ADDENDUM TO THE
PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

for the

Residence Area Subject Property
of the Tully Creek Site (APN 534-182-015)
Tully Creek Road, Humboldt County, California

August 5, 2013

Prepared for:
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ADDENDUM TO THE
PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT
FOR THE TULLY CREEK SUBJECT PROPERTY (APN 534-182-015)
TULLY CREEK ROAD, HUMBOLDT COUNTY, CALIFORNIA

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ACRONYMS AND ABBREVIATIONS

APN	Assessors Parcel Number
ASTM	American Society for Testing and Materials
bgs	below ground surface
CalRecycle	California Department of Resources Recycling and Recovery
CERCLA	Comprehensive Environmental Response, Cleanup, and Liability Act
CFR	Code of Federal Regulations
CHHSL	California Human Health Screening Levels
CLP	Contract Laboratory Program
CWA	Clean Water Act
DQA	Data quality assessment
DQI	Data quality indicators
DQO	Data quality objectives
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESL	Environmental Screening Levels
FEMA	Federal Emergency Management Agency
FES	Freshwater Environmental Services
FSP	Field sampling plan
GPS	Global Positioning System
GIS	Geographic Information System
GC/MS	Gas chromatography and mass spectrometry
IDW	Investigation-derived waste
IRIS	Integrated Risk Information System (USEPA)
LCS/LCSD	Laboratory control sample and laboratory control sample duplicates
MDL	Method detection limit
MPC	Measurement Performance Criteria
MQO	Measurement quality objective
MS/MSD	Matrix spike and matrix spike duplicate
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NRCS	Natural Resource Conservation Service
PARCCS	Precision, accuracy, representativeness, completeness, comparability, and sensitivity
PE	Performance evaluation
PRG	Preliminary remediation goal
PRQL	Project-required quantitation limit
QA	Quality assurance
QA/QC	Quality assurance/quality control
QAPP	Quality assurance project plan
QC	Quality control
QL	Quantitation limit
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
RPD	Relative percent difference
RSls	Residential Screening Levels
%R	Percent recovery
SAP	Sampling and analysis plan (an integrated FSP and QAPP)

SOP	Standard operating procedures
SOW	Statement of work
SVOC	Semi-volatile organic compound
TPH	Total Petroleum Hydrocarbons
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USGS	United States Geological Survey
VOC	Volatile organic compound
YTEP	Yurok Tribe Environmental Program

1.0 INTRODUCTION

Freshwater Environmental Services (FES) has prepared this report of findings for the Addendum to the Phase II Environmental Site Assessment (ESA) for the Residence Area Subject Property of the Tully Creek Site (APN 534-182-015) near the end of Tully Creek Road, near Weitchpec, Humboldt County, California. This addendum was prepared for the Yurok Tribe Environmental Program (YTEP) with funding from the United States Environmental Protection Agency (USEPA) CERCLA 128(a) Tribal Response Program grant. The Site location is shown on Figure 1.

This report conforms to the process and principles recommended in the *Standard Guide for Environmental Assessments: Phase II Environmental Site Assessment Process*, E-1903, (ASTM, 2002). This report documents the soil sampling performed at the former residence area (the Subject Property). The location of the parcel that contains the Subject Property is shown on Figures 1, 2, and 3.

The objective of this Addendum to the Phase II ESA was to determine the horizontal and vertical extent of soil contaminated with TPH-Motor Oil reported in the *Phase II Environmental Site Assessment Report* (FES, 2012). The scope of work developed by FES for this addendum was based on the findings of the Phase II ESA (FES, 2012).

The principal study question for this investigation is whether the residence area contains soils contaminated with TPH-Motor Oil from unauthorized activities above concentrations regarded as safe for use of the residence area? The alternative actions that could result from resolution of the principal study question include:

- If contamination is limited to within approximately 10 feet of previous sample location Residence-1 this area can be cleaned up and the area redeveloped; and
- If contamination is identified over allowable levels beyond approximately 10 feet, from Residence-1, additional assessment and cleanup will be necessary prior to redevelopment.

