PHASE II ENVIRONMENTAL SITE ASSESSMENT AND UXO SURVEY REPORT

PIÑA RIDGE, FORMER MUNITIONS STORAGE DEPOT, TINIAN

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LIST OF ACRONYMS

AST	Above Ground Storage Tank
ASTM	American Society for Testing and Materials
AMSL	Above Mean Sea Level
APEC	Allied Pacific Environmental Consulting
BECQ	CNMI Bureau of Environmental and Coastal Quality
BGS	Below ground surface
CERCLA	Comprehensive Environmental Response, Cleanup, and Liability Act
CFR	Code of Federal Regulations
CNMI	Commonwealth of the Northern Mariana Islands
COC	Constituents of Concern
CUC	Commonwealth Utilities Corporation
DDESB	Department of Defense Explosive Safety Board
DEQ	CNMI Division of Environmental Quality
DMM	Discarded Military Munitions
DOT	Department of Transportation
DoD	Department of Defense
DPL	CNMI Department of Public Lands
DPS	CNMI Department of Public Safety
DQA	Data quality assessment
DQI	Data quality indicators
DQO	Data quality objectives
DU	Decision Unit
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESLs	Environmental Screening Levels
FSP	Field sampling plan
FUDs	Formerly Used Defense sites
GIS	Geographic Information System
GPS	Global Positioning System
HAZWOPER	Hazardous Waste Operations and Emergency Response
IAR	Instrument Aided Reconnaissance
IDW	Investigation-derived waste
LCS	Laboratory control sample
MEC	Munitions and Explosives of Concern
MDL	Method detection limit
MQO	Measurement quality objective
MPPEH	Munitions Presenting a Potential Explosive Hazard
MS/MSD	Matrix spike and matrix spike duplicate
mg/L	Milligrams per liter
µg/L	Micrograms per liter
PAHs	Poly Aromatic Hydrocarbons
PARCCS	Precision, accuracy, representativeness, completeness, comparability, and sensitivity
PBESLs	Pacific Basin Environmental Screening Levels
QA/QC	Quality Assurance/Quality Control
QAPP	Quality assurance project plan
REC	Recognized Environmental Condition
SAP/WP	Sampling and Analysis / Work Plan
SOP	Standard Operating Procedures
SPCC	Spill, Prevention, Control, and Countermeasure Plan
SVOC	Semi-volatile organic compound
TPH	Total Petroleum Hydrocarbon
UHWM	Uniformed Hazardous Waste Manifest
USACE	United States Army Corp of Engineers
VOC	Volatile organic compound

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1.0 EXECUTIVE SUMMARY

The Commonwealth of Northern Mariana Islands (CNMI), Department of Public Lands (DPL), retained Allied Pacific Environmental Consulting (APEC) with Amec Foster Wheeler, to conduct a Phase II Environmental Site Assessment (ESA) of the Piña Plateau on the Island of Tinian, MP. This investigation was conducted in general accordance with the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, Standard E 1903-11.* Work carried out during this ESA included reconnaissance of the subject and adjoining properties, soil sampling for identified constituents of concern (COCs) identified as likely to be present in the ASTM Standard E 1527-13 Phase I ESA conducted in 2014 as recognized environmental conditions (RECs). These COCs include: explosives, total petroleum hydrocarbons (TPH) and metals. These COCs were established based on the known presence of Munitions Presenting a Potential Explosive Hazard (MPPEH) which had been abandoned on site following the conclusion of World War II, as well as the historical use of the site as a munitions storage area during World War II.

This Phase II ESA assessed environmental media at the site to confirm or dismiss the RECs identified during a Phase I ESA that was completed by APEC in 2014. In accordance with our November 17, 2016, approved Sampling and Analysis / Work Plan (SAP/WP), APEC conducted Phase II ESA activities at the Site. APEC conducted all fieldwork related activities on site in December of 2016 and January of 2017. Previously identified RECs were confirmed on site with a number of MPPEH encountered and soil sample results indicating the presence of petroleum and heavy metals above regional environmental screening levels in areas potentially affected by former military activities on site. Based on the findings and conclusions of this Phase II ESA, further site investigation in the form of confirmation soil sampling is recommended in the event of site clearing/development and it is strongly recommended that an adequate ordnance removal action be conducted prior to or in conjunction with any construction, clearing or earthworks activity at this site.

2.0 INTRODUCTION

The purpose of this Phase II ESA is to confirm the presence or absence of suspected soil contaminants, which were identified in previous site investigations that may have an adverse impact on the subject property.

Property Location and Description

The subject property is owned by the Northern Marianas Descent and managed by the CNMI DPL and is located on the eastern coast of Tinian at the foot of the Piña plateau, and is designated as the Masalog ridge. Figure A-01 (Appendix A) shows the general location of the subject property on a topographic map of Tinian. This ESA is limited to Tract 41-3 Masalog Development (Piña ridge) Tinian, CNMI. The property is a 260 acre strip of land which curves along the shoreline on the east of and along the Pina Plateau. At the time of this ESA, the property is undeveloped and heavily vegetated.

With the exception of a dirt road that runs the length of the site the majority of the site is vegetated. Plant species on the site primarily consist of tangan-tangan (*Leucaena leucocephala*) and ironwood (*Casuarina equisetifolia*) as well as a variety of palms, ferns and other species of native flora. Open areas are covered mainly by sword grass (*Digitaria mariannensis*). Within the property boundaries are several man-made structures, which include earthen revetments that are “U” Shaped, approximately 150 feet by 75 feet and approximately 4-6 feet in height; known to have been built between 1944 and 1945. These revetments are known to have been built for ordnance storage, through historical documentation and photos, and are located on either side of the dirt road.

Geology, Hydrology and Soils

Tinian is one of the 17 islands that constitute the Mariana Islands archipelago. It is located 55 miles north of Rota and 3.3-miles south of Saipan and is the forth-largest island in the Mariana Islands Archipelago. Tinian is approximately 12.5-miles (north-south), 6-miles (east-west), has a total area of 41-square miles and is generally rhombic in shape. The Tinian coast is dominated by crenulations and reentrants. The northern tip, Puntan Tahgong, is almost a right angle between two geometrically straight coasts. The remainder of the coastline is sinuous to irregular, terminating at a rounded southern tip. Narrow fringing

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reefs occur around much of the shoreline and the island's single barrier reef, along the southwest coast outlines the current harbor breakwater.

Tinian is comprised of a volcanic basement mantled by a succession of relatively flat but undulating coralliferous limestone plateaus. Four major geologic units make up the island. They are the volcanic basement Tinian Pyroclastic Rocks, the Tagpochau limestone, the Mariana limestone, and unconsolidated sediments consisting of beach deposits, alluvium, and colluvium.

Tinian Pyroclastic Rocks, of late Eocene age, is the oldest exposed geologic unit and underlie all other exposed rock units (Doan and others, 1960). The volcanic exposures in the north-central highland and southeastern ridge are Tinian Pyroclastic Rocks.

The Tagpochau limestone is of early Miocene age (Doan and others, 1960) and is exposed on about 15 percent of the surface on Tinian, principally in the north-central highland and the southern part of the southeastern ridge. The unit increases in thickness from 0 to at least 600 feet in all directions away from the surface exposures of the Tinian Pyroclastic Rocks in the north-central highland and southeastern ridge.

The Mariana limestone is of Pliocene to Pleistocene age and is the most extensive unit aerially above sea level covering about 80 percent of the surface, and forming nearly all of the northern lowlands, the central plateau, and the median valley. The Mariana limestone thickens from 0 to at least 450 ft thick in all directions away from the surface exposures of the Tinian Pyroclastic Rocks and the Tagpochau limestone.

The Masalog site is located in the southeastern ridge geological division of Tinian. The most striking feature of the area is the Piña plateau, which rises 320 to 350 feet above sea level. The surficial geology of the area is comprised of Mariana Limestone, plus a few small exposures of alluvium.

Two minor high angle fault zones of vertical joints in linear continuity are located in two portions of the site. One of these fault zones runs northeast to southwest on the north end of the project site. The other zone runs almost directly north-south along the middle of the property at the foot of the Piña plateau. A concealed high angle fault zone runs from southeast to northwest from the southwestern corner of the property along the foot of the Piña plateau towards the centrally located minor high angle fault zone.

The rocks underlying the site consists of Mariana limestone of Detrital undifferentiated facies of Mariana Limestone: white; pink, or buff, massive to well-stratified, friable to wholly consolidated or recrystalized, porous to compact, very fine grained to very coarse-grained, in places pebbly or conglomeratic, detrital bioclastic and biogenic limestone containing, in some places, few to many lenses or pockets of bioconstructional material. This limestone is of a permeable nature which allows a high rate of hydraulic conductivity estimated to be as high as 10,500 feet per day (Gingerich, S.B., 2002). Since rainfall on Tinian is in excess of 80 inches per year, it is likely that these conditions may impact the migration of any soil contamination on the site.

Soil types throughout the project site are variants of chinnen Tagpochao and Tagpochao-chinnen rock outcrop, the soils are generally fairly shallow and include a surface layer of gravelly sandy loam fill material approximately 6-10 inches thick. Below are normally dark grayish brown to reddish brown clay loam to about 1.5 feet, with a yellowish red clay loam over jagged limestone outcrops below with limestone outcroppings throughout the site.

Surface water features in the form of streams, ponds or wetlands are not known to exist on the subject property. Due to the high infiltration rates of the surficial soils and underlying strata on site there is little evidence of channelized overland storm water erosional features on the property.

There is no known fresh ground water at the project site. No freshwater basal lens is known to exist below the project site.

2.1 Statement of Objectives

Based upon the recommendations of the Phase I ESA report, contaminants of concern may be present in surface and shallow subsurface soils within the site. The objective of this Phase II ESA sampling event is

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to collect data of sufficient quality to assess whether a release to soil has occurred and to evaluate if the property is impacted by the identified potential contaminants at levels that may impact human health or the environment.

2.1.1 Summary of Previous Assessments

The activities conducted during the performance of a previous site assessment included: aerial photograph interpretation, site reconnaissance, digital photography of the site and review of any previous site investigations. The sampling and analysis methodologies utilized in this Phase II ESA may be referenced in the site specific Sampling and Analysis Plan (SAP), (APEC/AMEC Foster Wheeler, 2016). The protocol used for this ESA is in general accordance with the requirements of American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, Standard E 1903-11*.

2.1.1.1 Findings and Recommendations from Previous Assessments

This Phase II ESA is driven in large part, based upon the findings of the Phase I ESA, conducted by APEC in 2014, which revealed several RECs. These RECs are as follows:

I. **Unexploded Ordnance (UXO)/Discarded Military Munitions (DMMs)**
It is common historical knowledge that the subject property was a former ordnance storage area for munitions, primarily aerial bombs, as part of the associated Army Air Corps airfields (Tinian North Field and Tinian West Field) from 1944 to 1946. Prior site investigations by APEC, CNMI DPL, CNMI BECQ and the US Department of Defense (DOD) have indicated the presence of UXO and DMM site and within the general area of Tinian.

During the 2014 Phase I ESA, large quantities of UXO/DMM were observed on the property, located among structures on the site, known to have been revetments built by the USAAF, during World War II. The UXO/DMM encountered was consistent with USAAF ordnance used during that period and it was determined that it is possible that chemical constituents from corroding UXO/DMM, such as Tritonal, TNT, Composition B or Amatol, may have leached into the soils of the site and possibly migrated throughout the subject property.

II. **Former Military Activities on Site**
The aforementioned previous site investigations and common knowledge establish that Department of Defense activities were conducted on the subject site. At one time this site was also listed as a Formerly Used Defense Site (FUDS). Current FUDS Inventory identifies a FUDS site near the project property; The Tinian West Field Surplus Area designated AS H09CN0403, which encompasses a large part of Tinian, north of the subject property.

Structures found on site that are potentially associated with former military activities are likely to present little or no current threat to environmental conditions of the property. However, due to the nature of the activities associated with this site, including the handling and storage of ordnance, use and maintenance of vehicles and other industrial uses, it is prudent to monitor soil conditions for evidence of any potential residual contamination, most likely to be from petroleum products or heavy metals.

2.2 Scope of Assessment

The scope of assessment for this Phase II ESA is detailed in the *Sampling and Analysis/Work Plan for Track 41-2, ASTM Phase II Environmental Site Assessment Piña Ridge, Tinian (USEPA Approved Final).* This ESA is limited to Tract 41-3, Tinian, CNMI. Specifically, the scope of this assessment included the following tasks: Review of Existing Information; Field Exploration; Sampling and Chemical Analyses; Evaluation of Results and; Discussion of Findings and Conclusions. The findings and conclusions presented in this report apply only to the recognized environmental conditions assessed.

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2.2.1 Historical Review

Prior site investigations by CNMI DPL, CNMI BECQ and the US Department of Defense (DOD) have indicated the presence of UXO and DMM on the site. During APEC's previous Phase I site investigation activities, large quantities of UXO/DMM were observed to be strewn about the remains of the ordnance revetments. The UXO/DMM encountered during previous site investigation activities included: fifteen (15) AN/M-65 1,000 pound general purpose bombs; one (1) AN/M-57 250 pound general purpose bomb; one (1) MK 53 350 pound depth bomb and one (1) suspected anti-tank landmine. Furthermore, it is possible that chemical constituents from corroding UXO, such as Tritonal, TNT, Composition B or Amatol, may have leached into the soils of the site. No environmental media samples had been collected and analyzed for this site during prior site investigations.

A summary of the findings of the 2014 Phase I ESA for this site are:

- US Military ordnance and or components thereof are present on the subject property and have a potential to be a hazard and or source of soil contamination.
- It is assumed that due to normal erosion and exposure to the elements, that over the past 70 years, a significant percentage of the munitions will have deteriorated. This deterioration may have resulted in the release of chemical munitions constituents to the environment as chemicals of potential concern to human and ecological receptors.

2.2.2 Conceptual Site Model and Sampling Plan

In planning for the sampling and analysis activities under this ESA, in order to quantify the impacts the previously discovered RECs, namely the presence of UXO/DMM and associated military activities on the site, the APEC/Amec Foster Wheeler team chose to sample environmental media for the most likely contaminants to be present in the soils of the site. These are explosives and associated volatile and semi-volatile compounds, total petroleum hydrocarbons (TPH); and metals. The project team also factored in the likely behavior and transport characteristics over time of these constituents of concern (COCs) over the past seven decades to determine the current fate of these COCs.

The climate of Tinian is humid and warm with dominant trade winds throughout the year, with a fairly consistent temperature ranging from 79°-87° F throughout the year. The annual rainfall average is approximately 80 inches with a dry season that lasts typically from November through April. Tinian is also affected by semi-regular tropical storms and the occasional typhoon, which can strip the island of vegetation and deluge soils with additional rainfall, which can increase natural erosion.

As previously mentioned in this report, the soils and limestone facies underlying the site have high infiltration rates and hydraulic conductivity. High hydraulic conductivity of rocks and soils, coupled with the relatively high amount of rainfall annually; general slope of the topography; and proximity to the shoreline, makes the migration of COCs towards the coastline and possibly into the ocean a likely scenario.

It is anticipated that over the past 70 years a significant percentage of the UXO/DMM on the subject property has deteriorated and may have resulted in chemical munitions constituents being released to the environment as chemicals of potential concern to human and ecological receptors. Potential contaminants associated with the historical use of the site as a munitions depot in shallow surface soil include MEC (explosives, metals, and petroleum compounds).

The types of human receptors that may be present at the site now and in the future are site workers and the occasional public users of the property. Future planned land use is classified as commercial/recreational. Possible exposure pathways are through inhalation, ingestion, external and dermal contact.
The US EPA approved, APEC/Amec Foster Wheeler SAP/WP provides a detailed description of all data quality objectives, sampling and design rationale, quality control/assurance measures taken and laboratory information pertaining to this Phase II ESA.

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2.2.3 Deviations from the Sampling and Analysis / Work Plan

During the course of this Phase II ESA, transects were modified and added due to field conditions, such as terrain and foliage. Transects were also added based upon the field observations of DMM, where additional screening was warranted. Sample labeling methodology was also modified somewhat from the SAP/WP. Additionally, field screening kits for incremental soil samples were not utilized due to the unavailability of screening kits at the time of site activities. Finally, the final EPA approved SAP/WP may have made reference to "Project Action Levels" and/or Environmental Screening Levels (ESLs) dated 2015, the project team decided during the course of completing this Phase II ESA report to only refer to and to utilize the ESLs as stated below and as were made available by BECQ as of the date of finalizing the SAP/WP (November, 2016) for this particular site assessment project. The reader is referred to section 4.4 below for more information regarding the selection of ESLs for this Phase II ESA.

2.3 Sample Handling and Chemical Analysis

COCs that were sampled for were determined by the field observations and conclusions made during the 2014 Phase I ESA. There were three analytical groups of COCs: I; Explosives, II; Total Petroleum Hydrocarbons (TPH) and III; Metals. The sample matrix for all COCs was soil, as there is no known standing or running surface water on the site, nor is there any known aquifer under the site.

Explosives to be analyzed were determined by the types of DMM discovered on the site, which were common US ordnance in use during World War II. The DMMs encountered on site were primarily AN/M-65 1,000 pound general purpose bombs. TPH was analyzed due to the likelihood of TPH contamination from military activities on site such as the use of vehicles, maintenance and refueling. Metals were analyzed due to their likely presence in the discovered aforementioned DMM and the probability of leaching into soils due to natural erosion and corrosion over time. The project COC groups, target analytes, ESLs, and the desired laboratory detection limits are presented in the tables on the following pages:

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TABLE 1 COC ANALYTICAL (GROUP I) EXPLOSIVES

Matrix: Solid (Soil)
Analytical Group: Explosives

Analyte	Unrestricted ESL[1/] (mg/kg) Drinking Water	Achievable Laboratory Limits[2/3]	
		LOD (mg/kg)	LOQ (mg/kg)
1,3,5-Trinitrobenzene (1,3,5-TNB)	5.4	0.20	0.50
1,3-Dinitrobenzene (1,3-DNB)	**0.13**	0.20	**0.45**
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.68	0.20	**0.50**
2,4-Dinitrotoluene (2,4-DNT)	2.7	0.20	0.50
2,6-Dinitrotoluene (2,6-DNT)	2.3	0.20	0.50
2-Amino-4,6-dinitrotoluene	0.25	0.20	0.50
2-Nitrotoluene (2-NT)	**0.0032**	0.20	**0.50**
3,5-Dinitroaniline (3,5-DNA)	No Criteria (NC)	0.20	0.50
3-Nitrotoluene (3-NT)	6.7	0.20	0.50
4-Amino-2,6-dinitrotoluene	0.65	0.20	0.50
4-Nitrotoluene (4-NT)	**0.22**	0.20	**0.50**
Hexahydro-1,3,5-Trinitro-1,3,5-triazine (RDX)	**0.0020**	0.20	**0.50**
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	49	0.20	0.50
Nitrobenzene (NB)	**0.11**	0.20	**0.50**
Nitroglycerin (NG)	**0.079**	0.20	**0.50**
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	100	0.20	0.50
Pentaerythritol tetranitrate (PETN)	**0.015**	1.0	**2.50**

[1/] Unrestricted ESL listed in this table are consistent with the Pacific Basin ESL for unrestricted land use in areas above a current or potential drinking water source and located greater than 150 meters from surface water. A majority of these values are based on the protection of groundwater, and some of these levels are not achievable by existing methodologies. Per guidance provided by HDOH Hazard Evaluation and Emergency Response Office, the laboratory detection limit can be utilized as the ESL for analytes with detection limits greater than the unrestricted ESL.
[2/] Analytical LODs and LOQs are those documented in validated methods. Method SW-846 8330B is a performance-based method, which does not specifically state LODs or LOQs. The laboratory is required to perform appropriate studies to determine LODs/LOQs.
[3/] LODs and LOQs for actual samples will be adjusted based on sample amount and dilution factor.
BOLD – ESL is below the laboratory LOQ, thus EAL will be defined as the laboratory LOQ.

TABLE 2 COC ANALYTICAL (GROUP II) TPH

Matrix: Solid (Soil)
Analytical Group: TPH

Analyte	Unrestricted ESL[1/] (mg/kg)	Achievable Laboratory Limits[2/3]	
		LOD (mg/kg)	LOQ (mg/kg)
TPH-G	100	10	1.0
TPH-D	100	10	1.0
TPH-RRO	500	50	5.0

[1/] Unrestricted ESL listed in this table are consistent with the Pacific Basin ESL for unrestricted land use in areas above a current or potential drinking water source and located greater than 150 meters from surface water.
[2/] Analytical LODs and LOQs are those documented in validated methods.
[3/] LODs and LOQs for actual samples were adjusted based on sample amount, moisture content, and dilution factor.

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TABLE 3 COC ANALYTICAL (GROUP III) METALS

Matrix: Solid (Soil)
Analytical Group: Targeted Metals

Analyte	Unrestricted ESL[1/] (mg/kg)	Achievable Laboratory Limits[2/3]	
		LOD (mg/kg)	LOQ (mg/kg)
Copper	630	0.188	0.50
Chromium	65	0.244	0.50
Lead	200	0.184	0.50
Zinc	1000	2.3	5.0

[1/] Unrestricted ESL listed in this table are consistent with the Pacific Basin ESL for unrestricted land use in areas above a current or potential drinking water source and located greater than 150 meters from surface water.
[2/] Analytical LODs and LOQs are those documented in validated methods.
[3/] LODs and LOQs for actual samples will be adjusted based on sample amount, moisture content, and dilution factor

The US EPA approved APEC/Amec Foster Wheeler SAP/WP provides a detailed description of all data quality objectives, sampling and design rationale, quality control/assurance measures taken and laboratory information pertaining to this Phase II ESA.

2.3.1 UXO/DMM Screening and Field Sampling/Analytical Methodologies

The Phase I ESA identified several areas with known munitions and explosives of concern (MEC) and munitions presenting a potential explosive hazard (MPPEH) contamination. The focus of the Phase II ESA is to determine if the subject property has been contaminated with munitions constituents (MC) or other chemicals of concern (COCs) based on previous site usage. The project field team was supported and escorted by UXO Technicians (Level III and Level II) to ensure safety of the sampling team during Phase II activities.

The UXO Technicians performed instrument aided reconnaissance (IAR) and implemented avoidance techniques for intrusive MC and COC sampling. The UXO Technicians documented evidence of surface MEC, MPPEH and discarded military munitions (DMM) during the Phase II ESA field activities. The team utilized GPS equipment to capture transect and munitions location information. Fluxgate magnetometers (Schonstedts) for IAR and avoidance activities were also utilized during field sampling activities.

IAR transects were cut through the overgrowth and located to allow for investigative coverage throughout the 260 acre site. Previous site investigations have revealed the presence of UXO/DMM on the southern portion of the site, and therefore the APEC-Amec team focused these IAR transects towards the northern section of the site where there is less complete data as to the presence or absence of UXO/DMM. In order to confirm the UXO/DMM observations made during the 2014 Phase I ESA, approximately 2 miles of IAR data was collected in the southern end of the property. Approximately 4 miles of IAR transect data was collected in the northern end of the site, where there was less data on UXO/DMM to confirm the presence or absence of UXO/DMM (see figures A-02 and A-07 for transect maps).

The UXO team intrusively investigated at least one detection of magnetic anomalies for every 100m (~300 ft) along each IAR transect. In the absence of subsurface or surface detections of metallic objects for every 100m this absence was also noted. Figures A-06 through A--13 illustrate the locations of the magnetic anomalies which were detected during site investigation activities. Intrusive investigations of these subsurface anomalies were performed by hand tools until the metallic object being investigated was discovered up to a depth of 3 ft bgs. Recovered objects were identified, logged and photographed. The locations were recorded by GPS as well. Any metallic object, which was detected deeper than 3 ft bgs, was noted for additional investigation

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with the location recorded by GPS. Section 3 of this report includes the results of this IAR transect subsurface investigation.

2.3.2 Soil Sampling Approach

All soil sampling locations were screened for the presence of subsurface anomalies prior to soil sample collection. MPPEH was inspected by the DDESB-qualified UXO Technicians III and II to determine type and condition. Planned sample locations were modified when subsurface anomalies were detected. No MEC, MPPEH, DMM or munitions debris (MD) were moved or otherwise disturbed during this Phase II ESA. Demolition/disposal of munitions was not within the scope of this Phase II ESA. UXO, MEC, MPPEH, DMM and MS encountered are listed in Appendix C of this report.

A combination of simple field screening and laboratory analysis of soil samples was utilized in order to determine the nature of COC contamination on site. This sampling approach did not provide a complete analysis of the contamination extent or provide a baseline risk assessment for the site. The sample results were evaluated against environmental screening level (ESL) criteria to determine if further sampling and site investigation would be required. The approach utilized was for surface soil only, and excluded groundwater, surface water, soil vapor and sediment sampling.

Environmental Media Sampling for Soil

Incremental and discrete sampling methodologies were utilized during this Phase II ESA in accordance with the SAP. Incremental samples were collected from locations established to be bomb storage revetments, with known or observed MEC, MPPEH and DMM. A total of five (5), incremental samples were collected from these locations (see Figures A-08 and A-10). A decision unit (DU) was established for each of these 5 sample grids.

The DU boundaries extend half way up the revetment berms and are finished by connecting the open side of the revetment berms together. Each DU consisted of between 40 and 48 increments. Each incremental sample consisted of between 1 and 1.5 kilograms of soil, and each increment consisted of approximately 50 grams of soil. Increments were placed into a single sample container (a re-sealable plastic bag). These DUs were designated A, B, C, D and E. Duplicate and triplicate samples for DU A were collected and submitted blind to the laboratory as part of the QA/QC procedures. The multi incremental samples were analyzed for the following constituents:

- TPH – DRO/RRO (8015B)
- Nitro Aromatics and Explosives (SW8330B)
- Total Metals (Cr, Cu, Pb, Zn) (6020A)

Incremental samples were labeled in the following manner:

- Client – DPL
- Grid (DU) – G_
- Date – _____

Example **DPL-GE-011317**

A total of sixteen (16) discrete soil samples, and two duplicates, were collected and analyzed for project COCs based on the criteria identified in the SAP/WP. These discrete samples consisted of a five point composite taken from within a one foot perimeter set around selected surface magnetic anomalies, which during this site investigation, were all identified as ordnance (1,000 lb aerial bombs). Two (2) duplicate samples were also collected for the purpose of QA/QC in accordance with the SAP. The samples were collected from areas determined as acceptable for sampling by the UXO technicians, and were collected into 16oz glass jars. Samples were not collected from directly beneath any of the identified ordnance. Discrete samples were analyzed for the following constituents:

- TPH – DRO/RRO (8015B)
- Nitro Aromatics and Explosives (SW8330B)
- Total Metals (Cr, Cu, Pb, Zn) (6020A)

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Discrete samples were labeled in the following manner:

- Client – DPL
- GPS Anomaly #, followed by an 'S' indicating that anomaly was Sampled
- Date – _____

Example **DPL-096S-011317**

2.3.3 Soil Sample Collection, Labeling, Handling and Shipping

All of the soil sample containers were pre-cleaned and were not rinsed prior to sample collection. Custody of samples were maintained in accordance with EPA chain-of-custody guidelines as prescribed in *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (EPA OSWER Directive 9355 3-01). A description of sample custody procedures is provided in Section 7 of the SAP/WP.

Surface soil samples included discrete (by 5-point composite) and multi incremental soil samples that were collected from areas as expressed in section 2.3.2 above. Soil samples were collected following the specifications presented in APEC SOP Ch. 12, *Soil Sampling* (Appendix A in the SAP/WP). UXO/MEC anomaly avoidance measures and procedures that were followed during all soil sampling activities are presented in detail in sections 4.1 and 6.4 of the SAP/WP.

Disposable hand trowels were utilized for sampling surface soil in instances where samples were not to be analyzed for volatile organics. The hand trowel was initially used to remove the uppermost 2 inches of soil and then used to acquire a representative sample of deeper materials to a depth of no greater than 6 inches. Generally, only samples within the upper 6 inches of soil were sampled using these methods.

