berg et. al 2006) were used for the calculation of the dioxin toxicity equivalent quotient concentrations.

The incremental subsurface samples from the second mobilization were also shipped to TestAmerica Laboratories, Inc. in West Sacramento California. The laboratory analyzed the samples for metals by EPA 6010C and mercury by EPA 7471B/7470A.

The sample results were compared to the DOH Tier 1 residential soil and groundwater EALs for sites where groundwater is not a current or potential drinking water resource and the nearest surface water body is located within 150 meters (DOH 2011) of the site. The metals concentrations in soil were also compared to the 95th percentile background metals concentrations (DOH 2012).

The EALs are concentrations of contaminants in soil, soil gas, and groundwater that are used in decision making throughout the environmental hazard evaluation (EHE). The EALs are based on cancer or non-cancer toxicity factors (for human and ecological health), direct exposure concerns, leaching to groundwater, vapor intrusion pathways, background concentrations, and gross contamination concerns, whichever is most appropriate for a specific chemical and the specific site condition. The Tier 1 EALs chosen for the site represent the concentration at which the potential contaminant presents an insignificant threat to human or environmental health based on the site being a current residential area, the groundwater is not potable, and proximity (<150 meters) to surface water (i.e., the irrigation canal north of the subdivision).

Contaminants with measured concentrations exceeding the EALs are identified as chemicals of potential concern (COPCs). COPC concentrations that exceed the EALs do not necessarily mean that a COPC presents a significant threat to human health or the environment, but that additional evaluation is needed. Following DOH Guidance (DOH 2011) an EHE is performed to further evaluate COPCs with concentrations exceeding their respective DOH Tier 1 EALs.

5.0 ANALYTICAL RESULTS

The laboratory reports of the surface soil, subsurface soil, and groundwater were compared to the DOH Tier 1 EALs (Attachment C and Attachment D).

The following observations were made from the first investigation in April 2014:

- *Surface Soil:* Based on the laboratory analytical results of the surface soil samples, metals, TPH, organochlorine pesticides, PCBs, PAHs, and dioxins were either not detected or were detected at concentrations below their respective DOH Tier 1 EALs, (Attachment C, Table C-1). As such, no COPCs were identified for surface soil.
- *Subsurface Soil:* Based on the laboratory analytical results of the subsurface soil samples, concentrations of the following potential contaminants exceeded their respective DOH Tier 1 EALs and background values:
 - Arsenic (maximum concentration of 35 milligrams per kilogram [mg/kg] at SB04 exceeding the DOH Tier 1 EAL for arsenic of 24 mg/kg)
 - Lead (maximum concentration of 1,100 mg/kg at SB02 exceeding the DOH Tier 1 EAL for lead of 200 mg/kg)
 - Mercury (maximum concentration of 30 mg/kg at SB02 exceeding the DOH Tier 1 EAL for mercury of 4.7 mg/kg)
 - TPH-diesel (maximum concentration of 610 mg/kg at SB02 exceeding the DOH Tier 1 EAL for TPH-diesel of 500 mg/kg)

Discrete subsurface soil COPC exceedances are depicted graphically in Attachment A, Figure 5, and the detected results are shown in tabular format in Attachment C, Table C-2.

- *Groundwater:* Based on the laboratory analytical results of the groundwater samples, metals, TPHs, organochlorine pesticides, PCBs, PAHs, and dioxins were either not detected or were at concentrations below their respective DOH Tier 1 EALs (Attachment C, Table C-3). It should be noted that method detection limits for some pesticides, mercury, selenium, and PCBs in groundwater were above their respective DOH Tier 1 EALs. However, given the low concentrations of these analytes in the site soil and the fact that they are generally immobile in soil, it is unlikely that these analytes have migrated through the soil column to the groundwater and are present in the groundwater above their respective DOH Tier 1 EALs.
- The subsurface soil sample results that exceeded the DOH Tier 1 EALs corresponded with the dark brown, silty soil (Layer B) found in borings SB02 and SB04 (Attachment B, Photograph 2 and Photograph 5). One boring did not contain any debris or Layer B soil (SB01), while the three others (SB02, SB03, and SB04) did, but at different depths and thicknesses. Layer B was observed in the three borings at depths between 2 and 5.5 feet bgs and at thicknesses between 0.5 and 2 feet thick. As such, it is assumed that Layer B is likely heterogeneously distributed throughout the site.

Site-wide incremental subsurface soil sampling results for the eight RCRA metals are presented in tabular format in Attachment C, Table C-4. The following observations were made from the second subsurface soil investigation in May 2015:

- The subsurface soil sampling results for metals from Layer A (Attachment C, Table C-4) did not exceed either the DOH Tier 1 EALs or the background value.
- The subsurface soil sampling results for metals from Layer B (Attachment C, Table C-4) did not exceed any DOH Tier 1 EALs. Arsenic was detected at the EAL of 24 mg/kg in the triplicate sample. However, the primary and duplicate sample concentrations were both below the EAL and within the range of background values (19 and 22 mg/kg, respectively).

- Arsenic in the triplicate sample from Layer B and lead from all three replicate samples of Layer B are above the background concentration values. This indicates that Layer B lead and arsenic concentrations are slightly elevated site-wide in comparison to background soil.
- The relative standard deviation between the triplicate samples is below 15.3 for all metals except lead (relative standard deviation of 32.2). This indicates that the metal concentrations detected in Layer A and Layer B sampling is representative of site-wide conditions.
- An estimate of the lateral extent, depth, and thickness of Layer B within 0 to 3 ft bgs at the site is depicted in Attachment A, Figure 6. Layer B was observed within 6 inches of the ground surface at 15 lots in the neighborhood (Attachment B, Photograph 24). At other locations this layer is either overlain by Layer A or by fill soil and vegetated cover brought in by the neighborhood residents.
- The incremental subsurface sampling results indicate that there is no site-wide concern from metal contamination within Layer B soil.

6.0 SUMMARY OF NATURE AND EXTENT OF CONTAMINATION

The following summary is based on the results of the Phase II Investigation:

- Incremental surface soil sampling (0 to 6 inches bgs) indicates that COPCs in surface soil are below DOH Tier 1 EAL.
- Incremental subsurface soil sampling (between 0 and 3 ft bgs), which evaluated Layer A (native fill soil layer) and Layer B (dark brown fill layer with debris) for the eight RCRA metals indicates that the detected concentration of metals in these layers is below the DOH Tier 1 EAL.
- Groundwater at the site does not appear to be adversely impacted by COPCs (i.e., concentrations are below the DOH Tier 1 EALs).
- The sampling design evaluated COPC contamination on a site-wide basis. A lot by lot evaluation of COPC concentrations was not done. Concentrations of COPCs at an individual lot may be higher or lower than the results reported in this investigation.

The following issues were noted with the site:

- Debris remains in the site subsurface. The depth of the debris appears to depend on the cutting, filling, and grading of site during the development phase of construction of the subdivision.
- Discrete subsurface sampling results from > 2 ft bgs indicate that at certain locations and depths COPCs may be present at concentrations greater than the DOH Tier 1 EALs.
- Patties of a tar-like substance were seen along the eroding embankment on the northern portion of Lot 3, and covered tar patties are assumed to be also present along the grass-covered embankments of Lots 1 and 2, adjacent to the west of Lot 3. The tar patties were not sampled during this investigation, but gross contamination was confirmed previously by DOH (DOH 2012). The tar contains TPH diesel and RRO above their respective Tier 1 EALs.
- Large debris (>1 ft in dimension) has been observed in the eroded embankment along the northern site boundary. This debris may pose a hazard to residents. The steeper slopes along the exposed embankment may also slough and erode in the future.

The following section provides the results of a topographic survey to address issues related to tar patties, and the eroding embankment along Lots 1 through 4 and an EHE for deeper subsurface soils.

7.0 TOPOGRAPHIC SURVEY AND SLOPE ASSESSMENT

As suggested in a letter from Fenix Grange of DOH's HEER office to Sandra Pfund (DOH 2013), one possible remedy for the tarry material and the associated gross contamination concerns was to remove it from the surface and cover the area with a soil cap held in place by a retaining wall. In order to evaluate this and other potential remedial options, a survey of the exposed cut-slope in the backyard of Lots 1 through 4 was conducted to assess the topography and measure existing slopes. The contours for the surface elevation are illustrated on Attachment A, Figure 7, along with significant site features such as buildings and trees. As indicated on the figure, steep slopes (greater than 2:1) are observed behind Lots 1 and 2. Lot 2 also has several trees along the top of the slope. Lot 3 has a slope of approximately 2.5:1, and a portion of the house on the site extends to within 4 feet of the top of the slope.

These slopes, especially those observed on Lot 2, are of sufficient steepness that fill soil could erode from these areas and expose buried debris. If a typical soil cap thickness of two feet is assumed, then retaining walls up to 4 feet in height are necessary to hold the new fill in place. The site features present near the tops of the slopes also limit the remedial options for tarry material and debris observed on the slopes. The site features constrain the amount of excavation and grading that can be done to the slopes without compromising the stability of the site features.

Given these considerations, a design for a soil cover and retaining wall to stabilize the section of slope between Lots 1, 2, and 3 is illustrated on Attachment A, Figure 7. Such a design will ensure that the residents of those lots are not exposed to buried subsurface debris and the soil in the backyard is stabilized.

8.0 ENVIRONMENTAL HAZARD EVALUATION FOR SUBSURFACE SOIL DEEPER THAN 3 FEET BELOW GROUND SURFACE

The investigation detected four contaminants in deeper subsurface soil (> 3 ft bgs) at concentrations exceeding their respective DOH Tier 1 EALs. The subsurface soil investigation of Layer A and Layer B was conducted on a site wide basis; a lot by lot evaluation of potential contamination has not been conducted. The results for the soil and groundwater investigation indicate that there is no significant concern for contamination on a site-wide basis for soil less than 3 ft bgs.

The DOH HEER office has devised a methodology for preparing EHEs to assess potential environmental concerns at sites where releases of hazardous substances have occurred (DOH 2011). This section presents an EHE for subsurface soils > 3 ft bgs at the Kekaha residential lots.

To aid in the EHE process, the HEER office has developed Tier 1 EALs and provided guidance for their use (Evaluation of Environmental Concerns at Sites with Contaminated Soil and Groundwater; DOH 2011). The COPCs detected during site wide sampling were compared to the Tier 1 EALs for soil and groundwater at sites zoned for residential land use. EHEs consolidate potential human health and ecological hazards, along with other types of environmental hazards, to comprehensively evaluate a broad range of potential concerns.

8.1 CONCEPTUAL SITE MODEL

The sources of concern for potential contamination at the site is the darker fill material (Layer B) present at > 3 ft bgs, TPH concentrations in the tar patties observed along the northern boundary of the site, and from gross contamination associated with tar patties and debris observed at the site. Any contamination from these sources is not present at levels that pose site wide concern to surface soil, shallow subsurface soils (< 3 ft bgs), and groundwater. Any potential soil contamination in the deeper soil is adsorbed (tightly bound) to the soil and exposure can result only through intrusive activities that expose receptors to this layer. Common examples of such activities include digging, trenching or construction work that exposes the deeper layer.

8.2 POTENTIAL RECEPTORS

The site is a residential area improved with homes occupied by residents. Common areas are also present on the site. In the future, the site is anticipated to be used for continued residential use.

Potential human receptors at this site include current/future residents, outdoor workers, and potential future construction workers. Terrestrial ecological receptors, especially household pets, are other users of the site.

8.3 POTENTIAL EXPOSURE PATHWAYS

An exposure pathway describes the course that a chemical takes from a source to a receptor. Potential exposures are evaluated by considering the following four factors:

- A source of potentially toxic chemicals
- A contaminated media, such as soil or groundwater
- An exposure or contact point with the contaminated medium
- An exposure route for chemical intake by a receptor

An exposure pathway is considered complete when it has all four factors. Designation of an exposure pathway as complete indicates that exposure is possible, but does not necessarily mean that exposures will occur, nor that exposures will occur at the levels estimated in this report. When any one of the factors is missing, the pathway is considered incomplete.

This section evaluates a site wide exposure scenario to potential contamination in subsurface soil > 3 ft bgs. The potential pathways of exposure from potential contamination in this source is explained below.

The primary likely scenario for exposure to potential subsurface soil contamination below 3 ft bgs is direct exposure to the contaminated soil. Such an exposure is likely for human construction workers who dig up the soil to expose buried subsurface soil. In such a case, exposure could occur through:

- Incidental ingestion and/or
- Dermal contact

An unlikely exposure pathway scenario at the site is for the contamination from subsurface soil to volatilize into soil gas and migrate in the vapor phase to residential houses (vapor intrusion pathway). Two of the identified subsurface soil COPCs, TPH-diesel and mercury, are considered to be volatile contaminants. The DOH has not developed EALs for either COPC to evaluate potential vapor intrusion hazards (i.e., soil to indoor air). Rather, the DOH recommends the collection of soil gas samples to evaluate this potential hazard. Although soil gas samples were not collected, the volatile contaminants were detected in only one of the subsurface soil samples (SB02 at 3.5 to 4 ft bgs) indicating these contaminants appear to be isolated and are not pervasive at the site. In addition, the sample location is located on the western edge of the subdivision in Lot 39 and adjacent to the intersection of two streets (Nukupu'u Street and Anianiau Street). This location is unlikely to pose vapor intrusion hazards as it is adjacent to a street intersection and not a residence. As a result of these factors, vapor intrusion is not a likely exposure pathway.

Another unlikely exposure pathway scenario for potential contamination from subsurface soil > 3 ft bgs concerns leaching into groundwater. In this scenario the potential subsurface contamination dissolves into percolating water and migrates (leaches) into groundwater. One of the identified subsurface soil COPCs, TPH-diesel, was measured at a concentration (610 mg/kg) that exceeded the leaching EAL of 500 mg/kg. EALs for soil leaching concerns are not available for the remaining COPCs (arsenic, mercury, and lead). Rather, the DOH recommends site-specific testing (i.e., batch tests and a leaching model). Although site-specific testing was not conducted, potential contaminants were not detected in the groundwater samples at concentrations exceeding the DOH Tier 1 EALs. The measured concentration for TPH-diesel in soil, which exceeded the residential EAL, is only slightly above the EAL. Therefore, it is unlikely the COPCs at the site pose a significant leaching hazard and this pathway is likely not a concern based upon the results of this Phase II ESA.

8.4 POTENTIAL ENVIRONMENTAL HAZARDS

Based on the nature and extent of contamination at the site, the identified potential receptors, and the identified exposure pathways, the following potential site wide environmental hazard was identified:

Human Health (direct exposure to subsurface soil greater than 3 ft bgs during potential excavation activities)

It should be noted that subsurface soils, if excavated and used as surface soils at this site or at another location, may pose direct exposure hazards to residential receptors or commercial/industrial receptors or pose gross contamination hazards. Consequently, the subsurface soils must be appropriately managed.

9.0 CONCLUSIONS

The following are the conclusions from the Phase II Investigation and the EHE:

- Surface soil, shallow subsurface soil (< 3 ft bgs), and groundwater are not significantly impacted by contamination on a site-wide basis. COPC concentrations were at or below their respective Tier 1 DOH EALs for residential land use.
- Exceedances of the DOH Tier 1 screening criteria for arsenic, lead, mercury, and TPH-diesel were noted in one or more discrete samples of subsurface soil. The site was evaluated on a site-wide basis. The site was not evaluated on a lot by lot basis.
- In one area of the site (i.e., northern site boundary), debris and tar are observable at the ground surface along an eroded embankment and may pose a physical hazard and gross contamination concern. Surface soil sampling in this area did not result in the identification of COPCs. Although potential contaminants in surface soil were not detected at concentrations exceeding their respective DOH Tier 1 EALs for residential land use, the tar by itself potentially poses a risk to residential receptors due to the concentrations of TPH above the EALs.
- An EHE was conducted for the subject property and it identifies a potential hazard from direct exposure to subsurface soil > 3 ft bgs during potential future construction work.

10.0 RECOMMENDATIONS

Based on the results of the investigation and the EHE, the following recommendations are made:

- In areas of the site where debris and a tar-like substance appear at the surface (i.e., along the eroded embankment on the northern border of the site), the exposed tar and debris should be removed and a cover should be constructed to prevent gross contamination hazards and residential exposure to tar containing TPH above the EALs. Soil, debris, and tar would be removed to a depth of 6 inches below the current grade prior to the construction of the cover.

A suggested cover would consist of a geotextile barrier, a layer of clean fill, and a retaining wall (Attachment A, Figure 7). A geotextile, such as an orange geotextile fabric, would be placed on the newly graded surface. The geotextile would function as a visual demarcation layer to alert potential construction workers if digging or excavation occurs in this area in the future. Clean fill, perhaps 2 ft, would serve as an additional barrier and support residential use. The retaining wall would hold the new fill in place and prevent further erosion.

- An environmental hazard management plan (EHMP) to manage the potential environmental hazards at the site over the long-term should be prepared. In addition to the required contents of an EHMP (DOH 2011), the EHMP should also include the following:
 - Long-term maintenance and management requirements of the soil cover and retaining wall.
 - Requirements for the protection of construction workers during potential future construction work which results in exposing soil > 3 ft bgs.
 - Appropriate management and/or disposal requirements of excavated subsurface soil > 3 ft bgs during potential future construction work.
 - Requirements of a resident notification plan/agreement that limits residential excavation, construction, landscaping, or other activities that have the potential to disturb subsurface soils > 3 ft bgs.

11.0 REFERENCES

- AECOM Technical Services, Inc. (AECOM). 2014. *Phase I Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision, TMK Number: (4) 1-2-017:001-057, Kekaha, Kauai, Hawaii*. Prepared for Hawai'i Department of Hawaiian Home Lands. Kapolei, HI. January.
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**Attachment A:
Figures**

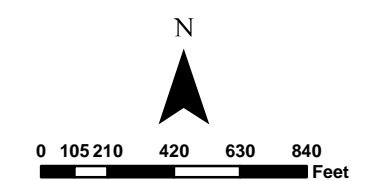
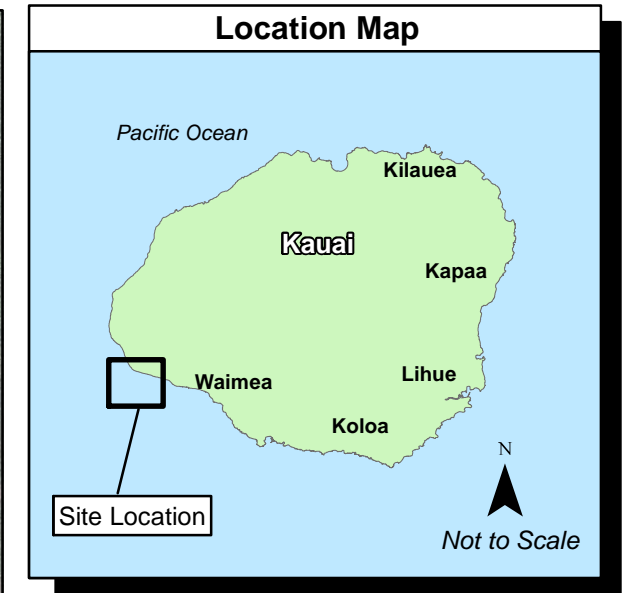
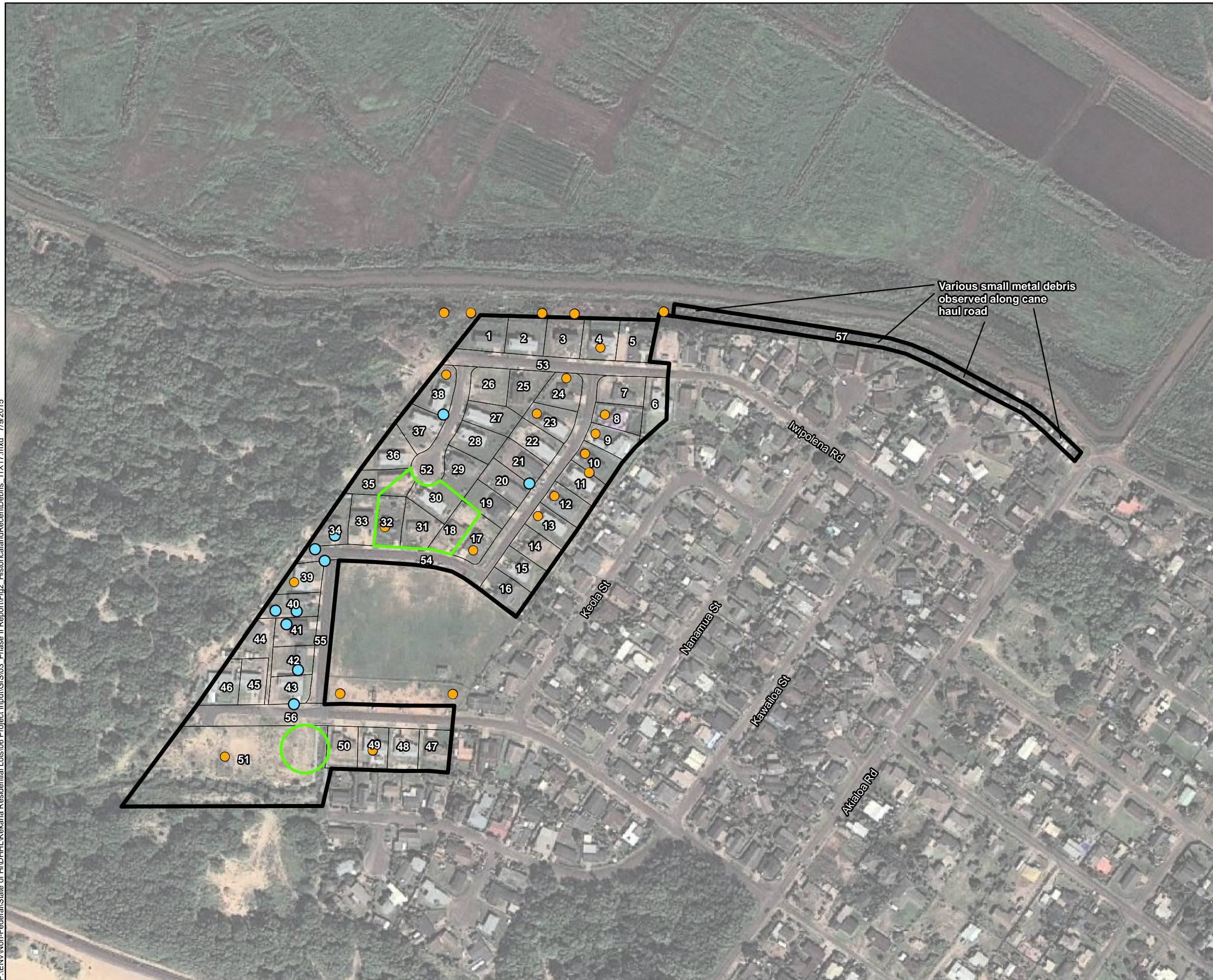


Figure 1
Site Location Map
Kekaha Residential Lots
Unit 4 Subdivision
Kekaha, Kaua'i, Hawai'i



Legend

- Recent Debris (observed April 2013)
- Historical Test Pit with Debris
- ▭ Historical Debris Piles
- ▭ Site Boundary
- 1 Lot Numbers

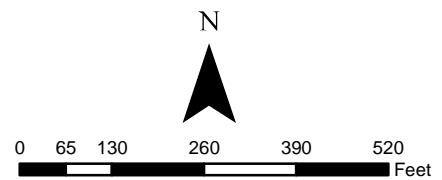
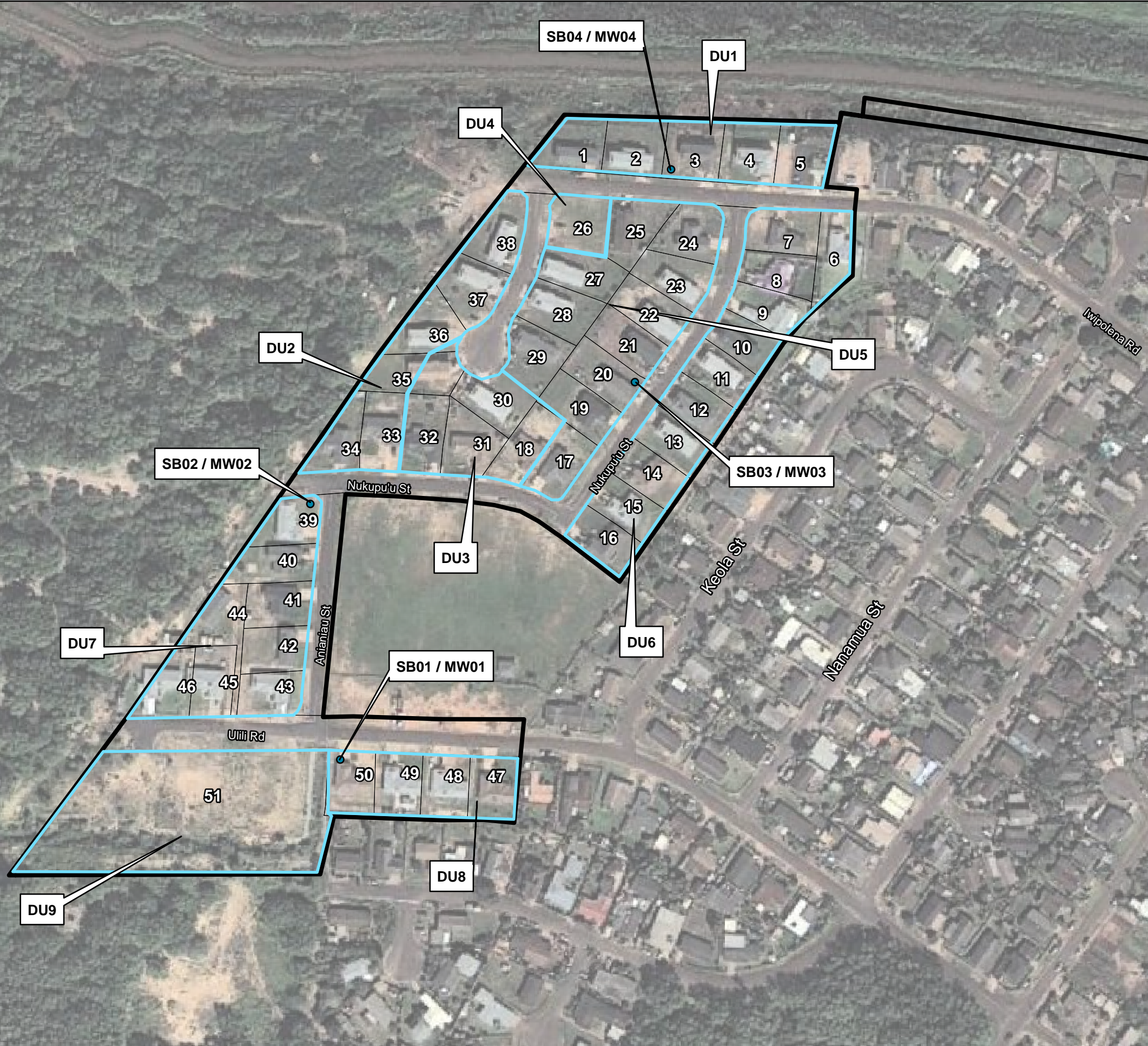


Figure 2
Historical and Recent Observed Debris
Kekaha Residential Lots
Unit 4 Subdivision
Kekaha, Kauai, Hawaii

P:\ENV\Non-Federal\State of H\H\H\Kekaha Residential Lots\06 Project Input\GIS\05_PhaseII_B\Figure3_SamplingLocApr2014.mxd 7/9/2015



Legend	
1	Lot Numbers
●	SB and MW Locations
□	DU Boundary
▭	Site Boundary

Notes	
Acronyms	
DU	Decision Unit
MW	Monitoring Well
SB	Soil Boring

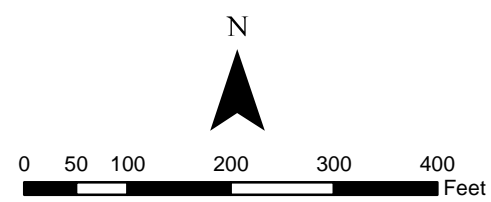
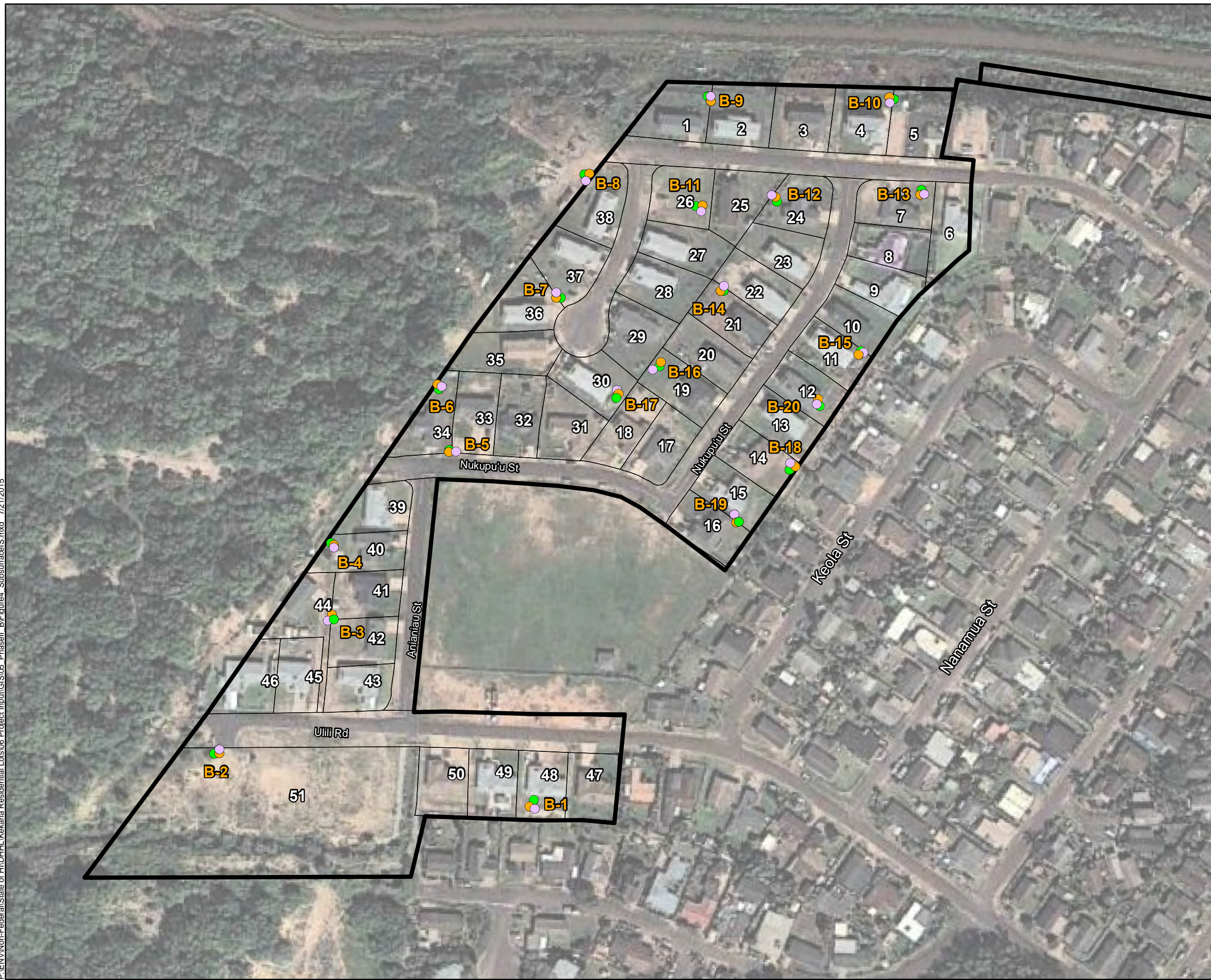


Figure 3
 April 2014 Sampling Locations for Surface Soil,
 Discrete Subsurface Soil, and Groundwater
 Kekaha Residential Lots
 Unit 4 Subdivision
 Kekaha, Kaua'i, Hawai'i

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Legend

- 1 Lot Numbers
- Primary Increment Location
- Duplicate Increment Location
- Triplicate Increment Location
- ▭ Site Boundary

Notes

Acronyms

DU	Decision Unit
MW	Monitoring Well
SB	Soil Boring

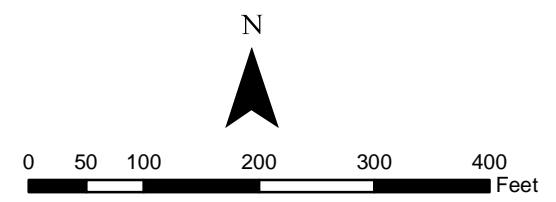


Figure 4
May 2015 Subsurface Soil Sampling
and Increment Location Map
Kekaha Residential Lots
Unit 4 Subdivision
Kekaha, Kaua'i, Hawai'i

Legend

- 1 Lot Numbers
- Soil Boring
- Decision Unit Boundary
- Site Boundary

Notes

- Not applicable
- 1 Table B-2. Residential Land Use; Groundwater is not a current or potential drinking water resource, and surface water is within 150 meters from release site
- 2 95th percentile background value (DOH 2012)
- Bolded Text** Indicates result exceeded background threshold value
- Italicized Text* Indicates result exceeded DOH EAL

Acronyms

- DOH Department of Health, State of Hawaii
- DRO Diesel Range Organics
- EAL Environmental Action Level
- FT Feet
- SB Soil Boring

No sample was taken at SB01.
All results are in milligram per kilogram.

Analyte	DOH EAL ¹	Background Value ²	SB02-01
			3.5-4.0 ft Result
Mercury	4.7	0.65	30
Lead	200	54.2	1100
DRO (C10-C24)	500	—	610

Analyte	DOH EAL ¹	Background Value ²	SB04-01	SB04-02
			2-2.5 ft Result	4.5-5 ft Result
Arsenic	24	23.6	35	28
Lead	200	54.2	210	320

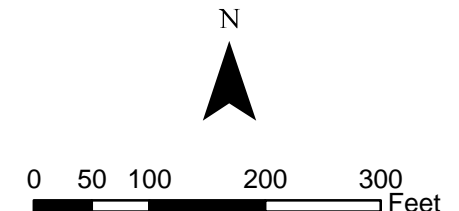
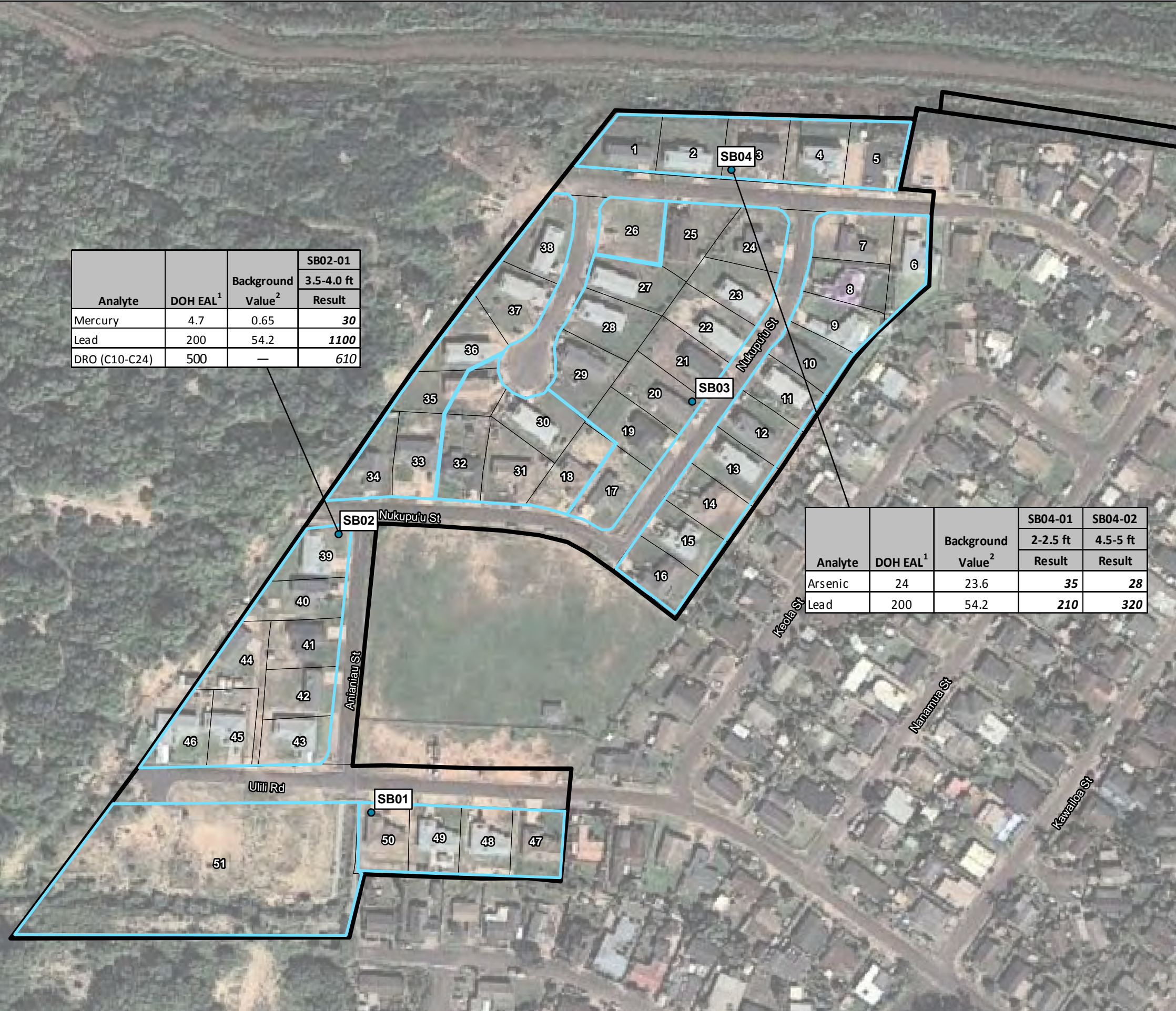
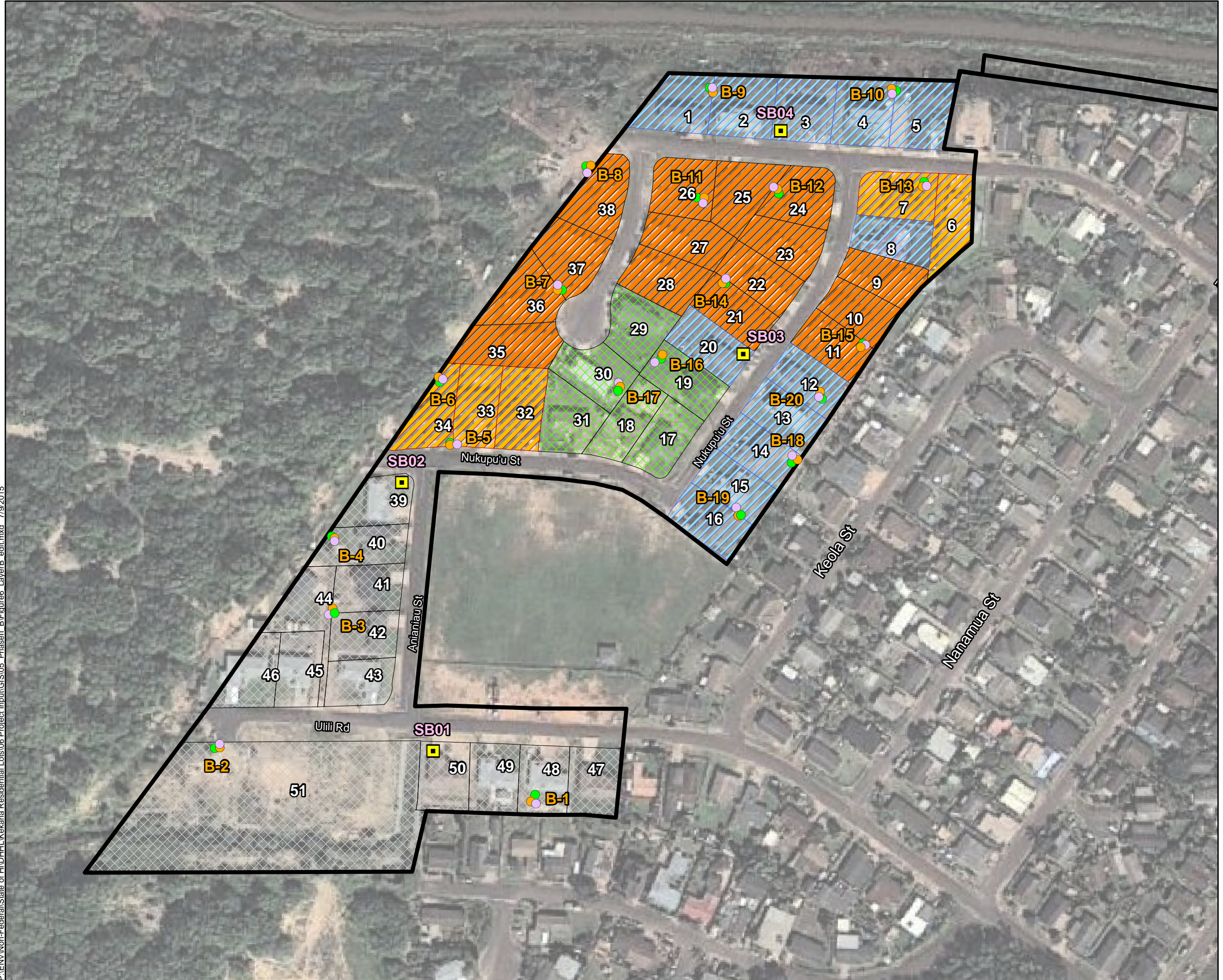


Figure 5
Discrete Subsurface Soil Exceedances
Kekaha Residential Lots
Unit 4 Subdivision
Kekaha, Kaua'i, Hawai'i

P:\ENV\Non-Federal\State of H\ID\H\Kekaha Residential Lots\06 Project Input\GIS\05_PhaseII_B\Figure6_LayerB_edit.mxd 7/9/2015



Legend

- 1 Lot Numbers
- Soil Borings (April 2014)

Subsurface Borings and Increment Locations

- Primary Increment
- Duplicate Increment
- Triplicate Increment

- Layer B is exposed (within 0 to 6 inches bgs) and thick (> 3 inches)
- Layer B is near-surface (within 12 inches bgs) and thick (> 3 inches)
- Layer B is deep (>12 inches bgs) and thick (> 3 inches)
- Layer B is deep (>12 inches bgs) and thin (< 3 inches)
- Layer B was not present within 36 inches bgs

Site Boundary

Notes

Acronyms

DU	Decision Unit
MW	Monitoring Well
SB	Soil Boring

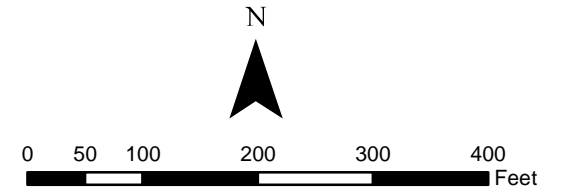
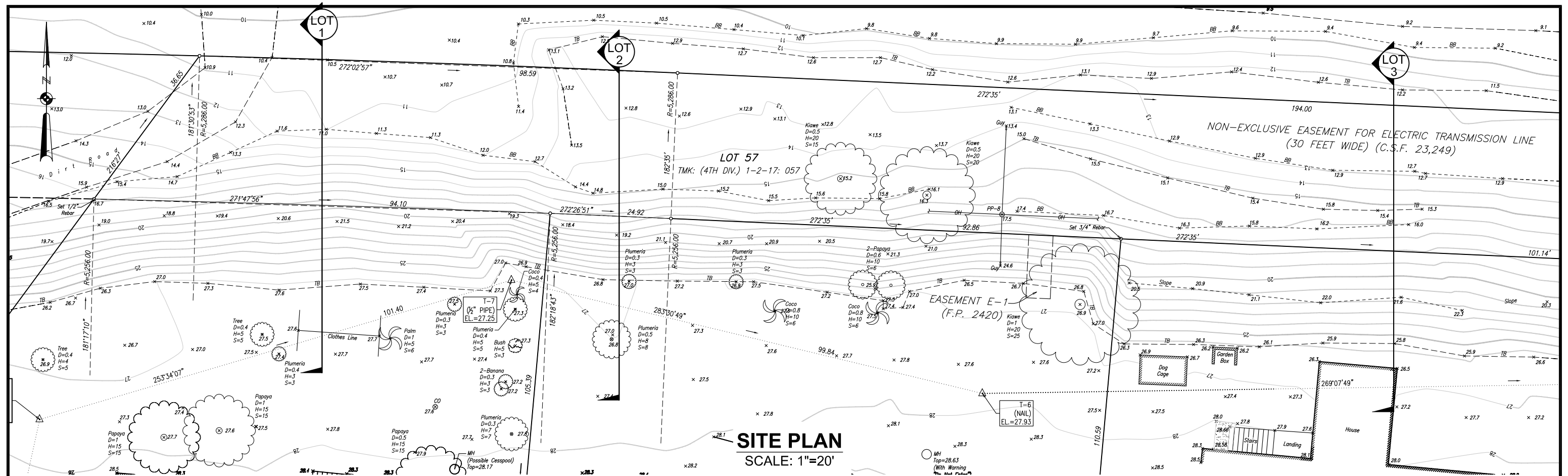
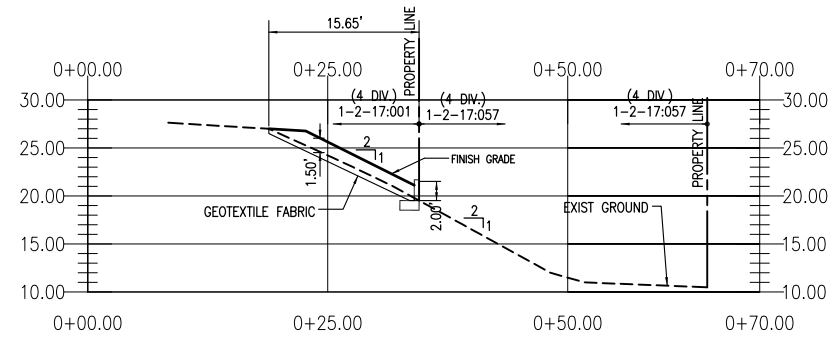


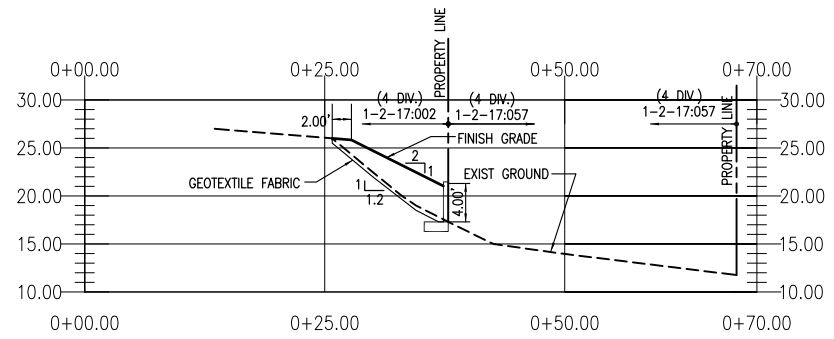
Figure 6
Layer B Depth and Thickness
Kekaha Residential Lots
Unit 4 Subdivision
Kekaha, Kaua'i, Hawai'i



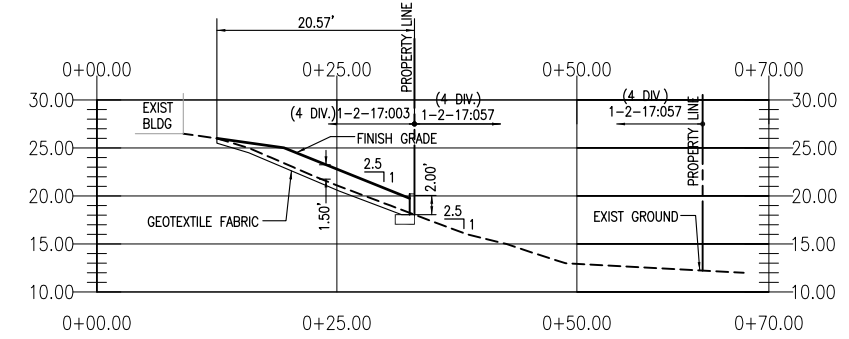
SITE PLAN
SCALE: 1"=20'



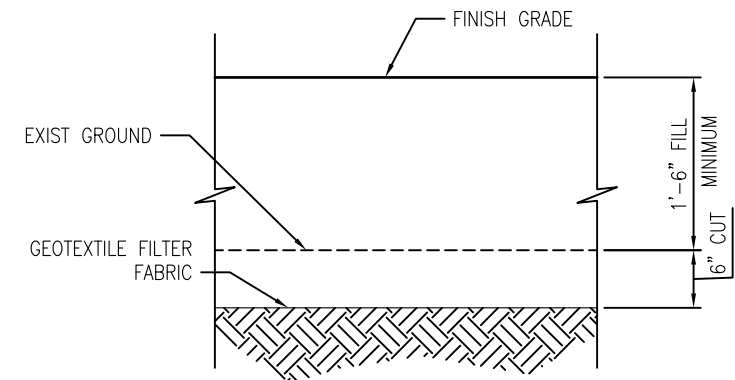
LOT 1 SECTION



LOT 2 SECTION



LOT 3 SECTION



TYPICAL SECTION
NOT TO SCALE

SECTIONS
SCALE: 1"=20' VERT
1"=20' HORIZ



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ASB TOWER, STE 1600 · 1001 BISHOP ST, HONOLULU, HAWAII 96813

Figure 7
KEKAHA RESIDENCE LOTS
UNIT 4
Kekaha, Waimea, Kauai, Hawaii
June 2015

**Attachment B:
Soil Boring and Photo Logs**



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BORING ID: SB01

PAGE 1 OF 1

CLIENT Department of Hawaiian Home Lands **LATITUDE** _____ **LONGITUDE** _____ **DATUM** _____
PROJECT NAME Kekaha Residential Lots **PROJECT LOCATION** Kekaha
DATE STARTED 4/7/2014 11:30:00 AM **COMPLETED** 4/7/2014 12:30:00 PM **GROUND ELEVATION** _____ **HOLE SIZE** 2 in.
DRILLING CONTRACTOR ; Geotek Hawaii **GROUND WATER LEVEL:**
DRILLING METHOD: DPT/DPT 6600 ∇ **AT TIME OF DRILLING** 20.80 ft
LOGGED BY S. McKnight **CHECKED BY** S. McKnight **END OF DRILLING** ---
SAMPLER TYPE/ADVANCEMENT _____ **24 HOURS AFTER DRILLING** ---

AK ENV BH-1 - GINT STD US.GDT - 10/8/14 16:13 - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\06 PROJECT INPUT\GINT\KEKAHA LOTS.GPJ - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\06 PROJECT INPUT\GINT\KEKAHA LOTS.GLB

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	Percent Gravel	Percent Sand	Percent Fines	U.S.C.S.	GRAPHIC LOG	Depth (ft bgs)	MATERIAL DESCRIPTION	Elevation (ft ams)	WELL DIAGRAM
0											
5	AL	80							POORLY GRADED SAND WITH SILT , (SP-SM), brownish yellow (10YR 6/8), fine grained, moist, non plastic, poorly graded, no odor.		
10	AL	76	0	90	10	SP-SM			Same as above, trace nodules, moist, no odor, fine gravel size.		
15	AL	90							Increase grain size to medium sand with trace coral fragments and black sand grains, moist, no odor.		
17.5			0	100	0	SP-SM		17.5	POORLY GRADED SAND WITH SILT , (SP), blackish (10YR 2/1 (black)), fine grained, non plastic, poorly graded.		
18.0			0	95	5	SW		18.0	WELL GRADED SAND , (SW), brownish yellow (10YR 6/8), fine to medium grained, moist, non plastic, well graded, trace silt, slight organic odor, slightly sweet.		
20	AL	90						20.0	WELL GRADED SAND , (SW), light brownish yellow with blackish (10YR 6/8 (brownish yellow)), fine to medium grained, moist, non plastic, well graded, trace fine sand, no odor, trace coral fragments and fine grained black sand. Collected bag sample.		
23.0			0	100	0	SP		23.0	POORLY GRADED SAND WITH SILT , (SP), brownish yellow (10YR 6/8 (brownish yellow)), fine grained, saturated, non plastic, poorly graded. No sampling from 25'- 30'. Pushed rods to 30'. Set well inside rods		
25			0	100	0						
30								30.0			

Bottom of borehole at 30.0 feet.



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BORING ID: SB02

PAGE 1 OF 1

CLIENT Department of Hawaiian Home Lands **LATITUDE** _____ **LONGITUDE** _____ **DATUM** _____
PROJECT NAME Kekaha Residential Lots **PROJECT LOCATION** Kekaha
DATE STARTED 4/7/2014 1:30:00 PM **COMPLETED** 4/7/2014 2:30:00 PM **GROUND ELEVATION** _____ **HOLE SIZE** 2 in.
DRILLING CONTRACTOR ; Geotek Hawaii **GROUND WATER LEVEL:**
DRILLING METHOD: DPT/DPT 6600 **AT TIME OF DRILLING** 26.80 ft
LOGGED BY S. McKnight **CHECKED BY** S. McKnight **END OF DRILLING** ---
SAMPLER TYPE/ADVANCEMENT _____ **24 HOURS AFTER DRILLING** ---

AK ENV BH-1 - GINT STD US GDT - 10/8/14 16:13 - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\GPI - P\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\GPI\PROJECT INPUT\GINT\KEKAHA LOTS.GLB

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	Percent Gravel	Percent Sand	Percent Fines	U.S.C.S.	GRAPHIC LOG	Depth (ft bgs)	MATERIAL DESCRIPTION	Elevation (ft amsl)	WELL DIAGRAM
0											
3.5	AL	80	0	80	20	SM		3.5	SILTY SAND. (SM), yellowish red (5YR 4/6 (yellowish red)), fine grained, dry, loose, no to low plasticity, well graded, no odor, no cementation.[Fill]		
4.5	SB02-01	100	10	20	70	CL		4.5	LEAN CLAY. (CL), reddish brown (2.5YR 4/3 (reddish brown)), dry, stiff, low plasticity, well graded, with fine to medium sand, trace fine to coarse gravel, no odor, plastic, metal debris at 4.2'.[Fill]		
5	AL	80							POORLY GRADED SAND. (SP), brownish yellow (10YR 6/8 (brownish yellow)), fine grained, damp, loose, non plastic, poorly graded, no odor, no staining.		
10	AL	80							Grades to moist		
15	AL	80							Grades to moist		
20	AL	80	0	100	0	SP			Grades to fine to medium sand, moist to wet		
25	AL	80							Hard drilling, dense sand		
30									Temporary Refusal @ 27'		
35									Pushed through, no sampling		
35.0								35.0			

Bottom of borehole at 35.0 feet.



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BORING ID: SB03
 PAGE 1 OF 1

CLIENT Department of Hawaiian Home Lands **LATITUDE** _____ **LONGITUDE** _____ **DATUM** _____

PROJECT NAME Kekaha Residential Lots **PROJECT LOCATION** Kekaha

DATE STARTED 4/8/2014 8:30:00 AM **COMPLETED** 4/8/2014 10:00:00 AM **GROUND ELEVATION** _____ **HOLE SIZE** 2 in.

DRILLING CONTRACTOR ; Geotek Hawaii **GROUND WATER LEVEL:**

DRILLING METHOD: DPT/DPT 6600 **AT TIME OF DRILLING** 26.80 ft

LOGGED BY S. McKnight **CHECKED BY** S. McKnight **END OF DRILLING** ---

SAMPLER TYPE/ADVANCEMENT _____ **24 HOURS AFTER DRILLING** ---

AK ENV BH-1 - GINT STD US GDT - 10/8/14 16:13 - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\G.PJ - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\G.PJ - PROJECT INPUT\GINT\KEKAHALOTS.GLB

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	Percent Gravel	Percent Sand	Percent Fines	U.S.C.S.	GRAPHIC LOG	Depth (ft bgs)	MATERIAL DESCRIPTION	Elevation (ft ams)	WELL DIAGRAM
0											
	SB03-01 AL	100	10	80	10	SP		2.0	POORLY GRADED SAND , (SP), light brown (7.5YR 6/3 (light brown)), fine grained, dry, trace organics, trace fine gravel.[Fill]		
		80	0	30	70	ML		3.0	CLAYEY SILT WITH SAND , (ML), dark brown (7.5YR 3/2 (dark brown)), moist, and fine sand, no odor.[Fill]		
5		80									
10		70							grades to moist, trace cemented nodules of sand, up to 0.5" in diameter @ 13'-15' bgs		
15		80									
20			0	100	0	SP			nodules		
25		70							10% medium sand		
									Nodules increase to fine gravel size		
									Grades to medium sand with black sand grains. Wet. No odor.		
30											
		0							Hard drilling, no sample 30'-35'		
35								35.0			

Bottom of borehole at 35.0 feet.



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BORING ID: SB04

PAGE 1 OF 1

CLIENT Department of Hawaiian Home Lands **LATITUDE** _____ **LONGITUDE** _____ **DATUM** _____
PROJECT NAME Kekaha Residential Lots **PROJECT LOCATION** Kekaha
DATE STARTED 4/8/2014 10:30:00 AM **COMPLETED** 4/8/2014 11:45:00 AM **GROUND ELEVATION** _____ **HOLE SIZE** 2 in.
DRILLING CONTRACTOR ; Geotek Hawaii **GROUND WATER LEVEL:**
DRILLING METHOD: DPT/DPT 6600 ∇ **AT TIME OF DRILLING** 29.60 ft
LOGGED BY S. McKnight **CHECKED BY** S. McKnight **END OF DRILLING** ---
SAMPLER TYPE/ADVANCEMENT _____ **24 HOURS AFTER DRILLING** ---

AK ENV BH-1 - GINT STD US GDT - 10/8/14 16:13 - P:\ENVNON-FEDERAL\STATE OF HII\HLL\KEKAHA RESIDENTIAL LOTS\06 PROJECT INPUT\GINT\KEKAHA LOTS.GLB

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	Percent Gravel	Percent Sand	Percent Fines	U.S.C.S.	GRAPHIC LOG	Depth (ft bgs)	MATERIAL DESCRIPTION	Elevation (ft ams)	WELL DIAGRAM
0											
1.5			0	85	15	SP-SM		1.5	POORLY GRADED SAND WITH SILT , (SP-SM), brown (10YR 4/3 (brown)), fine grained, dry, with silt, trace coarse sand, no odor, lens of tan fine sand at 1.4'. [Fill]		
2.5	SB04-01	100	0	80	20	SM		2.5	SILTY SAND , (SM), dark brown (7.5YR 3/2 (dark brown)), fine grained, dry, hard, trace clay, rusted metal debris at 2.5'. [Fill]		
3.5	AL	100	0	95	5	SP-SM		3.5	POORLY GRADED SAND WITH SILT , (SP-SM), brown (10YR 4/3 (brown)), fine grained, dry, loose, trace coarse sand, trace fine gravel, no odor. [Fill]		
5.5	SB04-02	100	0	80	20	SM		5.5	SILTY SAND , (SM), dark brown (7.5YR 3/2 (dark brown)), fine grained, dry, hard, trace clay, no odor. Brick, glass, scoria debris observed.		
7.5	AL	90	0	100	0	SP		7.5	POORLY GRADED SAND , (SP), brown (10YR 4/3 (brown)), fine grained, dry, trace silt, trace organics, 1.5" tree root at 7'.		
10	AL	80							POORLY GRADED SAND , (SP), brownish yellow (10YR 6/8), fine grained, moist, no odor, no debris.		
15	AL	80									
20	AL	80									
25	AL	80	0	100	0	SP			Moist		
30	AL	80									
35	AL	80									
40								40.0			

29.60 ∇

Bottom of borehole at 40.0 feet.



Photograph 1: Field personnel using GPS unit to locate incremental sample (IS) location at DU9, facing west.



Photograph 2: Soil borings from SB02 showing soil at 3.5' to 5.0' and 8.5' to 10' below ground surface (bgs). Soil below 10' bgs was consistent with soil observed in the 5' to 10' liner. The SB02 sample consisted of the dark brown silty material shown in the photo.



Photograph 3. Soil borings from SB02. Soil in liner on the right is from 0' to 5' bgs. Distinct dark brown silty sand layer present from approximately 3.7' to 4.4' bgs. Soil in liner on the left is from 5' to 10' bgs. No brown layer present, only native tan fine-grained sand.



Photograph 4. Soil from SB01. Liners shown begin with 0' to 5' bgs (0' at bottom left) and progress right to 25' bgs (25' at top right). Soil consists of native tan, fine to medium sand throughout the boring.



Photograph 5. Soil from SB04. Liner on the left shows soil from 0' to 5' bgs; liner on the right from 5' to 10' bgs. Shallow layer of silty brown soil observed and sampled from 1.8' to 2.4' bgs. Second layer of brown soil observed from approximately 3.5' to 6' bgs.



Photograph 6: IS pinflag locations in the backyard of Lot 50. Taken from western edge of DU8 facing southeast.



Photograph 7: IS pinflag locations along the northern edge of DU8. Ulili Road facing east. Note temporary well MW01 located near the road.



Photograph 8: Field personnel using the Cold Regions Research and Engineering Laboratory Multi-Increment Sampling Tool (CMIST) sampling tool for surface soil increment collection.



Photograph 9: IS pinflag locations in backyard of Lot 48, facing east.



Photograph 10: Field personnel characterizing soil in DU8 behind Lot 47.



Photograph 11: Two IS pinflag locations in DU8 in the backyard of Lot 47, facing north.



Photograph 12: IS pinflag locations in DU8 in the front yard of Lot 47, facing southeast.



Photograph 13: IS pinflag locations in DU8, Lot 49, facing west.



Photograph 14: Field personnel performing groundwater sampling at SB04.



Photograph 15: DU4 as setup by Habitat for Humanity, facing southwest.



Photograph 16: Location and markings for SB03 between Lots 20 and 21, facing northwest.



Photograph 17: Capped temporary soil boring SB03.



Photograph 18: IS sampling locations in DU6, north side yard of Lot 12.



Photograph 19: Squash and vegetable garden located in DU6, backyard of Lot 11, facing southeast.



Photograph 20: North slope of Lot 3 in DU1. View from Cane Haul Road.



Photograph 21: North slope of Lot 2 in DU1. IS pinflag locations obscured by high grass and brush.



Photograph 22: IS pinflag locations on north slope of Lot 5 in DU1.



Photograph 23: IS pinflag locations on north slope of Lot 4 in DU1.



Photograph 24: Boring B-12 Primary Increment in Lot 24 (May 12, 2015). Typical photograph to illustrate areas where Layer B was observed on surface and the layer is thick.



Photograph 25: Boring B-17 Duplicate Increment in Lot 30 (May 12, 2015). Typical photograph to illustrate thin (<3 inches) of Layer B, which is buried >12 inches bgs.



Photograph 26: Boring B-19 Triplicate Increment in Lot 15/& 16 (May 12, 2015). Typical photograph to illustrate thick (>3 inches) of Layer B, which is buried >12 inches bgs.



Photograph 27: Boring B-02 Duplicate Increment in Lot 51 (May 13, 2015). Typical photograph to illustrate boreholes with Layer A only (no Layer B present).



Photograph 28: Typical photograph of geophysical survey (electromagnetic survey) activity.



Photograph 29: Typical photograph of geophysical survey activity.



Photograph 30: Typical photograph showing grid layout for geophysical survey.



Photograph 31: Typical photograph showing direct push borings in progress.