2.0 SITE BACKGROUND

The Subject Property including the former residence area was the location of a former residence. The Subject Property was cleaned up in 2008 with a grant from CalRecycle (formerly California Integrated Waste Management Board).

Two soil samples were collected from the former residence area for the Phase II ESA (FES, 2012). Total Petroleum Hydrocarbons as Diesel and Motor Oil (TPH-D/MO) were detected in both of the soil samples as shown in the table below. The detections of TPH-Diesel were below the screening level of 83 mg/kg. Because there were detections of TPH-D/MO the samples were subjected to a silica gel cleanup to remove non-petroleum compounds. After the silica gel cleanup only the sample from Residence-1-(0.0'-0.25') contained TPH-MO at a concentration that exceeded the screening level of 370 milligrams per kilogram (mg/kg). The screening levels that were used are from the California Regional Water Quality Control Board San Francisco Bay Region, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, November 2007, revised May 2008, Table A Environmental Screening Levels (ESLs) Shallow Soils (<3m bgs), Groundwater is Current or Potential Source of Drinking Water. The environmental screening level for TPH for residual fuels was applied to TPH-Motor Oil.

SUMMARY OF TOTAL PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL SAMPLES FROM THE JULY 19, 2012 SAMPLING EVENT

Sample ID	**Date**	**TPH-Motor Oil (mg/kg)**	**TPH-Motor Oil (mg/kg)** With Silica Gel	**TPH-Diesel (mg/kg)**	**TPH-Diesel (mg/kg)** With Silica Gel
	Residential Screening Levels	370	370	83	83
Residence-1-(0.0'-0.25')	7/19/12	**1,000**	**660**	11	<20
Residence-2-(0.0'-0.25')	7/19/12	**400**	340	10	10

NOTES:

Samples with detections were subject to a silica gel cleanup.

1,000 Analytes detected at or above the screening level shown in red bold.

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbon

3.0 SITE GEOLOGY AND HYDROLOGY

The elevation of the parcel which contains the Subject Property ranges from approximately 360 feet to 1,360 feet above mean sea level. The area of the Subject Property where the former residence was located is approximately 575 feet above mean sea level. The topography of the Site generally slopes moderately to steeply to the east towards the Klamath River. The Subject Property is a relatively flat clearing that was probably constructed after the date of the 1954 aerial photograph.

The nearest stream shown on the USGS topographic map is Waukell Creek which flows eastward through the Site to the Klamath River approximately 2,100 feet east of the Subject Property. There are two tributaries shown on the topographic map with the northern tributary shown just south of the former residence area. The locations of Waukell Creek and its tributaries are shown on Figures 1, 2, and 3.

Based on data obtained from the Natural Resource Conservation Service (NRCS), the average annual precipitation at the Site is approximately 73 inches in the western portion and approximately 65 inches in the eastern portion of the Site.

The Subject Property is shown on the "Geologic Map of the Weed Quadrangle, California" (Wagner and Saucedo, 1987) as being underlain by the South Fork Mountain Schist. Schist is a metamorphic rock type with sub-parallel orientation of micaceous minerals which typically dominant the composition. The nearest fault zoned as active (within the last 11,000 years) under the Alquist-Priolo Earthquake Fault Zoning Act, is approximately 22 miles southwest of the Subject Property.

4.0 SAMPLING METHODS AND ANALYSIS

4.1 Field Methods

The Yurok Tribe Environmental Program was responsible for determining whether subsurface utilities were present at the Subject Property in the areas where borings were to be advanced. YTEP also completed a Cultural Resources Management Permit Application (Appendix D) to ensure that the project would have no impact to cultural resources. Soil samples were collected at a maximum depth of approximately 1.1 feet below ground surface (bgs). The soil samples were collected using a rock bar and shovel. Boring logs were prepared for each sample location and are included in Appendix A.