Individual incremental surface soil samples were collected by clearing the area to be sampled of vegetation and collecting a 30 gram increment from a depth of no greater than 6 inches bgs using disposable clean plastic scoops. Each increment was placed in a sample container consisting of a re-sealable bag to yield the multi increment sample. Sample containers were filled taking care to prevent soil from remaining in the closure mechanism prior to being closed to prevent potential contaminant migration to or from the sample. Sample containers were closed as soon as they were filled, then cooled to less than or equal to 6ºC and processed for shipment to the analytical laboratory.

2.3.4 Soil Sample Analytical Data

All samples collected at the project site were analyzed by either Test America (TA) Seattle or TA Sacramento. TA provided APEC with the Laboratory Analytical Report: Job Number: 580-65448-1, included as Appendix D of this Phase II ESA report with summary of data presented in Section 3 below. A total of twenty-five (25) soil samples were received by TA Seattle on January 18, 2017. Samples were preserved on ice and received at a temperature of 1.4°C. Samples were analyzed for explosives, TPH and metals as described in Section 2.3 of this report.

3.0 PRESENTATION OF DATA

The following section contains the presentation of laboratory analytical results of soils analyzed and evaluated by TA Seattle and Sacramento for this Phase II ESA. These soil samples were collected via both multi-incremental (MI) sampling and discrete sampling methodologies during site investigation activities conducted between January 11-13, 2017. All samples were evaluated against US EPA and CNMI BECQ established Environmental Screening Levels (ESLs).

These ESLs are based upon the US EPA Pacific Basin ESL for unrestricted land use in areas above a current or potential drinking water source and located greater than 150 meters from surface water. ESLs are listed in Tables 1, 2 and 3 in Section 2.3 above. The following laboratory methods were utilized by TA to conduct the analysis of soil samples:

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- TPH – DRO/RRO (8015B)
- Nitro Aromatics and Explosives (SW8330B)
- Total Metals – Cr, Cu, Pb, Zn (6020A)

3.1 UXO/DMM Screening Results

During the period of January 9-13, 2017, two Amec Foster Wheeler UXO Technicians supported personnel from APEC during the Track 41-3, ASTM Phase II Environmental Site Assessment at Pina Ridge, Tinian.

The Visual Sampling Plan software was used to calculate the adequate amount of transect coverage necessary to categorize the site for the presence of UXO.

During this five day period the UXO Personnel traversed twenty-nine transect segments and surveyed the environmental sampling points for the presence of MEC. During the course of these sampling activities the following information was obtained:

- 335 anomalies were investigated
- 51 each AN-M65 U.S. HE Bombs (1,000 lb. General Purpose Aircraft Bombs)
- Approximately 1,600 pounds of munitions debris (MD) was located along transects

See Appendix C for the full site investigation list of findings.

It is important to note that the majority of the munitions debris was in the form of old bomb casings or large pieces of the bomb casings remaining after either being burned out or the explosives within detonated. All of the AN-M65 U.S. HE Bombs were unfuzed but still maintain an explosive hazard. In US Department of Defense language these AN-M65 US HE Bombs would be considered DMM See Appendix C for description.

3.2 Soil Sampling Analytical Data

3.2.1 TPH – DRO/RRO (8015B)

Soil analysis for the site revealed that there is some TPH contamination in the diesel range DRO (>C12-C24) in levels slightly above the established ESL for all of the composite samples taken with only one composite sample at the ESL for TPH in the residual range RRO (>C24-32), which occurred at Grid D. The tables below show the laboratory results with the ESL indicated for each composite sample taken by grid and sample ID.

Table notes: ESL denotes CNMI BECQ Environmental Screening Levels.
Bold **Red** indicates testing results that are above the ESL. Bold **Blue** is the ESL.
Laboratory analytical report 580-65448-1 is located in Appendix D of this report.

Table 4: ISM SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
TPH (DRO/RRO) EPA Method 8015m

GRID	SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOQ (mg/Kg)
A	DPL-GA-01-011217	TPH DRO (>C12-C24)	**180**	**100**	13
		TPH RRO (>C24-C32)	**480**	**500**	27
	DPL-GA-02-011217 (Duplicate)	TPH DRO (>C12-C24)	**170**	**100**	14
		TPH RRO (>C24-C32)	**400**	**500**	28

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Table 4: ISM SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
TPH (DRO/RRO) EPA Method 8015m

GRID	SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOQ (mg/Kg)
	DPL-GA-03-011217 (Triplicate)	TPH DRO (>C12-C24)	170	100	14
		TPH RRO (>C24-C32)	460	500	29
B	DPL-GB-01-011217	TPH DRO (>C12-C24)	150	100	13
		TPH RRO (>C24-C32)	340	500	25
C	DPL-GC-01-011217	TPH DRO (>C12-C24)	85	100	12
		TPH RRO (>C24-C32)	380	500	23
D	DPL-GD-01-011217	TPH DRO (>C12-C24)	110	100	13
		TPH RRO (>C24-C32)	500	500	26
E	DPL-GE-01-011217	TPH DRO (>C12-C24)	71	100	12
		TPH RRO (>C24-C32)	320	500	24

Table 5: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
TPH (DRO/RRO) EPA method 8015B

SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOQ (mg/Kg)
DPL-096S-011317	TPH DRO (>C12-C24)	96	100	50
	TPH RRO (>C24-C32)	600	500	99
DPL-095S-011317	TPH DRO (>C12-C24)	57	100	44
	TPH RRO (>C24-C32)	350	500	87
DPL-094S-011317	TPH DRO (>C12-C24)	38	100	34
	TPH RRO (>C24-C32)	240	500	68
DPL-063S-011317	TPH DRO (>C12-C24)	40	100	28

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Table 5: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS TPH (DRO/RRO) EPA method 8015B				
SAMPLE ID	**ANALYTE**	**RESULT (mg/Kg)**	**ESL (mg/Kg)**	**LOQ (mg/Kg)**
	TPH RRO (>C24-C32)	**180**	**500**	56
DPL-063S1-011317 (Duplicate)	TPH DRO (>C12-C24)	**53**	**100**	34
	TPH RRO (>C24-C32)	**240**	**500**	67
DPL-093S-011317	TPH DRO (>C12-C24)	**44**	**100**	34
	TPH RRO (>C24-C32)	**340**	**500**	67
DPL-117S-011317	TPH DRO (>C12-C24)	**37**	**100**	31
	TPH RRO (>C24-C32)	**290**	**500**	63
DPL-115S-011317	TPH DRO (>C12-C24)	**26**	**100**	32
	TPH RRO (>C24-C32)	**130**	**500**	64
DPL-138S-011317	TPH DRO (>C12-C24)	**32**	**100**	30
	TPH RRO (>C24-C32)	**290**	**500**	59
DPL-114S-011317	TPH DRO (>C12-C24)	**38**	**100**	31
	TPH RRO (>C24-C32)	**330**	**500**	62
DPL-111S-011317	TPH DRO (>C12-C24)	**52**	**100**	35
	TPH RRO (>C24-C32)	**270**	**500**	70
DPL-139S-011317	TPH DRO (>C12-C24)	**22**	**100**	31
	TPH RRO (>C24-C32)	**200**	**500**	62
DPL-132S-011317	TPH DRO (>C12-C24)	**66**	**100**	38
	TPH RRO (>C24-C32)	**440**	**500**	76

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Table 5: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS TPH (DRO/RRO) EPA method 8015B

SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOQ (mg/Kg)
DPL-129S-011317	TPH DRO (>C12-C24)	**17**	**100**	29
	TPH RRO (>C24-C32)	**190**	**500**	58
DPL-128S-011317	TPH DRO (>C12-C24)	**22**	**100**	29
	TPH RRO (>C24-C32)	**220**	**500**	59
DPL-125S-011317	TPH DRO (>C12-C24)	**25**	**100**	32
	TPH RRO (>C24-C32)	**180**	**500**	64
DPL-126S-011317	TPH DRO (>C12-C24)	**42**	**100**	36
	TPH RRO (>C24-C32)	**270**	**500**	73
DPL-063S1-011317 (Duplicate)	TPH DRO (>C12-C24)	**52**	**100**	35
	TPH RRO (>C24-C32)	**320**	**500**	70

3.2.2 Nitro Aromatics and Explosives (8330B)

Soil analysis for nitro aromatics and explosives revealed that for all sample locations, both discrete and composite grids, all analytes were undetected at the limit of detection (LOD) for each individual analyte. TA Laboratory personnel confirmed that for the nitro aromatics and explosives analyses under this project, all of the soil samples can be considered non-detected up to the LOD for each analyte reported. The reader is referred to Appendix D, TA Laboratory analytical report 580-65448-1 for more information.

3.2.3 Total Metals – Cr, Cu, Pb, Zn (6020A)

Soil analysis for total metals, (copper, chromium, lead and zinc), revealed that with the exception of chromium, all metals were below the ESLs for all sample locations for both discrete and composite samples. Chromium was found to be near or above the ESLs in all sample locations, with the lowest value at 55 mg/kg and the highest at 100 mg/kg.

Table 6 on the following page presents the laboratory results with the ESL indicated for each composite sample and Table 7 provides the discrete sample analytical results.

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Table 6: COMPOSITE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
Metals by EPA Method 6020A

GRID	SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOD (mg/kg)	LOQ (mg/kg)
A	DPL-GA-01-011217	Chromium	**62**	65	0.16	1.2
		Copper	**67**	630	0.24	0.99
		Lead	**19**	200	0.12	1.2
		Zinc	**42**	1000	2.8	12
	DPL-GA-02-011217 (Duplicate)	Chromium	**56**	65	0.16	1.2
		Copper	**61**	630	0.24	0.99
		Lead	**19**	200	0.12	1.2
		Zinc	**38**	1000	2.8	12
	DPL-GA-03-011217 (Triplicate)	Chromium	**58**	65	0.15	1.2
		Copper	**63**	630	0.24	0.97
		Lead	**20**	200	0.12	1.2
		Zinc	**44**	1000	2.7	12
B	DPL-GB-01-011217	Chromium	**57**	65	0.15	1.2
		Copper	**65**	630	0.24	0.98
		Lead	**15**	200	0.12	1.2
		Zinc	**33**	1000	2.7	12
C	DPL-GC-01-011217	Chromium	**62**	65	0.15	1.2
		Copper	**85**	630	0.24	0.98
		Lead	**52**	200	0.12	1.2
		Zinc	**63**	1000	2.7	12
D	DPL-GD-01-011217	Chromium	**74**	65	0.15	1.2
		Copper	**68**	630	0.23	0.95
		Lead	**13**	200	0.11	1.2
		Zinc	**38**	1000	2.7	12
E	DPL-GE-01-011217	Chromium	**82**	65	0.15	1.2
		Copper	**91**	630	0.24	0.97
		Lead	**14**	200	0.12	1.2
		Zinc	**40**	1000	2.7	12

Table 7: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
Metals by EPA Method 6020A

SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOD (mg/kg)	LOQ (mg/kg)
DPL-096S-011217	Chromium	**60**	65	0.13	1.0
	Copper	**53**	630	0.20	0.81
	Lead	**7.5**	200	0.098	1.0
	Zinc	**23**	1000	2.3	10
DPL-095S-011217	Chromium	**59**	65	0.10	0.83
	Copper	**56**	630	0.16	0.66
	Lead	**8.2**	200	0.080	0.8
	Zinc	**26**	1000	1.9	8.3
DPL-094S-011217	Chromium	**94**	65	0.077	0.61
	Copper	**66**	630	0.12	0.49
	Lead	**9.6**	200	0.058	0.61
	Zinc	**27**	1000	1.4	6.1
DPL-063S-011217	Chromium	**93**	65	0.076	0.61
	Copper	**120**	630	0.12	0.48

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Table 7: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
Metals by EPA Method 6020A

SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOD (mg/kg)	LOQ (mg/kg)
	Lead	**14**	**200**	0.058	0.61
	Zinc	**51**	**1000**	1.4	6.1
DPL-063S1-011317 (Duplicate)	Chromium	**86**	**65**	0.087	0.69
	Copper	**120**	**630**	0.13	0.55
	Lead	**14**	**200**	0.066	0.69
	Zinc	**51**	**1000**	1.5	6.9
DPL-093S-011217	Chromium	**84**	**65**	0.092	0.73
	Copper	**82**	**630**	0.14	0.58
	Lead	**10**	**200**	0.070	0.73
	Zinc	**31**	**1000**	1.6	7.3
DPL-117S-011217	Chromium	**84**	**65**	0.077	0.61
	Copper	**110**	**630**	0.12	0.49
	Lead	**12**	**200**	0.059	0.61
	Zinc	**57**	**1000**	1.4	6.1
DPL-115S-011217	Chromium	**55**	**65**	0.084	0.66
	Copper	**69**	**630**	0.13	0.53
	Lead	**17**	**200**	0.064	0.66
	Zinc	**55**	**1000**	1.5	6.6
DPL-138S-011217	Chromium	**90**	**65**	0.084	0.67
	Copper	**93**	**630**	0.13	0.54
	Lead	**14**	**200**	0.064	0.67
	Zinc	**48**	**1000**	1.5	6.7
DPL-114S-011217	Chromium	**80**	**65**	0.079	0.62
	Copper	**84**	**630**	0.12	0.50
	Lead	**14**	**200**	0.060	0.62
	Zinc	**42**	**1000**	1.4	6.2
DPL-111S-011217	Chromium	**87**	**65**	0.093	0.74
	Copper	**94**	**630**	0.15	0.59
	Lead	**12**	**200**	0.071	0.74
	Zinc	**56**	**1000**	1.7	7.4
DPL-139S-011217	Chromium	**100**	**65**	0.084	0.66
	Copper	**100**	**630**	0.13	0.53
	Lead	**11**	**200**	0.064	0.66
	Zinc	**43**	**1000**	1.5	6.6
DPL-132S-011317	Chromium	**59**	**65**	0.10	0.80
	Copper	**81**	**630**	0.16	0.64
	Lead	**8.9**	**200**	0.076	0.80
	Zinc	**38**	**1000**	1.8	8.0
DPL-129S-011317	Chromium	**68**	**65**	0.077	0.61
	Copper	**83**	**630**	0.12	0.49
	Lead	**12**	**200**	0.059	0.61
	Zinc	**44**	**1000**	1.4	6.1
DPL-128S-011317	Chromium	**88**	**65**	0.086	0.69
	Copper	**100**	**630**	0.13	0.55
	Lead	**13**	**200**	0.066	0.69
	Zinc	**45**	**1000**	1.5	6.9
DPL-125S-011317	Chromium	**84**	**65**	0.085	0.67
	Copper	**120**	**630**	0.13	0.54
	Lead	**13**	**200**	0.064	0.67

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Table 7: DISCRETE SOIL SAMPLE LABORATORY ANALYTICAL TESTING RESULTS
Metals by EPA Method 6020A

SAMPLE ID	ANALYTE	RESULT (mg/Kg)	ESL (mg/Kg)	LOD (mg/kg)	LOQ (mg/kg)
	Zinc	**75**	**1000**	1.5	6.7
DPL-126S-011317	Chromium	**75**	**65**	0.091	0.72
	Copper	**110**	**630**	0.14	0.58
	Lead	**12**	**200**	0.069	0.72
	Zinc	**47**	**1000**	1.6	7.2
DPL-126S1-011317 (Duplicate)	Chromium	**89**	**65**	0.10	0.81
	Copper	**130**	**630**	0.16	0.65
	Lead	**14**	**200**	0.077	0.81
	Zinc	**83**	**1000**	1.8	8.1

4.0 FINDINGS

4.1 Recognized Environmental Conditions

This Phase II ESA investigated in further detail RECs, which were identified in the previous Phase I ESA. These RECs include: the presence of UXO/DMM, and the likely presence of constituents including nitro aromatics and explosives and metals. Soil sampling and analysis revealed the following:

Unexploded Ordnance (UXO)/Discarded Military Munitions (DMMs)

Numerous pieces of UXO/DMM were identified during this Phase II ESA. A total of fifty one (51) 1,000 pound bombs were located along or near the transects covered on site. A total of three hundred and thirty five (335) magnetic anomalies (metal fragments) were identified on site. As the Transects cut during site investigation activities cover approximately 3% of the site, it is highly likely that the site contains more UXO/DMM which is yet to be located and identified. Soil sampling and analysis indicated that there is some heavy metals contamination of soils, where UXO/DMM were located. Elevated chromium levels above the established ESLs were present, but in levels within one magnitude of the screening levels. The nitro aromatics and explosives analysis showed that these analytes were in concentrations below the laboratory detection limits.

Former Military Activities on Site

Military activities on the site during World War II present the likelihood for the presence of petroleum products and heavy metals on site. As stated above, there were elevated levels of chromium found on the site in addition to petroleum in the form of total petroleum Hydrocarbons (TPH) in the Diesel range (>C12-C24) and residual range (>C24-C32). TPH in the DRO range is present on site at several sample locations above the ESLs, yet within one magnitude of these screening levels. TPH in DRO range was also found to be at levels within one magnitude of the screening levels in one sample location.

4.2 Quality Control/Quality Assurance

Quality control and quality assurance measures undertaken during this Phase II ESA are detailed in Section 3 of the SAP/WP. Duplicate and triplicate samples were taken for one of the multi-incremental sampling grids, grid A. And at least 10% duplicate samples were collected for the discrete (5-point composite) soil samples. Sample collection and laboratory analysis was controlled using a laboratory provided Chain of Custody document and custody seals were utilized to ensure the integrity of the samples en route to the laboratory.

APEC compared the corresponding duplicate sample results to assess laboratory precision and reproducibility of the results. Due to exponential increases of apparent variability with decreasing orders of magnitude, duplicate sample results were compared when detected concentrations of analytes were greater than two times the laboratory LOQ.

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To compare the results and determine if they are reproducible, the relative percent difference (RPD) of each duplicate result was calculated. Due to inherent environmental sample variability, slight effects of laboratory sample preparation, and effects of sample matrix interference with laboratory instrumentation, a RPD of less than or equal to 33% is normally considered reproducible. The RPD is calculated as follows:

$$RPD = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Mean of the Two Results}} \times 100$$

Table 8: Relative Percent Difference (RPD) Results for Duplicate Soil Samples

Sample ID	Analyte	Duplicate Laboratory Results (mg/Kg)	Primary Laboratory Results (mg/Kg)	RPD
DPL-GA-011217	TPH DRO	170	180	5.71%
DPL-GA-011217	TPH RRO	400	480	18.18%
DPL-063S-011317	TPH DRO	53	40	27.96%
DPL-063S-011317	TPH RRO	240	180	28.57%
DPL-126S-011317	TPH DRO	52	42	21.28%
DPL-126S-011317	TPH RRO	320	270	16.95%
DPL-GA-011217	Chromium	56	62	10.17%
DPL-GA-011217	Copper	61	67	9.38%
DPL-GA-011217	Lead	20	19	5.13%
DPL-GA-011217	Zinc	38	42	10.00%
DPL-063S-011317	Chromium	86	93	7.82%
DPL-063S-011317	Copper	120	120	0.00%
DPL-063S-011317	Lead	14	14	0.00%
DPL-063S-011317	Zinc	51	51	0.00%
DPL-126S-011317	Chromium	89	75	17.07%
DPL-126S-011317	Copper	130	110	16.67%
DPL-126S-011317	Lead	14	12	15.38%
DPL-126S-011317	Zinc	83	47	55.38%

These RPDs indicate that the results for metals and TPH were on the whole acceptable and that the metals within the matrix of the samples were more or less homogeneously distributed. However, the zinc analysis is not reproducible for Sample ID DPL-126S-011317 and the RPD of TPH for Sample ID DPL-063S-011317 was acceptable, but also high. Due to field observations of this sample indicating it was a mixture of grain sizes including a mix of sand, silt, and soil, it is likely that the distribution of petroleum and metals within these samples was heterogeneous and likely preferential to any absorptive minerals or materials within the sample. Based on this rationale, the combination of sample variability and grain size differences likely led to this variability. It is therefore APEC's opinion that this sample heterogeneity is responsible for the difference in duplicate sample sets. However, this heterogeneity has not adversely affected the results since we see that Chromium was detected in these samples above the ESLs. So even though the petroleum and metal concentrations throughout the site may be considered somewhat variable, certain areas of the site may still be regulated for possible remediation due to elevated levels of petroleum and metals in the soil.

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4.3 Limiting Conditions and Methodologies Used

The report has been prepared in accordance with generally accepted environmental methodologies referred to in ASTM 1903-11 and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

As with any site investigating of this type, there were limiting factors that apply to the ability of the team in fully investigating a site. Terrain, foliage, weather and time were all factors, which limited the amount of terrain to be covered in this Phase II ESA. As this site is a 260 acre property, which is mainly overgrown by dense jungle on rough terrain, transects had to be cut through the brush in order for the team to access portions of the site to conduct the UXO/MEC survey and soil sampling activities. Therefore only approximately 2-4% of the actual site was accessed in order to glean a representative snapshot of the current state of the subject property. Therefore, due to the large area of the site, and the overgrown state of the property making access to the property difficult, it was impossible within the scope of this ASTM *Standard E 1903-11* Phase II ESA, to fully explore the site.

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty.

Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

This report does not reflect:
1. Conditions in untested areas.
2. Variations in chemical concentrations that can occur between sample locations.
3. The total understanding of potential influences of off-site areas or historical uses that may have contributed or currently contribute to site contamination, particularly relating to groundwater and subsurface soil conditions. The limited evaluation of off-site contamination sources was based on available data and records.
4. The potential presence of analytes that were not analyzed for or that may be present below minimum LOD/LOQs for the methods tested.
5. The conditions of groundwater and/or surface water beyond available data.
6. Variation in site conditions that occurred at a time other than that when the site assessment was completed.

Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and may be a material detriment to the orderly completion of transactions. If hazardous substance or petroleum releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.

Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether the generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

In the event that any conditions differ from those described herein are encountered at a later time, APEC requests an opportunity to review such differences and modify the assessment and conclusions of this report. This report was prepared expressly for the purpose described. The information in this report may

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not be suitable for any other use without adaptation for the specific purpose intended. Any such reuse of this report, without adaptation, shall be at the sole risk and liability of the party undertaking the reuse.

4.4 Utilization of Environmental Screening Levels for this Phase II ESA

The above referenced Environmental Screening Levels (ESLs) were selected based upon available information provided by the CNMI BECQ and were documented in Section 3.3 of the Draft and Final Sampling and Analysis/Work Plan (*USEPA - Approved Final: November 16, 2016*) which guided all work completed as part of this Phase II ESA. It is understood that at the time of publishing this Phase II ESA, the CNMI BECQ has since adopted and published revised ESLs (now titled "Tropical Pacific Edition" ESLs) which reflect higher screening values for some of the selected COCs for this site. It is also understood that ESLs provide guidance for regulatory authorities as well as for property owners in making decisions based upon currently available information with respect to risk assessment for possible response actions. APEC, with the CNMI DPL's concurrence, has determined that comparing the soil sample results presented above against the previously adopted (and lower value) screening levels does provide a useful indication as to the nature and extent of COCs throughout the site as detected in the selected shallow soil sampling areas. However this comparison does not seem to necessitate immediate cleanup actions on site, as is reflected in the conclusions and recommendations section below. Finally, it is assumed that all future work on this site will utilize the best available information with respect to screening and/or action and/or cleanup levels to be specifically established for the future end use of this property.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Remediation/Mitigation of UXO/DMM

Approximately 1,600 pounds of munitions debris (MD) was located along or near the transects, in addition to the fifty one (51) AN-M65 US HE Bombs (1,000lb) encountered. This quantity of UXO/DMM may be considered as representing a small fraction of what currently exists on site. It is important to note that the majority of the MD was in the form of old bomb casings or large pieces of the bomb casings remaining after either being burned out or the explosives within detonated. All of the AN-M65 U.S. HE Bombs were unfused but still maintain an explosive hazard. In U. S. Department of Defense language these AN-M65 U.S. HE Bombs would be considered DMM.

Regardless of the future intended use of this site, it is strongly recommended that an ordnance removal action be conducted prior to or in conjunction with any construction activity or earthworks at this location. The unexploded bombs are relatively benign while lying in situ but still maintain an extreme explosive hazard if handled incorrectly by inexperienced personnel.

5.2 Remediation/Mitigation of Contaminated Soil

Based on the soil sampling results, surface soil containing petroleum and chromium at concentrations above or near their respective ESLs is present in limited areas. Immediate additional site investigation work does not appear to be warranted. However, residual soil contamination may require special handling/management of soils at the site during site development and a Construction Contingency Plan should be developed. In addition, it is highly recommended that confirmation surface soil sampling be undertaken as part of any ordnance removal actions on this site. APEC recommends that any future UXO/DMMR cleanup efforts and/or site remediation work include confirmation sampling efforts with an analytical request list including: TPH-diesel, explosives, naphthalene, methylnaphthalene and TAL metals. It is recommended that all future work on this site abide by the most current and applicable regulatory and/or guidance documentation at that time.

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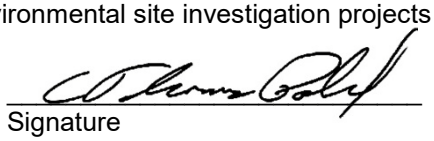
6.0 SIGNATURE OF QUALIFIED ENVIRONMENTAL PROFESSIONAL

Mr. C Thomas Polevich is an environmental professional, hydrogeologist, and senior manager responsible for APEC corporate and project management. Mr. Polevich has a Master's of Science in Hydrogeology from Adelphi University in New York and has 31 years of experience in the field of hydrogeology and environmental consulting with 25 years of experience the Pacific Region. Mr. Polevich oversees all environmental site investigation projects conducted by APEC.