**Attachment C:
Analytical Data Tables**

**Table C-1. Detected Surface Soil Results and Non-detected Results above the DOH EALs
DHHL Phase 2 Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision**

Analyte	CAS Number	Units	DOH EAL ^a	Background Value ^b	DU1-01	DU2-01	DU3-01	DU4-01	DU5-01	DU6-01	DU7-01	DU8-01	DU9-01	DU9-02	DU9-03
Dioxins and Furans (EPA Method 8290A)															
OCDD	3268-87-9	pg/g	—	—	12,000 E G B	10,000 G E	4,900 E G B	6,000 E G B	9,900 G E	3,600 G	800	590	660 B	730 B	710 B
OCDF	39001-02-0	pg/g	—	—	430	300	140	160	210	120	51	34	25	24	25
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/g	—	—	1,400 G	1,100 G	530	610 G	770 G	390	94	64	75	76	78
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/g	—	—	180 B	120	61 B	68 B	84	47	21	14 q	10 B	11 B	11 B
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/g	—	—	14	8.8	4.8 J	4.8 J	6.1	3.2 J	0.97 J q	< 0.63	0.9 J	0.81 J	0.76 J
1,2,3,4,7,8-HxCDD	39227-28-6	pg/g	—	—	14	13	6.7	7.6	8	4.1 J	0.84 J q	0.57 J q	1.1 J	1 J	1.2 J
1,2,3,4,7,8-HxCDF	70648-26-9	pg/g	—	—	7.1	5.3	2.6 J	3.1 J	3.9 J	2.2 J	0.79 J q	0.45 J	0.63 J	0.49 J	0.65 J
1,2,3,6,7,8-HxCDD	57653-85-7	pg/g	—	—	39	32	15	19	21	12	3.4 J	2.3 J	2.4 J	2.5 J	2.6 J
1,2,3,6,7,8-HxCDF	57117-44-9	pg/g	—	—	6.5	4.3 J	2.2 J	2.6 J	3 J	1.6 J	0.75 J	0.33 J q	0.43 J	0.4 J	0.41 J
1,2,3,7,8,9-HxCDD	19408-74-3	pg/g	—	—	30	30	14	15	15	11	2.9 J	1.9 J	2.3 J	2.3 J q	2.7 J
1,2,3,7,8,9-HxCDF	72918-21-9	pg/g	—	—	< 0.77	< 0.46	< 0.41	< 0.38	< 0.37	< 0.23	< 0.17	< 0.18	< 0.1	< 0.076	< 0.14
1,2,3,7,8-PeCDD	40321-76-4	pg/g	—	—	5.9	4.8 J	3 J	2.7 J	3.2 J	1.9 J	< 0.27	< 0.33	0.54 J	0.47 J	0.51 J
1,2,3,7,8-PeCDF	57117-41-6	pg/g	—	—	0.87 J q	0.92 J	0.45 J q	0.77 J q	0.92 J	0.5 J q	< 0.18	< 0.21	0.29 J	0.17 J q	< 0.09
2,3,4,6,7,8-HxCDF	60851-34-5	pg/g	—	—	5.1	3.2 J	1.3 J q	1.9 J	2.3 J	1.2 J	< 0.15	0.55 J	0.55 J	0.32 J	0.23 J q
2,3,4,7,8-PeCDF	57117-31-4	pg/g	—	—	1.2 J	1.1 J	0.67 J	0.67 J q	0.92 J	0.59 J	< 0.2	< 0.22	< 0.17	< 0.11	0.15 J q
2,3,7,8-TCDD	1746-01-6	pg/g	—	—	2	0.9 J q	0.83 J	0.86 J q	0.79 J q	0.65 J	0.22 J q	< 0.11	< 0.094	0.16 J q	0.18 J q
2,3,7,8-TCDF	51207-31-9	pg/g	—	—	0.63 J	0.84 J	0.43 J	0.75 J	1	0.68 J	0.36 J	0.27 J q	0.46 J	0.21 J q	0.34 J
Dioxin TEQ	NA	pg/g	240	—	38.2	30.3	15.7	17.5	21.3	11.5	2.54	1.6	2.4	2.46	2.67
Metals and Mercury (EPA Method 7471A/6010B)															
Mercury	7439-97-6	mg/Kg	4.7	0.65	0.042	0.051	0.022 J	0.036	0.041	0.027	0.019 J	0.013 J	0.011 J	0.02 J	0.0072 J
Arsenic	7440-38-2	mg/Kg	24	23.6	14	14	12	14	15	14	12	11	12	13	12
Barium	7440-39-3	mg/Kg	1,000	607	20	23	22	21	24	25	13	11	9.7	9.3	11
Cadmium	7440-43-9	mg/Kg	14	4.6	0.21 J	0.24 J	0.16 J	0.26 J	0.3 J	0.23 J	0.12 J	0.13 J	0.09 J	0.092 J	0.11 J
Chromium	7440-47-3	mg/Kg	1,100	1,010	86	63	45	51	65	50	40	35	31	31	30
Lead	7439-92-1	mg/Kg	200	54.2	23	34	15	31	32	24	12	3.6	5.1	3	3.4
Organochlorine Pesticides (EPA Method 8081A)															
4,4'-DDD	72-54-8	µg/Kg	2,000	—	1.8	< 0.26	< 0.26	< 0.26	38 E	< 0.26	< 0.26	< 0.25	< 0.26	< 0.26	< 0.26
4,4'-DDE	72-55-9	µg/Kg	1,400	—	1 J E p	1.8	0.71 J	1.7	1.6 J	0.63 J	0.23 J p	< 0.21	< 0.22	< 0.22	< 0.22
4,4'-DDT	50-29-3	µg/Kg	1,700	—	< 0.4	0.5 J	< 0.4	0.4 J p	0.51 J p	0.69 J	< 0.4	< 0.39	< 0.4	< 0.4	< 0.4
alpha-BHC	319-84-6	µg/Kg	—	—	< 0.22	0.55 J	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.21	< 0.22	< 0.22	< 0.22
alpha-Chlordane	5103-71-9	µg/Kg	—	—	0.38 J E p	1.3 J	0.35 J	2.2	0.31 J	0.61 J p	0.68 J	< 0.19	< 0.2	< 0.2	< 0.2
beta-BHC	319-85-7	µg/Kg	—	—	< 0.33	1.8	< 0.33	< 0.32	< 0.33	< 0.33	< 0.33	< 0.32	< 0.33	< 0.33	< 0.33
delta-BHC	319-86-8	µg/Kg	—	—	0.32 J	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	0.17 J	< 0.16	< 0.16	< 0.16	< 0.16
Diieldrin	60-57-1	µg/Kg	1,500	—	0.096 J p	0.1 J p	< 0.09	< 0.09	0.42 J p	0.24 J p	0.25 J p	< 0.088	< 0.091	< 0.092	< 0.091
Endosulfan I	959-98-8	µg/Kg	—	—	< 0.052	< 0.052	< 0.052	< 0.051	0.27 J	< 0.052	< 0.052	< 0.051	< 0.052	< 0.052	< 0.052
Endosulfan II	33213-65-9	µg/Kg	—	—	< 0.1	< 0.1	< 0.099	< 0.098	0.16 J	< 0.1	< 0.1	< 0.097	< 0.099	< 0.1	< 0.1
Endosulfan sulfate	1031-07-8	µg/Kg	—	—	< 0.92 *	< 0.92 *	< 0.091 *	< 0.09 *	0.29 J	0.75 J p *	0.13 J p *	0.17 J p *	< 0.092 *	< 0.093 *	< 0.092 *
Endosulfan (Total)	115-29-7	µg/Kg	18	—	< 0.92 *	< 0.92 *	< 0.099 *	< 0.098 *	0.72 J	0.75 J p *	0.13 J p *	0.17 J p *	< 0.099 *	< 0.1 *	< 0.1 *
Endrin	72-20-8	µg/Kg	3,700	—	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.84 J	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Endrin aldehyde	7421-93-4	µg/Kg	—	—	< 0.11	0.81 J	0.27 J p	< 0.11	1 J	0.15 J p	< 0.11	0.21 J p	< 0.11	0.18 J p	0.17 J p
Endrin ketone	53494-70-5	µg/Kg	—	—	< 0.34	< 0.34	< 0.34	< 0.33	< 0.34	1.4 J	< 0.34	< 0.33	< 0.34	< 0.34	< 0.34
gamma-Chlordane	5103-74-2	µg/Kg	—	—	0.23 J p	1.7	0.072 J p	0.31 J	0.34 J	0.68 J	0.98 J	0.11 J	< 0.053	< 0.053	< 0.053
Heptachlor	76-44-8	µg/Kg	110	—	< 0.19	< 0.19	< 0.19	< 0.19	0.19 J	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.19

Table C-1. Detected Surface Soil Results and Non-detected Results above the DOH EALs (cont'd)

DHHL Phase 2 Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision

Analyte	CAS Number	Units	DOH EAL ^a	Background Value ^b	DU1-01	DU2-01	DU3-01	DU4-01	DU5-01	DU6-01	DU7-01	DU8-01	DU9-01	DU9-02	DU9-03
Heptachlor epoxide	1024-57-3	µg/Kg	53	—	< 0.12	< 0.12	0.24 J	0.27 J	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Polychlorinated Biphenyls (EPA Method 8082)															
PCB (Total)	1336-36-3	µg/Kg	1,100	—	< 7.4 *	< 7.4 *	< 7.4 *	< 7.4 *	< 7.4 *	< 7.4	< 7.4	< 7.2 *	< 7.4 *	< 7.5 *	< 7.4 *
Total Petroleum Hydrocarbons (EPA Method 8015B)															
DRO (C10-C24)	N/A	mg/Kg	500	—	5.3	—	—	—	—	—	—	—	—	—	—
RROs (C24-C36)	N/A	mg/Kg	500	—	56	—	—	—	—	—	—	—	—	—	—
Polyaromatic Hydrocarbons (EPA Method 8270C-SIM)															
Acenaphthene	83-32-9	µg/Kg	120,000	—	< 0.46	0.67 J	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	0.58 J	< 0.45	< 0.46	< 0.44
Acenaphthylene	208-96-8	µg/Kg	13,000	—	0.88 J	1.1 J	0.69 J	1.6 J	0.45 J	0.66 J	0.78 J	0.91 J	< 0.31	0.83 J	< 0.31
Anthracene	120-12-7	µg/Kg	4,300	—	1.6 J	5	1.3 J	1.9 J	0.78 J	0.64 J	1.5 J	1.3 J	< 0.38	1.7 J	0.4 J
Benzo[a]anthracene	56-55-3	µg/Kg	1,500	—	6.2	14	5.4	14	4.8 J	2.6 J	4.2 J	5.4	0.73 J	2.9 J	0.69 J
Benzo[a]pyrene	50-32-8	µg/Kg	150	—	8.3	15	6.1	21	5.6	3.1 J	4.1 J	6.7	0.93 J	2.6 J	0.69 J
Benzo[b]fluoranthene	205-99-2	µg/Kg	1,500	—	23	24	12	28	10	6.1	15	23	2.9 J	4.1 J	3.8 J
Benzo[g,h,i]perylene	191-24-2	µg/Kg	27,000	—	12	6.6	5.2	18	3.9 J	3.1 J	4 J	12	1.3 J	2 J	1.1 J
Benzo[k]fluoranthene	207-08-9	µg/Kg	15,000	—	8.6	18	7.7	18	6.7	4.2 J	8.5	13	1.6 J	3.9 J	1.4 J
Chrysene	218-01-9	µg/Kg	10,000	—	22	29	13	21	11	6.1	19	21	3.9 J	7.2	5.3
Dibenz(a,h)anthracene	53-70-3	µg/Kg	150	—	5.4	2.6 J	1.2 J	4.5 J	< 1.2	< 1.2	< 1.2	2.2 J	< 1.1	< 1.2	< 1.1
Fluoranthene	206-44-0	µg/Kg	87,000	—	29	46	21	20	13	8.7	22	26	6.1	18	9.1
Fluorene	86-73-7	µg/Kg	100,000	—	< 0.48	0.95 J	0.68 J	< 0.49	< 0.49	< 0.49	< 0.49	0.98 J	< 0.47	0.5 J	< 0.46
Indeno[1,2,3-cd]pyrene	193-39-5	µg/Kg	1,500	—	6.6	6.9	5.4	20	3.9 J	3 J	4.4 J	12	1.1 J	2 J	0.98 J
Naphthalene	91-20-3	µg/Kg	4,500	—	1.7 J	0.92 J	0.7 J	0.61 J	0.8 J	0.66 J	0.5 J	3.2 J	0.33 J	0.38 J	0.38 J
Phenanthrene	85-01-8	µg/Kg	69,000	—	13	19	8.4	5.2	4.7 J	3.9 J	5.2	14	2.1 J	9.8	4.2 J
Pyrene	129-00-0	µg/Kg	44,000	—	24	41	18	20	12	8	18	19	4.5 J	15	6.3

^a Table B-2, Groundwater is not a current or potential drinking water resource, and surface water is within 150 meters from release site (DOH 2011).

^b 95th percentile background value (DOH 2012).

- < less than the method detection limit
- not available/not analyzed
- * laboratory control sample exceeds control limits
- µg/Kg microgram per kilogram
- B analyte was found in sample and method blank
- DOH Department of Health, State of Hawaii
- DRO diesel range organics
- E result exceeds calibration range
- EAL environmental action level
- G reporting limit raised due to matrix interference
- HpCDD heptachlorodibenzo-p-dioxin
- HpCDF heptachlorodibenzofuran
- HxCDD hexachlorodibenzo-p-dioxin
- HxCDF hexachlorodibenzofuran
- J estimated result

- mg/Kg milligram per kilogram
- OCDD octochlorodibenzo-p-dioxin
- OCDF octochlorodibenzofuran
- p RPD>40% between the primary and confirmation columns
- PAH polynuclear aromatic hydrocarbon
- PCB polychlorinated biphenyl
- PeCDD pentachlorodibenzo-p-dioxin
- PeCDF pentachlorodibenzofuran
- pg/g picogram per gram
- q result is the estimated maximum potential concentration
- TCDD tetrachlorodibenzo-p-dioxin
- TCDF tetrachlorodibenzofuran
- TEQ toxicity equivalent
- TPH total petroleum hydrocarbon

**Table C-2. Detected Subsurface Soil Results and Non-detected Results above the DOH EALs
DHHL Phase 2 Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision**

Analyte	CAS Number	Units	DOH EAL ^a	Background Value ^b	SB02-01	SB03-01	SB04-01	SB04-02
Dioxins and Furans (EPA Method 8290A)								
OCDD	3268-87-9	pg/g	—	—	6,100 E G B	6,900 E G B	26,000 G B	98,000 E G B
OCDF	39001-02-0	pg/g	—	—	350	440	850	1,300
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/g	—	—	640 G	820 G	3,100	7,100
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/g	—	—	140 B	170 B	340 B	410 G B
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/g	—	—	9.3	11	25 G	39 G
1,2,3,4,7,8-HxCDD	39227-28-6	pg/g	—	—	4.5 J	7.2 q	32	60
1,2,3,4,7,8-HxCDF	70648-26-9	pg/g	—	—	5.8	5.8	16	19
1,2,3,6,7,8-HxCDD	57653-85-7	pg/g	—	—	20	28	90	130
1,2,3,6,7,8-HxCDF	57117-44-9	pg/g	—	—	3.6 J	4.4 J	12	15
1,2,3,7,8,9-HxCDD	19408-74-3	pg/g	—	—	13	21	74	110
1,2,3,7,8,9-HxCDF	72918-21-9	pg/g	—	—	< 1.1	< 0.79	< 1.7	< 1.6
1,2,3,7,8-PeCDD	40321-76-4	pg/g	—	—	2.3 J	4.2 J	13	18
1,2,3,7,8-PeCDF	57117-41-6	pg/g	—	—	0.84 J q	1.2 J	5.3	6.1
2,3,4,6,7,8-HxCDF	60851-34-5	pg/g	—	—	2.6 J	3.6 J	9.7	12
2,3,4,7,8-PeCDF	57117-31-4	pg/g	—	—	0.91 J	1.2 J	5.5	7.2
2,3,7,8-TCDD	1746-01-6	pg/g	—	—	6.5	3.7	4.6	4.9
2,3,7,8-TCDF	51207-31-9	pg/g	—	—	0.49 J	0.98 J	6	7.8
Dioxin TEQ	NA	pg/g	240	—	23.9	27.6	86.1	166
Metals and Mercury (EPA Method 7471A/6010B)								
Mercury	7439-97-6	mg/Kg	4.7	0.65	30	0.071	0.17	0.19
Arsenic	7440-38-2	mg/Kg	24	23.6	14	15	35	28
Barium	7440-39-3	mg/Kg	1,000	607	31	39	80	93
Cadmium	7440-43-9	mg/Kg	14	4.6	0.089 J	0.13 J	1	1.3
Chromium	7440-47-3	mg/Kg	1,100	1,010	130	160	110	100
Lead	7439-92-1	mg/Kg	200	54.2	1,100	12	210	320
Silver	7440-22-4	mg/Kg	78	1.17	< 0.22	< 0.22	< 0.22	0.75 J
Organochlorine Pesticides (EPA Method 8081A)								
4,4'-DDD	72-54-8	µg/Kg	2,000	—	< 0.26	< 0.26	1.1 J	2.1
4,4'-DDE	72-55-9	µg/Kg	1,400	—	4.8	1.2 J	14	19
4,4'-DDT	50-29-3	µg/Kg	1,700	—	0.45 J p	< 0.4	2.5 p	1.4 J p
alpha-Chlordane	5103-71-9	µg/Kg	—	—	0.59 J	< 0.2	0.58 J	0.75 J
beta-BHC	319-85-7	µg/Kg	—	—	< 0.33	< 0.33	0.93 J p	0.76 J
delta-BHC	319-86-8	µg/Kg	—	—	< 0.16	0.24 J	0.77 J	0.75 J
Dieldrin	60-57-1	µg/Kg	1,500	—	0.35 J p	< 0.091	< 0.091	0.25 J
Endosulfan I	959-98-8	µg/Kg	—	—	< 0.052	0.078 J	< 0.052	0.073 J
Endosulfan II	33213-65-9	µg/Kg	—	—	0.33 J	< 0.1	< 0.1	0.12 J
Endosulfan sulfate	1031-07-8	µg/Kg	—	—	0.83 J *	< 0.092 *	1.8 *	0.22 J p *
Endosulfan (Total)	115-29-7	µg/Kg	18	—	1.16 J *	0.078 J	1.8 *	0.413 J p *
Endrin aldehyde	7421-93-4	µg/Kg	—	—	0.63 J p	0.56 J p	0.38 J p	0.71 J p
gamma-Chlordane	5103-74-2	µg/Kg	—	—	0.076 J p	< 0.053 U	0.39 J p	0.57 J p
PCBs (EPA Method 8082)								
PCB-1260	11096-82-5	µg/Kg	—	—	< 2.9	< 2.9	9 J	7.9 J
PCB (Total)	1336-36-3	µg/Kg	1,100	—	< 7.4 *	< 7.4 *	9 J	7.9 J
TPHs (EPA Method 8015B)								
DRO (C10-C24)	N/A	mg/Kg	500	—	610	3.9	8.5	6.5
RROs (C24-C36)	N/A	mg/Kg	500	—	79	26	54	58
PAHs (EPA Method 8270C-SIM)								
Acenaphthene	83-32-9	µg/Kg	120,000	—	< 0.47	< 0.47	< 0.47	0.69 J
Acenaphthylene	208-96-8	µg/Kg	13,000	—	< 0.33	< 0.33	1.4 J	1.5 J
Anthracene	120-12-7	µg/Kg	4,300	—	1.1 J	0.46 J	1.6 J	2.1 J
Benzo[a]anthracene	56-55-3	µg/Kg	1,500	—	1.4 J	2.3 J	9.7	11
Benzo[a]pyrene	50-32-8	µg/Kg	150	—	1.5 J	2.4 J	12	14
Benzo[b]fluoranthene	205-99-2	µg/Kg	1,500	—	3.1 J	4.7 J	17	19
Benzo[g,h,i]perylene	191-24-2	µg/Kg	27,000	—	3.1 J	2.3 J	9.7	10
Benzo[k]fluoranthene	207-08-9	µg/Kg	15,000	—	2 J	2.8 J	11	15
Chrysene	218-01-9	µg/Kg	10,000	—	3.5 J	4.9 J	16	18

Table C-2. Detected Subsurface Soil Results and Non-detected Results above the DOH EALs (cont'd)
DHHL Phase 2 Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision

Analyte	CAS Number	Units	DOH EAL ^a	Background Value ^b	SB02-01	SB03-01	SB04-01	SB04-02
Dibenz(a,h)anthracene	53-70-3	µg/Kg	150	—	< 1.2	< 1.2	2.1 J	2.1 J
Fluoranthene	206-44-0	µg/Kg	87,000	—	5.3	5.5	16	21
Fluorene	86-73-7	µg/Kg	100,000	—	0.73 J	< 0.49	0.63 J	0.88 J
Indeno[1,2,3-cd]pyrene	193-39-5	µg/Kg	1,500	—	1.6 J	2.2 J	9.5	11
Naphthalene	91-20-3	µg/Kg	4,500	—	< 3.1	1.5 J	2.2 J	3 J
Phenanthrene	85-01-8	µg/Kg	69,000	—	11	3.3 J	8.2	11
Pyrene	129-00-0	µg/Kg	44,000	—	11	5.9	18	23

^a Table B-2, Groundwater is not a current or potential drinking water resource, and surface water is within 150 meters from release site (DOH 2011).

^b 95th percentile background value (DOH 2012).

Bold text indicates result is greater than the background value.

Exceeds DOH EAL

< less than the method detection limit

— not available/not analyzed

* laboratory control sample exceeds control limits

µg/Kg microgram per kilogram

B analyte was found in sample and method blank

DOH Department of Health, State of Hawaii

DRO diesel range organics

E result exceeds calibration range

EAL environmental action level

G reporting limit raised due to matrix interference

HpCDD heptachlorodibenzo-p-dioxin

HpCDF heptachlorodibenzofuran

HxCDD hexachlorodibenzo-p-dioxin

HxCDF hexachlorodibenzofuran

J estimated result

mg/Kg

milligram per kilogram

OCDD

octochlorodibenzo-p-dioxin

OCDF

octochlorodibenzofuran

p

RPD>40% between the primary and confirmation columns

PAH

polynuclear aromatic hydrocarbon

PCB

polychlorinated biphenyl

PeCDD

pentachlorodibenzo-p-dioxin

PeCDF

pentachlorodibenzofuran

pg/g

picogram per gram

q

result is the estimated maximum potential concentration

TCDD

tetrachlorodibenzo-p-dioxin

TCDF

tetrachlorodibenzofuran

TEQ

toxicity equivalent

TPH

total petroleum hydrocarbon

**Table C-3. Detected Groundwater Results and Non-detected Results above the DOH EALs
DHHL Phase 2 Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision**

Analyte	CAS Number	Units	DOH EAL ^a	MW01-01	MW02-01	MW03-01	MW04-01	MW04-02
Dioxins and Furans (EPA Method 8290A)								
OCDD	3268-87-9	pg/L	—	8.2 J B q	24 J B q	1.3 J B q	18 J B	22 J B
OCDF	39001-02-0	pg/L	—	16 J B	2.7 J B	0.7 J B	8.6 J B q	30 J B
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	—	2.5 J B	5.5 J B	< 0.23	< 0.39	4.9 J B
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	—	23 J B	2.1 J B q	0.91 J B q	14 J B	29 J B
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	—	1.9 J q	< 0.46	< 0.21	< 0.59	3.4 J
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	—	0.68 J B q	< 0.26	< 0.21	2 J B q	1.9 J B
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	—	9.1 J B	< 0.33	< 0.19	7 J B	12 J B
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	—	1 J B	< 0.2	< 0.16	1.6 J B q	1.5 J B q
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	—	3.5 J B	< 0.26	< 0.15	2.2 J B	3.7 J B q
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	—	0.91 J B	< 0.19	< 0.15	1.5 J B q	1.7 J B q
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	—	< 0.44	< 0.32	< 0.19	1.5 J B	2.5 J B
1,2,3,7,8-PeCDD	40321-76-4	pg/L	—	< 0.23	< 0.32	< 0.28	1.2 J	< 0.38
1,2,3,7,8-PeCDF	57117-41-6	pg/L	—	1.7 J B	< 0.22	< 0.19	1.1 J B q	1.7 J B q
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	—	1.3 J B	< 0.3	< 0.17	1 J B	1.8 J B q
2,3,4,7,8-PeCDF	57117-31-4	pg/L	—	1.6 J B	< 0.23	< 0.28	1.6 J B	2.3 J B
2,3,7,8-TCDD	1746-01-6	pg/L	—	< 0.33	< 0.3	< 0.2	< 0.28	< 0.28
2,3,7,8-TCDF	51207-31-9	pg/L	—	1.5 J B	< 0.71	< 0.14	1 J B	1.5 J B q
Dioxin TEQ	NA	pg/L	5	2.61	0.08	0.01	3.64	3.79
Metals and Mercury (EPA Method 7470A/6010B)								
Mercury	7439-97-6	mg/L	0.000025	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	7440-39-3	mg/L	0.2	< 0.0025	0.0056	0.0058	0.0093	0.0096
Chromium	7440-47-3	mg/L	0.074	0.0029 J	< 0.0012	0.0032 J	< 0.0012	< 0.0012
Lead	7439-92-1	mg/L	0.0056	0.0029 J	0.0042 J	< 0.0025	< 0.0025	< 0.0025
Selenium	7782-49-2	mg/L	0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Silver	7440-22-4	mg/L	0.001	< 0.00084	< 0.00084	< 0.00084	< 0.00084	0.00099 J B
Organochlorine Pesticides (EPA Method 8081A)								
4,4'-DDD	72-54-8	µg/L	0.001	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDE	72-55-9	µg/L	0.001	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
4,4'-DDT	50-29-3	µg/L	0.001	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
Dieldrin	60-57-1	µg/L	0.0019	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
Endosulfan (Total)	115-29-7	µg/L	0.0087	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
Endrin	72-20-8	µg/L	0.0023	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012
Heptachlor	76-44-8	µg/L	0.0036	< 0.0067	< 0.0069	< 0.007	< 0.0069	< 0.0068
Heptachlor epoxide	1024-57-3	µg/L	0.0036	< 0.0058	< 0.0059	< 0.006	< 0.0059	< 0.0059
Methoxychlor	72-43-5	µg/L	0.03	< 0.04	< 0.041	< 0.042	< 0.041	< 0.041
Toxaphene	8001-35-2	µg/L	0.0002	< 0.49	< 0.5	< 0.51	< 0.5	< 0.5
PCBs (EPA Method 8082)								
PCB (Total)	1336-36-3	µg/L	0.014	< 0.16	< 0.17	< 0.17	< 0.17	< 0.17
TPHs (EPA Method 8015B)								
DRO (C10-C24)	N/A	µg/L	640	41 J	34 J	24 J	21 J	18 J
PAHs (EPA Method 8270C-SIM)								
Acenaphthene	83-32-9	µg/L	23	0.011 J	0.01 J	0.0042 J	< 0.0031	< 0.0031
Fluoranthene	206-44-0	µg/L	8	< 0.0041	0.0087 J	0.0044 J	< 0.0043	< 0.0042
Naphthalene	91-20-3	µg/L	24	0.0056 J	0.013 J	0.0051 J	0.0075 J	0.0046 J
Phenanthrene	85-01-8	µg/L	4.6	< 0.006	0.0077 J	< 0.0061	< 0.0062	< 0.0062
Pyrene	129-00-0	µg/L	2	0.0047 J	0.011 J	0.0045 J	< 0.0042	< 0.0041

^a Table D-1c, Groundwater is not a current or potential drinking water resource, and surface water is within 150 meters from release site (DOH 2011).

Italic text indicates non-detect result is greater than the DOH EAL

<	less than the method detection limit	OCDD	octochlorodibenzo-p-dioxin
—	not available/not analyzed	OCDF	octochlorodibenzofuran
µg/L	microgram per liter	PAH	polynuclear aromatic hydrocarbon
B	analyte was found in sample and method blank	PCB	polychlorinated biphenyl
DOH	Department of Health, State of Hawaii	PeCDD	pentachlorodibenzo-p-dioxin
DRO	diesel range organics	PeCDF	pentachlorodibenzofuran
EAL	environmental action level	pg/L	picogram per liter
HpCDD	heptachlorodibenzo-p-dioxin	q	result is the estimated maximum potential concentration
HpCDF	heptachlorodibenzofuran	TCDD	tetrachlorodibenzo-p-dioxin
HxCDD	hexachlorodibenzo-p-dioxin	TCDF	tetrachlorodibenzofuran
HxCDF	hexachlorodibenzofuran	TEQ	toxicity equivalent
J	estimated result	TPH	total petroleum hydrocarbon
mg/L	milligram per liter		

Table C-4. Incremental Sampling Subsurface Soil Results
DHHL Phase II Environmental Site Assessment, Kekaha Residential Lots, Unit 4 Subdivision

Analyte	CAS Number	Units	DOH EAL ^a	Background Value ^b	KEK-SS01	KEK-SB01	KEK-SB02	KEK-SB03
Metals and Mercury (EPA Method 7471A/6010B)								
Mercury	7439-97-6	mg/Kg	4.7	0.65	0.012 F1	0.089	0.14	0.17 J
Arsenic	7440-38-2	mg/Kg	24	23.6	14	19	22	24
Barium	7440-39-3	mg/Kg	1000	607	8.2	61	63	60
Cadmium	7440-43-9	mg/Kg	14	4.6	0.063 J	0.55	0.62	0.66
Chromium	7440-47-3	mg/Kg	1100	1010	34	130	100	110
Lead	7439-92-1	mg/Kg	200	54.2	3	90	100	150
Selenium	7782-49-2	mg/Kg	78	5.27	< 2 U	< 2 U	< 2 U	< 2 U
Silver	7440-22-4	mg/Kg	78	1.17	< 0.5 U	0.59	0.31 J	0.3 J

Layer A
 Layer B
 Exceeds DOH EAL

Bold Text indicates result is greater than the background value

^a Table B-2, residential land use, groundwater is not a current or potential drinking water resource, and surface water is within 150 meters of release site (DOH 2011)

^b 95th percentile background value (DOH 2012)

DOH Department of Health, State of Hawaii

EAL environmental action level

mg/kg milligram per kilogram

* LCS/LCSD exceeded criteria; result is estimate

F1 MS and/or MSD Recovery is outside acceptance limits

J estimated result

< less than method detection limit

U non-detect

**Attachment D:
Analytical Laboratory Reports**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-7028-1

Client Project/Site: DHHL Kekaha Phase II Env. Site
Assessmen

For:
AECOM Technical Services Inc.
1001 Bishop Street
Suite 1600
Honolulu, Hawaii 96813

Attn: Steve McKnight



Authorized for release by:
4/30/2014 4:32:46 PM

Karen Sellers, Project Manager II
(916)374-4442
karen.sellers@testamericainc.com

LINKS

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results through
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Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery exceeds the control limits

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
F1	MS and/or MSD Recovery exceeds the control limits
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F3	Duplicate RPD exceeds the control limit
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio

TestAmerica Sacramento

Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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- 2
- 3
- 4
- 5
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- 7
- 8
- 9
- 10
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- 12
- 13
- 14
- 15
- 16
- 17

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1

Laboratory: TestAmerica Sacramento

Narrative

Comments

The soil samples were processed by multi-incremental sampling techniques per laboratory SOP SAC-QA-0028, Rev. 3.3 as requested by the client.

Receipt

The samples were received on 4/12/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 1.9° C, 2.4° C, 2.5° C, 2.5° C, 2.7° C, 4.7° C and 5.0° C.

GC/MS Semi VOA

Method 8270C SIM:

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 320-40868 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The following sample was diluted due to the abundance of non-target analytes: SB02-01 (320-7028-14). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information. Elevated reporting limits (RLs) are provided.

Due to a large co-eluting matrix peak that eluted between 3 minutes and 6 minutes, surrogate Nitrobenzene-d5, internal standard Naphthalene-d8 and Naphthalene could not be reported from the undiluted analysis for sample SB02-01 (320-7028-14). They were reported from the 10X dilution.

The sample and sample duplicate relative percent difference (RPD) were outside control limits, but the sample and sample triplicate RPD were in control. Sample matrix interference and/or non-homogeneity are suspected.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8081A:

The continuing calibration verification (CCV) associated with batch 40813 recovered above the upper control limit for some target analytes. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (LCS 320-40476/2-A), (LCS 320-40476/3-A), (MB 320-40476/1-A), MW01-01 (320-7028-3), MW02-01 (320-7028-4), MW03-01 (320-7028-5), MW04-01 (320-7028-1), MW04-01 (320-7028-1 MS), MW04-01 (320-7028-1 MSD), MW04-02 (320-7028-2).

The LCS for extraction batch 40870 recovered outside control limits for Endosulfan Sulfate on the primary column used to report results. The recovery of 121% was just outside the current limits of 69-120%. The higher biased recovery is due to a chromatographic interference near the retention time of this compound. Recovery for Endosulfan Sulfate on the confirmation column was 94% and free from interference. Samples reporting Endosulfan Sulfate at detected levels do not appear to have the interference observed in the LCS; therefore, the data have been reported.

The MS/MSD recoveries for extraction batch 40870 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery was within acceptance limits.

Two target compounds, 4,4'-DDE and alpha Chlordane in sample DU01-01 (320-7028-20) are flagged as above the instrument calibration range. In both cases, this is due to interferences on the confirmation column only. The reported values (primary results) are within the calibration range and valid. Due to the sample matrix related interferences, the results are also flagged as having greater than 40% difference between the primary and confirmation results.

Surrogate recovery for the following samples were outside control limits: DU05-01 (320-7028-18), DU06-01 (320-7028-13), SB04-01 (320-7028-16), SB04-02 (320-7028-17). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

For the 8081 analysis, the opening continuing calibration verifications (CCV) were in control, however, the closing CCVs recovered outside of the control limits for some analytes. Similar results were obtained in the original analysis attempt. It is evident that co-extracted interferences from the samples have an effect on the instruments that cause elevated response for some compounds and degradation

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

(low response) in other compounds. This explains the relative high responses observed for breakdown related compounds such as 4,4'-DDD in the CCVs and relative low responses for 4,4'-DDT, Methoxychlor, and Toxaphene. The following samples are affected: (LCS 320-40858/2-B), (LCS 320-40858/3-B), (MB 320-40858/1-B), DU01-01 (320-7028-20), DU02-01 (320-7028-12), DU03-01 (320-7028-11), DU04-01 (320-7028-19), DU05-01 (320-7028-18), DU06-01 (320-7028-13), DU07-01 (320-7028-10), DU08-01 (320-7028-9), DU09-01 (320-7028-6), DU09-01 (320-7028-6 DU), DU09-01 (320-7028-6 MS), DU09-01 (320-7028-6 MSD), DU09-01 (320-7028-6 TRL), DU09-02 (320-7028-7), DU09-03 (320-7028-8), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17). As the phenomena appear to be sample matrix related, the data have been reported.

Method 8082:

Surrogate recovery for the following sample was outside control limits: SB04-01 (320-7028-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The LCS for extraction batch 40869 recovered outside control limits for Aroclor 1016. This analyte was biased high in the LCS and not detected in the associated samples; therefore, the data have been reported.

The MS recovery for Aroclor 1016 in extraction batch 40869 was above control limits. As all samples were non detect for this analyte, the data have been reported.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

Method 8290A:

The matrix spike (MS) recovery of 1,2,3,4,7,8,9-HpCDF for batch 40582 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery was within acceptance limits.

Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA), 13C-1,2,3,6,7,8-HxCDD, associated with the following sample: DU09-01 (320-7028-6 TRL). The theoretical area for the IDA was used to quantitate recovery concentration.

The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: DU01-01 (320-7028-20), DU03-01 (320-7028-11), DU04-01 (320-7028-19), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17). These analytes have been qualified; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range. Samples SB04-01 (320-7028-16), SB04-02 (320-7028-17) required dilution for OCDD as the peak saturated the detector.

The concentration of the analyte OCDD associated with the diluted analysis of sample SB04-02 (320-7028-17) exceeded the instrument calibration range. This analyte has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

The following samples: DU01-01 (320-7028-20), DU03-01 (320-7028-11), DU04-01 (320-7028-19), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17) exhibited elevated noise or matrix interference for one or more analytes requiring the detection limits to be raised appropriately. These analytes were flagged with the "G" qualifier.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method 6010B:

The MS/MSD recoveries for batch 320-40968 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery was within acceptance limits.

The sample and sample duplicate relative percent difference (RPD) for lead was outside control limits, but the sample and sample triplicate RPD were in control. Sample matrix interference and/or non-homogeneity are suspected.

The following samples were diluted due to the nature of the sample matrix: (320-7028-6 PDS), (320-7028-6 SD), DU02-01

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

(320-7028-12), DU03-01 (320-7028-11), DU06-01 (320-7028-13), DU07-01 (320-7028-10), DU08-01 (320-7028-9), DU09-01 (320-7028-6), DU09-01 (320-7028-6 DU), DU09-01 (320-7028-6 MS), DU09-01 (320-7028-6 MSD), DU09-01 (320-7028-6 TRL), DU09-02 (320-7028-7), DU09-03 (320-7028-8), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17). Elevated reporting limits (RLs) are provided. The ISM process produces fine particles that can cause damage to the instrument.

Method 7471A:

The following sample was diluted to bring the concentration of target analytes within the calibration range: SB02-01 (320-7028-14). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job Narrative 320-7028-1

Comments

No additional comments.

Receipt

The samples were received on 4/12/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 1.9° C, 2.4° C, 2.5° C, 2.5° C, 2.7° C, 4.7° C and 5.0° C.

GC/MS Semi VOA

Method(s) 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 320-40868 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270C SIM: The following sample(s) was diluted due to the abundance of non-target analytes: SB02-01 (320-7028-14). Elevated reporting limits (RLs) are provided.

Method(s) 8270C SIM: The following sample required a dilution due to the nature of the sample matrix: SB02-01 (320-7028-14). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C SIM: The sample and sample duplicate relative percent difference (RPD) were outside control limits, but the sample and sample triplicate RPD were in control. Sample matrix interference and/or non-homogeneity are suspected.

Method(s) 8270C SIM: Due to a large co-eluting matrix peak that eluted between 3 minutes and 6 minutes, analytes Nitrobenzene-d5 (surrogate), Naphthalene-d8 (internal standard) and Naphthalene could not be reported from the undiluted analysis for sample SB02-01 (320-7028-14). They were reported from the 10X dilution.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 40813 recovered above the upper control limit for

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

some target analytes. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (LCS 320-40476/2-A), (LCS 320-40476/3-A), (MB 320-40476/1-A), MW01-01 (320-7028-3), MW02-01 (320-7028-4), MW03-01 (320-7028-5), MW04-01 (320-7028-1), MW04-01 (320-7028-1 MS), MW04-01 (320-7028-1 MSD), MW04-02 (320-7028-2).

Method(s) 8081A: The laboratory control sample (LCS) for extraction batch 40870 recovered outside control limits for Endosulfan Sulfate on the primary column used to report results. The recovery of 121% was just outside the current limits of 69-120%. The higher biased recovery is due to a chromatographic interference near the retention time of this compound. Recovery for Endosulfan Sulfate on the confirmation column was 94% and free from interference.

Samples reporting Endosulfan Sulfate at detected levels do not appear to have the interference observed in the LCS; therefore, the data have been reported.

Method(s) 8081A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for extraction batch 40870 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8081A: Two target compounds in sample 320-7028-20 (4,4'-DDE and alpha Chlordane) are flagged as above the instrument calibration range. In both cases, this is due to interferences on the confirmation column only. The reported values (primary results) are within the calibration range and valid. Due to the sample matrix related interferences, the results are also flagged as having greater than 40% difference between the primary and confirmation results.

Method(s) 8081A: Surrogate recovery for the following samples were outside control limits: DU05-01 (320-7028-18), DU06-01 (320-7028-13), SB04-01 (320-7028-16), SB04-02 (320-7028-17). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8081A: For the 8081 analysis, the opening continuing calibration verifications (CCV) were in control, however, the closing CCVs recovered outside of the control limits for some analytes. Similar results were obtained in the original analysis attempt. It is evident that co-extracted interferences from the samples have an effect on the instruments that cause elevated response for some compounds and degradation (low response) in other compounds. This explains the relative high responses observed for breakdown related compounds such as 4,4'-DDD in the CCVs and relative low responses for 4,4'-DDT, Methoxychlor, and Toxaphene.

As the phenomena appear to be sample matrix related, the data have been reported.

INDAB-L5 CCV 25-Apr-2014 16:44hrs (Criteria: +/- 15%D)

GC73a (Primary)		GC73b (Confirmation)	
Aldrin	31%D	Aldrin	26%D
alpha-BHC	42%D	alpha-BHC	31%D
beta-BHC	28%D	beta-BHC	16%D
delta-BHC	35%D	delta-BHC	24%D
gamma-BHC	28%D	gamma-BHC	18%D
alpha-Chlordane	22%D	alpha-Chlordane	18%D
gamma-Chlordane	29%D	gamma-Chlordane	21%D
4,4'-DDD	41%D	4,4'-DDD	39%D
4,4'-DDE	11%D Pass	4,4'-DDE	-2.5%D Pass
4,4'-DDT	-51%D	4,4'-DDT	-46%D
Dieldrin	18%D	Dieldrin	22%D
Endosulfan I	25%D	Endosulfan I	12%D Pass
Endosulfan II	8.1%D Pass	Endosulfan II	6.0%D Pass
Endosulfan sulfate	1.0%D Pass	Endosulfan sulfate	-5.0%D Pass
Endrin	18%D	Endrin	16%D
Endrin aldehyde	-3.5%D Pass	Endrin aldehyde	-14%D Pass
Endrin ketone	-12%D Pass	Endrin ketone	-22%D
Heptachlor	2.9%D Pass	Heptachlor	-1.9%D Pass

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

Heptachlor epoxide	32%D		Heptachlor epoxide	23%D	
Methoxychlor	-41%D		Methoxychlor	-41%D	
Toxaphene	-15%D	Pass	Toxaphene	-18%D	
Decachlorobiphenyl	-2.4 %D	Pass	Decachlorobiphenyl	-4.5 %D	Pass
Tetrachloro-m-xylene	-2.7 %D	Pass	Tetrachloro-m-xylene	-1.0 %D	Pass

INDAB-L5 CCV 28-Apr-2014 19:25hrs (Criteria: +/- 15%D)

GC73a (Primary)			GC73b (Confirmation)		
Aldrin	44%D		Aldrin	34%D	
alpha-BHC	55%D		alpha-BHC	41%D	
beta-BHC	42%D		beta-BHC	28%D	
delta-BHC	48%D		delta-BHC	37%D	
gamma-BHC	51%D		gamma-BHC	35%D	
alpha-Chlordane	37%D		alpha-Chlordane	28%D	
gamma-Chlordane	48%D		gamma-Chlordane	33%D	
4,4'-DDD	74%D		4,4'-DDD	61%D	
4,4'-DDE	20%D		4,4'-DDE	19%D	
4,4'-DDT	-49%D		4,4'-DDT	-51%D	
Dieldrin	37%D		Dieldrin	34%D	
Endosulfan I	39%D		Endosulfan I	27%D	
Endosulfan II	32%D		Endosulfan II	23%D	
Endosulfan sulfate	20%D		Endosulfan sulfate	9.8%D	Pass
Endrin	43%D		Endrin	30%D	
Endrin aldehyde	11%D	Pass	Endrin aldehyde	-1.6%D	Pass
Endrin ketone	8.0%D	Pass	Endrin ketone	-5.1%D	Pass
Heptachlor	23%D		Heptachlor	13%D	Pass
Heptachlor epoxide	46%D		Heptachlor epoxide	33%D	
Methoxychlor	-45%D		Methoxychlor	-46%D	
Toxaphene	-9.2%D	Pass	Toxaphene	-19%D	
Decachlorobiphenyl	9.1 %D	Pass	Decachlorobiphenyl	6.0 %D	Pass
Tetrachloro-m-xylene	4.6 %D	Pass	Tetrachloro-m-xylene	2.4 %D	Pass

Method(s) 8082: Surrogate recovery for the following sample was outside control limits: SB04-01 (320-7028-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082: The laboratory control sample (LCS) for extraction batch 40869 recovered outside control limits for aroclor 1016. This analyte was biased high in the LCS and not detected in the associated samples; therefore, the data have been reported.

Method(s) 8082: The matrix spike recovery for aroclor 1016 in extraction batch 40869 was above control limits. As all samples were non detect for this analyte, the data have been reported.

No other analytical or quality issues were noted.

Dioxin

Method(s) 8290A: The matrix spike (MS) recovery of 1,2,3,4,7,8,9-HpCDF for batch 40582 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8290A: Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA), 13C-1,2,3,6,7,8-HxCDD, associated with the following sample: DU09-01 (320-7028-6 TRL). The theoretical area for the IDA was used to quantitate recovery concentration.

Method(s) 8290A: The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: DU01-01 (320-7028-20), DU03-01 (320-7028-11), DU04-01 (320-7028-19), SB02-01 (320-7028-14), SB03-01 (320-7028-15). These analytes have been qualified; however, the peaks did not saturate the instrument detector. Historical data indicate that for the

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Job ID: 320-7028-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Sample 320-7028-16 and 17 required dilution for OCDD as the peak saturated the detector.

Method(s) 8290A: The following samples: DU01-01 (320-7028-20), DU03-01 (320-7028-11), DU04-01 (320-7028-19), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17) exhibited elevated noise or matrix interference for one or more analytes requiring the detection limits to be raised appropriately. These analytes were flagged with the "G" qualifier.

Method(s) 8290A: The concentration of the OCDD analyte associated with the following sample exceeded the instrument calibration range: SB04-02 (320-7028-17). This analyte has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

No other analytical or quality issues were noted.

Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 320-40968 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 320-40968 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6010B: The RPD for Pb was outside of the 35% range. The result is under the reporting limits. No corrective action is required.

Method(s) 6010B: The following samples was diluted due to the nature of the sample matrix (ISM): (320-7028-6 PDS), (320-7028-6 SD), DU02-01 (320-7028-12), DU03-01 (320-7028-11), DU06-01 (320-7028-13), DU07-01 (320-7028-10), DU08-01 (320-7028-9), DU09-01 (320-7028-6), DU09-01 (320-7028-6 DU), DU09-01 (320-7028-6 MS), DU09-01 (320-7028-6 MSD), DU09-01 (320-7028-6 TRL), DU09-02 (320-7028-7), DU09-03 (320-7028-8), SB02-01 (320-7028-14), SB03-01 (320-7028-15), SB04-01 (320-7028-16), SB04-02 (320-7028-17). Elevated reporting limits (RLs) are provided. The ISM process produces fine particles that can cause damages to our instrument.

Method(s) 7471A: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB02-01 (320-7028-14). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	1.0	J B	9.9	0.18	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDD	1.2	J	50	0.40	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	1.1	J q B	50	0.26	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.6	J B	50	0.27	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	2.0	J q B	50	0.31	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	1.6	J q B	50	0.24	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	1.5	J q B	50	0.23	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	7.0	J B	50	0.39	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.2	J B	50	0.31	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDF	1.5	J B	50	0.38	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.0	J B	50	0.35	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	14	J B	50	0.50	pg/L	1		8290A	Total/NA
OCDD	18	J B	99	0.43	pg/L	1		8290A	Total/NA
OCDF	8.6	J q B	99	0.59	pg/L	1		8290A	Total/NA
Total TCDF	1.0	J B	9.9	0.18	pg/L	1		8290A	Total/NA
Total PeCDD	1.2	J	50	0.40	pg/L	1		8290A	Total/NA
Total PeCDF	4.4	J q B	50	0.27	pg/L	1		8290A	Total/NA
Total HxCDD	5.1	J q B	50	0.26	pg/L	1		8290A	Total/NA
Total HxCDF	14	J q B	50	0.36	pg/L	1		8290A	Total/NA
Total HpCDF	16	J q B	50	0.55	pg/L	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	7.5	J	49	3.7	ng/L	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	21	J	50	16	ug/L	1		8015B	Total/NA
Barium	0.0093		0.0050	0.0025	mg/L	1		6010B	Total/NA

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	1.5	J q B	9.9	0.21	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	1.7	J q B	50	0.29	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	2.3	J B	50	0.30	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.9	J B	50	0.37	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	1.5	J q B	50	0.29	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	1.7	J q B	50	0.28	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	12	J B	50	0.43	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	3.7	J q B	50	0.34	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDF	2.5	J B	50	0.42	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.8	J q B	50	0.39	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	4.9	J B	50	0.44	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	29	J B	50	0.53	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	3.4	J	50	0.63	pg/L	1		8290A	Total/NA
OCDD	22	J B	99	0.58	pg/L	1		8290A	Total/NA
OCDF	30	J B	99	0.72	pg/L	1		8290A	Total/NA
Total TCDF	2.7	J q B	9.9	0.21	pg/L	1		8290A	Total/NA
Total PeCDF	10	J q B	50	0.29	pg/L	1		8290A	Total/NA
Total HxCDD	5.1	J q B	50	0.31	pg/L	1		8290A	Total/NA
Total HxCDF	25	J q B	50	0.40	pg/L	1		8290A	Total/NA
Total HpCDD	7.2	J q B	50	0.44	pg/L	1		8290A	Total/NA
Total HpCDF	39	J q B	50	0.58	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-02 (Continued)

Lab Sample ID: 320-7028-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	4.6	J	49	3.6	ng/L	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	18	J	48	15	ug/L	1		8015B	Total/NA
Barium	0.0096		0.0050	0.0025	mg/L	1		6010B	Total/NA
Silver	0.00099	J B	0.0050	0.00084	mg/L	1		6010B	Total/NA

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	1.5	J B	12	0.23	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	1.7	J B	59	0.35	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.6	J B	59	0.37	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	0.68	J q B	59	0.33	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	1.0	J B	59	0.26	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.91	J B	59	0.25	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	9.1	J B	59	0.45	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	3.5	J B	59	0.35	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.3	J B	59	0.41	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	2.5	J B	59	0.29	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	23	J B	59	0.43	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	1.9	J q	59	0.51	pg/L	1		8290A	Total/NA
OCDD	8.2	J q B	120	0.42	pg/L	1		8290A	Total/NA
OCDF	16	J B	120	0.62	pg/L	1		8290A	Total/NA
Total TCDF	1.5	J B	12	0.23	pg/L	1		8290A	Total/NA
Total PeCDF	6.7	J q B	59	0.36	pg/L	1		8290A	Total/NA
Total HxCDD	3.6	J q B	59	0.28	pg/L	1		8290A	Total/NA
Total HxCDF	17	J q B	59	0.41	pg/L	1		8290A	Total/NA
Total HpCDD	4.7	J q B	59	0.29	pg/L	1		8290A	Total/NA
Total HpCDF	28	J q B	59	0.47	pg/L	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	11	J	47	3.0	ng/L	1		8270C SIM	Total/NA
Naphthalene	5.6	J	47	3.5	ng/L	1		8270C SIM	Total/NA
Pyrene	4.7	J	47	4.0	ng/L	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	41	J	48	15	ug/L	1		8015B	Total/NA
Chromium	0.0029	J	0.0080	0.0012	mg/L	1		6010B	Total/NA
Lead	0.0029	J	0.0050	0.0025	mg/L	1		6010B	Total/NA

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	5.5	J B	51	0.34	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	2.1	J q B	51	0.39	pg/L	1		8290A	Total/NA
OCDD	24	J q B	100	0.50	pg/L	1		8290A	Total/NA
OCDF	2.7	J B	100	0.52	pg/L	1		8290A	Total/NA
Total HpCDD	10	J B	51	0.34	pg/L	1		8290A	Total/NA
Total HpCDF	2.1	J q B	51	0.43	pg/L	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	10	J	49	3.1	ng/L	1		8270C SIM	Total/NA
Fluoranthene	8.7	J	49	4.2	ng/L	1		8270C SIM	Total/NA
Naphthalene	13	J	49	3.6	ng/L	1		8270C SIM	Total/NA
Phenanthrene	7.7	J	49	6.2	ng/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW02-01 (Continued)

Lab Sample ID: 320-7028-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	11	J	49	4.1	ng/L	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	34	J	48	15	ug/L	1		8015B	Total/NA
Barium	0.0056		0.0050	0.0025	mg/L	1		6010B	Total/NA
Lead	0.0042	J	0.0050	0.0025	mg/L	1		6010B	Total/NA

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDF	0.91	J q B	48	0.18	pg/L	1		8290A	Total/NA
OCDD	1.3	J q B	95	0.24	pg/L	1		8290A	Total/NA
OCDF	0.70	J B	95	0.32	pg/L	1		8290A	Total/NA
Total HpCDF	0.91	J q B	48	0.20	pg/L	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	4.2	J	48	3.1	ng/L	1		8270C SIM	Total/NA
Fluoranthene	4.4	J	48	4.2	ng/L	1		8270C SIM	Total/NA
Naphthalene	5.1	J	48	3.6	ng/L	1		8270C SIM	Total/NA
Pyrene	4.5	J	48	4.1	ng/L	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	24	J	48	15	ug/L	1		8015B	Total/NA
Barium	0.0058		0.0050	0.0025	mg/L	1		6010B	Total/NA
Chromium	0.0032	J	0.0080	0.0012	mg/L	1		6010B	Total/NA

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.46	J	1.0	0.075	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	0.54	J	5.1	0.24	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.29	J	5.1	0.16	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.1	J	5.1	0.13	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	2.4	J	5.1	0.11	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	2.3	J	5.1	0.11	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.63	J	5.1	0.099	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	0.43	J	5.1	0.088	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	0.55	J	5.1	0.096	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	75		5.1	0.73	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	10	B	5.1	0.23	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.90	J	5.1	0.29	pg/g	1		8290A	Total/NA
OCDD	660	B	10	3.1	pg/g	1		8290A	Total/NA
OCDF	25		10	0.21	pg/g	1		8290A	Total/NA
Total TCDD	1.1	q	1.0	0.094	pg/g	1		8290A	Total/NA
Total TCDF	2.3	q	1.0	0.075	pg/g	1		8290A	Total/NA
Total PeCDD	3.9	J q	5.1	0.24	pg/g	1		8290A	Total/NA
Total PeCDF	2.2	J q	5.1	0.16	pg/g	1		8290A	Total/NA
Total HxCDD	24	q B	5.1	0.12	pg/g	1		8290A	Total/NA
Total HxCDF	9.9	B	5.1	0.097	pg/g	1		8290A	Total/NA
Total HpCDD	140		5.1	0.73	pg/g	1		8290A	Total/NA
Total HpCDF	33	B	5.1	0.26	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.73	J	4.8	0.29	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.93	J	4.8	0.38	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	2.9	J	4.8	0.48	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-01 (Continued)

Lab Sample ID: 320-7028-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	1.3	J	4.8	0.95	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	1.6	J	4.8	0.72	ug/Kg	1		8270C SIM	Total/NA
Chrysene	3.9	J	4.8	0.33	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	6.1		4.8	0.28	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.1	J	4.8	0.46	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.33	J	4.8	0.29	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	2.1	J	4.8	0.33	ug/Kg	1		8270C SIM	Total/NA
Pyrene	4.5	J	4.8	0.33	ug/Kg	1		8270C SIM	Total/NA
Arsenic	12		4.9	3.2	mg/Kg	5		6010B	Total/NA
Barium	9.7		2.4	0.29	mg/Kg	5		6010B	Total/NA
Cadmium	0.090	J	0.49	0.073	mg/Kg	5		6010B	Total/NA
Chromium	31		1.2	0.34	mg/Kg	5		6010B	Total/NA
Lead	5.1		2.4	0.63	mg/Kg	5		6010B	Total/NA
Mercury	0.011	J	0.024	0.0053	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.16	J q	0.98	0.075	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF	0.21	J q	0.98	0.059	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	0.47	J	4.9	0.16	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.17	J q	4.9	0.11	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.0	J	4.9	0.13	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	2.5	J	4.9	0.11	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	2.3	J q	4.9	0.11	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.49	J	4.9	0.072	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	0.40	J	4.9	0.064	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	0.32	J	4.9	0.070	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	76		4.9	0.67	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	11	B	4.9	0.18	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.81	J	4.9	0.22	pg/g	1		8290A	Total/NA
OCDD	730	B	9.8	3.1	pg/g	1		8290A	Total/NA
OCDF	24		9.8	0.19	pg/g	1		8290A	Total/NA
Total TCDD	1.0	q	0.98	0.075	pg/g	1		8290A	Total/NA
Total TCDF	0.83	J q	0.98	0.059	pg/g	1		8290A	Total/NA
Total PeCDD	3.0	J q	4.9	0.16	pg/g	1		8290A	Total/NA
Total PeCDF	1.9	J q	4.9	0.11	pg/g	1		8290A	Total/NA
Total HxCDD	23	q B	4.9	0.12	pg/g	1		8290A	Total/NA
Total HxCDF	9.1	q B	4.9	0.070	pg/g	1		8290A	Total/NA
Total HpCDD	150		4.9	0.67	pg/g	1		8290A	Total/NA
Total HpCDF	33	B	4.9	0.20	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.83	J	4.9	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.7	J	4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	2.9	J	4.9	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	2.6	J	4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	4.1	J	4.9	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	2.0	J	4.9	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	3.9	J	4.9	0.75	ug/Kg	1		8270C SIM	Total/NA
Chrysene	7.2		4.9	0.34	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02 (Continued)

Lab Sample ID: 320-7028-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	18		4.9	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.50	J	4.9	0.48	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.0	J	4.9	0.47	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.38	J	4.9	0.30	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	9.8		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	15		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
Endrin aldehyde	0.18	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	13		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	9.3		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.092	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	31		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	3.0		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.020	J	0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU09-03

Lab Sample ID: 320-7028-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.18	J q	1.0	0.085	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF	0.34	J	1.0	0.059	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	0.51	J	5.0	0.16	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.15	J q	5.0	0.096	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.2	J	5.0	0.17	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	2.6	J	5.0	0.14	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	2.7	J	5.0	0.14	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.65	J	5.0	0.13	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	0.41	J	5.0	0.12	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	0.23	J q	5.0	0.13	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	78		5.0	0.77	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	11	B	5.0	0.21	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.76	J	5.0	0.26	pg/g	1		8290A	Total/NA
OCDD	710	B	10	3.3	pg/g	1		8290A	Total/NA
OCDF	25		10	0.23	pg/g	1		8290A	Total/NA
Total TCDD	1.7	q	1.0	0.085	pg/g	1		8290A	Total/NA
Total TCDF	1.8	q	1.0	0.059	pg/g	1		8290A	Total/NA
Total PeCDD	3.7	J q	5.0	0.16	pg/g	1		8290A	Total/NA
Total PeCDF	2.2	J q	5.0	0.093	pg/g	1		8290A	Total/NA
Total HxCDD	25	B	5.0	0.15	pg/g	1		8290A	Total/NA
Total HxCDF	9.3	q B	5.0	0.13	pg/g	1		8290A	Total/NA
Total HpCDD	150		5.0	0.77	pg/g	1		8290A	Total/NA
Total HpCDF	33	B	5.0	0.24	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.40	J	4.7	0.37	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	0.69	J	4.7	0.29	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	0.69	J	4.7	0.38	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	3.8	J	4.7	0.48	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.1	J	4.7	0.94	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	1.4	J	4.7	0.72	ug/Kg	1		8270C SIM	Total/NA
Chrysene	5.3		4.7	0.33	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	9.1		4.7	0.28	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.98	J	4.7	0.45	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-03 (Continued)

Lab Sample ID: 320-7028-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.38	J	4.7	0.29	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	4.2	J	4.7	0.33	ug/Kg	1		8270C SIM	Total/NA
Pyrene	6.3		4.7	0.33	ug/Kg	1		8270C SIM	Total/NA
Endrin aldehyde	0.17	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	12		4.9	3.2	mg/Kg	5		6010B	Total/NA
Barium	11		2.4	0.29	mg/Kg	5		6010B	Total/NA
Cadmium	0.11	J	0.49	0.073	mg/Kg	5		6010B	Total/NA
Chromium	30		1.2	0.34	mg/Kg	5		6010B	Total/NA
Lead	3.4		2.4	0.64	mg/Kg	5		6010B	Total/NA
Mercury	0.0072	J	0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.58	J	5.0	0.47	ug/Kg	1		8270C SIM	Total/NA
Acenaphthylene	0.91	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.3	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	5.4		5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	6.7		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	23		5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	12		5.0	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	13		5.0	0.75	ug/Kg	1		8270C SIM	Total/NA
Chrysene	21		5.0	0.34	ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	2.2	J	5.0	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	26		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.98	J	5.0	0.49	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	12		5.0	0.47	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	3.2	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	14		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	19		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
gamma-Chlordane	0.11	J	1.7	0.051	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.17	J p *	1.7	0.089	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.21	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	11		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	11		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.13	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	35		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	3.6		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.013	J	0.024	0.0052	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.78	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.5	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	4.2	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	4.1	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	15		5.0	0.51	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	4.0	J	5.0	1.0	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	8.5		5.0	0.76	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU07-01 (Continued)

Lab Sample ID: 320-7028-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	19		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	22		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	4.4	J	5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.50	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	5.2		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	18		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDE	0.23	J p	1.7	0.22	ug/Kg	1		8081A	Total/NA
delta-BHC	0.17	J	1.7	0.16	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.68	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.98	J	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.25	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.13	J p *	1.7	0.092	ug/Kg	1		8081A	Total/NA
Arsenic	12		5.0	3.3	mg/Kg	5		6010B	Total/NA
Barium	13		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.12	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	40		1.3	0.35	mg/Kg	5		6010B	Total/NA
Lead	12		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.019	J	0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.83	J	1.0	0.11	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	3.0	J	5.0	0.25	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.45	J q	5.0	0.14	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.67	J	5.0	0.15	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	6.7		5.0	0.50	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	15		5.0	0.43	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	14		5.0	0.41	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	2.6	J	5.0	0.39	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.2	J	5.0	0.34	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.3	J q	5.0	0.38	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	530		5.0	4.8	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	61	B	5.0	1.1	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	4.8	J	5.0	1.3	pg/g	1		8290A	Total/NA
OCDD	4900	E G B	18	18	pg/g	1		8290A	Total/NA
OCDF	140		10	0.59	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.43	J	1.0	0.075	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.69	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.3	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	5.4		5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	6.1		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	12		5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	5.2		5.0	1.0	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	7.7		5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	13		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Dibenz[a,h]anthracene	1.2	J	5.0	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	21		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.68	J	5.0	0.49	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU03-01 (Continued)

Lab Sample ID: 320-7028-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indeno[1,2,3-cd]pyrene	5.4		5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.70	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	8.4		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	18		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDE	0.71	J	1.7	0.22	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.35	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.072	J p	1.7	0.053	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.27	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Heptachlor epoxide	0.24	J	1.7	0.12	ug/Kg	1		8081A	Total/NA
Arsenic	12		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	22		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.16	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	45		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	15		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.022	J	0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.67	J	4.9	0.46	ug/Kg	1		8270C SIM	Total/NA
Acenaphthylene	1.1	J	4.9	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	5.0		4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	14		4.9	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	15		4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	24		4.9	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	6.6		4.9	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	18		4.9	0.75	ug/Kg	1		8270C SIM	Total/NA
Chrysene	29		4.9	0.34	ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	2.6	J	4.9	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	46		4.9	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.95	J	4.9	0.48	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	6.9		4.9	0.47	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.92	J	4.9	0.30	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	19		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	41		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDE	1.8		1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	0.50	J	1.7	0.40	ug/Kg	1		8081A	Total/NA
alpha-BHC	0.55	J	1.7	0.22	ug/Kg	1		8081A	Total/NA
beta-BHC	1.8		1.7	0.33	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	1.3	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	1.7		1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.10	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.81	J	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	14		5.0	3.3	mg/Kg	5		6010B	Total/NA
Barium	23		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.24	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	63		1.3	0.35	mg/Kg	5		6010B	Total/NA
Lead	34		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.051		0.022	0.0048	mg/Kg	1		7471A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.66	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	0.64	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	2.6	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	3.1	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	6.1		5.0	0.51	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	3.1	J	5.0	1.0	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	4.2	J	5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	6.1		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	8.7		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	3.0	J	5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.66	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	3.9	J	5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	8.0		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDE	0.63	J	1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	0.69	J	1.7	0.40	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.61	J p	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.68	J	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.24	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.75	J p *	1.7	0.092	ug/Kg	1		8081A	Total/NA
Endrin	0.84	J	1.7	0.11	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.15	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Endrin ketone	1.4	J	1.7	0.34	ug/Kg	1		8081A	Total/NA
Arsenic	14		4.9	3.2	mg/Kg	5		6010B	Total/NA
Barium	25		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.23	J	0.49	0.074	mg/Kg	5		6010B	Total/NA
Chromium	50		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	24		2.5	0.64	mg/Kg	5		6010B	Total/NA
Mercury	0.027		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	6.5		1.0	0.12	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	2.3	J	5.0	0.30	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.84	J q	5.0	0.17	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.91	J	5.0	0.18	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	4.5	J	5.0	0.36	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	20		5.0	0.31	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	13		5.0	0.30	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	5.8		5.0	1.0	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	3.6	J	5.0	0.92	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	2.6	J	5.0	1.0	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	640	G	5.4	5.4	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	140	B	5.0	2.2	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	9.3		5.0	2.7	pg/g	1		8290A	Total/NA
OCDD	6100	E G B	21	21	pg/g	1		8290A	Total/NA
OCDF	350		10	1.3	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.49	J	1.0	0.11	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	1.1	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB02-01 (Continued)