4.2 Soil Sampling

A total of 14 soil samples were collected in the area of the former residence at the end of the road. The samples were collected from depth intervals ranging from of 0.0 to 1.1 feet bgs. The samples were collected from locations surrounding the sample location Residence-1 from July 19, 2012. YTEP personnel collected GPS data for the sample locations. It was decided to use the actual ground measurements based on the previous Residence-1 location to plot the samples on the maps. The coordinates of the sample locations based on digitizing and calculations in a Geographic Information System (GIS) are presented in Table 2. The approximate sample locations are shown on Figure 3 and Figure 4.

4.3 Chemical Analysis Methods

The soil samples were analyzed by Calscience Environmental Laboratories, Inc. (Calscience) of Garden Grove, California. Calscience is certified by the California Department of Public Health for the requested analysis. Sample preparation followed EPA 3550B and analysis was by EPA 8015B (M) for Total Petroleum Hydrocarbons (TPH) as Motor Oil.

4.4 Modifications to the Approved Sampling and Analysis Plan

Because of conditions in the field there were some modifications to the Sampling and Analysis Plan (SAP).

The SAP indicated that the soil samples would be collected from two depth intervals. The first interval was proposed to be 0.0 to 0.5 feet bgs and the second proposed interval was to be 0.5 to 1.0 feet bgs. The soil samples at the residence were collected from a range of depths between 0.0 and 1.1 feet bgs because of conditions encountered during sample collection. These conditions included:

- The presence of fragments of what appeared to be asphalt shingles; and
- The presence of large rocks preventing access to deeper samples.

5.0 CHEMICAL ANALYSIS RESULTS

The laboratory analytical reports are included in Appendix C. The results of the TPH-Motor Oil analysis are shown in the table below:

SUMMARY OF TPH-MOTOR OIL CONCENTRATIONS IN SOIL SAMPLES FROM THE RESIDENCE AREA

Sample ID	Date	TPH-Motor Oil (mg/kg)	TPH-Motor Oil (mg/kg) With Silica Gel
	RSL	370	370
Residence-1-(0.0'-0.25')	7/19/12	**1,000**	**660**
Residence-1-1.0'-1.1'	4/9/13	NA	31
Residence-3-0.25"-0.5'	4/9/13	NA	**1,800**
Residence-3-0.5'-0.75'	4/9/13	NA	**400**
Residence-4-0.0'-0.25'	4/9/13	NA	150
Residence-4-0.5'-0.6'	4/9/13	NA	NA
Residence-5-0.0'-0.25'	4/9/13	NA	**4,000**
Residence-5-0.5'-0.7'	4/9/13	NA	**500**
Residence-6-0.0'-0.25'	4/9/13	NA	**2,000**
Residence-6-1.0'-1.1'	4/9/13	NA	35
Residence-7-0.0'-0.25'	4/9/13	NA	NA
Residence-7-0.5'-0.7'	4/9/13	NA	NA
Residence-8-0.0'-0.25'	4/9/13	NA	<25
Residence-8-0.5'-0.7'	4/9/13	NA	56
Residence-9-1.0'-1.1' Duplicate of Residence-1-1.0'-1.1'	4/9/13	NA	130

NOTES:

1,000 Analytes detected at or above the screening level shown in red bold.
NA Not Analyzed
RSL Resident Screening Level. Sources of screening levels are included in Table 1.
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbon

6.0 DATA QUALITY EVALUATION

6.1 Review of Laboratory Reports

The laboratory analytical reports are included in Appendix C. FES reviewed the laboratory analytical reports to determine if there were any data quality issues. There were no quality control issues observed in the Calscience results.

6.2 Assessment of Field Variability of Field Duplicate Soil Sample

One field duplicate soil sample was collected for this project. The field duplicate samples were created by placing soil from the same location (Residence-1-1.0'-1.1') in a clean glass mixing bowl and homogenizing the sample with gloved hands. Soil from the homogenized sample was divided into two 4-ounce glass jars labeled Residence-1-1.0'-1.1' and Residence-9-1.0'-1.1'. The laboratory homogenized the individual samples prior to extraction and analysis.