Signature

June 15, 2017
Date

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APPENDIX A

Site Figures

TITLE: USGS TOPOGRAPHIC MAP TINIAN WITH PROJECT SITE LOCATION

FIGURE: A-01

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

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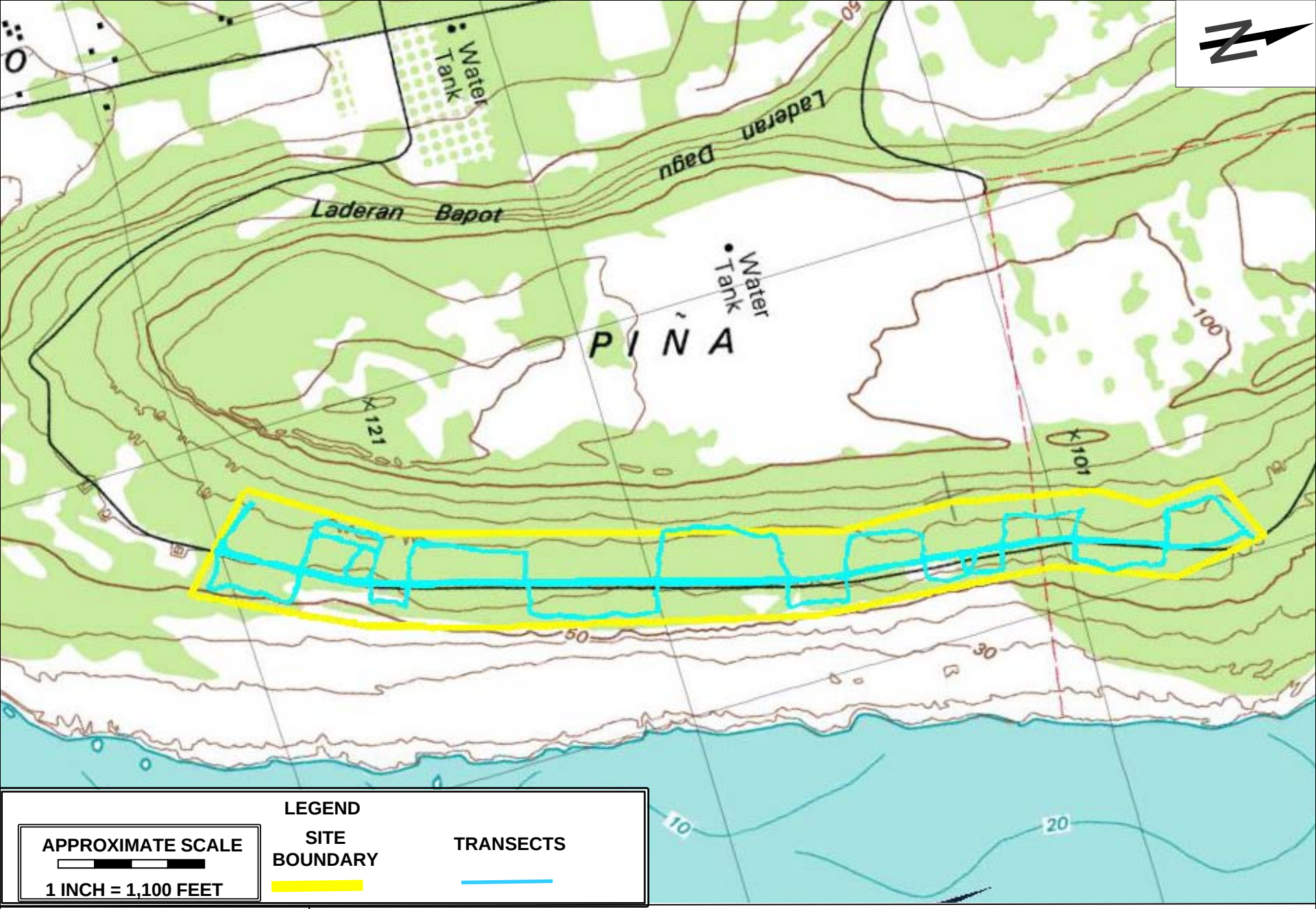
1999 USGS



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TITLE: TOPOGRAPHIC MAP OF PROJECT SITE WITH SITE BOUNDARY AND TRANSECT LINES

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-02

QTmcc | QTmca | QTmc | QTms | QTmh | QTmu | QTma

Mariana limestone

Constructional coralliferous facies, QTmcc: *white, massive, porous to dense, partly to wholly consolidated, bioconstructional limestone containing at least 40 percent of fossil corals in growth position.*

Constructional algal facies, QTmca: *white, pink-white, or buff, massive, vuggy or porous to dense, consolidated, bioconstructional limestone containing at least 50 percent of encrusting coralline algal remains, in most places as thin to thick controted bands.*

Detrital coralliferous facies, QTmc: *buff to white, stratified or massive, partly to wholly consolidated, porous conglomeratic, detrital bioclastic limestone containing at least 60 percent of whole or fractured fossil corals.*

Detrital shelly facies, QTms: *white to buff-white, stratified, soft and unconsolidated to recrystallized and fractured, porous, very fine-grained to silt-sized detrital bioclastic and biogenic limestone containing at least 5 percent of whole pelecypod valves or, in places, their empty molds.*

Detrital *Halimeda* facies, QTmh: *white to buff-white, massive to stratified, porous, friable to wholly consolidated, very coarse-grained, detrital bioclastic limestone containing at least 40 percent of whole or fractured joints of the articulated alga, Halimeda sp.*

Detrital undifferentiated facies, QTmu: *white, pink, or buff, massive to well-stratified, friable to wholly consolidated or recrystallized, porous to compact, very fine-grained to very coarse-grained, in places pebbly or conglomeratic, detrital bioclastic and biogenic limestone containing, in some places, few to many lenses or pockets of bioconstructional material corresponding to* QTmcc *or* QTmca *(too small to delineate separately).*

Detrital argillaceous facies, QTma: *buff, tan, or reddish-brown, massive to poorly stratified, poorly consolidated, generally porous, detrital limestone similar to* QTmu *but containing at least 5 percent, and in places as much as 45 percent, of clay materials distributed unevenly throughout the rock mass.*

Normal stratigraphic contact. Solid where demonstrable, dashed where inferred, dotted where covered.

Fault, high-angle or vertical. Solid where demonstrable, dashed where inferred, dotted where concealed. U, upthrown side; D, downthrown side.

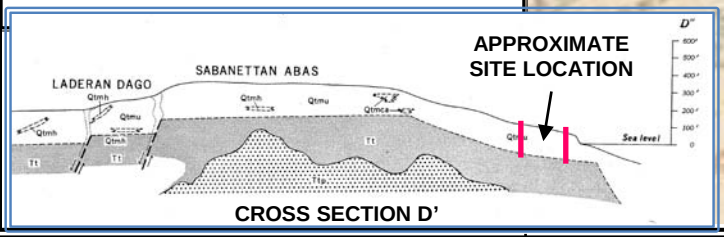
Minor high-angle fault or zone of vertical joints in linear continuity, artificially emphasized by wave erosion, stoping, or excavation during submergence.

20 — Strike and dip of beds.

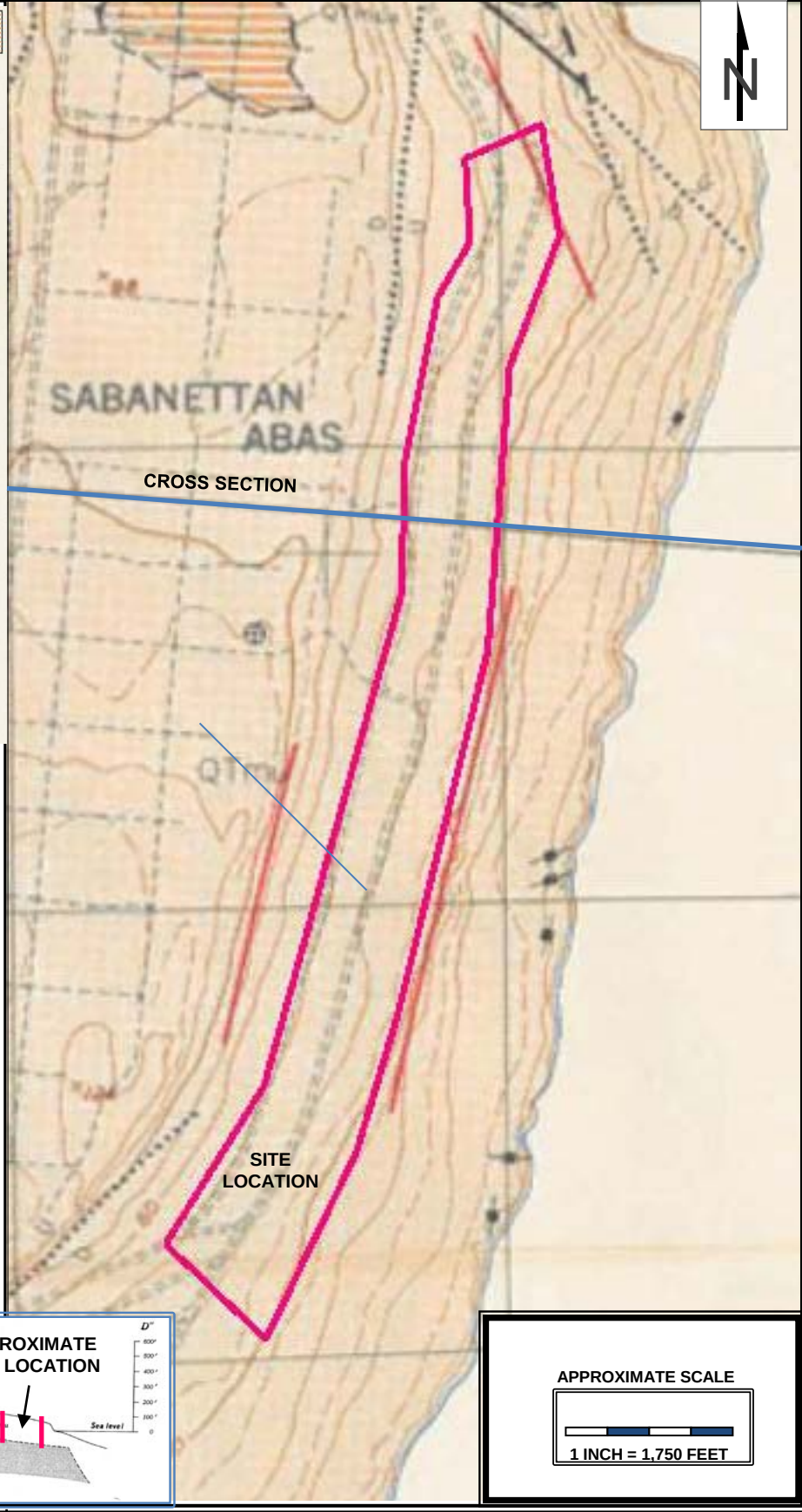
Horizontal beds.

3 — Approximate strike and dip of beds.

75 — Strike and dip of joint; vertical joint.



CROSS SECTION D'



N

APPROXIMATE SCALE

1 INCH = 1,750 FEET

TITLE: US ARMY CORPS OF ENGINEERS GEOLOGY MAP OF PROJECT SITE LOCATION

FIGURE: A-03

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

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1959 US ARMY CORPS OF ENGINEERS

TITLE: UDA SOIL MAP OF PROJECT SITE

FIGURE: A-04

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

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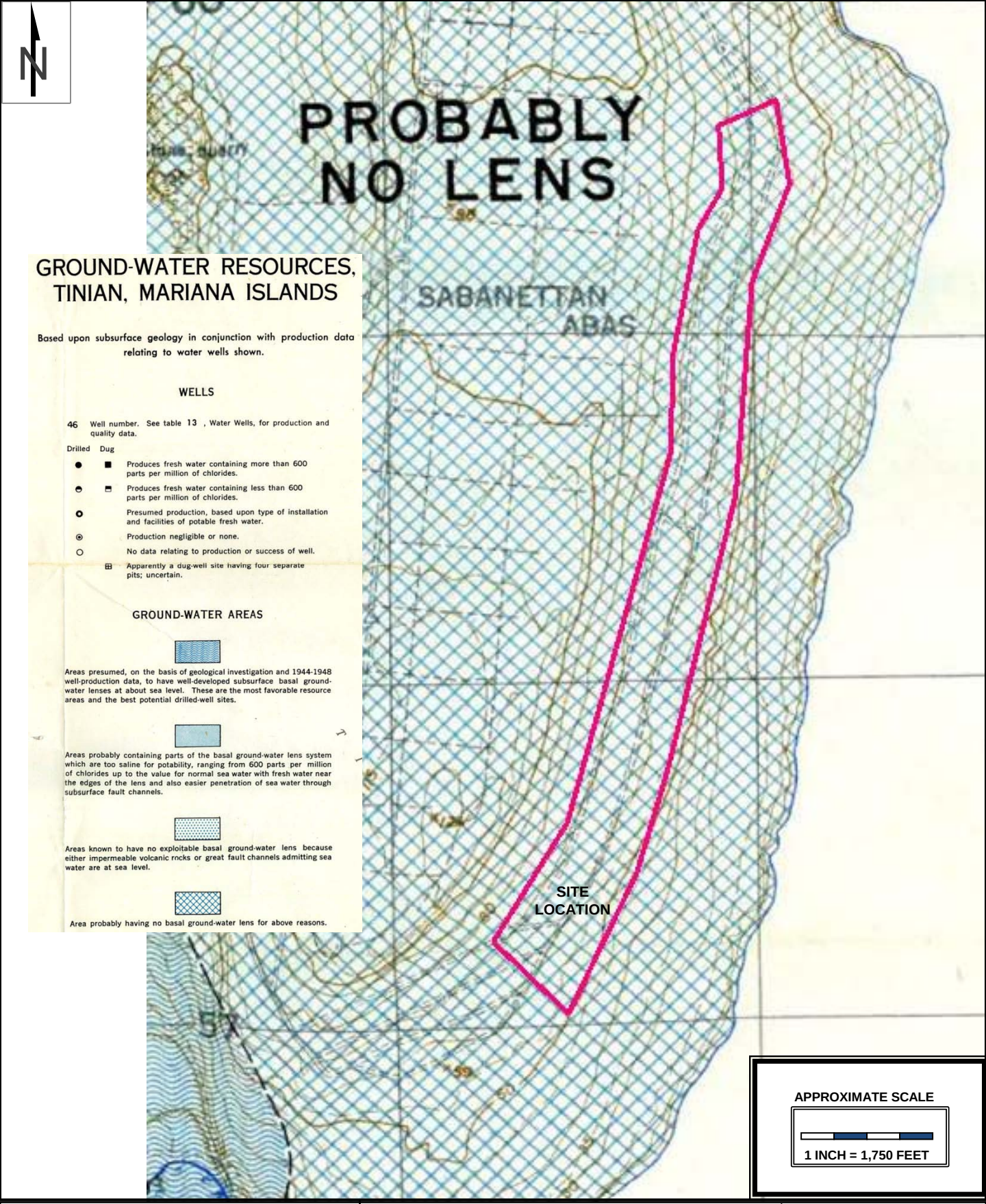
1988 USDA



GROUND-WATER RESOURCES, TINIAN, MARIANA ISLANDS

Based upon subsurface geology in conjunction with production data relating to water wells shown.

WELLS

46 Well number. See table 13 , Water Wells, for production and quality data.

Drilled	Dug	
●	■	Produces fresh water containing more than 600 parts per million of chlorides.
◓	◨	Produces fresh water containing less than 600 parts per million of chlorides.
◎		Presumed production, based upon type of installation and facilities of potable fresh water.
◉		Production negligible or none.
○		No data relating to production or success of well.
	⊞	Apparently a dug-well site having four separate pits; uncertain.

GROUND-WATER AREAS

Areas presumed, on the basis of geological investigation and 1944-1948 well-production data, to have well-developed subsurface basal ground-water lenses at about sea level. These are the most favorable resource areas and the best potential drilled-well sites.

Areas probably containing parts of the basal ground-water lens system which are too saline for potability, ranging from 600 parts per million of chlorides up to the value for normal sea water with fresh water near the edges of the lens and also easier penetration of sea water through subsurface fault channels.

Areas known to have no exploitable basal ground-water lens because either impermeable volcanic rocks or great fault channels admitting sea water are at sea level.

Area probably having no basal ground-water lens for above reasons.

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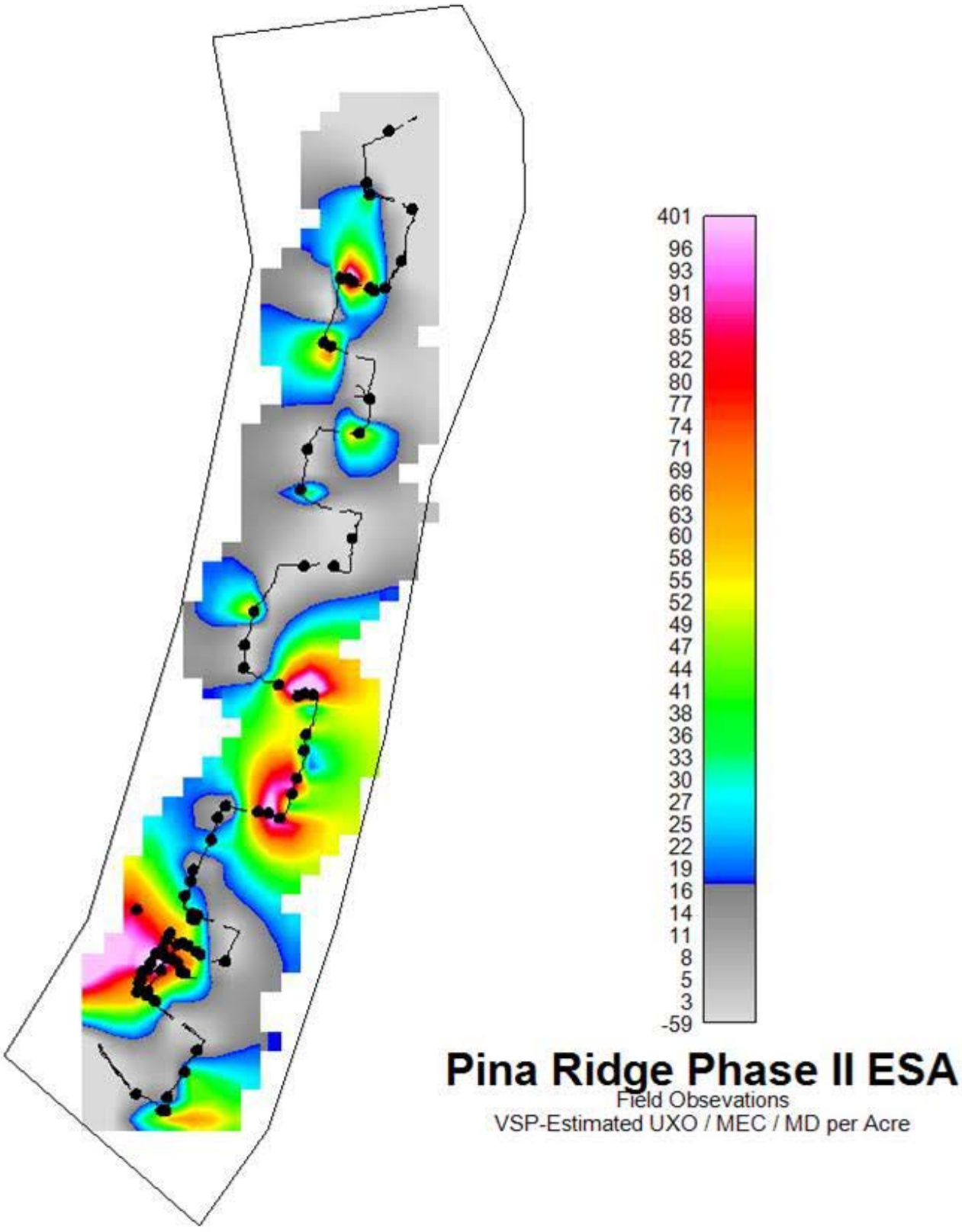
TITLE: TINIAN MASALOG HYDROLOGY MAP

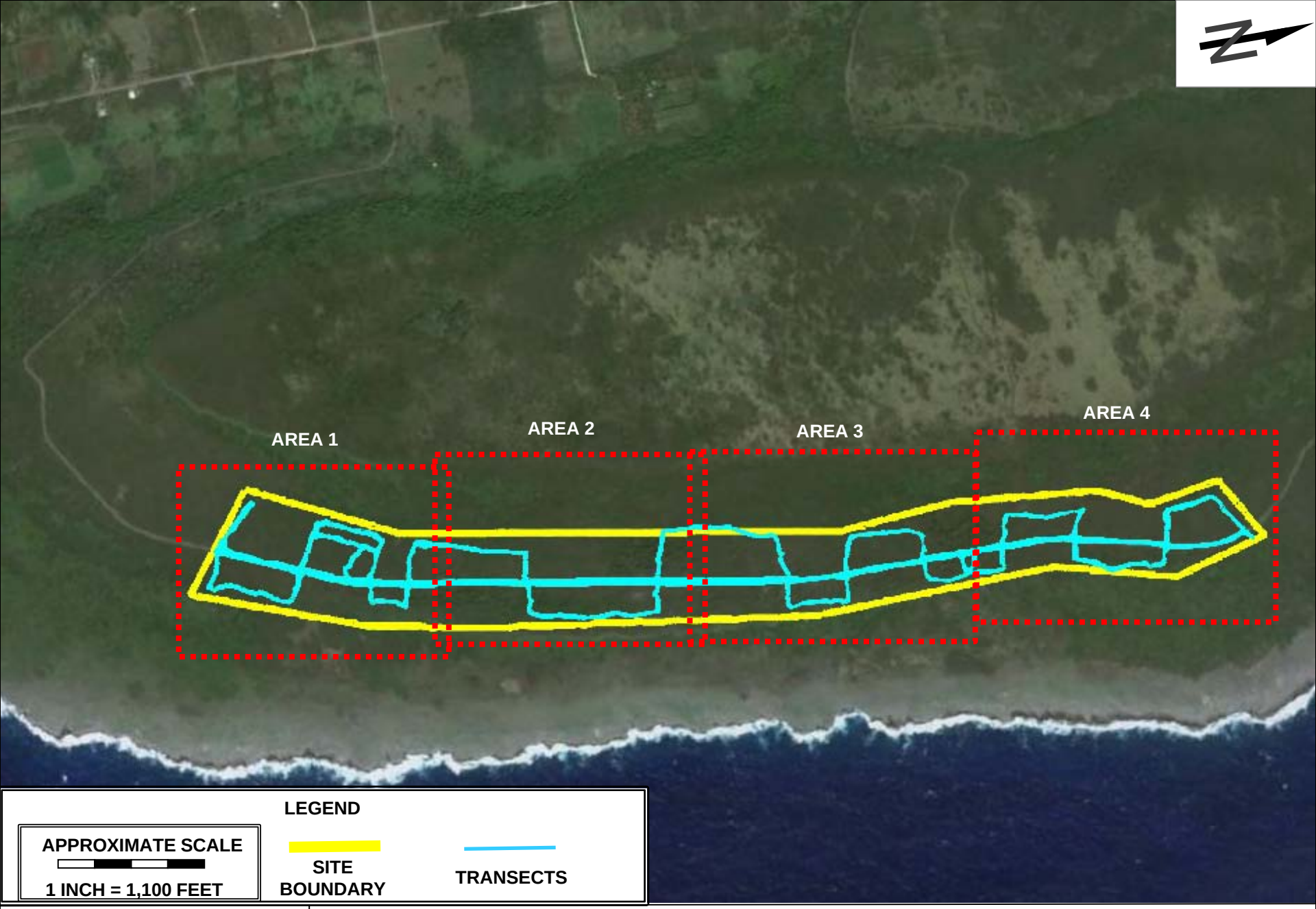
FIGURE: A-05

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

1959 US ARMY CORPS OF ENGINEERS



apec allied pacific environmental consulting	**TITLE**: Visual Sampling Plan, UXO/MEC Density Map	**FIGURE:** A-06
	PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA	



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TITLE: SATELLITE IMAGE OF PROJECT SITE WITH SITE BOUNDARY AND TRANSECT LINES

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-07

LEGEND

APPROXIMATE SCALE

1 INCH = 325 FEET

SITE BOUNDARY

TRANSECTS

D

ISM GRID

DISCRETE SAMPLE LOCATION

UXO/DMM

apec

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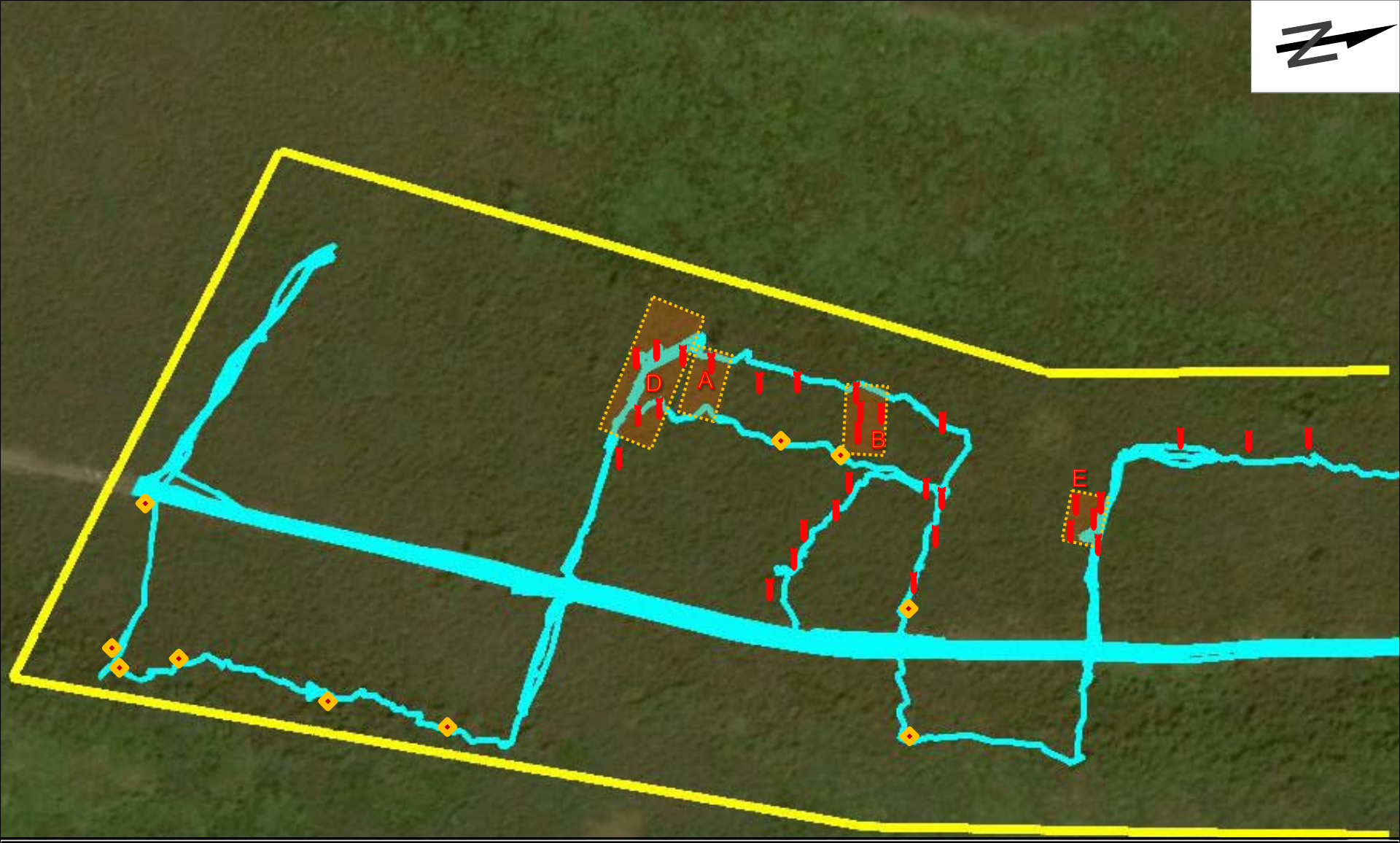
TITLE: SAMPLE LOCATONS AREA 1

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-08



APPROXIMATE SCALE

1 INCH = 325 FEET

LEGEND

SITE BOUNDARY

TRANSECTS

D

ISM GRID

MAGNETIC ANOMOLIES

UXO/DMM

apec

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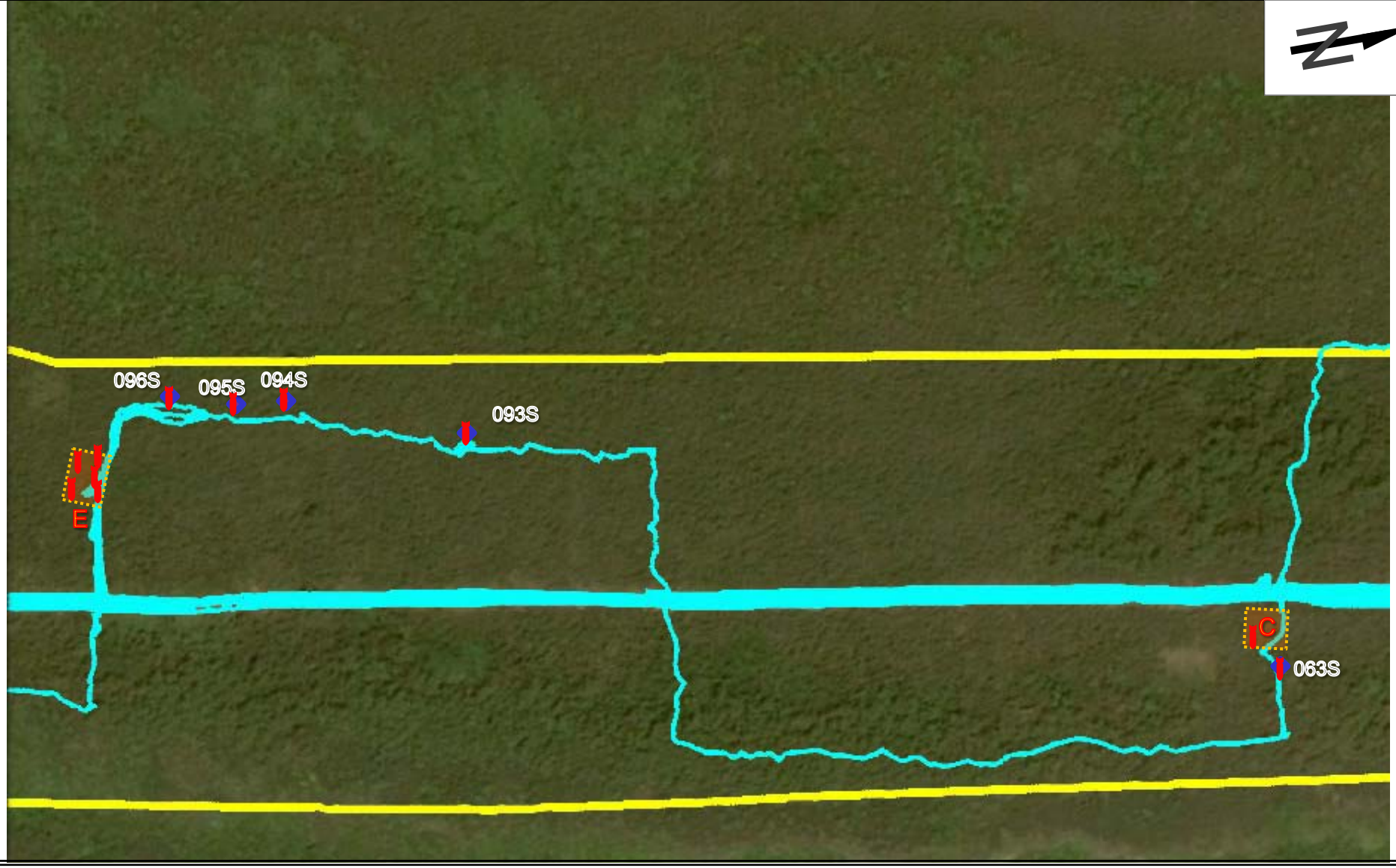
TITLE: MAGNETC ANOMOLY LOCATONS AREA 1