Lab Sample ID: 320-7028-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1.4	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	1.5	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	3.1	J	5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	3.1	J	5.0	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	2.0	J	5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	3.5	J	5.0	0.34	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	5.3		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.73	J	5.0	0.49	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.6	J	5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	11		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	11		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	610		10	3.0	mg/Kg	10		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	79		50	16	mg/Kg	10		8015B	Total/NA
4,4'-DDE	4.8		1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	0.45	J p	1.7	0.40	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.59	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.076	J p	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.35	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endosulfan II	0.33	J	1.7	0.10	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.83	J *	1.7	0.092	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.63	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	14		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	31		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.089	J	0.50	0.074	mg/Kg	5		6010B	Total/NA
Chromium	130		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	1100		2.5	0.64	mg/Kg	5		6010B	Total/NA
Mercury	30		2.4	0.51	mg/Kg	100		7471A	Total/NA

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.7		1.0	0.16	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	4.2	J	5.0	0.34	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	1.2	J	5.0	0.20	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.2	J	5.0	0.21	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	7.2	q	5.0	0.60	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	28		5.0	0.52	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	21		5.0	0.50	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	5.8		5.0	0.75	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	4.4	J	5.0	0.66	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	3.6	J	5.0	0.73	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	820	G	6.5	6.5	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	170	B	5.0	2.3	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	11		5.0	2.9	pg/g	1		8290A	Total/NA
OCDD	6900	E G B	26	26	pg/g	1		8290A	Total/NA
OCDF	440		10	1.6	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.98	J	1.0	0.11	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.46	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	2.3	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB03-01 (Continued)

Lab Sample ID: 320-7028-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	2.4	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	4.7	J	5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	2.3	J	5.0	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	2.8	J	5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	4.9	J	5.0	0.34	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	5.5		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.2	J	5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	1.5	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	3.3	J	5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	5.9		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	3.9		1.0	0.30	mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	26		5.0	1.6	mg/Kg	1		8015B	Total/NA
4,4'-DDE	1.2	J	1.7	0.22	ug/Kg	1		8081A	Total/NA
delta-BHC	0.24	J	1.7	0.16	ug/Kg	1		8081A	Total/NA
Endosulfan I	0.078	J	1.7	0.052	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.56	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
Arsenic	15		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	39		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.13	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	160		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	12		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.071		0.024	0.0052	mg/Kg	1		7471A	Total/NA

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.6		0.99	0.46	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	13		5.0	1.5	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	5.3		5.0	0.44	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	5.5		5.0	0.47	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	32		5.0	1.8	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	90		5.0	1.5	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	74		5.0	1.4	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	16		5.0	1.6	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	12		5.0	1.5	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	9.7		5.0	1.6	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	3100		50	32	pg/g	10		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	340	B	5.0	5.0	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	25	G	6.3	6.3	pg/g	1		8290A	Total/NA
OCDD	26000	G B	100	100	pg/g	10		8290A	Total/NA
OCDF	850		9.9	2.8	pg/g	1		8290A	Total/NA
Total HpCDD	6000		50	32	pg/g	10		8290A	Total/NA
2,3,7,8-TCDF - RA	6.0		0.99	0.17	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	1.4	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.6	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	9.7		5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	12		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	17		5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	9.7		5.0	1.0	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01 (Continued)

Lab Sample ID: 320-7028-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[k]fluoranthene	11		5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	16		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	2.1	J	5.0	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	16		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.63	J	5.0	0.49	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	9.5		5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	2.2	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	8.2		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	18		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	8.5		0.99	0.30	mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	54		5.0	1.6	mg/Kg	1		8015B	Total/NA
4,4'-DDD	1.1	J	1.7	0.26	ug/Kg	1		8081A	Total/NA
4,4'-DDE	14		1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	2.5	p	1.7	0.40	ug/Kg	1		8081A	Total/NA
beta-BHC	0.93	J p	1.7	0.33	ug/Kg	1		8081A	Total/NA
delta-BHC	0.77	J	1.7	0.16	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.58	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.39	J p	1.7	0.053	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	1.8	*	1.7	0.092	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.38	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
PCB-1260	9.0	J	33	2.9	ug/Kg	1		8082	Total/NA
Arsenic	35		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	80		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	1.0		0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	110		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	210		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.17		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.9		0.99	0.48	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	18		4.9	0.81	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	6.1		4.9	0.50	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	7.2		4.9	0.53	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	60		4.9	2.9	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	130		4.9	2.4	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	110		4.9	2.4	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	19		4.9	1.5	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	15		4.9	1.4	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	12		4.9	1.5	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	7100		99	99	pg/g	20		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	410	G B	7.8	7.8	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	39	G	9.9	9.9	pg/g	1		8290A	Total/NA
OCDD	98000	E G B	470	470	pg/g	20		8290A	Total/NA
OCDF	1300		9.9	4.3	pg/g	1		8290A	Total/NA
Total HpCDD	15000		99	99	pg/g	20		8290A	Total/NA
2,3,7,8-TCDF - RA	7.8		0.99	0.19	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.69	J	5.0	0.47	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-02 (Continued)

Lab Sample ID: 320-7028-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	1.5	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	2.1	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	11		5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	14		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	19		5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	10		5.0	1.0	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	15		5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	18		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	2.1	J	5.0	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	21		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Fluorene	0.88	J	5.0	0.49	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	11		5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	3.0	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	11		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	23		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	6.5		0.99	0.30	mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	58		5.0	1.6	mg/Kg	1		8015B	Total/NA
4,4'-DDD	2.1		1.7	0.26	ug/Kg	1		8081A	Total/NA
4,4'-DDE	19		1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	1.4	J p	1.7	0.40	ug/Kg	1		8081A	Total/NA
beta-BHC	0.76	J	1.7	0.33	ug/Kg	1		8081A	Total/NA
delta-BHC	0.75	J	1.7	0.16	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.75	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.57	J p	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.25	J	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endosulfan I	0.073	J	1.7	0.052	ug/Kg	1		8081A	Total/NA
Endosulfan II	0.12	J	1.7	0.10	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.22	J p *	1.7	0.092	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	0.71	J p	1.7	0.11	ug/Kg	1		8081A	Total/NA
PCB-1260	7.9	J	33	2.9	ug/Kg	1		8082	Total/NA
Arsenic	28		4.9	3.2	mg/Kg	5		6010B	Total/NA
Barium	93		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	1.3		0.49	0.074	mg/Kg	5		6010B	Total/NA
Chromium	100		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	320		2.5	0.64	mg/Kg	5		6010B	Total/NA
Silver	0.75	J	1.2	0.22	mg/Kg	5		6010B	Total/NA
Mercury	0.19		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.45	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	0.78	J	5.0	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	4.8	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	5.6		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	10		5.0	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	3.9	J	5.0	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	6.7		5.0	0.75	ug/Kg	1		8270C SIM	Total/NA
Chrysene	11		5.0	0.34	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	13		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU05-01 (Continued)

Lab Sample ID: 320-7028-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indeno[1,2,3-cd]pyrene	3.9	J	5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.80	J	5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	4.7	J	5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	12		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDD	38	E	1.7	0.26	ug/Kg	1		8081A	Total/NA
4,4'-DDE	1.6	J	1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	0.51	J p	1.7	0.40	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.31	J	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.34	J	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.42	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Endosulfan I	0.27	J	1.7	0.052	ug/Kg	1		8081A	Total/NA
Endosulfan II	0.16	J	1.7	0.10	ug/Kg	1		8081A	Total/NA
Endosulfan sulfate	0.29	J *	1.7	0.092	ug/Kg	1		8081A	Total/NA
Endrin aldehyde	1.0	J	1.7	0.11	ug/Kg	1		8081A	Total/NA
Heptachlor	0.19	J	1.7	0.19	ug/Kg	1		8081A	Total/NA
Arsenic	15		4.9	3.2	mg/Kg	5		6010B	Total/NA
Barium	24		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.30	J	0.49	0.074	mg/Kg	5		6010B	Total/NA
Chromium	65		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	32		2.5	0.64	mg/Kg	5		6010B	Total/NA
Mercury	0.041		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.86	J q	0.97	0.18	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	2.7	J	4.9	0.39	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.77	J q	4.9	0.23	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.67	J q	4.9	0.24	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	7.6		4.9	0.65	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	19		4.9	0.56	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	15		4.9	0.54	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	3.1	J	4.9	0.36	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.6	J	4.9	0.32	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.9	J	4.9	0.35	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	610	G	5.8	5.8	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	68	B	4.9	1.1	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	4.8	J	4.9	1.4	pg/g	1		8290A	Total/NA
OCDD	6000	E G B	22	22	pg/g	1		8290A	Total/NA
OCDF	160		9.7	0.86	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.75	J	0.97	0.10	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	1.6	J	5.0	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.9	J	5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	14		5.0	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	21		5.0	0.40	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	28		5.0	0.51	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	18		5.0	1.0	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	18		5.0	0.76	ug/Kg	1		8270C SIM	Total/NA
Chrysene	21		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU04-01 (Continued)

Lab Sample ID: 320-7028-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	4.5	J	5.0	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	20		5.0	0.29	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	20		5.0	0.48	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	0.61	J	5.0	0.31	ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	5.2		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	20		5.0	0.35	ug/Kg	1		8270C SIM	Total/NA
4,4'-DDE	1.7		1.7	0.22	ug/Kg	1		8081A	Total/NA
4,4'-DDT	0.40	J p	1.7	0.39	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	2.2		1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.31	J	1.7	0.052	ug/Kg	1		8081A	Total/NA
Heptachlor epoxide	0.27	J	1.7	0.12	ug/Kg	1		8081A	Total/NA
Arsenic	14		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	21		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.26	J	0.50	0.075	mg/Kg	5		6010B	Total/NA
Chromium	51		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	31		2.5	0.65	mg/Kg	5		6010B	Total/NA
Mercury	0.036		0.023	0.0050	mg/Kg	1		7471A	Total/NA

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.0		1.0	0.14	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	5.9		5.0	0.41	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.87	J q	5.0	0.27	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.2	J	5.0	0.28	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	14		5.0	0.94	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	39		5.0	0.80	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	30		5.0	0.77	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	7.1		5.0	0.73	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	6.5		5.0	0.65	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	5.1		5.0	0.71	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	1400	G	13	13	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	180	B	5.0	2.6	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	14		5.0	3.3	pg/g	1		8290A	Total/NA
OCDD	12000	E G B	46	46	pg/g	1		8290A	Total/NA
OCDF	430		10	1.8	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.63	J	1.0	0.097	pg/g	1		8290A	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.88	J	4.9	0.33	ug/Kg	1		8270C SIM	Total/NA
Anthracene	1.6	J	4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	6.2		4.9	0.30	ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	8.3		4.9	0.39	ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	23		4.9	0.50	ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	12		4.9	0.99	ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	8.6		4.9	0.75	ug/Kg	1		8270C SIM	Total/NA
Chrysene	22		4.9	0.34	ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	5.4		4.9	1.2	ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	29		4.9	0.29	ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	6.6		4.9	0.47	ug/Kg	1		8270C SIM	Total/NA
Naphthalene	1.7	J	4.9	0.30	ug/Kg	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU01-01 (Continued)

Lab Sample ID: 320-7028-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	13		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
Pyrene	24		4.9	0.35	ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics (C10-C24)	5.3		0.99	0.30	mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	56		5.0	1.6	mg/Kg	1		8015B	Total/NA
4,4'-DDD	1.8		1.7	0.26	ug/Kg	1		8081A	Total/NA
4,4'-DDE	1.0	J E p	1.7	0.22	ug/Kg	1		8081A	Total/NA
delta-BHC	0.32	J	1.7	0.16	ug/Kg	1		8081A	Total/NA
alpha-Chlordane	0.38	J E p	1.7	0.20	ug/Kg	1		8081A	Total/NA
gamma-Chlordane	0.23	J p	1.7	0.053	ug/Kg	1		8081A	Total/NA
Dieldrin	0.096	J p	1.7	0.091	ug/Kg	1		8081A	Total/NA
Arsenic	14		5.0	3.2	mg/Kg	5		6010B	Total/NA
Barium	20		2.5	0.30	mg/Kg	5		6010B	Total/NA
Cadmium	0.21	J	0.50	0.074	mg/Kg	5		6010B	Total/NA
Chromium	86		1.2	0.35	mg/Kg	5		6010B	Total/NA
Lead	23		2.5	0.64	mg/Kg	5		6010B	Total/NA
Mercury	0.042		0.024	0.0051	mg/Kg	1		7471A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Date Collected: 04/09/14 12:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49	3.1	ng/L		04/15/14 08:53	04/16/14 16:10	1
Acenaphthylene	ND		49	3.0	ng/L		04/15/14 08:53	04/16/14 16:10	1
Anthracene	ND		49	4.4	ng/L		04/15/14 08:53	04/16/14 16:10	1
Benzo[a]anthracene	ND		49	4.5	ng/L		04/15/14 08:53	04/16/14 16:10	1
Benzo[a]pyrene	ND		49	4.3	ng/L		04/15/14 08:53	04/16/14 16:10	1
Benzo[b]fluoranthene	ND		49	12	ng/L		04/15/14 08:53	04/16/14 16:10	1
Benzo[g,h,i]perylene	ND		49	5.4	ng/L		04/15/14 08:53	04/16/14 16:10	1
Benzo[k]fluoranthene	ND		49	7.7	ng/L		04/15/14 08:53	04/16/14 16:10	1
Chrysene	ND		49	4.0	ng/L		04/15/14 08:53	04/16/14 16:10	1
Dibenz(a,h)anthracene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 16:10	1
Fluoranthene	ND		49	4.3	ng/L		04/15/14 08:53	04/16/14 16:10	1
Fluorene	ND		49	4.0	ng/L		04/15/14 08:53	04/16/14 16:10	1
Indeno[1,2,3-cd]pyrene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 16:10	1
Naphthalene	7.5	J	49	3.7	ng/L		04/15/14 08:53	04/16/14 16:10	1
Phenanthrene	ND		49	6.2	ng/L		04/15/14 08:53	04/16/14 16:10	1
Pyrene	ND		49	4.2	ng/L		04/15/14 08:53	04/16/14 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	88		20 - 123				04/15/14 08:53	04/16/14 16:10	1
Terphenyl-d14	107		46 - 137				04/15/14 08:53	04/16/14 16:10	1
2-Fluorobiphenyl (Surr)	87		31 - 107				04/15/14 08:53	04/16/14 16:10	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	21	J	50	16	ug/L		04/15/14 09:00	04/17/14 16:20	1
Motor Oil Range Organics [C24-C36]	ND		250	83	ug/L		04/15/14 09:00	04/17/14 16:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	93		56 - 145				04/15/14 09:00	04/17/14 16:20	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
4,4'-DDE	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
4,4'-DDT	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Aldrin	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 15:13	1
alpha-BHC	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 15:13	1
beta-BHC	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 15:13	1
gamma-BHC (Lindane)	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 15:13	1
delta-BHC	ND		0.049	0.011	ug/L		04/15/14 09:06	04/18/14 15:13	1
alpha-Chlordane	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 15:13	1
gamma-Chlordane	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Dieldrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endosulfan I	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endosulfan II	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endosulfan sulfate	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endrin aldehyde	ND		0.099	0.025	ug/L		04/15/14 09:06	04/18/14 15:13	1
Endrin ketone	ND		0.099	0.020	ug/L		04/15/14 09:06	04/18/14 15:13	1
Heptachlor	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 15:13	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Date Collected: 04/09/14 12:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 15:13	1
Methoxychlor	ND		0.099	0.041	ug/L		04/15/14 09:06	04/18/14 15:13	1
Toxaphene	ND		2.0	0.50	ug/L		04/15/14 09:06	04/18/14 15:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		44 - 114				04/15/14 09:06	04/18/14 15:13	1
DCB Decachlorobiphenyl	52		12 - 131				04/15/14 09:06	04/18/14 15:13	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.99	0.089	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1221	ND		0.99	0.11	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1232	ND		0.99	0.17	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1242	ND		0.99	0.12	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1248	ND		0.99	0.059	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1254	ND		0.99	0.049	ug/L		04/15/14 09:17	04/18/14 13:45	1
PCB-1260	ND		0.99	0.049	ug/L		04/15/14 09:17	04/18/14 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	57		29 - 128				04/15/14 09:17	04/18/14 13:45	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.28	pg/L		04/16/14 08:58	04/18/14 00:10	1
2,3,7,8-TCDF	1.0	J B	9.9	0.18	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,7,8-PeCDD	1.2	J	50	0.40	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,7,8-PeCDF	1.1	J q B	50	0.26	pg/L		04/16/14 08:58	04/18/14 00:10	1
2,3,4,7,8-PeCDF	1.6	J B	50	0.27	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,4,7,8-HxCDD	2.0	J q B	50	0.31	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,6,7,8-HxCDD	1.6	J q B	50	0.24	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,7,8,9-HxCDD	1.5	J q B	50	0.23	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,4,7,8-HxCDF	7.0	J B	50	0.39	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,6,7,8-HxCDF	2.2	J B	50	0.31	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,7,8,9-HxCDF	1.5	J B	50	0.38	pg/L		04/16/14 08:58	04/18/14 00:10	1
2,3,4,6,7,8-HxCDF	1.0	J B	50	0.35	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.39	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,4,6,7,8-HpCDF	14	J B	50	0.50	pg/L		04/16/14 08:58	04/18/14 00:10	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.59	pg/L		04/16/14 08:58	04/18/14 00:10	1
OCDD	18	J B	99	0.43	pg/L		04/16/14 08:58	04/18/14 00:10	1
OCDF	8.6	J q B	99	0.59	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total TCDD	ND		9.9	0.28	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total TCDF	1.0	J B	9.9	0.18	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total PeCDD	1.2	J	50	0.40	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total PeCDF	4.4	J q B	50	0.27	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total HxCDD	5.1	J q B	50	0.26	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total HxCDF	14	J q B	50	0.36	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total HpCDD	ND		50	0.39	pg/L		04/16/14 08:58	04/18/14 00:10	1
Total HpCDF	16	J q B	50	0.55	pg/L		04/16/14 08:58	04/18/14 00:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	85		40 - 135				04/16/14 08:58	04/18/14 00:10	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Date Collected: 04/09/14 12:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	89		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,7,8-PeCDD	76		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,7,8-PeCDF	79		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,4,6,7,8-HpCDD	84		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-1,2,3,4,6,7,8-HpCDF	82		40 - 135	04/16/14 08:58	04/18/14 00:10	1
13C-OCDD	79		40 - 135	04/16/14 08:58	04/18/14 00:10	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:34	1
Barium	0.0093		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:34	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:34	1
Chromium	ND		0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:34	1
Lead	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:34	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:34	1
Silver	ND		0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 09:50	1

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Date Collected: 04/09/14 13:20

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49	3.1	ng/L		04/15/14 08:53	04/16/14 17:39	1
Acenaphthylene	ND		49	3.0	ng/L		04/15/14 08:53	04/16/14 17:39	1
Anthracene	ND		49	4.4	ng/L		04/15/14 08:53	04/16/14 17:39	1
Benzo[a]anthracene	ND		49	4.5	ng/L		04/15/14 08:53	04/16/14 17:39	1
Benzo[a]pyrene	ND		49	4.3	ng/L		04/15/14 08:53	04/16/14 17:39	1
Benzo[b]fluoranthene	ND		49	12	ng/L		04/15/14 08:53	04/16/14 17:39	1
Benzo[g,h,i]perylene	ND		49	5.4	ng/L		04/15/14 08:53	04/16/14 17:39	1
Benzo[k]fluoranthene	ND		49	7.6	ng/L		04/15/14 08:53	04/16/14 17:39	1
Chrysene	ND		49	3.9	ng/L		04/15/14 08:53	04/16/14 17:39	1
Dibenz(a,h)anthracene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 17:39	1
Fluoranthene	ND		49	4.2	ng/L		04/15/14 08:53	04/16/14 17:39	1
Fluorene	ND		49	4.0	ng/L		04/15/14 08:53	04/16/14 17:39	1
Indeno[1,2,3-cd]pyrene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 17:39	1
Naphthalene	4.6	J	49	3.6	ng/L		04/15/14 08:53	04/16/14 17:39	1
Phenanthrene	ND		49	6.2	ng/L		04/15/14 08:53	04/16/14 17:39	1
Pyrene	ND		49	4.1	ng/L		04/15/14 08:53	04/16/14 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		20 - 123	04/15/14 08:53	04/16/14 17:39	1
Terphenyl-d14	99		46 - 137	04/15/14 08:53	04/16/14 17:39	1
2-Fluorobiphenyl (Surr)	81		31 - 107	04/15/14 08:53	04/16/14 17:39	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Date Collected: 04/09/14 13:20

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	18	J	48	15	ug/L		04/15/14 09:00	04/17/14 17:48	1
Motor Oil Range Organics [C24-C36]	ND		240	80	ug/L		04/15/14 09:00	04/17/14 17:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	92		56 - 145				04/15/14 09:00	04/17/14 17:48	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
4,4'-DDE	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
4,4'-DDT	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Aldrin	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:05	1
alpha-BHC	ND		0.049	0.0068	ug/L		04/15/14 09:06	04/18/14 16:05	1
beta-BHC	ND		0.049	0.0068	ug/L		04/15/14 09:06	04/18/14 16:05	1
gamma-BHC (Lindane)	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:05	1
delta-BHC	ND		0.049	0.011	ug/L		04/15/14 09:06	04/18/14 16:05	1
alpha-Chlordane	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:05	1
gamma-Chlordane	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Dieldrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endosulfan I	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endosulfan II	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endosulfan sulfate	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endrin aldehyde	ND		0.098	0.024	ug/L		04/15/14 09:06	04/18/14 16:05	1
Endrin ketone	ND		0.098	0.020	ug/L		04/15/14 09:06	04/18/14 16:05	1
Heptachlor	ND		0.049	0.0068	ug/L		04/15/14 09:06	04/18/14 16:05	1
Heptachlor epoxide	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:05	1
Methoxychlor	ND		0.098	0.041	ug/L		04/15/14 09:06	04/18/14 16:05	1
Toxaphene	ND		2.0	0.50	ug/L		04/15/14 09:06	04/18/14 16:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	83		44 - 114				04/15/14 09:06	04/18/14 16:05	1
<i>DCB Decachlorobiphenyl</i>	43		12 - 131				04/15/14 09:06	04/18/14 16:05	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.98	0.088	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1221	ND		0.98	0.11	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1232	ND		0.98	0.17	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1242	ND		0.98	0.12	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1248	ND		0.98	0.059	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1254	ND		0.98	0.049	ug/L		04/15/14 09:17	04/18/14 14:46	1
PCB-1260	ND		0.98	0.049	ug/L		04/15/14 09:17	04/18/14 14:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	45		29 - 128				04/15/14 09:17	04/18/14 14:46	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.28	pg/L		04/16/14 08:58	04/18/14 02:15	1
2,3,7,8-TCDF	1.5	J q B	9.9	0.21	pg/L		04/16/14 08:58	04/18/14 02:15	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Date Collected: 04/09/14 13:20

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	ND		50	0.38	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,7,8-PeCDF	1.7	J q B	50	0.29	pg/L		04/16/14 08:58	04/18/14 02:15	1
2,3,4,7,8-PeCDF	2.3	J B	50	0.30	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,4,7,8-HxCDD	1.9	J B	50	0.37	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,6,7,8-HxCDD	1.5	J q B	50	0.29	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,7,8,9-HxCDD	1.7	J q B	50	0.28	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,4,7,8-HxCDF	12	J B	50	0.43	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,6,7,8-HxCDF	3.7	J q B	50	0.34	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,7,8,9-HxCDF	2.5	J B	50	0.42	pg/L		04/16/14 08:58	04/18/14 02:15	1
2,3,4,6,7,8-HxCDF	1.8	J q B	50	0.39	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,4,6,7,8-HpCDD	4.9	J B	50	0.44	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,4,6,7,8-HpCDF	29	J B	50	0.53	pg/L		04/16/14 08:58	04/18/14 02:15	1
1,2,3,4,7,8,9-HpCDF	3.4	J	50	0.63	pg/L		04/16/14 08:58	04/18/14 02:15	1
OCDD	22	J B	99	0.58	pg/L		04/16/14 08:58	04/18/14 02:15	1
OCDF	30	J B	99	0.72	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total TCDD	ND		9.9	0.28	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total TCDF	2.7	J q B	9.9	0.21	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total PeCDD	ND		50	0.38	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total PeCDF	10	J q B	50	0.29	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total HxCDD	5.1	J q B	50	0.31	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total HxCDF	25	J q B	50	0.40	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total HpCDD	7.2	J q B	50	0.44	pg/L		04/16/14 08:58	04/18/14 02:15	1
Total HpCDF	39	J q B	50	0.58	pg/L		04/16/14 08:58	04/18/14 02:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	88		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-2,3,7,8-TCDF	98		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,7,8-PeCDD	84		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,7,8-PeCDF	86		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135				04/16/14 08:58	04/18/14 02:15	1
13C-OCDD	76		40 - 135				04/16/14 08:58	04/18/14 02:15	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:47	1
Barium	0.0096		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:47	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:47	1
Chromium	ND		0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:47	1
Lead	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:47	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:47	1
Silver	0.00099	J B	0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 09:59	1

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Date Collected: 04/08/14 16:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	11	J	47	3.0	ng/L		04/15/14 08:53	04/16/14 18:09	1
Acenaphthylene	ND		47	2.9	ng/L		04/15/14 08:53	04/16/14 18:09	1
Anthracene	ND		47	4.2	ng/L		04/15/14 08:53	04/16/14 18:09	1
Benzo[a]anthracene	ND		47	4.4	ng/L		04/15/14 08:53	04/16/14 18:09	1
Benzo[a]pyrene	ND		47	4.2	ng/L		04/15/14 08:53	04/16/14 18:09	1
Benzo[b]fluoranthene	ND		47	12	ng/L		04/15/14 08:53	04/16/14 18:09	1
Benzo[g,h,i]perylene	ND		47	5.2	ng/L		04/15/14 08:53	04/16/14 18:09	1
Benzo[k]fluoranthene	ND		47	7.4	ng/L		04/15/14 08:53	04/16/14 18:09	1
Chrysene	ND		47	3.8	ng/L		04/15/14 08:53	04/16/14 18:09	1
Dibenz(a,h)anthracene	ND		47	14	ng/L		04/15/14 08:53	04/16/14 18:09	1
Fluoranthene	ND		47	4.1	ng/L		04/15/14 08:53	04/16/14 18:09	1
Fluorene	ND		47	3.8	ng/L		04/15/14 08:53	04/16/14 18:09	1
Indeno[1,2,3-cd]pyrene	ND		47	13	ng/L		04/15/14 08:53	04/16/14 18:09	1
Naphthalene	5.6	J	47	3.5	ng/L		04/15/14 08:53	04/16/14 18:09	1
Phenanthrene	ND		47	6.0	ng/L		04/15/14 08:53	04/16/14 18:09	1
Pyrene	4.7	J	47	4.0	ng/L		04/15/14 08:53	04/16/14 18:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	94		20 - 123				04/15/14 08:53	04/16/14 18:09	1
Terphenyl-d14	111		46 - 137				04/15/14 08:53	04/16/14 18:09	1
2-Fluorobiphenyl (Surr)	85		31 - 107				04/15/14 08:53	04/16/14 18:09	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	41	J	48	15	ug/L		04/15/14 09:00	04/17/14 18:17	1
Motor Oil Range Organics [C24-C36]	ND		240	80	ug/L		04/15/14 09:00	04/17/14 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	94		56 - 145				04/15/14 09:00	04/17/14 18:17	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
4,4'-DDE	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
4,4'-DDT	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Aldrin	ND		0.048	0.0058	ug/L		04/15/14 09:06	04/18/14 16:22	1
alpha-BHC	ND		0.048	0.0067	ug/L		04/15/14 09:06	04/18/14 16:22	1
beta-BHC	ND		0.048	0.0067	ug/L		04/15/14 09:06	04/18/14 16:22	1
gamma-BHC (Lindane)	ND		0.048	0.0058	ug/L		04/15/14 09:06	04/18/14 16:22	1
delta-BHC	ND		0.048	0.011	ug/L		04/15/14 09:06	04/18/14 16:22	1
alpha-Chlordane	ND		0.048	0.0058	ug/L		04/15/14 09:06	04/18/14 16:22	1
gamma-Chlordane	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Dieldrin	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endosulfan I	ND		0.048	0.0058	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endosulfan II	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endosulfan sulfate	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endrin	ND		0.048	0.012	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endrin aldehyde	ND		0.096	0.024	ug/L		04/15/14 09:06	04/18/14 16:22	1
Endrin ketone	ND		0.096	0.019	ug/L		04/15/14 09:06	04/18/14 16:22	1
Heptachlor	ND		0.048	0.0067	ug/L		04/15/14 09:06	04/18/14 16:22	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Date Collected: 04/08/14 16:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.048	0.0058	ug/L		04/15/14 09:06	04/18/14 16:22	1
Methoxychlor	ND		0.096	0.040	ug/L		04/15/14 09:06	04/18/14 16:22	1
Toxaphene	ND		1.9	0.49	ug/L		04/15/14 09:06	04/18/14 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		44 - 114				04/15/14 09:06	04/18/14 16:22	1
DCB Decachlorobiphenyl	82		12 - 131				04/15/14 09:06	04/18/14 16:22	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.96	0.086	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1221	ND		0.96	0.11	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1232	ND		0.96	0.16	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1242	ND		0.96	0.12	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1248	ND		0.96	0.058	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1254	ND		0.96	0.048	ug/L		04/15/14 09:17	04/18/14 15:07	1
PCB-1260	ND		0.96	0.048	ug/L		04/15/14 09:17	04/18/14 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	90		29 - 128				04/15/14 09:17	04/18/14 15:07	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		12	0.33	pg/L		04/16/14 08:58	04/18/14 02:57	1
2,3,7,8-TCDF	1.5	J B	12	0.23	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,7,8-PeCDD	ND		59	0.41	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,7,8-PeCDF	1.7	J B	59	0.35	pg/L		04/16/14 08:58	04/18/14 02:57	1
2,3,4,7,8-PeCDF	1.6	J B	59	0.37	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,4,7,8-HxCDD	0.68	J q B	59	0.33	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,6,7,8-HxCDD	1.0	J B	59	0.26	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,7,8,9-HxCDD	0.91	J B	59	0.25	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,4,7,8-HxCDF	9.1	J B	59	0.45	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,6,7,8-HxCDF	3.5	J B	59	0.35	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,7,8,9-HxCDF	ND		59	0.44	pg/L		04/16/14 08:58	04/18/14 02:57	1
2,3,4,6,7,8-HxCDF	1.3	J B	59	0.41	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,4,6,7,8-HpCDD	2.5	J B	59	0.29	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,4,6,7,8-HpCDF	23	J B	59	0.43	pg/L		04/16/14 08:58	04/18/14 02:57	1
1,2,3,4,7,8,9-HpCDF	1.9	J q	59	0.51	pg/L		04/16/14 08:58	04/18/14 02:57	1
OCDD	8.2	J q B	120	0.42	pg/L		04/16/14 08:58	04/18/14 02:57	1
OCDF	16	J B	120	0.62	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total TCDD	ND		12	0.33	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total TCDF	1.5	J B	12	0.23	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total PeCDD	ND		59	0.41	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total PeCDF	6.7	J q B	59	0.36	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total HxCDD	3.6	J q B	59	0.28	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total HxCDF	17	J q B	59	0.41	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total HpCDD	4.7	J q B	59	0.29	pg/L		04/16/14 08:58	04/18/14 02:57	1
Total HpCDF	28	J q B	59	0.47	pg/L		04/16/14 08:58	04/18/14 02:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	85		40 - 135				04/16/14 08:58	04/18/14 02:57	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Date Collected: 04/08/14 16:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	92		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,7,8-PeCDD	82		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,4,7,8-HxCDF	92		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-1,2,3,4,6,7,8-HpCDF	99		40 - 135	04/16/14 08:58	04/18/14 02:57	1
13C-OCDD	93		40 - 135	04/16/14 08:58	04/18/14 02:57	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:50	1
Barium	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:50	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:50	1
Chromium	0.0029	J	0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:50	1
Lead	0.0029	J	0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:50	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:50	1
Silver	ND		0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 10:01	1

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Date Collected: 04/10/14 12:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	10	J	49	3.1	ng/L		04/15/14 08:53	04/16/14 18:38	1
Acenaphthylene	ND		49	3.0	ng/L		04/15/14 08:53	04/16/14 18:38	1
Anthracene	ND		49	4.4	ng/L		04/15/14 08:53	04/16/14 18:38	1
Benzo[a]anthracene	ND		49	4.5	ng/L		04/15/14 08:53	04/16/14 18:38	1
Benzo[a]pyrene	ND		49	4.3	ng/L		04/15/14 08:53	04/16/14 18:38	1
Benzo[b]fluoranthene	ND		49	12	ng/L		04/15/14 08:53	04/16/14 18:38	1
Benzo[g,h,i]perylene	ND		49	5.4	ng/L		04/15/14 08:53	04/16/14 18:38	1
Benzo[k]fluoranthene	ND		49	7.7	ng/L		04/15/14 08:53	04/16/14 18:38	1
Chrysene	ND		49	3.9	ng/L		04/15/14 08:53	04/16/14 18:38	1
Dibenz(a,h)anthracene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 18:38	1
Fluoranthene	8.7	J	49	4.2	ng/L		04/15/14 08:53	04/16/14 18:38	1
Fluorene	ND		49	4.0	ng/L		04/15/14 08:53	04/16/14 18:38	1
Indeno[1,2,3-cd]pyrene	ND		49	14	ng/L		04/15/14 08:53	04/16/14 18:38	1
Naphthalene	13	J	49	3.6	ng/L		04/15/14 08:53	04/16/14 18:38	1
Phenanthrene	7.7	J	49	6.2	ng/L		04/15/14 08:53	04/16/14 18:38	1
Pyrene	11	J	49	4.1	ng/L		04/15/14 08:53	04/16/14 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	99		20 - 123	04/15/14 08:53	04/16/14 18:38	1
Terphenyl-d14	97		46 - 137	04/15/14 08:53	04/16/14 18:38	1
2-Fluorobiphenyl (Surr)	90		31 - 107	04/15/14 08:53	04/16/14 18:38	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Date Collected: 04/10/14 12:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	34	J	48	15	ug/L		04/15/14 09:00	04/17/14 18:47	1
Motor Oil Range Organics [C24-C36]	ND		240	81	ug/L		04/15/14 09:00	04/17/14 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	92		56 - 145				04/15/14 09:00	04/17/14 18:47	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
4,4'-DDE	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
4,4'-DDT	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Aldrin	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:39	1
alpha-BHC	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 16:39	1
beta-BHC	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 16:39	1
gamma-BHC (Lindane)	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:39	1
delta-BHC	ND		0.049	0.011	ug/L		04/15/14 09:06	04/18/14 16:39	1
alpha-Chlordane	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:39	1
gamma-Chlordane	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Dieldrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endosulfan I	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endosulfan II	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endosulfan sulfate	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endrin	ND		0.049	0.012	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endrin aldehyde	ND		0.098	0.025	ug/L		04/15/14 09:06	04/18/14 16:39	1
Endrin ketone	ND		0.098	0.020	ug/L		04/15/14 09:06	04/18/14 16:39	1
Heptachlor	ND		0.049	0.0069	ug/L		04/15/14 09:06	04/18/14 16:39	1
Heptachlor epoxide	ND		0.049	0.0059	ug/L		04/15/14 09:06	04/18/14 16:39	1
Methoxychlor	ND		0.098	0.041	ug/L		04/15/14 09:06	04/18/14 16:39	1
Toxaphene	ND		2.0	0.50	ug/L		04/15/14 09:06	04/18/14 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	81		44 - 114				04/15/14 09:06	04/18/14 16:39	1
<i>DCB Decachlorobiphenyl</i>	53		12 - 131				04/15/14 09:06	04/18/14 16:39	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.98	0.088	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1221	ND		0.98	0.11	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1232	ND		0.98	0.17	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1242	ND		0.98	0.12	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1248	ND		0.98	0.059	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1254	ND		0.98	0.049	ug/L		04/15/14 09:17	04/18/14 15:27	1
PCB-1260	ND		0.98	0.049	ug/L		04/15/14 09:17	04/18/14 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	50		29 - 128				04/15/14 09:17	04/18/14 15:27	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.30	pg/L		04/16/14 08:58	04/18/14 03:38	1
2,3,7,8-TCDF	ND		10	0.17	pg/L		04/16/14 08:58	04/18/14 03:38	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Date Collected: 04/10/14 12:00

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	ND		51	0.32	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,7,8-PeCDF	ND		51	0.22	pg/L		04/16/14 08:58	04/18/14 03:38	1
2,3,4,7,8-PeCDF	ND		51	0.23	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,4,7,8-HxCDD	ND		51	0.26	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,6,7,8-HxCDD	ND		51	0.20	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,7,8,9-HxCDD	ND		51	0.19	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,4,7,8-HxCDF	ND		51	0.33	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,6,7,8-HxCDF	ND		51	0.26	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,7,8,9-HxCDF	ND		51	0.32	pg/L		04/16/14 08:58	04/18/14 03:38	1
2,3,4,6,7,8-HxCDF	ND		51	0.30	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,4,6,7,8-HpCDD	5.5	J B	51	0.34	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,4,6,7,8-HpCDF	2.1	J q B	51	0.39	pg/L		04/16/14 08:58	04/18/14 03:38	1
1,2,3,4,7,8,9-HpCDF	ND		51	0.46	pg/L		04/16/14 08:58	04/18/14 03:38	1
OCDD	24	J q B	100	0.50	pg/L		04/16/14 08:58	04/18/14 03:38	1
OCDF	2.7	J B	100	0.52	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total TCDD	ND		10	0.30	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total TCDF	ND		10	0.17	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total PeCDD	ND		51	0.32	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total PeCDF	ND		51	0.23	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total HxCDD	ND		51	0.26	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total HxCDF	ND		51	0.33	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total HpCDD	10	J B	51	0.34	pg/L		04/16/14 08:58	04/18/14 03:38	1
Total HpCDF	2.1	J q B	51	0.43	pg/L		04/16/14 08:58	04/18/14 03:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-2,3,7,8-TCDF	87		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,7,8-PeCDD	77		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,7,8-PeCDF	79		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,6,7,8-HxCDD	69		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,4,6,7,8-HpCDD	82		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-1,2,3,4,6,7,8-HpCDF	76		40 - 135				04/16/14 08:58	04/18/14 03:38	1
13C-OCDD	71		40 - 135				04/16/14 08:58	04/18/14 03:38	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:53	1
Barium	0.0056		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:53	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:53	1
Chromium	ND		0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:53	1
Lead	0.0042	J	0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:53	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:53	1
Silver	ND		0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 10:03	1

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Date Collected: 04/09/14 16:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	4.2	J	48	3.1	ng/L		04/15/14 08:53	04/16/14 19:08	1
Acenaphthylene	ND		48	3.0	ng/L		04/15/14 08:53	04/16/14 19:08	1
Anthracene	ND		48	4.3	ng/L		04/15/14 08:53	04/16/14 19:08	1
Benzo[a]anthracene	ND		48	4.4	ng/L		04/15/14 08:53	04/16/14 19:08	1
Benzo[a]pyrene	ND		48	4.3	ng/L		04/15/14 08:53	04/16/14 19:08	1
Benzo[b]fluoranthene	ND		48	12	ng/L		04/15/14 08:53	04/16/14 19:08	1
Benzo[g,h,i]perylene	ND		48	5.3	ng/L		04/15/14 08:53	04/16/14 19:08	1
Benzo[k]fluoranthene	ND		48	7.5	ng/L		04/15/14 08:53	04/16/14 19:08	1
Chrysene	ND		48	3.9	ng/L		04/15/14 08:53	04/16/14 19:08	1
Dibenz(a,h)anthracene	ND		48	14	ng/L		04/15/14 08:53	04/16/14 19:08	1
Fluoranthene	4.4	J	48	4.2	ng/L		04/15/14 08:53	04/16/14 19:08	1
Fluorene	ND		48	3.9	ng/L		04/15/14 08:53	04/16/14 19:08	1
Indeno[1,2,3-cd]pyrene	ND		48	14	ng/L		04/15/14 08:53	04/16/14 19:08	1
Naphthalene	5.1	J	48	3.6	ng/L		04/15/14 08:53	04/16/14 19:08	1
Phenanthrene	ND		48	6.1	ng/L		04/15/14 08:53	04/16/14 19:08	1
Pyrene	4.5	J	48	4.1	ng/L		04/15/14 08:53	04/16/14 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	99		20 - 123				04/15/14 08:53	04/16/14 19:08	1
Terphenyl-d14	106		46 - 137				04/15/14 08:53	04/16/14 19:08	1
2-Fluorobiphenyl (Surr)	89		31 - 107				04/15/14 08:53	04/16/14 19:08	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	24	J	48	15	ug/L		04/15/14 09:00	04/17/14 19:16	1
Motor Oil Range Organics [C24-C36]	ND		240	80	ug/L		04/15/14 09:00	04/17/14 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	93		56 - 145				04/15/14 09:00	04/17/14 19:16	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
4,4'-DDE	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
4,4'-DDT	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Aldrin	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 16:56	1
alpha-BHC	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 16:56	1
beta-BHC	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 16:56	1
gamma-BHC (Lindane)	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 16:56	1
delta-BHC	ND		0.050	0.011	ug/L		04/15/14 09:06	04/18/14 16:56	1
alpha-Chlordane	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 16:56	1
gamma-Chlordane	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Dieldrin	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endosulfan I	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endosulfan II	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endosulfan sulfate	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endrin	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endrin aldehyde	ND		0.099	0.025	ug/L		04/15/14 09:06	04/18/14 16:56	1
Endrin ketone	ND		0.099	0.020	ug/L		04/15/14 09:06	04/18/14 16:56	1
Heptachlor	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 16:56	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Date Collected: 04/09/14 16:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 16:56	1
Methoxychlor	ND		0.099	0.042	ug/L		04/15/14 09:06	04/18/14 16:56	1
Toxaphene	ND		2.0	0.51	ug/L		04/15/14 09:06	04/18/14 16:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		44 - 114				04/15/14 09:06	04/18/14 16:56	1
DCB Decachlorobiphenyl	97		12 - 131				04/15/14 09:06	04/18/14 16:56	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.99	0.089	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1221	ND		0.99	0.11	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1232	ND		0.99	0.17	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1242	ND		0.99	0.12	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1248	ND		0.99	0.060	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1254	ND		0.99	0.050	ug/L		04/15/14 09:17	04/18/14 15:47	1
PCB-1260	ND		0.99	0.050	ug/L		04/15/14 09:17	04/18/14 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	102		29 - 128				04/15/14 09:17	04/18/14 15:47	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.20	pg/L		04/16/14 08:58	04/18/14 04:20	1
2,3,7,8-TCDF	ND		9.5	0.14	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,7,8-PeCDD	ND		48	0.28	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,7,8-PeCDF	ND		48	0.19	pg/L		04/16/14 08:58	04/18/14 04:20	1
2,3,4,7,8-PeCDF	ND		48	0.20	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,4,7,8-HxCDD	ND		48	0.21	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,6,7,8-HxCDD	ND		48	0.16	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,7,8,9-HxCDD	ND		48	0.15	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,4,7,8-HxCDF	ND		48	0.19	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,6,7,8-HxCDF	ND		48	0.15	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,7,8,9-HxCDF	ND		48	0.19	pg/L		04/16/14 08:58	04/18/14 04:20	1
2,3,4,6,7,8-HxCDF	ND		48	0.17	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,4,6,7,8-HpCDD	ND		48	0.23	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,4,6,7,8-HpCDF	0.91	J q B	48	0.18	pg/L		04/16/14 08:58	04/18/14 04:20	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.21	pg/L		04/16/14 08:58	04/18/14 04:20	1
OCDD	1.3	J q B	95	0.24	pg/L		04/16/14 08:58	04/18/14 04:20	1
OCDF	0.70	J B	95	0.32	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total TCDD	ND		9.5	0.20	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total TCDF	ND		9.5	0.14	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total PeCDD	ND		48	0.28	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total PeCDF	ND		48	0.20	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total HxCDD	ND		48	0.21	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total HxCDF	ND		48	0.19	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total HpCDD	ND		48	0.23	pg/L		04/16/14 08:58	04/18/14 04:20	1
Total HpCDF	0.91	J q B	48	0.20	pg/L		04/16/14 08:58	04/18/14 04:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	86		40 - 135				04/16/14 08:58	04/18/14 04:20	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Date Collected: 04/09/14 16:30

Matrix: Water

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	93		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,7,8-PeCDD	86		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,6,7,8-HxCDD	85		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,4,7,8-HxCDF	90		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135	04/16/14 08:58	04/18/14 04:20	1
13C-OCDD	88		40 - 135	04/16/14 08:58	04/18/14 04:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:56	1
Barium	0.0058		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:56	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:56	1
Chromium	0.0032	J	0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:56	1
Lead	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:56	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:56	1
Silver	ND		0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 10:05	1

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.8	0.45	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Acenaphthylene	ND		4.8	0.31	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Anthracene	ND		4.8	0.38	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Benzo[a]anthracene	0.73	J	4.8	0.29	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Benzo[a]pyrene	0.93	J	4.8	0.38	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Benzo[b]fluoranthene	2.9	J	4.8	0.48	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Benzo[g,h,i]perylene	1.3	J	4.8	0.95	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Benzo[k]fluoranthene	1.6	J	4.8	0.72	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Chrysene	3.9	J	4.8	0.33	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Dibenz(a,h)anthracene	ND		4.8	1.1	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Fluoranthene	6.1		4.8	0.28	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Fluorene	ND		4.8	0.47	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Indeno[1,2,3-cd]pyrene	1.1	J	4.8	0.46	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Naphthalene	0.33	J	4.8	0.29	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Phenanthrene	2.1	J	4.8	0.33	ug/Kg		04/21/14 09:50	04/25/14 14:24	1
Pyrene	4.5	J	4.8	0.33	ug/Kg		04/21/14 09:50	04/25/14 14:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	98		53 - 113	04/21/14 09:50	04/25/14 14:24	1
Terphenyl-d14	104		70 - 144	04/21/14 09:50	04/25/14 14:24	1
2-Fluorobiphenyl (Surr)	99		53 - 113	04/21/14 09:50	04/25/14 14:24	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
4,4'-DDE	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
alpha-Chlordane	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
gamma-Chlordane	ND		1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Dieldrin	ND		1.7	0.091	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endosulfan II	ND		1.7	0.099	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endosulfan sulfate	ND	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endrin aldehyde	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/25/14 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		58 - 111				04/21/14 09:49	04/25/14 13:45	1
DCB Decachlorobiphenyl	95		49 - 119				04/21/14 09:49	04/25/14 13:45	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 16:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	113		77 - 123				04/21/14 09:47	04/23/14 16:40	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.094	pg/g		04/22/14 13:58	04/24/14 03:27	1
2,3,7,8-TCDF	0.46	J	1.0	0.075	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,7,8-PeCDD	0.54	J	5.1	0.24	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,7,8-PeCDF	0.29	J	5.1	0.16	pg/g		04/22/14 13:58	04/24/14 03:27	1
2,3,4,7,8-PeCDF	ND		5.1	0.17	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,4,7,8-HxCDD	1.1	J	5.1	0.13	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,6,7,8-HxCDD	2.4	J	5.1	0.11	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,7,8,9-HxCDD	2.3	J	5.1	0.11	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,4,7,8-HxCDF	0.63	J	5.1	0.099	pg/g		04/22/14 13:58	04/24/14 03:27	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	0.43	J	5.1	0.088	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,7,8,9-HxCDF	ND		5.1	0.10	pg/g		04/22/14 13:58	04/24/14 03:27	1
2,3,4,6,7,8-HxCDF	0.55	J	5.1	0.096	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,4,6,7,8-HpCDD	75		5.1	0.73	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,4,6,7,8-HpCDF	10	B	5.1	0.23	pg/g		04/22/14 13:58	04/24/14 03:27	1
1,2,3,4,7,8,9-HpCDF	0.90	J	5.1	0.29	pg/g		04/22/14 13:58	04/24/14 03:27	1
OCDD	660	B	10	3.1	pg/g		04/22/14 13:58	04/24/14 03:27	1
OCDF	25		10	0.21	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total TCDD	1.1	q	1.0	0.094	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total TCDF	2.3	q	1.0	0.075	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total PeCDD	3.9	J q	5.1	0.24	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total PeCDF	2.2	J q	5.1	0.16	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total HxCDD	24	q B	5.1	0.12	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total HxCDF	9.9	B	5.1	0.097	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total HpCDD	140		5.1	0.73	pg/g		04/22/14 13:58	04/24/14 03:27	1
Total HpCDF	33	B	5.1	0.26	pg/g		04/22/14 13:58	04/24/14 03:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-2,3,7,8-TCDF	64		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,7,8-PeCDD	63		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,7,8-PeCDF	65		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,6,7,8-HxCDD	69		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135				04/22/14 13:58	04/24/14 03:27	1
13C-OCDD	85		40 - 135				04/22/14 13:58	04/24/14 03:27	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		4.9	3.2	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Barium	9.7		2.4	0.29	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Cadmium	0.090	J	0.49	0.073	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Chromium	31		1.2	0.34	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Lead	5.1		2.4	0.63	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Selenium	ND		4.9	3.4	mg/Kg		04/22/14 07:45	04/29/14 11:15	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 11:15	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.024	0.0053	mg/Kg		04/28/14 11:39	04/28/14 15:37	1

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9	0.46	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Acenaphthylene	0.83	J	4.9	0.33	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Anthracene	1.7	J	4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 16:52	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	2.9	J	4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Benzo[a]pyrene	2.6	J	4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Benzo[b]fluoranthene	4.1	J	4.9	0.50	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Benzo[g,h,i]perylene	2.0	J	4.9	0.99	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Benzo[k]fluoranthene	3.9	J	4.9	0.75	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Chrysene	7.2		4.9	0.34	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Dibenz(a,h)anthracene	ND		4.9	1.2	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Fluoranthene	18		4.9	0.29	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Fluorene	0.50	J	4.9	0.48	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Indeno[1,2,3-cd]pyrene	2.0	J	4.9	0.47	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Naphthalene	0.38	J	4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Phenanthrene	9.8		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Pyrene	15		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	99		53 - 113				04/21/14 09:50	04/25/14 16:52	1
Terphenyl-d14	98		70 - 144				04/21/14 09:50	04/25/14 16:52	1
2-Fluorobiphenyl (Surr)	96		53 - 113				04/21/14 09:50	04/25/14 16:52	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
4,4'-DDE	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
alpha-Chlordane	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
gamma-Chlordane	ND		1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Dieldrin	ND		1.7	0.092	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endosulfan sulfate	ND	*	1.7	0.093	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endrin aldehyde	0.18	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Toxaphene	ND		68	20	ug/Kg		04/21/14 09:49	04/25/14 15:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		58 - 111				04/21/14 09:49	04/25/14 15:33	1
Tetrachloro-m-xylene	92		58 - 111				04/21/14 09:49	04/25/14 15:33	1
DCB Decachlorobiphenyl	100		49 - 119				04/21/14 09:49	04/25/14 15:33	1
DCB Decachlorobiphenyl	102		49 - 119				04/21/14 09:49	04/25/14 15:33	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1232	ND		33	6.5	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1242	ND		33	7.5	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 18:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	106		77 - 123				04/21/14 09:47	04/23/14 18:42	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.16	J q	0.98	0.075	pg/g		04/22/14 13:58	04/24/14 18:17	1
2,3,7,8-TCDF	0.21	J q	0.98	0.059	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,7,8-PeCDD	0.47	J	4.9	0.16	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,7,8-PeCDF	0.17	J q	4.9	0.11	pg/g		04/22/14 13:58	04/24/14 18:17	1
2,3,4,7,8-PeCDF	ND		4.9	0.11	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,4,7,8-HxCDD	1.0	J	4.9	0.13	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,6,7,8-HxCDD	2.5	J	4.9	0.11	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,7,8,9-HxCDD	2.3	J q	4.9	0.11	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,4,7,8-HxCDF	0.49	J	4.9	0.072	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,6,7,8-HxCDF	0.40	J	4.9	0.064	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,7,8,9-HxCDF	ND		4.9	0.076	pg/g		04/22/14 13:58	04/24/14 18:17	1
2,3,4,6,7,8-HxCDF	0.32	J	4.9	0.070	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,4,6,7,8-HpCDD	76		4.9	0.67	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,4,6,7,8-HpCDF	11	B	4.9	0.18	pg/g		04/22/14 13:58	04/24/14 18:17	1
1,2,3,4,7,8,9-HpCDF	0.81	J	4.9	0.22	pg/g		04/22/14 13:58	04/24/14 18:17	1
OCDD	730	B	9.8	3.1	pg/g		04/22/14 13:58	04/24/14 18:17	1
OCDF	24		9.8	0.19	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total TCDD	1.0	q	0.98	0.075	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total TCDF	0.83	J q	0.98	0.059	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total PeCDD	3.0	J q	4.9	0.16	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total PeCDF	1.9	J q	4.9	0.11	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total HxCDD	23	q B	4.9	0.12	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total HxCDF	9.1	q B	4.9	0.070	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total HpCDD	150		4.9	0.67	pg/g		04/22/14 13:58	04/24/14 18:17	1
Total HpCDF	33	B	4.9	0.20	pg/g		04/22/14 13:58	04/24/14 18:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-2,3,7,8-TCDF	70		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,7,8-PeCDD	72		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,7,8-PeCDF	71		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135				04/22/14 13:58	04/24/14 18:17	1
13C-OCDD	90		40 - 135				04/22/14 13:58	04/24/14 18:17	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Barium	9.3		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Cadmium	0.092	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Chromium	31		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Lead	3.0		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 11:40	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 11:40	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	J	0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 15:47	1

Client Sample ID: DU09-03

Lab Sample ID: 320-7028-8

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.7	0.44	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Acenaphthylene	ND		4.7	0.31	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Anthracene	0.40	J	4.7	0.37	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Benzo[a]anthracene	0.69	J	4.7	0.29	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Benzo[a]pyrene	0.69	J	4.7	0.38	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Benzo[b]fluoranthene	3.8	J	4.7	0.48	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Benzo[g,h,i]perylene	1.1	J	4.7	0.94	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Benzo[k]fluoranthene	1.4	J	4.7	0.72	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Chrysene	5.3		4.7	0.33	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Dibenz(a,h)anthracene	ND		4.7	1.1	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Fluoranthene	9.1		4.7	0.28	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Fluorene	ND		4.7	0.46	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Indeno[1,2,3-cd]pyrene	0.98	J	4.7	0.45	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Naphthalene	0.38	J	4.7	0.29	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Phenanthrene	4.2	J	4.7	0.33	ug/Kg		04/21/14 09:50	04/25/14 17:21	1
Pyrene	6.3		4.7	0.33	ug/Kg		04/21/14 09:50	04/25/14 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	95		53 - 113	04/21/14 09:50	04/25/14 17:21	1
Terphenyl-d14	94		70 - 144	04/21/14 09:50	04/25/14 17:21	1
2-Fluorobiphenyl (Surr)	91		53 - 113	04/21/14 09:50	04/25/14 17:21	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
4,4'-DDE	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 15:51	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-03

Lab Sample ID: 320-7028-8

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-Chlordane	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
gamma-Chlordane	ND		1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Dieldrin	ND		1.7	0.091	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endosulfan sulfate	ND	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endrin aldehyde	0.17	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/25/14 15:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	92		58 - 111				04/21/14 09:49	04/25/14 15:51	1
<i>Tetrachloro-m-xylene</i>	91		58 - 111				04/21/14 09:49	04/25/14 15:51	1
<i>DCB Decachlorobiphenyl</i>	98		49 - 119				04/21/14 09:49	04/25/14 15:51	1
<i>DCB Decachlorobiphenyl</i>	99		49 - 119				04/21/14 09:49	04/25/14 15:51	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	108		77 - 123				04/21/14 09:47	04/23/14 19:02	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.18	J q	1.0	0.085	pg/g		04/22/14 13:58	04/24/14 19:01	1
2,3,7,8-TCDF	0.34	J	1.0	0.059	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,7,8-PeCDD	0.51	J	5.0	0.16	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,7,8-PeCDF	ND		5.0	0.090	pg/g		04/22/14 13:58	04/24/14 19:01	1
2,3,4,7,8-PeCDF	0.15	J q	5.0	0.096	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,4,7,8-HxCDD	1.2	J	5.0	0.17	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,6,7,8-HxCDD	2.6	J	5.0	0.14	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,7,8,9-HxCDD	2.7	J	5.0	0.14	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,4,7,8-HxCDF	0.65	J	5.0	0.13	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,6,7,8-HxCDF	0.41	J	5.0	0.12	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.14	pg/g		04/22/14 13:58	04/24/14 19:01	1
2,3,4,6,7,8-HxCDF	0.23	J q	5.0	0.13	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,4,6,7,8-HpCDD	78		5.0	0.77	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,4,6,7,8-HpCDF	11	B	5.0	0.21	pg/g		04/22/14 13:58	04/24/14 19:01	1
1,2,3,4,7,8,9-HpCDF	0.76	J	5.0	0.26	pg/g		04/22/14 13:58	04/24/14 19:01	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-03

Lab Sample ID: 320-7028-8

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	710	B	10	3.3	pg/g		04/22/14 13:58	04/24/14 19:01	1
OCDF	25		10	0.23	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total TCDD	1.7	q	1.0	0.085	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total TCDF	1.8	q	1.0	0.059	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total PeCDD	3.7	J q	5.0	0.16	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total PeCDF	2.2	J q	5.0	0.093	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total HxCDD	25	B	5.0	0.15	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total HxCDF	9.3	q B	5.0	0.13	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total HpCDD	150		5.0	0.77	pg/g		04/22/14 13:58	04/24/14 19:01	1
Total HpCDF	33	B	5.0	0.24	pg/g		04/22/14 13:58	04/24/14 19:01	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	67		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-2,3,7,8-TCDF	67		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,7,8-PeCDD	67		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,7,8-PeCDF	68		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,6,7,8-HxCDD	69		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135				04/22/14 13:58	04/24/14 19:01	1
13C-OCDD	91		40 - 135				04/22/14 13:58	04/24/14 19:01	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		4.9	3.2	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Barium	11		2.4	0.29	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Cadmium	0.11	J	0.49	0.073	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Chromium	30		1.2	0.34	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Lead	3.4		2.4	0.64	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Selenium	ND		4.9	3.4	mg/Kg		04/22/14 07:45	04/29/14 11:43	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 11:43	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0072	J	0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 15:49	1

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Date Collected: 04/07/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.58	J	5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Acenaphthylene	0.91	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Anthracene	1.3	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Benzo[a]anthracene	5.4		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Benzo[a]pyrene	6.7		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Benzo[b]fluoranthene	23		5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Benzo[g,h,i]perylene	12		5.0	0.99	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Benzo[k]fluoranthene	13		5.0	0.75	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Chrysene	21		5.0	0.34	ug/Kg		04/21/14 09:50	04/25/14 17:51	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Date Collected: 04/07/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	2.2	J	5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Fluoranthene	26		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Fluorene	0.98	J	5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Indeno[1,2,3-cd]pyrene	12		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Naphthalene	3.2	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Phenanthrene	14		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 17:51	1
Pyrene	19		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		53 - 113	04/21/14 09:50	04/25/14 17:51	1
Terphenyl-d14	101		70 - 144	04/21/14 09:50	04/25/14 17:51	1
2-Fluorobiphenyl (Surr)	88		53 - 113	04/21/14 09:50	04/25/14 17:51	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.25	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
4,4'-DDE	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
4,4'-DDT	ND		1.7	0.39	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Aldrin	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
alpha-BHC	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
beta-BHC	ND		1.7	0.32	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
alpha-Chlordane	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
gamma-Chlordane	0.11	J	1.7	0.051	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Dieldrin	ND		1.7	0.088	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endosulfan I	ND		1.7	0.051	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endosulfan II	ND		1.7	0.097	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endosulfan sulfate	0.17	J p *	1.7	0.089	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endrin aldehyde	0.21	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Endrin ketone	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Heptachlor	ND		1.7	0.18	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Methoxychlor	ND		3.3	1.3	ug/Kg		04/21/14 09:49	04/25/14 16:09	1
Toxaphene	ND		65	19	ug/Kg		04/21/14 09:49	04/25/14 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		58 - 111	04/21/14 09:49	04/25/14 16:09	1
Tetrachloro-m-xylene	85		58 - 111	04/21/14 09:49	04/25/14 16:09	1
DCB Decachlorobiphenyl	90		49 - 119	04/21/14 09:49	04/25/14 16:09	1
DCB Decachlorobiphenyl	96		49 - 119	04/21/14 09:49	04/25/14 16:09	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	32	3.3	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
PCB-1221	ND		32	5.1	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
PCB-1232	ND		32	6.2	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
PCB-1242	ND		32	7.2	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
PCB-1248	ND		32	5.5	ug/Kg		04/21/14 09:47	04/23/14 19:22	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Date Collected: 04/07/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		32	2.6	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
PCB-1260	ND		32	2.8	ug/Kg		04/21/14 09:47	04/23/14 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	101		77 - 123				04/21/14 09:47	04/23/14 19:22	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Barium	11		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Cadmium	0.13	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Chromium	35		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Lead	3.6		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 11:45	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 11:45	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	J	0.024	0.0052	mg/Kg		04/28/14 11:39	04/28/14 15:54	1

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Acenaphthylene	0.78	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Anthracene	1.5	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Benzo[a]anthracene	4.2	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Benzo[a]pyrene	4.1	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Benzo[b]fluoranthene	15		5.0	0.51	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Benzo[g,h,i]perylene	4.0	J	5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Benzo[k]fluoranthene	8.5		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Chrysene	19		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Fluoranthene	22		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Indeno[1,2,3-cd]pyrene	4.4	J	5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Naphthalene	0.50	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Phenanthrene	5.2		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Pyrene	18		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	87		53 - 113				04/21/14 09:50	04/25/14 18:20	1
Terphenyl-d14	95		70 - 144				04/21/14 09:50	04/25/14 18:20	1
2-Fluorobiphenyl (Surr)	85		53 - 113				04/21/14 09:50	04/25/14 18:20	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 16:26	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	0.23	J p	1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
delta-BHC	0.17	J	1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
alpha-Chlordane	0.68	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
gamma-Chlordane	0.98	J	1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Dieldrin	0.25	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endosulfan sulfate	0.13	J p *	1.7	0.092	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endrin aldehyde	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 16:26	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/25/14 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		58 - 111	04/21/14 09:49	04/25/14 16:26	1
Tetrachloro-m-xylene	89		58 - 111	04/21/14 09:49	04/25/14 16:26	1
DCB Decachlorobiphenyl	95		49 - 119	04/21/14 09:49	04/25/14 16:26	1
DCB Decachlorobiphenyl	102		49 - 119	04/21/14 09:49	04/25/14 16:26	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 19:42	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	114		77 - 123	04/21/14 09:47	04/23/14 19:42	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		5.0	3.3	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Barium	13		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Cadmium	0.12	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Chromium	40		1.3	0.35	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Lead	12		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 11:48	5
Silver	ND		1.3	0.23	mg/Kg		04/22/14 07:45	04/29/14 11:48	5