The results of the TPH-Motor Oil analysis are shown in the table below. The equation for calculating the RPD is:

$$RPD = \left| X_1 - X_2 \right| \div [(X_1 + X_2)/2] \times 100$$

RPD = Relative Percent Difference (as %)
$X_1 - X_2$ = Absolute value (always positive) of $X_1 - X_2$
X_1 = Original sample concentration
X_2 = Duplicate sample concentration

A RPD of 35% or less is generally considered acceptable for soil samples. The RPD for the field duplicate sample was 123% which is significantly higher than the generally accepted 35%. The soil composition at this location included a heterogeneous mixture of gravel, sand, silt, and clay. The higher than normal RPD for this sample may be due to the possible preferential distribution of the TPH-Motor Oil with the finer grained materials. It is possible that a more rigorous homogenization and the use of a splitting device would have produced a lower RPD.

SUMMARY OF CHEMICAL CONCENTRATIONS IN THE FIELD DUPLICATE SOIL SAMPLE FROM THE APRIL 9, 2013 SAMPLING EVENT

Sample ID	Date	TPH-Motor Oil (mg/kg) With Silica Gel
Residence-1-1.0'-1.1'	4/9/13	31
Residence-9-1.0'-1.1'	4/9/13	130
Relative Percent Difference		123%

NOTES:
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbon

6.3 Equipment Blanks

No equipment blanks were collected because the samples were collected from near the surface with no contact between the equipment and the soil collected for the sample.

6.4 Investigation Derived Wastes

There were no indications of contamination so all solid investigation derived wastes were placed back in the holes where they were collected. No waste was generated during this sampling event.

7.0 MEASUREMENT QUALITY OBJECTIVES (MQOs)

Data assessment criteria are used to evaluate the quality of the field sampling and laboratory performance for the sampling event, and are expressed in terms of analytical precision, accuracy, representativeness, completeness, and comparability, which are described below.

7.1 Precision

Precision is the degree of mutual agreement between or among independent measurements of a similar property usually reported as relative percent difference (RPD). This indicator relates to the analysis of duplicate laboratory samples, duplicate matrix spikes, and field duplicates. An RPD of <20% for water and <35% for soil, depending upon the chemical being analyzed is generally considered acceptable.

The RPD for the field duplicate soil sample was 123%. Although this is higher than the 35% considered acceptable for soil samples, the detections (31 mg/kg and 130 mg/kg) were both well below the screening level of 370 mg/kg. The higher than normal RPD for this sample may be due to the possible preferential distribution of the TPH-Motor Oil with the finer grained materials as described in Section 6.2.

Laboratory precision was assessed using laboratory control samples and laboratory control sample duplicates (LCS/LCSD) and matrix spikes and matrix spike duplicates (MS/MSD). Precision was expressed in terms of RPD between the values resulting from duplicate analysis. RPDs for all laboratory analysis were within acceptable ranges for the specific analytical techniques.

7.2 Accuracy/Bias

Accuracy is the degree of agreement of a measurement with a known or true value. To determine accuracy, a laboratory value was compared to a known or true concentration. Accuracy for this project was determined by laboratory control samples and laboratory control sample duplicates and matrix spikes and matrix spike duplicates. Accuracy is expressed as a bias (high or low) and is determined by calculating percent recovery (%R) from MSs/MSDs and LCSs/LCSDs.

LCS %R indicates accuracy relevant to an analytical batch lot and is a measure of analytical accuracy conditions independent of samples and matrices. MS/MSD and surrogate spike %Rs indicate accuracy relevant to a unique sample matrix. The %R of an analyte, and the resulting degree of accuracy expected for the analysis of spiked samples, are dependent upon the sample matrix, method of analysis, and the compound or element being measured. The concentration of the analyte relative to the detection limit of the method also is a significant factor in determining the accuracy of the measurement.