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-09



LEGEND

APPROXIMATE SCALE
1 INCH = 325 FEET

SITE BOUNDARY

TRANSECTS

E
GRID

DISCRETE SAMPLE LOCATION

UXO/DMM

apec
allied pacific environmental consulting

TITLE: SAMPLE LOCATONS AREA 2

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-10

LEGEND

APPROXIMATE SCALE

1 INCH = 325 FEET

SITE BOUNDARY

TRANSECTS

E

ISM GRID

MAGNETIC ANOMOLIES

UXO/DMM

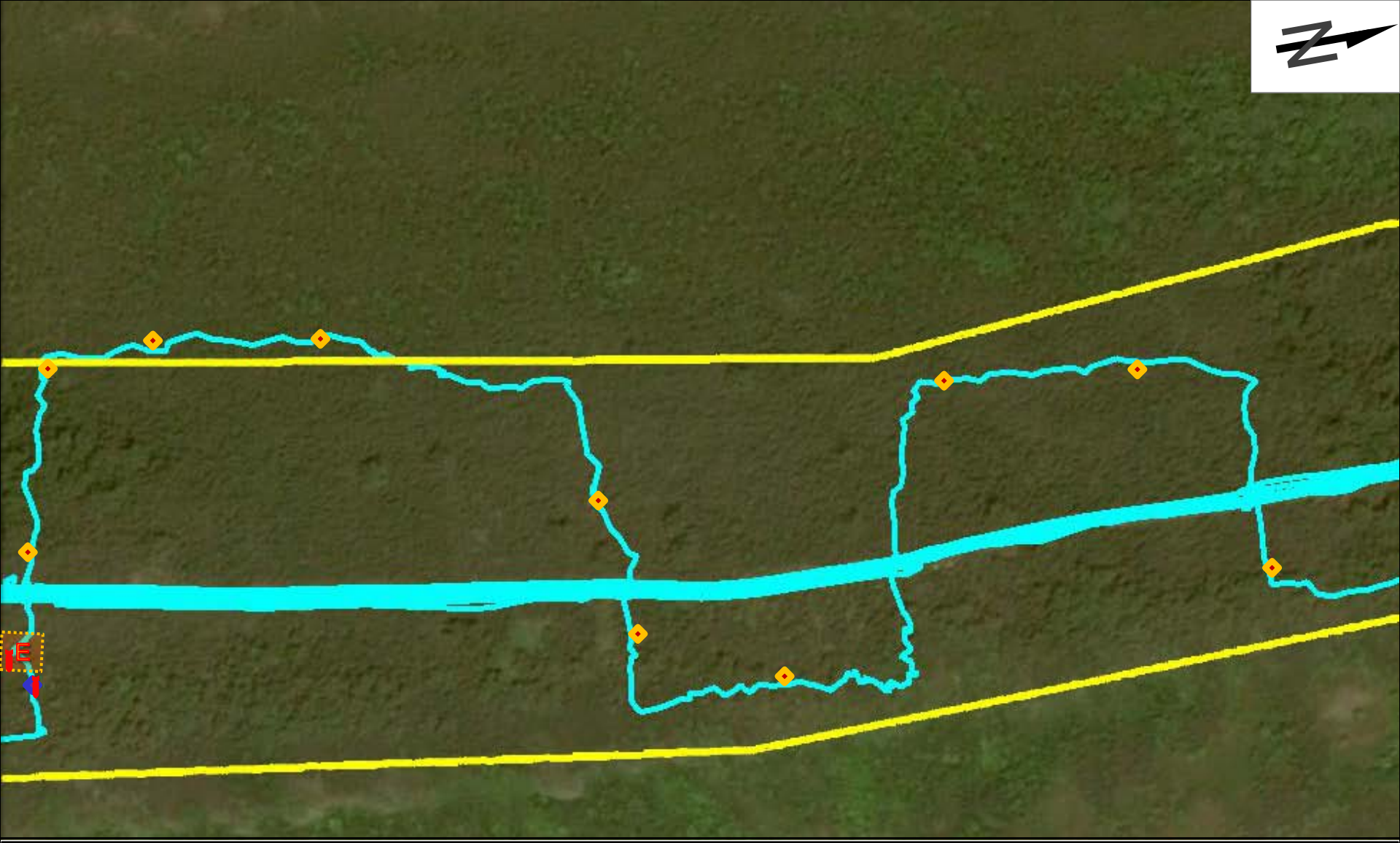
apec

allied pacific environmental consulting

TITLE: MAGNETC ANOMOLY LOCATONS AREA 2

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-11



APPROXIMATE SCALE

1 INCH = 325 FEET

LEGEND

SITE BOUNDARY

TRANSECTS

ISM GRID

MAGNETIC ANOMOLIES

DISCRETE SAMPLE LOCATION

UXO/DMM

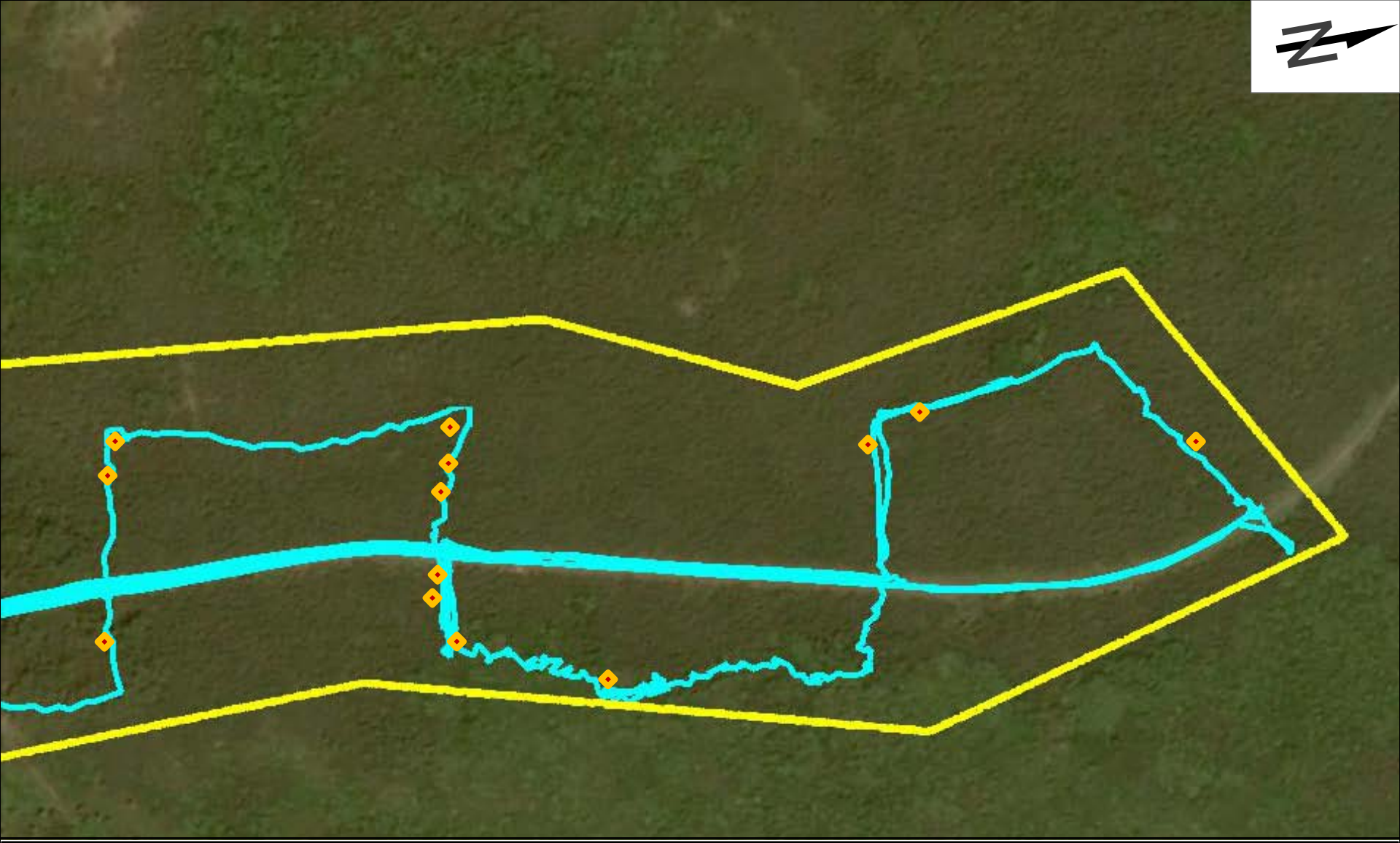
apec

allied pacific environmental consulting

TITLE: MAGNETC ANOMOLY LOCATONS WITH SAMPLE LOCATONS, AREA 3

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-12



LEGEND

APPROXIMATE SCALE

1 INCH = 325 FEET

SITE BOUNDARY

TRANSECTS

MAGNETIC ANOMOLIES

apec
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TITLE: MAGNETC ANOMOLY LOCATONS AREA 4

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: A-13

APPENDIX B

Photographs

UXO Tech III with DPL representative observing ISM sampling within Grid C. Flags denote soil sample increments. Photo facing northwest.

Typical 1,000 pound bomb encountered on site. Photo taken near the southwest corner of Grid A facing southeast.

UXO Tech II and Tech III investigating, marking and logging a bomb fragment on site. Photo taken at soil sample location 111S facing southwest.

UXO Tech III conducting UXO/MEC survey along transect line between the northwest corner of Grid C and the access road. Photo facing northwest.

1,000 pound bomb located at soil sample location 093S, with Schonstedts magnetometer shown for scale.

Bomb fragment (100 LB) typical of fragments encountered on site with, work glove for scale.

TITLE: PHOTOGRAPHS OF SITE RECONAISSANCE ACTIVITIES

PROJECT: CNMI DPL MASALOG RIDGE TINIAN CNMI, PHASE II ESA

FIGURE: C-03

APPENDIX C

Daily Activity Reports and Detailed Description of Munitions Encountered on Site

Tinian Pina Ridge Transect Investigations

UXO Team 1 (Luckanavage, Reavill)

Team: Tinian Pina Ridge

Date: 09 January 2017

Transect	Length x Width	X coordinate	Y coordinate	Weight in Lbs.	MD/UXO	# Anomalies	# UXO	Nomenclature
9-10 eastern portion	**300' x 5'**							
		356570	1657736	**2**	MD			
		356597	1657732	2	MD			
		356625	1657720	1	MD			
Total MD per transect:				**5**	**MD**	**30**		
Transect 10-11 Complete	**1000' x 5'**							
		356656	1657782	0.5	MD			
		356690	1657822	8	MD			
		356687	1657893	2	MD			
		356692	1657934	100	MD			
Total MD per transect:				**110.5**	**MD**	**35**		
Transect 11-12 Complete	**600' x 5'**	356709	1658034	**175**	**MD**			
		356687	1658038	100	MD			
		356672	1658032	1,000	US HE Bomb			
		356623	1658060	1	MD			
		356534	1658104	12	MD			
Total MD per transect:				**288**	**MD**	**36**		
				1000	**HE Bomb**		**1**	**AN-M65 U.S. HE Bombs**

Transect 12-13 Complete	**1000’ x 5’**							
		356536	1658162	5	MD			
		356560	1658248	10	MD			
Total MD per transect:				**15**	**MD**	**15**		
Transect 13-14 Complete	**600’ x 5’**							
		356686	1658364	5	MD			
		356763	1658364	10	MD			
Total MD per transect:				**15**	**MD**	**7**		
Transect 14 -15 Complete	**500’ x 5’**							
		356809	1658434	0.5	MD			
Total MD per transect:				**0.5**	**MD**	**1**		
Transect 15-16 Complete	**600’ x 5’**							
Total MD per transect:				**0**	**MD**	**0**		
Transect 16-17 Complete	**500’ x 5’**							
		356678	1658559	10	MD			
		356696	1658662	5	MD			
Total MD per transect:				**15**	**MD**	**10**		
Transect 17-18 Complete	**600’ x 5’**							
		356827	1658703	5	MD			
Total MD per transect:				**5**	**MD**	**2**		
Transect 18-19 Complete	**500’ x 5’**							
		356854	1658791	1	MD			
Total MD per transect:				**1**	**MD**	**2**		
Transect 19-20 Complete	**600’ x 5’**							

		356837	1659985	1	MD			
		356755	1658925	15	MD			
Total MD per transect:				**16**	**MD**	**15**		
Transect 20-21 Complete	**500’ x 5’**							
		356737	1658935	1	MD			
Total MD per transect:				**1**	**MD**	**1**		
Transect 21-22 West Side	**300’ x 5’**							
		356780	1659098	0.5	MD			
		356797	1659098	10	MD			
		356812	1659089	5	MD			
Total MD per transect:				**15.5**	**MD**	**10**		

Date: 10 January 2017								
Transect 21-22 eastern portion	**300’ x 5’**							
		356854	1659074	**5**	MD			
		356865	1659067	5	MD			
Total MD per transect:				**10**	**MD**	**25**		
Transect 22-23	**750’ x 5’**							
		356893	1659074	6	MD			
		356934	1659144	25	MD			
Total MD per transect:				**31**	**MD**	**20**		
Transect 23-24	**500’ x 5’**							
		356961	1659275	10	MD			
		356854	1659312	20	MD			

Total MD per transect:				**30**	**MD**	**30**		
Transect 24-25	**300’ x 5’**							
		356846	1659343	1	MD			
Total MD per transect:				**1**	**MD**	**3**		
Transect 25-26	**400’ x 5’**							
		356902	1659476	20	MD			
Total MD per transect:				**20**	**MD**	**1**		
Transect 9-10 western portion	**250’ x 5’**							
		356488	1657751	1	MD			
Total MD per transect:				**1**	**MD**	**1**		
Transect 8 - 9	**750’ x 5’**							
		356467	1657721	5	MD			
		356451	1657665	1000	**HE Bomb**			
		356405	1657588	1000	**HE Bomb**			
		356399	1657560	1000	**HE Bomb**			
		365384	1657522	1000	**HE Bomb**			
Total MD per transect:				**5**	**MD**	**25**		
				4000	**HE Bomb**		**4**	**AN-M65 U.S. HE Bombs**
Transect 7-8	**600’ x 5’**							
		356403	1657476	2	HE Bomb			
		356405	1657472	2	**HE Bomb**			
		356410	1657460	1	**HE Bomb**			
		356401	165463	1	**HE Bomb**			
		356417	1657471	1	**HE Bomb**			
Total MD per transect:				**7**	**HE Boms**	**7**	**7**	**AN-M65 U.S. HE Bombs**

Transect 6-7	300’ x 5’							
		356486	1657354	500	**MD**			
Total MD per transect:				**500**	**MD**	**1**		
Transect 5-6	**600’ x 5’**							
		356379	1657402	1000	HE Bomb			
		356392	1657394	1000	**HE Bomb**			
		356414	1657379	1000	HE Bomb			
		356424	1657371	20	MD			
Total MD per transect:				**20**	**MD**	**4**		
				3000	**HE Bomb**		**3**	**AN-M65 U.S. HE Bombs**
Transect 4-5	**600’ x 5’**							
		356274	1657308	1000	HE Bomb			
		356292	1657331	1000	HE Bomb			
		356297	1657350	1000	HE Bomb			
		356311	1657374	1000	HE Bomb			
		356338	1657409	1000	HE Bomb			
Total MD per transect:				**5000**	**HE Bomb**	**5**	**5**	**AN-M65 U.S. HE Bombs**
Transect 3-4 western portion	**400’ x 5’**							
		356309	1657252	1000	HE Bomb		1	
		356290	1657266	1000	HE Bomb		1	
		356291	1657278	2000	HE Bomb		2	
		356265	1657279	1000	HE Bomb		1	
		356262	1657486	1000	HE Bomb		1	
		356262	1657276	1000	HE Bomb		1	
		356268	1657299	1000	HE Bomb		1	

Total MD per transect:				**8000**	**HE Bomb**	**8**	**8**	**AN-M65 U.S. HE Bombs**
				15	MD			
Date: 11 January 2017								
Transect 1-2	**750’ x 5’**							
		356335	1656972	200	MD			
		356325	1656974	200	MD			
		356260	1657016	25	Steel Plate			
Total MD per transect:				**235**	**MD**	**20**		
Transect 2-3	**600’ x 5’**							
		356415	1657127	0.5	MD			
		356384	1657072	0.5	MD			
		356339	356339	3	Barbed Wire			
Total MD per transect:				**1**	**MD**	**8**		
Transect 3-4 eastern portion	**300’ x 5’**							
Total MD per transect:						**0**		
Transect Additional Between Transects 3, 4 & 5 Western Side of Road	**800’ x 5’**							
		356375	1657328	1000	HE Bomb			
		356384	1657323	1000	HE Bomb			
		356365	1657352	1000	HE Bomb			
		356353	1657359	1000	HE Bomb			
		356365	1657397	1000	HE Bomb			
		356339	1657361	1000	HE Bomb			

		356324	1657332	1000	HE Bomb			
Total MD per transect:				**7000**		**7**	**7**	**AN-M65 U.S. HE Bombs**
Soil Sample Grid A	**100’ 100’**							
		356271	1657310	1000	HE Bomb			
Total MD per transect:				**1000**		**1**	**1**	**AN-M65 U.S. HE Bombs**
Soil Sample Grid B	**100’ 100’**							
		356330	1657371	2-1000	HE Bomb			
		356329	1657381	1000	HE Bomb			
		356324	1657379	1000	HE Bomb			
		356326	1657384	1000	HE Bomb			
Total MD per transect:				**5000**		**5**	**5**	**AN-M65 U.S. HE Bombs**

Date: 12 January 2017								
Date: 13 January 2017								
Transect 4-5								
		356346	1657426	1000	HE Bomb			
		356274	1657328	1000	HE Bomb			
				2000			**2**	**AN-M65 U.S. HE Bombs**
						335	51	

Daily Report

Date:	**09 January 2017**	Contract Number:	
Location:	**Tinian Pina Ridge**		
Weather Conditions:	**Partly Cloudy, Rain, Temp High of 84 Low of 77**		

Daily UXO Team Activity:
UXO Team 1 (Luckanavage, Reavill)

Transect investigation

Transect 9-10 eastern portion 300' x 5'. 30 anomalies, 5lbs MD.
GPS Coordinates:
#55 - 0356570, 1657736 – 2lbs Frag
#56 – 0356597, 1657732 – 2lbs Frag
#57 – 0356625, 1657720 – 1lb Frag.

Transect 10-11 Complete 1000' x 5'. 35 anomalies 110.5lbs MD.
GPS Coordinates:
#58 – 0356656, 1657782 – 0.5lbs Frag
#59 – 035669, 1657822 – 8lbs Frag
#60 – 0356687, 1657893 – 2lbs Frag
#61 – 0356692, 1657934 – 100lbs Frag

Transect 11-12 Complete 600' x 5'. 36 anomalies 288lbs of MD, 1 UXO U.S. 1,000lb HE Bomb.
GPS Coordinates:
#62 – 0356709, 1658034 – 175lbs Frag
#63 – 0356687, 1658038 – 100lbs Frag
#64 – 0356672, 1658032 – 1,000lb US HE Bomb
#65 – 0356623, 1658060 – 1lb Frag
#67 – 0356534, 1658104 – 12lbs Frag

Transect 12-13 Complete 1000' x 5'. 15 anomalies 10lbs of MD.
GPS Coordinates:
#68 – 0356536, 1658162 – 5lbs Frag
#69 – 0356560, 1658248 – 10lbs Frag

Transect 13-14 Complete 600' x 5'. 7 anomalies 15lbs MD.
GPS Coordinates:
#70 – 0356686, 1658364 – 5lbs Frag
#71 – 0356763, 1658364 – 10lbs Frag

Transect 14-15 Complete 500’ x 5’. 1 anomaly 0.5lbs MD
GPS Coordinates:
#72 – 0356809, 1658434 – 0.5lbs Frag

Transect 15-16 Complete 600’ x 5’ with 0 anomalies.

Transect 16-17 Complete 500’ x 5’. 10 anomalies 15lbs MD.
GPS Coordinates:
#73 – 0356678, 1658559 – 10lbs Frag
#74 – 0356696, 1658662 – 5lbs Frag

Transect 17-18 Complete 600’ x 5’. 2 anomalies 5lbs MD.
GPS Coordinates:
#75 – 0356827, 1658703 – 5lbs Frag

Transect 18-19 Complete 500’ x 5’. 2 anomalies 1lb MD.
GPS Coordinates:
#76 – 0356854, 1658791 – 1lb Frag

Transect 19-20 Complete 600’ x 5’. 15 anomalies 16lbs MD.
GPS Coordinates:
#77 – 0356837, 1659985 – 1lb Frag
#78 – 0356755, 1658925 – 15lbs Frag

Transect 20-21 Complete 500’ x 5’. 1 anomaly 1lb MD.
GPS Coordinates:
#79 – 0356737, 1658935 – 1lb Frag

Transect 21-22 West Side 300’ x 5’. 10 anomalies 15.5lbs MD.
GPS Coordinates:
#80 – 0356780, 1659098 – 0.5lbs Frag
#81 – 0356797, 1659098 – 10lbs Frag
#82 - 0356812, 1659089 – 5lbs Frag

Total anomalies: 164
Total MD: 476.5
UXO: 1 – 1,000lb HE Bomb

Other Daily Events:

Morning UXO Safety Brief Given By K. Luckanavage

Equipment:

II. Instructions Received:

III. Safety Comments: Wear proper PPE in all operations.			
IV. UXO Summary			
Type	**Location**		
1,000lb US HE Bomb	Transect 11-12 GPS: 0356672, 1658032		
V. Personnel/Equipment Utilization: Hand Held magnetometers and hand tools			
a. Personnel On-site	Position	Location/ Work	Hours/Stby
1. Kyle Luckanavage	**SUXOS**	Pina Ridge	8
2. Monte Reavill	**Tech II**	Pina Ridge	8

VI**. Plans for the next work day:** Daytime MEC support: Giving UXO Support in NPA	
Senior UXO Supervisor	Kyle Luckanavage 

Daily Report

Date:	**10 January 2017**	Contract Number:	
Location:	**Tinian Pina Ridge**		
Weather Conditions:	**Partly Cloudy, Rain, Temp High of 84 Low of 77**		

Daily UXO Team Activity:
UXO Team 1 (Luckanavage, Reavill)

Transect investigation

Transect 21-22 eastern portion 300' x 5'. 25 anomalies, 10lbs MD.
GPS Coordinates:
#83 – 0356854, 1659074 – 5lbs Frag
#84 – 0356865, 1659067 – 5lbs Frag

Transect 22-23 750' x 5'. 20 anomalies, 31lbs MD.
GPS Coordinates:
#85 – 0356893, 1659074 – 6lbs Frag
#86 – 0356934, 1659144 – 25lbs Frag

Transect 23-24 500' x 5'. 30 anomalies, 30lbs MD.
GPS Coordinates:
#87 – 0356961, 1659275 – 10lbs Frag
#88 – 0356854, 1659312 – 20lbs Frag

Transect 24-25 300' x 5'. 3 anomalies, 1lb MD.
GPS Coordinates:
#89 - 0356846, 1659343 – 1lb Frag

Transect 25-26 400' x 5'. 1 anomaly, 20lbs MD.
GPS Coordinates:
#90 – 0356902, 1659476 – 20lbs Frag

Transect 9-10 western portion 250' x 5'. 1 anomaly, 1lb MD.
GPS Coordinates:
#91 – 0356488, 1657751 – 1lb Frag

Transect 8-9 750' x 5'. 25 anomalies, 5lbs MD, 4 - 1,000lb U.S. HE Bombs
GPS Coordinates:
#92 – 0356467, 1657721 – 5lbs Frag
#93 – 0356451, 1657665 – 1,000lb HE Bomb
#94 – 0356405, 1657588 – 1,000lb HE Bomb

#95 – 0356399, 1657560 – 1,000lb HE Bomb
#96 – 0365384, 1657522 – 1,000lb HE Bomb

Transect 7-8 600' x 5'. 7 anomalies, 7 – 1,000lbs U.S. HE Bombs
GPS Coordinates:
#97 – 0356403, 1657476 – 2-1,000lb HE Bombs
#98 – 0356405, 1657472 – 2-1,000lb HE Bombs
#99 – 0356410, 1657460 – 1,000lb HE Bomb
#100 – 0356401, 165463 – 1,000lb HE Bomb
#101 – 0356417, 1657471 – 1,000lb HE Bomb

Transect 6-7 300' x 5'. 1 anomaly, 500lbs MD
GPS Coordinates:
#102 – 0356486, 1657354 – 500lbs Frag

Transect 5-6 600' x 5'. 4 anomalies, 20lbs MD, 3-1,000lb U.S. HE Bombs
GPS Coordinates:
#115 – 0356379, 1657402 – 1,000lb HE Bomb
#116 – 0356392, 1657394 – 1,000lb HE Bomb
#117 – 0356414, 1657379 – 1,000lb HE Bomb
#118 – 0356424, 1657371 – 20lbs Frag

Transect 4-5 600' x 5'. 5 anomalies, 5-1,000lb U.S. HE Bombs
GPS Coordinates:
#110 – 0356274, 1657308 – 1,000lb HE Bomb
#111 – 0356292, 1657331 – 1,000lb HE Bomb
#112 – 0356297, 1657350 – 1,000lb HE Bomb
#113 – 0356311, 1657374 – 1,000lb HE Bomb
#114 – 0356338, 1657409 – 1,000lb HE Bomb

Transect 3-4 western portion 400' x 5'. 8 anomalies, 8-1,000 U.S. HE Bombs
GPS Coordinates:
#103 – 0356309, 1657252 – 1,000lb HE Bomb
#104 – 0356290, 1657266 – 1,000lbHE Bomb
#105 – 0356291, 1657278 – 2-1,000lb HE Bombs
#106 – 0356265, 1657279 – 1,000lb HE Bomb
#107 – 0356262, 1657486 – 1,000lb HE Bomb
#108 – 0356262, 1657276 – 1,000lb HE Bomb
#109 – 0356268, 1657299 – 1,000lb HE Bomb

Other Daily Events:

Morning UXO Safety Brief Given By K. Luckanavage

Equipment:

II. Instructions Received:
III. Safety Comments: Wear proper PPE in all operations.
IV. UXO Summary

Type	**Location**
27 - 1,000lb US HE Bomb	Listed Above

V. Personnel/Equipment Utilization: Hand Held magnetometers and hand tools

a. Personnel On-site	Position	Location/ Work	Hours/Stby
1. Kyle Luckanavage	**SUXOS**	Pina Ridge	8
2. Monte Reavill	**Tech II**	Pina Ridge	8

VI**. Plans for the next work day:**
Daytime MEC support:
Giving UXO Support in NPA

Senior UXO Supervisor	Kyle Luckanavage 

Daily Report

Date:	**11 January 2017**	Contract Number:	
Location:	**Tinian Pina Ridge**		
Weather Conditions:	**Partly Cloudy, Rain, Temp High of 84 Low of 77**		

Daily UXO Team Activity:
UXO Team 1 (Luckanavage, Reavill)

Transect investigation

Transect 1-2, 750' x 5'. 20 anomalies, 235lbs MD and 25lbs of CD.
GPS Coordinates:
#122 – 0356335, 1656972 – Frag 200lbs
#123 – 0356325, 1656974 – Frag 30lbs
#124 – 0356260, 1657016 – Steel Plate 25lbs

Transect 2-3 600' x 5'. 8 anomalies, 1lb MD and 3lbs of CD.
GPS Coordinates:
#119 – 0356415, 1657127 – Frag 0.5lbs
#120 – 0356384, 1657072 – Frag 0.5lbs
#121 – 0356339, 1657006 – Barbed Wire 3lbs

Transect 3-4 eastern portion, 300' x 5'. 0 anomalies.