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.019	J	0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 15:56	1

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Date Collected: 04/08/14 12:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Acenaphthylene	0.69	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Anthracene	1.3	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Benzo[a]anthracene	5.4		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Benzo[a]pyrene	6.1		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Benzo[b]fluoranthene	12		5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Benzo[g,h,i]perylene	5.2		5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Benzo[k]fluoranthene	7.7		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Chrysene	13		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Dibenz(a,h)anthracene	1.2	J	5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Fluoranthene	21		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Fluorene	0.68	J	5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Indeno[1,2,3-cd]pyrene	5.4		5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Naphthalene	0.70	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Phenanthrene	8.4		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Pyrene	18		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 18:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	87		53 - 113				04/21/14 09:50	04/25/14 18:50	1
Terphenyl-d14	100		70 - 144				04/21/14 09:50	04/25/14 18:50	1
2-Fluorobiphenyl (Surr)	89		53 - 113				04/21/14 09:50	04/25/14 18:50	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
4,4'-DDE	0.71	J	1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
alpha-Chlordane	0.35	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
gamma-Chlordane	0.072	J p	1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Dieldrin	ND		1.7	0.090	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endosulfan II	ND		1.7	0.099	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endosulfan sulfate	ND	*	1.7	0.091	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endrin aldehyde	0.27	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 15:15	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Date Collected: 04/08/14 12:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	0.24	J	1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/25/14 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		58 - 111				04/21/14 09:49	04/25/14 15:15	1
Tetrachloro-m-xylene	85		58 - 111				04/21/14 09:49	04/25/14 15:15	1
DCB Decachlorobiphenyl	96		49 - 119				04/21/14 09:49	04/25/14 15:15	1
DCB Decachlorobiphenyl	109		49 - 119				04/21/14 09:49	04/25/14 15:15	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 20:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	111		77 - 123				04/21/14 09:47	04/23/14 20:03	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.83	J	1.0	0.11	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,7,8-PeCDD	3.0	J	5.0	0.25	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,7,8-PeCDF	0.45	J q	5.0	0.14	pg/g		04/22/14 13:58	04/24/14 19:44	1
2,3,4,7,8-PeCDF	0.67	J	5.0	0.15	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,4,7,8-HxCDD	6.7		5.0	0.50	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,6,7,8-HxCDD	15		5.0	0.43	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,7,8,9-HxCDD	14		5.0	0.41	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,4,7,8-HxCDF	2.6	J	5.0	0.39	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,6,7,8-HxCDF	2.2	J	5.0	0.34	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.41	pg/g		04/22/14 13:58	04/24/14 19:44	1
2,3,4,6,7,8-HxCDF	1.3	J q	5.0	0.38	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,4,6,7,8-HpCDD	530		5.0	4.8	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,4,6,7,8-HpCDF	61	B	5.0	1.1	pg/g		04/22/14 13:58	04/24/14 19:44	1
1,2,3,4,7,8,9-HpCDF	4.8	J	5.0	1.3	pg/g		04/22/14 13:58	04/24/14 19:44	1
OCDD	4900	E G B	18	18	pg/g		04/22/14 13:58	04/24/14 19:44	1
OCDF	140		10	0.59	pg/g		04/22/14 13:58	04/24/14 19:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-2,3,7,8-TCDF	67		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,7,8-PeCDD	61		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135				04/22/14 13:58	04/24/14 19:44	1
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135				04/22/14 13:58	04/24/14 19:44	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Date Collected: 04/08/14 12:30

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDD	97		40 - 135	04/22/14 13:58	04/24/14 19:44	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.43	J	1.0	0.075	pg/g		04/22/14 13:58	04/25/14 19:18	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDF	66		40 - 135	04/22/14 13:58	04/25/14 19:18	1			

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Barium	22		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Cadmium	0.16	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Chromium	45		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Lead	15		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 11:51	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 11:51	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.022	J	0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 15:58	1

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.67	J	4.9	0.46	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Acenaphthylene	1.1	J	4.9	0.33	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Anthracene	5.0		4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Benzo[a]anthracene	14		4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Benzo[a]pyrene	15		4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Benzo[b]fluoranthene	24		4.9	0.50	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Benzo[g,h,i]perylene	6.6		4.9	0.99	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Benzo[k]fluoranthene	18		4.9	0.75	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Chrysene	29		4.9	0.34	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Dibenz(a,h)anthracene	2.6	J	4.9	1.2	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Fluoranthene	46		4.9	0.29	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Fluorene	0.95	J	4.9	0.48	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Indeno[1,2,3-cd]pyrene	6.9		4.9	0.47	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Naphthalene	0.92	J	4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Phenanthrene	19		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Pyrene	41		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 19:19	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Nitrobenzene-d5	92		53 - 113	04/21/14 09:50	04/25/14 19:19	1			
Terphenyl-d14	106		70 - 144	04/21/14 09:50	04/25/14 19:19	1			
2-Fluorobiphenyl (Surr)	95		53 - 113	04/21/14 09:50	04/25/14 19:19	1			

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
4,4'-DDE	1.8		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
4,4'-DDT	0.50	J	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
alpha-BHC	0.55	J	1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
beta-BHC	1.8		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
alpha-Chlordane	1.3	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
gamma-Chlordane	1.7		1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Dieldrin	0.10	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endosulfan sulfate	ND	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endrin aldehyde	0.81	J	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 14:03	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	101		58 - 111	04/21/14 09:49	04/28/14 14:03	1
<i>Tetrachloro-m-xylene</i>	106		58 - 111	04/21/14 09:49	04/28/14 14:03	1
<i>DCB Decachlorobiphenyl</i>	108		49 - 119	04/21/14 09:49	04/28/14 14:03	1
<i>DCB Decachlorobiphenyl</i>	115		49 - 119	04/21/14 09:49	04/28/14 14:03	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 20:23	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	97		77 - 123	04/21/14 09:47	04/23/14 20:23	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		5.0	3.3	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Barium	23		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Cadmium	0.24	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Chromium	63		1.3	0.35	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Lead	34		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 11:59	5
Silver	ND		1.3	0.23	mg/Kg		04/22/14 07:45	04/29/14 11:59	5

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051		0.022	0.0048	mg/Kg		04/28/14 11:39	04/28/14 16:00	1

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Acenaphthylene	0.66	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Anthracene	0.64	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Benzo[a]anthracene	2.6	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Benzo[a]pyrene	3.1	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Benzo[b]fluoranthene	6.1		5.0	0.51	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Benzo[g,h,i]perylene	3.1	J	5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Benzo[k]fluoranthene	4.2	J	5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Chrysene	6.1		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Fluoranthene	8.7		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Indeno[1,2,3-cd]pyrene	3.0	J	5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Naphthalene	0.66	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Phenanthrene	3.9	J	5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 19:49	1
Pyrene	8.0		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	90		53 - 113	04/21/14 09:50	04/25/14 19:49	1
Terphenyl-d14	97		70 - 144	04/21/14 09:50	04/25/14 19:49	1
2-Fluorobiphenyl (Surr)	87		53 - 113	04/21/14 09:50	04/25/14 19:49	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
4,4'-DDE	0.63	J	1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
4,4'-DDT	0.69	J	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
alpha-Chlordane	0.61	J p	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
gamma-Chlordane	0.68	J	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Dieldrin	0.24	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endosulfan sulfate	0.75	J p *	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endrin	0.84	J	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endrin aldehyde	0.15	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Endrin ketone	1.4	J	1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 14:39	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 14:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		58 - 111				04/21/14 09:49	04/28/14 14:39	1
Tetrachloro-m-xylene	90		58 - 111				04/21/14 09:49	04/28/14 14:39	1
DCB Decachlorobiphenyl	112		49 - 119				04/21/14 09:49	04/28/14 14:39	1
DCB Decachlorobiphenyl	132	X	49 - 119				04/21/14 09:49	04/28/14 14:39	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 20:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	104		77 - 123				04/21/14 09:47	04/23/14 20:44	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		4.9	3.2	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Barium	25		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Cadmium	0.23	J	0.49	0.074	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Chromium	50		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Lead	24		2.5	0.64	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Selenium	ND		4.9	3.5	mg/Kg		04/22/14 07:45	04/29/14 12:02	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 12:02	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027		0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 16:01	1

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Date Collected: 04/08/14 12:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Acenaphthylene	ND		5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Anthracene	1.1	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Benzo[a]anthracene	1.4	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Benzo[a]pyrene	1.5	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Benzo[b]fluoranthene	3.1	J	5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Benzo[g,h,i]perylene	3.1	J	5.0	0.99	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Benzo[k]fluoranthene	2.0	J	5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 20:18	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Date Collected: 04/08/14 12:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	3.5	J	5.0	0.34	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Fluoranthene	5.3		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Fluorene	0.73	J	5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Indeno[1,2,3-cd]pyrene	1.6	J	5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Phenanthrene	11		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Pyrene	11		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 20:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	99		70 - 144				04/21/14 09:50	04/25/14 20:18	1
2-Fluorobiphenyl (Surr)	96		53 - 113				04/21/14 09:50	04/25/14 20:18	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		50	3.1	ug/Kg		04/21/14 09:50	04/28/14 12:30	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	0	X	53 - 113				04/21/14 09:50	04/28/14 12:30	10
Terphenyl-d14	103		70 - 144				04/21/14 09:50	04/28/14 12:30	10
2-Fluorobiphenyl (Surr)	97		53 - 113				04/21/14 09:50	04/28/14 12:30	10

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	610		10	3.0	mg/Kg		04/18/14 11:19	04/21/14 17:47	10
Motor Oil Range Organics [C24-C36]	79		50	16	mg/Kg		04/18/14 11:19	04/21/14 17:47	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	99	D	63 - 141				04/18/14 11:19	04/21/14 17:47	10

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
4,4'-DDE	4.8		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
4,4'-DDT	0.45	J p	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
alpha-Chlordane	0.59	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
gamma-Chlordane	0.076	J p	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Dieldrin	0.35	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endosulfan II	0.33	J	1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endosulfan sulfate	0.83	J *	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endrin aldehyde	0.63	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 15:14	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Date Collected: 04/08/14 12:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 15:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	111		58 - 111				04/21/14 09:49	04/28/14 15:14	1
Tetrachloro-m-xylene	79		58 - 111				04/21/14 09:49	04/28/14 15:14	1
DCB Decachlorobiphenyl	116		49 - 119				04/21/14 09:49	04/28/14 15:14	1
DCB Decachlorobiphenyl	115		49 - 119				04/21/14 09:49	04/28/14 15:14	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 21:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	108		77 - 123				04/21/14 09:47	04/23/14 21:04	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	6.5		1.0	0.12	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,7,8-PeCDD	2.3	J	5.0	0.30	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,7,8-PeCDF	0.84	J q	5.0	0.17	pg/g		04/22/14 13:58	04/24/14 20:27	1
2,3,4,7,8-PeCDF	0.91	J	5.0	0.18	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,4,7,8-HxCDD	4.5	J	5.0	0.36	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,6,7,8-HxCDD	20		5.0	0.31	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,7,8,9-HxCDD	13		5.0	0.30	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,4,7,8-HxCDF	5.8		5.0	1.0	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,6,7,8-HxCDF	3.6	J	5.0	0.92	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	pg/g		04/22/14 13:58	04/24/14 20:27	1
2,3,4,6,7,8-HxCDF	2.6	J	5.0	1.0	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,4,6,7,8-HpCDD	640	G	5.4	5.4	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,4,6,7,8-HpCDF	140	B	5.0	2.2	pg/g		04/22/14 13:58	04/24/14 20:27	1
1,2,3,4,7,8,9-HpCDF	9.3		5.0	2.7	pg/g		04/22/14 13:58	04/24/14 20:27	1
OCDD	6100	E G B	21	21	pg/g		04/22/14 13:58	04/24/14 20:27	1
OCDF	350		10	1.3	pg/g		04/22/14 13:58	04/24/14 20:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-2,3,7,8-TCDF	67		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,7,8-PeCDD	63		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,7,8-PeCDF	65		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,4,7,8-HxCDF	73		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135				04/22/14 13:58	04/24/14 20:27	1
13C-OCDD	90		40 - 135				04/22/14 13:58	04/24/14 20:27	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Date Collected: 04/08/14 12:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.49	J	1.0	0.11	pg/g		04/22/14 13:58	04/25/14 19:56	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	64		40 - 135				04/22/14 13:58	04/25/14 19:56	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Barium	31		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Cadmium	0.089	J	0.50	0.074	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Chromium	130		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Lead	1100		2.5	0.64	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 12:05	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 12:05	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	30		2.4	0.51	mg/Kg		04/28/14 11:39	04/28/14 16:35	100

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Date Collected: 04/08/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Acenaphthylene	ND		5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Anthracene	0.46	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Benzo[a]anthracene	2.3	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Benzo[a]pyrene	2.4	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Benzo[b]fluoranthene	4.7	J	5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Benzo[g,h,i]perylene	2.3	J	5.0	0.99	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Benzo[k]fluoranthene	2.8	J	5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Chrysene	4.9	J	5.0	0.34	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Fluoranthene	5.5		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Indeno[1,2,3-cd]pyrene	2.2	J	5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Naphthalene	1.5	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Phenanthrene	3.3	J	5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
Pyrene	5.9		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 20:48	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Nitrobenzene-d5	102		53 - 113				04/21/14 09:50	04/25/14 20:48	1
Terphenyl-d14	96		70 - 144				04/21/14 09:50	04/25/14 20:48	1
2-Fluorobiphenyl (Surr)	93		53 - 113				04/21/14 09:50	04/25/14 20:48	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	3.9		1.0	0.30	mg/Kg		04/18/14 11:19	04/21/14 18:16	1
Motor Oil Range Organics [C24-C36]	26		5.0	1.6	mg/Kg		04/18/14 11:19	04/21/14 18:16	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Date Collected: 04/08/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	101		63 - 141	04/18/14 11:19	04/21/14 18:16	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
4,4'-DDE	1.2	J	1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
delta-BHC	0.24	J	1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
alpha-Chlordane	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
gamma-Chlordane	ND		1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Dieldrin	ND		1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endosulfan I	0.078	J	1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endosulfan sulfate	ND	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endrin aldehyde	0.56	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 15:50	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	91		58 - 111	04/21/14 09:49	04/28/14 15:50	1
<i>Tetrachloro-m-xylene</i>	88		58 - 111	04/21/14 09:49	04/28/14 15:50	1
<i>DCB Decachlorobiphenyl</i>	98		49 - 119	04/21/14 09:49	04/28/14 15:50	1
<i>DCB Decachlorobiphenyl</i>	104		49 - 119	04/21/14 09:49	04/28/14 15:50	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 21:24	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	96		77 - 123	04/21/14 09:47	04/23/14 21:24	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3.7		1.0	0.16	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,7,8-PeCDD	4.2	J	5.0	0.34	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,7,8-PeCDF	1.2	J	5.0	0.20	pg/g		04/22/14 13:58	04/24/14 21:10	1
2,3,4,7,8-PeCDF	1.2	J	5.0	0.21	pg/g		04/22/14 13:58	04/24/14 21:10	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Date Collected: 04/08/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	7.2	q	5.0	0.60	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,6,7,8-HxCDD	28		5.0	0.52	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,7,8,9-HxCDD	21		5.0	0.50	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,4,7,8-HxCDF	5.8		5.0	0.75	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,6,7,8-HxCDF	4.4	J	5.0	0.66	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.79	pg/g		04/22/14 13:58	04/24/14 21:10	1
2,3,4,6,7,8-HxCDF	3.6	J	5.0	0.73	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,4,6,7,8-HpCDD	820	G	6.5	6.5	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,4,6,7,8-HpCDF	170	B	5.0	2.3	pg/g		04/22/14 13:58	04/24/14 21:10	1
1,2,3,4,7,8,9-HpCDF	11		5.0	2.9	pg/g		04/22/14 13:58	04/24/14 21:10	1
OCDD	6900	E G B	26	26	pg/g		04/22/14 13:58	04/24/14 21:10	1
OCDF	440		10	1.6	pg/g		04/22/14 13:58	04/24/14 21:10	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	67		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-2,3,7,8-TCDF	67		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,7,8-PeCDD	65		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,7,8-PeCDF	67		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135				04/22/14 13:58	04/24/14 21:10	1
13C-OCDD	93		40 - 135				04/22/14 13:58	04/24/14 21:10	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.98	J	1.0	0.11	pg/g		04/22/14 13:58	04/25/14 21:48	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	68		40 - 135				04/22/14 13:58	04/25/14 21:48	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Barium	39		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Cadmium	0.13	J	0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Chromium	160		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Lead	12		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 12:07	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 12:07	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.071		0.024	0.0052	mg/Kg		04/28/14 11:39	04/28/14 16:41	1

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 21:17	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	1.4	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Anthracene	1.6	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Benzo[a]anthracene	9.7		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Benzo[a]pyrene	12		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Benzo[b]fluoranthene	17		5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Benzo[g,h,i]perylene	9.7		5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Benzo[k]fluoranthene	11		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Chrysene	16		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Dibenz(a,h)anthracene	2.1	J	5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Fluoranthene	16		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Fluorene	0.63	J	5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Indeno[1,2,3-cd]pyrene	9.5		5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Naphthalene	2.2	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Phenanthrene	8.2		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Pyrene	18		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	102		53 - 113				04/21/14 09:50	04/25/14 21:17	1
Terphenyl-d14	97		70 - 144				04/21/14 09:50	04/25/14 21:17	1
2-Fluorobiphenyl (Surr)	97		53 - 113				04/21/14 09:50	04/25/14 21:17	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	8.5		0.99	0.30	mg/Kg		04/18/14 11:19	04/21/14 15:21	1
Motor Oil Range Organics [C24-C36]	54		5.0	1.6	mg/Kg		04/18/14 11:19	04/21/14 15:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	89		63 - 141				04/18/14 11:19	04/21/14 15:21	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	1.1	J	1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
4,4'-DDE	14		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
4,4'-DDT	2.5	p	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
beta-BHC	0.93	J p	1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
delta-BHC	0.77	J	1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
alpha-Chlordane	0.58	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
gamma-Chlordane	0.39	J p	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Dieldrin	ND		1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endosulfan sulfate	1.8	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endrin aldehyde	0.38	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 16:26	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 16:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85	p	58 - 111				04/21/14 09:49	04/28/14 16:26	1
DCB Decachlorobiphenyl	149	X	49 - 119				04/21/14 09:49	04/28/14 16:26	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
PCB-1260	9.0	J	33	2.9	ug/Kg		04/21/14 09:47	04/23/14 22:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	151	X	77 - 123				04/21/14 09:47	04/23/14 22:05	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.6		0.99	0.46	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,7,8-PeCDD	13		5.0	1.5	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,7,8-PeCDF	5.3		5.0	0.44	pg/g		04/22/14 13:58	04/24/14 21:53	1
2,3,4,7,8-PeCDF	5.5		5.0	0.47	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,4,7,8-HxCDD	32		5.0	1.8	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,6,7,8-HxCDD	90		5.0	1.5	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,7,8,9-HxCDD	74		5.0	1.4	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,4,7,8-HxCDF	16		5.0	1.6	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,6,7,8-HxCDF	12		5.0	1.5	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,7,8,9-HxCDF	ND		5.0	1.7	pg/g		04/22/14 13:58	04/24/14 21:53	1
2,3,4,6,7,8-HxCDF	9.7		5.0	1.6	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,4,6,7,8-HpCDD	3100		50	32	pg/g		04/22/14 13:58	04/25/14 17:48	10
1,2,3,4,6,7,8-HpCDF	340	B	5.0	5.0	pg/g		04/22/14 13:58	04/24/14 21:53	1
1,2,3,4,7,8,9-HpCDF	25	G	6.3	6.3	pg/g		04/22/14 13:58	04/24/14 21:53	1
OCDD	26000	G B	100	100	pg/g		04/22/14 13:58	04/25/14 17:48	10
OCDF	850		9.9	2.8	pg/g		04/22/14 13:58	04/24/14 21:53	1
Total HpCDD	6000		50	32	pg/g		04/22/14 13:58	04/25/14 17:48	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-2,3,7,8-TCDF	70		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-1,2,3,7,8-PeCDD	67		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-1,2,3,7,8-PeCDF	67		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135				04/22/14 13:58	04/25/14 17:48	10
13C-1,2,3,4,6,7,8-HpCDF	73		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-OCDD	113		40 - 135				04/22/14 13:58	04/24/14 21:53	1
13C-OCDF	94		40 - 135				04/22/14 13:58	04/25/14 17:48	10

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	6.0		0.99	0.17	pg/g		04/22/14 13:58	04/25/14 22:26	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	68		40 - 135				04/22/14 13:58	04/25/14 22:26	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	35		5.0	3.2	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Barium	80		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Cadmium	1.0		0.50	0.075	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Chromium	110		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Lead	210		2.5	0.65	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Selenium	ND		5.0	3.5	mg/Kg		04/22/14 07:45	04/29/14 12:10	5
Silver	ND		1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 12:10	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17		0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 16:08	1

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.69	J	5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Acenaphthylene	1.5	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Anthracene	2.1	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Benzo[a]anthracene	11		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Benzo[a]pyrene	14		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Benzo[b]fluoranthene	19		5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Benzo[g,h,i]perylene	10		5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Benzo[k]fluoranthene	15		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Chrysene	18		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Dibenz(a,h)anthracene	2.1	J	5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Fluoranthene	21		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Fluorene	0.88	J	5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Indeno[1,2,3-cd]pyrene	11		5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Naphthalene	3.0	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Phenanthrene	11		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
Pyrene	23		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 21:47	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Nitrobenzene-d5	101		53 - 113				04/21/14 09:50	04/25/14 21:47	1
Terphenyl-d14	94		70 - 144				04/21/14 09:50	04/25/14 21:47	1
2-Fluorobiphenyl (Surr)	96		53 - 113				04/21/14 09:50	04/25/14 21:47	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	6.5		0.99	0.30	mg/Kg		04/18/14 11:19	04/21/14 15:50	1
Motor Oil Range Organics [C24-C36]	58		5.0	1.6	mg/Kg		04/18/14 11:19	04/21/14 15:50	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	102		63 - 141	04/18/14 11:19	04/21/14 15:50	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	2.1		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
4,4'-DDE	19		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
4,4'-DDT	1.4	J p	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
beta-BHC	0.76	J	1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
delta-BHC	0.75	J	1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
alpha-Chlordane	0.75	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
gamma-Chlordane	0.57	J p	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Dieldrin	0.25	J	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endosulfan I	0.073	J	1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endosulfan II	0.12	J	1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endosulfan sulfate	0.22	J p *	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endrin aldehyde	0.71	J p	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 17:02	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	98		58 - 111	04/21/14 09:49	04/28/14 17:02	1
Tetrachloro- <i>m</i> -xylene	92		58 - 111	04/21/14 09:49	04/28/14 17:02	1
DCB Decachlorobiphenyl	133	X	49 - 119	04/21/14 09:49	04/28/14 17:02	1
DCB Decachlorobiphenyl	143	X	49 - 119	04/21/14 09:49	04/28/14 17:02	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 22:25	1
PCB-1260	7.9	J	33	2.9	ug/Kg		04/21/14 09:47	04/23/14 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	122		77 - 123	04/21/14 09:47	04/23/14 22:25	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.9		0.99	0.48	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,7,8-PeCDD	18		4.9	0.81	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,7,8-PeCDF	6.1		4.9	0.50	pg/g		04/22/14 13:58	04/24/14 22:37	1
2,3,4,7,8-PeCDF	7.2		4.9	0.53	pg/g		04/22/14 13:58	04/24/14 22:37	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	60		4.9	2.9	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,6,7,8-HxCDD	130		4.9	2.4	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,7,8,9-HxCDD	110		4.9	2.4	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,4,7,8-HxCDF	19		4.9	1.5	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,6,7,8-HxCDF	15		4.9	1.4	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,7,8,9-HxCDF	ND		4.9	1.6	pg/g		04/22/14 13:58	04/24/14 22:37	1
2,3,4,6,7,8-HxCDF	12		4.9	1.5	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,4,6,7,8-HpCDD	7100		99	99	pg/g		04/22/14 13:58	04/25/14 18:32	20
1,2,3,4,6,7,8-HpCDF	410	G B	7.8	7.8	pg/g		04/22/14 13:58	04/24/14 22:37	1
1,2,3,4,7,8,9-HpCDF	39	G	9.9	9.9	pg/g		04/22/14 13:58	04/24/14 22:37	1
OCDD	98000	E G B	470	470	pg/g		04/22/14 13:58	04/25/14 18:32	20
OCDF	1300		9.9	4.3	pg/g		04/22/14 13:58	04/24/14 22:37	1
Total HpCDD	15000		99	99	pg/g		04/22/14 13:58	04/25/14 18:32	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	74		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-2,3,7,8-TCDF	78		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-1,2,3,7,8-PeCDD	69		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-1,2,3,7,8-PeCDF	73		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135				04/22/14 13:58	04/25/14 18:32	20
13C-1,2,3,4,6,7,8-HpCDF	63		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-OCDD	81		40 - 135				04/22/14 13:58	04/24/14 22:37	1
13C-OCDF	69		40 - 135				04/22/14 13:58	04/25/14 18:32	20

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7.8		0.99	0.19	pg/g		04/22/14 13:58	04/25/14 23:03	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	75		40 - 135				04/22/14 13:58	04/25/14 23:03	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28		4.9	3.2	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Barium	93		2.5	0.30	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Cadmium	1.3		0.49	0.074	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Chromium	100		1.2	0.35	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Lead	320		2.5	0.64	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Selenium	ND		4.9	3.5	mg/Kg		04/22/14 07:45	04/29/14 12:13	5
Silver	0.75	J	1.2	0.22	mg/Kg		04/22/14 07:45	04/29/14 12:13	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.19		0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 16:10	1

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Acenaphthylene	0.45	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Anthracene	0.78	J	5.0	0.39	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Benzo[a]anthracene	4.8	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Benzo[a]pyrene	5.6		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Benzo[b]fluoranthene	10		5.0	0.50	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Benzo[g,h,i]perylene	3.9	J	5.0	0.99	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Benzo[k]fluoranthene	6.7		5.0	0.75	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Chrysene	11		5.0	0.34	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Fluoranthene	13		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Indeno[1,2,3-cd]pyrene	3.9	J	5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Naphthalene	0.80	J	5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Phenanthrene	4.7	J	5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Pyrene	12		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 22:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	97		53 - 113				04/21/14 09:50	04/25/14 22:16	1
Terphenyl-d14	99		70 - 144				04/21/14 09:50	04/25/14 22:16	1
2-Fluorobiphenyl (Surr)	93		53 - 113				04/21/14 09:50	04/25/14 22:16	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	38	E	1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
4,4'-DDE	1.6	J	1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
4,4'-DDT	0.51	J p	1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
alpha-Chlordane	0.31	J	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
gamma-Chlordane	0.34	J	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Dieldrin	0.42	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endosulfan I	0.27	J	1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endosulfan II	0.16	J	1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endosulfan sulfate	0.29	J *	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endrin aldehyde	1.0	J	1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Heptachlor	0.19	J	1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 17:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		58 - 111				04/21/14 09:49	04/28/14 17:38	1
Tetrachloro-m-xylene	88		58 - 111				04/21/14 09:49	04/28/14 17:38	1
DCB Decachlorobiphenyl	117		49 - 119				04/21/14 09:49	04/28/14 17:38	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	123	X	49 - 119	04/21/14 09:49	04/28/14 17:38	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 22:45	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	110		77 - 123	04/21/14 09:47	04/23/14 22:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		4.9	3.2	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Barium	24		2.5	0.30	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Cadmium	0.30	J	0.49	0.074	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Chromium	65		1.2	0.35	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Lead	32		2.5	0.64	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Selenium	ND		4.9	3.5	mg/Kg		04/23/14 06:45	04/29/14 13:17	5
Silver	ND		1.2	0.22	mg/Kg		04/23/14 06:45	04/29/14 13:17	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.041		0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 16:12	1

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Date Collected: 04/10/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Acenaphthylene	1.6	J	5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Anthracene	1.9	J	5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Benzo[a]anthracene	14		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Benzo[a]pyrene	21		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Benzo[b]fluoranthene	28		5.0	0.51	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Benzo[g,h,i]perylene	18		5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Benzo[k]fluoranthene	18		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Chrysene	21		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Dibenz(a,h)anthracene	4.5	J	5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Fluoranthene	20		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Indeno[1,2,3-cd]pyrene	20		5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Naphthalene	0.61	J	5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Phenanthrene	5.2		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 22:46	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Date Collected: 04/10/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	20		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	103		53 - 113				04/21/14 09:50	04/25/14 22:46	1
Terphenyl-d14	99		70 - 144				04/21/14 09:50	04/25/14 22:46	1
2-Fluorobiphenyl (Surr)	98		53 - 113				04/21/14 09:50	04/25/14 22:46	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
4,4'-DDE	1.7		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
4,4'-DDT	0.40	J p	1.7	0.39	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
beta-BHC	ND		1.7	0.32	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
alpha-Chlordane	2.2		1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
gamma-Chlordane	0.31	J	1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Dieldrin	ND		1.7	0.090	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endosulfan I	ND		1.7	0.051	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endosulfan II	ND		1.7	0.098	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endosulfan sulfate	ND	*	1.7	0.090	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endrin aldehyde	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Endrin ketone	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Heptachlor epoxide	0.27	J	1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Methoxychlor	ND		3.3	1.3	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Toxaphene	ND		66	20	ug/Kg		04/21/14 09:49	04/28/14 18:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		58 - 111				04/21/14 09:49	04/28/14 18:13	1
Tetrachloro-m-xylene	93		58 - 111				04/21/14 09:49	04/28/14 18:13	1
DCB Decachlorobiphenyl	113		49 - 119				04/21/14 09:49	04/28/14 18:13	1
DCB Decachlorobiphenyl	112		49 - 119				04/21/14 09:49	04/28/14 18:13	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	32	3.3	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1221	ND		32	5.1	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1232	ND		32	6.3	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1242	ND		32	7.3	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1248	ND		32	5.6	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1254	ND		32	2.7	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
PCB-1260	ND		32	2.9	ug/Kg		04/21/14 09:47	04/23/14 23:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	113		77 - 123				04/21/14 09:47	04/23/14 23:06	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Date Collected: 04/10/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.86	J q	0.97	0.18	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,7,8-PeCDD	2.7	J	4.9	0.39	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,7,8-PeCDF	0.77	J q	4.9	0.23	pg/g		04/22/14 13:58	04/24/14 23:20	1
2,3,4,7,8-PeCDF	0.67	J q	4.9	0.24	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,4,7,8-HxCDD	7.6		4.9	0.65	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,6,7,8-HxCDD	19		4.9	0.56	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,7,8,9-HxCDD	15		4.9	0.54	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,4,7,8-HxCDF	3.1	J	4.9	0.36	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,6,7,8-HxCDF	2.6	J	4.9	0.32	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,7,8,9-HxCDF	ND		4.9	0.38	pg/g		04/22/14 13:58	04/24/14 23:20	1
2,3,4,6,7,8-HxCDF	1.9	J	4.9	0.35	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,4,6,7,8-HpCDD	610	G	5.8	5.8	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,4,6,7,8-HpCDF	68	B	4.9	1.1	pg/g		04/22/14 13:58	04/24/14 23:20	1
1,2,3,4,7,8,9-HpCDF	4.8	J	4.9	1.4	pg/g		04/22/14 13:58	04/24/14 23:20	1
OCDD	6000	E G B	22	22	pg/g		04/22/14 13:58	04/24/14 23:20	1
OCDF	160		9.7	0.86	pg/g		04/22/14 13:58	04/24/14 23:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-2,3,7,8-TCDF	58		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,7,8-PeCDD	55		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,7,8-PeCDF	56		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,6,7,8-HxCDD	61		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-1,2,3,4,6,7,8-HpCDF	63		40 - 135				04/22/14 13:58	04/24/14 23:20	1
13C-OCDD	85		40 - 135				04/22/14 13:58	04/24/14 23:20	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.75	J	0.97	0.10	pg/g		04/22/14 13:58	04/25/14 21:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	56		40 - 135				04/22/14 13:58	04/25/14 21:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		5.0	3.2	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Barium	21		2.5	0.30	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Cadmium	0.26	J	0.50	0.075	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Chromium	51		1.2	0.35	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Lead	31		2.5	0.65	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Selenium	ND		5.0	3.5	mg/Kg		04/23/14 06:45	04/29/14 13:20	5
Silver	ND		1.2	0.22	mg/Kg		04/23/14 06:45	04/29/14 13:20	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.036		0.023	0.0050	mg/Kg		04/28/14 11:39	04/28/14 16:18	1

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Date Collected: 04/11/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9	0.46	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Acenaphthylene	0.88	J	4.9	0.33	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Anthracene	1.6	J	4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Benzo[a]anthracene	6.2		4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Benzo[a]pyrene	8.3		4.9	0.39	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Benzo[b]fluoranthene	23		4.9	0.50	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Benzo[g,h,i]perylene	12		4.9	0.99	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Benzo[k]fluoranthene	8.6		4.9	0.75	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Chrysene	22		4.9	0.34	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Dibenz(a,h)anthracene	5.4		4.9	1.2	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Fluoranthene	29		4.9	0.29	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Fluorene	ND		4.9	0.48	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Indeno[1,2,3-cd]pyrene	6.6		4.9	0.47	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Naphthalene	1.7	J	4.9	0.30	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Phenanthrene	13		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Pyrene	24		4.9	0.35	ug/Kg		04/21/14 09:50	04/25/14 23:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	98		53 - 113				04/21/14 09:50	04/25/14 23:15	1
Terphenyl-d14	95		70 - 144				04/21/14 09:50	04/25/14 23:15	1
2-Fluorobiphenyl (Surr)	93		53 - 113				04/21/14 09:50	04/25/14 23:15	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	5.3		0.99	0.30	mg/Kg		04/18/14 11:19	04/21/14 16:19	1
Motor Oil Range Organics [C24-C36]	56		5.0	1.6	mg/Kg		04/18/14 11:19	04/21/14 16:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	100		63 - 141				04/18/14 11:19	04/21/14 16:19	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	1.8		1.7	0.26	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
4,4'-DDE	1.0	J E p	1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
delta-BHC	0.32	J	1.7	0.16	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
alpha-Chlordane	0.38	J E p	1.7	0.20	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
gamma-Chlordane	0.23	J p	1.7	0.053	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Dieldrin	0.096	J p	1.7	0.091	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endosulfan sulfate	ND	*	1.7	0.092	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endrin aldehyde	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/28/14 18:49	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Date Collected: 04/11/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/28/14 18:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		58 - 111				04/21/14 09:49	04/28/14 18:49	1
Tetrachloro-m-xylene	90		58 - 111				04/21/14 09:49	04/28/14 18:49	1
DCB Decachlorobiphenyl	113		49 - 119				04/21/14 09:49	04/28/14 18:49	1
DCB Decachlorobiphenyl	117		49 - 119				04/21/14 09:49	04/28/14 18:49	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	*	33	3.4	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 23:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	103		77 - 123				04/21/14 09:47	04/23/14 23:26	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.0		1.0	0.14	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,7,8-PeCDD	5.9		5.0	0.41	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,7,8-PeCDF	0.87	J q	5.0	0.27	pg/g		04/22/14 13:58	04/25/14 00:03	1
2,3,4,7,8-PeCDF	1.2	J	5.0	0.28	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,4,7,8-HxCDD	14		5.0	0.94	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,6,7,8-HxCDD	39		5.0	0.80	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,7,8,9-HxCDD	30		5.0	0.77	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,4,7,8-HxCDF	7.1		5.0	0.73	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,6,7,8-HxCDF	6.5		5.0	0.65	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.77	pg/g		04/22/14 13:58	04/25/14 00:03	1
2,3,4,6,7,8-HxCDF	5.1		5.0	0.71	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,4,6,7,8-HpCDD	1400	G	13	13	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,4,6,7,8-HpCDF	180	B	5.0	2.6	pg/g		04/22/14 13:58	04/25/14 00:03	1
1,2,3,4,7,8,9-HpCDF	14		5.0	3.3	pg/g		04/22/14 13:58	04/25/14 00:03	1
OCDD	12000	E G B	46	46	pg/g		04/22/14 13:58	04/25/14 00:03	1
OCDF	430		10	1.8	pg/g		04/22/14 13:58	04/25/14 00:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-2,3,7,8-TCDF	62		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,7,8-PeCDD	59		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,7,8-PeCDF	61		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135				04/22/14 13:58	04/25/14 00:03	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135				04/22/14 13:58	04/25/14 00:03	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Date Collected: 04/11/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDD	89		40 - 135	04/22/14 13:58	04/25/14 00:03	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.63	J	1.0	0.097	pg/g		04/22/14 13:58	04/25/14 20:33	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C-2,3,7,8-TCDF	60		40 - 135	04/22/14 13:58	04/25/14 20:33	1			

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		5.0	3.2	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Barium	20		2.5	0.30	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Cadmium	0.21	J	0.50	0.074	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Chromium	86		1.2	0.35	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Lead	23		2.5	0.64	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Selenium	ND		5.0	3.5	mg/Kg		04/23/14 06:45	04/29/14 12:21	5
Silver	ND		1.2	0.22	mg/Kg		04/23/14 06:45	04/29/14 12:21	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042		0.024	0.0051	mg/Kg		04/28/14 11:39	04/28/14 16:20	1

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/L		3.6	TEQ
Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.9	0.28	pg/L	1	0.00	8290A
2,3,7,8-TCDF	1.0	J B	9.9	0.18	pg/L	0.1	0.10	8290A
1,2,3,7,8-PeCDD	1.2	J	50	0.40	pg/L	1	1.2	8290A
1,2,3,7,8-PeCDF	1.1	J q B	50	0.26	pg/L	0.03	0.033	8290A
2,3,4,7,8-PeCDF	1.6	J B	50	0.27	pg/L	0.3	0.48	8290A
1,2,3,4,7,8-HxCDD	2.0	J q B	50	0.31	pg/L	0.1	0.20	8290A
1,2,3,6,7,8-HxCDD	1.6	J q B	50	0.24	pg/L	0.1	0.16	8290A
1,2,3,7,8,9-HxCDD	1.5	J q B	50	0.23	pg/L	0.1	0.15	8290A
1,2,3,4,7,8-HxCDF	7.0	J B	50	0.39	pg/L	0.1	0.70	8290A
1,2,3,6,7,8-HxCDF	2.2	J B	50	0.31	pg/L	0.1	0.22	8290A
1,2,3,7,8,9-HxCDF	1.5	J B	50	0.38	pg/L	0.1	0.15	8290A
2,3,4,6,7,8-HxCDF	1.0	J B	50	0.35	pg/L	0.1	0.10	8290A
1,2,3,4,6,7,8-HpCDD	ND		50	0.39	pg/L	0.01	0.00	8290A
1,2,3,4,6,7,8-HpCDF	14	J B	50	0.50	pg/L	0.01	0.14	8290A
1,2,3,4,7,8,9-HpCDF	ND		50	0.59	pg/L	0.01	0.00	8290A
OCDD	18	J B	99	0.43	pg/L	0.0003	0.0054	8290A
OCDF	8.6	J q B	99	0.59	pg/L	0.0003	0.0026	8290A

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/L		3.8	TEQ
Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.9	0.28	pg/L	1	0.00	8290A
2,3,7,8-TCDF	1.5	J q B	9.9	0.21	pg/L	0.1	0.15	8290A
1,2,3,7,8-PeCDD	ND		50	0.38	pg/L	1	0.00	8290A
1,2,3,7,8-PeCDF	1.7	J q B	50	0.29	pg/L	0.03	0.051	8290A
2,3,4,7,8-PeCDF	2.3	J B	50	0.30	pg/L	0.3	0.69	8290A
1,2,3,4,7,8-HxCDD	1.9	J B	50	0.37	pg/L	0.1	0.19	8290A
1,2,3,6,7,8-HxCDD	1.5	J q B	50	0.29	pg/L	0.1	0.15	8290A
1,2,3,7,8,9-HxCDD	1.7	J q B	50	0.28	pg/L	0.1	0.17	8290A
1,2,3,4,7,8-HxCDF	12	J B	50	0.43	pg/L	0.1	1.2	8290A
1,2,3,6,7,8-HxCDF	3.7	J q B	50	0.34	pg/L	0.1	0.37	8290A
1,2,3,7,8,9-HxCDF	2.5	J B	50	0.42	pg/L	0.1	0.25	8290A
2,3,4,6,7,8-HxCDF	1.8	J q B	50	0.39	pg/L	0.1	0.18	8290A
1,2,3,4,6,7,8-HpCDD	4.9	J B	50	0.44	pg/L	0.01	0.049	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

TestAmerica Sacramento

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-02 (Continued)

Lab Sample ID: 320-7028-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
1,2,3,4,6,7,8-HpCDF	29	J B	50	0.53	pg/L	0.01	0.29	8290A
1,2,3,4,7,8,9-HpCDF	3.4	J	50	0.63	pg/L	0.01	0.034	8290A
OCDD	22	J B	99	0.58	pg/L	0.0003	0.0066	8290A
OCDF	30	J B	99	0.72	pg/L	0.0003	0.0090	8290A

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
Total Dioxin/Furan TEQ					pg/L		2.6	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,7,8-TCDD	ND		12	0.33	pg/L	1	0.00	8290A
2,3,7,8-TCDF	1.5	J B	12	0.23	pg/L	0.1	0.15	8290A
1,2,3,7,8-PeCDD	ND		59	0.41	pg/L	1	0.00	8290A
1,2,3,7,8-PeCDF	1.7	J B	59	0.35	pg/L	0.03	0.051	8290A
2,3,4,7,8-PeCDF	1.6	J B	59	0.37	pg/L	0.3	0.48	8290A
1,2,3,4,7,8-HxCDD	0.68	J q B	59	0.33	pg/L	0.1	0.068	8290A
1,2,3,6,7,8-HxCDD	1.0	J B	59	0.26	pg/L	0.1	0.10	8290A
1,2,3,7,8,9-HxCDD	0.91	J B	59	0.25	pg/L	0.1	0.091	8290A
1,2,3,4,7,8-HxCDF	9.1	J B	59	0.45	pg/L	0.1	0.91	8290A
1,2,3,6,7,8-HxCDF	3.5	J B	59	0.35	pg/L	0.1	0.35	8290A
1,2,3,7,8,9-HxCDF	ND		59	0.44	pg/L	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	1.3	J B	59	0.41	pg/L	0.1	0.13	8290A
1,2,3,4,6,7,8-HpCDD	2.5	J B	59	0.29	pg/L	0.01	0.025	8290A
1,2,3,4,6,7,8-HpCDF	23	J B	59	0.43	pg/L	0.01	0.23	8290A
1,2,3,4,7,8,9-HpCDF	1.9	J q	59	0.51	pg/L	0.01	0.019	8290A
OCDD	8.2	J q B	120	0.42	pg/L	0.0003	0.0025	8290A
OCDF	16	J B	120	0.62	pg/L	0.0003	0.0048	8290A

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
Total Dioxin/Furan TEQ					pg/L		0.084	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,7,8-TCDD	ND		10	0.30	pg/L	1	0.00	8290A
2,3,7,8-TCDF	ND		10	0.17	pg/L	0.1	0.00	8290A
1,2,3,7,8-PeCDD	ND		51	0.32	pg/L	1	0.00	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW02-01 (Continued)

Lab Sample ID: 320-7028-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
1,2,3,7,8-PeCDF	ND		51	0.22	pg/L	0.03	0.00	8290A
2,3,4,7,8-PeCDF	ND		51	0.23	pg/L	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	ND		51	0.26	pg/L	0.1	0.00	8290A
1,2,3,6,7,8-HxCDD	ND		51	0.20	pg/L	0.1	0.00	8290A
1,2,3,7,8,9-HxCDD	ND		51	0.19	pg/L	0.1	0.00	8290A
1,2,3,4,7,8-HxCDF	ND		51	0.33	pg/L	0.1	0.00	8290A
1,2,3,6,7,8-HxCDF	ND		51	0.26	pg/L	0.1	0.00	8290A
1,2,3,7,8,9-HxCDF	ND		51	0.32	pg/L	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	ND		51	0.30	pg/L	0.1	0.00	8290A
1,2,3,4,6,7,8-HpCDD	5.5	J B	51	0.34	pg/L	0.01	0.055	8290A
1,2,3,4,6,7,8-HpCDF	2.1	J q B	51	0.39	pg/L	0.01	0.021	8290A
1,2,3,4,7,8,9-HpCDF	ND		51	0.46	pg/L	0.01	0.00	8290A
OCDD	24	J q B	100	0.50	pg/L	0.0003	0.0072	8290A
OCDF	2.7	J B	100	0.52	pg/L	0.0003	0.00081	8290A

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/L		0.0097	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.5	0.20	pg/L	1	0.00	8290A
2,3,7,8-TCDF	ND		9.5	0.14	pg/L	0.1	0.00	8290A
1,2,3,7,8-PeCDD	ND		48	0.28	pg/L	1	0.00	8290A
1,2,3,7,8-PeCDF	ND		48	0.19	pg/L	0.03	0.00	8290A
2,3,4,7,8-PeCDF	ND		48	0.20	pg/L	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	ND		48	0.21	pg/L	0.1	0.00	8290A
1,2,3,6,7,8-HxCDD	ND		48	0.16	pg/L	0.1	0.00	8290A
1,2,3,7,8,9-HxCDD	ND		48	0.15	pg/L	0.1	0.00	8290A
1,2,3,4,7,8-HxCDF	ND		48	0.19	pg/L	0.1	0.00	8290A
1,2,3,6,7,8-HxCDF	ND		48	0.15	pg/L	0.1	0.00	8290A
1,2,3,7,8,9-HxCDF	ND		48	0.19	pg/L	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	ND		48	0.17	pg/L	0.1	0.00	8290A
1,2,3,4,6,7,8-HpCDD	ND		48	0.23	pg/L	0.01	0.00	8290A
1,2,3,4,6,7,8-HpCDF	0.91	J q B	48	0.18	pg/L	0.01	0.0091	8290A
1,2,3,4,7,8,9-HpCDF	ND		48	0.21	pg/L	0.01	0.00	8290A
OCDD	1.3	J q B	95	0.24	pg/L	0.0003	0.00039	8290A
OCDF	0.70	J B	95	0.32	pg/L	0.0003	0.00021	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2.4	TEQ
WHO 2005 ND = 0								
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.0	0.094	pg/g	1	0.00	8290A
2,3,7,8-TCDF	0.46	J	1.0	0.075	pg/g	0.1	0.046	8290A
1,2,3,7,8-PeCDD	0.54	J	5.1	0.24	pg/g	1	0.54	8290A
1,2,3,7,8-PeCDF	0.29	J	5.1	0.16	pg/g	0.03	0.0087	8290A
2,3,4,7,8-PeCDF	ND		5.1	0.17	pg/g	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	1.1	J	5.1	0.13	pg/g	0.1	0.11	8290A
1,2,3,6,7,8-HxCDD	2.4	J	5.1	0.11	pg/g	0.1	0.24	8290A
1,2,3,7,8,9-HxCDD	2.3	J	5.1	0.11	pg/g	0.1	0.23	8290A
1,2,3,4,7,8-HxCDF	0.63	J	5.1	0.099	pg/g	0.1	0.063	8290A
1,2,3,6,7,8-HxCDF	0.43	J	5.1	0.088	pg/g	0.1	0.043	8290A
1,2,3,7,8,9-HxCDF	ND		5.1	0.10	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	0.55	J	5.1	0.096	pg/g	0.1	0.055	8290A
1,2,3,4,6,7,8-HpCDD	75		5.1	0.73	pg/g	0.01	0.75	8290A
1,2,3,4,6,7,8-HpCDF	10	B	5.1	0.23	pg/g	0.01	0.10	8290A
1,2,3,4,7,8,9-HpCDF	0.90	J	5.1	0.29	pg/g	0.01	0.0090	8290A
OCDD	660	B	10	3.1	pg/g	0.0003	0.20	8290A
OCDF	25		10	0.21	pg/g	0.0003	0.0075	8290A

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ
WHO 2005 ND = 0								
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	0.16	J q	0.98	0.075	pg/g	1	0.16	8290A
2,3,7,8-TCDF	0.21	J q	0.98	0.059	pg/g	0.1	0.021	8290A
1,2,3,7,8-PeCDD	0.47	J	4.9	0.16	pg/g	1	0.47	8290A
1,2,3,7,8-PeCDF	0.17	J q	4.9	0.11	pg/g	0.03	0.0051	8290A
2,3,4,7,8-PeCDF	ND		4.9	0.11	pg/g	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	1.0	J	4.9	0.13	pg/g	0.1	0.10	8290A
1,2,3,6,7,8-HxCDD	2.5	J	4.9	0.11	pg/g	0.1	0.25	8290A
1,2,3,7,8,9-HxCDD	2.3	J q	4.9	0.11	pg/g	0.1	0.23	8290A
1,2,3,4,7,8-HxCDF	0.49	J	4.9	0.072	pg/g	0.1	0.049	8290A
1,2,3,6,7,8-HxCDF	0.40	J	4.9	0.064	pg/g	0.1	0.040	8290A
1,2,3,7,8,9-HxCDF	ND		4.9	0.076	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	0.32	J	4.9	0.070	pg/g	0.1	0.032	8290A
1,2,3,4,6,7,8-HpCDD	76		4.9	0.67	pg/g	0.01	0.76	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02 (Continued)

Lab Sample ID: 320-7028-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
1,2,3,4,6,7,8-HpCDF	11	B	4.9	0.18	pg/g	0.01	0.11	8290A
1,2,3,4,7,8,9-HpCDF	0.81	J	4.9	0.22	pg/g	0.01	0.0081	8290A
OCDD	730	B	9.8	3.1	pg/g	0.0003	0.22	8290A
OCDF	24		9.8	0.19	pg/g	0.0003	0.0072	8290A

Client Sample ID: DU09-03

Lab Sample ID: 320-7028-8

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2.7	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.18	J q	1.0	0.085	pg/g	1	0.18	8290A
2,3,7,8-TCDF	0.34	J	1.0	0.059	pg/g	0.1	0.034	8290A
1,2,3,7,8-PeCDD	0.51	J	5.0	0.16	pg/g	1	0.51	8290A
1,2,3,7,8-PeCDF	ND		5.0	0.090	pg/g	0.03	0.00	8290A
2,3,4,7,8-PeCDF	0.15	J q	5.0	0.096	pg/g	0.3	0.045	8290A
1,2,3,4,7,8-HxCDD	1.2	J	5.0	0.17	pg/g	0.1	0.12	8290A
1,2,3,6,7,8-HxCDD	2.6	J	5.0	0.14	pg/g	0.1	0.26	8290A
1,2,3,7,8,9-HxCDD	2.7	J	5.0	0.14	pg/g	0.1	0.27	8290A
1,2,3,4,7,8-HxCDF	0.65	J	5.0	0.13	pg/g	0.1	0.065	8290A
1,2,3,6,7,8-HxCDF	0.41	J	5.0	0.12	pg/g	0.1	0.041	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.14	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	0.23	J q	5.0	0.13	pg/g	0.1	0.023	8290A
1,2,3,4,6,7,8-HpCDD	78		5.0	0.77	pg/g	0.01	0.78	8290A
1,2,3,4,6,7,8-HpCDF	11	B	5.0	0.21	pg/g	0.01	0.11	8290A
1,2,3,4,7,8,9-HpCDF	0.76	J	5.0	0.26	pg/g	0.01	0.0076	8290A
OCDD	710	B	10	3.3	pg/g	0.0003	0.21	8290A
OCDF	25		10	0.23	pg/g	0.0003	0.0075	8290A

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		16	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.83	J	1.0	0.11	pg/g	1	0.83	8290A
1,2,3,7,8-PeCDD	3.0	J	5.0	0.25	pg/g	1	3.0	8290A
1,2,3,7,8-PeCDF	0.45	J q	5.0	0.14	pg/g	0.03	0.014	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU03-01 (Continued)

Lab Sample ID: 320-7028-11

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,4,7,8-PeCDF	0.67	J	5.0	0.15	pg/g	0.3	0.20	8290A
1,2,3,4,7,8-HxCDD	6.7		5.0	0.50	pg/g	0.1	0.67	8290A
1,2,3,6,7,8-HxCDD	15		5.0	0.43	pg/g	0.1	1.5	8290A
1,2,3,7,8,9-HxCDD	14		5.0	0.41	pg/g	0.1	1.4	8290A
1,2,3,4,7,8-HxCDF	2.6	J	5.0	0.39	pg/g	0.1	0.26	8290A
1,2,3,6,7,8-HxCDF	2.2	J	5.0	0.34	pg/g	0.1	0.22	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.41	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	1.3	J q	5.0	0.38	pg/g	0.1	0.13	8290A
1,2,3,4,6,7,8-HpCDD	530		5.0	4.8	pg/g	0.01	5.3	8290A
1,2,3,4,6,7,8-HpCDF	61	B	5.0	1.1	pg/g	0.01	0.61	8290A
1,2,3,4,7,8,9-HpCDF	4.8	J	5.0	1.3	pg/g	0.01	0.048	8290A
OCDD	4900	E G B	18	18	pg/g	0.0003	1.5	8290A
OCDF	140		10	0.59	pg/g	0.0003	0.042	8290A
2,3,7,8-TCDF - RA	0.43	J	1.0	0.075	pg/g	0.1	0.043	8290A

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		24	TEQ
						ND = 0		
						WHO 2005		
						ND = 0		
2,3,7,8-TCDD	6.5		1.0	0.12	pg/g	1	6.5	8290A
1,2,3,7,8-PeCDD	2.3	J	5.0	0.30	pg/g	1	2.3	8290A
1,2,3,7,8-PeCDF	0.84	J q	5.0	0.17	pg/g	0.03	0.025	8290A
2,3,4,7,8-PeCDF	0.91	J	5.0	0.18	pg/g	0.3	0.27	8290A
1,2,3,4,7,8-HxCDD	4.5	J	5.0	0.36	pg/g	0.1	0.45	8290A
1,2,3,6,7,8-HxCDD	20		5.0	0.31	pg/g	0.1	2.0	8290A
1,2,3,7,8,9-HxCDD	13		5.0	0.30	pg/g	0.1	1.3	8290A
1,2,3,4,7,8-HxCDF	5.8		5.0	1.0	pg/g	0.1	0.58	8290A
1,2,3,6,7,8-HxCDF	3.6	J	5.0	0.92	pg/g	0.1	0.36	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	2.6	J	5.0	1.0	pg/g	0.1	0.26	8290A
1,2,3,4,6,7,8-HpCDD	640	G	5.4	5.4	pg/g	0.01	6.4	8290A
1,2,3,4,6,7,8-HpCDF	140	B	5.0	2.2	pg/g	0.01	1.4	8290A
1,2,3,4,7,8,9-HpCDF	9.3		5.0	2.7	pg/g	0.01	0.093	8290A
OCDD	6100	E G B	21	21	pg/g	0.0003	1.8	8290A
OCDF	350		10	1.3	pg/g	0.0003	0.11	8290A
2,3,7,8-TCDF - RA	0.49	J	1.0	0.11	pg/g	0.1	0.049	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		28	TEQ
WHO 2005 ND = 0								
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	3.7		1.0	0.16	pg/g	1	3.7	8290A
1,2,3,7,8-PeCDD	4.2	J	5.0	0.34	pg/g	1	4.2	8290A
1,2,3,7,8-PeCDF	1.2	J	5.0	0.20	pg/g	0.03	0.036	8290A
2,3,4,7,8-PeCDF	1.2	J	5.0	0.21	pg/g	0.3	0.36	8290A
1,2,3,4,7,8-HxCDD	7.2	q	5.0	0.60	pg/g	0.1	0.72	8290A
1,2,3,6,7,8-HxCDD	28		5.0	0.52	pg/g	0.1	2.8	8290A
1,2,3,7,8,9-HxCDD	21		5.0	0.50	pg/g	0.1	2.1	8290A
1,2,3,4,7,8-HxCDF	5.8		5.0	0.75	pg/g	0.1	0.58	8290A
1,2,3,6,7,8-HxCDF	4.4	J	5.0	0.66	pg/g	0.1	0.44	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.79	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	3.6	J	5.0	0.73	pg/g	0.1	0.36	8290A
1,2,3,4,6,7,8-HpCDD	820	G	6.5	6.5	pg/g	0.01	8.2	8290A
1,2,3,4,6,7,8-HpCDF	170	B	5.0	2.3	pg/g	0.01	1.7	8290A
1,2,3,4,7,8,9-HpCDF	11		5.0	2.9	pg/g	0.01	0.11	8290A
OCDD	6900	E G B	26	26	pg/g	0.0003	2.1	8290A
OCDF	440		10	1.6	pg/g	0.0003	0.13	8290A
2,3,7,8-TCDF - RA	0.98	J	1.0	0.11	pg/g	0.1	0.098	8290A

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		86	TEQ
WHO 2005 ND = 0								
Analyte	Result	Qualifier	RL	EDL	Unit	TEF	TEQ	Method
2,3,7,8-TCDD	4.6		0.99	0.46	pg/g	1	4.6	8290A
1,2,3,7,8-PeCDD	13		5.0	1.5	pg/g	1	13	8290A
1,2,3,7,8-PeCDF	5.3		5.0	0.44	pg/g	0.03	0.16	8290A
2,3,4,7,8-PeCDF	5.5		5.0	0.47	pg/g	0.3	1.7	8290A
1,2,3,4,7,8-HxCDD	32		5.0	1.8	pg/g	0.1	3.2	8290A
1,2,3,6,7,8-HxCDD	90		5.0	1.5	pg/g	0.1	9.0	8290A
1,2,3,7,8,9-HxCDD	74		5.0	1.4	pg/g	0.1	7.4	8290A
1,2,3,4,7,8-HxCDF	16		5.0	1.6	pg/g	0.1	1.6	8290A
1,2,3,6,7,8-HxCDF	12		5.0	1.5	pg/g	0.1	1.2	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	1.7	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	9.7		5.0	1.6	pg/g	0.1	0.97	8290A
1,2,3,4,6,7,8-HpCDD	3100		50	32	pg/g	0.01	31	8290A
1,2,3,4,6,7,8-HpCDF	340	B	5.0	5.0	pg/g	0.01	3.4	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

TestAmerica Sacramento

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01 (Continued)

Lab Sample ID: 320-7028-16

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
1,2,3,4,7,8,9-HpCDF	25	G	6.3	6.3	pg/g	0.01	0.25	8290A
OCDD	26000	G B	100	100	pg/g	0.0003	7.8	8290A
OCDF	850		9.9	2.8	pg/g	0.0003	0.26	8290A
2,3,7,8-TCDF - RA	6.0		0.99	0.17	pg/g	0.1	0.60	8290A

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		170	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	4.9		0.99	0.48	pg/g	1	4.9	8290A
1,2,3,7,8-PeCDD	18		4.9	0.81	pg/g	1	18	8290A
1,2,3,7,8-PeCDF	6.1		4.9	0.50	pg/g	0.03	0.18	8290A
2,3,4,7,8-PeCDF	7.2		4.9	0.53	pg/g	0.3	2.2	8290A
1,2,3,4,7,8-HxCDD	60		4.9	2.9	pg/g	0.1	6.0	8290A
1,2,3,6,7,8-HxCDD	130		4.9	2.4	pg/g	0.1	13	8290A
1,2,3,7,8,9-HxCDD	110		4.9	2.4	pg/g	0.1	11	8290A
1,2,3,4,7,8-HxCDF	19		4.9	1.5	pg/g	0.1	1.9	8290A
1,2,3,6,7,8-HxCDF	15		4.9	1.4	pg/g	0.1	1.5	8290A
1,2,3,7,8,9-HxCDF	ND		4.9	1.6	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	12		4.9	1.5	pg/g	0.1	1.2	8290A
1,2,3,4,6,7,8-HpCDD	7100		99	99	pg/g	0.01	71	8290A
1,2,3,4,6,7,8-HpCDF	410	G B	7.8	7.8	pg/g	0.01	4.1	8290A
1,2,3,4,7,8,9-HpCDF	39	G	9.9	9.9	pg/g	0.01	0.39	8290A
OCDD	98000	E G B	470	470	pg/g	0.0003	29	8290A
OCDF	1300		9.9	4.3	pg/g	0.0003	0.39	8290A
2,3,7,8-TCDF - RA	7.8		0.99	0.19	pg/g	0.1	0.78	8290A

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		17	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.86	J q	0.97	0.18	pg/g	1	0.86	8290A
1,2,3,7,8-PeCDD	2.7	J	4.9	0.39	pg/g	1	2.7	8290A
1,2,3,7,8-PeCDF	0.77	J q	4.9	0.23	pg/g	0.03	0.023	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU04-01 (Continued)

Lab Sample ID: 320-7028-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
2,3,4,7,8-PeCDF	0.67	J q	4.9	0.24	pg/g	0.3	0.20	8290A
1,2,3,4,7,8-HxCDD	7.6		4.9	0.65	pg/g	0.1	0.76	8290A
1,2,3,6,7,8-HxCDD	19		4.9	0.56	pg/g	0.1	1.9	8290A
1,2,3,7,8,9-HxCDD	15		4.9	0.54	pg/g	0.1	1.5	8290A
1,2,3,4,7,8-HxCDF	3.1	J	4.9	0.36	pg/g	0.1	0.31	8290A
1,2,3,6,7,8-HxCDF	2.6	J	4.9	0.32	pg/g	0.1	0.26	8290A
1,2,3,7,8,9-HxCDF	ND		4.9	0.38	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	1.9	J	4.9	0.35	pg/g	0.1	0.19	8290A
1,2,3,4,6,7,8-HpCDD	610	G	5.8	5.8	pg/g	0.01	6.1	8290A
1,2,3,4,6,7,8-HpCDF	68	B	4.9	1.1	pg/g	0.01	0.68	8290A
1,2,3,4,7,8,9-HpCDF	4.8	J	4.9	1.4	pg/g	0.01	0.048	8290A
OCDD	6000	E G B	22	22	pg/g	0.0003	1.8	8290A
OCDF	160		9.7	0.86	pg/g	0.0003	0.048	8290A
2,3,7,8-TCDF - RA	0.75	J	0.97	0.10	pg/g	0.1	0.075	8290A