Quality control samples that were used in this investigation to measure accuracy/bias include laboratory control spikes and duplicates and matrix spikes and matrix spike duplicates.

A laboratory control spike and laboratory spike duplicate were analyzed for the sample batch that included the samples. The LCS and LCSD percent recoveries for the samples were within the acceptable range. The RPD for the LCS/LCSD was 1%.

A matrix spike and matrix spike duplicate were analyzed for the sample collected at Residence-1 as requested on the chain-of-custody. The MS and MSD percent recoveries for the samples were within the acceptable range. The RPD for the sample was 2%.

7.3 Representativeness

Representativeness is the expression of the degree to which data accurately and precisely represent a characteristic of an environmental condition or a population. It relates both to the area of interest and to the method of taking the individual sample. The principal study questions for this project are whether the Subject Property contains contaminated soils above concentrations regarded as safe for reuse of the Subject Property resulting from illegal dumping.

This samples collected for this project were from areas that the Phase II identified as contaminated with TPH-Motor Oil above the screening level.

Factors that affect representativeness include:

- Use of appropriate sampling procedures, including equipment and equipment decontamination and sample holding temperatures;
- Use of appropriate analytical methods for the required parameters and project reporting limits; and
- Analysis of samples within the required holding times.

The portion of each collected sample that was chosen for analysis also affects sample representativeness. The laboratory homogenized all samples prior to taking aliquots for analysis to ensure that the reported results were representative of the sample received.

This investigation used sampling and analytical methods for ensuring the data collected reflects the environmental conditions in the areas sampled. To further ensure the representativeness of the data collected, chain-of-custody procedures, sample preservation, and maximum sample holding times were followed.

QC samples that were used in this investigation to quantitatively measure representativeness included the use of temperature blanks. The temperatures were recorded upon receipt of the samples by the laboratory to serve as a QC check for temperature-related sample preservation. All samples were received within the acceptance criteria for samples requiring preservation at 4°C +/- 2°C.

A qualitative measure of representativeness included verification that documented sample collection and analytical methods (including sample handling, chain-of-custody procedures, sample preservation, and sample holding times protocols) were followed to ensure that the data reflects the environmental conditions.

7.4 Comparability

Comparability expresses the confidence with which one dataset can be compared to another. The use of methods from EPA or "Standard Methods" or from some other recognized sources allows the data to be compared facilitating evaluation of trends or changes at a site. Comparability also refers to the reporting of data in comparable units so direct comparisons are simplified. Comparability during analysis is dependent upon analytical methods, detection limits, laboratories, units of measure, and sample preparation procedures. Comparability is determined on a qualitative rather than quantitative basis. For this project, comparability of all data collected was ensured by adherence to standard sample collection procedures, standard field measurement procedures, and standard analysis and reporting methods, including consistent units.

7.5 Completeness

Completeness is expressed as percent of valid usable data actually obtained compared to the amount that was expected. A total of 13 soil samples (excluding the field duplicate) were collected from the Subject Property. The Sampling and Analysis Plan called for the collection of 13 soil samples. The percent completeness is 100% based on the number of samples planned, versus the number of samples collected.

All 14 samples (including the field duplicate) were shipped to the laboratory with five of the samples designated for initial analysis and nine samples placed on hold pending analysis of the samples in the immediate vicinity of Residence-1. Based on the initial results indicating that TPH-Motor Oil exceeded the screening level in two of the samples around Residence-1 an additional six samples were analyzed. Based on the protocol described in the SAP, three of the soil samples were not analyzed. The following samples were not analyzed for the reasons listed below:

- Residence-4-0.5'-0.6' (The shallow sample, Residence-4-0.0'-0.25' was below the screening level).
- Residence-7-0.0'-0.25' (The adjacent sample, Residence-4-0.0'-0.25' was below the screening level).
- Residence-7-0.5'-0.7' (The adjacent sample, Residence-4-0.0'-0.25' was below the screening level).