Transect Additional Between Transects 3, 4 & 5 Western Side of Road. 800' x 5'. 7 Anomalies
7-1,000lb AN-M65 U.S. HE Bombs
GPS Coordinates:
#125 – 0356375, 1657328 – 1,000lb HE Bomb
#126 – 0356384, 1657323 – 1,000lb HE Bomb
#128 – 0356365, 1657352 – 1,000lb HE Bomb
#129 – 0356353, 1657359 – 1,000lb HE Bomb
#130 – 0356365, 1657397 – 1,000lb HE Bomb
#131 – 0356339, 1657361 – 1,000lb HE Bomb
#132 – 0356324, 1657332 – 1,000lb HE Bomb

Soil Sample Grid A: 100' x 100' 1-1,000lb HE Bomb (AN-M65)
GPS Coordinates:
#133 – 0356271, 1657310 – 1,000lb HE Bomb

Soil Sample Grid B: 100' x 100' 5-1,000lb HE Bomb (AN-M65)
GPS Coordinates:
#134 – 0356330, 1657371 – 2-1,000lb HE Bombs

#135 – 0356329, 1657381 – 1,000lb HE Bomb
#136 – 0356324, 1657379 – 1,000lb HE Bomb
#137 – 0356326, 1657384 – 1,000lb HE Bomb

Other Daily Events:

Morning UXO Safety Brief Given By K. Luckanavage

Equipment:

II. Instructions Received:

III. Safety Comments: Wear proper PPE in all operations.

IV. UXO Summary

Type	**Location**
13 - 1,000lb US HE Bomb (AN-M65)	Listed Above

V. Personnel/Equipment Utilization: Hand Held magnetometers and hand tools

a. Personnel On-site	Position	Location/ Work	Hours/Stby
1. Kyle Luckanavage	**SUXOS**	Pina Ridge	8
2. Monte Reavill	**Tech II**	Pina Ridge	8

VI**. Plans for the next work day:**
Daytime MEC support:
Giving UXO Support in NPA

Senior UXO Supervisor	Kyle Luckanavage 

Daily Report

Date:	**12 January 2017**	Contract Number:	
Location:	**Tinian Pina Ridge**		
Weather Conditions:	**Partly Cloudy, Rain, Temp High of 84 Low of 77**		

Daily UXO Team Activity:
UXO Team 1 (Luckanavage, Reavill)

Provided UXO support for soil sampling activities. No new UXO items encountered today.

Other Daily Events:

Morning UXO Safety Brief Given By K. Luckanavage

Equipment:

II. Instructions Received:

III. Safety Comments: Wear proper PPE in all operations.

IV. UXO Summary

Type	**Location**

V. Personnel/Equipment Utilization: Hand Held magnetometers and hand tools

a. Personnel On-site	Position	Location/ Work	Hours/Stby
1. Kyle Luckanavage	**SUXOS**	Pina Ridge	8

2. Monte Reavill	**Tech II**	Pina Ridge	8

VI**. Plans for the next work day:** Daytime MEC support: Giving UXO Support for soil sampling	
Senior UXO Supervisor	Kyle Luckanavage 

Daily Report

Date:	**13 January 2017**	Contract Number:	
Location:	**Tinian Pina Ridge**		
Weather Conditions:	**Partly Cloudy, Rain, Temp High of 84 Low of 77**		

Daily UXO Team Activity:
UXO Team 1 (Luckanavage, Reavill)

Provided UXO support for soil sampling activities.
Found 2 additional AN-M65 1,000lb Bombs near Transect 4-5 while conducting soil sampling.
GPS Coordinates:
0356346, 1657426
0356274, 1657328

All activities for this phase 2 are complete.
Demob tomorrow Saturday 14 January 2017

Other Daily Events:

Morning UXO Safety Brief Given By K. Luckanavage

Equipment:

II. Instructions Received:

III. Safety Comments: Wear proper PPE in all operations.

IV. UXO Summary

Type	**Location**
2 – AN-M65 1,000lb HE Bombs	Transect 4-5 Coordinates Above.

V. Personnel/Equipment Utilization: Hand Held magnetometers and hand tools

a. Personnel On-site	Position	Location/ Work	Hours/Stby
1. Kyle Luckanavage	**SUXOS**	Pina Ridge	8
2. Monte Reavill	**Tech II**	Pina Ridge	8

VI**. Plans for the next work day:** Daytime MEC support: Giving UXO Support for soil sampling	
Senior UXO Supervisor	Kyle Luckanavage 

BOMB, GENERAL PURPOSE, 1,000 LB, AN-M65 & AN-M65A1

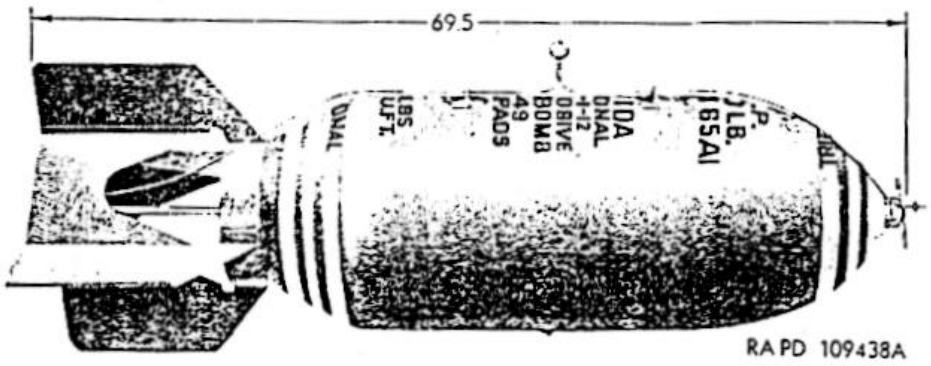

Figure 85. Bomb, GP, tritonal, 1,000-lb, AN-M65A1.

Description. This bomb is of cylindrical construction and may be charged with Tritonal, TNT, Comp B, or 50-50 Amatol. The primary difference between the M65 and M65A1 is that the M65A1 is fitted with a single lifting lug located opposite of the standard dual lifting lugs. If the Navy uses the bomb, it may be fitted with a trunnion band, M2A1. This bomb may be fitted with conical or box fins or with a parachute retarding unit. These will affect the overall length of the bomb; the length of bomb listed below is for the bomb without a tail assembly. The bomb is painted Olive Drab with Yellow bands around the nose and Tail indicating the filler: one for Amatol or TNT, two for Comp B, and three for Tritonal.

Body Length.....67 inches
Body Diameter.....19 inches

	50-50 Amatol	TNT	Comp B	Tritonal
Total Weight	970 lbs	1,015 lbs	1,013 lbs	1,016 lbs
Filler Weight	529.8 lbs	545.2 lbs	572.2 lbs	575.7 lbs

	Nose	Tail
Fuze	M103, M103A1	M102, M102A1, M102A2
	M135, M135A1	M162
	M136, M136A1	M114, M114A1
	M139, M139A1	M117
	M140, M140A1	M125, M125A1
	M149	M134
	M163, M164, M165	Mk 238 Mod 0
	Mk 239	Mk 230
	Mk 243, Mk 244	Mk 240
	T50E4, M166, T82	

References: *NAVSEA OP 1664*, dated 28 May 1947, with change 1, dated 15 January 1969; *TM 9-1980*, dated December 1950

APPENDIX D

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 580-65448-1

Job Description: DPL Tinian Pina Ridge Phase II ESA

For:
Allied Pacific Environmental Consulting
PO BOX 5091
Hagatna, Guam 96932

Attention: Robert Jordan

Approved for release.
Elaine M Walker
Project Manager II
2/1/2017 3:07 PM

Elaine M Walker, Project Manager II
5755 8th Street East, Tacoma, WA, 98424
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02/01/2017

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This report shall not be reproduced except in full, without prior express written approval by the laboratory. The results relate only to the item(s) tested and the sample(s) as received by the laboratory.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

CASE NARRATIVE
Client: Allied Pacific Environmental Consulting
Project: DPL Tinian Pina Ridge Phase II ESA
Report Number: 580-65448-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Twenty-five samples were received on 01/18/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4oC.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DIESEL RANGE ORGANICS WITH INCREMENTAL PREPARATION

Samples DPL-GA-01-011217 (580-65448-1), DPL-GA-02-011217 (580-65448-2), DPL-GA-03-011217 (580-65448-3), DPL-GB-011217 (580-65448-4), DPL-GC-011217 (580-65448-5), DPL-GD-011217 (580-65448-6) and DPL-GE-011317 (580-65448-7) were analyzed for Diesel Range Organics with incremental preparation in accordance with 8015B DRO. The samples were leached on 01/20/2017, prepared on 01/20/2017 and analyzed on 01/23/2017.

o-Terphenyl failed the surrogate recovery criteria low for DPL-GA-02-011217 (580-65448-2). o-Terphenyl failed the surrogate recovery criteria low for DPL-GA-03-011217 (580-65448-3). o-Terphenyl failed the surrogate recovery criteria low for DPL-GB-011217 (580-65448-4). o-Terphenyl failed the surrogate recovery criteria low for DPL-GA-01-011217MS (580-65448-1MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis were not performed.

HI Diesel Range Organics (>C12-C24) and HI Residual Range Organics (>C24-C32) failed the recovery criteria low for the MS of sample DPL-GA-01-011217MS (580-65448-1) in batch 580-236881. HI Diesel Range Organics (>C12-C24) failed the recovery criteria low for the MSD of sample DPL-GA-01-011217MSD (580-65448-1) in batch 580-236881. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The peak profile present in this sample DPL-GA-01-011217 (580-65448-1), DPL-GA-02-011217 (580-65448-2), DPL-GA-03-011217 (580-65448-3), DPL-GB-011217 (580-65448-4), DPL-GC-011217 (580-65448-5), DPL-GD-011217 (580-65448-6) and DPL-GE-011317 (580-65448-7) is atypical of a hydrocarbon pattern.

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

DIESEL RANGE ORGANICS

Samples DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), DPL-139S-011317 (580-65448-18), DPL-132S-011317 (580-65448-19), DPL-129S-011317 (580-65448-20), DPL-128S-011317 (580-65448-21), DPL-125S-011317 (580-65448-22), DPL-126S-011317 (580-65448-23), DPL-063S1-011317 (580-65448-24) and DPL-126S1-011317 (580-65448-25) were analyzed for Diesel Range Organics in accordance with 8015B DRO. The samples were prepared on 01/23/2017 and analyzed on 01/23/2017 and 01/24/2017.

The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), DPL-132S-011317 (580-65448-19), DPL-126S-011317 (580-65448-23), DPL-063S1-011317 (580-65448-24) and DPL-126S1-011317 (580-65448-25).

The following continuing calibration verification (CCV) standard associated with batch 580-236927 recovered outside acceptance criteria for %D for surrogate o-Terphenyl low (criteria 20). Since the %Recovery is within the acceptance criteria for the surrogate in associated samples (unless matrix interferes) and all the other surrogates and target analytes were within %D criteria; therefore, the data have been reported. DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), (CCV 580-236927/25), (CCV 580-236927/36) and (CCV 580-236927/43)

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

EXPLOSIVES WITH INCREMENTAL PREPARATION

Samples DPL-GA-01-011217 (580-65448-1), DPL-GA-02-011217 (580-65448-2), DPL-GA-03-011217 (580-65448-3), DPL-GB-011217 (580-65448-4), DPL-GC-011217 (580-65448-5), DPL-GD-011217 (580-65448-6), DPL-GE-011317 (580-65448-7), DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), DPL-139S-011317 (580-65448-18), DPL-132S-011317 (580-65448-19), DPL-129S-011317 (580-65448-20), DPL-128S-011317 (580-65448-21), DPL-125S-011317 (580-65448-22), DPL-126S-011317 (580-65448-23), DPL-063S1-011317 (580-65448-24) and DPL-126S1-011317 (580-65448-25) were analyzed for Explosives with incremental preparation in accordance with 8330B. The samples were prepared on 01/25/2017 and analyzed on 01/27/2017 and 01/28/2017.

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

METALS (ICPMS) WITH INCREMENTAL PREPARATION

Samples DPL-GA-01-011217 (580-65448-1), DPL-GA-02-011217 (580-65448-2), DPL-GA-03-011217 (580-65448-3), DPL-GB-011217 (580-65448-4), DPL-GC-011217 (580-65448-5), DPL-GD-011217 (580-65448-6) and DPL-GE-011317 (580-65448-7) were analyzed for metals (ICPMS) with incremental preparation in accordance with 6020A. The samples were leached on 01/20/2017, prepared on 01/25/2017 and analyzed on 01/27/2017.

Chromium was detected in method blank MB 580-237058/12-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Chromium and Copper failed the recovery criteria high for the MSD of sample DPL-GA-01-011217MSD (580-65448-1) in batch 580-237299. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. The MS and associated LCS/LCSD recoveries met acceptance criteria.

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

METALS (ICPMS)

Samples DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), DPL-139S-011317 (580-65448-18), DPL-132S-011317 (580-65448-19), DPL-129S-011317 (580-65448-20), DPL-128S-011317 (580-65448-21), DPL-125S-011317 (580-65448-22), DPL-126S-011317 (580-65448-23), DPL-063S1-011317 (580-65448-24) and DPL-126S1-011317 (580-65448-25) were analyzed for metals (ICPMS) in accordance with 6020A. The samples were prepared on 01/19/2017 and analyzed on 01/20/2017.

Chromium and Copper failed the recovery criteria high for the MS of sample DPL-096S-011317MS (580-65448-8) in batch 580-236847. Chromium and Copper failed the recovery criteria high for the MSD of sample DPL-096S-011317MSD (580-65448-8) in batch 580-236847. The associated LCS/LCSD recoveries met acceptance criteria.

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

MOISTURE CONTENT

Samples DPL-GA-01-011217 (580-65448-1), DPL-GA-02-011217 (580-65448-2), DPL-GA-03-011217 (580-65448-3), DPL-GB-011217 (580-65448-4), DPL-GC-011217 (580-65448-5), DPL-GD-011217 (580-65448-6) and DPL-GE-011317 (580-65448-7) were analyzed for moisture content in accordance with ASTM D2216. The samples were leached on 01/20/2017 and analyzed on 01/20/2017.

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

PERCENT SOLIDS

Samples DPL-096S-011317 (580-65448-8), DPL-095S-011317 (580-65448-9), DPL-094S-011317 (580-65448-10), DPL-063S-011317 (580-65448-11), DPL-093S-011317 (580-65448-12), DPL-117S-011317 (580-65448-13), DPL-115S-011317 (580-65448-14), DPL-138S-011317 (580-65448-15), DPL-114S-011317 (580-65448-16), DPL-111S-011317 (580-65448-17), DPL-139S-011317 (580-65448-18), DPL-132S-011317 (580-65448-19), DPL-129S-011317 (580-65448-20), DPL-128S-011317 (580-65448-21), DPL-125S-011317 (580-65448-22), DPL-126S-011317 (580-65448-23), DPL-063S1-011317 (580-65448-24) and DPL-126S1-011317

(580-65448-25) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 01/19/2017.

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

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-1	**DPL-GA-01-011217**					
HI Diesel Range Organics (>C12-C24)		180	J	13	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		480	J	27	mg/Kg	8015B DRO
Chromium		62	J	1.2	mg/Kg	6020A
Copper		67	J	0.99	mg/Kg	6020A
Lead		19		1.2	mg/Kg	6020A
Zinc		42		12	mg/Kg	6020A
Percent Solids		59.6		0.1	%	D 2216
Percent Moisture		40.4		0.1	%	D 2216
580-65448-2	**DPL-GA-02-011217**					
HI Diesel Range Organics (>C12-C24)		170	J	14	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		400	J	28	mg/Kg	8015B DRO
Chromium		56		1.2	mg/Kg	6020A
Copper		61		0.99	mg/Kg	6020A
Lead		19		1.2	mg/Kg	6020A
Zinc		38		12	mg/Kg	6020A
Percent Solids		59.0		0.1	%	D 2216
Percent Moisture		41.0		0.1	%	D 2216
580-65448-3	**DPL-GA-03-011217**					
HI Diesel Range Organics (>C12-C24)		170	J	14	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		460	J	29	mg/Kg	8015B DRO
Chromium		58		1.2	mg/Kg	6020A
Copper		63		0.97	mg/Kg	6020A
Lead		20		1.2	mg/Kg	6020A
Zinc		44		12	mg/Kg	6020A
Percent Solids		57.9		0.1	%	D 2216
Percent Moisture		42.1		0.1	%	D 2216
580-65448-4	**DPL-GB-011217**					
HI Diesel Range Organics (>C12-C24)		150	J	13	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		340	J	25	mg/Kg	8015B DRO
Chromium		57		1.2	mg/Kg	6020A
Copper		65		0.98	mg/Kg	6020A
Lead		15		1.2	mg/Kg	6020A
Zinc		33		12	mg/Kg	6020A
Percent Solids		64.3		0.1	%	D 2216
Percent Moisture		35.7		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-5	**DPL-GC-011217**					
HI Diesel Range Organics (>C12-C24)		85		12	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		380		23	mg/Kg	8015B DRO
Chromium		62		1.2	mg/Kg	6020A
Copper		85		0.98	mg/Kg	6020A
Lead		52		1.2	mg/Kg	6020A
Zinc		63		12	mg/Kg	6020A
Percent Solids		67.5		0.1	%	D 2216
Percent Moisture		32.5		0.1	%	D 2216
580-65448-6	**DPL-GD-011217**					
HI Diesel Range Organics (>C12-C24)		110		13	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		500		26	mg/Kg	8015B DRO
Chromium		74		1.2	mg/Kg	6020A
Copper		68		0.95	mg/Kg	6020A
Lead		13		1.2	mg/Kg	6020A
Zinc		38		12	mg/Kg	6020A
Percent Solids		62.2		0.1	%	D 2216
Percent Moisture		37.8		0.1	%	D 2216
580-65448-7	**DPL-GE-011317**					
HI Diesel Range Organics (>C12-C24)		71		12	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		320		24	mg/Kg	8015B DRO
Chromium		82		1.2	mg/Kg	6020A
Copper		91		0.97	mg/Kg	6020A
Lead		14		1.2	mg/Kg	6020A
Zinc		40		12	mg/Kg	6020A
Percent Solids		68.5		0.1	%	D 2216
Percent Moisture		31.5		0.1	%	D 2216
580-65448-8	**DPL-096S-011317**					
HI Diesel Range Organics (>C12-C24)		96		50	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		600		99	mg/Kg	8015B DRO
Chromium		60	J	1.0	mg/Kg	6020A
Copper		53	J	0.81	mg/Kg	6020A
Lead		7.5		1.0	mg/Kg	6020A
Zinc		23		10	mg/Kg	6020A
Percent Solids		46.2		0.1	%	D 2216
Percent Moisture		53.8		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-9	**DPL-095S-011317**					
HI Diesel Range Organics (>C12-C24)		57		44	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		350		87	mg/Kg	8015B DRO
Chromium		59		0.83	mg/Kg	6020A
Copper		56		0.66	mg/Kg	6020A
Lead		8.2		0.83	mg/Kg	6020A
Zinc		26		8.3	mg/Kg	6020A
Percent Solids		56.2		0.1	%	D 2216
Percent Moisture		43.8		0.1	%	D 2216
580-65448-10	**DPL-094S-011317**					
HI Diesel Range Organics (>C12-C24)		38		34	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		240		68	mg/Kg	8015B DRO
Chromium		94		0.61	mg/Kg	6020A
Copper		66		0.49	mg/Kg	6020A
Lead		9.6		0.61	mg/Kg	6020A
Zinc		27		6.1	mg/Kg	6020A
Percent Solids		72.2		0.1	%	D 2216
Percent Moisture		27.8		0.1	%	D 2216
580-65448-11	**DPL-063S-011317**					
HI Diesel Range Organics (>C12-C24)		40		28	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		180		56	mg/Kg	8015B DRO
Chromium		93		0.61	mg/Kg	6020A
Copper		120		0.48	mg/Kg	6020A
Lead		14		0.61	mg/Kg	6020A
Zinc		51		6.1	mg/Kg	6020A
Percent Solids		72.0		0.1	%	D 2216
Percent Moisture		28.0		0.1	%	D 2216
580-65448-12	**DPL-093S-011317**					
HI Diesel Range Organics (>C12-C24)		44		34	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		350		67	mg/Kg	8015B DRO
Chromium		84		0.73	mg/Kg	6020A
Copper		82		0.58	mg/Kg	6020A
Lead		10		0.73	mg/Kg	6020A
Zinc		31		7.3	mg/Kg	6020A
Percent Solids		65.6		0.1	%	D 2216
Percent Moisture		34.4		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-13	**DPL-117S-011317**					
HI Diesel Range Organics (>C12-C24)		37		31	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		290		63	mg/Kg	8015B DRO
Chromium		84		0.61	mg/Kg	6020A
Copper		110		0.49	mg/Kg	6020A
Lead		12		0.61	mg/Kg	6020A
Zinc		57		6.1	mg/Kg	6020A
Percent Solids		72.3		0.1	%	D 2216
Percent Moisture		27.7		0.1	%	D 2216
580-65448-14	**DPL-115S-011317**					
HI Diesel Range Organics (>C12-C24)		26	J	32	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		130		64	mg/Kg	8015B DRO
Chromium		55		0.66	mg/Kg	6020A
Copper		69		0.53	mg/Kg	6020A
Lead		17		0.66	mg/Kg	6020A
Zinc		55		6.6	mg/Kg	6020A
Percent Solids		67.9		0.1	%	D 2216
Percent Moisture		32.1		0.1	%	D 2216
580-65448-15	**DPL-138S-011317**					
HI Diesel Range Organics (>C12-C24)		32		30	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		290		59	mg/Kg	8015B DRO
Chromium		90		0.67	mg/Kg	6020A
Copper		93		0.54	mg/Kg	6020A
Lead		14		0.67	mg/Kg	6020A
Zinc		48		6.7	mg/Kg	6020A
Percent Solids		72.1		0.1	%	D 2216
Percent Moisture		27.9		0.1	%	D 2216
580-65448-16	**DPL-114S-011317**					
HI Diesel Range Organics (>C12-C24)		38		31	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		330		62	mg/Kg	8015B DRO
Chromium		80		0.62	mg/Kg	6020A
Copper		84		0.50	mg/Kg	6020A
Lead		14		0.62	mg/Kg	6020A
Zinc		42		6.2	mg/Kg	6020A
Percent Solids		68.4		0.1	%	D 2216
Percent Moisture		31.6		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-17	**DPL-111S-011317**					
HI Diesel Range Organics (>C12-C24)		52		35	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		270		70	mg/Kg	8015B DRO
Chromium		87		0.74	mg/Kg	6020A
Copper		94		0.59	mg/Kg	6020A
Lead		12		0.74	mg/Kg	6020A
Zinc		56		7.4	mg/Kg	6020A
Percent Solids		63.2		0.1	%	D 2216
Percent Moisture		36.8		0.1	%	D 2216
580-65448-18	**DPL-139S-011317**					
HI Diesel Range Organics (>C12-C24)		22	J	31	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		200		62	mg/Kg	8015B DRO
Chromium		100		0.66	mg/Kg	6020A
Copper		100		0.53	mg/Kg	6020A
Lead		11		0.66	mg/Kg	6020A
Zinc		43		6.6	mg/Kg	6020A
Percent Solids		69.4		0.1	%	D 2216
Percent Moisture		30.6		0.1	%	D 2216
580-65448-19	**DPL-132S-011317**					
HI Diesel Range Organics (>C12-C24)		66		38	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		440		76	mg/Kg	8015B DRO
Chromium		59		0.80	mg/Kg	6020A
Copper		81		0.64	mg/Kg	6020A
Lead		8.9		0.80	mg/Kg	6020A
Zinc		38		8.0	mg/Kg	6020A
Percent Solids		57.3		0.1	%	D 2216
Percent Moisture		42.7		0.1	%	D 2216
580-65448-20	**DPL-129S-011317**					
HI Diesel Range Organics (>C12-C24)		17	J	29	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		190		58	mg/Kg	8015B DRO
Chromium		68		0.61	mg/Kg	6020A
Copper		83		0.49	mg/Kg	6020A
Lead		12		0.61	mg/Kg	6020A
Zinc		44		6.1	mg/Kg	6020A
Percent Solids		75.5		0.1	%	D 2216
Percent Moisture		24.5		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-21	**DPL-128S-011317**					
HI Diesel Range Organics (>C12-C24)		22	J	29	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		200		59	mg/Kg	8015B DRO
Chromium		88		0.69	mg/Kg	6020A
Copper		100		0.55	mg/Kg	6020A
Lead		13		0.69	mg/Kg	6020A
Zinc		45		6.9	mg/Kg	6020A
Percent Solids		72.0		0.1	%	D 2216
Percent Moisture		28.0		0.1	%	D 2216
580-65448-22	**DPL-125S-011317**					
HI Diesel Range Organics (>C12-C24)		25	J	32	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		180		64	mg/Kg	8015B DRO
Chromium		84		0.67	mg/Kg	6020A
Copper		120		0.54	mg/Kg	6020A
Lead		13		0.67	mg/Kg	6020A
Zinc		75		6.7	mg/Kg	6020A
Percent Solids		71.6		0.1	%	D 2216
Percent Moisture		28.4		0.1	%	D 2216
580-65448-23	**DPL-126S-011317**					
HI Diesel Range Organics (>C12-C24)		42		36	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		270		73	mg/Kg	8015B DRO
Chromium		75		0.72	mg/Kg	6020A
Copper		110		0.58	mg/Kg	6020A
Lead		12		0.72	mg/Kg	6020A
Zinc		47		7.2	mg/Kg	6020A
Percent Solids		66.0		0.1	%	D 2216
Percent Moisture		34.0		0.1	%	D 2216
580-65448-24	**DPL-063S1-011317**					
HI Diesel Range Organics (>C12-C24)		53		34	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		240		67	mg/Kg	8015B DRO
Chromium		86		0.69	mg/Kg	6020A
Copper		120		0.55	mg/Kg	6020A
Lead		14		0.69	mg/Kg	6020A
Zinc		51		6.9	mg/Kg	6020A
Percent Solids		63.9		0.1	%	D 2216
Percent Moisture		36.1		0.1	%	D 2216

EXECUTIVE SUMMARY - Detections

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
580-65448-25	**DPL-126S1-011317**					
HI Diesel Range Organics (>C12-C24)		52		35	mg/Kg	8015B DRO
HI Residual Range Organics (>C24-C32)		320		70	mg/Kg	8015B DRO
Chromium		89		0.81	mg/Kg	6020A
Copper		130		0.65	mg/Kg	6020A
Lead		14		0.81	mg/Kg	6020A
Zinc		83		8.1	mg/Kg	6020A
Percent Solids		60.4		0.1	%	D 2216
Percent Moisture		39.6		0.1	%	D 2216