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		38	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						ND = 0		
						TEF	TEQ	
2,3,7,8-TCDD	2.0		1.0	0.14	pg/g	1	2.0	8290A
1,2,3,7,8-PeCDD	5.9		5.0	0.41	pg/g	1	5.9	8290A
1,2,3,7,8-PeCDF	0.87	J q	5.0	0.27	pg/g	0.03	0.026	8290A
2,3,4,7,8-PeCDF	1.2	J	5.0	0.28	pg/g	0.3	0.36	8290A
1,2,3,4,7,8-HxCDD	14		5.0	0.94	pg/g	0.1	1.4	8290A
1,2,3,6,7,8-HxCDD	39		5.0	0.80	pg/g	0.1	3.9	8290A
1,2,3,7,8,9-HxCDD	30		5.0	0.77	pg/g	0.1	3.0	8290A
1,2,3,4,7,8-HxCDF	7.1		5.0	0.73	pg/g	0.1	0.71	8290A
1,2,3,6,7,8-HxCDF	6.5		5.0	0.65	pg/g	0.1	0.65	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.77	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	5.1		5.0	0.71	pg/g	0.1	0.51	8290A
1,2,3,4,6,7,8-HpCDD	1400	G	13	13	pg/g	0.01	14	8290A
1,2,3,4,6,7,8-HpCDF	180	B	5.0	2.6	pg/g	0.01	1.8	8290A
1,2,3,4,7,8,9-HpCDF	14		5.0	3.3	pg/g	0.01	0.14	8290A
OCDD	12000	E G B	46	46	pg/g	0.0003	3.6	8290A
OCDF	430		10	1.8	pg/g	0.0003	0.13	8290A
2,3,7,8-TCDF - RA	0.63	J	1.0	0.097	pg/g	0.1	0.063	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Surrogate Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		NBZ (53-113)	TPH (70-144)	FBP (53-113)
320-7028-6	DU09-01	98	104	99
320-7028-6 DU	DU09-01	100	100	95
320-7028-6 MS	DU09-01	100	100	97
320-7028-6 MSD	DU09-01	104	99	100
320-7028-6 TRL	TRIP	99	98	95
320-7028-7	DU09-02	99	98	96
320-7028-8	DU09-03	95	94	91
320-7028-9	DU08-01	81	101	88
320-7028-10	DU07-01	87	95	85
320-7028-11	DU03-01	87	100	89
320-7028-12	DU02-01	92	106	95
320-7028-13	DU06-01	90	97	87
320-7028-14	SB02-01		99	96
320-7028-14 - DL	SB02-01	0 X	103	97
320-7028-15	SB03-01	102	96	93
320-7028-16	SB04-01	102	97	97
320-7028-17	SB04-02	101	94	96
320-7028-18	DU05-01	97	99	93
320-7028-19	DU04-01	103	99	98
320-7028-20	DU01-01	98	95	93
LCS 320-40868/2-A	Lab Control Sample	96	96	92
MB 320-40868/1-A	Method Blank	95	98	100

Surrogate Legend

NBZ = Nitrobenzene-d5
 TPH = Terphenyl-d14
 FBP = 2-Fluorobiphenyl (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		NBZ (20-123)	TPH (46-137)	FBP (31-107)
320-7028-1	MW04-01	88	107	87
320-7028-1 MS	MW04-01	93	101	87
320-7028-1 MSD	MW04-01	98	99	88
320-7028-2	MW04-02	82	99	81
320-7028-3	MW01-01	94	111	85
320-7028-4	MW02-01	99	97	90
320-7028-5	MW03-01	99	106	89
LCS 320-40471/2-A	Lab Control Sample	91	102	86
MB 320-40471/1-A	Method Blank	88	111	81

Surrogate Legend

NBZ = Nitrobenzene-d5
 TPH = Terphenyl-d14
 FBP = 2-Fluorobiphenyl (Surr)

Surrogate Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	OTPH1 (63-141)				
320-7028-14	SB02-01	99 D				
320-7028-15	SB03-01	101				
320-7028-16	SB04-01	89				
320-7028-17	SB04-02	102				
320-7028-20	DU01-01	100				
320-7028-20 MS	DU01-01	102				
320-7028-20 MSD	DU01-01	99				
LCS 320-40783/2-B	Lab Control Sample	97				
MB 320-40783/1-B	Method Blank	100				
Surrogate Legend						
OTPH = o-Terphenyl (Surr)						

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	OTPH1 (56-145)				
320-7028-1	MW04-01	93				
320-7028-1 MS	MW04-01	90				
320-7028-1 MSD	MW04-01	90				
320-7028-2	MW04-02	92				
320-7028-3	MW01-01	94				
320-7028-4	MW02-01	92				
320-7028-5	MW03-01	93				
LCS 320-40475/2-A	Lab Control Sample	90				
MB 320-40475/1-A	Method Blank	91				
Surrogate Legend						
OTPH = o-Terphenyl (Surr)						

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TCX1 (58-111)	TCX2 (58-111)	DCB1 (49-119)	DCB2 (49-119)	
320-7028-6	DU09-01	93		95		
320-7028-6 DU	DU09-01	92		94		
320-7028-6 MS	DU09-01	84		93		
320-7028-6 MSD	DU09-01	87		100		
320-7028-6 TRL	TRIP	90		95		
320-7028-7	DU09-02	93	92	100	102	
320-7028-8	DU09-03	92	91	98	99	
320-7028-9	DU08-01	87	85	90	96	
320-7028-10	DU07-01	88	89	95	102	
320-7028-11	DU03-01	84	85	96	109	
320-7028-12	DU02-01	101	106	108	115	
320-7028-13	DU06-01	97	90	112	132 X	

TestAmerica Sacramento

Surrogate Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (58-111)	TCX2 (58-111)	DCB1 (49-119)	DCB2 (49-119)
320-7028-14	SB02-01	111	79	116	115
320-7028-15	SB03-01	91	88	98	104
320-7028-16	SB04-01		85 p		149 X
320-7028-17	SB04-02	98	92	133 X	143 X
320-7028-18	DU05-01	92	88	117	123 X
320-7028-19	DU04-01	96	93	113	112
320-7028-20	DU01-01	96	90	113	117
LCS 320-40858/2-B	Lab Control Sample	91		98	
LCS 320-40858/3-B	Lab Control Sample	88		92	
MB 320-40858/1-B	Method Blank	96	92	99	100

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (44-114)	DCB1 (12-131)
320-7028-1	MW04-01	83	52
320-7028-1 MS	MW04-01	98	42
320-7028-1 MSD	MW04-01	82	52
320-7028-2	MW04-02	83	43
320-7028-3	MW01-01	81	82
320-7028-4	MW02-01	81	53
320-7028-5	MW03-01	82	97
LCS 320-40476/2-A	Lab Control Sample	62	68
LCS 320-40476/3-A	Lab Control Sample	58	46
MB 320-40476/1-A	Method Blank	56	34

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCB1 (77-123)
320-7028-6	DU09-01	113
320-7028-6 DU	DU09-01	123
320-7028-6 MS	DU09-01	111
320-7028-6 MSD	DU09-01	105
320-7028-6 TRL	TRIP	106
320-7028-7	DU09-02	106
320-7028-8	DU09-03	108
320-7028-9	DU08-01	101

TestAmerica Sacramento

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (77-123)
320-7028-10	DU07-01	114
320-7028-11	DU03-01	111
320-7028-12	DU02-01	97
320-7028-13	DU06-01	104
320-7028-14	SB02-01	108
320-7028-15	SB03-01	96
320-7028-16	SB04-01	151 X
320-7028-17	SB04-02	122
320-7028-18	DU05-01	110
320-7028-19	DU04-01	113
320-7028-20	DU01-01	103
LCS 320-40857/2-B	Lab Control Sample	123
MB 320-40857/1-B	Method Blank	110

Surrogate Legend

DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (29-128)
320-7028-1	MW04-01	57
320-7028-1 MS	MW04-01	48
320-7028-1 MSD	MW04-01	51
320-7028-2	MW04-02	45
320-7028-3	MW01-01	90
320-7028-4	MW02-01	50
320-7028-5	MW03-01	102
LCS 320-40477/2-A	Lab Control Sample	45
MB 320-40477/1-A	Method Blank	38

Surrogate Legend

DCB = DCB Decachlorobiphenyl

Isotope Dilution Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
320-7028-6	DU09-01	64	64	63	65	69	79	70	65
320-7028-6 DU	DU09-01	61	62	59	59	66	77	74	67
320-7028-6 MS	DU09-01	63	65	65	63	70	77	74	68
320-7028-6 MSD	DU09-01	65	63	64	63	68	75	73	69
320-7028-6 TRL	TRIP	69	70	66	69	66 q	80	76	71
320-7028-7	DU09-02	70	70	72	71	74	84	78	72
320-7028-8	DU09-03	67	67	67	68	69	82	76	70
320-7028-11	DU03-01	66	67	61	63	73	82	75	69
320-7028-11 - RA	DU03-01		66						
320-7028-14	SB02-01	65	67	63	65	70	73	70	65
320-7028-14 - RA	SB02-01		64						
320-7028-15	SB03-01	67	67	65	67	74	79	75	70
320-7028-15 - RA	SB03-01		68						
320-7028-16	SB04-01	69	70	67	67	74	84		73
320-7028-16	SB04-01							78	
320-7028-16 - RA	SB04-01		68						
320-7028-17	SB04-02	74	78	69	73	70	83		63
320-7028-17	SB04-02							68	
320-7028-17 - RA	SB04-02		75						
320-7028-19	DU04-01	57	58	55	56	61	69	68	63
320-7028-19 - RA	DU04-01		56						
320-7028-20	DU01-01	61	62	59	61	70	71	70	64
320-7028-20 - RA	DU01-01		60						
LCS 320-41002/2-A	Lab Control Sample	63	64	60	63	68	80	70	64
MB 320-41002/1-A	Method Blank	61	62	61	61	64	73	68	64

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		OCDD (40-135)							
320-7028-6	DU09-01	85							
320-7028-6 DU	DU09-01	87							
320-7028-6 MS	DU09-01	88							
320-7028-6 MSD	DU09-01	82							
320-7028-6 TRL	TRIP	89							
320-7028-7	DU09-02	90							
320-7028-8	DU09-03	91							
320-7028-11	DU03-01	97							
320-7028-11 - RA	DU03-01								
320-7028-14	SB02-01	90							
320-7028-14 - RA	SB02-01								
320-7028-15	SB03-01	93							
320-7028-15 - RA	SB03-01								
320-7028-16	SB04-01	113							
320-7028-16	SB04-01	94							
320-7028-16 - RA	SB04-01								
320-7028-17	SB04-02	81							
320-7028-17	SB04-02	69							
320-7028-17 - RA	SB04-02								
320-7028-19	DU04-01	85							
320-7028-19 - RA	DU04-01								

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Isotope Dilution Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-7028-20	DU01-01	89
320-7028-20 - RA	DU01-01	
LCS 320-41002/2-A	Lab Control Sample	79
MB 320-41002/1-A	Method Blank	75

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF1 = 13C-1,2,3,7,8-PeCDF
 HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
 HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
 OCDD = 13C-OCDD

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
320-7028-1	MW04-01	85	89	76	79	75	80	84	82
320-7028-1 MS	MW04-01	85	90	81	80	83	81	83	78
320-7028-1 MSD	MW04-01	89	94	87	85	89	88	103	96
320-7028-2	MW04-02	88	98	84	86	75	79	86	80
320-7028-3	MW01-01	85	92	82	85	99	92	101	99
320-7028-4	MW02-01	79	87	77	79	69	65	82	76
320-7028-5	MW03-01	86	93	86	85	85	90	93	93
LCS 320-40582/2-A	Lab Control Sample	87	94	84	86	96	93	99	95
MB 320-40582/1-A	Method Blank	92	99	90	91	90	90	102	93

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-7028-1	MW04-01	79
320-7028-1 MS	MW04-01	77
320-7028-1 MSD	MW04-01	91
320-7028-2	MW04-02	76
320-7028-3	MW01-01	93
320-7028-4	MW02-01	71
320-7028-5	MW03-01	88
LCS 320-40582/2-A	Lab Control Sample	92
MB 320-40582/1-A	Method Blank	83

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF1 = 13C-1,2,3,7,8-PeCDF
 HxCDD2 = 13C-1,2,3,6,7,8-HxCDD

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Isotope Dilution Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-40471/1-A

Matrix: Water

Analysis Batch: 40621

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50	3.2	ng/L		04/15/14 08:53	04/16/14 15:11	1
Acenaphthylene	ND		50	3.1	ng/L		04/15/14 08:53	04/16/14 15:11	1
Anthracene	ND		50	4.4	ng/L		04/15/14 08:53	04/16/14 15:11	1
Benzo[a]anthracene	ND		50	4.6	ng/L		04/15/14 08:53	04/16/14 15:11	1
Benzo[a]pyrene	ND		50	4.4	ng/L		04/15/14 08:53	04/16/14 15:11	1
Benzo[b]fluoranthene	ND		50	12	ng/L		04/15/14 08:53	04/16/14 15:11	1
Benzo[g,h,i]perylene	ND		50	5.5	ng/L		04/15/14 08:53	04/16/14 15:11	1
Benzo[k]fluoranthene	ND		50	7.8	ng/L		04/15/14 08:53	04/16/14 15:11	1
Chrysene	ND		50	4.0	ng/L		04/15/14 08:53	04/16/14 15:11	1
Dibenz(a,h)anthracene	ND		50	15	ng/L		04/15/14 08:53	04/16/14 15:11	1
Fluoranthene	ND		50	4.3	ng/L		04/15/14 08:53	04/16/14 15:11	1
Fluorene	ND		50	4.0	ng/L		04/15/14 08:53	04/16/14 15:11	1
Indeno[1,2,3-cd]pyrene	ND		50	14	ng/L		04/15/14 08:53	04/16/14 15:11	1
Naphthalene	ND		50	3.7	ng/L		04/15/14 08:53	04/16/14 15:11	1
Phenanthrene	ND		50	6.3	ng/L		04/15/14 08:53	04/16/14 15:11	1
Pyrene	ND		50	4.2	ng/L		04/15/14 08:53	04/16/14 15:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	88		20 - 123	04/15/14 08:53	04/16/14 15:11	1
Terphenyl-d14	111		46 - 137	04/15/14 08:53	04/16/14 15:11	1
2-Fluorobiphenyl (Surr)	81		31 - 107	04/15/14 08:53	04/16/14 15:11	1

Lab Sample ID: LCS 320-40471/2-A

Matrix: Water

Analysis Batch: 40621

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	250	210		ng/L		84	45 - 105
Acenaphthylene	250	202		ng/L		81	43 - 103
Anthracene	250	226		ng/L		90	40 - 100
Benzo[a]anthracene	250	199		ng/L		79	54 - 117
Benzo[a]pyrene	250	204		ng/L		82	52 - 117
Benzo[b]fluoranthene	250	213		ng/L		85	50 - 124
Benzo[g,h,i]perylene	250	195		ng/L		78	39 - 118
Benzo[k]fluoranthene	250	212		ng/L		85	61 - 129
Chrysene	250	239		ng/L		95	57 - 117
Dibenz(a,h)anthracene	250	188		ng/L		75	38 - 123
Fluoranthene	250	228		ng/L		91	51 - 111
Fluorene	250	210		ng/L		84	44 - 106
Indeno[1,2,3-cd]pyrene	250	193		ng/L		77	36 - 123
Naphthalene	250	194		ng/L		78	42 - 105
Phenanthrene	250	227		ng/L		91	49 - 111
Pyrene	250	239		ng/L		96	54 - 114

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	91		20 - 123
Terphenyl-d14	102		46 - 137

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-40471/2-A
Matrix: Water
Analysis Batch: 40621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40471

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	86		31 - 107

Lab Sample ID: 320-7028-1 MS
Matrix: Water
Analysis Batch: 40621

Client Sample ID: MW04-01
Prep Type: Total/NA
Prep Batch: 40471

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Acenaphthene	ND		245	223		ng/L		91	45 - 105
Acenaphthylene	ND		245	234		ng/L		95	43 - 103
Anthracene	ND		245	246		ng/L		100	40 - 100
Benzo[a]anthracene	ND		245	215		ng/L		88	54 - 117
Benzo[a]pyrene	ND		245	225		ng/L		92	52 - 117
Benzo[b]fluoranthene	ND		245	207		ng/L		85	50 - 124
Benzo[g,h,i]perylene	ND		245	170		ng/L		69	39 - 118
Benzo[k]fluoranthene	ND		245	207		ng/L		85	61 - 129
Chrysene	ND		245	237		ng/L		97	57 - 117
Dibenz(a,h)anthracene	ND		245	166		ng/L		68	38 - 123
Fluoranthene	ND		245	244		ng/L		100	51 - 111
Fluorene	ND		245	225		ng/L		92	44 - 106
Indeno[1,2,3-cd]pyrene	ND		245	188		ng/L		77	36 - 123
Naphthalene	7.5	J	245	198		ng/L		78	42 - 105
Phenanthrene	ND		245	236		ng/L		96	49 - 111
Pyrene	ND		245	257		ng/L		105	54 - 114

Surrogate	MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	93		20 - 123
Terphenyl-d14	101		46 - 137
2-Fluorobiphenyl (Surr)	87		31 - 107

Lab Sample ID: 320-7028-1 MSD
Matrix: Water
Analysis Batch: 40621

Client Sample ID: MW04-01
Prep Type: Total/NA
Prep Batch: 40471

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Acenaphthene	ND		241	220		ng/L		92	45 - 105	1	30
Acenaphthylene	ND		241	224		ng/L		93	43 - 103	5	30
Anthracene	ND		241	239		ng/L		99	40 - 100	3	30
Benzo[a]anthracene	ND		241	208		ng/L		86	54 - 117	3	30
Benzo[a]pyrene	ND		241	211		ng/L		87	52 - 117	7	30
Benzo[b]fluoranthene	ND		241	204		ng/L		84	50 - 124	2	30
Benzo[g,h,i]perylene	ND		241	167		ng/L		69	39 - 118	2	30
Benzo[k]fluoranthene	ND		241	199		ng/L		83	61 - 129	4	30
Chrysene	ND		241	235		ng/L		97	57 - 117	1	30
Dibenz(a,h)anthracene	ND		241	138		ng/L		57	38 - 123	18	30
Fluoranthene	ND		241	240		ng/L		100	51 - 111	2	30
Fluorene	ND		241	221		ng/L		92	44 - 106	2	30
Indeno[1,2,3-cd]pyrene	ND		241	182		ng/L		76	36 - 123	3	30
Naphthalene	7.5	J	241	201		ng/L		80	42 - 105	1	30

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40621

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40471

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenanthrene	ND		241	234		ng/L		97	49 - 111	1	30
Pyrene	ND		241	249		ng/L		103	54 - 114	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5	98		20 - 123
Terphenyl-d14	99		46 - 137
2-Fluorobiphenyl (Surr)	88		31 - 107

Lab Sample ID: MB 320-40868/1-A

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.47	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Acenaphthylene	ND		5.0	0.33	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Anthracene	ND		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Benzo[a]anthracene	ND		5.0	0.30	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Benzo[a]pyrene	ND		5.0	0.40	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Benzo[b]fluoranthene	ND		5.0	0.51	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Benzo[g,h,i]perylene	ND		5.0	1.0	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Benzo[k]fluoranthene	ND		5.0	0.76	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Chrysene	ND		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Fluoranthene	ND		5.0	0.29	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Fluorene	ND		5.0	0.49	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.48	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Naphthalene	ND		5.0	0.31	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Phenanthrene	ND		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 13:26	1
Pyrene	ND		5.0	0.35	ug/Kg		04/21/14 09:50	04/25/14 13:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	95		53 - 113	04/21/14 09:50	04/25/14 13:26	1
Terphenyl-d14	98		70 - 144	04/21/14 09:50	04/25/14 13:26	1
2-Fluorobiphenyl (Surr)	100		53 - 113	04/21/14 09:50	04/25/14 13:26	1

Lab Sample ID: LCS 320-40868/2-A

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	25.0	24.0		ug/Kg		96	51 - 111
Acenaphthylene	25.0	23.5		ug/Kg		94	51 - 111
Anthracene	25.0	25.4		ug/Kg		102	54 - 114
Benzo[a]anthracene	25.0	21.7		ug/Kg		87	66 - 126
Benzo[a]pyrene	25.0	23.0		ug/Kg		92	64 - 124
Benzo[b]fluoranthene	25.0	24.7		ug/Kg		99	65 - 125
Benzo[g,h,i]perylene	25.0	23.0		ug/Kg		92	54 - 134
Benzo[k]fluoranthene	25.0	22.3		ug/Kg		89	69 - 129

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-40868/2-A

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	25.0	25.1		ug/Kg		100	67 - 127
Dibenz(a,h)anthracene	25.0	23.1		ug/Kg		92	58 - 128
Fluoranthene	25.0	25.0		ug/Kg		100	67 - 127
Fluorene	25.0	24.3		ug/Kg		97	54 - 114
Indeno[1,2,3-cd]pyrene	25.0	23.7		ug/Kg		95	59 - 133
Naphthalene	25.0	22.4		ug/Kg		90	52 - 112
Phenanthrene	25.0	24.9		ug/Kg		99	59 - 119
Pyrene	25.0	26.5		ug/Kg		106	71 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	96		53 - 113
Terphenyl-d14	96		70 - 144
2-Fluorobiphenyl (Surr)	92		53 - 113

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		22.8	21.5		ug/Kg		94	51 - 111
Acenaphthylene	ND		22.8	22.1		ug/Kg		97	51 - 111
Anthracene	ND		22.8	23.8		ug/Kg		104	54 - 114
Benzo[a]anthracene	0.73	J	22.8	21.6		ug/Kg		91	66 - 126
Benzo[a]pyrene	0.93	J	22.8	22.3		ug/Kg		94	64 - 124
Benzo[b]fluoranthene	2.9	J	22.8	25.2		ug/Kg		98	65 - 125
Benzo[g,h,i]perylene	1.3	J	22.8	21.5		ug/Kg		89	54 - 134
Benzo[k]fluoranthene	1.6	J	22.8	21.2		ug/Kg		86	69 - 129
Chrysene	3.9	J	22.8	26.6		ug/Kg		100	67 - 127
Dibenz(a,h)anthracene	ND		22.8	20.1		ug/Kg		88	58 - 128
Fluoranthene	6.1		22.8	28.7		ug/Kg		99	67 - 127
Fluorene	ND		22.8	22.0		ug/Kg		97	54 - 114
Indeno[1,2,3-cd]pyrene	1.1	J	22.8	21.6		ug/Kg		90	59 - 133
Naphthalene	0.33	J	22.8	20.8		ug/Kg		90	52 - 112
Phenanthrene	2.1	J	22.8	25.5		ug/Kg		102	59 - 119
Pyrene	4.5	J	22.8	28.6		ug/Kg		106	71 - 131

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	100		53 - 113
Terphenyl-d14	100		70 - 144
2-Fluorobiphenyl (Surr)	97		53 - 113

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acenaphthene	ND		24.5	24.5		ug/Kg		100	51 - 111	13	30
Acenaphthylene	ND		24.5	24.9		ug/Kg		102	51 - 111	12	30

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Anthracene	ND		24.5	26.0		ug/Kg		106	54 - 114	9	30
Benzo[a]anthracene	0.73	J	24.5	23.4		ug/Kg		92	66 - 126	8	30
Benzo[a]pyrene	0.93	J	24.5	24.6		ug/Kg		97	64 - 124	10	30
Benzo[b]fluoranthene	2.9	J	24.5	28.0		ug/Kg		102	65 - 125	11	30
Benzo[g,h,i]perylene	1.3	J	24.5	23.0		ug/Kg		89	54 - 134	7	30
Benzo[k]fluoranthene	1.6	J	24.5	23.5		ug/Kg		89	69 - 129	11	30
Chrysene	3.9	J	24.5	29.4		ug/Kg		104	67 - 127	10	30
Dibenz(a,h)anthracene	ND		24.5	22.3		ug/Kg		91	58 - 128	10	30
Fluoranthene	6.1		24.5	37.2		ug/Kg		127	67 - 127	26	30
Fluorene	ND		24.5	24.3		ug/Kg		99	54 - 114	10	30
Indeno[1,2,3-cd]pyrene	1.1	J	24.5	23.8		ug/Kg		93	59 - 133	10	30
Naphthalene	0.33	J	24.5	23.2		ug/Kg		93	52 - 112	11	30
Phenanthrene	2.1	J	24.5	31.6	F1	ug/Kg		120	59 - 119	22	30
Pyrene	4.5	J	24.5	34.3		ug/Kg		121	71 - 131	18	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5	104		53 - 113
Terphenyl-d14	99		70 - 144
2-Fluorobiphenyl (Surr)	100		53 - 113

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Acenaphthene	ND		ND		ug/Kg		NC	30
Acenaphthylene	ND		ND		ug/Kg		NC	30
Anthracene	ND		0.397	J	ug/Kg		NC	30
Benzo[a]anthracene	0.73	J	0.762	J	ug/Kg		4	30
Benzo[a]pyrene	0.93	J	0.628	J	ug/Kg		39	30
Benzo[b]fluoranthene	2.9	J	2.22	J	ug/Kg		28	30
Benzo[g,h,i]perylene	1.3	J	1.03	J	ug/Kg		23	30
Benzo[k]fluoranthene	1.6	J	1.27	J	ug/Kg		25	30
Chrysene	3.9	J	5.95		ug/Kg		42	30
Dibenz(a,h)anthracene	ND		ND		ug/Kg		NC	30
Fluoranthene	6.1		5.74		ug/Kg		6	30
Fluorene	ND		ND		ug/Kg		NC	30
Indeno[1,2,3-cd]pyrene	1.1	J	0.883	J	ug/Kg		18	30
Naphthalene	0.33	J	0.311	J	ug/Kg		5	30
Phenanthrene	2.1	J	2.40	J	ug/Kg		11	30
Pyrene	4.5	J	4.26	J	ug/Kg		6	30

Surrogate	DU %Recovery	DU Qualifier	Limits
Nitrobenzene-d5	100		53 - 113
Terphenyl-d14	100		70 - 144
2-Fluorobiphenyl (Surr)	95		53 - 113

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41226

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 40868

Analyte	Sample Result	Sample Qualifier	TRL Result	TRL Qualifier	Unit	D	RSD	Limit
Acenaphthene	ND		ND		ug/Kg		NC	
Acenaphthylene	ND		ND		ug/Kg		NC	
Anthracene	ND		ND		ug/Kg		NC	
Benzo[a]anthracene	0.73		0.606	J	ug/Kg		10	30
Benzo[a]pyrene	0.93		0.769	J	ug/Kg		16	30
Benzo[b]fluoranthene	2.9		2.20	J	ug/Kg		14	30
Benzo[g,h,i]perylene	1.3		1.14	J	ug/Kg		9	30
Benzo[k]fluoranthene	1.6		1.24	J	ug/Kg		13	30
Chrysene	3.9		3.25	J	ug/Kg		26	30
Dibenz(a,h)anthracene	ND		ND		ug/Kg		NC	
Fluoranthene	6.1		4.20	J	ug/Kg		15	30
Fluorene	ND		ND		ug/Kg		NC	
Indeno[1,2,3-cd]pyrene	1.1		1.16	J	ug/Kg		11	30
Naphthalene	0.33		0.335	J	ug/Kg		3	30
Phenanthrene	2.1		1.93	J	ug/Kg		9	30
Pyrene	4.5		3.01	J	ug/Kg		17	30

Surrogate	TRL %Recovery	TRL Qualifier	Limits
Nitrobenzene-d5	99		53 - 113
Terphenyl-d14	98		70 - 144
2-Fluorobiphenyl (Surr)	95		53 - 113

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 320-40475/1-A

Matrix: Water

Analysis Batch: 40705

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40475

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	ND		50	16	ug/L		04/15/14 09:00	04/17/14 15:22	1
Motor Oil Range Organics [C24-C36]	ND		250	84	ug/L		04/15/14 09:00	04/17/14 15:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	91		56 - 145	04/15/14 09:00	04/17/14 15:22	1

Lab Sample ID: LCS 320-40475/2-A

Matrix: Water

Analysis Batch: 40705

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (C10-C24)	300	292		ug/L		97	53 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	90		56 - 145

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 320-7028-1 MS

Matrix: Water

Analysis Batch: 40705

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (C10-C24)	21	J	293	291		ug/L		92	53 - 123
Surrogate	%Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	90		56 - 145						

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40705

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (C10-C24)	21	J	295	300		ug/L		95	53 - 123	3	20
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o</i> -Terphenyl (Surr)	90		56 - 145								

Lab Sample ID: MB 320-40783/1-B

Matrix: Solid

Analysis Batch: 40911

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40786

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	ND		1.0	0.30	mg/Kg		04/18/14 11:19	04/21/14 13:24	1
Motor Oil Range Organics [C24-C36]	ND		5.0	1.6	mg/Kg		04/18/14 11:19	04/21/14 13:24	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	100		63 - 141				04/18/14 11:19	04/21/14 13:24	1

Lab Sample ID: LCS 320-40783/2-B

Matrix: Solid

Analysis Batch: 40911

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40786

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (C10-C24)	10.0	10.4		mg/Kg		104	67 - 113
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	97		63 - 141				

Lab Sample ID: 320-7028-20 MS

Matrix: Solid

Analysis Batch: 40911

Client Sample ID: DU01-01

Prep Type: Total/NA

Prep Batch: 40786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (C10-C24)	5.3		9.90	13.9		mg/Kg		87	67 - 113

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 320-7028-20 MS
Matrix: Solid
Analysis Batch: 40911

Client Sample ID: DU01-01
Prep Type: Total/NA
Prep Batch: 40786

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	102		63 - 141

Lab Sample ID: 320-7028-20 MSD
Matrix: Solid
Analysis Batch: 40911

Client Sample ID: DU01-01
Prep Type: Total/NA
Prep Batch: 40786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (C10-C24)	5.3		9.89	14.2		mg/Kg		90	67 - 113	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	99		63 - 141

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 320-40476/1-A
Matrix: Water
Analysis Batch: 40813

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40476

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
4,4'-DDE	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
4,4'-DDT	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Aldrin	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 14:22	1
alpha-BHC	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 14:22	1
beta-BHC	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 14:22	1
gamma-BHC (Lindane)	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 14:22	1
delta-BHC	ND		0.050	0.011	ug/L		04/15/14 09:06	04/18/14 14:22	1
alpha-Chlordane	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 14:22	1
gamma-Chlordane	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Dieldrin	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endosulfan I	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endosulfan II	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endosulfan sulfate	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endrin	ND		0.050	0.012	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endrin aldehyde	ND		0.10	0.025	ug/L		04/15/14 09:06	04/18/14 14:22	1
Endrin ketone	ND		0.10	0.020	ug/L		04/15/14 09:06	04/18/14 14:22	1
Heptachlor	ND		0.050	0.0070	ug/L		04/15/14 09:06	04/18/14 14:22	1
Heptachlor epoxide	ND		0.050	0.0060	ug/L		04/15/14 09:06	04/18/14 14:22	1
Methoxychlor	ND		0.10	0.042	ug/L		04/15/14 09:06	04/18/14 14:22	1
Toxaphene	ND		2.0	0.51	ug/L		04/15/14 09:06	04/18/14 14:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	56		44 - 114	04/15/14 09:06	04/18/14 14:22	1
DCB Decachlorobiphenyl	34		12 - 131	04/15/14 09:06	04/18/14 14:22	1

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 320-40476/2-A

Matrix: Water

Analysis Batch: 40813

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40476

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.500	0.479		ug/L		96	65 - 141
4,4'-DDE	0.500	0.427		ug/L		85	60 - 134
4,4'-DDT	0.500	0.437		ug/L		87	69 - 127
Aldrin	0.500	0.335		ug/L		67	56 - 119
alpha-BHC	0.500	0.528		ug/L		106	63 - 137
beta-BHC	0.500	0.412		ug/L		82	64 - 125
gamma-BHC (Lindane)	0.500	0.442		ug/L		88	68 - 135
delta-BHC	0.500	0.491		ug/L		98	61 - 140
alpha-Chlordane	0.500	0.462		ug/L		92	63 - 127
gamma-Chlordane	0.500	0.436		ug/L		87	59 - 128
Dieldrin	0.500	0.501		ug/L		100	63 - 135
Endosulfan I	0.500	0.316		ug/L		63	37 - 133
Endosulfan II	0.500	0.343		ug/L		69	54 - 126
Endosulfan sulfate	0.500	0.443		ug/L		89	59 - 124
Endrin	0.500	0.479		ug/L		96	67 - 136
Endrin aldehyde	0.500	0.352		ug/L		70	41 - 112
Endrin ketone	0.500	0.434		ug/L		87	57 - 128
Heptachlor	0.500	0.339		ug/L		68	63 - 126
Heptachlor epoxide	0.500	0.483		ug/L		97	67 - 129
Methoxychlor	0.500	0.420		ug/L		84	71 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	62		44 - 114
DCB Decachlorobiphenyl	68		12 - 131

Lab Sample ID: LCS 320-40476/3-A

Matrix: Water

Analysis Batch: 40813

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40476

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	5.00	3.86		ug/L		77	46 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	58		44 - 114
DCB Decachlorobiphenyl	46		12 - 131

Lab Sample ID: 320-7028-1 MS

Matrix: Water

Analysis Batch: 40813

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40476

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		0.489	0.498		ug/L		102	65 - 141
4,4'-DDE	ND		0.489	0.475		ug/L		97	60 - 134
4,4'-DDT	ND		0.489	0.450		ug/L		92	69 - 127
Aldrin	ND		0.489	0.415		ug/L		85	56 - 119
alpha-BHC	ND		0.489	0.545		ug/L		111	63 - 137
beta-BHC	ND		0.489	0.436		ug/L		89	64 - 125

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 320-7028-1 MS

Matrix: Water

Analysis Batch: 40813

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40476

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
gamma-BHC (Lindane)	ND		0.489	0.460		ug/L		94	68 - 135
delta-BHC	ND		0.489	0.522		ug/L		107	61 - 140
alpha-Chlordane	ND		0.489	0.493		ug/L		101	63 - 127
gamma-Chlordane	0.055		0.489	0.479		ug/L		87	59 - 128
Dieldrin	ND		0.489	0.520		ug/L		106	63 - 135
Endosulfan I	ND		0.489	0.324		ug/L		66	37 - 133
Endosulfan II	ND		0.489	0.354		ug/L		72	54 - 126
Endosulfan sulfate	ND		0.489	0.470		ug/L		96	59 - 124
Endrin	ND		0.489	0.514		ug/L		105	67 - 136
Endrin aldehyde	ND		0.489	0.378		ug/L		77	41 - 112
Endrin ketone	ND		0.489	0.443		ug/L		91	57 - 128
Heptachlor	ND		0.489	0.397		ug/L		81	63 - 126
Heptachlor epoxide	ND		0.489	0.500		ug/L		102	67 - 129
Methoxychlor	ND		0.489	0.433		ug/L		88	71 - 125

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Tetrachloro-m-xylene	98		44 - 114
DCB Decachlorobiphenyl	42		12 - 131

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40813

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40476

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
4,4'-DDD	ND		0.492	0.523		ug/L		106	65 - 141	5	30
4,4'-DDE	ND		0.492	0.498		ug/L		101	60 - 134	5	30
4,4'-DDT	ND		0.492	0.472		ug/L		96	69 - 127	5	30
Aldrin	ND		0.492	0.441		ug/L		90	56 - 119	6	30
alpha-BHC	ND		0.492	0.573		ug/L		117	63 - 137	5	30
beta-BHC	ND		0.492	0.464		ug/L		94	64 - 125	6	30
gamma-BHC (Lindane)	ND		0.492	0.501		ug/L		102	68 - 135	8	30
delta-BHC	ND		0.492	0.559		ug/L		114	61 - 140	7	30
alpha-Chlordane	ND		0.492	0.514		ug/L		104	63 - 127	4	30
gamma-Chlordane	0.055		0.492	0.505		ug/L		91	59 - 128	5	30
Dieldrin	ND		0.492	0.544		ug/L		111	63 - 135	5	30
Endosulfan I	ND		0.492	0.339		ug/L		69	37 - 133	5	30
Endosulfan II	ND		0.492	0.370		ug/L		75	54 - 126	4	30
Endosulfan sulfate	ND		0.492	0.489		ug/L		99	59 - 124	4	30
Endrin	ND		0.492	0.535		ug/L		109	67 - 136	4	30
Endrin aldehyde	ND		0.492	0.389		ug/L		79	41 - 112	3	30
Endrin ketone	ND		0.492	0.461		ug/L		94	57 - 128	4	30
Heptachlor	ND		0.492	0.426		ug/L		87	63 - 126	7	30
Heptachlor epoxide	ND		0.492	0.524		ug/L		107	67 - 129	5	30
Methoxychlor	ND		0.492	0.449		ug/L		91	71 - 125	4	30

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
Tetrachloro-m-xylene	82		44 - 114

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40813

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40476

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	52		12 - 131

Lab Sample ID: MB 320-40858/1-B

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40870

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.7	0.26	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
4,4'-DDE	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
4,4'-DDT	ND		1.7	0.40	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Aldrin	ND		1.7	0.21	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
alpha-BHC	ND		1.7	0.22	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
beta-BHC	ND		1.7	0.33	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
gamma-BHC (Lindane)	ND		1.7	0.17	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
delta-BHC	ND		1.7	0.16	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
alpha-Chlordane	ND		1.7	0.20	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
gamma-Chlordane	ND		1.7	0.053	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Dieldrin	ND		1.7	0.091	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endosulfan I	ND		1.7	0.052	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endosulfan II	ND		1.7	0.10	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endosulfan sulfate	ND		1.7	0.092	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endrin	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endrin aldehyde	ND		1.7	0.11	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Endrin ketone	ND		1.7	0.34	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Heptachlor	ND		1.7	0.19	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Heptachlor epoxide	ND		1.7	0.12	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Methoxychlor	ND		3.4	1.3	ug/Kg		04/21/14 09:49	04/25/14 12:52	1
Toxaphene	ND		67	20	ug/Kg		04/21/14 09:49	04/25/14 12:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		58 - 111	04/21/14 09:49	04/25/14 12:52	1
Tetrachloro-m-xylene	92		58 - 111	04/21/14 09:49	04/25/14 12:52	1
DCB Decachlorobiphenyl	99		49 - 119	04/21/14 09:49	04/25/14 12:52	1
DCB Decachlorobiphenyl	100		49 - 119	04/21/14 09:49	04/25/14 12:52	1

Lab Sample ID: LCS 320-40858/2-B

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	16.7	17.7		ug/Kg		106	79 - 124
4,4'-DDE	16.7	18.3		ug/Kg		110	71 - 129
4,4'-DDT	16.7	18.6		ug/Kg		112	68 - 129
Aldrin	16.7	18.8		ug/Kg		113	68 - 116
alpha-BHC	16.7	19.1		ug/Kg		114	71 - 121
beta-BHC	16.7	15.3		ug/Kg		92	72 - 111
gamma-BHC (Lindane)	16.7	17.1		ug/Kg		102	74 - 121
delta-BHC	16.7	18.1		ug/Kg		108	75 - 124

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 320-40858/2-B

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-Chlordane	16.7	18.5		ug/Kg		111	71 - 116
gamma-Chlordane	16.7	18.4		ug/Kg		110	68 - 116
Dieldrin	16.7	18.2		ug/Kg		109	68 - 123
Endosulfan I	16.7	11.3		ug/Kg		68	62 - 111
Endosulfan II	16.7	12.1		ug/Kg		72	70 - 121
Endosulfan sulfate	16.7	20.2	*	ug/Kg		121	69 - 120
Endrin	16.7	17.7		ug/Kg		106	71 - 128
Endrin aldehyde	16.7	14.9		ug/Kg		90	21 - 112
Endrin ketone	16.7	16.0		ug/Kg		96	65 - 118
Heptachlor	16.7	18.4		ug/Kg		110	74 - 120
Heptachlor epoxide	16.7	17.9		ug/Kg		108	74 - 116
Methoxychlor	16.7	17.3		ug/Kg		104	71 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	91		58 - 111
DCB Decachlorobiphenyl	98		49 - 119

Lab Sample ID: LCS 320-40858/3-B

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene	167	158		ug/Kg		95	41 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	88		58 - 111
DCB Decachlorobiphenyl	92		49 - 119

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	ND		16.8	19.8		ug/Kg		118	79 - 124
4,4'-DDE	ND		16.8	17.6		ug/Kg		105	71 - 129
4,4'-DDT	ND		16.8	17.5		ug/Kg		104	68 - 129
Aldrin	ND		16.8	19.5		ug/Kg		116	68 - 116
alpha-BHC	ND		16.8	20.3		ug/Kg		121	71 - 121
beta-BHC	ND		16.8	16.8		ug/Kg		100	72 - 111
gamma-BHC (Lindane)	ND		16.8	18.0		ug/Kg		108	74 - 121
delta-BHC	ND		16.8	19.8		ug/Kg		118	75 - 124
alpha-Chlordane	ND		16.8	19.3		ug/Kg		116	71 - 116
gamma-Chlordane	ND		16.8	20.0	F1	ug/Kg		119	68 - 116
Dieldrin	ND		16.8	19.6		ug/Kg		117	68 - 123
Endosulfan I	ND		16.8	12.1		ug/Kg		72	62 - 111
Endosulfan II	ND		16.8	12.4		ug/Kg		74	70 - 121
Endosulfan sulfate	ND	*	16.8	19.5		ug/Kg		117	69 - 120
Endrin	ND		16.8	19.2		ug/Kg		115	71 - 128

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits
Endrin aldehyde	ND		16.8	14.8		ug/Kg		88	21 - 112	
Endrin ketone	ND		16.8	14.7		ug/Kg		88	65 - 118	
Heptachlor	ND		16.8	17.3		ug/Kg		104	74 - 120	
Heptachlor epoxide	ND		16.8	19.4		ug/Kg		116	74 - 116	
Methoxychlor	ND		16.8	15.6		ug/Kg		93	71 - 123	
Surrogate	%Recovery	MS Qualifier	Limits							
Tetrachloro-m-xylene	84		58 - 111							
DCB Decachlorobiphenyl	93		49 - 119							

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	RPD	Limit
4,4'-DDD	ND		16.2	21.4	F1	ug/Kg		132	79 - 124	8	30	
4,4'-DDE	ND		16.2	18.1		ug/Kg		112	71 - 129	3	30	
4,4'-DDT	ND		16.2	18.7		ug/Kg		116	68 - 129	7	30	
Aldrin	ND		16.2	19.8	F1	ug/Kg		122	68 - 116	1	30	
alpha-BHC	ND		16.2	21.0	F1	ug/Kg		130	71 - 121	3	30	
beta-BHC	ND		16.2	17.0		ug/Kg		105	72 - 111	1	30	
gamma-BHC (Lindane)	ND		16.2	18.9		ug/Kg		117	74 - 121	4	30	
delta-BHC	ND		16.2	20.4	F1	ug/Kg		126	75 - 124	3	30	
alpha-Chlordane	ND		16.2	20.3	F1	ug/Kg		125	71 - 116	5	30	
gamma-Chlordane	ND		16.2	21.0	F1	ug/Kg		130	68 - 116	5	30	
Dieldrin	ND		16.2	20.7	F1	ug/Kg		128	68 - 123	5	30	
Endosulfan I	ND		16.2	12.7		ug/Kg		79	62 - 111	5	30	
Endosulfan II	ND		16.2	13.3		ug/Kg		82	70 - 121	7	30	
Endosulfan sulfate	ND	*	16.2	20.9	F1	ug/Kg		129	69 - 120	7	30	
Endrin	ND		16.2	20.2		ug/Kg		125	71 - 128	5	30	
Endrin aldehyde	ND		16.2	15.9		ug/Kg		98	21 - 112	7	30	
Endrin ketone	ND		16.2	16.0		ug/Kg		99	65 - 118	8	30	
Heptachlor	ND		16.2	18.6		ug/Kg		115	74 - 120	7	30	
Heptachlor epoxide	ND		16.2	20.3	F1	ug/Kg		125	74 - 116	4	30	
Methoxychlor	ND		16.2	16.7	p	ug/Kg		103	71 - 123	7	30	
Surrogate	%Recovery	MSD Qualifier	Limits									
Tetrachloro-m-xylene	87		58 - 111									
DCB Decachlorobiphenyl	100		49 - 119									

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
4,4'-DDD	ND		ND		ug/Kg		NC	30
4,4'-DDE	ND		ND		ug/Kg		NC	30
4,4'-DDT	ND		ND		ug/Kg		NC	30

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Aldrin	ND		ND		ug/Kg		NC	30
alpha-BHC	ND		ND		ug/Kg		NC	30
beta-BHC	ND		ND		ug/Kg		NC	30
gamma-BHC (Lindane)	ND		ND		ug/Kg		NC	30
delta-BHC	ND		ND		ug/Kg		NC	30
alpha-Chlordane	ND		ND		ug/Kg		NC	30
gamma-Chlordane	ND		ND		ug/Kg		NC	30
Dieldrin	ND		ND		ug/Kg		NC	30
Endosulfan I	ND		ND		ug/Kg		NC	30
Endosulfan II	ND		ND		ug/Kg		NC	30
Endosulfan sulfate	ND		ND	*	ug/Kg		NC	30
Endrin	ND		ND		ug/Kg		NC	30
Endrin aldehyde	ND		ND		ug/Kg		NC	30
Endrin ketone	ND		ND		ug/Kg		NC	30
Heptachlor	ND		ND		ug/Kg		NC	30
Heptachlor epoxide	ND		ND		ug/Kg		NC	30
Methoxychlor	ND		ND		ug/Kg		NC	30
Toxaphene	ND		ND		ug/Kg		NC	30

Surrogate	%Recovery	DU Qualifier	DU Limits
Tetrachloro-m-xylene	92		58 - 111
DCB Decachlorobiphenyl	94		49 - 119

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41220

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 40870

Analyte	Sample	Sample	TRL	TRL	Unit	D	RSD	Limit
	Result	Qualifier	Result	Qualifier				
4,4'-DDD	ND		ND		ug/Kg		NC	
4,4'-DDE	ND		ND		ug/Kg		NC	
4,4'-DDT	ND		ND		ug/Kg		NC	
Aldrin	ND		ND		ug/Kg		NC	
alpha-BHC	ND		ND		ug/Kg		NC	
beta-BHC	ND		ND		ug/Kg		NC	
gamma-BHC (Lindane)	ND		ND		ug/Kg		NC	
delta-BHC	ND		ND		ug/Kg		NC	
alpha-Chlordane	ND		ND		ug/Kg		NC	
gamma-Chlordane	ND		ND		ug/Kg		NC	
Dieldrin	ND		ND		ug/Kg		NC	
Endosulfan I	ND		ND		ug/Kg		NC	
Endosulfan II	ND		ND		ug/Kg		NC	
Endosulfan sulfate	ND		ND	*	ug/Kg		NC	
Endrin	ND		ND		ug/Kg		NC	
Endrin aldehyde	ND		ND		ug/Kg		NC	
Endrin ketone	ND		ND		ug/Kg		NC	
Heptachlor	ND		ND		ug/Kg		NC	
Heptachlor epoxide	ND		ND		ug/Kg		NC	
Methoxychlor	ND		ND		ug/Kg		NC	

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 320-7028-6 TRL
Matrix: Solid
Analysis Batch: 41220

Client Sample ID: TRIP
Prep Type: Total/NA
Prep Batch: 40870

Analyte	Sample Result	Sample Qualifier	TRL Result	TRL Qualifier	Unit	D	RSD	Limit
Toxaphene	ND		ND		ug/Kg		NC	
Surrogate	%Recovery	TRL Qualifier	Limits					
Tetrachloro-m-xylene	90		58 - 111					
DCB Decachlorobiphenyl	95		49 - 119					

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 320-40477/1-A
Matrix: Water
Analysis Batch: 40808

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40477

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.090	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1221	ND		1.0	0.11	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1232	ND		1.0	0.17	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1242	ND		1.0	0.12	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1248	ND		1.0	0.060	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1254	ND		1.0	0.050	ug/L		04/15/14 09:17	04/18/14 13:05	1
PCB-1260	ND		1.0	0.050	ug/L		04/15/14 09:17	04/18/14 13:05	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	38		29 - 128				04/15/14 09:17	04/18/14 13:05	1

Lab Sample ID: LCS 320-40477/2-A
Matrix: Water
Analysis Batch: 40808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40477

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.00	2.19		ug/L		109	63 - 114
PCB-1260	2.00	1.83		ug/L		91	64 - 114
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	45		29 - 128				

Lab Sample ID: 320-7028-1 MS
Matrix: Water
Analysis Batch: 40808

Client Sample ID: MW04-01
Prep Type: Total/NA
Prep Batch: 40477

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		1.99	2.07		ug/L		104	63 - 114
PCB-1260	ND		1.99	1.72		ug/L		87	64 - 114
Surrogate	MS %Recovery	MS Qualifier	Limits						
DCB Decachlorobiphenyl	48		29 - 128						

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40808

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40477

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit		
				Result	Qualifier				Limits	RPD				
PCB-1016	ND		1.98	2.03		ug/L		103	63 - 114	2	30			
PCB-1260	ND		1.98	1.75		ug/L		89	64 - 114	2	30			
		MSD MSD												
Surrogate	%Recovery	Qualifier	Limits											
DCB Decachlorobiphenyl	51		29 - 128											

Lab Sample ID: MB 320-40857/1-B

Matrix: Solid

Analysis Batch: 41033

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40869

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
	Result	Qualifier											
PCB-1016	ND		33	3.4	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1221	ND		33	5.2	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1232	ND		33	6.4	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1242	ND		33	7.4	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1248	ND		33	5.7	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1254	ND		33	2.7	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
PCB-1260	ND		33	2.9	ug/Kg		04/21/14 09:47	04/23/14 15:59	1				
		MB MB											
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac				
DCB Decachlorobiphenyl	110		77 - 123				04/21/14 09:47	04/23/14 15:59	1				

Lab Sample ID: LCS 320-40857/2-B

Matrix: Solid

Analysis Batch: 41033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40869

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.			
		Result	Qualifier				Limits	RPD		
PCB-1016	66.7	78.4	*	ug/Kg		118	81 - 114			
PCB-1260	66.7	77.3		ug/Kg		116	85 - 123			
		LCS LCS								
Surrogate	%Recovery	Qualifier	Limits							
DCB Decachlorobiphenyl	123		77 - 123							

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41216

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40869

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.			
				Result	Qualifier				Limits	RPD		
PCB-1016	ND	*	66.4	76.0	F1	ug/Kg		115	81 - 114			
PCB-1260	ND		66.4	72.1		ug/Kg		109	85 - 123			
		MS MS										
Surrogate	%Recovery	Qualifier	Limits									
DCB Decachlorobiphenyl	111		77 - 123									

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41216

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40869

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier		Result	Qualifier				Limits		Limit
PCB-1016	ND	*	65.9	72.8		ug/Kg		111	81 - 114	4	20
PCB-1260	ND		65.9	66.8		ug/Kg		101	85 - 123	8	30
		MSD MSD									
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl	105		77 - 123								

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41033

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40869

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD			
	Result	Qualifier		Result				Qualifier	Limit		
PCB-1016	ND	*	ND	*	ug/Kg		NC	20			
PCB-1221	ND		ND		ug/Kg		NC				
PCB-1232	ND		ND		ug/Kg		NC				
PCB-1242	ND		ND		ug/Kg		NC				
PCB-1248	ND		ND		ug/Kg		NC				
PCB-1254	ND		ND		ug/Kg		NC				
PCB-1260	ND		ND		ug/Kg		NC	20			
		DU DU									
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl	123		77 - 123								

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41033

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 40869

Analyte	Sample	Sample	TRL	TRL	Unit	D	RSD	RSD			
	Result	Qualifier		Result				Qualifier	Limit		
PCB-1016	ND		ND	*	ug/Kg		NC				
PCB-1221	ND		ND		ug/Kg		NC				
PCB-1232	ND		ND		ug/Kg		NC				
PCB-1242	ND		ND		ug/Kg		NC				
PCB-1248	ND		ND		ug/Kg		NC				
PCB-1254	ND		ND		ug/Kg		NC				
PCB-1260	ND		ND		ug/Kg		NC				
		TRL TRL									
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl	106		77 - 123								

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-40582/1-A

Matrix: Water

Analysis Batch: 40820

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40582

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	0.783	J q	10	0.24	pg/L		04/16/14 08:58	04/17/14 22:46	1
2,3,7,8-TCDF	1.16	J q	10	0.19	pg/L		04/16/14 08:58	04/17/14 22:46	1

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-40582/1-A

Matrix: Water

Analysis Batch: 40820

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40582

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3,7,8-PeCDD	ND		50	0.33	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,7,8-PeCDF	1.25	J	50	0.22	pg/L		04/16/14 08:58	04/17/14 22:46	1
2,3,4,7,8-PeCDF	1.64	J	50	0.23	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,4,7,8-HxCDD	0.746	J q	50	0.24	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,6,7,8-HxCDD	0.993	J	50	0.19	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,7,8,9-HxCDD	0.983	J q	50	0.18	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,4,7,8-HxCDF	6.96	J	50	0.30	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,6,7,8-HxCDF	2.43	J	50	0.24	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,7,8,9-HxCDF	1.60	J	50	0.29	pg/L		04/16/14 08:58	04/17/14 22:46	1
2,3,4,6,7,8-HxCDF	1.26	J	50	0.27	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,4,6,7,8-HpCDD	2.70	J	50	0.31	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,4,6,7,8-HpCDF	17.2	J	50	0.35	pg/L		04/16/14 08:58	04/17/14 22:46	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.42	pg/L		04/16/14 08:58	04/17/14 22:46	1
OCDD	9.20	J	100	0.31	pg/L		04/16/14 08:58	04/17/14 22:46	1
OCDF	12.6	J q	100	0.47	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total TCDD	1.38	J q	10	0.24	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total TCDF	1.62	J q	10	0.19	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total PeCDD	ND		50	0.33	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total PeCDF	4.97	J q	50	0.23	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total HxCDD	2.72	J q	50	0.21	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total HxCDF	14.7	J q	50	0.27	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total HpCDD	2.70	J	50	0.31	pg/L		04/16/14 08:58	04/17/14 22:46	1
Total HpCDF	19.4	J	50	0.38	pg/L		04/16/14 08:58	04/17/14 22:46	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	92		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-2,3,7,8-TCDF	99		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,7,8-PeCDD	90		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,7,8-PeCDF	91		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,6,7,8-HxCDD	90		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,4,7,8-HxCDF	90		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,4,6,7,8-HpCDD	102		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135	04/16/14 08:58	04/17/14 22:46	1
13C-OCDD	83		40 - 135	04/16/14 08:58	04/17/14 22:46	1

Lab Sample ID: LCS 320-40582/2-A

Matrix: Water

Analysis Batch: 40820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limit	Limit
2,3,7,8-TCDD	200	235		pg/L		118	64 - 142	
2,3,7,8-TCDF	200	204		pg/L		102	71 - 142	
1,2,3,7,8-PeCDD	1000	1150		pg/L		115	71 - 140	
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	76 - 135	
2,3,4,7,8-PeCDF	1000	1140		pg/L		114	74 - 137	
1,2,3,4,7,8-HxCDD	1000	964		pg/L		96	56 - 146	
1,2,3,6,7,8-HxCDD	1000	1080		pg/L		108	73 - 144	
1,2,3,7,8,9-HxCDD	1000	1030		pg/L		103	71 - 151	

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-40582/2-A

Matrix: Water

Analysis Batch: 40820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8-HxCDF	1000	1050		pg/L		105	75 - 131
1,2,3,6,7,8-HxCDF	1000	1050		pg/L		105	76 - 133
1,2,3,7,8,9-HxCDF	1000	1060		pg/L		106	77 - 142
2,3,4,6,7,8-HxCDF	1000	1070		pg/L		107	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	1180		pg/L		118	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	1130		pg/L		113	79 - 133
1,2,3,4,7,8,9-HpCDF	1000	1160		pg/L		116	83 - 130
OCDD	2000	2360		pg/L		118	80 - 132
OCDF	2000	2520		pg/L		126	72 - 140

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	87		40 - 135
13C-2,3,7,8-TCDF	94		40 - 135
13C-1,2,3,7,8-PeCDD	84		40 - 135
13C-1,2,3,7,8-PeCDF	86		40 - 135
13C-1,2,3,6,7,8-HxCDD	96		40 - 135
13C-1,2,3,4,7,8-HxCDF	93		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	95		40 - 135
13C-OCDD	92		40 - 135

Lab Sample ID: 320-7028-1 MS

Matrix: Water

Analysis Batch: 40820

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	ND		191	216		pg/L		113	64 - 142
2,3,7,8-TCDF	1.0	J B	191	199		pg/L		104	71 - 142
1,2,3,7,8-PeCDD	1.2	J	954	1100		pg/L		115	71 - 140
1,2,3,7,8-PeCDF	1.1	J q B	954	1100		pg/L		115	76 - 135
2,3,4,7,8-PeCDF	1.6	J B	954	1090		pg/L		114	74 - 137
1,2,3,4,7,8-HxCDD	2.0	J q B	954	1040		pg/L		109	56 - 146
1,2,3,6,7,8-HxCDD	1.6	J q B	954	1180		pg/L		123	73 - 144
1,2,3,7,8,9-HxCDD	1.5	J q B	954	1120		pg/L		117	71 - 151
1,2,3,4,7,8-HxCDF	7.0	J B	954	1090		pg/L		114	75 - 131
1,2,3,6,7,8-HxCDF	2.2	J B	954	1120		pg/L		117	76 - 133
1,2,3,7,8,9-HxCDF	1.5	J B	954	1130		pg/L		118	77 - 142
2,3,4,6,7,8-HxCDF	1.0	J B	954	1170		pg/L		123	80 - 137
1,2,3,4,6,7,8-HpCDD	ND		954	1280		pg/L		134	78 - 139
1,2,3,4,6,7,8-HpCDF	14	J B	954	1230		pg/L		128	79 - 133
1,2,3,4,7,8,9-HpCDF	ND		954	1300	F1	pg/L		136	83 - 130
OCDD	18	J B	1910	2500		pg/L		130	80 - 132
OCDF	8.6	J q B	1910	2500		pg/L		130	72 - 140

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	85		40 - 135
13C-2,3,7,8-TCDF	90		40 - 135
13C-1,2,3,7,8-PeCDD	81		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-7028-1 MS

Matrix: Water

Analysis Batch: 40820

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40582

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C-1,2,3,7,8-PeCDF	80		40 - 135
13C-1,2,3,6,7,8-HxCDD	83		40 - 135
13C-1,2,3,4,7,8-HxCDF	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	83		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	78		40 - 135
13C-OCDD	77		40 - 135

Lab Sample ID: 320-7028-1 MSD

Matrix: Water

Analysis Batch: 40820

Client Sample ID: MW04-01

Prep Type: Total/NA

Prep Batch: 40582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
2,3,7,8-TCDD	ND		200	218		pg/L		109	64 - 142	1	20	
2,3,7,8-TCDF	1.0	J B	200	206		pg/L		103	71 - 142	4	20	
1,2,3,7,8-PeCDD	1.2	J	999	1150		pg/L		115	71 - 140	4	20	
1,2,3,7,8-PeCDF	1.1	J q B	999	1150		pg/L		115	76 - 135	4	20	
2,3,4,7,8-PeCDF	1.6	J B	999	1110		pg/L		111	74 - 137	2	20	
1,2,3,4,7,8-HxCDD	2.0	J q B	999	1060		pg/L		106	56 - 146	2	20	
1,2,3,6,7,8-HxCDD	1.6	J q B	999	1110		pg/L		111	73 - 144	6	20	
1,2,3,7,8,9-HxCDD	1.5	J q B	999	1120		pg/L		112	71 - 151	1	20	
1,2,3,4,7,8-HxCDF	7.0	J B	999	1020		pg/L		101	75 - 131	7	20	
1,2,3,6,7,8-HxCDF	2.2	J B	999	1090		pg/L		109	76 - 133	3	20	
1,2,3,7,8,9-HxCDF	1.5	J B	999	1110		pg/L		111	77 - 142	2	20	
2,3,4,6,7,8-HxCDF	1.0	J B	999	1110		pg/L		111	80 - 137	6	20	
1,2,3,4,6,7,8-HpCDD	ND		999	1170		pg/L		118	78 - 139	9	20	
1,2,3,4,6,7,8-HpCDF	14	J B	999	1140		pg/L		113	79 - 133	8	20	
1,2,3,4,7,8,9-HpCDF	ND		999	1190		pg/L		119	83 - 130	9	20	
OCDD	18	J B	2000	2540		pg/L		126	80 - 132	1	20	
OCDF	8.6	J q B	2000	2570		pg/L		128	72 - 140	3	20	

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDD	89		40 - 135
13C-2,3,7,8-TCDF	94		40 - 135
13C-1,2,3,7,8-PeCDD	87		40 - 135
13C-1,2,3,7,8-PeCDF	85		40 - 135
13C-1,2,3,6,7,8-HxCDD	89		40 - 135
13C-1,2,3,4,7,8-HxCDF	88		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	103		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135
13C-OCDD	91		40 - 135

Lab Sample ID: MB 320-41002/1-A

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41002

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	ND		1.0	0.052	pg/g	04/22/14 13:58	04/24/14 07:46	1	
1,2,3,7,8-PeCDD	ND		5.0	0.13	pg/g	04/22/14 13:58	04/24/14 07:46	1	

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-41002/1-A

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41002

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3,7,8-PeCDF	ND		5.0	0.11	pg/g		04/22/14 13:58	04/24/14 07:46	1
2,3,4,7,8-PeCDF	ND		5.0	0.12	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.069	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.059	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.057	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.040	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.035	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.042	pg/g		04/22/14 13:58	04/24/14 07:46	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.039	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.054	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,4,6,7,8-HpCDF	0.0831	J	5.0	0.040	pg/g		04/22/14 13:58	04/24/14 07:46	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.051	pg/g		04/22/14 13:58	04/24/14 07:46	1
OCDD	0.485	J	10	0.11	pg/g		04/22/14 13:58	04/24/14 07:46	1
OCDF	ND		10	0.099	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total TCDD	ND		1.0	0.061	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total TCDF	ND		1.0	0.052	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total PeCDD	ND		5.0	0.13	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total PeCDF	ND		5.0	0.12	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total HxCDD	0.142	J q	5.0	0.062	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total HxCDF	0.0682	J q	5.0	0.039	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total HpCDD	ND		5.0	0.054	pg/g		04/22/14 13:58	04/24/14 07:46	1
Total HpCDF	0.0831	J	5.0	0.046	pg/g		04/22/14 13:58	04/24/14 07:46	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	61		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-2,3,7,8-TCDF	62		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,7,8-PeCDD	61		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,4,7,8-HxCDF	73		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135	04/22/14 13:58	04/24/14 07:46	1
13C-OCDD	75		40 - 135	04/22/14 13:58	04/24/14 07:46	1

Lab Sample ID: LCS 320-41002/2-A

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limit	Limits
2,3,7,8-TCDD	20.0	23.4		pg/g		117	77 - 130	
2,3,7,8-TCDF	20.0	24.1		pg/g		121	79 - 137	
1,2,3,7,8-PeCDD	100	120		pg/g		120	79 - 134	
1,2,3,7,8-PeCDF	100	118		pg/g		118	81 - 134	
2,3,4,7,8-PeCDF	100	120		pg/g		120	76 - 132	
1,2,3,4,7,8-HxCDD	100	122		pg/g		122	65 - 144	
1,2,3,6,7,8-HxCDD	100	123		pg/g		123	73 - 147	
1,2,3,7,8,9-HxCDD	100	119		pg/g		119	80 - 143	
1,2,3,4,7,8-HxCDF	100	104		pg/g		104	72 - 140	

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-41002/2-A

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDF	100	106		pg/g		106	63 - 152
1,2,3,7,8,9-HxCDF	100	99.9		pg/g		100	72 - 152
2,3,4,6,7,8-HxCDF	100	106		pg/g		106	72 - 151
1,2,3,4,6,7,8-HpCDD	100	113		pg/g		113	86 - 134
1,2,3,4,6,7,8-HpCDF	100	119		pg/g		119	81 - 137
1,2,3,4,7,8,9-HpCDF	100	125		pg/g		125	79 - 139
OCDD	200	253		pg/g		126	80 - 137
OCDF	200	257		pg/g		129	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	63		40 - 135
13C-2,3,7,8-TCDF	64		40 - 135
13C-1,2,3,7,8-PeCDD	60		40 - 135
13C-1,2,3,7,8-PeCDF	63		40 - 135
13C-1,2,3,6,7,8-HxCDD	68		40 - 135
13C-1,2,3,4,7,8-HxCDF	80		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135
13C-OCDD	79		40 - 135