7.6 Sensitivity

Laboratory methods utilized in the assessment were sensitive enough to be able to quantify the concentration of TPH-Motor Oil below the screening level. The reporting limit for TPH-Motor Oil for concentrations less than 100 mg/kg was 25 mg/kg. Reporting limits for samples with concentrations more than 100 mg/kg were elevated because the samples were diluted due to the presence of the analyte.

8.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

8.1 Residence Area

Sample Location Descriptions

Thirteen samples (excluding the field duplicate sample) were collected from the former residence area around the Residence-1 sample location from the Phase II ESA (FES, 2012). The sample locations were intended to delineate the horizontal and vertical extent of the soil contaminated with TPH-Motor Oil. The samples were collected from intervals with a maximum depth of 1.1 feet.

Discussion

TPH-Motor Oil was detected at concentrations ranging from 31 mg/kg to 4,000 mg/kg after the silica gel cleanup. Five of the soil samples had detections of TPH-Motor Oil exceeding the screening level of 370 mg/kg.

Conclusion

The extent of TPH-Motor Oil contamination around sample location Residence-1 has been horizontally delineated to the south but not to the north. Vertical delineation has been achieved to the southeast but not to the southwest and north.

Recommendations

FES recommends additional sampling that will include deeper samples from the area where Residence-3 and Residence-5 were collected as well as additional samples to delineate the horizontal extent of the contamination to the north of Residence-6. The additional samples would be analyzed for TPH-Motor Oil.

Human Risk

The concentration of TPH-Motor Oil presents a minimal risk to humans if the Subject Property is not developed for use. Prior to redevelopment, the soils in areas where TPH-Motor Oil exceeds the screening level will need to be removed from the Subject Property and disposed of at an appropriate permitted facility.

Ecological Risk

The concentrations of TPH-Motor Oil in the residence area are considered a minimal ecological risk as it is unlikely that significant concentrations would be mobilized by surface water flowing across the residence area. The following species are listed by the United States Fish and Wildlife Service and the National Marine Fisheries Service for the Johnsons 7.5-minute USGS Topographic Map that includes the Subject Property:

Type	Listing Agency	Common Name	Category	Habitat Designated
Fish	NMFS	green sturgeon	T	yes
	NMFS	S. OR/N. CA coho salmon	T	yes
Birds	US FWS	marbled murrelet	T	yes
	US FWS	Western yellow-billed cuckoo	C	no
	US FWS	northern spotted owl	T	yes
Mammals	US FWS	fisher, West Coast DPS	C	no

US FWS US Fish and Wildlife Service
NMFS National Marine Fisheries Service
T Threatened species
C Candidate species
DPS Distinct Population Segment

8.2 Principal Study Questions

The principal study question for this investigation was whether the residence area contains soils contaminated with TPH-Motor Oil from unauthorized activities above concentrations regarded as safe for use of the residence area? The alternative actions that could result from resolution of the principal study question include:

- If contamination is limited to within approximately 10 feet of previous sample location Residence-1 this area can be cleaned up and the area redeveloped; and

- If contamination is identified over allowable levels beyond approximately 10 feet, from Residence-1, additional assessment and cleanup will be necessary prior to redevelopment.

This assessment has concluded that the Subject Property requires additional assessment to the north of sample location Residence-6 to delineate the horizontal extent of contamination with TPH-Motor Oil. Additionally a deeper sample will need to be collected at sample location Residence-5 to delineate the vertical extent of contamination with TPH-Motor Oil.

9.0 REFERENCES

ASTM E1903 – 97, 2002, *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

California Regional Water Quality Control Board San Francisco Bay Region, 2008, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, INTERIM FINAL- November 2007 (Revised May 2008)*.

Freshwater Environmental Services, 2009, *Phase I Environmental Site Assessment Report for the Tully Creek Former Illegal Dumpsite Site, (APN 534-182-015) Located on Tully Creek Road Near Weitchpec, California*, September 9.