METHOD SUMMARY

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Diesel Range Organics (DRO) (GC)	TAL SEA	SW846 8015B DRO	
Microwave Extraction	TAL SEA		SW846 3546
Diesel Range Organics (DRO) (GC)	TAL SEA	SW846 8015B DRO	
ISM - Dry as Received, Disaggregate, Sieve, 2 D Slabcake Subsample	TAL SEA		EPA Increment, Prep
Microwave Extraction	TAL SEA		SW846 3546
Metals (ICP/MS)	TAL SEA	SW846 6020A	
Preparation, Metals	TAL SEA		SW846 3050B
Metals (ICP/MS)	TAL SEA	SW846 6020A	
ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	TAL SEA		EPA Increment, prep
Preparation, Metals	TAL SEA		SW846 3050B
Percent Moisture	TAL SEA	ASTM D 2216	
Percent Moisture	TAL SEA	ASTM D 2216	
ISM - Dry as Received, Disaggregate, Sieve, 2 D Slabcake Subsample	TAL SEA		EPA Increment, Prep
Nitroaromatics and Nitramines (HPLC)	TAL SAC	EPA 8330B	
Sonication Extraction (Explosives)	TAL SAC		SW846 8330B

Lab References:

TAL SAC = TestAmerica Sacramento

TAL SEA = TestAmerica Seattle

Method References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Method	Analyst	Analyst ID
SW846 8015B DRO	Jantanu, Charinporn	CJ
SW846 8015B DRO	Thaneerat, Wijittra 1	W1T
SW846 6020A	Woo, Fred C	FCW
ASTM D 2216	Michalek, Mattie M	MMM
EPA 8330B	Changnoi, Thussamon 1	TC1

SAMPLE SUMMARY

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-65448-1	DPL-GA-01-011217	Solid	01/12/2017 0800	01/18/2017 0945
580-65448-2	DPL-GA-02-011217	Solid	01/12/2017 0815	01/18/2017 0945
580-65448-3	DPL-GA-03-011217	Solid	01/12/2017 0830	01/18/2017 0945
580-65448-4	DPL-GB-011217	Solid	01/12/2017 0930	01/18/2017 0945
580-65448-5	DPL-GC-011217	Solid	01/12/2017 1045	01/18/2017 0945
580-65448-6	DPL-GD-011217	Solid	01/12/2017 1530	01/18/2017 0945
580-65448-7	DPL-GE-011317	Solid	01/13/2017 0830	01/18/2017 0945
580-65448-8	DPL-096S-011317	Solid	01/13/2017 0930	01/18/2017 0945
580-65448-9	DPL-095S-011317	Solid	01/13/2017 0945	01/18/2017 0945
580-65448-10	DPL-094S-011317	Solid	01/13/2017 1000	01/18/2017 0945
580-65448-11	DPL-063S-011317	Solid	01/13/2017 1030	01/18/2017 0945
580-65448-12	DPL-093S-011317	Solid	01/13/2017 1135	01/18/2017 0945
580-65448-13	DPL-117S-011317	Solid	01/13/2017 1200	01/18/2017 0945
580-65448-14	DPL-115S-011317	Solid	01/13/2017 1230	01/18/2017 0945
580-65448-15	DPL-138S-011317	Solid	01/13/2017 1345	01/18/2017 0945
580-65448-16	DPL-114S-011317	Solid	01/13/2017 1410	01/18/2017 0945
580-65448-17	DPL-111S-011317	Solid	01/13/2017 1430	01/18/2017 0945
580-65448-18	DPL-139S-011317	Solid	01/13/2017 1445	01/18/2017 0945
580-65448-19	DPL-132S-011317	Solid	01/13/2017 1500	01/18/2017 0945
580-65448-20	DPL-129S-011317	Solid	01/13/2017 1515	01/18/2017 0945
580-65448-21	DPL-128S-011317	Solid	01/13/2017 1525	01/18/2017 0945
580-65448-22	DPL-125S-011317	Solid	01/13/2017 1540	01/18/2017 0945
580-65448-23	DPL-126S-011317	Solid	01/13/2017 1555	01/18/2017 0945
580-65448-24	DPL-063S1-011317	Solid	01/13/2017 1615	01/18/2017 0945
580-65448-25	DPL-126S1-011317	Solid	01/13/2017 1630	01/18/2017 0945

SAMPLE RESULTS

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-01-011217

Lab Sample ID: 580-65448-1 Date Sampled: 01/12/2017 0800
Client Matrix: Solid % Moisture: 40.4 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	31.348 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1621			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	180	J	6.6	13
HI Residual Range Organics (>C24-C32)	480	J	7.5	27

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	53		45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-02-011217

Lab Sample ID: 580-65448-2 Date Sampled: 01/12/2017 0815
Client Matrix: Solid % Moisture: 41.0 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	30.149 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1727			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	170	J	7.0	14
HI Residual Range Organics (>C24-C32)	400	J	7.9	28

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	36	J	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-03-011217

Lab Sample ID: 580-65448-3 Date Sampled: 01/12/2017 0830
Client Matrix: Solid % Moisture: 42.1 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	30.141 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1812			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	170	J	7.1	14
HI Residual Range Organics (>C24-C32)	460	J	8.0	29

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	40	J	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GB-011217

Lab Sample ID: 580-65448-4 Date Sampled: 01/12/2017 0930
Client Matrix: Solid % Moisture: 35.7 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	30.553 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1834			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	150	J	6.3	13
HI Residual Range Organics (>C24-C32)	340	J	7.1	25

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	38	J	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GC-011217

Lab Sample ID: 580-65448-5 Date Sampled: 01/12/2017 1045
Client Matrix: Solid % Moisture: 32.5 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	32.077 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1856			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	85		5.7	12
HI Residual Range Organics (>C24-C32)	380		6.5	23

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	63		45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-GD-011217**

Lab Sample ID: 580-65448-6 | Date Sampled: 01/12/2017 1530
Client Matrix: Solid | % Moisture: 37.8 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	30.935 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1918			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	110		6.4	13
HI Residual Range Organics (>C24-C32)	500		7.3	26

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	74		45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-GE-011317**

Lab Sample ID: 580-65448-7 | Date Sampled: 01/13/2017 0830
Client Matrix: Solid | % Moisture: 31.5 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236881	Instrument ID:	SEA012
Prep Method:	3546	Prep Batch:	580-236802	Initial Weight/Volume:	30.037 g
Dilution:	1.0	ISM Prep Batch:	580-236757	Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1941			Injection Volume:	1 uL
Prep Date:	01/20/2017 1420			Result Type:	PRIMARY
ISM Prep Date:	01/20/2017 0917				

Analyte (DryWt Corrected: Y)	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)	71		6.0	12
HI Residual Range Organics (>C24-C32)	320		6.8	24

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	70		45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-096S-011317**

Lab Sample ID: 580-65448-8 | Date Sampled: 01/13/2017 0930
Client Matrix: Solid | % Moisture: 53.8 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	10.895 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1827			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		96		25	50
HI Residual Range Organics (>C24-C32)		600		28	99

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	57	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-095S-011317**

Lab Sample ID: 580-65448-9 | Date Sampled: 01/13/2017 0945
Client Matrix: Solid | % Moisture: 43.8 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	10.217 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1848			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		57		22	44
HI Residual Range Organics (>C24-C32)		350		24	87

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	61	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-094S-011317**

Lab Sample ID: 580-65448-10 | Date Sampled: 01/13/2017 1000
Client Matrix: Solid | % Moisture: 27.8 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	10.153 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1908			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		38		17	34
HI Residual Range Organics (>C24-C32)		240		19	68

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	63	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-063S-011317**

Lab Sample ID: 580-65448-11 | Date Sampled: 01/13/2017 1030
Client Matrix: Solid | % Moisture: 28.0 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	12.488 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1928			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		40		14	28
HI Residual Range Organics (>C24-C32)		180		16	56

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	59	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-093S-011317**

Lab Sample ID: 580-65448-12 | Date Sampled: 01/13/2017 1135
Client Matrix: Solid | % Moisture: 34.4 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.321 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 1949			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		44		17	34
HI Residual Range Organics (>C24-C32)		350		19	67

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	59	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-117S-011317**

Lab Sample ID: 580-65448-13 | Date Sampled: 01/13/2017 1200
Client Matrix: Solid | % Moisture: 27.7 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.065 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2031			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		37		16	31
HI Residual Range Organics (>C24-C32)		290		18	63

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	60	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-115S-011317**

Lab Sample ID: 580-65448-14 | Date Sampled: 01/13/2017 1230
Client Matrix: Solid | % Moisture: 32.1 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.496 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2051			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		26	J	16	32
HI Residual Range Organics (>C24-C32)		130		18	64

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	57	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-138S-011317**

Lab Sample ID: 580-65448-15 | Date Sampled: 01/13/2017 1345
Client Matrix: Solid | % Moisture: 27.9 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.692 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2111			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		32		15	30
HI Residual Range Organics (>C24-C32)		290		17	59

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	58	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-114S-011317**

Lab Sample ID: 580-65448-16 | Date Sampled: 01/13/2017 1410
Client Matrix: Solid | % Moisture: 31.6 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.859 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2132			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		38		15	31
HI Residual Range Organics (>C24-C32)		330		17	62

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	58	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-111S-011317**

Lab Sample ID: 580-65448-17 | Date Sampled: 01/13/2017 1430
Client Matrix: Solid | % Moisture: 36.8 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.364 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2152			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		52		17	35
HI Residual Range Organics (>C24-C32)		270		19	70

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	62	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-139S-011317**

Lab Sample ID: 580-65448-18 | Date Sampled: 01/13/2017 1445
Client Matrix: Solid | % Moisture: 30.6 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.617 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2212			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		22	J	15	31
HI Residual Range Organics (>C24-C32)		200		17	62

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	59	Q	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-132S-011317

Lab Sample ID: 580-65448-19 Date Sampled: 01/13/2017 1500
Client Matrix: Solid % Moisture: 42.7 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.542 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2232			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		66		19	38
HI Residual Range Organics (>C24-C32)		440		21	76

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	58	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-129S-011317**

Lab Sample ID: 580-65448-20 | Date Sampled: 01/13/2017 1515
Client Matrix: Solid | % Moisture: 24.5 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.439 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2252			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		17	J	14	29
HI Residual Range Organics (>C24-C32)		190		16	58

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	61	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-128S-011317**

Lab Sample ID: 580-65448-21 | Date Sampled: 01/13/2017 1525
Client Matrix: Solid | % Moisture: 28.0 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.781 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2312			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		22	J	15	29
HI Residual Range Organics (>C24-C32)		200		17	59

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	61	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-125S-011317**

Lab Sample ID: 580-65448-22 | Date Sampled: 01/13/2017 1540
Client Matrix: Solid | % Moisture: 28.4 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	10.839 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/23/2017 2332			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		25	J	16	32
HI Residual Range Organics (>C24-C32)		180		18	64

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	63	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S-011317**

Lab Sample ID: 580-65448-23 | Date Sampled: 01/13/2017 1555
Client Matrix: Solid | % Moisture: 34.0 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	10.403 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/24/2017 0013			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		42		18	36
HI Residual Range Organics (>C24-C32)		270		20	73

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	60	Q	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-063S1-011317

Lab Sample ID: 580-65448-24 Date Sampled: 01/13/2017 1615
Client Matrix: Solid % Moisture: 36.1 Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.652 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/24/2017 0033			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		53		17	34
HI Residual Range Organics (>C24-C32)		240		19	67

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	62	Q	45 - 130

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S1-011317**

Lab Sample ID: 580-65448-25 | Date Sampled: 01/13/2017 1630
Client Matrix: Solid | % Moisture: 39.6 | Date Received: 01/18/2017 0945

8015B DRO Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B DRO	Analysis Batch:	580-236927	Instrument ID:	TAC020
Prep Method:	3546	Prep Batch:	580-236854	Initial Weight/Volume:	11.873 g
Dilution:	1.0			Final Weight/Volume:	10 mL
Analysis Date:	01/24/2017 0053			Injection Volume:	1 uL
Prep Date:	01/23/2017 0947			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
HI Diesel Range Organics (>C12-C24)		52		17	35
HI Residual Range Organics (>C24-C32)		320		20	70

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	62	Q	45 - 130

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-01-011217

Lab Sample ID: 580-65448-1 Date Sampled: 01/12/2017 0800
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.05 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 1700			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	90		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-02-011217

Lab Sample ID: 580-65448-2 Date Sampled: 01/12/2017 0815
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.97 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 1939			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U M	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	90		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-03-011217

Lab Sample ID: 580-65448-3 Date Sampled: 01/12/2017 0830
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.09 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 2032			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.099	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.099	0.50
Nitrobenzene		0.050	U	0.017	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	87		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-GB-011217**

Lab Sample ID: 580-65448-4 | Date Sampled: 01/12/2017 0930
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.07 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 2125			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.099	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.099	0.50
Nitrobenzene		0.050	U	0.017	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	92		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GC-011217

Lab Sample ID: 580-65448-5 Date Sampled: 01/12/2017 1045
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.04 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 2218			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U M	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	93		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-GD-011217**

Lab Sample ID: 580-65448-6 | Date Sampled: 01/12/2017 1530
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.02 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/27/2017 2311			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GE-011317

Lab Sample ID: 580-65448-7 Date Sampled: 01/13/2017 0830
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.99 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0057			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-096S-011317

Lab Sample ID: 580-65448-8 Date Sampled: 01/13/2017 0930
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.87 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0150			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.051	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.051	U	0.020	0.25
3,5-Dinitroaniline		0.051	U	0.020	0.25
1,3-Dinitrobenzene		0.051	U	0.020	0.25
2,4-Dinitrotoluene		0.051	U	0.020	0.25
2,6-Dinitrotoluene		0.051	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.051	U	0.020	0.25
3-Nitrotoluene		0.051	U	0.016	0.25
2-Nitrotoluene		0.051	U	0.013	0.25
4-Nitrotoluene		0.051	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.51
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.51
Nitrobenzene		0.051	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.051	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.051	U	0.020	0.25
1,3,5-Trinitrobenzene		0.051	U	0.020	0.25
2,4,6-Trinitrotoluene		0.051	U	0.020	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	92		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-095S-011317

Lab Sample ID: 580-65448-9 Date Sampled: 01/13/2017 0945
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.97 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0243			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	91		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-094S-011317**

Lab Sample ID: 580-65448-10 | Date Sampled: 01/13/2017 1000
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.01 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0337			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	94		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-063S-011317

Lab Sample ID: 580-65448-11 Date Sampled: 01/13/2017 1030
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.02 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0430			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-093S-011317**

Lab Sample ID: 580-65448-12 | Date Sampled: 01/13/2017 1135
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.05 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0523			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	87		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-117S-011317**

Lab Sample ID: 580-65448-13 | Date Sampled: 01/13/2017 1200
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.01 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0616			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-115S-011317

Lab Sample ID: 580-65448-14 Date Sampled: 01/13/2017 1230
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.02 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0709			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	90		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-138S-011317

Lab Sample ID: 580-65448-15 Date Sampled: 01/13/2017 1345
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.08 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0802			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.099	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.099	0.50
Nitrobenzene		0.050	U	0.017	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	92		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-114S-011317**

Lab Sample ID: 580-65448-16 | Date Sampled: 01/13/2017 1410
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.05 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 0855			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	87		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-111S-011317

Lab Sample ID: 580-65448-17 Date Sampled: 01/13/2017 1430
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.98 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1041			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-139S-011317**

Lab Sample ID: 580-65448-18 | Date Sampled: 01/13/2017 1445
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.03 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1134			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89	M	78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-132S-011317**

Lab Sample ID: 580-65448-19 | Date Sampled: 01/13/2017 1500
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	9.99 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1227			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	89		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-129S-011317

Lab Sample ID: 580-65448-20 Date Sampled: 01/13/2017 1515
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147772	Initial Weight/Volume:	10.02 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1320			Injection Volume:	500 uL
Prep Date:	01/25/2017 1315			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	90		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-128S-011317

Lab Sample ID: 580-65448-21 Date Sampled: 01/13/2017 1525
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147773	Initial Weight/Volume:	10.07 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1652			Injection Volume:	500 uL
Prep Date:	01/25/2017 1321			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.099	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.099	0.50
Nitrobenzene		0.050	U	0.017	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	90		78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-125S-011317

Lab Sample ID: 580-65448-22 Date Sampled: 01/13/2017 1540
Client Matrix: Solid Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147773	Initial Weight/Volume:	10.05 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1745			Injection Volume:	500 uL
Prep Date:	01/25/2017 1321			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	88		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S-011317**

Lab Sample ID: 580-65448-23 | Date Sampled: 01/13/2017 1555
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147773	Initial Weight/Volume:	10.02 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 1838			Injection Volume:	500 uL
Prep Date:	01/25/2017 1321			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.012	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.015	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	92		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-063S1-011317**

Lab Sample ID: 580-65448-24 | Date Sampled: 01/13/2017 1615
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147773	Initial Weight/Volume:	10.00 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 2024			Injection Volume:	500 uL
Prep Date:	01/25/2017 1321			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.019	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	91		78 - 118

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S1-011317**

Lab Sample ID: 580-65448-25 | Date Sampled: 01/13/2017 1630
Client Matrix: Solid | Date Received: 01/18/2017 0945

8330B Nitroaromatics and Nitramines (HPLC)

Analysis Method:	8330B	Analysis Batch:	320-147980	Instrument ID:	LC11
Prep Method:	8330B	Prep Batch:	320-147773	Initial Weight/Volume:	9.92 g
Dilution:	1.0			Final Weight/Volume:	80.00 mL
Analysis Date:	01/28/2017 2117			Injection Volume:	500 uL
Prep Date:	01/25/2017 1321			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
2-Amino-4,6-dinitrotoluene		0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene		0.050	U	0.020	0.25
3,5-Dinitroaniline		0.050	U	0.020	0.25
1,3-Dinitrobenzene		0.050	U	0.020	0.25
2,4-Dinitrotoluene		0.050	U	0.020	0.25
2,6-Dinitrotoluene		0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		0.050	U	0.020	0.25
3-Nitrotoluene		0.050	U	0.016	0.25
2-Nitrotoluene		0.050	U	0.013	0.25
4-Nitrotoluene		0.050	U	0.018	0.25
Nitroglycerin		0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)		0.25	U	0.10	0.50
Nitrobenzene		0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine		0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine		0.050	U	0.020	0.25
1,3,5-Trinitrobenzene		0.050	U	0.020	0.25
2,4,6-Trinitrotoluene		0.050	U	0.020	0.25

Surrogate	%Rec	Qualifier	Acceptance Limits
3,4-Dinitrotoluene	91		78 - 118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GA-01-011217**

Lab Sample ID: 580-65448-1
Client Matrix: Solid

Date Sampled: 01/12/2017 0800
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	028SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.1437 g
Analysis Date:	01/27/2017 1055			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		62	J	0.16	1.2
Copper		67	J	0.24	0.99
Lead		19		0.12	1.2
Zinc		42		2.8	12

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Client Sample ID: DPL-GA-02-011217

Lab Sample ID: 580-65448-2 Date Sampled: 01/12/2017 0815
Client Matrix: Solid Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	059SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.0595 g
Analysis Date:	01/27/2017 1314			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		56		0.16	1.2
Copper		61		0.24	0.99
Lead		19		0.12	1.2
Zinc		38		2.8	12

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GA-03-011217**

Lab Sample ID: 580-65448-3
Client Matrix: Solid

Date Sampled: 01/12/2017 0830
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	060SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.3389 g
Analysis Date:	01/27/2017 1319			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		58		0.15	1.2
Copper		63		0.24	0.97
Lead		20		0.12	1.2
Zinc		44		2.7	12

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GB-011217**

Lab Sample ID: 580-65448-4
Client Matrix: Solid

Date Sampled: 01/12/2017 0930
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	061SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.2267 g
Analysis Date:	01/27/2017 1323			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		57		0.15	1.2
Copper		65		0.24	0.98
Lead		15		0.12	1.2
Zinc		33		2.7	12

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GC-011217**

Lab Sample ID: 580-65448-5
Client Matrix: Solid

Date Sampled: 01/12/2017 1045
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	062SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.2252 g
Analysis Date:	01/27/2017 1328			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		62		0.15	1.2
Copper		85		0.24	0.98
Lead		52		0.12	1.2
Zinc		63		2.7	12

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GD-011217**

Lab Sample ID: 580-65448-6
Client Matrix: Solid

Date Sampled: 01/12/2017 1530
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	027SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.5087 g
Analysis Date:	01/27/2017 1050			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		74		0.15	1.2
Copper		68		0.23	0.95
Lead		13		0.11	1.2
Zinc		38		2.7	12

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Client Sample ID: **DPL-GE-011317**

Lab Sample ID: 580-65448-7
Client Matrix: Solid

Date Sampled: 01/13/2017 0830
Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-237058	Lab File ID:	063SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.3418 g
Analysis Date:	01/27/2017 1332			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 917				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		82		0.15	1.2
Copper		91		0.24	0.97
Lead		14		0.12	1.2
Zinc		40		2.7	12

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-096S-011317**

Lab Sample ID: 580-65448-8 | Date Sampled: 01/13/2017 0930
Client Matrix: Solid | % Moisture: 53.8 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	023SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0632 g
Analysis Date:	01/20/2017 1455			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		60	J	0.13	1.0
Copper		53	J	0.20	0.81
Lead		7.5		0.098	1.0
Zinc		23		2.3	10

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-095S-011317**

Lab Sample ID: 580-65448-9 | Date Sampled: 01/13/2017 0945
Client Matrix: Solid | % Moisture: 43.8 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	033SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0736 g
Analysis Date:	01/20/2017 1540			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		59		0.10	0.83
Copper		56		0.16	0.66
Lead		8.2		0.080	0.83
Zinc		26		1.9	8.3

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-094S-011317**

Lab Sample ID: 580-65448-10 | Date Sampled: 01/13/2017 1000
Client Matrix: Solid | % Moisture: 27.8 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	034SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1379 g
Analysis Date:	01/20/2017 1544			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		94		0.077	0.61
Copper		66		0.12	0.49
Lead		9.6		0.058	0.61
Zinc		27		1.4	6.1

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-063S-011317**

Lab Sample ID: 580-65448-11 | Date Sampled: 01/13/2017 1030
Client Matrix: Solid | % Moisture: 28.0 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	035SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1460 g
Analysis Date:	01/20/2017 1548			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		93		0.076	0.61
Copper		120		0.12	0.48
Lead		14		0.058	0.61
Zinc		51		1.4	6.1

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-093S-011317**

Lab Sample ID: 580-65448-12 | Date Sampled: 01/13/2017 1135
Client Matrix: Solid | % Moisture: 34.4 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	036SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0483 g
Analysis Date:	01/20/2017 1553			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		84		0.092	0.73
Copper		82		0.14	0.58
Lead		10		0.070	0.73
Zinc		31		1.6	7.3

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-117S-011317**

Lab Sample ID: 580-65448-13 | Date Sampled: 01/13/2017 1200
Client Matrix: Solid | % Moisture: 27.7 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	037SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1268 g
Analysis Date:	01/20/2017 1557			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		84		0.077	0.61
Copper		110		0.12	0.49
Lead		12		0.059	0.61
Zinc		57		1.4	6.1

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-115S-011317**

Lab Sample ID: 580-65448-14 | Date Sampled: 01/13/2017 1230
Client Matrix: Solid | % Moisture: 32.1 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	046SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1078 g
Analysis Date:	01/20/2017 1637			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		55		0.084	0.66
Copper		69		0.13	0.53
Lead		17		0.064	0.66
Zinc		55		1.5	6.6

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-138S-011317**

Lab Sample ID: 580-65448-15 | Date Sampled: 01/13/2017 1345
Client Matrix: Solid | % Moisture: 27.9 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	047SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0365 g
Analysis Date:	01/20/2017 1641			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		90		0.084	0.67
Copper		93		0.13	0.54
Lead		14		0.064	0.67
Zinc		48		1.5	6.7

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-114S-011317**

Lab Sample ID: 580-65448-16 | Date Sampled: 01/13/2017 1410
Client Matrix: Solid | % Moisture: 31.6 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	048SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1700 g
Analysis Date:	01/20/2017 1646			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		80		0.079	0.62
Copper		84		0.12	0.50
Lead		14		0.060	0.62
Zinc		42		1.4	6.2

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-111S-011317**

Lab Sample ID: 580-65448-17 | Date Sampled: 01/13/2017 1430
Client Matrix: Solid | % Moisture: 36.8 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	049SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0688 g
Analysis Date:	01/20/2017 1650			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		87		0.093	0.74
Copper		94		0.15	0.59
Lead		12		0.071	0.74
Zinc		56		1.7	7.4

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-139S-011317**

Lab Sample ID: 580-65448-18 | Date Sampled: 01/13/2017 1445
Client Matrix: Solid | % Moisture: 30.6 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	050SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0836 g
Analysis Date:	01/20/2017 1654			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		100		0.084	0.66
Copper		100		0.13	0.53
Lead		11		0.064	0.66
Zinc		43		1.5	6.6

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-132S-011317**

Lab Sample ID: 580-65448-19 | Date Sampled: 01/13/2017 1500
Client Matrix: Solid | % Moisture: 42.7 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	059SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0964 g
Analysis Date:	01/20/2017 1734			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		59		0.10	0.80
Copper		81		0.16	0.64
Lead		8.9		0.076	0.80
Zinc		38		1.8	8.0

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-129S-011317**

Lab Sample ID: 580-65448-20 | Date Sampled: 01/13/2017 1515
Client Matrix: Solid | % Moisture: 24.5 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	060SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0839 g
Analysis Date:	01/20/2017 1739			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		68		0.077	0.61
Copper		83		0.12	0.49
Lead		12		0.059	0.61
Zinc		44		1.4	6.1

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-128S-011317**

Lab Sample ID: 580-65448-21 | Date Sampled: 01/13/2017 1525
Client Matrix: Solid | % Moisture: 28.0 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	061SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0130 g
Analysis Date:	01/20/2017 1743			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		88		0.086	0.69
Copper		100		0.13	0.55
Lead		13		0.066	0.69
Zinc		45		1.5	6.9

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-125S-011317**

Lab Sample ID: 580-65448-22 | Date Sampled: 01/13/2017 1540
Client Matrix: Solid | % Moisture: 28.4 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	062SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0411 g
Analysis Date:	01/20/2017 1747			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		84		0.085	0.67
Copper		120		0.13	0.54
Lead		13		0.064	0.67
Zinc		75		1.5	6.7

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S-011317**

Lab Sample ID: 580-65448-23 | Date Sampled: 01/13/2017 1555
Client Matrix: Solid | % Moisture: 34.0 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	063SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0538 g
Analysis Date:	01/20/2017 1752			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		75		0.091	0.72
Copper		110		0.14	0.58
Lead		12		0.069	0.72
Zinc		47		1.6	7.2

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-063S1-011317**

Lab Sample ID: 580-65448-24 | Date Sampled: 01/13/2017 1615
Client Matrix: Solid | % Moisture: 36.1 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	072SMPL.D
Dilution:	10			Initial Weight/Volume:	1.1378 g
Analysis Date:	01/20/2017 1832			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		86		0.087	0.69
Copper		120		0.13	0.55
Lead		14		0.066	0.69
Zinc		51		1.5	6.9

Client: Allied Pacific Environmental Consulting | Job Number: 580-65448-1

Client Sample ID: **DPL-126S1-011317**

Lab Sample ID: 580-65448-25 | Date Sampled: 01/13/2017 1630
Client Matrix: Solid | % Moisture: 39.6 | Date Received: 01/18/2017 0945

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Prep Method:	3050B	Prep Batch:	580-236685	Lab File ID:	073SMPL.D
Dilution:	10			Initial Weight/Volume:	1.0253 g
Analysis Date:	01/20/2017 1836			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	DL	LOQ
Chromium		89		0.10	0.81
Copper		130		0.16	0.65
Lead		14		0.077	0.81
Zinc		83		1.8	8.1

General Chemistry

Client Sample ID: **DPL-GA-01-011217**

Lab Sample ID: 580-65448-1 Date Sampled: 01/12/2017 0800
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	59.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	40.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-GA-02-011217**

Lab Sample ID: 580-65448-2 Date Sampled: 01/12/2017 0815
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	59.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	41.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-GA-03-011217**

Lab Sample ID: 580-65448-3 Date Sampled: 01/12/2017 0830
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	57.9		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	42.1		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-GB-011217**

Lab Sample ID: 580-65448-4 Date Sampled: 01/12/2017 0930
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	64.3		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	35.7		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-GC-011217**

Lab Sample ID: 580-65448-5 Date Sampled: 01/12/2017 1045
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	67.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	32.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-GD-011217**

Lab Sample ID: 580-65448-6 Date Sampled: 01/12/2017 1530
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	62.2		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	37.8		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: DPL-GE-011317

Lab Sample ID: 580-65448-7 Date Sampled: 01/13/2017 0830
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	68.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	
Percent Moisture	31.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236803	Analysis Date: 01/20/2017 1421					DryWt Corrected: N	

General Chemistry

Client Sample ID: DPL-096S-011317

Lab Sample ID: 580-65448-8 Date Sampled: 01/13/2017 0930
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	46.2		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	53.8		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-095S-011317**

Lab Sample ID: 580-65448-9 Date Sampled: 01/13/2017 0945
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	56.2		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	43.8		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-094S-011317**

Lab Sample ID: 580-65448-10 Date Sampled: 01/13/2017 1000
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	72.2		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	27.8		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-063S-011317**

Lab Sample ID: 580-65448-11 Date Sampled: 01/13/2017 1030
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	72.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	28.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-093S-011317**

Lab Sample ID: 580-65448-12 Date Sampled: 01/13/2017 1135
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	65.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	34.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-117S-011317**

Lab Sample ID: 580-65448-13 Date Sampled: 01/13/2017 1200
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	72.3		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	27.7		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-115S-011317**

Lab Sample ID: 580-65448-14 Date Sampled: 01/13/2017 1230
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	67.9		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	32.1		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-138S-011317**

Lab Sample ID: 580-65448-15 Date Sampled: 01/13/2017 1345
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	72.1		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	27.9		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-114S-011317**

Lab Sample ID: 580-65448-16 Date Sampled: 01/13/2017 1410
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	68.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	31.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-111S-011317**

Lab Sample ID: 580-65448-17 Date Sampled: 01/13/2017 1430
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	63.2		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	36.8		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-139S-011317**

Lab Sample ID: 580-65448-18 Date Sampled: 01/13/2017 1445
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	69.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	30.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-132S-011317**

Lab Sample ID: 580-65448-19 Date Sampled: 01/13/2017 1500
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	57.3		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	42.7		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-129S-011317**

Lab Sample ID: 580-65448-20 Date Sampled: 01/13/2017 1515
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	75.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	24.5		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-128S-011317**

Lab Sample ID: 580-65448-21 Date Sampled: 01/13/2017 1525
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	72.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	28.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-125S-011317**

Lab Sample ID: 580-65448-22 Date Sampled: 01/13/2017 1540
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	71.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	28.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-126S-011317**

Lab Sample ID: 580-65448-23 Date Sampled: 01/13/2017 1555
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	66.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	34.0		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: **DPL-063S1-011317**

Lab Sample ID: 580-65448-24 Date Sampled: 01/13/2017 1615
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	63.9		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	36.1		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

General Chemistry

Client Sample ID: DPL-126S1-011317

Lab Sample ID: 580-65448-25 Date Sampled: 01/13/2017 1630
Client Matrix: Solid Date Received: 01/18/2017 0945

Analyte	Result	Qual	Units	DL	LOQ	Dil	Method
Percent Solids	60.4		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	
Percent Moisture	39.6		%	0.1	0.1	1.0	D 2216
Analysis Batch: 580-236678	Analysis Date: 01/19/2017 0921					DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Section	Qualifier	Description
GC Semi VOA		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
	Q	One or more quality control criteria failed.
	U	Undetected at the Limit of Detection.
HPLC/IC		
	M	Manual integrated compound.
	U	Undetected at the Limit of Detection.
Metals		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
	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.
	U	Undetected at the Limit of Detection.