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 41002

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	ND		20.3	22.5		pg/g		111	77 - 130
2,3,7,8-TCDF	0.46	J	20.3	23.6		pg/g		114	79 - 137
1,2,3,7,8-PeCDD	0.54	J	101	113		pg/g		111	79 - 134
1,2,3,7,8-PeCDF	0.29	J	101	117		pg/g		115	81 - 134
2,3,4,7,8-PeCDF	ND		101	121		pg/g		119	76 - 132
1,2,3,4,7,8-HxCDD	1.1	J	101	113		pg/g		110	65 - 144
1,2,3,6,7,8-HxCDD	2.4	J	101	115		pg/g		111	73 - 147
1,2,3,7,8,9-HxCDD	2.3	J	101	115		pg/g		111	80 - 143
1,2,3,4,7,8-HxCDF	0.63	J	101	103		pg/g		101	72 - 140
1,2,3,6,7,8-HxCDF	0.43	J	101	103		pg/g		101	63 - 152
1,2,3,7,8,9-HxCDF	ND		101	103		pg/g		102	72 - 152
2,3,4,6,7,8-HxCDF	0.55	J	101	103		pg/g		101	72 - 151
1,2,3,4,6,7,8-HpCDD	75		101	186		pg/g		110	86 - 134
1,2,3,4,6,7,8-HpCDF	10	B	101	121		pg/g		109	81 - 137
1,2,3,4,7,8,9-HpCDF	0.90	J	101	126		pg/g		123	79 - 139
OCDD	660	B	203	906		pg/g		122	80 - 137
OCDF	25		203	274		pg/g		123	75 - 141

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	63		40 - 135
13C-2,3,7,8-TCDF	65		40 - 135
13C-1,2,3,7,8-PeCDD	65		40 - 135
13C-1,2,3,7,8-PeCDF	63		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-7028-6 MS
Matrix: Solid
Analysis Batch: 41140

Client Sample ID: DU09-01
Prep Type: Total/NA
Prep Batch: 41002

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C-1,2,3,6,7,8-HxCDD	70		40 - 135
13C-1,2,3,4,7,8-HxCDF	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135
13C-OCDD	88		40 - 135

Lab Sample ID: 320-7028-6 MSD
Matrix: Solid
Analysis Batch: 41140

Client Sample ID: DU09-01
Prep Type: Total/NA
Prep Batch: 41002

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
2,3,7,8-TCDD	ND		19.7	22.3		pg/g		113	77 - 130	1	20	
2,3,7,8-TCDF	0.46	J	19.7	25.0		pg/g		125	79 - 137	6	20	
1,2,3,7,8-PeCDD	0.54	J	98.4	115		pg/g		116	79 - 134	2	20	
1,2,3,7,8-PeCDF	0.29	J	98.4	119		pg/g		120	81 - 134	1	20	
2,3,4,7,8-PeCDF	ND		98.4	121		pg/g		123	76 - 132	1	20	
1,2,3,4,7,8-HxCDD	1.1	J	98.4	111		pg/g		111	65 - 144	2	20	
1,2,3,6,7,8-HxCDD	2.4	J	98.4	120		pg/g		119	73 - 147	4	20	
1,2,3,7,8,9-HxCDD	2.3	J	98.4	114		pg/g		114	80 - 143	1	20	
1,2,3,4,7,8-HxCDF	0.63	J	98.4	102		pg/g		103	72 - 140	1	20	
1,2,3,6,7,8-HxCDF	0.43	J	98.4	105		pg/g		107	63 - 152	3	20	
1,2,3,7,8,9-HxCDF	ND		98.4	100		pg/g		102	72 - 152	3	20	
2,3,4,6,7,8-HxCDF	0.55	J	98.4	103		pg/g		105	72 - 151	0	20	
1,2,3,4,6,7,8-HpCDD	75		98.4	178		pg/g		105	86 - 134	4	20	
1,2,3,4,6,7,8-HpCDF	10	B	98.4	116		pg/g		108	81 - 137	4	20	
1,2,3,4,7,8,9-HpCDF	0.90	J	98.4	111		pg/g		111	79 - 139	13	20	
OCDD	660	B	197	898		pg/g		122	80 - 137	1	20	
OCDF	25		197	269		pg/g		124	75 - 141	2	20	

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDD	65		40 - 135
13C-2,3,7,8-TCDF	63		40 - 135
13C-1,2,3,7,8-PeCDD	64		40 - 135
13C-1,2,3,7,8-PeCDF	63		40 - 135
13C-1,2,3,6,7,8-HxCDD	68		40 - 135
13C-1,2,3,4,7,8-HxCDF	75		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	73		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135
13C-OCDD	82		40 - 135

Lab Sample ID: 320-7028-6 DU
Matrix: Solid
Analysis Batch: 41140

Client Sample ID: DU09-01
Prep Type: Total/NA
Prep Batch: 41002

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
2,3,7,8-TCDD	ND		ND		pg/g		NC	25
2,3,7,8-TCDF	0.46	J	0.338	J	pg/g		31	25
1,2,3,7,8-PeCDD	0.54	J	0.359	J q	pg/g		40	25
1,2,3,7,8-PeCDF	0.29	J	ND		pg/g		NC	25

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-7028-6 DU
Matrix: Solid
Analysis Batch: 41140

Client Sample ID: DU09-01
Prep Type: Total/NA
Prep Batch: 41002

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,3,4,7,8-PeCDF	ND		ND		pg/g		NC	25
1,2,3,4,7,8-HxCDD	1.1	J	0.997	J q	pg/g		5	25
1,2,3,6,7,8-HxCDD	2.4	J	2.67	J	pg/g		9	25
1,2,3,7,8,9-HxCDD	2.3	J	2.38	J q	pg/g		4	25
1,2,3,4,7,8-HxCDF	0.63	J	0.500	J	pg/g		23	25
1,2,3,6,7,8-HxCDF	0.43	J	0.361	J q	pg/g		18	25
1,2,3,7,8,9-HxCDF	ND		ND		pg/g		NC	25
2,3,4,6,7,8-HxCDF	0.55	J	0.593	J	pg/g		8	25
1,2,3,4,6,7,8-HpCDD	75		73.4		pg/g		2	25
1,2,3,4,6,7,8-HpCDF	10	B	10.6		pg/g		1	25
1,2,3,4,7,8,9-HpCDF	0.90	J	0.701	J	pg/g		25	25
OCDD	660	B	656		pg/g		0.2	25
OCDF	25		24.7		pg/g		0.8	25
Total TCDD	1.1	q	1.15	q	pg/g		4	25
Total TCDF	2.3	q	1.59	q	pg/g		37	25
Total PeCDD	3.9	J q	3.66	J q	pg/g		5	25
Total PeCDF	2.2	J q	1.73	J	pg/g		24	25
Total HxCDD	24	q B	25.5	q	pg/g		7	25
Total HxCDF	9.9	B	10.4	q	pg/g		4	25
Total HpCDD	140		141		pg/g		2	25
Total HpCDF	33	B	32.0		pg/g		2	25

Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	61		40 - 135
13C-2,3,7,8-TCDF	62		40 - 135
13C-1,2,3,7,8-PeCDD	59		40 - 135
13C-1,2,3,7,8-PeCDF	59		40 - 135
13C-1,2,3,6,7,8-HxCDD	66		40 - 135
13C-1,2,3,4,7,8-HxCDF	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135
13C-OCDD	87		40 - 135

Lab Sample ID: 320-7028-6 TRL
Matrix: Solid
Analysis Batch: 41140

Client Sample ID: TRIP
Prep Type: Total/NA
Prep Batch: 41002

Analyte	Sample	Sample	TRL	TRL	Unit	D	RSD	Limit
	Result	Qualifier	Result	Qualifier				
2,3,7,8-TCDD	ND		0.293	J q	pg/g		NC	
2,3,7,8-TCDF	0.46		0.405	J	pg/g		13	20
1,2,3,7,8-PeCDD	0.54		0.598	J	pg/g		20	20
1,2,3,7,8-PeCDF	0.29		ND		pg/g		NC	
2,3,4,7,8-PeCDF	ND		ND		pg/g		NC	
1,2,3,4,7,8-HxCDD	1.1		1.12	J	pg/g		5	20
1,2,3,6,7,8-HxCDD	2.4		2.52	J	pg/g		4	20
1,2,3,7,8,9-HxCDD	2.3		2.66	J	pg/g		6	20
1,2,3,4,7,8-HxCDF	0.63		0.602	J	pg/g		10	20
1,2,3,6,7,8-HxCDF	0.43		0.440	J q	pg/g		9	20

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41140

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 41002

Analyte	Sample	Sample	TRL	TRL	Unit	D	RSD	Limit
	Result	Qualifier	Result	Qualifier				
1,2,3,7,8,9-HxCDF	ND		ND		pg/g		NC	
2,3,4,6,7,8-HxCDF	0.55		0.581	J	pg/g		3	20
1,2,3,4,6,7,8-HpCDD	75		72.6		pg/g		1	20
1,2,3,4,6,7,8-HpCDF	10		10.3		pg/g		1	20
1,2,3,4,7,8,9-HpCDF	0.90		0.710	J	pg/g		12	20
OCDD	660		645		pg/g		0.9	20
OCDF	25		22.9		pg/g		4	20
Total TCDD	1.1		1.63	q	pg/g		18	20
Total TCDF	2.3		1.50	q	pg/g		20	20
Total PeCDD	3.9		3.77	J q	pg/g		2	20
Total PeCDF	2.2		1.65	J q	pg/g		13	20
Total HxCDD	24		24.5		pg/g		3	20
Total HxCDF	9.9		9.83	q	pg/g		2	20
Total HpCDD	140		142		pg/g		0.7	20
Total HpCDF	33		30.9		pg/g		2	20

Isotope Dilution	TRL	TRL	Limits
%Recovery	Qualifier		
13C-2,3,7,8-TCDD	69		40 - 135
13C-2,3,7,8-TCDF	70		40 - 135
13C-1,2,3,7,8-PeCDD	66		40 - 135
13C-1,2,3,7,8-PeCDF	69		40 - 135
13C-1,2,3,6,7,8-HxCDD	66	q	40 - 135
13C-1,2,3,4,7,8-HxCDF	80		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135
13C-OCDD	89		40 - 135

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-40385/1-A

Matrix: Water

Analysis Batch: 40757

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40385

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.020	0.012	mg/L		04/14/14 07:00	04/16/14 16:24	1
Barium	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:24	1
Cadmium	ND		0.0020	0.00050	mg/L		04/14/14 07:00	04/16/14 16:24	1
Chromium	ND		0.0080	0.0012	mg/L		04/14/14 07:00	04/16/14 16:24	1
Lead	ND		0.0050	0.0025	mg/L		04/14/14 07:00	04/16/14 16:24	1
Selenium	ND		0.020	0.013	mg/L		04/14/14 07:00	04/16/14 16:24	1
Silver	0.00114	J	0.0050	0.00084	mg/L		04/14/14 07:00	04/16/14 16:24	1

Lab Sample ID: LCS 320-40385/2-A

Matrix: Water

Analysis Batch: 40757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Arsenic	2.00	2.04		mg/L		102	85 - 110

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 320-40385/2-A
Matrix: Water
Analysis Batch: 40757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	2.03		mg/L		102	89 - 110
Cadmium	0.0500	0.0529		mg/L		106	89 - 110
Chromium	0.200	0.206		mg/L		103	90 - 110
Lead	0.500	0.523		mg/L		105	86 - 110
Selenium	2.00	2.12		mg/L		106	84 - 110
Silver	0.0500	0.0523		mg/L		105	88 - 110

Lab Sample ID: 320-7028-1 MS
Matrix: Water
Analysis Batch: 40757

Client Sample ID: MW04-01
Prep Type: Total/NA
Prep Batch: 40385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		2.00	2.08		mg/L		104	85 - 110
Barium	0.0093		2.00	2.01		mg/L		100	89 - 110
Cadmium	ND		0.0500	0.0517		mg/L		103	89 - 110
Chromium	ND		0.200	0.204		mg/L		102	90 - 110
Lead	ND		0.500	0.501		mg/L		100	86 - 110
Selenium	ND		2.00	2.12		mg/L		106	84 - 110
Silver	ND		0.0500	0.0510		mg/L		102	88 - 110

Lab Sample ID: 320-7028-1 MSD
Matrix: Water
Analysis Batch: 40757

Client Sample ID: MW04-01
Prep Type: Total/NA
Prep Batch: 40385

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		2.00	2.06		mg/L		103	85 - 110	1	20
Barium	0.0093		2.00	1.99		mg/L		99	89 - 110	1	20
Cadmium	ND		0.0500	0.0511		mg/L		102	89 - 110	1	20
Chromium	ND		0.200	0.200		mg/L		100	90 - 110	2	20
Lead	ND		0.500	0.499		mg/L		100	86 - 110	0	20
Selenium	ND		2.00	2.10		mg/L		105	84 - 110	1	20
Silver	ND		0.0500	0.0513		mg/L		103	88 - 110	1	20

Lab Sample ID: MB 320-40968/1-A
Matrix: Solid
Analysis Batch: 41465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40968

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	1.3	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Barium	ND		1.0	0.12	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Cadmium	ND		0.20	0.030	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Chromium	ND		0.50	0.14	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Lead	ND		1.0	0.26	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Selenium	ND		2.0	1.4	mg/Kg		04/22/14 07:45	04/29/14 11:10	1
Silver	ND		0.50	0.090	mg/Kg		04/22/14 07:45	04/29/14 11:10	1

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 320-40968/2-A

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40968

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	197		mg/Kg		98	81 - 110
Barium	200	197		mg/Kg		98	88 - 110
Cadmium	5.00	5.25		mg/Kg		105	86 - 110
Chromium	20.0	20.4		mg/Kg		102	88 - 110
Lead	50.0	51.2		mg/Kg		102	85 - 110
Selenium	200	208		mg/Kg		104	80 - 110
Silver	5.00	5.23		mg/Kg		105	85 - 110

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40968

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	12		101	107		mg/Kg		94	81 - 110
Barium	9.7		101	103		mg/Kg		93	88 - 110
Cadmium	0.090	J	2.52	2.43		mg/Kg		93	86 - 110
Chromium	31		10.1	42.6	F1	mg/Kg		111	88 - 110
Lead	5.1		25.2	30.4		mg/Kg		100	85 - 110
Selenium	ND		101	94.1		mg/Kg		93	80 - 110
Silver	ND		2.52	2.17		mg/Kg		86	85 - 110

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40968

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	12		98.2	104		mg/Kg		93	81 - 110	3	35
Barium	9.7		98.2	100		mg/Kg		92	88 - 110	3	35
Cadmium	0.090	J	2.46	2.37		mg/Kg		93	86 - 110	2	35
Chromium	31		9.82	42.0		mg/Kg		108	88 - 110	1	35
Lead	5.1		24.6	25.2	F1	mg/Kg		82	85 - 110	19	35
Selenium	ND		98.2	90.2		mg/Kg		92	80 - 110	4	35
Silver	ND		2.46	2.48		mg/Kg		101	85 - 110	13	35

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 40968

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	12		12.2		mg/Kg		1	35
Barium	9.7		10.2		mg/Kg		6	35
Cadmium	0.090	J	0.109	J	mg/Kg		19	35
Chromium	31		32.7		mg/Kg		4	35
Lead	5.1		2.39	J F3	mg/Kg		73	35
Selenium	ND		ND		mg/Kg		NC	35
Silver	ND		ND		mg/Kg		NC	35

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 40968

Analyte	Sample	Sample	TRL	TRL	Unit	D	RSD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	12		12.6		mg/Kg		2	35
Barium	9.7		10.7		mg/Kg		4	35
Cadmium	0.090		ND		mg/Kg		NC	
Chromium	31		33.0		mg/Kg		2	35
Lead	5.1		3.62		mg/Kg		30	35
Selenium	ND		ND		mg/Kg		NC	
Silver	ND		ND		mg/Kg		NC	

Lab Sample ID: MB 320-41029/1-A

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41029

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		2.0	1.3	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Barium	ND		1.0	0.12	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Cadmium	ND		0.20	0.030	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Chromium	ND		0.50	0.14	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Lead	ND		1.0	0.26	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Selenium	ND		2.0	1.4	mg/Kg		04/23/14 06:45	04/29/14 12:15	1
Silver	ND		0.50	0.090	mg/Kg		04/23/14 06:45	04/29/14 12:15	1

Lab Sample ID: LCS 320-41029/2-A

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41029

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Arsenic	200	201		mg/Kg		100	81 - 110	
Barium	200	197		mg/Kg		99	88 - 110	
Cadmium	5.00	5.27		mg/Kg		105	86 - 110	
Chromium	20.0	20.5		mg/Kg		103	88 - 110	
Lead	50.0	51.9		mg/Kg		104	85 - 110	
Selenium	200	208		mg/Kg		104	80 - 110	
Silver	5.00	5.10		mg/Kg		102	85 - 110	

Lab Sample ID: 320-7028-20 MS

Matrix: Solid

Analysis Batch: 41465

Client Sample ID: DU01-01

Prep Type: Total/NA

Prep Batch: 41029

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier		Result	Qualifier					
Arsenic	14		96.9	105		mg/Kg		93	81 - 110	
Barium	20		96.9	110		mg/Kg		93	88 - 110	
Cadmium	0.21	J	2.42	2.48		mg/Kg		94	86 - 110	
Chromium	86		9.69	101	4	mg/Kg		153	88 - 110	
Lead	23		24.2	49.5		mg/Kg		109	85 - 110	
Selenium	ND		96.9	88.7		mg/Kg		92	80 - 110	
Silver	ND		2.42	2.39		mg/Kg		99	85 - 110	

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 320-7028-20 MSD
 Matrix: Solid
 Analysis Batch: 41465

Client Sample ID: DU01-01
 Prep Type: Total/NA
 Prep Batch: 41029

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Arsenic	14		98.9	105		mg/Kg		91	81 - 110	0	35
Barium	20		98.9	111		mg/Kg		92	88 - 110	1	35
Cadmium	0.21	J	2.47	2.53		mg/Kg		94	86 - 110	2	35
Chromium	86		9.89	98.2	4	mg/Kg		126	88 - 110	2	35
Lead	23		24.7	43.9		mg/Kg		85	85 - 110	12	35
Selenium	ND		98.9	89.2		mg/Kg		90	80 - 110	1	35
Silver	ND		2.47	2.53		mg/Kg		103	85 - 110	6	35

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 320-40750/11-A
 Matrix: Water
 Analysis Batch: 40798

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 40750

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020	0.00010	mg/L		04/18/14 07:25	04/18/14 09:33	1

Lab Sample ID: LCS 320-40750/12-A
 Matrix: Water
 Analysis Batch: 40798

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 40750

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00100	0.00106		mg/L		106	82 - 113

Lab Sample ID: 320-7028-1 MS
 Matrix: Water
 Analysis Batch: 40798

Client Sample ID: MW04-01
 Prep Type: Total/NA
 Prep Batch: 40750

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	ND		0.00100	0.00101		mg/L		101	82 - 113

Lab Sample ID: 320-7028-1 MSD
 Matrix: Water
 Analysis Batch: 40798

Client Sample ID: MW04-01
 Prep Type: Total/NA
 Prep Batch: 40750

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	ND		0.00100	0.00103		mg/L		103	82 - 113	2	17

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-41339/11-A
 Matrix: Solid
 Analysis Batch: 41370

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 41339

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.039	0.0083	mg/Kg		04/28/14 11:39	04/28/14 15:34	1

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 320-41339/12-A

Matrix: Solid

Analysis Batch: 41370

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0818	0.0799		mg/Kg		98	86 - 114

Lab Sample ID: 320-7028-6 MS

Matrix: Solid

Analysis Batch: 41370

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 41339

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.011	J	0.143	0.143		mg/Kg		92	86 - 114

Lab Sample ID: 320-7028-6 MSD

Matrix: Solid

Analysis Batch: 41370

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 41339

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.011	J	0.151	0.162		mg/Kg		100	86 - 114	12	17

Lab Sample ID: 320-7028-6 DU

Matrix: Solid

Analysis Batch: 41370

Client Sample ID: DU09-01

Prep Type: Total/NA

Prep Batch: 41339

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.011	J	ND		mg/Kg		NC	17

Lab Sample ID: 320-7028-6 TRL

Matrix: Solid

Analysis Batch: 41370

Client Sample ID: TRIP

Prep Type: Total/NA

Prep Batch: 41339

Analyte	Sample Result	Sample Qualifier	TRL Result	TRL Qualifier	Unit	D	RSD	RSD Limit
Mercury	0.011		0.0110	J	mg/Kg		NC	

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC/MS Semi VOA

Prep Batch: 40471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	3510C	
320-7028-1 MS	MW04-01	Total/NA	Water	3510C	
320-7028-1 MSD	MW04-01	Total/NA	Water	3510C	
320-7028-2	MW04-02	Total/NA	Water	3510C	
320-7028-3	MW01-01	Total/NA	Water	3510C	
320-7028-4	MW02-01	Total/NA	Water	3510C	
320-7028-5	MW03-01	Total/NA	Water	3510C	
LCS 320-40471/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 320-40471/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 40621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8270C SIM	40471
320-7028-1 MS	MW04-01	Total/NA	Water	8270C SIM	40471
320-7028-1 MSD	MW04-01	Total/NA	Water	8270C SIM	40471
320-7028-2	MW04-02	Total/NA	Water	8270C SIM	40471
320-7028-3	MW01-01	Total/NA	Water	8270C SIM	40471
320-7028-4	MW02-01	Total/NA	Water	8270C SIM	40471
320-7028-5	MW03-01	Total/NA	Water	8270C SIM	40471
LCS 320-40471/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	40471
MB 320-40471/1-A	Method Blank	Total/NA	Water	8270C SIM	40471

ISM Prep Batch: 40839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-14 - DL	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	

Prep Batch: 40868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	3550B	40839
320-7028-6 DU	DU09-01	Total/NA	Solid	3550B	40839
320-7028-6 MS	DU09-01	Total/NA	Solid	3550B	40839
320-7028-6 MSD	DU09-01	Total/NA	Solid	3550B	40839

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-1

GC/MS Semi VOA (Continued)

Prep Batch: 40868 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6 TRL	TRIP	Total/NA	Solid	3550B	40839
320-7028-7	DU09-02	Total/NA	Solid	3550B	40839
320-7028-8	DU09-03	Total/NA	Solid	3550B	40839
320-7028-9	DU08-01	Total/NA	Solid	3550B	40839
320-7028-10	DU07-01	Total/NA	Solid	3550B	40839
320-7028-11	DU03-01	Total/NA	Solid	3550B	40839
320-7028-12	DU02-01	Total/NA	Solid	3550B	40839
320-7028-13	DU06-01	Total/NA	Solid	3550B	40839
320-7028-14	SB02-01	Total/NA	Solid	3550B	40839
320-7028-14 - DL	SB02-01	Total/NA	Solid	3550B	40839
320-7028-15	SB03-01	Total/NA	Solid	3550B	40839
320-7028-16	SB04-01	Total/NA	Solid	3550B	40839
320-7028-17	SB04-02	Total/NA	Solid	3550B	40839
320-7028-18	DU05-01	Total/NA	Solid	3550B	40839
320-7028-19	DU04-01	Total/NA	Solid	3550B	40839
320-7028-20	DU01-01	Total/NA	Solid	3550B	40839
LCS 320-40868/2-A	Lab Control Sample	Total/NA	Solid	3550B	
MB 320-40868/1-A	Method Blank	Total/NA	Solid	3550B	

Analysis Batch: 41226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	8270C SIM	40868
320-7028-6 DU	DU09-01	Total/NA	Solid	8270C SIM	40868
320-7028-6 MS	DU09-01	Total/NA	Solid	8270C SIM	40868
320-7028-6 MSD	DU09-01	Total/NA	Solid	8270C SIM	40868
320-7028-6 TRL	TRIP	Total/NA	Solid	8270C SIM	40868
320-7028-7	DU09-02	Total/NA	Solid	8270C SIM	40868
320-7028-8	DU09-03	Total/NA	Solid	8270C SIM	40868
320-7028-9	DU08-01	Total/NA	Solid	8270C SIM	40868
320-7028-10	DU07-01	Total/NA	Solid	8270C SIM	40868
320-7028-11	DU03-01	Total/NA	Solid	8270C SIM	40868
320-7028-12	DU02-01	Total/NA	Solid	8270C SIM	40868
320-7028-13	DU06-01	Total/NA	Solid	8270C SIM	40868
320-7028-14	SB02-01	Total/NA	Solid	8270C SIM	40868
320-7028-15	SB03-01	Total/NA	Solid	8270C SIM	40868
320-7028-16	SB04-01	Total/NA	Solid	8270C SIM	40868
320-7028-17	SB04-02	Total/NA	Solid	8270C SIM	40868
320-7028-18	DU05-01	Total/NA	Solid	8270C SIM	40868
320-7028-19	DU04-01	Total/NA	Solid	8270C SIM	40868
320-7028-20	DU01-01	Total/NA	Solid	8270C SIM	40868
LCS 320-40868/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	40868
MB 320-40868/1-A	Method Blank	Total/NA	Solid	8270C SIM	40868

Analysis Batch: 41324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-14 - DL	SB02-01	Total/NA	Solid	8270C SIM	40868

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA

Prep Batch: 40475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	3510C	
320-7028-1 MS	MW04-01	Total/NA	Water	3510C	
320-7028-1 MSD	MW04-01	Total/NA	Water	3510C	
320-7028-2	MW04-02	Total/NA	Water	3510C	
320-7028-3	MW01-01	Total/NA	Water	3510C	
320-7028-4	MW02-01	Total/NA	Water	3510C	
320-7028-5	MW03-01	Total/NA	Water	3510C	
LCS 320-40475/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 320-40475/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 40476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	3510C	
320-7028-1 MS	MW04-01	Total/NA	Water	3510C	
320-7028-1 MSD	MW04-01	Total/NA	Water	3510C	
320-7028-2	MW04-02	Total/NA	Water	3510C	
320-7028-3	MW01-01	Total/NA	Water	3510C	
320-7028-4	MW02-01	Total/NA	Water	3510C	
320-7028-5	MW03-01	Total/NA	Water	3510C	
LCS 320-40476/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 320-40476/3-A	Lab Control Sample	Total/NA	Water	3510C	
MB 320-40476/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 40477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	3510C	
320-7028-1 MS	MW04-01	Total/NA	Water	3510C	
320-7028-1 MSD	MW04-01	Total/NA	Water	3510C	
320-7028-2	MW04-02	Total/NA	Water	3510C	
320-7028-3	MW01-01	Total/NA	Water	3510C	
320-7028-4	MW02-01	Total/NA	Water	3510C	
320-7028-5	MW03-01	Total/NA	Water	3510C	
LCS 320-40477/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 320-40477/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 40705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8015B	40475
320-7028-1 MS	MW04-01	Total/NA	Water	8015B	40475
320-7028-1 MSD	MW04-01	Total/NA	Water	8015B	40475
320-7028-2	MW04-02	Total/NA	Water	8015B	40475
320-7028-3	MW01-01	Total/NA	Water	8015B	40475
320-7028-4	MW02-01	Total/NA	Water	8015B	40475
320-7028-5	MW03-01	Total/NA	Water	8015B	40475
LCS 320-40475/2-A	Lab Control Sample	Total/NA	Water	8015B	40475
MB 320-40475/1-A	Method Blank	Total/NA	Water	8015B	40475

ISM Prep Batch: 40783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA (Continued)

ISM Prep Batch: 40783 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	
320-7028-20 MS	DU01-01	Total/NA	Solid	Increment, prep	
320-7028-20 MSD	DU01-01	Total/NA	Solid	Increment, prep	
LCS 320-40783/2-B	Lab Control Sample	Total/NA	Solid	Increment, prep	
MB 320-40783/1-B	Method Blank	Total/NA	Solid	Increment, prep	

Prep Batch: 40786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-14	SB02-01	Total/NA	Solid	3550B	40783
320-7028-15	SB03-01	Total/NA	Solid	3550B	40783
320-7028-16	SB04-01	Total/NA	Solid	3550B	40783
320-7028-17	SB04-02	Total/NA	Solid	3550B	40783
320-7028-20	DU01-01	Total/NA	Solid	3550B	40783
320-7028-20 MS	DU01-01	Total/NA	Solid	3550B	40783
320-7028-20 MSD	DU01-01	Total/NA	Solid	3550B	40783
LCS 320-40783/2-B	Lab Control Sample	Total/NA	Solid	3550B	40783
MB 320-40783/1-B	Method Blank	Total/NA	Solid	3550B	40783

Analysis Batch: 40808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8082	40477
320-7028-1 MS	MW04-01	Total/NA	Water	8082	40477
320-7028-1 MSD	MW04-01	Total/NA	Water	8082	40477
320-7028-2	MW04-02	Total/NA	Water	8082	40477
320-7028-3	MW01-01	Total/NA	Water	8082	40477
320-7028-4	MW02-01	Total/NA	Water	8082	40477
320-7028-5	MW03-01	Total/NA	Water	8082	40477
LCS 320-40477/2-A	Lab Control Sample	Total/NA	Water	8082	40477
MB 320-40477/1-A	Method Blank	Total/NA	Water	8082	40477

Analysis Batch: 40813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8081A	40476
320-7028-1 MS	MW04-01	Total/NA	Water	8081A	40476
320-7028-1 MSD	MW04-01	Total/NA	Water	8081A	40476
320-7028-2	MW04-02	Total/NA	Water	8081A	40476
320-7028-3	MW01-01	Total/NA	Water	8081A	40476
320-7028-4	MW02-01	Total/NA	Water	8081A	40476
320-7028-5	MW03-01	Total/NA	Water	8081A	40476
LCS 320-40476/2-A	Lab Control Sample	Total/NA	Water	8081A	40476
LCS 320-40476/3-A	Lab Control Sample	Total/NA	Water	8081A	40476
MB 320-40476/1-A	Method Blank	Total/NA	Water	8081A	40476

ISM Prep Batch: 40857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA (Continued)

ISM Prep Batch: 40857 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	
LCS 320-40857/2-B	Lab Control Sample	Total/NA	Solid	Increment, prep	
MB 320-40857/1-B	Method Blank	Total/NA	Solid	Increment, prep	

ISM Prep Batch: 40858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	
LCS 320-40858/2-B	Lab Control Sample	Total/NA	Solid	Increment, prep	
LCS 320-40858/3-B	Lab Control Sample	Total/NA	Solid	Increment, prep	
MB 320-40858/1-B	Method Blank	Total/NA	Solid	Increment, prep	

Prep Batch: 40869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	3550B	40857
320-7028-6 DU	DU09-01	Total/NA	Solid	3550B	40857
320-7028-6 MS	DU09-01	Total/NA	Solid	3550B	40857
320-7028-6 MSD	DU09-01	Total/NA	Solid	3550B	40857
320-7028-6 TRL	TRIP	Total/NA	Solid	3550B	40857
320-7028-7	DU09-02	Total/NA	Solid	3550B	40857

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA (Continued)

Prep Batch: 40869 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-8	DU09-03	Total/NA	Solid	3550B	40857
320-7028-9	DU08-01	Total/NA	Solid	3550B	40857
320-7028-10	DU07-01	Total/NA	Solid	3550B	40857
320-7028-11	DU03-01	Total/NA	Solid	3550B	40857
320-7028-12	DU02-01	Total/NA	Solid	3550B	40857
320-7028-13	DU06-01	Total/NA	Solid	3550B	40857
320-7028-14	SB02-01	Total/NA	Solid	3550B	40857
320-7028-15	SB03-01	Total/NA	Solid	3550B	40857
320-7028-16	SB04-01	Total/NA	Solid	3550B	40857
320-7028-17	SB04-02	Total/NA	Solid	3550B	40857
320-7028-18	DU05-01	Total/NA	Solid	3550B	40857
320-7028-19	DU04-01	Total/NA	Solid	3550B	40857
320-7028-20	DU01-01	Total/NA	Solid	3550B	40857
LCS 320-40857/2-B	Lab Control Sample	Total/NA	Solid	3550B	40857
MB 320-40857/1-B	Method Blank	Total/NA	Solid	3550B	40857

Prep Batch: 40870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	3550B	40858
320-7028-6 DU	DU09-01	Total/NA	Solid	3550B	40858
320-7028-6 MS	DU09-01	Total/NA	Solid	3550B	40858
320-7028-6 MSD	DU09-01	Total/NA	Solid	3550B	40858
320-7028-6 TRL	TRIP	Total/NA	Solid	3550B	40858
320-7028-7	DU09-02	Total/NA	Solid	3550B	40858
320-7028-8	DU09-03	Total/NA	Solid	3550B	40858
320-7028-9	DU08-01	Total/NA	Solid	3550B	40858
320-7028-10	DU07-01	Total/NA	Solid	3550B	40858
320-7028-11	DU03-01	Total/NA	Solid	3550B	40858
320-7028-12	DU02-01	Total/NA	Solid	3550B	40858
320-7028-13	DU06-01	Total/NA	Solid	3550B	40858
320-7028-14	SB02-01	Total/NA	Solid	3550B	40858
320-7028-15	SB03-01	Total/NA	Solid	3550B	40858
320-7028-16	SB04-01	Total/NA	Solid	3550B	40858
320-7028-17	SB04-02	Total/NA	Solid	3550B	40858
320-7028-18	DU05-01	Total/NA	Solid	3550B	40858
320-7028-19	DU04-01	Total/NA	Solid	3550B	40858
320-7028-20	DU01-01	Total/NA	Solid	3550B	40858
LCS 320-40858/2-B	Lab Control Sample	Total/NA	Solid	3550B	40858
LCS 320-40858/3-B	Lab Control Sample	Total/NA	Solid	3550B	40858
MB 320-40858/1-B	Method Blank	Total/NA	Solid	3550B	40858

Analysis Batch: 40911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-14	SB02-01	Total/NA	Solid	8015B	40786
320-7028-15	SB03-01	Total/NA	Solid	8015B	40786
320-7028-16	SB04-01	Total/NA	Solid	8015B	40786
320-7028-17	SB04-02	Total/NA	Solid	8015B	40786
320-7028-20	DU01-01	Total/NA	Solid	8015B	40786
320-7028-20 MS	DU01-01	Total/NA	Solid	8015B	40786
320-7028-20 MSD	DU01-01	Total/NA	Solid	8015B	40786
LCS 320-40783/2-B	Lab Control Sample	Total/NA	Solid	8015B	40786

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA (Continued)

Analysis Batch: 40911 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-40783/1-B	Method Blank	Total/NA	Solid	8015B	40786

Analysis Batch: 41033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	8082	40869
320-7028-6 DU	DU09-01	Total/NA	Solid	8082	40869
320-7028-6 TRL	TRIP	Total/NA	Solid	8082	40869
320-7028-7	DU09-02	Total/NA	Solid	8082	40869
320-7028-8	DU09-03	Total/NA	Solid	8082	40869
320-7028-9	DU08-01	Total/NA	Solid	8082	40869
320-7028-10	DU07-01	Total/NA	Solid	8082	40869
320-7028-11	DU03-01	Total/NA	Solid	8082	40869
320-7028-12	DU02-01	Total/NA	Solid	8082	40869
320-7028-13	DU06-01	Total/NA	Solid	8082	40869
320-7028-14	SB02-01	Total/NA	Solid	8082	40869
320-7028-15	SB03-01	Total/NA	Solid	8082	40869
320-7028-16	SB04-01	Total/NA	Solid	8082	40869
320-7028-17	SB04-02	Total/NA	Solid	8082	40869
320-7028-18	DU05-01	Total/NA	Solid	8082	40869
320-7028-19	DU04-01	Total/NA	Solid	8082	40869
320-7028-20	DU01-01	Total/NA	Solid	8082	40869
LCS 320-40857/2-B	Lab Control Sample	Total/NA	Solid	8082	40869
MB 320-40857/1-B	Method Blank	Total/NA	Solid	8082	40869

Analysis Batch: 41216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6 MS	DU09-01	Total/NA	Solid	8082	40869
320-7028-6 MSD	DU09-01	Total/NA	Solid	8082	40869

Analysis Batch: 41220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	8081A	40870
320-7028-6 DU	DU09-01	Total/NA	Solid	8081A	40870
320-7028-6 MS	DU09-01	Total/NA	Solid	8081A	40870
320-7028-6 MSD	DU09-01	Total/NA	Solid	8081A	40870
320-7028-6 TRL	TRIP	Total/NA	Solid	8081A	40870
320-7028-7	DU09-02	Total/NA	Solid	8081A	40870
320-7028-8	DU09-03	Total/NA	Solid	8081A	40870
320-7028-9	DU08-01	Total/NA	Solid	8081A	40870
320-7028-10	DU07-01	Total/NA	Solid	8081A	40870
320-7028-11	DU03-01	Total/NA	Solid	8081A	40870
LCS 320-40858/2-B	Lab Control Sample	Total/NA	Solid	8081A	40870
LCS 320-40858/3-B	Lab Control Sample	Total/NA	Solid	8081A	40870
MB 320-40858/1-B	Method Blank	Total/NA	Solid	8081A	40870

Analysis Batch: 41301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-12	DU02-01	Total/NA	Solid	8081A	40870
320-7028-13	DU06-01	Total/NA	Solid	8081A	40870
320-7028-14	SB02-01	Total/NA	Solid	8081A	40870
320-7028-15	SB03-01	Total/NA	Solid	8081A	40870

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

GC Semi VOA (Continued)

Analysis Batch: 41301 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-16	SB04-01	Total/NA	Solid	8081A	40870
320-7028-17	SB04-02	Total/NA	Solid	8081A	40870
320-7028-18	DU05-01	Total/NA	Solid	8081A	40870
320-7028-19	DU04-01	Total/NA	Solid	8081A	40870
320-7028-20	DU01-01	Total/NA	Solid	8081A	40870

Specialty Organics

Prep Batch: 40582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8290	
320-7028-1 MS	MW04-01	Total/NA	Water	8290	
320-7028-1 MSD	MW04-01	Total/NA	Water	8290	
320-7028-2	MW04-02	Total/NA	Water	8290	
320-7028-3	MW01-01	Total/NA	Water	8290	
320-7028-4	MW02-01	Total/NA	Water	8290	
320-7028-5	MW03-01	Total/NA	Water	8290	
LCS 320-40582/2-A	Lab Control Sample	Total/NA	Water	8290	
MB 320-40582/1-A	Method Blank	Total/NA	Water	8290	

Analysis Batch: 40820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	8290A	40582
320-7028-1 MS	MW04-01	Total/NA	Water	8290A	40582
320-7028-1 MSD	MW04-01	Total/NA	Water	8290A	40582
320-7028-2	MW04-02	Total/NA	Water	8290A	40582
320-7028-3	MW01-01	Total/NA	Water	8290A	40582
320-7028-4	MW02-01	Total/NA	Water	8290A	40582
320-7028-5	MW03-01	Total/NA	Water	8290A	40582
LCS 320-40582/2-A	Lab Control Sample	Total/NA	Water	8290A	40582
MB 320-40582/1-A	Method Blank	Total/NA	Water	8290A	40582

ISM Prep Batch: 40861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-11 - RA	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-14 - RA	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-15 - RA	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-16 - RA	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Specialty Organics (Continued)

ISM Prep Batch: 40861 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-17 - RA	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-19 - RA	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	
320-7028-20 - RA	DU01-01	Total/NA	Solid	Increment, prep	

Prep Batch: 41002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	8290	40861
320-7028-6 DU	DU09-01	Total/NA	Solid	8290	40861
320-7028-6 MS	DU09-01	Total/NA	Solid	8290	40861
320-7028-6 MSD	DU09-01	Total/NA	Solid	8290	40861
320-7028-6 TRL	TRIP	Total/NA	Solid	8290	40861
320-7028-7	DU09-02	Total/NA	Solid	8290	40861
320-7028-8	DU09-03	Total/NA	Solid	8290	40861
320-7028-11	DU03-01	Total/NA	Solid	8290	40861
320-7028-11 - RA	DU03-01	Total/NA	Solid	8290	40861
320-7028-14	SB02-01	Total/NA	Solid	8290	40861
320-7028-14 - RA	SB02-01	Total/NA	Solid	8290	40861
320-7028-15	SB03-01	Total/NA	Solid	8290	40861
320-7028-15 - RA	SB03-01	Total/NA	Solid	8290	40861
320-7028-16	SB04-01	Total/NA	Solid	8290	40861
320-7028-16 - RA	SB04-01	Total/NA	Solid	8290	40861
320-7028-17	SB04-02	Total/NA	Solid	8290	40861
320-7028-17 - RA	SB04-02	Total/NA	Solid	8290	40861
320-7028-19	DU04-01	Total/NA	Solid	8290	40861
320-7028-19 - RA	DU04-01	Total/NA	Solid	8290	40861
320-7028-20	DU01-01	Total/NA	Solid	8290	40861
320-7028-20 - RA	DU01-01	Total/NA	Solid	8290	40861
LCS 320-41002/2-A	Lab Control Sample	Total/NA	Solid	8290	40861
MB 320-41002/1-A	Method Blank	Total/NA	Solid	8290	40861

Analysis Batch: 41140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	8290A	41002
320-7028-6 DU	DU09-01	Total/NA	Solid	8290A	41002
320-7028-6 MS	DU09-01	Total/NA	Solid	8290A	41002
320-7028-6 MSD	DU09-01	Total/NA	Solid	8290A	41002
320-7028-6 TRL	TRIP	Total/NA	Solid	8290A	41002
LCS 320-41002/2-A	Lab Control Sample	Total/NA	Solid	8290A	41002
MB 320-41002/1-A	Method Blank	Total/NA	Solid	8290A	41002

Analysis Batch: 41197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-7	DU09-02	Total/NA	Solid	8290A	41002
320-7028-8	DU09-03	Total/NA	Solid	8290A	41002
320-7028-11	DU03-01	Total/NA	Solid	8290A	41002
320-7028-14	SB02-01	Total/NA	Solid	8290A	41002
320-7028-15	SB03-01	Total/NA	Solid	8290A	41002
320-7028-16	SB04-01	Total/NA	Solid	8290A	41002
320-7028-17	SB04-02	Total/NA	Solid	8290A	41002

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Specialty Organics (Continued)

Analysis Batch: 41197 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-19	DU04-01	Total/NA	Solid	8290A	41002
320-7028-20	DU01-01	Total/NA	Solid	8290A	41002

Analysis Batch: 41289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-16	SB04-01	Total/NA	Solid	8290A	41002
320-7028-17	SB04-02	Total/NA	Solid	8290A	41002

Analysis Batch: 41307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-11 - RA	DU03-01	Total/NA	Solid	8290A	41002
320-7028-14 - RA	SB02-01	Total/NA	Solid	8290A	41002
320-7028-15 - RA	SB03-01	Total/NA	Solid	8290A	41002
320-7028-16 - RA	SB04-01	Total/NA	Solid	8290A	41002
320-7028-17 - RA	SB04-02	Total/NA	Solid	8290A	41002
320-7028-19 - RA	DU04-01	Total/NA	Solid	8290A	41002
320-7028-20 - RA	DU01-01	Total/NA	Solid	8290A	41002

Metals

Prep Batch: 40385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	3010A	
320-7028-1 MS	MW04-01	Total/NA	Water	3010A	
320-7028-1 MSD	MW04-01	Total/NA	Water	3010A	
320-7028-2	MW04-02	Total/NA	Water	3010A	
320-7028-3	MW01-01	Total/NA	Water	3010A	
320-7028-4	MW02-01	Total/NA	Water	3010A	
320-7028-5	MW03-01	Total/NA	Water	3010A	
LCS 320-40385/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 320-40385/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 40750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	7470A	
320-7028-1 MS	MW04-01	Total/NA	Water	7470A	
320-7028-1 MSD	MW04-01	Total/NA	Water	7470A	
320-7028-2	MW04-02	Total/NA	Water	7470A	
320-7028-3	MW01-01	Total/NA	Water	7470A	
320-7028-4	MW02-01	Total/NA	Water	7470A	
320-7028-5	MW03-01	Total/NA	Water	7470A	
LCS 320-40750/12-A	Lab Control Sample	Total/NA	Water	7470A	
MB 320-40750/11-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 40757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	6010B	40385
320-7028-1 MS	MW04-01	Total/NA	Water	6010B	40385
320-7028-1 MSD	MW04-01	Total/NA	Water	6010B	40385
320-7028-2	MW04-02	Total/NA	Water	6010B	40385

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Metals (Continued)

Analysis Batch: 40757 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-3	MW01-01	Total/NA	Water	6010B	40385
320-7028-4	MW02-01	Total/NA	Water	6010B	40385
320-7028-5	MW03-01	Total/NA	Water	6010B	40385
LCS 320-40385/2-A	Lab Control Sample	Total/NA	Water	6010B	40385
MB 320-40385/1-A	Method Blank	Total/NA	Water	6010B	40385

Analysis Batch: 40798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-1	MW04-01	Total/NA	Water	7470A	40750
320-7028-1 MS	MW04-01	Total/NA	Water	7470A	40750
320-7028-1 MSD	MW04-01	Total/NA	Water	7470A	40750
320-7028-2	MW04-02	Total/NA	Water	7470A	40750
320-7028-3	MW01-01	Total/NA	Water	7470A	40750
320-7028-4	MW02-01	Total/NA	Water	7470A	40750
320-7028-5	MW03-01	Total/NA	Water	7470A	40750
LCS 320-40750/12-A	Lab Control Sample	Total/NA	Water	7470A	40750
MB 320-40750/11-A	Method Blank	Total/NA	Water	7470A	40750

ISM Prep Batch: 40859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	
320-7028-20 MS	DU01-01	Total/NA	Solid	Increment, prep	
320-7028-20 MSD	DU01-01	Total/NA	Solid	Increment, prep	

ISM Prep Batch: 40860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 DU	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MS	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 MSD	DU09-01	Total/NA	Solid	Increment, prep	
320-7028-6 TRL	TRIP	Total/NA	Solid	Increment, prep	
320-7028-7	DU09-02	Total/NA	Solid	Increment, prep	
320-7028-8	DU09-03	Total/NA	Solid	Increment, prep	

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Metals (Continued)

ISM Prep Batch: 40860 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-11	DU03-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-14	SB02-01	Total/NA	Solid	Increment, prep	
320-7028-15	SB03-01	Total/NA	Solid	Increment, prep	
320-7028-16	SB04-01	Total/NA	Solid	Increment, prep	
320-7028-17	SB04-02	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-19	DU04-01	Total/NA	Solid	Increment, prep	
320-7028-20	DU01-01	Total/NA	Solid	Increment, prep	

Prep Batch: 40968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	3050B	40859
320-7028-6 DU	DU09-01	Total/NA	Solid	3050B	40859
320-7028-6 MS	DU09-01	Total/NA	Solid	3050B	40859
320-7028-6 MSD	DU09-01	Total/NA	Solid	3050B	40859
320-7028-6 TRL	TRIP	Total/NA	Solid	3050B	40859
320-7028-7	DU09-02	Total/NA	Solid	3050B	40859
320-7028-8	DU09-03	Total/NA	Solid	3050B	40859
320-7028-9	DU08-01	Total/NA	Solid	3050B	40859
320-7028-10	DU07-01	Total/NA	Solid	3050B	40859
320-7028-11	DU03-01	Total/NA	Solid	3050B	40859
320-7028-12	DU02-01	Total/NA	Solid	3050B	40859
320-7028-13	DU06-01	Total/NA	Solid	3050B	40859
320-7028-14	SB02-01	Total/NA	Solid	3050B	40859
320-7028-15	SB03-01	Total/NA	Solid	3050B	40859
320-7028-16	SB04-01	Total/NA	Solid	3050B	40859
320-7028-17	SB04-02	Total/NA	Solid	3050B	40859
LCS 320-40968/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 320-40968/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 41029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-18	DU05-01	Total/NA	Solid	3050B	40859
320-7028-19	DU04-01	Total/NA	Solid	3050B	40859
320-7028-20	DU01-01	Total/NA	Solid	3050B	40859
320-7028-20 MS	DU01-01	Total/NA	Solid	3050B	40859
320-7028-20 MSD	DU01-01	Total/NA	Solid	3050B	40859
LCS 320-41029/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 320-41029/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 41339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	7471A	40860
320-7028-6 DU	DU09-01	Total/NA	Solid	7471A	40860
320-7028-6 MS	DU09-01	Total/NA	Solid	7471A	40860
320-7028-6 MSD	DU09-01	Total/NA	Solid	7471A	40860
320-7028-6 TRL	TRIP	Total/NA	Solid	7471A	40860

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-1

Metals (Continued)

Prep Batch: 41339 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-7	DU09-02	Total/NA	Solid	7471A	40860
320-7028-8	DU09-03	Total/NA	Solid	7471A	40860
320-7028-9	DU08-01	Total/NA	Solid	7471A	40860
320-7028-10	DU07-01	Total/NA	Solid	7471A	40860
320-7028-11	DU03-01	Total/NA	Solid	7471A	40860
320-7028-12	DU02-01	Total/NA	Solid	7471A	40860
320-7028-13	DU06-01	Total/NA	Solid	7471A	40860
320-7028-14	SB02-01	Total/NA	Solid	7471A	40860
320-7028-15	SB03-01	Total/NA	Solid	7471A	40860
320-7028-16	SB04-01	Total/NA	Solid	7471A	40860
320-7028-17	SB04-02	Total/NA	Solid	7471A	40860
320-7028-18	DU05-01	Total/NA	Solid	7471A	40860
320-7028-19	DU04-01	Total/NA	Solid	7471A	40860
320-7028-20	DU01-01	Total/NA	Solid	7471A	40860
LCS 320-41339/12-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 320-41339/11-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 41370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	7471A	41339
320-7028-6 DU	DU09-01	Total/NA	Solid	7471A	41339
320-7028-6 MS	DU09-01	Total/NA	Solid	7471A	41339
320-7028-6 MSD	DU09-01	Total/NA	Solid	7471A	41339
320-7028-6 TRL	TRIP	Total/NA	Solid	7471A	41339
320-7028-7	DU09-02	Total/NA	Solid	7471A	41339
320-7028-8	DU09-03	Total/NA	Solid	7471A	41339
320-7028-9	DU08-01	Total/NA	Solid	7471A	41339
320-7028-10	DU07-01	Total/NA	Solid	7471A	41339
320-7028-11	DU03-01	Total/NA	Solid	7471A	41339
320-7028-12	DU02-01	Total/NA	Solid	7471A	41339
320-7028-13	DU06-01	Total/NA	Solid	7471A	41339
320-7028-14	SB02-01	Total/NA	Solid	7471A	41339
320-7028-15	SB03-01	Total/NA	Solid	7471A	41339
320-7028-16	SB04-01	Total/NA	Solid	7471A	41339
320-7028-17	SB04-02	Total/NA	Solid	7471A	41339
320-7028-18	DU05-01	Total/NA	Solid	7471A	41339
320-7028-19	DU04-01	Total/NA	Solid	7471A	41339
320-7028-20	DU01-01	Total/NA	Solid	7471A	41339
LCS 320-41339/12-A	Lab Control Sample	Total/NA	Solid	7471A	41339
MB 320-41339/11-A	Method Blank	Total/NA	Solid	7471A	41339

Analysis Batch: 41465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-6	DU09-01	Total/NA	Solid	6010B	40968
320-7028-6 DU	DU09-01	Total/NA	Solid	6010B	40968
320-7028-6 MS	DU09-01	Total/NA	Solid	6010B	40968
320-7028-6 MSD	DU09-01	Total/NA	Solid	6010B	40968
320-7028-6 TRL	TRIP	Total/NA	Solid	6010B	40968
320-7028-7	DU09-02	Total/NA	Solid	6010B	40968
320-7028-8	DU09-03	Total/NA	Solid	6010B	40968
320-7028-9	DU08-01	Total/NA	Solid	6010B	40968

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-1

Metals (Continued)

Analysis Batch: 41465 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-10	DU07-01	Total/NA	Solid	6010B	40968
320-7028-11	DU03-01	Total/NA	Solid	6010B	40968
320-7028-12	DU02-01	Total/NA	Solid	6010B	40968
320-7028-13	DU06-01	Total/NA	Solid	6010B	40968
320-7028-14	SB02-01	Total/NA	Solid	6010B	40968
320-7028-15	SB03-01	Total/NA	Solid	6010B	40968
320-7028-16	SB04-01	Total/NA	Solid	6010B	40968
320-7028-17	SB04-02	Total/NA	Solid	6010B	40968
320-7028-18	DU05-01	Total/NA	Solid	6010B	41029
320-7028-19	DU04-01	Total/NA	Solid	6010B	41029
320-7028-20	DU01-01	Total/NA	Solid	6010B	41029
320-7028-20 MS	DU01-01	Total/NA	Solid	6010B	41029
320-7028-20 MSD	DU01-01	Total/NA	Solid	6010B	41029
LCS 320-40968/2-A	Lab Control Sample	Total/NA	Solid	6010B	40968
LCS 320-41029/2-A	Lab Control Sample	Total/NA	Solid	6010B	41029
MB 320-40968/1-A	Method Blank	Total/NA	Solid	6010B	40968
MB 320-41029/1-A	Method Blank	Total/NA	Solid	6010B	41029

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW04-01

Lab Sample ID: 320-7028-1

Date Collected: 04/09/14 12:30

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1011.5 mL	1 mL	40471	04/15/14 08:53	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	1011.5 mL	1 mL	40621	04/16/14 16:10	YPH	TAL SAC
Total/NA	Prep	3510C			1008.7 mL	3 mL	40475	04/15/14 09:00	NGK	TAL SAC
Total/NA	Analysis	8015B		1	1008.7 mL	3 mL	40705	04/17/14 16:20	UFB	TAL SAC
Total/NA	Prep	3510C			1013.6 mL	10 mL	40476	04/15/14 09:06	NGK	TAL SAC
Total/NA	Analysis	8081A		1	1013.6 mL	10 mL	40813	04/18/14 15:13	KXG	TAL SAC
Total/NA	Prep	3510C			1013.7 mL	10 mL	40477	04/15/14 09:17	NGK	TAL SAC
Total/NA	Analysis	8082		1	1013.7 mL	10 mL	40808	04/18/14 13:45	KXG	TAL SAC
Total/NA	Prep	8290			1008 mL	20.00 uL	40582	04/16/14 08:58	CCC	TAL SAC
Total/NA	Analysis	8290A		1	1008 mL	20.00 uL	40820	04/18/14 00:10	SMA	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	40385	04/14/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	40757	04/16/14 16:34	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	40750	04/18/14 07:25	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	40798	04/18/14 09:50	CV1	TAL SAC

Client Sample ID: MW04-02

Lab Sample ID: 320-7028-2

Date Collected: 04/09/14 13:20

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1020.2 mL	1 mL	40471	04/15/14 08:53	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	1020.2 mL	1 mL	40621	04/16/14 17:39	YPH	TAL SAC
Total/NA	Prep	3510C			1044.9 mL	3 mL	40475	04/15/14 09:00	NGK	TAL SAC
Total/NA	Analysis	8015B		1	1044.9 mL	3 mL	40705	04/17/14 17:48	UFB	TAL SAC
Total/NA	Prep	3510C			1022.3 mL	10 mL	40476	04/15/14 09:06	NGK	TAL SAC
Total/NA	Analysis	8081A		1	1022.3 mL	10 mL	40813	04/18/14 16:05	KXG	TAL SAC
Total/NA	Prep	3510C			1022.5 mL	10 mL	40477	04/15/14 09:17	NGK	TAL SAC
Total/NA	Analysis	8082		1	1022.5 mL	10 mL	40808	04/18/14 14:46	KXG	TAL SAC
Total/NA	Prep	8290			1007 mL	20.00 uL	40582	04/16/14 08:58	CCC	TAL SAC
Total/NA	Analysis	8290A		1	1007 mL	20.00 uL	40820	04/18/14 02:15	SMA	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	40385	04/14/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	40757	04/16/14 16:47	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	40750	04/18/14 07:25	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	40798	04/18/14 09:59	CV1	TAL SAC

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Date Collected: 04/08/14 16:00

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1053.9 mL	1 mL	40471	04/15/14 08:53	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	1053.9 mL	1 mL	40621	04/16/14 18:09	YPH	TAL SAC
Total/NA	Prep	3510C			1051 mL	3 mL	40475	04/15/14 09:00	NGK	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW01-01

Lab Sample ID: 320-7028-3

Date Collected: 04/08/14 16:00

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B		1	1051 mL	3 mL	40705	04/17/14 18:17	UFB	TAL SAC
Total/NA	Prep	3510C			1041 mL	10 mL	40476	04/15/14 09:06	NGK	TAL SAC
Total/NA	Analysis	8081A		1	1041 mL	10 mL	40813	04/18/14 16:22	KXG	TAL SAC
Total/NA	Prep	3510C			1041 mL	10 mL	40477	04/15/14 09:17	NGK	TAL SAC
Total/NA	Analysis	8082		1	1041 mL	10 mL	40808	04/18/14 15:07	KXG	TAL SAC
Total/NA	Prep	8290			847.5 mL	20.00 uL	40582	04/16/14 08:58	CCC	TAL SAC
Total/NA	Analysis	8290A		1	847.5 mL	20.00 uL	40820	04/18/14 02:57	SMA	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	40385	04/14/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	40757	04/16/14 16:50	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	40750	04/18/14 07:25	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	40798	04/18/14 10:01	CV1	TAL SAC

Client Sample ID: MW02-01

Lab Sample ID: 320-7028-4

Date Collected: 04/10/14 12:00

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1016.7 mL	1 mL	40471	04/15/14 08:53	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	1016.7 mL	1 mL	40621	04/16/14 18:38	YPH	TAL SAC
Total/NA	Prep	3510C			1039.5 mL	3 mL	40475	04/15/14 09:00	NGK	TAL SAC
Total/NA	Analysis	8015B		1	1039.5 mL	3 mL	40705	04/17/14 18:47	UFB	TAL SAC
Total/NA	Prep	3510C			1018 mL	10 mL	40476	04/15/14 09:06	NGK	TAL SAC
Total/NA	Analysis	8081A		1	1018 mL	10 mL	40813	04/18/14 16:39	KXG	TAL SAC
Total/NA	Prep	3510C			1018.1 mL	10 mL	40477	04/15/14 09:17	NGK	TAL SAC
Total/NA	Analysis	8082		1	1018.1 mL	10 mL	40808	04/18/14 15:27	KXG	TAL SAC
Total/NA	Prep	8290			989 mL	20.00 uL	40582	04/16/14 08:58	CCC	TAL SAC
Total/NA	Analysis	8290A		1	989 mL	20.00 uL	40820	04/18/14 03:38	SMA	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	40385	04/14/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	40757	04/16/14 16:53	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	40750	04/18/14 07:25	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	40798	04/18/14 10:03	CV1	TAL SAC

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Date Collected: 04/09/14 16:30

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1034 mL	1 mL	40471	04/15/14 08:53	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	1034 mL	1 mL	40621	04/16/14 19:08	YPH	TAL SAC
Total/NA	Prep	3510C			1044.9 mL	3 mL	40475	04/15/14 09:00	NGK	TAL SAC
Total/NA	Analysis	8015B		1	1044.9 mL	3 mL	40705	04/17/14 19:16	UFB	TAL SAC
Total/NA	Prep	3510C			1007 mL	10 mL	40476	04/15/14 09:06	NGK	TAL SAC
Total/NA	Analysis	8081A		1	1007 mL	10 mL	40813	04/18/14 16:56	KXG	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: MW03-01

Lab Sample ID: 320-7028-5

Date Collected: 04/09/14 16:30

Matrix: Water

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1007.2 mL	10 mL	40477	04/15/14 09:17	NGK	TAL SAC
Total/NA	Analysis	8082		1	1007.2 mL	10 mL	40808	04/18/14 15:47	KXG	TAL SAC
Total/NA	Prep	8290			1050 mL	20.00 uL	40582	04/16/14 08:58	CCC	TAL SAC
Total/NA	Analysis	8290A		1	1050 mL	20.00 uL	40820	04/18/14 04:20	SMA	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	40385	04/14/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	40757	04/16/14 16:56	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	40750	04/18/14 07:25	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	40798	04/18/14 10:05	CV1	TAL SAC

Client Sample ID: DU09-01

Lab Sample ID: 320-7028-6

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.52 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.52 g	1 mL	41226	04/25/14 14:24	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.16 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.16 g	10 mL	41220	04/25/14 13:45	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.16 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.16 g	10 mL	41033	04/23/14 16:40	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			9.85 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	9.85 g	20 uL	41140	04/24/14 03:27	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.25 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.25 g	500 mL	41465	04/29/14 11:15	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			9.80 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	9.80 g	500 mL	41370	04/28/14 15:37	CV1	TAL SAC

Client Sample ID: DU09-02

Lab Sample ID: 320-7028-7

Date Collected: 04/07/14 13:30

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.11 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.11 g	1 mL	41226	04/25/14 16:52	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			29.74 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	29.74 g	10 mL	41220	04/25/14 15:33	KXG	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU09-02

Date Collected: 04/07/14 13:30

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			29.74 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	29.74 g	10 mL	41033	04/23/14 18:42	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.24 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.24 g	20 uL	41197	04/24/14 18:17	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.02 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.02 g	500 mL	41465	04/29/14 11:40	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.20 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.20 g	500 mL	41370	04/28/14 15:47	CV1	TAL SAC

Client Sample ID: DU09-03

Date Collected: 04/07/14 13:30

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.60 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.60 g	1 mL	41226	04/25/14 17:21	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.07 g	10 mL	41220	04/25/14 15:51	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.07 g	10 mL	41033	04/23/14 19:02	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.00 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.00 g	20 uL	41197	04/24/14 19:01	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.21 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.21 g	500 mL	41465	04/29/14 11:43	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.02 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.02 g	500 mL	41370	04/28/14 15:49	CV1	TAL SAC

Client Sample ID: DU08-01

Date Collected: 04/07/14 16:00

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.09 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.09 g	1 mL	41226	04/25/14 17:51	YPH	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Date Collected: 04/07/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.89 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.89 g	10 mL	41220	04/25/14 16:09	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.89 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.89 g	10 mL	41033	04/23/14 19:22	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.06 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.06 g	500 mL	41465	04/29/14 11:45	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.00 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.00 g	500 mL	41370	04/28/14 15:54	CV1	TAL SAC

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			9.98 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	9.98 g	1 mL	41226	04/25/14 18:20	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.10 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.10 g	10 mL	41220	04/25/14 16:26	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.10 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.10 g	10 mL	41033	04/23/14 19:42	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			9.99 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	9.99 g	500 mL	41465	04/29/14 11:48	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.09 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.09 g	500 mL	41370	04/28/14 15:56	CV1	TAL SAC

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Date Collected: 04/08/14 12:30

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.04 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.04 g	1 mL	41226	04/25/14 18:50	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.20 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.20 g	10 mL	41220	04/25/14 15:15	KXG	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU03-01

Lab Sample ID: 320-7028-11

Date Collected: 04/08/14 12:30

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.20 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.20 g	10 mL	41033	04/23/14 20:03	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.05 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.05 g	20 uL	41197	04/24/14 19:44	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.05 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.05 g	20 uL	41307	04/25/14 19:18	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.05 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.05 g	500 mL	41465	04/29/14 11:51	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.10 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.10 g	500 mL	41370	04/28/14 15:58	CV1	TAL SAC

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.13 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.13 g	1 mL	41226	04/25/14 19:19	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.03 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.03 g	10 mL	41301	04/28/14 14:03	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.03 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.03 g	10 mL	41033	04/23/14 20:23	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			9.99 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	9.99 g	500 mL	41465	04/29/14 11:59	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.67 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.67 g	500 mL	41370	04/28/14 16:00	CV1	TAL SAC

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.00 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.00 g	1 mL	41226	04/25/14 19:49	YPH	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			29.90 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	29.90 g	10 mL	41301	04/28/14 14:39	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			29.90 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	29.90 g	10 mL	41033	04/23/14 20:44	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.14 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.14 g	500 mL	41465	04/29/14 12:02	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.02 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.02 g	500 mL	41370	04/28/14 16:01	CV1	TAL SAC

Client Sample ID: SB02-01

Lab Sample ID: 320-7028-14

Date Collected: 04/08/14 12:00

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.06 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.06 g	1 mL	41226	04/25/14 20:18	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep	DL			10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B	DL		10.06 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM	DL	10	10.06 g	1 mL	41324	04/28/14 12:30	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40783	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.02 g	3 mL	40786	04/18/14 11:19	NGK	TAL SAC
Total/NA	Analysis	8015B		10	30.02 g	3 mL	40911	04/21/14 17:47	UFB	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.01 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.01 g	10 mL	41301	04/28/14 15:14	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.01 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.01 g	10 mL	41033	04/23/14 21:04	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.02 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.02 g	20 uL	41197	04/24/14 20:27	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.02 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.02 g	20 uL	41307	04/25/14 19:56	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.09 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.09 g	500 mL	41465	04/29/14 12:05	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.08 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		100	10.08 g	500 mL	41370	04/28/14 16:35	CV1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB03-01