Freshwater Environmental Services, 2012, *Phase II Environmental Site Assessment Report for the Tully Site, (APN 534-182-015) Tully Creek Road, Near Weitchpec, California*, October 16.

Wagner and Saucedo, 1987, *Geologic Map of the Weed Quadrangle, California*, California Division of Mines and Geology.

TABLES

TABLE 1
SUMMARY OF TPH-MOTOR OIL ANALYSES OF SOIL SAMPLES FROM THE FORMER RESIDENCE AREA AT THE TULLY CREEK SITE
Humboldt County, California

Sample ID	Date Sampled	TPH-Motor Oil (mg/kg)	TPH-Motor Oil (mg/kg) WITH SILICA GEL CLEANUP
Residential Screening Level		370 [a]	370 [a]
Residence-1-(0.0'-0.25')	19-Jul-12	**1,000**	**660**
Residence-1-1.0'-1.1'	09-Apr-13	NA	31 [1]
Residence-3-0.25"-0.5'	09-Apr-13	NA	**1,800** [1]
Residence-3-0.5'-0.75'	09-Apr-13	NA	**400** [1]
Residence-4-0.0'-0.25'	09-Apr-13	NA	150 [1]
Residence-4-0.5'-0.6'	09-Apr-13	NA	NA
Residence-5-0.0'-0.25'	09-Apr-13	NA	**4,000** [1]
Residence-5-0.5'-0.7'	09-Apr-13	NA	**500** [1]
Residence-6-0.0'-0.25'	09-Apr-13	NA	**2,000** [1]
Residence-6-1.0'-1.1'	09-Apr-13	NA	35 [1]
Residence-7-0.0'-0.25'	09-Apr-13	NA	NA
Residence-7-0.5'-0.7'	09-Apr-13	NA	NA
Residence-8-0.0'-0.25'	09-Apr-13	NA	<25
Residence-8-0.5'-0.7'	09-Apr-13	NA	56 [1]
Residence-9-1.0'-1.1' (Duplicate of Residence-1-1.0'-1.1')	09-Apr-13	NA	130 [1]

Notes:
NA Not analyzed.
mg/kg milligrams per kilogram or parts per million
1,000 Red bold indicates a result that exceeds a screening level.

All samples analyzed were subjected to a silica gel cleanup.

[a] Table A Environmental Screening Levels (ESLs) Shallow Soils (<3m bgs) Groundwater is Current or Potential Source of Drinking Water. California Regional Water Quality Control Board San Francisco Bay Region, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, November 2007, revised May 2008. The environmental screening level for TPH (residual fuels) was applied to motor oil.