QUALITY CONTROL RESULTS

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 580-236757					
580-65448-1	DPL-GA-01-011217	T	Solid	Increment, Prep	
580-65448-1MS	Matrix Spike	T	Solid	Increment, Prep	
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	Increment, Prep	
580-65448-2	DPL-GA-02-011217	T	Solid	Increment, Prep	
580-65448-3	DPL-GA-03-011217	T	Solid	Increment, Prep	
580-65448-4	DPL-GB-011217	T	Solid	Increment, Prep	
580-65448-5	DPL-GC-011217	T	Solid	Increment, Prep	
580-65448-6	DPL-GD-011217	T	Solid	Increment, Prep	
580-65448-7	DPL-GE-011317	T	Solid	Increment, Prep	
Prep Batch: 580-236802					
LCS 580-236802/2-A	Lab Control Sample	T	Solid	3546	
MB 580-236802/1-A	Method Blank	T	Solid	3546	
580-65448-1	DPL-GA-01-011217	T	Solid	3546	580-236757
580-65448-1MS	Matrix Spike	T	Solid	3546	580-236757
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	3546	580-236757
580-65448-2	DPL-GA-02-011217	T	Solid	3546	580-236757
580-65448-3	DPL-GA-03-011217	T	Solid	3546	580-236757
580-65448-4	DPL-GB-011217	T	Solid	3546	580-236757
580-65448-5	DPL-GC-011217	T	Solid	3546	580-236757
580-65448-6	DPL-GD-011217	T	Solid	3546	580-236757
580-65448-7	DPL-GE-011317	T	Solid	3546	580-236757

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 580-236854					
LCS 580-236854/2-A	Lab Control Sample	T	Solid	3546	
LCSD 580-236854/3-A	Lab Control Sample Duplicate	T	Solid	3546	
MB 580-236854/1-A	Method Blank	T	Solid	3546	
580-65448-8	DPL-096S-011317	T	Solid	3546	
580-65448-9	DPL-095S-011317	T	Solid	3546	
580-65448-10	DPL-094S-011317	T	Solid	3546	
580-65448-11	DPL-063S-011317	T	Solid	3546	
580-65448-12	DPL-093S-011317	T	Solid	3546	
580-65448-13	DPL-117S-011317	T	Solid	3546	
580-65448-14	DPL-115S-011317	T	Solid	3546	
580-65448-15	DPL-138S-011317	T	Solid	3546	
580-65448-16	DPL-114S-011317	T	Solid	3546	
580-65448-17	DPL-111S-011317	T	Solid	3546	
580-65448-18	DPL-139S-011317	T	Solid	3546	
580-65448-19	DPL-132S-011317	T	Solid	3546	
580-65448-20	DPL-129S-011317	T	Solid	3546	
580-65448-21	DPL-128S-011317	T	Solid	3546	
580-65448-22	DPL-125S-011317	T	Solid	3546	
580-65448-23	DPL-126S-011317	T	Solid	3546	
580-65448-24	DPL-063S1-011317	T	Solid	3546	
580-65448-25	DPL-126S1-011317	T	Solid	3546	
580-65448-25MS	Matrix Spike	T	Solid	3546	
580-65448-25MSD	Matrix Spike Duplicate	T	Solid	3546	
Analysis Batch:580-236881					
MB 580-236802/1-A	Method Blank	T	Solid	8015B DRO	580-236802
580-65448-1	DPL-GA-01-011217	T	Solid	8015B DRO	580-236802
580-65448-1MS	Matrix Spike	T	Solid	8015B DRO	580-236802
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	8015B DRO	580-236802
580-65448-2	DPL-GA-02-011217	T	Solid	8015B DRO	580-236802
580-65448-3	DPL-GA-03-011217	T	Solid	8015B DRO	580-236802
580-65448-4	DPL-GB-011217	T	Solid	8015B DRO	580-236802
580-65448-5	DPL-GC-011217	T	Solid	8015B DRO	580-236802
580-65448-6	DPL-GD-011217	T	Solid	8015B DRO	580-236802
580-65448-7	DPL-GE-011317	T	Solid	8015B DRO	580-236802

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:580-236927					
LCS 580-236854/2-A	Lab Control Sample	T	Solid	8015B DRO	580-236854
LCSD 580-236854/3-A	Lab Control Sample Duplicate	T	Solid	8015B DRO	580-236854
MB 580-236854/1-A	Method Blank	T	Solid	8015B DRO	580-236854
580-65448-8	DPL-096S-011317	T	Solid	8015B DRO	580-236854
580-65448-9	DPL-095S-011317	T	Solid	8015B DRO	580-236854
580-65448-10	DPL-094S-011317	T	Solid	8015B DRO	580-236854
580-65448-11	DPL-063S-011317	T	Solid	8015B DRO	580-236854
580-65448-12	DPL-093S-011317	T	Solid	8015B DRO	580-236854
580-65448-13	DPL-117S-011317	T	Solid	8015B DRO	580-236854
580-65448-14	DPL-115S-011317	T	Solid	8015B DRO	580-236854
580-65448-15	DPL-138S-011317	T	Solid	8015B DRO	580-236854
580-65448-16	DPL-114S-011317	T	Solid	8015B DRO	580-236854
580-65448-17	DPL-111S-011317	T	Solid	8015B DRO	580-236854
580-65448-18	DPL-139S-011317	T	Solid	8015B DRO	580-236854
580-65448-19	DPL-132S-011317	T	Solid	8015B DRO	580-236854
580-65448-20	DPL-129S-011317	T	Solid	8015B DRO	580-236854
580-65448-21	DPL-128S-011317	T	Solid	8015B DRO	580-236854
580-65448-22	DPL-125S-011317	T	Solid	8015B DRO	580-236854
580-65448-23	DPL-126S-011317	T	Solid	8015B DRO	580-236854
580-65448-24	DPL-063S1-011317	T	Solid	8015B DRO	580-236854
580-65448-25	DPL-126S1-011317	T	Solid	8015B DRO	580-236854
580-65448-25MS	Matrix Spike	T	Solid	8015B DRO	580-236854
580-65448-25MSD	Matrix Spike Duplicate	T	Solid	8015B DRO	580-236854
Analysis Batch:580-236988					
LCS 580-236802/2-A	Lab Control Sample	T	Solid	8015B DRO	580-236802

Report Basis
T = Total

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 580-236685					
LCS 580-236685/23-A	Lab Control Sample	T	Solid	3050B	
LCSD 580-236685/24-A	Lab Control Sample Duplicate	T	Solid	3050B	
MB 580-236685/22-A	Method Blank	T	Solid	3050B	
580-65448-8	DPL-096S-011317	T	Solid	3050B	
580-65448-8DU	Duplicate	T	Solid	3050B	
580-65448-8MS	Matrix Spike	T	Solid	3050B	
580-65448-8MSD	Matrix Spike Duplicate	T	Solid	3050B	
580-65448-9	DPL-095S-011317	T	Solid	3050B	
580-65448-10	DPL-094S-011317	T	Solid	3050B	
580-65448-11	DPL-063S-011317	T	Solid	3050B	
580-65448-12	DPL-093S-011317	T	Solid	3050B	
580-65448-13	DPL-117S-011317	T	Solid	3050B	
580-65448-14	DPL-115S-011317	T	Solid	3050B	
580-65448-15	DPL-138S-011317	T	Solid	3050B	
580-65448-16	DPL-114S-011317	T	Solid	3050B	
580-65448-17	DPL-111S-011317	T	Solid	3050B	
580-65448-18	DPL-139S-011317	T	Solid	3050B	
580-65448-19	DPL-132S-011317	T	Solid	3050B	
580-65448-20	DPL-129S-011317	T	Solid	3050B	
580-65448-21	DPL-128S-011317	T	Solid	3050B	
580-65448-22	DPL-125S-011317	T	Solid	3050B	
580-65448-23	DPL-126S-011317	T	Solid	3050B	
580-65448-24	DPL-063S1-011317	T	Solid	3050B	
580-65448-25	DPL-126S1-011317	T	Solid	3050B	
Prep Batch: 580-236757					
580-65448-1	DPL-GA-01-011217	T	Solid	Increment, prep	
580-65448-1MS	Matrix Spike	T	Solid	Increment, prep	
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	Increment, prep	
580-65448-2	DPL-GA-02-011217	T	Solid	Increment, prep	
580-65448-3	DPL-GA-03-011217	T	Solid	Increment, prep	
580-65448-4	DPL-GB-011217	T	Solid	Increment, prep	
580-65448-5	DPL-GC-011217	T	Solid	Increment, prep	
580-65448-6	DPL-GD-011217	T	Solid	Increment, prep	
580-65448-7	DPL-GE-011317	T	Solid	Increment, prep	

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:580-236847					
LCS 580-236685/23-A	Lab Control Sample	T	Solid	6020A	580-236685
LCSD 580-236685/24-A	Lab Control Sample Duplicate	T	Solid	6020A	580-236685
MB 580-236685/22-A	Method Blank	T	Solid	6020A	580-236685
580-65448-8	DPL-096S-011317	T	Solid	6020A	580-236685
580-65448-8DU	Duplicate	T	Solid	6020A	580-236685
580-65448-8MS	Matrix Spike	T	Solid	6020A	580-236685
580-65448-8MSD	Matrix Spike Duplicate	T	Solid	6020A	580-236685
580-65448-9	DPL-095S-011317	T	Solid	6020A	580-236685
580-65448-10	DPL-094S-011317	T	Solid	6020A	580-236685
580-65448-11	DPL-063S-011317	T	Solid	6020A	580-236685
580-65448-12	DPL-093S-011317	T	Solid	6020A	580-236685
580-65448-13	DPL-117S-011317	T	Solid	6020A	580-236685
580-65448-14	DPL-115S-011317	T	Solid	6020A	580-236685
580-65448-15	DPL-138S-011317	T	Solid	6020A	580-236685
580-65448-16	DPL-114S-011317	T	Solid	6020A	580-236685
580-65448-17	DPL-111S-011317	T	Solid	6020A	580-236685
580-65448-18	DPL-139S-011317	T	Solid	6020A	580-236685
580-65448-19	DPL-132S-011317	T	Solid	6020A	580-236685
580-65448-20	DPL-129S-011317	T	Solid	6020A	580-236685
580-65448-21	DPL-128S-011317	T	Solid	6020A	580-236685
580-65448-22	DPL-125S-011317	T	Solid	6020A	580-236685
580-65448-23	DPL-126S-011317	T	Solid	6020A	580-236685
580-65448-24	DPL-063S1-011317	T	Solid	6020A	580-236685
580-65448-25	DPL-126S1-011317	T	Solid	6020A	580-236685
Prep Batch: 580-237058					
LCS 580-237058/13-A	Lab Control Sample	T	Solid	3050B	
LCSD 580-237058/14-A	Lab Control Sample Duplicate	T	Solid	3050B	
MB 580-237058/12-A	Method Blank	T	Solid	3050B	
580-65448-1	DPL-GA-01-011217	T	Solid	3050B	580-236757
580-65448-1MS	Matrix Spike	T	Solid	3050B	580-236757
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	3050B	580-236757
580-65448-2	DPL-GA-02-011217	T	Solid	3050B	580-236757
580-65448-3	DPL-GA-03-011217	T	Solid	3050B	580-236757
580-65448-4	DPL-GB-011217	T	Solid	3050B	580-236757
580-65448-5	DPL-GC-011217	T	Solid	3050B	580-236757
580-65448-6	DPL-GD-011217	T	Solid	3050B	580-236757
580-65448-7	DPL-GE-011317	T	Solid	3050B	580-236757

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:580-237299					
LCS 580-237058/13-A	Lab Control Sample	T	Solid	6020A	580-237058
LCSD 580-237058/14-A	Lab Control Sample Duplicate	T	Solid	6020A	580-237058
MB 580-237058/12-A	Method Blank	T	Solid	6020A	580-237058
580-65448-1	DPL-GA-01-011217	T	Solid	6020A	580-237058
580-65448-1MS	Matrix Spike	T	Solid	6020A	580-237058
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	6020A	580-237058
580-65448-2	DPL-GA-02-011217	T	Solid	6020A	580-237058
580-65448-3	DPL-GA-03-011217	T	Solid	6020A	580-237058
580-65448-4	DPL-GB-011217	T	Solid	6020A	580-237058
580-65448-5	DPL-GC-011217	T	Solid	6020A	580-237058
580-65448-6	DPL-GD-011217	T	Solid	6020A	580-237058
580-65448-7	DPL-GE-011317	T	Solid	6020A	580-237058

Report Basis
T = Total

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:580-236678					
580-65448-8	DPL-096S-011317	T	Solid	D 2216	
580-65448-8DU	Duplicate	T	Solid	D 2216	
580-65448-9	DPL-095S-011317	T	Solid	D 2216	
580-65448-9DU	Duplicate	T	Solid	D 2216	
580-65448-10	DPL-094S-011317	T	Solid	D 2216	
580-65448-11	DPL-063S-011317	T	Solid	D 2216	
580-65448-12	DPL-093S-011317	T	Solid	D 2216	
580-65448-13	DPL-117S-011317	T	Solid	D 2216	
580-65448-14	DPL-115S-011317	T	Solid	D 2216	
580-65448-15	DPL-138S-011317	T	Solid	D 2216	
580-65448-16	DPL-114S-011317	T	Solid	D 2216	
580-65448-17	DPL-111S-011317	T	Solid	D 2216	
580-65448-18	DPL-139S-011317	T	Solid	D 2216	
580-65448-19	DPL-132S-011317	T	Solid	D 2216	
580-65448-20	DPL-129S-011317	T	Solid	D 2216	
580-65448-21	DPL-128S-011317	T	Solid	D 2216	
580-65448-22	DPL-125S-011317	T	Solid	D 2216	
580-65448-23	DPL-126S-011317	T	Solid	D 2216	
580-65448-24	DPL-063S1-011317	T	Solid	D 2216	
580-65448-25	DPL-126S1-011317	T	Solid	D 2216	
Prep Batch: 580-236757					
580-65448-1	DPL-GA-01-011217	T	Solid	Increment, Prep	
580-65448-1DU	Duplicate	T	Solid	Increment, Prep	
580-65448-2	DPL-GA-02-011217	T	Solid	Increment, Prep	
580-65448-3	DPL-GA-03-011217	T	Solid	Increment, Prep	
580-65448-4	DPL-GB-011217	T	Solid	Increment, Prep	
580-65448-5	DPL-GC-011217	T	Solid	Increment, Prep	
580-65448-6	DPL-GD-011217	T	Solid	Increment, Prep	
580-65448-7	DPL-GE-011317	T	Solid	Increment, Prep	
Analysis Batch:580-236803					
580-65448-1	DPL-GA-01-011217	T	Solid	D 2216	
580-65448-1DU	Duplicate	T	Solid	D 2216	
580-65448-2	DPL-GA-02-011217	T	Solid	D 2216	
580-65448-3	DPL-GA-03-011217	T	Solid	D 2216	
580-65448-4	DPL-GB-011217	T	Solid	D 2216	
580-65448-5	DPL-GC-011217	T	Solid	D 2216	
580-65448-6	DPL-GD-011217	T	Solid	D 2216	
580-65448-7	DPL-GE-011317	T	Solid	D 2216	

Report Basis
T = Total

TestAmerica Seattle

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 320-147772					
LCS 320-147772/2-A	Lab Control Sample	T	Solid	8330B	
MB 320-147772/1-A	Method Blank	T	Solid	8330B	
580-65448-1	DPL-GA-01-011217	T	Solid	8330B	
580-65448-1MS	Matrix Spike	T	Solid	8330B	
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	8330B	
580-65448-2	DPL-GA-02-011217	T	Solid	8330B	
580-65448-3	DPL-GA-03-011217	T	Solid	8330B	
580-65448-4	DPL-GB-011217	T	Solid	8330B	
580-65448-5	DPL-GC-011217	T	Solid	8330B	
580-65448-6	DPL-GD-011217	T	Solid	8330B	
580-65448-7	DPL-GE-011317	T	Solid	8330B	
580-65448-8	DPL-096S-011317	T	Solid	8330B	
580-65448-9	DPL-095S-011317	T	Solid	8330B	
580-65448-10	DPL-094S-011317	T	Solid	8330B	
580-65448-11	DPL-063S-011317	T	Solid	8330B	
580-65448-12	DPL-093S-011317	T	Solid	8330B	
580-65448-13	DPL-117S-011317	T	Solid	8330B	
580-65448-14	DPL-115S-011317	T	Solid	8330B	
580-65448-15	DPL-138S-011317	T	Solid	8330B	
580-65448-16	DPL-114S-011317	T	Solid	8330B	
580-65448-17	DPL-111S-011317	T	Solid	8330B	
580-65448-18	DPL-139S-011317	T	Solid	8330B	
580-65448-19	DPL-132S-011317	T	Solid	8330B	
580-65448-20	DPL-129S-011317	T	Solid	8330B	
Prep Batch: 320-147773					
LCS 320-147773/2-A	Lab Control Sample	T	Solid	8330B	
LCSD 320-147773/3-A	Lab Control Sample Duplicate	T	Solid	8330B	
MB 320-147773/1-A	Method Blank	T	Solid	8330B	
580-65448-21	DPL-128S-011317	T	Solid	8330B	
580-65448-22	DPL-125S-011317	T	Solid	8330B	
580-65448-23	DPL-126S-011317	T	Solid	8330B	
580-65448-24	DPL-063S1-011317	T	Solid	8330B	
580-65448-25	DPL-126S1-011317	T	Solid	8330B	

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:320-147980					
LCS 320-147772/2-A	Lab Control Sample	T	Solid	8330B	320-147772
MB 320-147772/1-A	Method Blank	T	Solid	8330B	320-147772
LCS 320-147773/2-A	Lab Control Sample	T	Solid	8330B	320-147773
LCSD 320-147773/3-A	Lab Control Sample Duplicate	T	Solid	8330B	320-147773
MB 320-147773/1-A	Method Blank	T	Solid	8330B	320-147773
580-65448-1	DPL-GA-01-011217	T	Solid	8330B	320-147772
580-65448-1MS	Matrix Spike	T	Solid	8330B	320-147772
580-65448-1MSD	Matrix Spike Duplicate	T	Solid	8330B	320-147772
580-65448-2	DPL-GA-02-011217	T	Solid	8330B	320-147772
580-65448-3	DPL-GA-03-011217	T	Solid	8330B	320-147772
580-65448-4	DPL-GB-011217	T	Solid	8330B	320-147772
580-65448-5	DPL-GC-011217	T	Solid	8330B	320-147772
580-65448-6	DPL-GD-011217	T	Solid	8330B	320-147772
580-65448-7	DPL-GE-011317	T	Solid	8330B	320-147772
580-65448-8	DPL-096S-011317	T	Solid	8330B	320-147772
580-65448-9	DPL-095S-011317	T	Solid	8330B	320-147772
580-65448-10	DPL-094S-011317	T	Solid	8330B	320-147772
580-65448-11	DPL-063S-011317	T	Solid	8330B	320-147772
580-65448-12	DPL-093S-011317	T	Solid	8330B	320-147772
580-65448-13	DPL-117S-011317	T	Solid	8330B	320-147772
580-65448-14	DPL-115S-011317	T	Solid	8330B	320-147772
580-65448-15	DPL-138S-011317	T	Solid	8330B	320-147772
580-65448-16	DPL-114S-011317	T	Solid	8330B	320-147772
580-65448-17	DPL-111S-011317	T	Solid	8330B	320-147772
580-65448-18	DPL-139S-011317	T	Solid	8330B	320-147772
580-65448-19	DPL-132S-011317	T	Solid	8330B	320-147772
580-65448-20	DPL-129S-011317	T	Solid	8330B	320-147772
580-65448-21	DPL-128S-011317	T	Solid	8330B	320-147773
580-65448-22	DPL-125S-011317	T	Solid	8330B	320-147773
580-65448-23	DPL-126S-011317	T	Solid	8330B	320-147773
580-65448-24	DPL-063S1-011317	T	Solid	8330B	320-147773
580-65448-25	DPL-126S1-011317	T	Solid	8330B	320-147773

Report Basis
T = Total

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Surrogate Recovery Report

8015B DRO Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec	OTPH2 %Rec
580-65448-1	DPL-GA-01-011217		53
580-65448-2	DPL-GA-02-011217		36J
580-65448-3	DPL-GA-03-011217		40J
580-65448-4	DPL-GB-011217		38J
580-65448-5	DPL-GC-011217		63
580-65448-6	DPL-GD-011217		74
580-65448-7	DPL-GE-011317		70
580-65448-8	DPL-096S-011317	57Q	
580-65448-9	DPL-095S-011317	61Q	
580-65448-10	DPL-094S-011317	63Q	
580-65448-11	DPL-063S-011317	59Q	
580-65448-12	DPL-093S-011317	59Q	
580-65448-13	DPL-117S-011317	60Q	
580-65448-14	DPL-115S-011317	57Q	
580-65448-15	DPL-138S-011317	58Q	
580-65448-16	DPL-114S-011317	58Q	
580-65448-17	DPL-111S-011317	62Q	
580-65448-18	DPL-139S-011317	59Q	
580-65448-19	DPL-132S-011317	58Q	
580-65448-20	DPL-129S-011317	61Q	
580-65448-21	DPL-128S-011317	61Q	
580-65448-22	DPL-125S-011317	63Q	
580-65448-23	DPL-126S-011317	60Q	
580-65448-24	DPL-063S1-011317	62Q	
580-65448-25	DPL-126S1-011317	62Q	
MB 580-236802/1-A			100
MB 580-236854/1-A		65	
LCS 580-236802/2-A			98
LCS 580-236854/2-A		73	

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	45-130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Surrogate Recovery Report

8015B DRO Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec	OTPH2 %Rec
LCSD 580-236854/3-A		65	
580-65448-1 MS	DPL-GA-01-011217 MS		31J
580-65448-25 MS	DPL-126S1-011317 MS	56	
580-65448-1 MSD	DPL-GA-01-011217 MSD		53
580-65448-25 MSD	DPL-126S1-011317 MSD	59	

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	45-130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Surrogate Recovery Report

8330B Nitroaromatics and Nitramines (HPLC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DNT1 %Rec
580-65448-1	DPL-GA-01-011217	90
580-65448-2	DPL-GA-02-011217	90
580-65448-3	DPL-GA-03-011217	87
580-65448-4	DPL-GB-011217	92
580-65448-5	DPL-GC-011217	93
580-65448-6	DPL-GD-011217	89
580-65448-7	DPL-GE-011317	89
580-65448-8	DPL-096S-011317	92
580-65448-9	DPL-095S-011317	91
580-65448-10	DPL-094S-011317	94
580-65448-11	DPL-063S-011317	89
580-65448-12	DPL-093S-011317	87
580-65448-13	DPL-117S-011317	89
580-65448-14	DPL-115S-011317	90
580-65448-15	DPL-138S-011317	92
580-65448-16	DPL-114S-011317	87
580-65448-17	DPL-111S-011317	89
580-65448-18	DPL-139S-011317	89M
580-65448-19	DPL-132S-011317	89
580-65448-20	DPL-129S-011317	90
580-65448-21	DPL-128S-011317	90
580-65448-22	DPL-125S-011317	88
580-65448-23	DPL-126S-011317	92
580-65448-24	DPL-063S1-011317	91
580-65448-25	DPL-126S1-011317	91
MB 320-147772/1-A		92
MB 320-147773/1-A		91
LCS 320-147772/2-A		89
LCS 320-147773/2-A		95

Surrogate	Acceptance Limits
DNT = 3,4-Dinitrotoluene	78-118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Surrogate Recovery Report

8330B Nitroaromatics and Nitramines (HPLC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DNT1 %Rec
LCSD 320-147773/3-A		97
580-65448-1 MS	DPL-GA-01-011217 MS	95
580-65448-1 MSD	DPL-GA-01-011217 MSD	90

Surrogate	Acceptance Limits
DNT = 3,4-Dinitrotoluene	78-118

Method Blank - Batch: 580-236802

Method: 8015B DRO
Preparation: 3546

Lab Sample ID:	MB 580-236802/1-A	Analysis Batch:	580-236881	Instrument ID:	SEA012
Client Matrix:	Solid	Prep Batch:	580-236802	Lab File ID:	078B1101.D
Dilution:	1.0	ISM Prep Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/23/2017 1537	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/20/2017 1420			Injection Volume:	1 uL
ISM Prep Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	DL	LOQ
HI Diesel Range Organics (>C12-C24)	8.3	U	4.1	8.3
HI Residual Range Organics (>C24-C32)	8.4	U	4.7	17