Lab Sample ID: 320-7028-15

Date Collected: 04/08/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.06 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.06 g	1 mL	41226	04/25/14 20:48	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40783	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.05 g	3 mL	40786	04/18/14 11:19	NGK	TAL SAC
Total/NA	Analysis	8015B		1	30.05 g	3 mL	40911	04/21/14 18:16	UFB	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.02 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.02 g	10 mL	41301	04/28/14 15:50	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.02 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.02 g	10 mL	41033	04/23/14 21:24	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.03 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.03 g	20 uL	41197	04/24/14 21:10	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.03 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.03 g	20 uL	41307	04/25/14 21:48	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.04 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.04 g	500 mL	41465	04/29/14 12:07	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.01 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.01 g	500 mL	41370	04/28/14 16:41	CV1	TAL SAC

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.02 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.02 g	1 mL	41226	04/25/14 21:17	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40783	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.25 g	3 mL	40786	04/18/14 11:19	NGK	TAL SAC
Total/NA	Analysis	8015B		1	30.25 g	3 mL	40911	04/21/14 15:21	UFB	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.07 g	10 mL	41301	04/28/14 16:26	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.07 g	10 mL	41033	04/23/14 22:05	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.09 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.09 g	20 uL	41197	04/24/14 21:53	KSS	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: SB04-01

Lab Sample ID: 320-7028-16

Date Collected: 04/08/14 10:45

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.09 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		10	10.09 g	20 uL	41289	04/25/14 17:48	SMA	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.09 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.09 g	20 uL	41307	04/25/14 22:26	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.01 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.01 g	500 mL	41465	04/29/14 12:10	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.05 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.05 g	500 mL	41370	04/28/14 16:08	CV1	TAL SAC

Client Sample ID: SB04-02

Lab Sample ID: 320-7028-17

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.05 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.05 g	1 mL	41226	04/25/14 21:47	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40783	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.30 g	3 mL	40786	04/18/14 11:19	NGK	TAL SAC
Total/NA	Analysis	8015B		1	30.30 g	3 mL	40911	04/21/14 15:50	UFB	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.04 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.04 g	10 mL	41301	04/28/14 17:02	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.04 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.04 g	10 mL	41033	04/23/14 22:25	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.11 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.11 g	20 uL	41197	04/24/14 22:37	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.11 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		20	10.11 g	20 uL	41289	04/25/14 18:32	SMA	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.11 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.11 g	20 uL	41307	04/25/14 23:03	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.14 g	500 mL	40968	04/22/14 07:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.14 g	500 mL	41465	04/29/14 12:13	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.05 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.05 g	500 mL	41370	04/28/14 16:10	CV1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.08 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.08 g	1 mL	41226	04/25/14 22:16	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.08 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.08 g	10 mL	41301	04/28/14 17:38	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.08 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.08 g	10 mL	41033	04/23/14 22:45	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.14 g	500 mL	41029	04/23/14 06:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.14 g	500 mL	41465	04/29/14 13:17	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.15 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.15 g	500 mL	41370	04/28/14 16:12	CV1	TAL SAC

Client Sample ID: DU04-01

Lab Sample ID: 320-7028-19

Date Collected: 04/10/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			9.99 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	9.99 g	1 mL	41226	04/25/14 22:46	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.50 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.50 g	10 mL	41301	04/28/14 18:13	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.50 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.50 g	10 mL	41033	04/23/14 23:06	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.29 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.29 g	20 uL	41197	04/24/14 23:20	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.29 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.29 g	20 uL	41307	04/25/14 21:11	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3050B			10.03 g	500 mL	41029	04/23/14 06:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.03 g	500 mL	41465	04/29/14 13:20	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	7471A			10.29 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.29 g	500 mL	41370	04/28/14 16:18	CV1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Client Sample ID: DU01-01

Lab Sample ID: 320-7028-20

Date Collected: 04/11/14 08:45

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40839	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			10.11 g	1 mL	40868	04/21/14 09:50	NGK	TAL SAC
Total/NA	Analysis	8270C SIM		1	10.11 g	1 mL	41226	04/25/14 23:15	YPH	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40783	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.17 g	3 mL	40786	04/18/14 11:19	NGK	TAL SAC
Total/NA	Analysis	8015B		1	30.17 g	3 mL	40911	04/21/14 16:19	UFB	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40858	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40870	04/21/14 09:49	NGK	TAL SAC
Total/NA	Analysis	8081A		1	30.07 g	10 mL	41301	04/28/14 18:49	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				30 g	40857	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	3550B			30.07 g	10 mL	40869	04/21/14 09:47	NGK	TAL SAC
Total/NA	Analysis	8082		1	30.07 g	10 mL	41033	04/23/14 23:26	KXG	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/18/14 16:19	ALH	TAL SAC
Total/NA	Prep	8290			10.04 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.04 g	20 uL	41197	04/25/14 00:03	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/18/14 16:19	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.04 g	20 uL	41002	04/22/14 13:58	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.04 g	20 uL	41307	04/25/14 20:33	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40859	04/18/14 16:11	ALH	TAL SAC
Total/NA	Prep	3050B			10.08 g	500 mL	41029	04/23/14 06:45	NIM	TAL SAC
Total/NA	Analysis	6010B		5	10.08 g	500 mL	41465	04/29/14 12:21	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				10 g	40860	04/18/14 16:15	ALH	TAL SAC
Total/NA	Prep	7471A			10.04 g	500 mL	41339	04/28/14 11:39	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.04 g	500 mL	41370	04/28/14 16:20	CV1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	CA200005	01-29-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8015B	3510C	Water	Motor Oil Range Organics [C24-C36]
8015B	3550B	Solid	Motor Oil Range Organics [C24-C36]
8270C SIM	3510C	Water	Acenaphthene
8270C SIM	3510C	Water	Acenaphthylene
8270C SIM	3510C	Water	Anthracene
8270C SIM	3510C	Water	Benzo[a]anthracene
8270C SIM	3510C	Water	Benzo[a]pyrene
8270C SIM	3510C	Water	Benzo[b]fluoranthene
8270C SIM	3510C	Water	Benzo[g,h,i]perylene
8270C SIM	3510C	Water	Benzo[k]fluoranthene
8270C SIM	3510C	Water	Chrysene
8270C SIM	3510C	Water	Dibenz(a,h)anthracene
8270C SIM	3510C	Water	Fluoranthene
8270C SIM	3510C	Water	Fluorene
8270C SIM	3510C	Water	Indeno[1,2,3-cd]pyrene
8270C SIM	3510C	Water	Naphthalene
8270C SIM	3510C	Water	Phenanthrene
8270C SIM	3510C	Water	Pyrene
8270C SIM	3550B	Solid	Acenaphthene
8270C SIM	3550B	Solid	Acenaphthylene
8270C SIM	3550B	Solid	Anthracene
8270C SIM	3550B	Solid	Benzo[a]anthracene
8270C SIM	3550B	Solid	Benzo[a]pyrene
8270C SIM	3550B	Solid	Benzo[b]fluoranthene
8270C SIM	3550B	Solid	Benzo[g,h,i]perylene
8270C SIM	3550B	Solid	Benzo[k]fluoranthene
8270C SIM	3550B	Solid	Chrysene
8270C SIM	3550B	Solid	Dibenz(a,h)anthracene
8270C SIM	3550B	Solid	Fluoranthene
8270C SIM	3550B	Solid	Fluorene
8270C SIM	3550B	Solid	Indeno[1,2,3-cd]pyrene
8270C SIM	3550B	Solid	Naphthalene
8270C SIM	3550B	Solid	Phenanthrene
8270C SIM	3550B	Solid	Pyrene
8290A	8290	Solid	1,2,3,4,6,7,8-HpCDD
8290A	8290	Solid	1,2,3,4,6,7,8-HpCDF
8290A	8290	Solid	1,2,3,4,7,8,9-HpCDF
8290A	8290	Solid	1,2,3,4,7,8-HxCDD
8290A	8290	Solid	1,2,3,4,7,8-HxCDF
8290A	8290	Solid	1,2,3,6,7,8-HxCDD
8290A	8290	Solid	1,2,3,6,7,8-HxCDF
8290A	8290	Solid	1,2,3,7,8,9-HxCDD
8290A	8290	Solid	1,2,3,7,8,9-HxCDF
8290A	8290	Solid	1,2,3,7,8-PeCDD
8290A	8290	Solid	1,2,3,7,8-PeCDF
8290A	8290	Solid	2,3,4,6,7,8-HxCDF

Certification Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Laboratory: TestAmerica Sacramento (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	CA200005	01-29-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8290A	8290	Solid	2,3,4,7,8-PeCDF
8290A	8290	Solid	2,3,7,8-TCDD
8290A	8290	Solid	2,3,7,8-TCDF
8290A	8290	Solid	OCDD
8290A	8290	Solid	OCDF
8290A	8290	Solid	Total HpCDD
8290A	8290	Solid	Total HpCDF
8290A	8290	Solid	Total HxCDD
8290A	8290	Solid	Total HxCDF
8290A	8290	Solid	Total PeCDD
8290A	8290	Solid	Total PeCDF
8290A	8290	Solid	Total TCDD
8290A	8290	Solid	Total TCDF
8290A	8290	Water	1,2,3,4,6,7,8-HpCDD
8290A	8290	Water	1,2,3,4,6,7,8-HpCDF
8290A	8290	Water	1,2,3,4,7,8,9-HpCDF
8290A	8290	Water	1,2,3,4,7,8-HxCDD
8290A	8290	Water	1,2,3,4,7,8-HxCDF
8290A	8290	Water	1,2,3,6,7,8-HxCDD
8290A	8290	Water	1,2,3,6,7,8-HxCDF
8290A	8290	Water	1,2,3,7,8,9-HxCDD
8290A	8290	Water	1,2,3,7,8,9-HxCDF
8290A	8290	Water	1,2,3,7,8-PeCDD
8290A	8290	Water	1,2,3,7,8-PeCDF
8290A	8290	Water	2,3,4,6,7,8-HxCDF
8290A	8290	Water	2,3,4,7,8-PeCDF
8290A	8290	Water	2,3,7,8-TCDD
8290A	8290	Water	2,3,7,8-TCDF
8290A	8290	Water	OCDD
8290A	8290	Water	OCDF
8290A	8290	Water	Total HpCDD
8290A	8290	Water	Total HpCDF
8290A	8290	Water	Total HxCDD
8290A	8290	Water	Total HxCDF
8290A	8290	Water	Total PeCDD
8290A	8290	Water	Total PeCDF
8290A	8290	Water	Total TCDD
8290A	8290	Water	Total TCDF

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-1

Method	Method Description	Protocol	Laboratory
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SAC
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SAC
8081A	Organochlorine Pesticides (GC)	SW846	TAL SAC
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SAC
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7470A	Mercury (CVAA)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-7028-1	MW04-01	Water	04/09/14 12:30	04/12/14 10:00
320-7028-2	MW04-02	Water	04/09/14 13:20	04/12/14 10:00
320-7028-3	MW01-01	Water	04/08/14 16:00	04/12/14 10:00
320-7028-4	MW02-01	Water	04/10/14 12:00	04/12/14 10:00
320-7028-5	MW03-01	Water	04/09/14 16:30	04/12/14 10:00
320-7028-6	DU09-01	Solid	04/07/14 13:30	04/12/14 10:00
320-7028-7	DU09-02	Solid	04/07/14 13:30	04/12/14 10:00
320-7028-8	DU09-03	Solid	04/07/14 13:30	04/12/14 10:00
320-7028-9	DU08-01	Solid	04/07/14 16:00	04/12/14 10:00
320-7028-10	DU07-01	Solid	04/08/14 11:00	04/12/14 10:00
320-7028-11	DU03-01	Solid	04/08/14 12:30	04/12/14 10:00
320-7028-12	DU02-01	Solid	04/09/14 14:10	04/12/14 10:00
320-7028-13	DU06-01	Solid	04/09/14 16:20	04/12/14 10:00
320-7028-14	SB02-01	Solid	04/08/14 12:00	04/12/14 10:00
320-7028-15	SB03-01	Solid	04/08/14 08:45	04/12/14 10:00
320-7028-16	SB04-01	Solid	04/08/14 10:45	04/12/14 10:00
320-7028-17	SB04-02	Solid	04/08/14 11:00	04/12/14 10:00
320-7028-18	DU05-01	Solid	04/10/14 15:50	04/12/14 10:00
320-7028-19	DU04-01	Solid	04/10/14 16:00	04/12/14 10:00
320-7028-20	DU01-01	Solid	04/11/14 08:45	04/12/14 10:00

TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street, Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379, 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab PM: Karen Sellers E-Mail: karen.sellers@testamericainc.com		Camer Tracking No(s): Page: Job #			
Due Date Requested: 14 day prelims; 21 day finals TAT Requested (days): Standard PO #: 14C-16460-HI02 WOC #: Project #: 60304802 SSOV#:		Analysis Requested EPA 6010C/471B Metals (soils) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 8270D SIM PAHs <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 8081B OCI Pesticides <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 8082A PCBs <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 8290 PCDD/PCDF <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 8015C TPH-DRO/RRO <input checked="" type="checkbox"/> Y <input type="checkbox"/> N EPA 6010C/470A Metals (water) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N					
Sample Identification MW04-01 MW04-01		Sample Date 4/9/14 4/9/14	Sample Time 12:30 12:30	Sample Type (C=Comp, G=grab) G G	Matrix (Mineral, Organic, Inorganic) W W	Total Number of containers 8 2	Special Instructions/Note: samples split between 2 coolers
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements			
Empty Kit Relinquished by: Relinquished by: Andrea Wong Relinquished by: Relinquished by:		Date 4/10/14 09:13:30 		Method of Shipment			
Custody Seals Intact A Yes <input type="checkbox"/> No <input type="checkbox"/>		Date 4-12-14 10:10 		Company Company Company			
Custody Seal No. seal		Cooler Temperature(s) °C and Other Remarks 1.9°C		Company Company Company			



TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95805
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PM Karen Sellers		Camera Tracking No(s)	
Client Contact Steve McKnight		Phone Andrew Wong (806) 954-4542		Page	
Company AECOM Technical Services Inc		E-Mail karen.sellers@testamericainc.com		Job #	
Address 1001 Bishop Street, Suite 1600		Due Date Requested: 14 day prelims; 21 day finals		Analysis Requested	
City Honolulu		TAT Requested (days): Standard		EPA 6010C/471B Metals (soils)	
State, Zip HI, 96813		PO # 14C-16460-H102		EPA 8270D SIM PAHs	
Phone 808-356-5379; 415-596-7837		WOC #		EPA 8081B OCl Pesticides	
Email steve.mcknight@aecom.com		Project # 60304802		EPA 8290 PCDD/PCDF	
Project Name DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		SSOW#		EPA 8015C TPH-DRO/RRO	
Site Hawaii		Matrix (W=Water, S=Soils, G=Grabs, O=Other)		EPA 6010C/470A Metals (water)	
Sample Identification		Sample Date		Sample Time	
MW04-01		4/9/14		1230	
MW04-01		4/9/14		1230	
Sample Type (C=Comp, G=Grab)		Preservation Codes		Special Instructions/Note:	
G		Y		8 sample split bottles in 2 cases	
G		Y		2	
Total Number of containers		Total Number of containers		Special Instructions/Note:	
8		2		8 sample split bottles in 2 cases	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - other (specify)		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date		Method of Shipment	
Relinquished by Andrew Wong		Date/Time 4/10/14 1330		Date/Time 4/12-14 1000	
Relinquished by		Date/Time		Date/Time	
Relinquished by		Date/Time		Date/Time	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks 1.9°C	



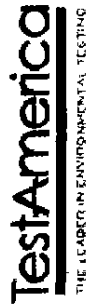
Chain of Custody Record

Client Information Supplier: <u>Andrea Wong</u> Karen Sellers Phone: <u>(888)954-4542</u> E-Mail: <u>karen.sellers@testamericainc.com</u>		Lab P/N: E-Mail:		Carrier Tracking No(s)		COC No Page Job #	
Company: <u>AECOM Technical Services Inc.</u> Address: <u>1001 Bishop Street Suite 1600</u> City: <u>Honolulu</u> State, Zip: <u>HI, 96813</u> Phone: <u>808-356-5379, 415-596-7837</u> Email: <u>steve.mcknight@aecom.com</u>		Due Date Requested: <u>14 day prelims; 21 day finals</u> TAT Requested (days): <u>Standard</u>		Analysis Requested EPA 6010C/7471B Metals (soils) <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 8270D SIM PAHs <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 8081B OCI Pesticides <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 8082A PCBs <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 8290 PCDD/PCDF <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 8015C TPH-DRO/RRO <input checked="" type="checkbox"/> N <input type="checkbox"/> Y EPA 6010C/7470A Metals (water) <input checked="" type="checkbox"/> N <input type="checkbox"/> Y			
PO #: <u>14C-16460-H102</u> WO #: _____ Project #: <u>60304802</u> SOW#: _____ Project Name: <u>DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd</u> Site: <u>Hawaii</u>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		Total Number of Containers: <u>8</u> Special Instructions/Note: <u>8 samples split between 2 racks</u> <u>8 samples split between 2 racks</u>			
Sample Identification Sample ID: <u>HW01-01</u> <u>MW01-01</u>		Sample Date: <u>4/9/14</u> <u>4/9/14</u>		Sample Time: <u>12:30</u> <u>12:30</u>		Matrix: <u>W</u> <u>W</u>	
Sample Type: <u>G</u> <u>G</u>		Preservation Code: <u>W</u> <u>W</u>		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Relinquished by: <u>Andrea Wong</u>		Date/Time: <u>4/10/14</u>		Date/Time: <u>5-12-14</u>		Company: <u>STARS</u>	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Custody Seals Intact: <u>Seal</u> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>25°C</u>		Special Instructions/QC Requirements:	



TestAmerica Denver
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 374-4340

Chain of Custody Record



Client Information		Lab PM		Camera Tracking No(s)																					
Client Contact Steve McKnight		Karen Sellers																							
Company AECOM Technical Services Inc.		E-Mail karen.sellers@testamerica.com																							
Address 1007 Bishop Street Suite 1600		Due Date Requested: 14 day prelims; 21 day finals																							
City Honolulu		TAT Requested (days): Standard																							
State/Zip HI, 96813		PO # 14C-16460-H102																							
Phone 808-356-5378; 415-596-7837		WO #																							
Email steve.mcknight@aecom.com		Project # 60304802																							
Project Name DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		SSOW#																							
Site Hawaii																									
Sample Identification MW01-01		Sample Date 4/9/14	Sample Time 1230	Sample Type (C=Comp, G=grab)	G	Matrix (W=water, S=solid, D=dust/dirt, G=grab)	W	Preservation Code (P=100% Ice, A=Ascorbic Acid)		Analysis Requested	EPA 8010C/7471B Metals (soils)	N	EPA 8270D SIM PAHs	N	EPA 8082A PCBs	N	EPA 8290 PCDD/PCDF	N	EPA 8015C TPH-DRO/RRO	N	EPA 8010C/7470A Metals (water)	N	Total Number of Containers	8	Special Instructions/Note: Sample split between 2 records
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements																			
Empty Kit Relinquished by		Date		Time		Method of Shipment																			
Relinquished by Andrea Wong		Date/Time 4/10/14 1330		Company		Received by <i>[Signature]</i>		Date/Time 4-12-14 1000		Company		Received by <i>[Signature]</i>		Date/Time		Company									
Relinquished by		Date/Time		Company		Received by		Date/Time		Company															
Custody Seals Intact. Δ Yes Δ No		Custody Seal No.: Seal		Cooler Temperature(s) °C and Other Remarks: 25°C																					



Chain of Custody Record

Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379; 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab PM: Karen Sellers E-Mail: karen_sellers@testamerica.com		Carrier Tracking No(s): COC No: Page: Job #	
Analysis Requested EPA 6010C/747B Metals (soils) <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8270D SIM PAHs <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8061B OCl Pesticides <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8082A PCBs <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8290 PCDD/PCDF <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8015C TPH-DRO/RRO <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 6010C/7470A Metals (water) <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Z - other (specify)	
Sample Identification MW04-02 MW04-02		Sample Date 4/9/14 4/9/14		Sample Time 1320 1320	
Sample Type (C=Comp, G=grab) G G		Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air) W W		Total Number of Containers 8 1	
Special Instructions/Note:		Special Instructions/Note:		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements					
Empty Kit Relinquished by: Relinquished by: Andriana Wang Relinquished by: Relinquished by:		Time: Date/Time: 4/10/14 1330 Date/Time: Date/Time:		Method of Shipment: Received by: [Signature] Received by: Received by:	
Custody Seals Intact A Yes Δ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks 2.7°C	



Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379, 415-598-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab PM: Karen Sellers E-Mail: karen.sellers@testamerica.com Camer Tracking No(s):		COC No: Page: Job #:	
Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard PO #: 14C-16460-H102 WO #: Project #: 60304802 SSOV#:		Analysis Requested			
Sample Identification MW04-02 MAW04-02	Sample Date: 4/9/14 4/9/14	Sample Time: 1320 1320	Sample Type (G=grab, G=comp, RT-Tissue, Avail): G W G W	Matrix (Water, Swill, Overstabil, Other): W W	Field Filtered Sample (Yes or No): X X
	EPA 6010C/7471B Metals (soils) N N X X X X EPA 8270D SIM PAHs N N X X X X EPA 8081B OCI Pesticides N N X X X X EPA 8082A PCBs N N X X X X EPA 8290 PCDD/PCDF N N X X X X EPA 8015C TPH-DRO/RRO N N X X X X EPA 8010C/7470A Metals (water) N N X X X X Total Number of Containers: X 8 X 1				
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - Na2SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - ph 4-5 X - other (specify)					Special Instructions/Note: Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)					
Empty Kit Relinquished by Relinquished by: Andrea Wong Date/Time: 4/14/14 1330 Relinquished by: Company Date/Time: Company Relinquished by: Company Date/Time: Company					
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: 2-7°C					



Client Information			Supplier			Lab P/M			Caret Tracking Note(s)			COC No																				
Company: AECOM Technical Services Inc. Address: 1001 Bishop Street Suite 1600 City: Honolulu State/Zip: HI, 96813 Phone: 808-556-5379, 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii			Supplier: Andrew Wong Phone: (808) 954-4542 E-Mail: karen.sellers@testamericainc.com			Lab P/M: Karen Sellers E-Mail: karen.sellers@testamericainc.com																										
Analysis Requested			Due Date Requested:			Field Filtered Sample (Yes or No)			Special Instructions/Note:			Total Number of Containers																				
Analysis Requested			14 day prelims; 21 day finals TAT Requested (days): Standard			X			EPA 6010C/7471B Metals (soils)			X																				
Analysis Requested			PO # 14C-16460-H102			X			EPA 8270D SIM PAHs			X																				
Analysis Requested			WO #			X			EPA 8081B OCl Pesticides			X																				
Analysis Requested			Project # 60304802			X			EPA 8290 PCDD/PCDF			X																				
Analysis Requested			SSOW#			X			EPA 8015C TPH-DRO/RRO			X																				
Analysis Requested						X			EPA 8010C/7470A Metals (water)			X																				
Sample Identification			Sample Date			Sample Time			Sample Type (G=Comp, G=grab)			Matrix (W=water, S=solid, O=volatile, BT=trace, Act=lit)			Preservation Code			Field Filtered Sample (Yes or No)			Special Instructions/Note:			Total Number of Containers								
MWDI-01			4/8/14			1600			G			W			X			8						1								
MWDI-01			4/8/14			1600			G			W			X			1						1								
Possible Hazard Identification			<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological																													
Deliverable Requested: I, II, III, IV, Other (specify)																																
Empty Kit Relinquished by			Date/Time			Date/Time			Date/Time			Date/Time			Date/Time			Date/Time			Date/Time			Date/Time			Date/Time					
Relinquished by: Andrew Wong			4/10/14 (11:13:30)																													
Relinquished by:																																
Relinquished by:																																
Custody Seal Intact:			Custody Seal No.			Cooler Temperature(s) °C and Other Remarks																										
Δ Yes Δ No			5-240			9.7 °C																										



Chain of Custody Record

Client Information Company: AECOM Technical Services Inc. Address: 1001 Bishop Street Suite 1800 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379, 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Sampler: <u>Andrea Wong</u> Lab PHL: Karen Sellers E-Mail: karen.sellers@testamericainc.com Phone: (908) 954-4542		Camer Tracking No(s): Job #:		COC No: Page: Job #:	
Due Date Requested: 14 day prelims; 21 day finals TAT Requested (days): Standard		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: Total Number of Containers: <u>8</u>	
PO #: 14C-16460-H102 WO #:		EPA 6010C/747B Metals (soils) EPA 8270D SIM PAHs EPA 8081B OCI Pesticides EPA 8082A PCBs EPA 8290 PCDD/PCDF EPA 8015C TPH-DRO/RRO EPA 6010C/7470A Metals (water)		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4.5 X - EDTA Z - other (specify)		Special Instructions/Note: Total Number of Containers: <u>1</u>	
Sample Date: 4/8/14 Sample Time: 1600 Matrix: G W Sample Type (C=comp, G=grab): G W Field Filtered Sample (Yes or No): X Preservation Code: X		EPA 6010C/747B Metals (soils) EPA 8270D SIM PAHs EPA 8081B OCI Pesticides EPA 8082A PCBs EPA 8290 PCDD/PCDF EPA 8015C TPH-DRO/RRO EPA 6010C/7470A Metals (water)		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4.5 X - EDTA Z - other (specify)		Special Instructions/Note: Total Number of Containers: <u>1</u>	
Sample Date: 4/8/14 Sample Time: 1600 Matrix: G W Sample Type (C=comp, G=grab): G W Field Filtered Sample (Yes or No): X Preservation Code: X		EPA 6010C/747B Metals (soils) EPA 8270D SIM PAHs EPA 8081B OCI Pesticides EPA 8082A PCBs EPA 8290 PCDD/PCDF EPA 8015C TPH-DRO/RRO EPA 6010C/7470A Metals (water)		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4.5 X - EDTA Z - other (specify)		Special Instructions/Note: Total Number of Containers: <u>1</u>	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Andrea Wong Date/Time: 4/10/14 1630 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Received by: [Signature] Date/Time: 4-12-14 1600 Company: TAAUS
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: Seal 4.7°C



**Chain of
Custody Record**

TAL-4124-280 (0508)

Sampler ID **TestAmerica**
Temperature on Receipt
Drinking Water? Yes No

THE LEADER IN ENVIRONMENTAL TESTING

Client AECOM			Project Manager Steve McKnight		Date		Chain of Custody Number 157503		
Address 1001 Bishop Street			Telephone Number (Area Code)/Fax Number (808) 523-8774 Fax: (808) 523-8150		Lab Number		Page of 		
City Honolulu	State HI	Zip Code 96813	Site Contact Karen Sellers	Lab Contact Karen Sellers	Analysis (Attach list if more space is needed)		Special Instructions/ Conditions of Receipt		
Project Name and Location (State) DHHL Phase 2 ESA, Kekohu Residential Lots, Unit 4, Subd 1, Kahala, HI			Carrier/Waybill Number						
Contract/Purchase Order/Quote No. PO #: 14C-16460-H102 project #: 60304802			Containers & Preservatives						
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Matrix						
MW 02-01	4/10/14	1200	Unpres	ZnAc	EPA 8270 SIM PAF	X	EPA 8270 SIM PAF	Filtered in field	
			Soil	HCl	EPA 8082A PCBs	X	EPA 8290 RR DR PF		
			Air	HNO3	EPA 8015 PCBs	X	EPA 8015 PCBs		
				H2SO4	EPA 8210 Lead	X	EPA 8210 Lead		
					EPA 8210 Cad	X	EPA 8210 Cad		
					EPA 8210 Cu	X	EPA 8210 Cu		
					EPA 8210 Ni	X	EPA 8210 Ni		
					EPA 8210 Pb	X	EPA 8210 Pb		
					EPA 8210 Ag	X	EPA 8210 Ag		
					EPA 8210 As	X	EPA 8210 As		
					EPA 8210 Cr	X	EPA 8210 Cr		
					EPA 8210 Mn	X	EPA 8210 Mn		
					EPA 8210 Se	X	EPA 8210 Se		
					EPA 8210 V	X	EPA 8210 V		
					EPA 8210 W	X	EPA 8210 W		
					EPA 8210 Zn	X	EPA 8210 Zn		
					EPA 8210 Cl	X	EPA 8210 Cl		
					EPA 8210 Br	X	EPA 8210 Br		
					EPA 8210 S	X	EPA 8210 S		
					EPA 8210 P	X	EPA 8210 P		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Archival For Months Months
 (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other 14 days prelims 21 days finals

1. Relinquished By **Andrea Wong** Date **4/10/14** Time **1330**
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

1. Received By Date **4-12-14** Time **1000**
 2. Received By Date _____ Time _____
 3. Received By Date _____ Time _____

Comments



Chain of Custody Record

Sampler ID

Temperature on Receipt 75°C

Drinking Water? Yes No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client

AECOM

Project Manager

Steve McFright

Date

Chain of Custody Number

149858

Address 1001 Bishop Street

Lab Number

City Honolulu

State HI

Page 1 of

of

Zip Code 96813
Project Name and Location (State) DHHL Phoebe 2 ESA, Keolu Resubmitted Lots Unit 4 Subdivision, Keolu, HI

Analysis (Attach list if more space is needed)

Special Instructions/
Conditions of Receipt

Contract/Purchase Order/Quote No. Proj: 14C-14160-H102

Carrier/Waybill Number

Containers & Preservatives

EPA 8210 CH703
EPA 8210 CH703
EPA 8210 CH703
EPA 8210 CH703
EPA 8210 CH703
EPA 8210 CH703
EPA 8210 CH703

Sample I.D. No. and Description

EPA 8210 CH703

(Containers for each sample may be combined on one line)

8 1+ ambers

MW03-01

1 500 mL poly

MW03-01

Possible Hazard Identification

Non-Hazard

Flammable

Skin Irritant

Poison B

Unknown

Return to Client

Disposal By Lab

Archive For

(A fee may be assessed if samples are retained longer than 1 month)

Months

QC Requirements (Specify)

1. Received By

2. Received By

3. Received By

Turn Around Time Required

24 Hours

48 Hours

7 Days

14 Days

21 Days

Other 14 days pre-lim

14 days pre-lim

14 days pre-lim

Date 4/10/14

Time 1330

Date 4/2/14

Time 1000

Reinforced By

Andrea Wong

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



TAL-4124-280 (0508)

Client: **AECOM** Project Manager: **Steve McNight** Chain of Custody Number: **157501**
 Address: **1001 Bishop Street** Telephone Number (Area Code)/Fax Number: **(808) 523-8814** Fax: **(808) 523-8950** Lab Number: _____ Page _____ of _____
 City: **Honolulu** State: **HI** Zip Code: **96813** Site Contact: **Karen Sellers** Lab Contact: _____

Project Name and Location (State): **PHILIPPOPOLO EAST, KAHALA RESIDENTIAL LOTS, UNIT 4 SUBDIVISION, KAHALA, HI**
 Contract/Purchase Order/Quote No.: **14C-16460-H102** Project #: **60304802**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Special Instructions/ Conditions of Receipt														
			Air	Soil	Sed	Sludge	Unpres.	H2SO4	HNO3	HCl		NaOH	ZnAc/NaOH												
DV09-01	4/7/14	1330		X						X	X	X													
DV09-02	4/7/14	1330		X						X	X	X													
DV09-03	4/7/14	1330		X						X	X	X													
DV08-01	4/7/14	1600		X						X	X	X													Hold EPA 8290 (PCDD/PCDF) analysis
DV07-01	4/8/14	1100		X						X	X	X													Hold EPA 8290 (PCDD/PCDF) analysis
DV03-01	4/8/14	1230		X						X	X	X													Hold EPA 8290 (PCDD/PCDF) analysis
DV02-01	4/9/14	1400		X						X	X	X													Hold EPA 8290 (PCDD/PCDF) analysis
DV06-01	4/9/14	1620		X						X	X	X													Hold EPA 8290 (PCDD/PCDF) analysis
SB02-01	4/8/14	1200		X						X	X	X													Hold until further notice
SB03-01	4/8/14	0845		X						X	X	X													Hold until further notice
SB04-01	4/8/14	1045		X						X	X	X													Hold until further notice
SB04-02	4/8/14	1100		X						X	X	X													Hold until further notice

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other: **14 days prelim, 21 days final**

Sample Disposal
 Return To Client Disposal By Lab Archive For _____ Months _____ Months _____ Months
 (A fee may be assessed if samples are retained longer than 1 month)

1. Received By <i>Andrew Wong</i>	Date 4/11/14	Time 1330
2. Received By	Date	Time
3. Received By	Date	Time

TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

Client Information Company: AECOM Technical Services Inc. Address: 1001 Bishop Street, Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379; 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab PM: Karen Sellers E-Mail: karen.sellers@testamericainc.com		Carrier Tracking No(s): Job #: Page: COC No:	
Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard		Analysis Requested EPA 6010C/7470A Metals (water) <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8015C TPH-DRO/RRO <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8290 PCDD/PCDF <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8082A PCBs <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8081B OCI Pesticides <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 8270D SIM PAHs <input checked="" type="checkbox"/> <input type="checkbox"/> EPA 6010C/7471B Metals (soils) <input checked="" type="checkbox"/> <input type="checkbox"/>		Preservation Codes: M - Hexane N - None O - AsN602 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA L - EDTA Z - other (specify)	
Sample Date: 4/10/14 Sample Time: 1550 Sample Type (G=Comp, B=grab): C Matrix (W=water, S=solid, O=volatile, A=air): S		Total Number of containers: 2		Special Instructions/Note: HOLD EPA 8290 (PCDD/PCDF) NO TPH ANALYSIS	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date: 4/11/14 1330 Relinquished by: <i>Archie Wong</i> Relinquished by:		Received by: <i>[Signature]</i> Received by:	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No. <i>Seals</i>		Cooler Temperature(s) °C and Other Remarks: <i>4.56</i>	



TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler		Lab PM		Karen Sellers		Camera Tracking No(s)		COC No	
Client Contact Steve McKnight		Phone		E-Mail karen.sellers@testamericainc.com		Page		Job #		Preservation Codes:	
Company AECOM Technical Services Inc.		Address 1001 Bishop Street Suite 1600		City Honolulu		State, Zip HI, 96813		Phone 808-356-5379; 415-586-7837		E-Mail steve.mcknight@aecom.com	
Project Name DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		Site Hawaii		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (H=water, S=solid, O=water/soil)	
Due Date Requested: 14 day prelims, 21 day finals		TAT Requested (days): Standard		PO # 14C-16460-H102		WFO #		Project # 60304802		SSOW#	
Sample Identification		Sample Date		Sample Time		Sample Type		Matrix		Preservation Codes	
DV05-01		4/10/14		1550		C		S		N X N N N D	
DV04-01		4/15/14		1600		C		S		N X N N N D	
DV01-01		4/11/14		0845		C		S		N X N N N D	
Special Instructions/Note: HOLD EPA 8240 (PCDD/PCDF)		Total Number of Containers		EPA 6010C/747B Metals (soils)		EPA 8270D SIM PAHs		EPA 8081B OCI Pesticides		EPA 8082A PCBs	
EPA 8015C TPH-DRO/RRO		EPA 8290 PCDD/PCDF		EPA 6010C/7470A Metals (water)							
Possible Hazard Identification		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>		Deliverable Requested I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Relinquished by Andrea Wang		Date/Time 4/11/14 1330	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months		Special Instructions/QC Requirements:		Date/Time		Received by <i>[Signature]</i>		Date/Time 4-19-14 1000 Hours	
Custody Seal No. Δ Yes Δ No		Custody Seal Intact		Relinquished by		Date/Time		Received by		Date/Time	
Seals		Seals		Seals		Seals		Seals		Seals	



Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 320-7028-1

Login Number: 7028

List Source: TestAmerica Sacramento

List Number: 1

Creator: Hytrek, Cheryl

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-7028-2

Client Project/Site: DHHL Kekaha Phase II Env. Site
Assessmen

For:
AECOM Technical Services Inc.
1001 Bishop Street
Suite 1600
Honolulu, Hawaii 96813

Attn: Steve McKnight



Authorized for release by:
5/15/2014 3:06:24 PM

Karen Sellers, Project Manager II
(916)374-4442
karen.sellers@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

- 1
- 2
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Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Job ID: 320-7028-2

Laboratory: TestAmerica Sacramento

Narrative

Comments

On May 6, 2014 the client released the following samples from hold for analysis of 8290A: DU08-01 (320-7028-9), DU07-01 (320-7028-10), DU02-01 (320-7028-12), DU06-01 (320-7028-13), DU05-01 (320-7028-18).

The soil samples were processed by multi-incremental sampling techniques per laboratory SOP SAC-QA-0028, Rev. 3.3 as requested by the client.

Receipt

The samples were received on 4/12/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 1.9° C, 2.4° C, 2.5° C, 2.5° C, 2.7° C, 4.7° C and 5.0° C.

Dioxin

Method 8290A:

The concentration of the OCDD analyte associated with the following samples exceeded the instrument calibration range: DU02-01 (320-7028-12), DU05-01 (320-7028-18). This analyte has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

The following samples: DU02-01 (320-7028-12), DU05-01 (320-7028-18), DU06-01 (320-7028-13), exhibited elevated noise or matrix interferences requiring several detection limits to be raised above the reporting limit.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.27	J q	1.0	0.13	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	0.57	J q	5.0	0.21	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	2.3	J	5.0	0.18	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	1.9	J	5.0	0.18	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.45	J	5.0	0.17	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	0.33	J q	5.0	0.15	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	0.55	J	5.0	0.17	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	64		5.0	1.2	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	14	q	5.0	0.50	pg/g	1		8290A	Total/NA
OCDD	590		10	5.2	pg/g	1		8290A	Total/NA
OCDF	34		10	0.39	pg/g	1		8290A	Total/NA
Total TCDF	0.48	J q	1.0	0.13	pg/g	1		8290A	Total/NA
Total PeCDD	0.66	J q	5.0	0.33	pg/g	1		8290A	Total/NA
Total PeCDF	1.4	J q	5.0	0.21	pg/g	1		8290A	Total/NA
Total HxCDD	17	q	5.0	0.19	pg/g	1		8290A	Total/NA
Total HxCDF	11	q	5.0	0.17	pg/g	1		8290A	Total/NA
Total HpCDD	120		5.0	1.2	pg/g	1		8290A	Total/NA
Total HpCDF	43	q	5.0	0.56	pg/g	1		8290A	Total/NA

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.22	J q	1.0	0.13	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF	0.36	J	1.0	0.14	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	0.84	J q	5.0	0.19	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	3.4	J	5.0	0.16	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	2.9	J	5.0	0.16	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.79	J q	5.0	0.16	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	0.75	J	5.0	0.14	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	94		5.0	1.5	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	21		5.0	0.46	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.97	J q	5.0	0.58	pg/g	1		8290A	Total/NA
OCDD	800		10	5.9	pg/g	1		8290A	Total/NA
OCDF	51		10	0.32	pg/g	1		8290A	Total/NA
Total TCDD	0.82	J q	1.0	0.13	pg/g	1		8290A	Total/NA
Total TCDF	0.66	J	1.0	0.14	pg/g	1		8290A	Total/NA
Total PeCDD	2.2	J q	5.0	0.27	pg/g	1		8290A	Total/NA
Total PeCDF	2.2	J q	5.0	0.19	pg/g	1		8290A	Total/NA
Total HxCDD	25	q	5.0	0.17	pg/g	1		8290A	Total/NA
Total HxCDF	18	q	5.0	0.15	pg/g	1		8290A	Total/NA
Total HpCDD	170		5.0	1.5	pg/g	1		8290A	Total/NA
Total HpCDF	65	q	5.0	0.52	pg/g	1		8290A	Total/NA

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.90	J q	1.0	0.13	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	4.8	J	5.0	0.37	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.92	J	5.0	0.17	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.1	J	5.0	0.18	pg/g	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU02-01 (Continued)

Lab Sample ID: 320-7028-12

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	13		5.0	0.75	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	32		5.0	0.64	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	30		5.0	0.62	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	5.3		5.0	0.44	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	4.3	J	5.0	0.39	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	3.2	J	5.0	0.43	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	1100	G	9.3	9.3	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	120		5.0	1.8	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	8.8		5.0	2.2	pg/g	1		8290A	Total/NA
OCDD	10000	G E	27	27	pg/g	1		8290A	Total/NA
OCDF	300		10	0.98	pg/g	1		8290A	Total/NA
Total TCDD	9.8	q	1.0	0.13	pg/g	1		8290A	Total/NA
Total TCDF	10	q	1.0	0.13	pg/g	1		8290A	Total/NA
Total PeCDD	30	q	5.0	0.37	pg/g	1		8290A	Total/NA
Total PeCDF	18	q	5.0	0.17	pg/g	1		8290A	Total/NA
Total HxCDD	280		5.0	0.67	pg/g	1		8290A	Total/NA
Total HxCDF	100		5.0	0.43	pg/g	1		8290A	Total/NA
Total HpCDD	2100	G	9.3	9.3	pg/g	1		8290A	Total/NA
Total HpCDF	400		5.0	2.0	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.84	J	1.0	0.11	pg/g	1		8290A	Total/NA

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.65	J	0.98	0.12	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	1.9	J	4.9	0.29	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.50	J q	4.9	0.18	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.59	J	4.9	0.19	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	4.1	J	4.9	0.32	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	12		4.9	0.27	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	11		4.9	0.26	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	2.2	J	4.9	0.22	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	1.6	J	4.9	0.19	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.2	J	4.9	0.21	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	390		4.9	3.6	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	47		4.9	0.76	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	3.2	J	4.9	0.96	pg/g	1		8290A	Total/NA
OCDD	3600	G	14	14	pg/g	1		8290A	Total/NA
OCDF	120		9.8	0.59	pg/g	1		8290A	Total/NA
Total TCDD	7.2	q	0.98	0.12	pg/g	1		8290A	Total/NA
Total TCDF	6.9	q	0.98	0.12	pg/g	1		8290A	Total/NA
Total PeCDD	16	q	4.9	0.29	pg/g	1		8290A	Total/NA
Total PeCDF	8.8	q	4.9	0.18	pg/g	1		8290A	Total/NA
Total HxCDD	100		4.9	0.29	pg/g	1		8290A	Total/NA
Total HxCDF	39	q	4.9	0.21	pg/g	1		8290A	Total/NA
Total HpCDD	720		4.9	3.6	pg/g	1		8290A	Total/NA
Total HpCDF	150		4.9	0.86	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	0.68	J	0.98	0.098	pg/g	1		8290A	Total/NA

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU05-01 (Continued)

Lab Sample ID: 320-7028-18

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.79	J q	0.99	0.18	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDD	3.2	J	5.0	0.36	pg/g	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.92	J	5.0	0.24	pg/g	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.92	J	5.0	0.26	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	8.0		5.0	0.46	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	21		5.0	0.39	pg/g	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	15		5.0	0.38	pg/g	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	3.9	J	5.0	0.35	pg/g	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	3.0	J	5.0	0.31	pg/g	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	2.3	J	5.0	0.34	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	770	G	7.3	7.3	pg/g	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	84		5.0	1.2	pg/g	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	6.1		5.0	1.5	pg/g	1		8290A	Total/NA
OCDD	9900	G E	28	28	pg/g	1		8290A	Total/NA
OCDF	210		9.9	0.68	pg/g	1		8290A	Total/NA
Total TCDD	11	q	0.99	0.18	pg/g	1		8290A	Total/NA
Total TCDF	14	q	0.99	0.15	pg/g	1		8290A	Total/NA
Total PeCDD	25	q	5.0	0.36	pg/g	1		8290A	Total/NA
Total PeCDF	17	q	5.0	0.25	pg/g	1		8290A	Total/NA
Total HxCDD	180		5.0	0.41	pg/g	1		8290A	Total/NA
Total HxCDF	72		5.0	0.34	pg/g	1		8290A	Total/NA
Total HpCDD	1500	G	7.3	7.3	pg/g	1		8290A	Total/NA
Total HpCDF	260		5.0	1.4	pg/g	1		8290A	Total/NA
2,3,7,8-TCDF - RA	1.0		0.99	0.099	pg/g	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Date Collected: 04/07/14 16:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.11	pg/g		05/07/14 10:33	05/09/14 00:00	1
2,3,7,8-TCDF	0.27	J q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,7,8-PeCDD	ND		5.0	0.33	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,7,8-PeCDF	ND		5.0	0.21	pg/g		05/07/14 10:33	05/09/14 00:00	1
2,3,4,7,8-PeCDF	ND		5.0	0.22	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,4,7,8-HxCDD	0.57	J q	5.0	0.21	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,6,7,8-HxCDD	2.3	J	5.0	0.18	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,7,8,9-HxCDD	1.9	J	5.0	0.18	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,4,7,8-HxCDF	0.45	J	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,6,7,8-HxCDF	0.33	J q	5.0	0.15	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.18	pg/g		05/07/14 10:33	05/09/14 00:00	1
2,3,4,6,7,8-HxCDF	0.55	J	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,4,6,7,8-HpCDD	64		5.0	1.2	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,4,6,7,8-HpCDF	14	q	5.0	0.50	pg/g		05/07/14 10:33	05/09/14 00:00	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.63	pg/g		05/07/14 10:33	05/09/14 00:00	1
OCDD	590		10	5.2	pg/g		05/07/14 10:33	05/09/14 00:00	1
OCDF	34		10	0.39	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total TCDD	ND		1.0	0.11	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total TCDF	0.48	J q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total PeCDD	0.66	J q	5.0	0.33	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total PeCDF	1.4	J q	5.0	0.21	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total HxCDD	17	q	5.0	0.19	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total HxCDF	11	q	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total HpCDD	120		5.0	1.2	pg/g		05/07/14 10:33	05/09/14 00:00	1
Total HpCDF	43	q	5.0	0.56	pg/g		05/07/14 10:33	05/09/14 00:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-2,3,7,8-TCDF	58		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,7,8-PeCDD	60		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,7,8-PeCDF	58		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,4,7,8-HxCDF	70		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-1,2,3,4,6,7,8-HpCDF	61		40 - 135				05/07/14 10:33	05/09/14 00:00	1
13C-OCDD	72		40 - 135				05/07/14 10:33	05/09/14 00:00	1

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.22	J q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 00:44	1
2,3,7,8-TCDF	0.36	J	1.0	0.14	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,7,8-PeCDD	ND		5.0	0.27	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,7,8-PeCDF	ND		5.0	0.18	pg/g		05/07/14 10:33	05/09/14 00:44	1
2,3,4,7,8-PeCDF	ND		5.0	0.20	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,4,7,8-HxCDD	0.84	J q	5.0	0.19	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,6,7,8-HxCDD	3.4	J	5.0	0.16	pg/g		05/07/14 10:33	05/09/14 00:44	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Date Collected: 04/08/14 11:00

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	2.9	J	5.0	0.16	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,4,7,8-HxCDF	0.79	J q	5.0	0.16	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,6,7,8-HxCDF	0.75	J	5.0	0.14	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.17	pg/g		05/07/14 10:33	05/09/14 00:44	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.15	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,4,6,7,8-HpCDD	94		5.0	1.5	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,4,6,7,8-HpCDF	21		5.0	0.46	pg/g		05/07/14 10:33	05/09/14 00:44	1
1,2,3,4,7,8,9-HpCDF	0.97	J q	5.0	0.58	pg/g		05/07/14 10:33	05/09/14 00:44	1
OCDD	800		10	5.9	pg/g		05/07/14 10:33	05/09/14 00:44	1
OCDF	51		10	0.32	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total TCDD	0.82	J q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total TCDF	0.66	J	1.0	0.14	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total PeCDD	2.2	J q	5.0	0.27	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total PeCDF	2.2	J q	5.0	0.19	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total HxCDD	25	q	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total HxCDF	18	q	5.0	0.15	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total HpCDD	170		5.0	1.5	pg/g		05/07/14 10:33	05/09/14 00:44	1
Total HpCDF	65	q	5.0	0.52	pg/g		05/07/14 10:33	05/09/14 00:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-2,3,7,8-TCDF	63		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,7,8-PeCDD	67		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,4,7,8-HxCDF	75		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135				05/07/14 10:33	05/09/14 00:44	1
13C-OCDD	82		40 - 135				05/07/14 10:33	05/09/14 00:44	1

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.90	J q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,7,8-PeCDD	4.8	J	5.0	0.37	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,7,8-PeCDF	0.92	J	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 01:27	1
2,3,4,7,8-PeCDF	1.1	J	5.0	0.18	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,4,7,8-HxCDD	13		5.0	0.75	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,6,7,8-HxCDD	32		5.0	0.64	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,7,8,9-HxCDD	30		5.0	0.62	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,4,7,8-HxCDF	5.3		5.0	0.44	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,6,7,8-HxCDF	4.3	J	5.0	0.39	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.46	pg/g		05/07/14 10:33	05/09/14 01:27	1
2,3,4,6,7,8-HxCDF	3.2	J	5.0	0.43	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,4,6,7,8-HpCDD	1100	G	9.3	9.3	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,4,6,7,8-HpCDF	120		5.0	1.8	pg/g		05/07/14 10:33	05/09/14 01:27	1
1,2,3,4,7,8,9-HpCDF	8.8		5.0	2.2	pg/g		05/07/14 10:33	05/09/14 01:27	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Date Collected: 04/09/14 14:10

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	10000	G E	27	27	pg/g		05/07/14 10:33	05/09/14 01:27	1
OCDF	300		10	0.98	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total TCDD	9.8	q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total TCDF	10	q	1.0	0.13	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total PeCDD	30	q	5.0	0.37	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total PeCDF	18	q	5.0	0.17	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total HxCDD	280		5.0	0.67	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total HxCDF	100		5.0	0.43	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total HpCDD	2100	G	9.3	9.3	pg/g		05/07/14 10:33	05/09/14 01:27	1
Total HpCDF	400		5.0	2.0	pg/g		05/07/14 10:33	05/09/14 01:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-2,3,7,8-TCDF	76		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,7,8-PeCDD	83		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,7,8-PeCDF	78		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,6,7,8-HxCDD	80		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,4,7,8-HxCDF	94		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,4,6,7,8-HpCDD	88		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-1,2,3,4,6,7,8-HpCDF	74		40 - 135				05/07/14 10:33	05/09/14 01:27	1
13C-OCDD	105		40 - 135				05/07/14 10:33	05/09/14 01:27	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.84	J	1.0	0.11	pg/g		05/07/14 10:33	05/12/14 15:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	84		40 - 135				05/07/14 10:33	05/12/14 15:00	1

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.65	J	0.98	0.12	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,7,8-PeCDD	1.9	J	4.9	0.29	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,7,8-PeCDF	0.50	J q	4.9	0.18	pg/g		05/07/14 10:33	05/09/14 02:10	1
2,3,4,7,8-PeCDF	0.59	J	4.9	0.19	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,4,7,8-HxCDD	4.1	J	4.9	0.32	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,6,7,8-HxCDD	12		4.9	0.27	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,7,8,9-HxCDD	11		4.9	0.26	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,4,7,8-HxCDF	2.2	J	4.9	0.22	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,6,7,8-HxCDF	1.6	J	4.9	0.19	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,7,8,9-HxCDF	ND		4.9	0.23	pg/g		05/07/14 10:33	05/09/14 02:10	1
2,3,4,6,7,8-HxCDF	1.2	J	4.9	0.21	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,4,6,7,8-HpCDD	390		4.9	3.6	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,4,6,7,8-HpCDF	47		4.9	0.76	pg/g		05/07/14 10:33	05/09/14 02:10	1
1,2,3,4,7,8,9-HpCDF	3.2	J	4.9	0.96	pg/g		05/07/14 10:33	05/09/14 02:10	1
OCDD	3600	G	14	14	pg/g		05/07/14 10:33	05/09/14 02:10	1
OCDF	120		9.8	0.59	pg/g		05/07/14 10:33	05/09/14 02:10	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Date Collected: 04/09/14 16:20

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	7.2	q	0.98	0.12	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total TCDF	6.9	q	0.98	0.12	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total PeCDD	16	q	4.9	0.29	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total PeCDF	8.8	q	4.9	0.18	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total HxCDD	100		4.9	0.29	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total HxCDF	39	q	4.9	0.21	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total HpCDD	720		4.9	3.6	pg/g		05/07/14 10:33	05/09/14 02:10	1
Total HpCDF	150		4.9	0.86	pg/g		05/07/14 10:33	05/09/14 02:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-2,3,7,8-TCDF	65		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,7,8-PeCDD	67		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,7,8-PeCDF	65		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,4,7,8-HxCDF	78		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135				05/07/14 10:33	05/09/14 02:10	1
13C-OCDD	89		40 - 135				05/07/14 10:33	05/09/14 02:10	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	0.68	J	0.98	0.098	pg/g		05/07/14 10:33	05/12/14 15:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	70		40 - 135				05/07/14 10:33	05/12/14 15:37	1

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.79	J q	0.99	0.18	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,7,8-PeCDD	3.2	J	5.0	0.36	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,7,8-PeCDF	0.92	J	5.0	0.24	pg/g		05/07/14 10:33	05/09/14 02:53	1
2,3,4,7,8-PeCDF	0.92	J	5.0	0.26	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,4,7,8-HxCDD	8.0		5.0	0.46	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,6,7,8-HxCDD	21		5.0	0.39	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,7,8,9-HxCDD	15		5.0	0.38	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,4,7,8-HxCDF	3.9	J	5.0	0.35	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,6,7,8-HxCDF	3.0	J	5.0	0.31	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.37	pg/g		05/07/14 10:33	05/09/14 02:53	1
2,3,4,6,7,8-HxCDF	2.3	J	5.0	0.34	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,4,6,7,8-HpCDD	770	G	7.3	7.3	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,4,6,7,8-HpCDF	84		5.0	1.2	pg/g		05/07/14 10:33	05/09/14 02:53	1
1,2,3,4,7,8,9-HpCDF	6.1		5.0	1.5	pg/g		05/07/14 10:33	05/09/14 02:53	1
OCDD	9900	G E	28	28	pg/g		05/07/14 10:33	05/09/14 02:53	1
OCDF	210		9.9	0.68	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total TCDD	11	q	0.99	0.18	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total TCDF	14	q	0.99	0.15	pg/g		05/07/14 10:33	05/09/14 02:53	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	25	q	5.0	0.36	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total PeCDF	17	q	5.0	0.25	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total HxCDD	180		5.0	0.41	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total HxCDF	72		5.0	0.34	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total HpCDD	1500	G	7.3	7.3	pg/g		05/07/14 10:33	05/09/14 02:53	1
Total HpCDF	260		5.0	1.4	pg/g		05/07/14 10:33	05/09/14 02:53	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	69		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-2,3,7,8-TCDF	67		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,7,8-PeCDD	69		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,7,8-PeCDF	66		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,4,6,7,8-HpCDD	81		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135				05/07/14 10:33	05/09/14 02:53	1
13C-OCDD	99		40 - 135				05/07/14 10:33	05/09/14 02:53	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1.0		0.99	0.099	pg/g		05/07/14 10:33	05/12/14 16:15	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDF	71		40 - 135				05/07/14 10:33	05/12/14 16:15	1

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU08-01

Lab Sample ID: 320-7028-9

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		1.6	TEQ
Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		1.0	0.11	pg/g	1	0.00	8290A
2,3,7,8-TCDF	0.27	J q	1.0	0.13	pg/g	0.1	0.027	8290A
1,2,3,7,8-PeCDD	ND		5.0	0.33	pg/g	1	0.00	8290A
1,2,3,7,8-PeCDF	ND		5.0	0.21	pg/g	0.03	0.00	8290A
2,3,4,7,8-PeCDF	ND		5.0	0.22	pg/g	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	0.57	J q	5.0	0.21	pg/g	0.1	0.057	8290A
1,2,3,6,7,8-HxCDD	2.3	J	5.0	0.18	pg/g	0.1	0.23	8290A
1,2,3,7,8,9-HxCDD	1.9	J	5.0	0.18	pg/g	0.1	0.19	8290A
1,2,3,4,7,8-HxCDF	0.45	J	5.0	0.17	pg/g	0.1	0.045	8290A
1,2,3,6,7,8-HxCDF	0.33	J q	5.0	0.15	pg/g	0.1	0.033	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.18	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	0.55	J	5.0	0.17	pg/g	0.1	0.055	8290A
1,2,3,4,6,7,8-HpCDD	64		5.0	1.2	pg/g	0.01	0.64	8290A
1,2,3,4,6,7,8-HpCDF	14	q	5.0	0.50	pg/g	0.01	0.14	8290A
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.63	pg/g	0.01	0.00	8290A
OCDD	590		10	5.2	pg/g	0.0003	0.18	8290A
OCDF	34		10	0.39	pg/g	0.0003	0.010	8290A

Client Sample ID: DU07-01

Lab Sample ID: 320-7028-10

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ
Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.22	J q	1.0	0.13	pg/g	1	0.22	8290A
2,3,7,8-TCDF	0.36	J	1.0	0.14	pg/g	0.1	0.036	8290A
1,2,3,7,8-PeCDD	ND		5.0	0.27	pg/g	1	0.00	8290A
1,2,3,7,8-PeCDF	ND		5.0	0.18	pg/g	0.03	0.00	8290A
2,3,4,7,8-PeCDF	ND		5.0	0.20	pg/g	0.3	0.00	8290A
1,2,3,4,7,8-HxCDD	0.84	J q	5.0	0.19	pg/g	0.1	0.084	8290A
1,2,3,6,7,8-HxCDD	3.4	J	5.0	0.16	pg/g	0.1	0.34	8290A
1,2,3,7,8,9-HxCDD	2.9	J	5.0	0.16	pg/g	0.1	0.29	8290A
1,2,3,4,7,8-HxCDF	0.79	J q	5.0	0.16	pg/g	0.1	0.079	8290A
1,2,3,6,7,8-HxCDF	0.75	J	5.0	0.14	pg/g	0.1	0.075	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.17	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	ND		5.0	0.15	pg/g	0.1	0.00	8290A
1,2,3,4,6,7,8-HpCDD	94		5.0	1.5	pg/g	0.01	0.94	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

TestAmerica Sacramento

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU07-01 (Continued)

Lab Sample ID: 320-7028-10

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
1,2,3,4,6,7,8-HpCDF	21		5.0	0.46	pg/g	0.01	0.21	8290A
1,2,3,4,7,8,9-HpCDF	0.97	J q	5.0	0.58	pg/g	0.01	0.0097	8290A
OCDD	800		10	5.9	pg/g	0.0003	0.24	8290A
OCDF	51		10	0.32	pg/g	0.0003	0.015	8290A

Client Sample ID: DU02-01

Lab Sample ID: 320-7028-12

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
Total Dioxin/Furan TEQ					pg/g		30	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,7,8-TCDD	0.90	J q	1.0	0.13	pg/g	1	0.90	8290A
1,2,3,7,8-PeCDD	4.8	J	5.0	0.37	pg/g	1	4.8	8290A
1,2,3,7,8-PeCDF	0.92	J	5.0	0.17	pg/g	0.03	0.028	8290A
2,3,4,7,8-PeCDF	1.1	J	5.0	0.18	pg/g	0.3	0.33	8290A
1,2,3,4,7,8-HxCDD	13		5.0	0.75	pg/g	0.1	1.3	8290A
1,2,3,6,7,8-HxCDD	32		5.0	0.64	pg/g	0.1	3.2	8290A
1,2,3,7,8,9-HxCDD	30		5.0	0.62	pg/g	0.1	3.0	8290A
1,2,3,4,7,8-HxCDF	5.3		5.0	0.44	pg/g	0.1	0.53	8290A
1,2,3,6,7,8-HxCDF	4.3	J	5.0	0.39	pg/g	0.1	0.43	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.46	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	3.2	J	5.0	0.43	pg/g	0.1	0.32	8290A
1,2,3,4,6,7,8-HpCDD	1100	G	9.3	9.3	pg/g	0.01	11	8290A
1,2,3,4,6,7,8-HpCDF	120		5.0	1.8	pg/g	0.01	1.2	8290A
1,2,3,4,7,8,9-HpCDF	8.8		5.0	2.2	pg/g	0.01	0.088	8290A
OCDD	10000	G E	27	27	pg/g	0.0003	3.0	8290A
OCDF	300		10	0.98	pg/g	0.0003	0.090	8290A
2,3,7,8-TCDF - RA	0.84	J	1.0	0.11	pg/g	0.1	0.084	8290A

Client Sample ID: DU06-01

Lab Sample ID: 320-7028-13

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
Total Dioxin/Furan TEQ					pg/g		12	TEQ

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,7,8-TCDD	0.65	J	0.98	0.12	pg/g	1	0.65	8290A
1,2,3,7,8-PeCDD	1.9	J	4.9	0.29	pg/g	1	1.9	8290A
1,2,3,7,8-PeCDF	0.50	J q	4.9	0.18	pg/g	0.03	0.015	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU06-01 (Continued)

Lab Sample ID: 320-7028-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
						ND = 0		
2,3,4,7,8-PeCDF	0.59	J	4.9	0.19	pg/g	0.3	0.18	8290A
1,2,3,4,7,8-HxCDD	4.1	J	4.9	0.32	pg/g	0.1	0.41	8290A
1,2,3,6,7,8-HxCDD	12		4.9	0.27	pg/g	0.1	1.2	8290A
1,2,3,7,8,9-HxCDD	11		4.9	0.26	pg/g	0.1	1.1	8290A
1,2,3,4,7,8-HxCDF	2.2	J	4.9	0.22	pg/g	0.1	0.22	8290A
1,2,3,6,7,8-HxCDF	1.6	J	4.9	0.19	pg/g	0.1	0.16	8290A
1,2,3,7,8,9-HxCDF	ND		4.9	0.23	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	1.2	J	4.9	0.21	pg/g	0.1	0.12	8290A
1,2,3,4,6,7,8-HpCDD	390		4.9	3.6	pg/g	0.01	3.9	8290A
1,2,3,4,6,7,8-HpCDF	47		4.9	0.76	pg/g	0.01	0.47	8290A
1,2,3,4,7,8,9-HpCDF	3.2	J	4.9	0.96	pg/g	0.01	0.032	8290A
OCDD	3600	G	14	14	pg/g	0.0003	1.1	8290A
OCDF	120		9.8	0.59	pg/g	0.0003	0.036	8290A
2,3,7,8-TCDF - RA	0.68	J	0.98	0.098	pg/g	0.1	0.068	8290A

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		21	TEQ
						ND = 0		
						WHO 2005		
						ND = 0		
2,3,7,8-TCDD	0.79	J q	0.99	0.18	pg/g	1	0.79	8290A
1,2,3,7,8-PeCDD	3.2	J	5.0	0.36	pg/g	1	3.2	8290A
1,2,3,7,8-PeCDF	0.92	J	5.0	0.24	pg/g	0.03	0.028	8290A
2,3,4,7,8-PeCDF	0.92	J	5.0	0.26	pg/g	0.3	0.28	8290A
1,2,3,4,7,8-HxCDD	8.0		5.0	0.46	pg/g	0.1	0.80	8290A
1,2,3,6,7,8-HxCDD	21		5.0	0.39	pg/g	0.1	2.1	8290A
1,2,3,7,8,9-HxCDD	15		5.0	0.38	pg/g	0.1	1.5	8290A
1,2,3,4,7,8-HxCDF	3.9	J	5.0	0.35	pg/g	0.1	0.39	8290A
1,2,3,6,7,8-HxCDF	3.0	J	5.0	0.31	pg/g	0.1	0.30	8290A
1,2,3,7,8,9-HxCDF	ND		5.0	0.37	pg/g	0.1	0.00	8290A
2,3,4,6,7,8-HxCDF	2.3	J	5.0	0.34	pg/g	0.1	0.23	8290A
1,2,3,4,6,7,8-HpCDD	770	G	7.3	7.3	pg/g	0.01	7.7	8290A
1,2,3,4,6,7,8-HpCDF	84		5.0	1.2	pg/g	0.01	0.84	8290A
1,2,3,4,7,8,9-HpCDF	6.1		5.0	1.5	pg/g	0.01	0.061	8290A
OCDD	9900	G E	28	28	pg/g	0.0003	3.0	8290A
OCDF	210		9.9	0.68	pg/g	0.0003	0.063	8290A
2,3,7,8-TCDF - RA	1.0		0.99	0.099	pg/g	0.1	0.10	8290A

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Isotope Dilution Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
320-7028-9	DU08-01	62	58	60	58	64	70	68	61
320-7028-10	DU07-01	66	63	67	63	72	75	76	70
320-7028-12	DU02-01	81	76	83	78	80	94	88	74
320-7028-12 - RA	DU02-01		84						
320-7028-13	DU06-01	68	65	67	65	70	78	76	68
320-7028-13 - RA	DU06-01		70						
320-7028-18	DU05-01	69	67	69	66	73	80	81	71
320-7028-18 - RA	DU05-01		71						
LCS 320-41892/2-A	Lab Control Sample	62	58	59	57	66	69	70	64
MB 320-41892/1-A	Method Blank	63	60	62	60	67	70	72	65

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-7028-9	DU08-01	72
320-7028-10	DU07-01	82
320-7028-12	DU02-01	105
320-7028-12 - RA	DU02-01	
320-7028-13	DU06-01	89
320-7028-13 - RA	DU06-01	
320-7028-18	DU05-01	99
320-7028-18 - RA	DU05-01	
LCS 320-41892/2-A	Lab Control Sample	73
MB 320-41892/1-A	Method Blank	72

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-41892/1-A

Matrix: Solid

Analysis Batch: 42018

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 41892

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.11	pg/g		05/07/14 10:33	05/08/14 23:17	1
2,3,7,8-TCDF	ND		1.0	0.10	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,7,8-PeCDD	ND		5.0	0.24	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,7,8-PeCDF	ND		5.0	0.20	pg/g		05/07/14 10:33	05/08/14 23:17	1
2,3,4,7,8-PeCDF	ND		5.0	0.21	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.11	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.095	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.091	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.084	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.074	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.088	pg/g		05/07/14 10:33	05/08/14 23:17	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.081	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.10	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.078	pg/g		05/07/14 10:33	05/08/14 23:17	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.098	pg/g		05/07/14 10:33	05/08/14 23:17	1
OCDD	ND		10	0.10	pg/g		05/07/14 10:33	05/08/14 23:17	1
OCDF	ND		10	0.16	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total TCDD	ND		1.0	0.11	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total TCDF	ND		1.0	0.10	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total PeCDD	ND		5.0	0.24	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total PeCDF	ND		5.0	0.21	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total HxCDD	ND		5.0	0.11	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total HxCDF	ND		5.0	0.088	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total HpCDD	ND		5.0	0.10	pg/g		05/07/14 10:33	05/08/14 23:17	1
Total HpCDF	ND		5.0	0.098	pg/g		05/07/14 10:33	05/08/14 23:17	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-2,3,7,8-TCDF	60		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,7,8-PeCDD	62		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,6,7,8-HxCDD	67		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,4,7,8-HxCDF	70		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135	05/07/14 10:33	05/08/14 23:17	1
13C-OCDD	72		40 - 135	05/07/14 10:33	05/08/14 23:17	1

Lab Sample ID: LCS 320-41892/2-A

Matrix: Solid

Analysis Batch: 42018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	19.1		pg/g		96	77 - 130
2,3,7,8-TCDF	20.0	20.9		pg/g		104	79 - 137
1,2,3,7,8-PeCDD	100	105		pg/g		105	79 - 134
1,2,3,7,8-PeCDF	100	108		pg/g		108	81 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	76 - 132
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	65 - 144

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHH Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-41892/2-A

Matrix: Solid

Analysis Batch: 42018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 41892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	100	104		pg/g		104	73 - 147
1,2,3,7,8,9-HxCDD	100	106		pg/g		106	80 - 143
1,2,3,4,7,8-HxCDF	100	94.0		pg/g		94	72 - 140
1,2,3,6,7,8-HxCDF	100	99.3		pg/g		99	63 - 152
1,2,3,7,8,9-HxCDF	100	97.1		pg/g		97	72 - 152
2,3,4,6,7,8-HxCDF	100	98.1		pg/g		98	72 - 151
1,2,3,4,6,7,8-HpCDD	100	100		pg/g		100	86 - 134
1,2,3,4,6,7,8-HpCDF	100	105		pg/g		105	81 - 137
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	79 - 139
OCDD	200	221		pg/g		110	80 - 137
OCDF	200	226		pg/g		113	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	62		40 - 135
13C-2,3,7,8-TCDF	58		40 - 135
13C-1,2,3,7,8-PeCDD	59		40 - 135
13C-1,2,3,7,8-PeCDF	57		40 - 135
13C-1,2,3,6,7,8-HxCDD	66		40 - 135
13C-1,2,3,4,7,8-HxCDF	69		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135
13C-OCDD	73		40 - 135

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Specialty Organics

ISM Prep Batch: 40861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-9	DU08-01	Total/NA	Solid	Increment, prep	
320-7028-10	DU07-01	Total/NA	Solid	Increment, prep	
320-7028-12	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-12 - RA	DU02-01	Total/NA	Solid	Increment, prep	
320-7028-13	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-13 - RA	DU06-01	Total/NA	Solid	Increment, prep	
320-7028-18	DU05-01	Total/NA	Solid	Increment, prep	
320-7028-18 - RA	DU05-01	Total/NA	Solid	Increment, prep	

Prep Batch: 41892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-9	DU08-01	Total/NA	Solid	8290	40861
320-7028-10	DU07-01	Total/NA	Solid	8290	40861
320-7028-12	DU02-01	Total/NA	Solid	8290	40861
320-7028-12 - RA	DU02-01	Total/NA	Solid	8290	40861
320-7028-13	DU06-01	Total/NA	Solid	8290	40861
320-7028-13 - RA	DU06-01	Total/NA	Solid	8290	40861
320-7028-18	DU05-01	Total/NA	Solid	8290	40861
320-7028-18 - RA	DU05-01	Total/NA	Solid	8290	40861
LCS 320-41892/2-A	Lab Control Sample	Total/NA	Solid	8290	
MB 320-41892/1-A	Method Blank	Total/NA	Solid	8290	

Analysis Batch: 42018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-9	DU08-01	Total/NA	Solid	8290A	41892
320-7028-10	DU07-01	Total/NA	Solid	8290A	41892
320-7028-12	DU02-01	Total/NA	Solid	8290A	41892
320-7028-13	DU06-01	Total/NA	Solid	8290A	41892
320-7028-18	DU05-01	Total/NA	Solid	8290A	41892
LCS 320-41892/2-A	Lab Control Sample	Total/NA	Solid	8290A	41892
MB 320-41892/1-A	Method Blank	Total/NA	Solid	8290A	41892

Analysis Batch: 42195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-7028-12 - RA	DU02-01	Total/NA	Solid	8290A	41892
320-7028-13 - RA	DU06-01	Total/NA	Solid	8290A	41892
320-7028-18 - RA	DU05-01	Total/NA	Solid	8290A	41892

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU08-01

Date Collected: 04/07/14 16:00

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.01 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.01 g	20 uL	42018	05/09/14 00:00	KSS	TAL SAC

Client Sample ID: DU07-01

Date Collected: 04/08/14 11:00

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.00 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.00 g	20 uL	42018	05/09/14 00:44	KSS	TAL SAC

Client Sample ID: DU02-01

Date Collected: 04/09/14 14:10

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.05 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.05 g	20 uL	42018	05/09/14 01:27	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.05 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.05 g	20 uL	42195	05/12/14 15:00	KSS	TAL SAC

Client Sample ID: DU06-01

Date Collected: 04/09/14 16:20

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290			10.16 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.16 g	20 uL	42018	05/09/14 02:10	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.16 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.16 g	20 uL	42195	05/12/14 15:37	KSS	TAL SAC

Client Sample ID: DU05-01

Date Collected: 04/10/14 15:50

Date Received: 04/12/14 10:00

Lab Sample ID: 320-7028-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				10 g	40861	04/17/14 12:00	ALH	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-2

Client Sample ID: DU05-01

Lab Sample ID: 320-7028-18

Date Collected: 04/10/14 15:50

Matrix: Solid

Date Received: 04/12/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.07 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A		1	10.07 g	20 uL	42018	05/09/14 02:53	KSS	TAL SAC
Total/NA	ISM Prep	Increment, prep	RA			10 g	40861	04/17/14 12:00	ALH	TAL SAC
Total/NA	Prep	8290	RA		10.07 g	20 uL	41892	05/07/14 10:33	DXD	TAL SAC
Total/NA	Analysis	8290A	RA	1	10.07 g	20 uL	42195	05/12/14 16:15	KSS	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Certification Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHK Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-7028-2

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	05-31-14 *
Alaska (UST)	State Program	10	UST-055	12-18-13 *
Arizona	State Program	9	AZ0708	08-11-14
Arkansas DEQ	State Program	6	88-0691	06-17-14
California	State Program	9	2897	01-31-15
Colorado	State Program	8	N/A	08-31-14
Connecticut	State Program	1	PH-0691	06-30-15
Florida	NELAP	4	E87570	06-30-14
Guam	State Program	9	N/A	08-31-14
Hawaii	State Program	9	N/A	01-29-15
Illinois	NELAP	5	200060	03-17-15
Kansas	NELAP	7	E-10375	10-31-14
Louisiana	NELAP	6	30612	06-30-14
Michigan	State Program	5	9947	01-31-15
Nebraska	State Program	7	NE-OS-22-13	01-29-15
Nevada	State Program	9	CA44	07-31-14
New Jersey	NELAP	2	CA005	06-30-14
New York	NELAP	2	11666	04-01-15
Pennsylvania	NELAP	3	9947	03-31-15
South Carolina	State Program	4	87014	06-30-14
Texas	NELAP	6	T104704399-08-TX	05-31-14
US Fish & Wildlife	Federal		LE148388-0	12-31-14
USDA	Federal		P330-11-00436	12-30-14
USEPA UCMR	Federal	1	CA00044	11-06-14
Utah	NELAP	8	QUAN1	02-28-15
West Virginia DHHR	State Program	3	9930C	12-31-14
Wyoming	State Program	8	8TMS-Q	02-28-14 *

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-2

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-7028-2


Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-7028-9	DU08-01	Solid	04/07/14 16:00	04/12/14 10:00
320-7028-10	DU07-01	Solid	04/08/14 11:00	04/12/14 10:00
320-7028-12	DU02-01	Solid	04/09/14 14:10	04/12/14 10:00
320-7028-13	DU06-01	Solid	04/09/14 16:20	04/12/14 10:00
320-7028-18	DU05-01	Solid	04/10/14 15:50	04/12/14 10:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

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Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street, Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379, 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab PM: Karen Sellers E-Mail: karen.sellers@testamericainc.com Camer Tracking No(s): Due Date Requested: 14 day prelims; 21 day finals TAT Requested (days): Standard PO #: 14C-16460-HI02 WOC #: Project #: 60304802 SSOV#: Matrix (Wet/dry, Swab, On-surface, Air):		Sampler: Andrea Wong Phone: (808) 954-4542 Analysis Requested: EPA 6010C/471B Metals (soils) Y EPA 8270D SIM PAHs X EPA 8081B OCI Pesticides X EPA 8082A PCBs X EPA 8290 PCDD/PCDF X EPA 8015C TPH-DRO/RRO X EPA 6010C/470A Metals (water) X Total Number of containers: 8		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3S S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - ph 4-5 X - other (specify) Other:		Special Instructions/Note: samples to remain locked  320-7028 Chain of Custody	
Sample Identification MW04-01 MW04-01	Sample Date: 4/9/14 Sample Time: 12:30 Sample Type (C=Comp, G=grab): G Preservation Code: W	Matrix: W Sample Type: G Sample Time: 12:30 Sample Date: 4/9/14	EPA 6010C/471B Metals (soils) Y EPA 8270D SIM PAHs X EPA 8081B OCI Pesticides X EPA 8082A PCBs X EPA 8290 PCDD/PCDF X EPA 8015C TPH-DRO/RRO X EPA 6010C/470A Metals (water) X	Total Number of containers: 8 Special Instructions/Note: samples to remain locked	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: Relinquished by: Andrea Wong Relinquished by: Relinquished by:		
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements Method of Shipment:		Date/Time: 4-12-14 10:10 Date/Time: Date/Time:		Company: Tows Company: Company:			
Custody Seals Intact A Yes Δ No		Custody Seal No.: seal		Cooler Temperature(s) °C and Other Remarks: 1.9°C		Received by: [Signature] Received by: Received by:			



Chain of Custody Record

Client Information Client Contact: Steve McKnight Phone: (806) 954-4542 E-Mail: karen.sellers@testamericainc.com		Lab PM: Karen Sellers E-Mail: karen.sellers@testamericainc.com		Camera Tracking No(s): 		COC No: 	
Company: AECOM Technical Services Inc Address: 1001 Bishop Street, Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379; 415-596-7837 Email: steve.mcknight@aecom.com		Due Date Requested: 14 day prelims; 21 day finals TAT Requested (days): Standard		Analysis Requested EPA 6010C/471B Metals (soils) EPA 8270D SIM PAHs EPA 8081B OCl Pesticides EPA 8082A PCBs EPA 8290 PCDD/PCDF EPA 8015C TPH-DRO/RRO EPA 6010C/470A Metals (water)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		PO #: 14C-16460-HI02 WOC #:		Total Number of containers: 8 Special Instructions/Note: 8 sample split before in 2004		Special Instructions/Note:	
Sample Identification: MW04-01 MW04-01		Sample Date: 4/9/14 4/9/14		Sample Time: 1230 1230		Matrix (W=Water, S=Soils, G=Grabs, O=Other, A=Air) Preservation Codes: Y Y	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For: Months		Special Instructions/QC Requirements:		Method of Shipment:	
Empty Kit Relinquished by:		Date: 4/10/14 1330		Received by: [Signature]		Date/Time: 4/12-14 1000 Company: PWS	
Relinquished by: Anding wang		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Seal		Cooler Temperature(s) °C and Other Remarks: 19°C		Received by:		Date/Time:	

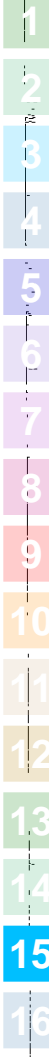


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Chain of Custody Record

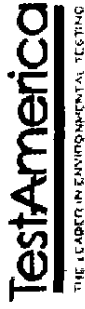
TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab P/M		Carrier Tracking No(s)		COC No									
Company: AECOM Technical Services Inc.		Karen Sellers													
Address: 1001 Bishop Street Suite 1600		E-Mail: karen.sellers@testamericainc.com													
City: Honolulu		Phone: (808) 954-4542													
State, Zip: HI, 96813		Due Date Requested: 14 day prelims; 21 day finals													
Phone: 808-356-5379, 415-596-7837		TAT Requested (days):													
Email: steve.mcknight@aecom.com		Standard													
Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		PO #: 14C-16460-H102													
Site: Hawaii		WO #: 60304802													
		SSOW#:													
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=biotox, A=air)	Field Filtered Sample (Yes or No)	EPA 6010C/7471B Metals (soils)	EPA 8270D SIM PAHs	EPA 8082A OCI Pesticides	EPA 8290 PCDD/PCDF	EPA 8015C TPH-DRO/RRO	EPA 6010C/7470A Metals (water)	Analysis Requested	Preservation Codes:	Total Number of containers	Special Instructions/Note:
HW01-01	4/9/14	12:30	G	W	X	X	X	X	X	X	X		M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	8	8 samples split between 2 racks
MW01-01	4/9/14	12:30	G	W	X	X	X	X	X	X	X		M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	8	8 samples split between 2 racks
<p>Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>															
<p>Empty Kit Relinquished by</p> <p>Relinquished by: <i>Andrea Wong</i> Date/Time: <i>4/10/14 1330</i> Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Δ <input type="checkbox"/> No <input type="checkbox"/> Seal <i>25°C</i></p>															

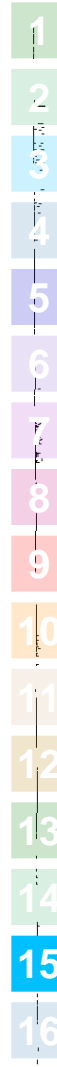


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 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record



Client Information		Lab PM: Karen Sellers		Camera Tracking No(s):	
Client Contact: Steve McKnight		Phone: (908) 959-4542		E-Mail: karen.sellers@testamericainc.com	
Company: AECOM Technical Services Inc.		Address: 1007 Bishop Street Suite 1600		City: Honolulu	
State: HI, Zip: 96813		Phone: 808-356-5378; 415-596-7837		PO #: 14C-16460-H102	
Email: steve.mcknight@aecom.com		Project #: 60304802		SSOW#:	
Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		Site: Hawaii			
Due Date Requested: 14 day prelims; 21 day finals		TAT Requested (days): Standard			
Sample Identification: MW01-01		Sample Date: 4/9/14		Sample Time: 1230	
Sample Type (C=Comp, G=Grab): G		Matrix (W=water, S=solid, D=wash/dil, P=issue, A=air): W		Preservation Code: Y	
Analysis Requested:		EPA 8010C/7471B Metals (soils)		EPA 8270D SIM PAHs	
		EPA 8081B OC Pesticides		EPA 8082A PCBs	
		EPA 8290 PCDD/PCDF		EPA 8015C TPH-DRO/RRO	
		EPA 8010C/7470A Metals (water)			
Total Number of Containers: 8		Special Instructions/Note: Sample split between 2 containers			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Disposal By Lab <input checked="" type="checkbox"/> Archive For: _____ Months	
Special Instructions/QC Requirements:		Empty Kit Relinquished by: Andrew Wong		Date: 4/10/14 @ 1330	
Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Time: _____	
Relinquished by: Andrew Wong		Relinquished by: _____		Date: _____	
Relinquished by: _____		Relinquished by: _____		Date: _____	
Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: Seal		Cooler Temperature(s) °C and Other Remarks: 2-5°C	



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Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379; 415-596-7837 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii		Lab to PM: Karen Sellers E-Mail: karen.sellers@testamerica.com C-OC No: _____ Page: _____ Job #: _____																								
Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard PO #: 14C-16460-H102 WO #: _____ Project #: 60304802 SSO# #: _____	Analysis Requested <table border="1"> <tr> <th>Analysis Requested</th> <th>Yes</th> <th>No</th> </tr> <tr> <td>EPA 6010C/747B Metals (soils)</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 8270D SIM PAHs</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 8061B OCl Pesticides</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 8062A PCBs</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 8290 PCDD/PCDF</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 8015C TPH-DRO/RRO</td> <td>X</td> <td></td> </tr> <tr> <td>EPA 6010C/7470A Metals (water)</td> <td>X</td> <td></td> </tr> </table>		Analysis Requested	Yes	No	EPA 6010C/747B Metals (soils)	X		EPA 8270D SIM PAHs	X		EPA 8061B OCl Pesticides	X		EPA 8062A PCBs	X		EPA 8290 PCDD/PCDF	X		EPA 8015C TPH-DRO/RRO	X		EPA 6010C/7470A Metals (water)	X	
Analysis Requested	Yes	No																								
EPA 6010C/747B Metals (soils)	X																									
EPA 8270D SIM PAHs	X																									
EPA 8061B OCl Pesticides	X																									
EPA 8062A PCBs	X																									
EPA 8290 PCDD/PCDF	X																									
EPA 8015C TPH-DRO/RRO	X																									
EPA 6010C/7470A Metals (water)	X																									
Sample Identification Sample ID: MW04-02 Matrix: W Sample Type (C=Comp, G=grab): G Sample Time: 4/9/14 1320 Sample Date: 4/9/14 Matrix (W=Water, E=Soil, G=Grab, BT=Tissue, A=Air) Field Filtered Sample (Yes or No): X	Possible Hazard Identification Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify) _____	Special Instructions/Note: Total Number of Containers: 2																								
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months <input type="checkbox"/>	Special Instructions/QC Requirements																									
Empty Kit Relinquished by: Relinquished by: Andrew Wong Date/Time: 4/10/14 1330	Received by: Received by: [Signature] Date/Time: 4-12-14 1000 HAWKS	Company: _____ Company: _____ Company: _____																								
Custody Seal Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	Cooler Temperature(s) °C and Other Remarks: 2.7°C																									

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Chain of Custody Record



Client Information		Sampler		Lab PM		Karen Sellers		Camera Tracking No(s)		COC No														
Company AECOM Technical Services Inc.		Steve McKnight		Andrea Wong		Karen Sellers		E-Mail karen.sellers@testamerica.com		Page														
Address 1001 Bishop Street Suite 1600		City Honolulu		State, Zip HI, 96813		Phone 808-356-5379, 415-596-7837		PO # 14C-16460-H102		Job #														
Email steve.mcknight@aecom.com		Project Name DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		Site Hawaii		SSOV#		Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard		Analysis Requested														
Sample Identification	Sample Date	Sample Time	Sample Type (G-grab)	Matrix (Water, Swill, Over-sat, BT-Tissue, Avail)	Field Filtered Sample (Yes or No)	Analysis Requested																		
						EPA 6010C/7471B Metals (soils)	EPA 8270D SIM PAHs	EPA 8081B OCI Pesticides	EPA 8082A PCBs	EPA 8290 PCDD/PCDF	EPA 8015C TPH-DRO/RRO	EPA 8010C/7470A Metals (water)	Total Number of Containers	Special Instructions/Note:	Preservation Codes:									
MW04-02	4/9/14	1320	G	W	X	N	X	X	X	X	X	X	8											
MW04-02	4/9/14	1320	G	W	X	N	X	X	X	X	X	X	1											

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested I, II, III, IV, Other (specify)

Empty Kit Relinquished by

Relinquished by: **Andrea Wong** Date/Time: 4/14/14 @ 1330 Company: **AW**

Relinquished by: Date/Time: Company:

Relinquished by: Date/Time: Company:

Custody Seals Intact: **Seal** Custody Seal No.: **2-7°C**

Return To Client Disposal By Lab Archive For _____ Months

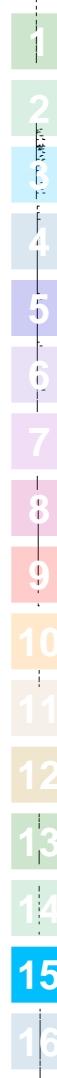
Special Instructions/QC Requirements:

Received by: **AW** Date/Time: 4-12-14 600 STWS Company: **AW**

Received by: Date/Time: Company:

Received by: Date/Time: Company:

Cooler Temperature(s) °C and Other Remarks: **2-7°C**

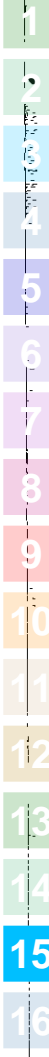


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 880 Riverside Parkway
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 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Supplier: <u>Anchovy Wong</u> Lab P#M: <u>Karen Sellers</u> Phone: <u>(808) 954-4542</u> E-Mail: <u>karen.sellers@testamericainc.com</u>		Carnet Tracking No(s): Job #:	
Company: <u>AECOM Technical Services Inc.</u> Address: <u>1001 Bishop Street Suite 1600</u> City: <u>Honolulu</u> State/Zip: <u>HI, 96813</u> Phone: <u>808-556-5379, 415-596-7837</u> Email: <u>steve.mcknight@aecom.com</u>		Analysis Requested <input type="checkbox"/> EPA 6010C/7471B Metals (soils) <input type="checkbox"/> EPA 8270D SIM PAHs <input type="checkbox"/> EPA 8081B OC Pesticides <input type="checkbox"/> EPA 8082A PCBs <input type="checkbox"/> EPA 8290 PCDD/PCDF <input type="checkbox"/> EPA 8015C TPH-DRO/RRO <input type="checkbox"/> EPA 8010C/7470A Metals (water)	
Due Date Requested: <u>14 day prelims; 21 day finals</u> TAT Requested (days): <u>Standard</u>		Total Number of Containers: <u>8</u>	
PO #: <u>14C-16460-H102</u> WO #: _____ Project #: <u>60304802</u> SSO#W#: _____ Project Name: <u>DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd</u> Site: <u>Hawaii</u>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Z - other (specify) Other: _____	
Sample Identification Sample Date: <u>4/8/14</u> Sample Time: <u>1600</u> Sample Type (C=Comp, G=grab): <u>G</u> Matrix (W=water, S=solid, O=volatile, BT=trace, Act=): <u>W</u> Field Filtered Sample (Yes or No): <u>X</u> Preservation Code: <u>W</u> Special Instructions/Note: _____		Special Instructions/Note: _____	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify) <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> Other		Special Instructions/QC Requirements _____	
Empty Kit Relinquished by Relinquished by: <u>Anchovy Wong</u> Date/Time: <u>4/14/14 (1330)</u> Company: _____		Method of Shipment: Date/Time: <u>4-12-14 1000</u> Company: <u>TABS</u>	
Custody Seals Intact: Δ Yes Δ No <u>5-240</u>		Cooler Temperature(s) °C and Other Remarks: <u>9.7 °C</u>	



TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PHL		Camer Tracking No(s)		COC No						
Company: AECOM Technical Services Inc.		Karen Sellers		Job #:		Page:						
Address: 1001 Bishop Street Suite 1800		E-Mail: karen.sellers@testamericainc.com		Job #:		Page:						
City: Honolulu		Phone: 808-356-5379, 415-596-7837		Job #:		Page:						
State, Zip: HI, 96813		Email: steve.mcknight@aecom.com		Job #:		Page:						
Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd		Project #: 60304802		Job #:		Page:						
Site: Hawaii		SSOW#:		Job #:		Page:						
Due Date Requested: 14 day prelims; 21 day finals TAT Requested (days): Standard		Analysis Requested		Special Instructions/Note:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2SO3 S - H2SO4 G - Amchlor H - Ascorbic Acid J - Ice K - EDTA L - EDTA W - ph 4.5 Z - other (specify) Other:						
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Gas, Soil, On-surface, Off-surface, Air)	Field Filtered Sample (Yes or No)	EPA 6010C/7471B Metals (soils)	EPA 8081B OCI Pesticides	EPA 8082A PCBs	EPA 8290 PCDD/PCDF	EPA 8015C TPH-DRO/RRO	EPA 6010C/7470A Metals (water)	Total Number of Containers
MW01-01	4/8/14	1600	G	W	X	N	X	X	X	X		8
MW01-01	4/8/14	1600	G	W	Y	N					X	1
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested, I, II, III, IV, Other (specify)												
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements												
Empty Kit Relinquished by Relinquished by: ANDREA WONG Relinquished by: _____ Relinquished by: _____		Date Date/Time: 4/10/14 1330 Date/Time: _____ Date/Time: _____		Method of Shipment Received by: <i>[Signature]</i> Received by: _____ Received by: _____		Company Company: TALS Company: _____ Company: _____						
Custody Seals Intact Yes <input type="checkbox"/> No <input type="checkbox"/>		Custody Seal No.: Seal		Cooler Temperature(s) °C and Other Remarks: 4.7°C								



Chain of Custody Record
Temperature on Receipt 24°C
Drinking Water? Yes No

Sampler ID 24°C

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client AE COM	Project Manager Steve McKnight	Date	Chain of Custody Number 157503
Address 1001 Bishop Street	Telephone Number (Area Code)/Fax Number (808) 523-8774 Fax: (808) 523-8750	Lab Number	Page <u> </u> of <u> </u>
City Honolulu	Site Contact Karen Sellers	Lab Contact	
State HI	Zip Code 96813	Carrier/Waybill Number	

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Air	sober	Sed	Soil	Unpres	H2SO4	HNO3	HCl			NaOH	ZnAc/ NaOH
MW 02-01	4/10/14	1200	X						1					Filtered in field

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Turn Around Time Required
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other 14 days prelims 21 days finals

Sample Disposal
 Return To Client Disposal By Lab Archive For Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)
14 days prelims

Reinquired By Andrea Wong Date 4/10/14 Time 1330

1. Received By [Signature] Date 4-12-14 Time 1000

2. Received By Date Time

3. Received By Date Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID 25.C
 Temperature on Receipt 25.C
 Drinking Water? Yes No

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: **AECOM**
 Address: 1001 Bishop Street, Honolulu, HI 96813
 Project Name and Location (State): **DAHL Phas 2 ESA, Kalaheo Resubmittal Lots Unit 4 Substation Kalaheo, HI**
 Contract/Purchase Order/Quote No.: **P04: 14C-16160 - H102 project #: 60301802**
 Project Manager: **Steve McKnight**
 Telephone Number (Area Code)/Fax Number: **(808) 356-5379 (419) 596-7837**
 Chain of Custody Number: **149858**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives						Special Instructions/ Conditions of Receipt						
			Air	Aqueous	Sed	Soil	Ulnpres.	H2SO4	HNO3	HCl	NaOH	ZnCl							
MW03-01	4/9/14	1630	X									X							
MW03-01	4/9/14	1630	X										X						8 1+ ambers
																			1 500 ml poly

Analysis (Attach list if more space is needed)	
EPA 8200 R D/R P/F	X
EPA 8081 B C & P/F	X
EPA 8082 A R C	X
EPA 820 D S W P/F	X

Site Contact: **K-arch Sellers**
 Carrier/Waybill Number: _____
 Sample Disposal: Return To Client Unknown Poison B Skin Irritant Flammable Non-Hazard
 Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other 14 days prelim 21 days final
 Date Received By: **Andra Wong** 4/14/14 Time: 1330
 Date Received By: _____ Time: _____
 Date Received By: _____ Time: _____

Comments: _____
 Possible Hazard Identification: _____
 (A fee may be assessed if samples are retained longer than 1 month)
 Disposal By Lab Archive For _____ Months _____
 QC Requirements (Specify): _____



Chain of Custody Record

TAL-4124-280 (0508)

Client **AECOM** Chain of Custody Number **157501**
 Address **1001 Bishop Street** Lab Number _____
 City **Honolulu** State **HI** Zip Code **96813** Page _____ of _____
 Project Name and Location (State) **DLHC Project East, Leeward Residential Lots, Unit 4 Subdivision, Kaka'ako, HI**
 Contract/Purchase Order/Quote No. **PO # : 14C-16460-H102 project #: 60304802**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt		
			Air	Soil	Sed.	Sludge	Unpres.	H2SO4	HNO3	HCl			NaOH	ZnAc/NaOH
DV09-01	4/7/14	1330		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV09-02	4/7/14	1330		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV09-03	4/7/14	1330		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV08-01	4/7/14	1600		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV07-01	4/8/14	1100		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV03-01	4/8/14	1230		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV02-01	4/9/14	1400		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
DV06-01	4/9/14	1620		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold EPA 8210 (PCDD/PCDF) analysis
SB02-01	4/8/14	1200		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold until further notice
SB03-01	4/8/14	0845		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold until further notice
SB04-01	4/8/14	1045		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold until further notice
SB04-02	4/8/14	1100		X								X	EPA 8210 (PCDD/PCDF) analysis	Hold until further notice

Sample Disposal: Return To Client Archive For _____ Months
 Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown
 Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other **14 days prelim 21 days final**
 (A fee may be assessed if samples are retained longer than 1 month)

Received By	Date	Time
<i>[Signature]</i>	4/11/14	1330
1. Received By	4-12-14	6:00
2. Received By		
3. Received By		

Comments _____
 Distribution: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Denver
 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PM		Carrier Tracking No(s)		COC No	
Company: AECOM Technical Services Inc.		Karen Sellers					
Address: 1001 Bishop Street, Suite 1600		E-Mail: karen.sellers@testamericainc.com					
City: Honolulu							
State, Zip: HI, 96813							
Phone: 808-356-5379; 415-596-7837							
Email: steve.mcknight@aecom.com							
Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd							
Site: Hawaii							
Due Date Requested: 14 day prelims, 21 day finals		Analysis Requested		Carrier Tracking No(s)		COC No	
TAT Requested (days): Standard		EPA 6010C/7470A Metals (soils)					
PO #: 14C-16460-H102		EPA 8270D SIM PAHs					
WO #:		EPA 8081B OCI Pesticides					
Project #: 60304802		EPA 8290 PCDD/PCDF					
SSOW#:		EPA 8015C TPH-DRO/RRO					
Sample Date		Sample Time		Sample Type (G=Comp, G=grab)		Matrix (W=water, S=solid, O=volatile, A=air)	
4/10/14		1550		C		S	
4/10/14		1600		C		S	
4/10/14		0845		C		S	
Sample Identification		Field Filtered Sample (Yes or No)		EPA 6010C/7470A Metals (water)		Special Instructions/Note:	
DV05-01		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Kekaha EPA 8290 (PCDD/PCDF)	
DV04-01		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		No TPH analysis	
DV01-01		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
Possible Hazard Identification		Total Number of containers		Return To Client <input type="checkbox"/>		Archive For <input type="checkbox"/>	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Empty Kit Relinquished by		Time:		Method of Shipment:			
Relinquished by: <i>Archie Wong</i>		Date: 4/11/14 1330		Received by: <i>[Signature]</i>		Date/Time: 4-12-14 1000	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No. <i>Seals</i>		Cooler Temperature(s) °C and Other Remarks: <i>4.56</i>			



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 880 Riverside Parkway
 West Sacramento, CA 95605
 Phone (916) 374-4340

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Steve McKnight Company: AECOM Technical Services Inc. Address: 1001 Bishop Street, Suite 1600 City: Honolulu State, Zip: HI, 96813 Phone: 808-356-5379; 415-586-7637 Email: steve.mcknight@aecom.com Project Name: DHHL Phase 2 ESA, Kekaha Residential Lots, Unit 4 Subd Site: Hawaii	Lab PM: Karen Sellers E-Mail: karen.sellers@lestamaterialinc.com Due Date Requested: 14 day prelims, 21 day finals TAT Requested (days): Standard PO #: 14C-16460-H102 WFO #: 60304802 Project #: 60304802 SSO#:	Camer Tracking No(s): Page: Job #: Preservation Codes: M - Hexene N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA L - EDA Z - other (specify) Other:	Total Number of containers: <input checked="" type="checkbox"/>	Special Instructions/Note: HOLD EPA 8240 (PCDD/PDF)																																																																																																									
Analysis Requested																																																																																																													
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Special Instructions/QC Requirements:																																																																																																												
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Identification</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (H=water, S=solid, O=water)</th> <th>Field Filtered Sample (Yes or No)</th> <th>EPA 6010C/7471B Metals (soils)</th> <th>EPA 8270D SIM PAHs</th> <th>EPA 8081B OCI Pesticides</th> <th>EPA 8082A PCBs</th> <th>EPA 8290 PCDD/PCDF</th> <th>EPA 8015C TPH-DRO/RRO</th> <th>EPA 6010C/7470A Metals (water)</th> </tr> </thead> <tbody> <tr> <td>DV05-01</td> <td>4/10/14</td> <td>1550</td> <td>C</td> <td>S</td> <td><input checked="" type="checkbox"/></td> <td>N</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>DV04-01</td> <td>4/10/14</td> <td>1600</td> <td>C</td> <td>S</td> <td><input checked="" type="checkbox"/></td> <td>N</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>DV01-01</td> <td>4/11/14</td> <td>0845</td> <td>C</td> <td>S</td> <td><input checked="" type="checkbox"/></td> <td>N</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (H=water, S=solid, O=water)	Field Filtered Sample (Yes or No)	EPA 6010C/7471B Metals (soils)	EPA 8270D SIM PAHs	EPA 8081B OCI Pesticides	EPA 8082A PCBs	EPA 8290 PCDD/PCDF	EPA 8015C TPH-DRO/RRO	EPA 6010C/7470A Metals (water)	DV05-01	4/10/14	1550	C	S	<input checked="" type="checkbox"/>	N	X	X	X	X			DV04-01	4/10/14	1600	C	S	<input checked="" type="checkbox"/>	N	X	X	X	X			DV01-01	4/11/14	0845	C	S	<input checked="" type="checkbox"/>	N	X	X	X	X																																																						
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Empty Kit Relinquished by: Date: _____ Method of Shipment: _____ Relinquished by: <i>Andrea Wang</i> Date/Time: 4/11/14 1330 Company: <i>4</i> Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____																																																																																																													
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Cooler Temperature(s) °C and Other Remarks: <i>Seal</i>																																																																																																													
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:																																																																																																													

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

From: McKnight, Steve (Honolulu) [Steve.McKnight@aecom.com]
Sent: Tuesday, May 06, 2014 9:22 PM
To: Sellers, Karen; Thach, Margie
Subject: RE: TotalAccess results available for DHHL Kekaha Phase II Env. Site Assessmen. AECOM Technical Services Inc. - Honolulu [320-7028-2]

Karen,

I received authorization from my client to go ahead with the Dioxin analyses for all of the samples on hold.

Please do them on the standard TAT, for the quoted price of \$475 per sample.

Thanks,

Steve

From: Sellers, Karen [mailto:Karen.Sellers@testamericainc.com]
Sent: Tuesday, May 06, 2014 5:56 AM
To: Thach, Margie
Cc: McKnight, Steve (Honolulu)
Subject: RE: TotalAccess results available for DHHL Kekaha Phase II Env. Site Assessmen. AECOM Technical Services Inc. - Honolulu [320-7028-2]

There is no difference in cost between methods 8290 and 1613. Attached is a table that shows the differences between the RLs/MDLs and control limits. I also noted that we don't have LODs for method 1613, so perhaps this is not a good option to switch to this method.

The point I was trying to make is that dioxins are so stable that this alternate method allows up to a year holding time even though method 8290 dictates 30 days. Our SOP states: "... all samples should be stored at 4 degrees C + 2, extracted within 30 days and completely analyzed within 45 days of collection. The 30 day hold time is recommended. PCDDs and PCDSs have demonstrated stability for greater than one year."

On this note, if you decided to have us proceed with the hold samples, we can turn them on a 5 business day TAT for an additional 60% surcharge.

KAREN SELLERS

Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

880 Riverside Parkway

West Sacramento, CA 95605

Tel 916.374.4442 I Fax 916.372.1059

www.testamericainc.com

From: Thach, Margie [mailto:Margie.Thach@aecom.com]
Sent: Monday, May 05, 2014 4:11 PM
To: Sellers, Karen
Subject: RE: TotalAccess results available for DHHL Kekaha Phase II Env. Site Assessmen. AECOM Technical Services Inc. - Honolulu [320-7028-2]

Hi Karen,

Steve mentioned to me that we are looking at switching to the 1613 method. Is there a difference in cost, and are the limits the same?

Thank you,

Margie Thach

Environmental Scientist

Environment, West Region, Pacific District

Direct 808.356.5373

Margie.Thach@aecom.com

From: TotalAccess [mailto:totalaccess@testamericainc.com]
Sent: Wednesday, April 30, 2014 2:07 PM
To: Thach, Margie
Subject: TotalAccess results available for DHHL Kekaha Phase II Env. Site Assessmen. AECOM Technical Services Inc. - Honolulu [320-7028-2]

Job

320-7028-2

Sacramento



Job Description:
DHHHL Kekaha Phase II Env. Site Assessmen
Project Number:
60304802

Report To:
Invoice To:

Steve McKnight
Accounts Payable

AECOM Technical Services Inc. - Honolulu
AECOM Technical Services Inc.

1001 Bishop Street Suite 1600
1001 Bishop Street

Honolulu, Hawaii 96813
Honolulu, HI 96813

Phone: (808)523-8874
Phone: (808)523-8874

Fax:
Fax:

Lab PM:
Karen Sellers
Date Due:
05/05/14 23:59

Status:
Reported
Date Received:
04/12/14 10:00

Status Date:
04/30/14 16:35
Date Logged:
04/12/14 18:06

Analysis
Expires
Status
Status Date

DU08-01 (320-7028-9) Solid
Sampled: 04/07/14 16:00

Dioxins and Furans (HRGC/HRMS)
N/A
Waiting
04/30/14 17:33

DU07-01 (320-7028-10) Solid
Sampled: 04/08/14 11:00

Dioxins and Furans (HRGC/HRMS)
N/A
Waiting
04/30/14 17:33

DU02-01 (320-7028-12) Solid
Sampled: 04/09/14 14:10

Dioxins and Furans (HRGC/HRMS)
N/A
Waiting
04/30/14 17:33

DU06-01 (320-7028-13) Solid
Sampled: 04/09/14 16:20



Dioxins and Furans (HRGC/HRMS)
N/A
Waiting
04/30/14 17:33

DU05-01 (320-7028-18) Solid
Sampled: 04/10/14 15:50

Dioxins and Furans (HRGC/HRMS)
N/A
Waiting
04/30/14 17:33

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Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 320-7028-2

Login Number: 7028

List Source: TestAmerica Sacramento

List Number: 1

Creator: Hytrek, Cheryl

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-13035-1
Client Project/Site: DHHL Kekaha Phase II Env. Site
Assessmen

For:
AECOM Technical Services Inc.
1001 Bishop Street
Suite 1600
Honolulu, Hawaii 96813

Attn: Steve McKnight



Authorized for release by:
6/1/2015 2:06:33 PM

Jill Kellmann, Manager of Project Management
(916)374-4402
jill.kellmann@testamericainc.com

LINKS

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www.testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Job ID: 320-13035-1

Laboratory: TestAmerica Sacramento

Narrative

Receipt

The samples were received on 5/15/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

Metals

Method(s) 7471A: The matrix spike (MS) recovery for 320-74710 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Inorganic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Client Sample ID: KEK-SS01

Lab Sample ID: 320-13035-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	14		2.0	1.3	mg/Kg	2		6010B	Total/NA
Barium	8.2		1.0	0.12	mg/Kg	2		6010B	Total/NA
Cadmium	0.063	J	0.20	0.030	mg/Kg	2		6010B	Total/NA
Chromium	34		0.50	0.14	mg/Kg	2		6010B	Total/NA
Lead	3.0		1.0	0.26	mg/Kg	2		6010B	Total/NA
Mercury	0.012	J	0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: KEK-FB01

Lab Sample ID: 320-13035-2

No Detections.

Client Sample ID: KEK-EB01

Lab Sample ID: 320-13035-3

No Detections.

Client Sample ID: KEK-SB01

Lab Sample ID: 320-13035-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	19		2.0	1.3	mg/Kg	2		6010B	Total/NA
Barium	61		0.99	0.12	mg/Kg	2		6010B	Total/NA
Cadmium	0.55		0.20	0.030	mg/Kg	2		6010B	Total/NA
Chromium	130		0.50	0.14	mg/Kg	2		6010B	Total/NA
Lead	90		0.99	0.26	mg/Kg	2		6010B	Total/NA
Silver	0.59		0.50	0.089	mg/Kg	2		6010B	Total/NA
Mercury	0.089		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: KEK-SB02

Lab Sample ID: 320-13035-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	22		2.0	1.3	mg/Kg	2		6010B	Total/NA
Barium	63		0.99	0.12	mg/Kg	2		6010B	Total/NA
Cadmium	0.62		0.20	0.030	mg/Kg	2		6010B	Total/NA
Chromium	100		0.50	0.14	mg/Kg	2		6010B	Total/NA
Lead	100		0.99	0.26	mg/Kg	2		6010B	Total/NA
Silver	0.31	J	0.50	0.089	mg/Kg	2		6010B	Total/NA
Mercury	0.14		0.024	0.0051	mg/Kg	1		7471A	Total/NA

Client Sample ID: KEK-SB03

Lab Sample ID: 320-13035-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	24		2.0	1.3	mg/Kg	2		6010B	Total/NA
Barium	60		0.98	0.12	mg/Kg	2		6010B	Total/NA
Cadmium	0.66		0.20	0.029	mg/Kg	2		6010B	Total/NA
Chromium	110		0.49	0.14	mg/Kg	2		6010B	Total/NA
Lead	150		0.98	0.25	mg/Kg	2		6010B	Total/NA
Silver	0.30	J	0.49	0.088	mg/Kg	2		6010B	Total/NA
Mercury	0.17	F1	0.024	0.0051	mg/Kg	1		7471A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Client Sample ID: KEK-SS01

Date Collected: 05/13/15 10:00

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-1

Matrix: Solid

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		2.0	1.3	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Barium	8.2		1.0	0.12	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Cadmium	0.063	J	0.20	0.030	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Chromium	34		0.50	0.14	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Lead	3.0		1.0	0.26	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Selenium	ND		2.0	1.4	mg/Kg		05/20/15 07:00	05/20/15 15:23	2
Silver	ND		0.50	0.090	mg/Kg		05/20/15 07:00	05/20/15 15:23	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.024	0.0051	mg/Kg		05/26/15 09:48	05/26/15 12:45	1

Client Sample ID: KEK-FB01

Date Collected: 05/13/15 10:20

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-2

Matrix: Water

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		05/19/15 07:00	05/20/15 14:48	1
Barium	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 14:48	1
Cadmium	ND		0.0020	0.00050	mg/L		05/19/15 07:00	05/20/15 14:48	1
Chromium	ND		0.0080	0.0012	mg/L		05/19/15 07:00	05/20/15 14:48	1
Lead	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 14:48	1
Selenium	ND		0.020	0.013	mg/L		05/19/15 07:00	05/20/15 14:48	1
Silver	ND		0.0050	0.00084	mg/L		05/19/15 07:00	05/20/15 14:48	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/21/15 11:45	05/22/15 09:03	1

Client Sample ID: KEK-EB01

Date Collected: 05/13/15 10:30

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-3

Matrix: Water

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		05/19/15 07:00	05/20/15 15:07	1
Barium	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 15:07	1
Cadmium	ND		0.0020	0.00050	mg/L		05/19/15 07:00	05/20/15 15:07	1
Chromium	ND		0.0080	0.0012	mg/L		05/19/15 07:00	05/20/15 15:07	1
Lead	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 15:07	1
Selenium	ND		0.020	0.013	mg/L		05/19/15 07:00	05/20/15 15:07	1
Silver	ND		0.0050	0.00084	mg/L		05/19/15 07:00	05/20/15 15:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/21/15 11:45	05/22/15 09:05	1

TestAmerica Sacramento

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Client Sample ID: KEK-SB01

Lab Sample ID: 320-13035-4

Date Collected: 05/13/15 10:45

Matrix: Solid

Date Received: 05/15/15 09:30

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19		2.0	1.3	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Barium	61		0.99	0.12	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Cadmium	0.55		0.20	0.030	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Chromium	130		0.50	0.14	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Lead	90		0.99	0.26	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Selenium	ND		2.0	1.4	mg/Kg		05/20/15 07:00	05/20/15 15:31	2
Silver	0.59		0.50	0.089	mg/Kg		05/20/15 07:00	05/20/15 15:31	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.089		0.024	0.0051	mg/Kg		05/26/15 09:48	05/26/15 12:47	1

Client Sample ID: KEK-SB02

Lab Sample ID: 320-13035-5

Date Collected: 05/13/15 10:55

Matrix: Solid

Date Received: 05/15/15 09:30

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	22		2.0	1.3	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Barium	63		0.99	0.12	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Cadmium	0.62		0.20	0.030	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Chromium	100		0.50	0.14	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Lead	100		0.99	0.26	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Selenium	ND		2.0	1.4	mg/Kg		05/20/15 07:00	05/20/15 15:34	2
Silver	0.31	J	0.50	0.089	mg/Kg		05/20/15 07:00	05/20/15 15:34	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14		0.024	0.0051	mg/Kg		05/26/15 09:48	05/26/15 12:50	1

Client Sample ID: KEK-SB03

Lab Sample ID: 320-13035-6

Date Collected: 05/13/15 11:05

Matrix: Solid

Date Received: 05/15/15 09:30

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	24		2.0	1.3	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Barium	60		0.98	0.12	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Cadmium	0.66		0.20	0.029	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Chromium	110		0.49	0.14	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Lead	150		0.98	0.25	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Selenium	ND		2.0	1.4	mg/Kg		05/20/15 07:00	05/20/15 15:09	2
Silver	0.30	J	0.49	0.088	mg/Kg		05/20/15 07:00	05/20/15 15:09	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	F1	0.024	0.0051	mg/Kg		05/26/15 09:48	05/26/15 12:35	1

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-74310/1-A
Matrix: Water
Analysis Batch: 74494

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		05/19/15 07:00	05/20/15 14:06	1
Barium	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 14:06	1
Cadmium	ND		0.0020	0.00050	mg/L		05/19/15 07:00	05/20/15 14:06	1
Chromium	ND		0.0080	0.0012	mg/L		05/19/15 07:00	05/20/15 14:06	1
Lead	ND		0.0050	0.0025	mg/L		05/19/15 07:00	05/20/15 14:06	1
Selenium	ND		0.020	0.013	mg/L		05/19/15 07:00	05/20/15 14:06	1
Silver	ND		0.0050	0.00084	mg/L		05/19/15 07:00	05/20/15 14:06	1

Lab Sample ID: LCS 320-74310/2-A
Matrix: Water
Analysis Batch: 74494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	2.06		mg/L		103	85 - 110
Barium	2.00	1.96		mg/L		98	89 - 110
Cadmium	0.0500	0.0523		mg/L		105	89 - 110
Chromium	0.200	0.213		mg/L		107	90 - 110
Lead	0.500	0.496		mg/L		99	86 - 110
Selenium	2.00	1.99		mg/L		99	84 - 110
Silver	0.0500	0.0517		mg/L		103	88 - 110

Lab Sample ID: 320-13035-2 MS
Matrix: Water
Analysis Batch: 74494

Client Sample ID: KEK-FB01
Prep Type: Total/NA
Prep Batch: 74310

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		2.00	2.12		mg/L		106	85 - 110
Barium	ND		2.00	2.01		mg/L		100	89 - 110
Cadmium	ND		0.0500	0.0527		mg/L		105	89 - 110
Chromium	ND		0.200	0.216		mg/L		108	90 - 110
Lead	ND		0.500	0.497		mg/L		99	86 - 110
Selenium	ND		2.00	2.02		mg/L		101	84 - 110
Silver	ND		0.0500	0.0531		mg/L		106	88 - 110

Lab Sample ID: 320-13035-2 MSD
Matrix: Water
Analysis Batch: 74494

Client Sample ID: KEK-FB01
Prep Type: Total/NA
Prep Batch: 74310

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		2.00	2.11		mg/L		105	85 - 110	0	20
Barium	ND		2.00	2.00		mg/L		100	89 - 110	0	20
Cadmium	ND		0.0500	0.0529		mg/L		106	89 - 110	0	20
Chromium	ND		0.200	0.213		mg/L		107	90 - 110	1	20
Lead	ND		0.500	0.497		mg/L		99	86 - 110	0	20
Selenium	ND		2.00	2.03		mg/L		101	84 - 110	0	20
Silver	ND		0.0500	0.0532		mg/L		106	88 - 110	0	20

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 320-74398/1-A
Matrix: Solid
Analysis Batch: 74494

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	1.3	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Barium	ND		1.0	0.12	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Cadmium	ND		0.20	0.030	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Chromium	ND		0.50	0.14	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Lead	ND		1.0	0.26	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Selenium	ND		2.0	1.4	mg/Kg		05/20/15 07:00	05/20/15 14:11	1
Silver	ND		0.50	0.090	mg/Kg		05/20/15 07:00	05/20/15 14:11	1

Lab Sample ID: LCS 320-74398/2-A
Matrix: Solid
Analysis Batch: 74494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	207		mg/Kg		103	81 - 110
Barium	200	196		mg/Kg		98	88 - 110
Cadmium	5.00	5.26		mg/Kg		105	86 - 110
Chromium	20.0	21.4		mg/Kg		107	88 - 110
Lead	50.0	49.8		mg/Kg		100	85 - 110
Selenium	200	199		mg/Kg		100	80 - 110
Silver	5.00	5.17		mg/Kg		103	85 - 110

Lab Sample ID: 320-13035-6 MS
Matrix: Solid
Analysis Batch: 74494

Client Sample ID: KEK-SB03
Prep Type: Total/NA
Prep Batch: 74398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	24		100	117		mg/Kg		93	81 - 110
Barium	60		100	154		mg/Kg		94	88 - 110
Cadmium	0.66		2.50	2.90		mg/Kg		89	86 - 110
Chromium	110		10.0	118	4	mg/Kg		124	88 - 110
Lead	150		25.0	142	4	mg/Kg		-29	85 - 110
Selenium	ND		100	83.7		mg/Kg		84	80 - 110
Silver	0.30	J	2.50	2.84		mg/Kg		101	85 - 110

Lab Sample ID: 320-13035-6 MSD
Matrix: Solid
Analysis Batch: 74494

Client Sample ID: KEK-SB03
Prep Type: Total/NA
Prep Batch: 74398

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	24		99.6	117		mg/Kg		93	81 - 110	1	35
Barium	60		99.6	151		mg/Kg		91	88 - 110	2	35
Cadmium	0.66		2.49	2.92		mg/Kg		91	86 - 110	1	35
Chromium	110		9.96	131	4	mg/Kg		256	88 - 110	11	35
Lead	150		24.9	124	4	mg/Kg		-104	85 - 110	14	35
Selenium	ND		99.6	82.7		mg/Kg		83	80 - 110	1	35
Silver	0.30	J	2.49	2.82		mg/Kg		101	85 - 110	0	35

TestAmerica Sacramento

QC Sample Results

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 320-74534/11-A
 Matrix: Water
 Analysis Batch: 74624

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 74534

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/21/15 11:45	05/21/15 15:04	1

Lab Sample ID: LCS 320-74534/12-A
 Matrix: Water
 Analysis Batch: 74624

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 74534

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00100	0.00101		mg/L		101	82 - 113

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-74710/11-A
 Matrix: Solid
 Analysis Batch: 74844

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 74710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0086	mg/Kg		05/26/15 09:48	05/26/15 11:55	1

Lab Sample ID: LCS 320-74710/12-A
 Matrix: Solid
 Analysis Batch: 74844

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 74710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0833	0.0892		mg/Kg		107	86 - 114

Lab Sample ID: 320-13035-6 MS
 Matrix: Solid
 Analysis Batch: 74844

Client Sample ID: KEK-SB03
 Prep Type: Total/NA
 Prep Batch: 74710

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.17	F1	0.150	0.300	F1	mg/Kg		84	86 - 114

Lab Sample ID: 320-13035-6 MSD
 Matrix: Solid
 Analysis Batch: 74844

Client Sample ID: KEK-SB03
 Prep Type: Total/NA
 Prep Batch: 74710

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.17	F1	0.150	0.333		mg/Kg		106	86 - 114	11	17

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Metals

ISM Prep Batch: 74262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-1	KEK-SS01	Total/NA	Solid	Increment, prep	
320-13035-4	KEK-SB01	Total/NA	Solid	Increment, prep	
320-13035-5	KEK-SB02	Total/NA	Solid	Increment, prep	
320-13035-6	KEK-SB03	Total/NA	Solid	Increment, prep	
320-13035-6 MS	KEK-SB03	Total/NA	Solid	Increment, prep	
320-13035-6 MSD	KEK-SB03	Total/NA	Solid	Increment, prep	

Prep Batch: 74310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-2	KEK-FB01	Total/NA	Water	3010A	
320-13035-2 MS	KEK-FB01	Total/NA	Water	3010A	
320-13035-2 MSD	KEK-FB01	Total/NA	Water	3010A	
320-13035-3	KEK-EB01	Total/NA	Water	3010A	
LCS 320-74310/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 320-74310/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 74398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-1	KEK-SS01	Total/NA	Solid	3050B	74262
320-13035-4	KEK-SB01	Total/NA	Solid	3050B	74262
320-13035-5	KEK-SB02	Total/NA	Solid	3050B	74262
320-13035-6	KEK-SB03	Total/NA	Solid	3050B	74262
320-13035-6 MS	KEK-SB03	Total/NA	Solid	3050B	74262
320-13035-6 MSD	KEK-SB03	Total/NA	Solid	3050B	74262
LCS 320-74398/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 320-74398/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 74494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-1	KEK-SS01	Total/NA	Solid	6010B	74398
320-13035-2	KEK-FB01	Total/NA	Water	6010B	74310
320-13035-2 MS	KEK-FB01	Total/NA	Water	6010B	74310
320-13035-2 MSD	KEK-FB01	Total/NA	Water	6010B	74310
320-13035-3	KEK-EB01	Total/NA	Water	6010B	74310
320-13035-4	KEK-SB01	Total/NA	Solid	6010B	74398
320-13035-5	KEK-SB02	Total/NA	Solid	6010B	74398
320-13035-6	KEK-SB03	Total/NA	Solid	6010B	74398
320-13035-6 MS	KEK-SB03	Total/NA	Solid	6010B	74398
320-13035-6 MSD	KEK-SB03	Total/NA	Solid	6010B	74398
LCS 320-74310/2-A	Lab Control Sample	Total/NA	Water	6010B	74310
LCS 320-74398/2-A	Lab Control Sample	Total/NA	Solid	6010B	74398
MB 320-74310/1-A	Method Blank	Total/NA	Water	6010B	74310
MB 320-74398/1-A	Method Blank	Total/NA	Solid	6010B	74398

Prep Batch: 74534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-2	KEK-FB01	Total/NA	Water	7470A	
320-13035-3	KEK-EB01	Total/NA	Water	7470A	
LCS 320-74534/12-A	Lab Control Sample	Total/NA	Water	7470A	
MB 320-74534/11-A	Method Blank	Total/NA	Water	7470A	

TestAmerica Sacramento

QC Association Summary

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Metals (Continued)

Analysis Batch: 74624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-74534/12-A	Lab Control Sample	Total/NA	Water	7470A	74534
MB 320-74534/11-A	Method Blank	Total/NA	Water	7470A	74534

Analysis Batch: 74653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-2	KEK-FB01	Total/NA	Water	7470A	74534
320-13035-3	KEK-EB01	Total/NA	Water	7470A	74534

Prep Batch: 74710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-1	KEK-SS01	Total/NA	Solid	7471A	74262
320-13035-4	KEK-SB01	Total/NA	Solid	7471A	74262
320-13035-5	KEK-SB02	Total/NA	Solid	7471A	74262
320-13035-6	KEK-SB03	Total/NA	Solid	7471A	74262
320-13035-6 MS	KEK-SB03	Total/NA	Solid	7471A	74262
320-13035-6 MSD	KEK-SB03	Total/NA	Solid	7471A	74262
LCS 320-74710/12-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 320-74710/11-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 74844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-13035-1	KEK-SS01	Total/NA	Solid	7471A	74710
320-13035-4	KEK-SB01	Total/NA	Solid	7471A	74710
320-13035-5	KEK-SB02	Total/NA	Solid	7471A	74710
320-13035-6	KEK-SB03	Total/NA	Solid	7471A	74710
320-13035-6 MS	KEK-SB03	Total/NA	Solid	7471A	74710
320-13035-6 MSD	KEK-SB03	Total/NA	Solid	7471A	74710
LCS 320-74710/12-A	Lab Control Sample	Total/NA	Solid	7471A	74710
MB 320-74710/11-A	Method Blank	Total/NA	Solid	7471A	74710

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Client Sample ID: KEK-SS01

Date Collected: 05/13/15 10:00

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	3050B			10.04 g	500 mL	74398	05/20/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		2	10.04 g	500 mL	74494	05/20/15 15:23	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	7471A			10.02 g	500 mL	74710	05/26/15 09:48	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.02 g	500 mL	74844	05/26/15 12:45	CV1	TAL SAC

Client Sample ID: KEK-FB01

Date Collected: 05/13/15 10:20

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	74310	05/19/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	74494	05/20/15 14:48	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	74534	05/21/15 11:45	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	74653	05/22/15 09:03	CV1	TAL SAC

Client Sample ID: KEK-EB01

Date Collected: 05/13/15 10:30

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	74310	05/19/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1	50 mL	50 mL	74494	05/20/15 15:07	CV1	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	74534	05/21/15 11:45	CV1	TAL SAC
Total/NA	Analysis	7470A		1	30 mL	30 mL	74653	05/22/15 09:05	CV1	TAL SAC

Client Sample ID: KEK-SB01

Date Collected: 05/13/15 10:45

Date Received: 05/15/15 09:30

Lab Sample ID: 320-13035-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	3050B			10.08 g	500 mL	74398	05/20/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		2	10.08 g	500 mL	74494	05/20/15 15:31	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	7471A			10.08 g	500 mL	74710	05/26/15 09:48	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.08 g	500 mL	74844	05/26/15 12:47	CV1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: AECOM Technical Services Inc.
 Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Client Sample ID: KEK-SB02

Lab Sample ID: 320-13035-5

Date Collected: 05/13/15 10:55

Matrix: Solid

Date Received: 05/15/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	3050B			10.07 g	500 mL	74398	05/20/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		2	10.07 g	500 mL	74494	05/20/15 15:34	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	7471A			10.06 g	500 mL	74710	05/26/15 09:48	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.06 g	500 mL	74844	05/26/15 12:50	CV1	TAL SAC

Client Sample ID: KEK-SB03

Lab Sample ID: 320-13035-6

Date Collected: 05/13/15 11:05

Matrix: Solid

Date Received: 05/15/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	3050B			10.22 g	500 mL	74398	05/20/15 07:00	NIM	TAL SAC
Total/NA	Analysis	6010B		2	10.22 g	500 mL	74494	05/20/15 15:09	CV1	TAL SAC
Total/NA	ISM Prep	Increment, prep				1.0 g	74262	05/18/15 11:25	ALH	TAL SAC
Total/NA	Prep	7471A			10.07 g	500 mL	74710	05/26/15 09:48	CV1	TAL SAC
Total/NA	Analysis	7471A		1	10.07 g	500 mL	74844	05/26/15 12:35	CV1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessmen

TestAmerica Job ID: 320-13035-1

Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	CA200005	01-29-16

Analysis Method	Prep Method	Matrix	Analyte
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- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SAC
7470A	Mercury (CVAA)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: DHHL Kekaha Phase II Env. Site Assessment

TestAmerica Job ID: 320-13035-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-13035-1	KEK-SS01	Solid	05/13/15 10:00	05/15/15 09:30
320-13035-2	KEK-FB01	Water	05/13/15 10:20	05/15/15 09:30
320-13035-3	KEK-EB01	Water	05/13/15 10:30	05/15/15 09:30
320-13035-4	KEK-SB01	Solid	05/13/15 10:45	05/15/15 09:30
320-13035-5	KEK-SB02	Solid	05/13/15 10:55	05/15/15 09:30
320-13035-6	KEK-SB03	Solid	05/13/15 11:05	05/15/15 09:30



LABORATORY USE ONLY

LAB JOB NO. _____

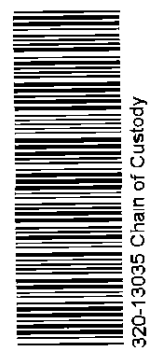
DOD QSM Required?

Report to MDL with J Flag values?

Chain of Custody / Analysis Request Form

Item no.	Client sample ID	Multi Incremental		Composite	Grab	Matrix					Preservation Method	Sampling		No of containers	Laboratory ID no.
		Water	Soil			Wastewater	Drinking water	Liquid	Solid	Other		Date	Time		
1	KEK-SS01	X			X						ice	5/13/15	1000	1	
2	KEK-FA01			X	X						HND	5/13/15	1020	1	X
3	KEK-EB01			X	X						HND	5/13/15	1030	1	X
4	KEK-SB01			X	X						ice	5/13/15	1045	1	X
5	KEK-SB02			X	X						ice	5/13/15	1050	1	X
6	KEK-SB03 MS/MSD			X	X						ice	5/13/15	1105	1	X
7															
8															
9															
10															

Metals (GOLD)
Hg (EPA) soil
Hg (EPA) water



Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Date / time received	Company / Agency affiliation	Condition noted
Daniela Costambe	5/14/15 1100	FedEx	[Signature]	5/15/15 930		1.8 C

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 320-13035-1

Login Number: 13035
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental and energy. With more than 50,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments.

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