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	100	45 - 130

Lab Control Sample - Batch: 580-236802

Method: 8015B DRO
Preparation: 3546

Lab Sample ID:	LCS 580-236802/2-A	Analysis Batch:	580-236988	Instrument ID:	SEA012
Client Matrix:	Solid	Prep Batch:	580-236802	Lab File ID:	074B0601.D
Dilution:	1.0	ISM Prep Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	01/24/2017 1550	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/20/2017 1420			Injection Volume:	1 uL
ISM Prep Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HI Diesel Range Organics (>C12-C24)	168	141	84	38 - 132	
HI Residual Range Organics (>C24-C32)	168	174	104	39 - 106	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	98	45 - 130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-236802

Method: 8015B DRO
Preparation: 3546

MS Lab Sample ID:	580-65448-1	Analysis Batch:	580-236881	Instrument ID:	SEA012
Client Matrix:	Solid	Prep Batch:	580-236802	Lab File ID:	081B1401.D
Dilution:	1.0	ISM Prep Batch:	580-236757	Initial Weight/Volume:	29.895 g
Analysis Date:	01/23/2017 1643			Final Weight/Volume:	10 mL
Prep Date:	01/20/2017 1420			Injection Volume:	1 uL
ISM Prep Date:	01/20/2017 0917			Column ID:	PRIMARY
MSD Lab Sample ID:	580-65448-1	Analysis Batch:	580-236881	Instrument ID:	SEA012
Client Matrix:	Solid	Prep Batch:	580-236802	Lab File ID:	082B1501.D
Dilution:	1.0	ISM Prep Batch:	580-236757	Initial Weight/Volume:	31.259 g
Analysis Date:	01/23/2017 1705			Final Weight/Volume:	10 mL
Prep Date:	01/20/2017 1420			Injection Volume:	1 uL
ISM Prep Date:	01/20/2017 0917			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
HI Diesel Range Organics (>C12-C24)	31	24	38 - 132	8	20	J	J
HI Residual Range Organics (>C24-C32)	25	48	39 - 106	10	20	J	

Surrogate	MS % Rec		MSD % Rec	Acceptance Limits
o-Terphenyl	31	J	53	45 - 130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Method Blank - Batch: 580-236854

Method: 8015B DRO
Preparation: 3546

Lab Sample ID:	MB 580-236854/1-A	Analysis Batch:	580-236927	Instrument ID:	TAC020
Client Matrix:	Solid	Prep Batch:	580-236854	Lab File ID:	TAC20-012317020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/23/2017 1725	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/23/2017 0947			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	DL	LOQ
HI Diesel Range Organics (>C12-C24)	25	U	12	25
HI Residual Range Organics (>C24-C32)	25	U	14	50

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	65	45 - 130

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 580-236854

Method: 8015B DRO
Preparation: 3546

LCS Lab Sample ID:	LCS 580-236854/2-A	Analysis Batch:	580-236927	Instrument ID:	TAC020
Client Matrix:	Solid	Prep Batch:	580-236854	Lab File ID:	TAC20-012317021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/23/2017 1746	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/23/2017 0947			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY
LCSD Lab Sample ID:	LCSD 580-236854/3-A	Analysis Batch:	580-236927	Instrument ID:	TAC020
Client Matrix:	Solid	Prep Batch:	580-236854	Lab File ID:	TAC20-012317022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/23/2017 1806	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	01/23/2017 0947			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HI Diesel Range Organics (>C12-C24)	69	67	38 - 132	4	20		
HI Residual Range Organics (>C24-C32)	87	84	39 - 106	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	73	65	45 - 130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-236854

Method: 8015B DRO
Preparation: 3546

MS Lab Sample ID:	580-65448-25	Analysis Batch:	580-236927	Instrument ID:	TAC020
Client Matrix:	Solid	Prep Batch:	580-236854	Lab File ID:	TAC20-012317043.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.900 g
Analysis Date:	01/24/2017 0113			Final Weight/Volume:	10 mL
Prep Date:	01/23/2017 0947			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	580-65448-25	Analysis Batch:	580-236927	Instrument ID:	TAC020
Client Matrix:	Solid	Prep Batch:	580-236854	Lab File ID:	TAC20-012317044.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.035 g
Analysis Date:	01/24/2017 0133			Final Weight/Volume:	10 mL
Prep Date:	01/23/2017 0947			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
HI Diesel Range Organics (>C12-C24)	58	65	38 - 132	17	20		
HI Residual Range Organics (>C24-C32)	71	89	39 - 106	20	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	56	59	45 - 130

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Method Blank - Batch: 320-147772

Method: 8330B
Preparation: 8330B

Lab Sample ID:	MB 320-147772/1-A	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147772	Lab File ID:	Z000027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.00 g
Analysis Date:	01/27/2017 1514	Units:	mg/Kg	Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1315			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	DL	LOQ
2-Amino-4,6-dinitrotoluene	0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene	0.050	U	0.020	0.25
3,5-Dinitroaniline	0.050	U	0.020	0.25
1,3-Dinitrobenzene	0.050	U	0.020	0.25
2,4-Dinitrotoluene	0.050	U	0.020	0.25
2,6-Dinitrotoluene	0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.050	U	0.020	0.25
3-Nitrotoluene	0.050	U	0.016	0.25
2-Nitrotoluene	0.050	U	0.013	0.25
4-Nitrotoluene	0.050	U	0.018	0.25
Nitroglycerin	0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)	0.25	U	0.10	0.50
Nitrobenzene	0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine	0.050	U	0.020	0.25
1,3,5-Trinitrobenzene	0.050	U	0.020	0.25
2,4,6-Trinitrotoluene	0.050	U	0.019	0.25

Surrogate	% Rec	Acceptance Limits
3,4-Dinitrotoluene	92	78 - 118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Lab Control Sample - Batch: 320-147772

Method: 8330B
Preparation: 8330B

Lab Sample ID:	LCS 320-147772/2-A	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147772	Lab File ID:	Z000028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.00 g
Analysis Date:	01/27/2017 1607	Units:	mg/Kg	Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1315			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2-Amino-4,6-dinitrotoluene	0.500	0.467	93	71 - 123	
4-Amino-2,6-dinitrotoluene	0.500	0.452	90	64 - 127	
3,5-Dinitroaniline	0.500	0.494	99	86 - 118	
1,3-Dinitrobenzene	0.500	0.480	96	73 - 119	
2,4-Dinitrotoluene	0.500	0.481	96	75 - 121	
2,6-Dinitrotoluene	0.500	0.445	89	79 - 117	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.500	0.490	98	74 - 124	
3-Nitrotoluene	0.500	0.488	98	67 - 129	
2-Nitrotoluene	0.500	0.485	97	70 - 124	
4-Nitrotoluene	0.500	0.477	95	71 - 124	
Nitroglycerin	1.00	0.942	94	73 - 124	
Pentaerythritol tetranitrate (PETN)	1.00	1.03	103	72 - 128	M
Nitrobenzene	0.500	0.482	96	67 - 129	
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.500	0.489	98	67 - 129	
Methyl-2,4,6-trinitrophenylnitramine	0.500	0.454	91	68 - 135	
1,3,5-Trinitrobenzene	0.500	0.466	93	80 - 116	
2,4,6-Trinitrotoluene	0.500	0.481	96	71 - 120	

Surrogate	% Rec	Acceptance Limits
3,4-Dinitrotoluene	89	78 - 118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 320-147772

Method: 8330B
Preparation: 8330B

MS Lab Sample ID:	580-65448-1	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147772	Lab File ID:	Z000030.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	9.92 g
Analysis Date:	01/27/2017 1753			Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1315			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	580-65448-1	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147772	Lab File ID:	Z000031.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	9.95 g
Analysis Date:	01/27/2017 1846			Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1315			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2-Amino-4,6-dinitrotoluene	94	92	71 - 123	2	20		
4-Amino-2,6-dinitrotoluene	91	89	64 - 127	3	20		
3,5-Dinitroaniline	92	91	86 - 118	1	20		
1,3-Dinitrobenzene	96	95	73 - 119	2	20		
2,4-Dinitrotoluene	97	94	75 - 121	4	20		
2,6-Dinitrotoluene	92	90	79 - 117	3	20		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocir	95	95	74 - 124	1	20		
3-Nitrotoluene	97	97	67 - 129	1	20		
2-Nitrotoluene	96	96	70 - 124	0	20		
4-Nitrotoluene	95	95	71 - 124	0	20		
Nitroglycerin	93	96	73 - 124	2	20		
Pentaerythritol tetranitrate (PETN)	94	94	72 - 128	0	20	M	M
Nitrobenzene	99	98	67 - 129	2	20		
Hexahydro-1,3,5-trinitro-1,3,5-triazine	88	89	67 - 129	0	20		
Methyl-2,4,6-trinitrophenylnitramine	88	88	68 - 135	0	20		
1,3,5-Trinitrobenzene	92	92	80 - 116	1	20		
2,4,6-Trinitrotoluene	97	94	71 - 120	3	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
3,4-Dinitrotoluene	95	90	78 - 118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Method Blank - Batch: 320-147773

Method: 8330B
Preparation: 8330B

Lab Sample ID:	MB 320-147773/1-A	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147773	Lab File ID:	Z000053.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.00 g
Analysis Date:	01/28/2017 1413	Units:	mg/Kg	Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1321			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	DL	LOQ
2-Amino-4,6-dinitrotoluene	0.050	U	0.013	0.25
4-Amino-2,6-dinitrotoluene	0.050	U	0.020	0.25
3,5-Dinitroaniline	0.050	U	0.020	0.25
1,3-Dinitrobenzene	0.050	U	0.020	0.25
2,4-Dinitrotoluene	0.050	U	0.020	0.25
2,6-Dinitrotoluene	0.050	U	0.020	0.25
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	0.050	U	0.020	0.25
3-Nitrotoluene	0.050	U	0.016	0.25
2-Nitrotoluene	0.050	U	0.013	0.25
4-Nitrotoluene	0.050	U	0.018	0.25
Nitroglycerin	0.25	U	0.10	0.50
Pentaerythritol tetranitrate (PETN)	0.25	U	0.10	0.50
Nitrobenzene	0.050	U	0.018	0.25
Hexahydro-1,3,5-trinitro-1,3,5-triazine	0.050	U	0.020	0.25
Methyl-2,4,6-trinitrophenylnitramine	0.050	U	0.020	0.25
1,3,5-Trinitrobenzene	0.050	U	0.020	0.25
2,4,6-Trinitrotoluene	0.050	U	0.019	0.25

Surrogate	% Rec	Acceptance Limits
3,4-Dinitrotoluene	91	78 - 118

Client: Allied Pacific Environmental Consulting Job Number: 580-65448-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 320-147773

Method: 8330B
Preparation: 8330B

LCS Lab Sample ID:	LCS 320-147773/2-A	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147773	Lab File ID:	Z000054.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.00 g
Analysis Date:	01/28/2017 1506	Units:	mg/Kg	Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1321			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 320-147773/3-A	Analysis Batch:	320-147980	Instrument ID:	LC11
Client Matrix:	Solid	Prep Batch:	320-147773	Lab File ID:	Z000055.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.00 g
Analysis Date:	01/28/2017 1559	Units:	mg/Kg	Final Weight/Volume:	80.00 mL
Prep Date:	01/25/2017 1321			Injection Volume:	500 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
2-Amino-4,6-dinitrotoluene	95	98	71 - 123	3	20		
4-Amino-2,6-dinitrotoluene	94	95	64 - 127	1	20		
3,5-Dinitroaniline	98	99	86 - 118	1	20		
1,3-Dinitrobenzene	98	98	73 - 119	0	20		
2,4-Dinitrotoluene	97	98	75 - 121	2	20		
2,6-Dinitrotoluene	91	91	79 - 117	0	20		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	97	100	74 - 124	3	20		
3-Nitrotoluene	97	99	67 - 129	2	20		
2-Nitrotoluene	95	97	70 - 124	2	20		
4-Nitrotoluene	93	98	71 - 124	5	20		
Nitroglycerin	95	93	73 - 124	1	20		
Pentaerythritol tetranitrate (PETN)	94	102	72 - 128	9	20	M	M
Nitrobenzene	97	98	67 - 129	1	20		
Hexahydro-1,3,5-trinitro-1,3,5-triazine	97	98	67 - 129	1	20		
Methyl-2,4,6-trinitrophenylnitramine	90	92	68 - 135	2	20		
1,3,5-Trinitrobenzene	92	93	80 - 116	1	20		
2,4,6-Trinitrotoluene	94	96	71 - 120	3	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
3,4-Dinitrotoluene	95	97	78 - 118

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Method Blank - Batch: 580-236685

Method: 6020A
Preparation: 3050B

Lab Sample ID:	MB 580-236685/22-A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	020SMPL.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	01/20/2017 1442	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				
Leach Date:	N/A				

Analyte	Result	Qual	DL	LOQ
Chromium	0.25	U	0.063	0.50
Copper	0.20	U	0.098	0.40
Lead	0.19	U	0.048	0.50
Zinc	2.5	U	1.1	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 580-236685

Method: 6020A
Preparation: 3050B

LCS Lab Sample ID:	LCS 580-236685/23-A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	021SMPL.D
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	01/20/2017 1446	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 580-236685/24-A	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	022SMPL.D
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	01/20/2017 1451	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1042				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chromium	96	96	83 - 119	0	20		
Copper	99	97	84 - 119	2	20		
Lead	91	91	84 - 118	0	20		
Zinc	95	95	82 - 119	0	20		

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-236685

Method: 6020A
Preparation: 3050B

MS Lab Sample ID:	580-65448-8	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	026SMPL.D
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	1.0503 g
Analysis Date:	01/20/2017 1509			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				
Leach Date:	N/A				

MSD Lab Sample ID:	580-65448-8	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	027SMPL.D
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	1.0371 g
Analysis Date:	01/20/2017 1513			Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium	179	177	83 - 119	0	20	J	J
Copper	159	159	84 - 119	1	20	J	J
Lead	102	101	84 - 118	0	20		
Zinc	106	106	82 - 119	2	20		

Duplicate - Batch: 580-236685

Method: 6020A
Preparation: 3050B

Lab Sample ID:	580-65448-8	Analysis Batch:	580-236847	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-236685	Lab File ID:	024SMPL.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.0640 g
Analysis Date:	01/20/2017 1500	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	01/19/2017 1041				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chromium	60	61.6	3	20	
Copper	53	54.1	1	20	
Lead	7.5	7.98	6	20	
Zinc	23	23.0	1	20	

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Method Blank - Batch: 580-237058

Method: 6020A
Preparation: 3050B

Lab Sample ID:	MB 580-237058/12-A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-237058	Lab File ID:	024SMPL.D
Dilution:	50	ISM Prep Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/27/2017 1037	Units:	mg/Kg	Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	N/A				

Analyte	Result	Qual	DL	LOQ
Chromium	0.192	J	0.16	1.3
Copper	0.50	U	0.25	1.0
Lead	0.48	U	0.12	1.3
Zinc	6.3	U	2.8	13

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 580-237058

Method: 6020A
Preparation: 3050B

LCS Lab Sample ID:	LCS 580-237058/13-A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-237058	Lab File ID:	025SMPL.D
Dilution:	50	ISM Prep Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/27/2017 1041	Units:	mg/Kg	Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	N/A				

LCSD Lab Sample ID:	LCSD 580-237058/14-A	Analysis Batch:	580-237299	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-237058	Lab File ID:	026SMPL.D
Dilution:	50	ISM Prep Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	01/27/2017 1046	Units:	mg/Kg	Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chromium	102	103	83 - 119	1	20		
Copper	103	103	84 - 119	0	20		
Lead	102	103	84 - 118	1	20		
Zinc	101	100	82 - 119	1	20		

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-237058

Method: 6020A
Preparation: 3050B

MS Lab Sample ID:	580-65448-1	Analysis Batch:	580-237299	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-237058	Lab File ID:	030SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.1473 g
Analysis Date:	01/27/2017 1104			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 0917				

MSD Lab Sample ID:	580-65448-1	Analysis Batch:	580-237299	Instrument ID:	SEA044
Client Matrix:	Solid	Prep Batch:	580-237058	Lab File ID:	031SMPL.D
Dilution:	50	ISM Prep Batch:	580-236757	Initial Weight/Volume:	10.4836 g
Analysis Date:	01/27/2017 1108			Final Weight/Volume:	250 mL
Prep Date:	01/25/2017 1247				
ISM Prep Date:	01/20/2017 0917				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium	110	137	83 - 119	3	20	4	4
Copper	111	145	84 - 119	4	20	4	4
Lead	97	110	84 - 118	5	20		
Zinc	96	101	82 - 119	2	20		

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Duplicate - Batch: 580-236678

Method: D 2216
Preparation: N/A

Lab Sample ID:	580-65448-8	Analysis Batch:	580-236678	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/19/2017 0921	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	46.2	50.2	8	20	
Percent Moisture	53.8	49.8	8	20	

Duplicate - Batch: 580-236678

Method: D 2216
Preparation: N/A

Lab Sample ID:	580-65448-9	Analysis Batch:	580-236678	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/19/2017 0921	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	56.2	55.2	2	20	
Percent Moisture	43.8	44.8	2	20	

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Duplicate - Batch: 580-236803

Method: D 2216
Preparation: N/A

Lab Sample ID:	580-65448-1	Analysis Batch:	580-236803	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	ISM Prep Batch:	580-236757	Initial Weight/Volume:	
Analysis Date:	01/20/2017 1421	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
ISM Prep Date:	01/20/2017 0917				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	59.6	57.9	3	20	
Percent Moisture	40.4	42.1	4	20	

Loc: 580
65448

TestAmerica Tacoma
5755 8th St. East
Tacoma, WA 98424
Phone 253-922-2310 fax 252-922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Robert Jordan	Site Contact:	Date: January 16, 2017	COC No:
Allied Pacific Environmental Consulting (CNMI)	Tel/Fax: 670.322.7709/7708	Lab Contact:	Carrier:	1 of 3 COCs
PMB 10001 Box A6	**Analysis Turnaround Time**			Job No.
Saipan, MP, 96950	Calendar (C) or Work Days (W) C			
(670) 322-7709 Phone	TAT if different from Below ☐			SDG No.
(670) 322-7708 FAX	☑ 2 weeks			
Project Name: DPL Tinian Pina Ridge Phase II ESA	☐ 1 week			
Site: DPL Tinian Pina Ridge, Track 41 - 3	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives by 8330B	Metals (Co, Cr, Pb, Zn) by 6010C	TPH (DRO, RRO) by 8015B
DPL - GA - 01 - 011217	1/12/2017	8:00	ISM	Soil	1		X	X	X
DPL - GA - 02 - 011217	1/12/2017	8:15	ISM	Soil	1		X	X	X
DPL - GA - 03 - 011217	1/12/2017	8:30	ISM	Soil	1		X	X	X
DPL - GB - 011217	1/12/2017	9:30	ISM	Soil	1		X	X	X
DPL - GC - 011217	1/12/2017	10:45	ISM	Soil	1		X	X	X
DPL - GD - 011217	1/12/2017	15:30	ISM	Soil	1		X	X	X
DPL - GE - 011317	1/13/2017	8:30	ISM	Soil	1		X	X	X
DPL - 096S - 011317	1/13/2017	9:30	Comp	Soil	1		X	X	X
DPL - 095S - 011317	1/13/2017	9:45	Comp	Soil	1		X	X	X
DPL - 094S - 011317	1/13/2017	10:00	Comp	Soil	1		X	X	X

Sample Specific Notes:

580-65448 Chain of Custody

TB ___ Cooler TR3 Cor 1.4 Unc 1.1
Cooler Dsc Large Blue w/a Lab
(Wet) Packs Packing Bubble
Intl. fed. P.O. w/cs

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other 1

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* 1 *Months*

Special Instructions/QC Requirements & Comments:

	Company	Date/Time	Received by	Company	Date/Time
Relinquished by: Robert A. Jordan	Company: APEC	Date/Time: 1/16/17, 16:00	Received by: M. Rivera-McDermott	Company: TA-Sea	Date/Time: 1/18/17 0945
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Tacoma
5755 8th St. East
Tacoma, WA 98424
Phone 253-922-2310 fax 252-922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Robert Jordan	Site Contact:	Date: January 16, 2017	COC No:
Allied Pacific Environmental Consulting (CNMI)	Tel/Fax: 670.322.7709/7708	Lab Contact:	Carrier:	2 of 3 COCs
PMB 10001 Box A6	Analysis Turnaround Time			Job No.
Saipan, MP, 96950	Calendar (C) or Work Days (W) C			
(670) 322-7709 Phone	TAT if different from Below			
(670) 322-7708 FAX	☑ 2 weeks			SDG No.
Project Name: DPL Tinian Pina Ridge Phase II ESA	☐ 1 week			
Site: DPL Tinian Pina Ridge, Track 41 - 3	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives by 8330B	Metals (Cu, Cr, Pb, Zn) by 6010C	TPH (DRO, RRO) by 8015B	Sample Specific Notes:
DPL - 063S - 011317	1/13/2017	10:30	Comp	Soil	1		X	X	X	
DPL - 093S - 011317	1/13/2017	11:35	Comp	Soil	1		X	X	X	
DPL - 117S - 011317	1/13/2017	12:00	Comp	Soil	1		X	X	X	
DPL - 115S - 011317	1/13/2017	12:30	Comp	Soil	1		X	X	X	
DPL - 138S - 011317	1/13/2017	13:45	Comp	Soil	1		X	X	X	
DPL - 114S - 011317	1/13/2017	14:10	Comp	Soil	1		X	X	X	
DPL - 111S - 011317	1/13/2017	14:30	Comp	Soil	1		X	X	X	
DPL - 139S - 011317	1/13/2017	14:45	Comp	Soil	1		X	X	X	
DPL - 132S - 011317	1/13/2017	15:00	Comp	Soil	1		X	X	X	
DPL - 129S - 011317	1/13/2017	15:15	Comp	Soil	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* 1 *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by: Robert A. Jordan [signature]	Company: APEC	Date/Time: 1/16/17, 16:00	Received by: M. Ponce McDermott [signature]	Company: TA-Sea	Date/Time: 1/18/17 0945
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Tacoma
5755 8th St. East
Tacoma, WA 98424
Phone 253-922-2310 fax 252-922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Robert Jordan	Site Contact:	Date: January 16, 2017	COC No:
Allied Pacific Environmental Consulting (CNMI)	Tel/Fax: 670.322.7709/7708	Lab Contact:	Carrier:	3 of 3 COCs
PMB 10001 Box A6	Analysis Turnaround Time			Job No.
Saipan, MP, 96950	Calendar (C) or Work Days (W) C			
(670) 322-7709 Phone	TAT if different from Below ☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			SDG No.
(670) 322-7708 FAX				
Project Name: DPL Tinian Pina Ridge Phase II ESA				
Site: DPL Tinian Pina Ridge, Track 41 - 3				
P O #				

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives by 8330B	Metals (Ca, Cr, Pb, Zn) by 6010C	TPH (DRO, RRO) by 8015B	Sample Specific Notes:
DPL - 128S - 011317	1/13/2017	15:25	Comp	Soil	1		X	X	X	
DPL - 125S - 011317	1/13/2017	15:40	Comp	Soil	1		X	X	X	
DPL - 126S - 011317	1/13/2017	15:55	Comp	Soil	1		X	X	X	
DPL - 063S1 - 011317	1/13/2017	16:15	Comp	Soil	1		X	X	X	
DPL - 126S1 - 011317	1/13/2017	16:30	Comp	Soil	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by: Robert A. Jordan	Company: APEC	Date/Time: 1/16/17, 16:00	Received by: [signature]	Company: TA-Sea	Date/Time: 1/18/17 0945
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Walker, Elaine M	Carrier Tracking No(s):	COC No: 580-43758.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: elaine.walker@testamericainc.com	State of Origin: Guam	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA; DoD ELAP - L-A-B		Job #: 580-65448-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 1/30/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: DPL Tinian Pina Ridge Phase II ESA	Project #: 58010689			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B_DOD5/8330B_Sonc_10g Explosives, Standard List + Nitroglycerl	8330B_DOD5/8330B_Sonc_10g (MOD) Explosives + Nitroglycerin & PETN	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
DPL-GA-01-011217 (580-65448-1)	1/12/17	08:00 West		Solid			X		4	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GA-02-011217 (580-65448-2)	1/12/17	08:15 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GA-03-011217 (580-65448-3)	1/12/17	08:30 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GB-011217 (580-65448-4)	1/12/17	09:30 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GC-011217 (580-65448-5)	1/12/17	10:45 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GD-011217 (580-65448-6)	1/12/17	15:30 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-GE-011317 (580-65448-7)	1/13/17	08:30 West		Solid			X		2	Seattle to dry / sieve, then send 2x 10g aliquots / sample for 8330B
DPL-096S-011317 (580-65448-8)	1/13/17	09:30 West		Solid				X	1	
DPL-095S-011317 (580-65448-9)	1/13/17	09:45 West		Solid				X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	1/23/17	TA-Sea	[signature] Tracy A. Tumpeer	1/24/17 0940	TMWS 6.2°C ice
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Walker, Elaine M	Carrier Tracking No(s):	COC No: 580-43758.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: elaine.walker@testamericainc.com	State of Origin: Guam	Page: Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA; DoD ELAP - L-A-B		Job #: 580-65448-1
Address: 880 Riverside Parkway,	Due Date Requested: 1/30/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: DPL Tinian Pina Ridge Phase II ESA	Project #: 58010689			
Site:	SSOW#:			

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 Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B_DOD5/8330B_Sonc_10g Explosives, Standard List + Nitroglyceri	8330B_DOD5/8330B_Sonc_10g (MOD) Explosives + Nitroglycerin & PETN	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
DPL-094S-011317 (580-65448-10)	1/13/17	10:00 West		Solid				X	1	
DPL-063S-011317 (580-65448-11)	1/13/17	10:30 West		Solid				X	1	
DPL-093S-011317 (580-65448-12)	1/13/17	11:35 West		Solid				X	1	
DPL-117S-011317 (580-65448-13)	1/13/17	12:00 West		Solid				X	1	
DPL-115S-011317 (580-65448-14)	1/13/17	12:30 West		Solid				X	1	
DPL-138S-011317 (580-65448-15)	1/13/17	13:45 West		Solid				X	1	
DPL-114S-011317 (580-65448-16)	1/13/17	14:10 West		Solid				X	1	
DPL-111S-011317 (580-65448-17)	1/13/17	14:30 West		Solid				X	1	
DPL-139S-011317 (580-65448-18)	1/13/17	14:45 West		Solid				X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ________ Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Tom Blant[signature]	Date/Time: 1/23/17	Company	Received by: [signature] Tony G. Turpin	Date/Time: 1/24/17 0940	Company: TAWS 0.2°C ice
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

TestAmerica Seattle
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Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Walker, Elaine M	Carrier Tracking No(s):	COC No: 580-43758.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: elaine.walker@testamericainc.com	State of Origin: Guam	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA; DoD ELAP - L-A-B		Job #: 580-65448-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 1/30/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: DPL Tinian Pina Ridge Phase II ESA	Project #: 58010689			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B_DOD5/8330B_Sonc_10g Explosives, Standard List + Nitroglycerl	8330B_DOD5/8330B_Sonc_10g (MOD) Explosives + Nitroglycerin & PETN	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
DPL-132S-011317 (580-65448-19)	1/13/17	15:00 West		Solid				X	1	
DPL-129S-011317 (580-65448-20)	1/13/17	15:15 West		Solid				X	1	
DPL-128S-011317 (580-65448-21)	1/13/17	15:25 West		Solid				X	1	
DPL-125S-011317 (580-65448-22)	1/13/17	15:40 West		Solid				X	1	
DPL-126S-011317 (580-65448-23)	1/13/17	15:55 West		Solid				X	1	
DPL-063S1-011317 (580-65448-24)	1/13/17	16:15 West		Solid				X	1	
DPL-126S1-011317 (580-65448-25)	1/13/17	16:30 West		Solid				X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Tom Blount	1/23/17		Troy G. Turpen	1/24/17 0940	TAWS 0.2°C ice
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Login Number: 65448
List Number: 1
Creator: Ponce-McDermott, Monica

List Source: TestAmerica Seattle

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	No name
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	

Login Sample Receipt Checklist

Client: Allied Pacific Environmental Consulting

Job Number: 580-65448-1

Login Number: 65448
List Number: 2
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 01/24/17 02:49 PM

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	622977
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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	