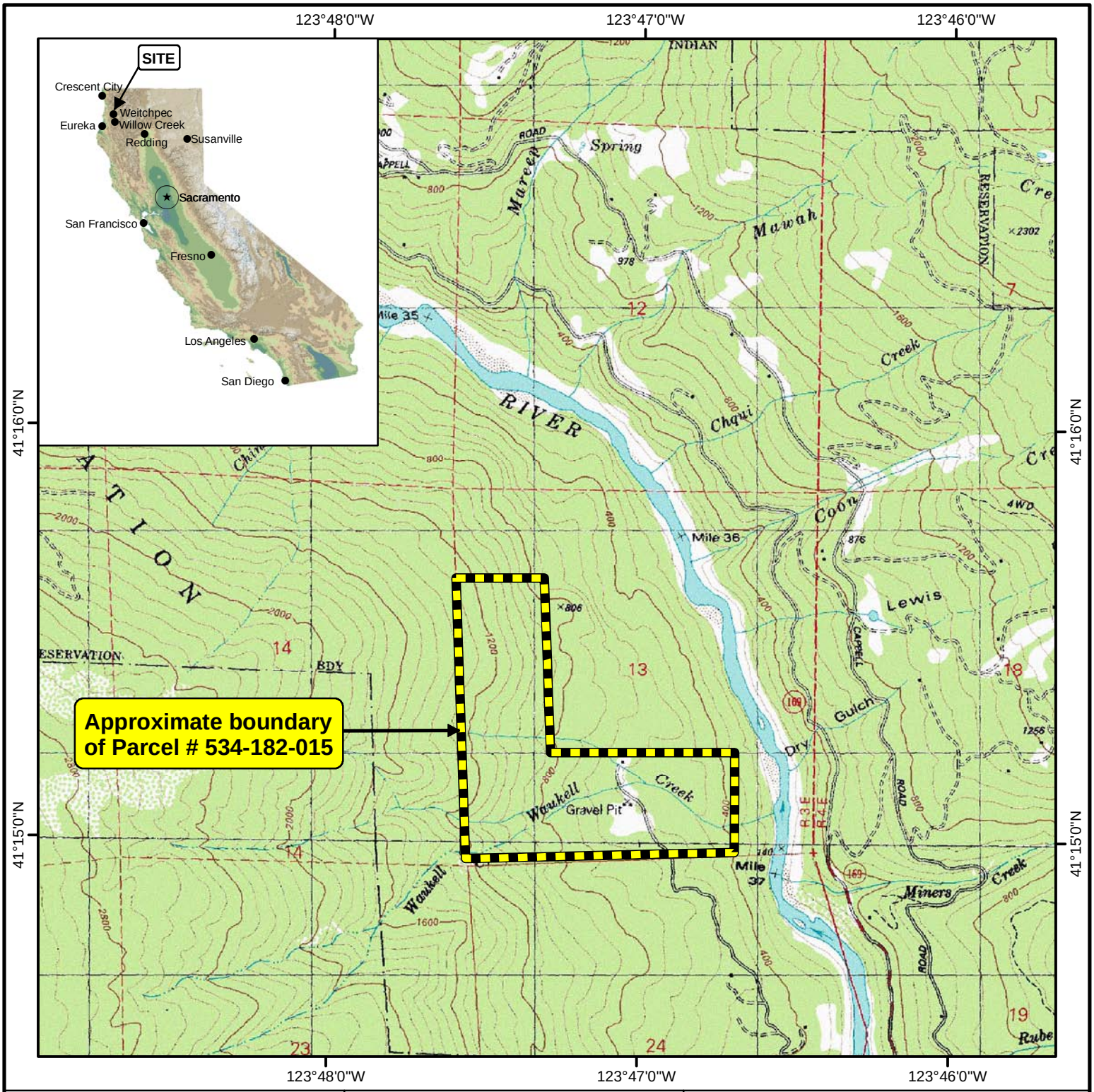
[1] The laboratory reported that "The chromatographic pattern was inconsistent with the profile of the reference fuel standard."

TABLE 2
GEOGRAPHIC COORDINATES CALCULATED BY FES USING GIS
FOR THE FORMER RESIDENCE AREA AT THE TULLY CREEK SITE
Humboldt County, California

Feature	Latitude	Longitude	Collection Method	Horizontal Datum
Residence-1	41.2531285998	-123.7841637350	Calculated using GIS	NAD 83
Residence-2	41.2531739205	-123.7842825540	Calculated using GIS	NAD 83
Residence-3	41.2531425378	-123.7841640630	Calculated using GIS	NAD 83
Residence-4	41.2531222489	-123.7841483010	Calculated using GIS	NAD 83
Residence-5	41.2531220378	-123.7841793050	Calculated using GIS	NAD 83
Residence-6	41.2531565270	-123.7841643490	Calculated using GIS	NAD 83
Residence-7	41.2531152399	-123.7841317700	Calculated using GIS	NAD 83
Residence-8	41.2531150063	-123.7841959370	Calculated using GIS	NAD 83

Notes: Locations were plotted based on the GPS location of Residence-1 which was collected by YTEP on July 19, 2012. Ground measurements for Residence-3 through Residence-8 from Residence-1 were collected by FES on April 9, 2013 and digitized in GIS. The geographic coordinates were then calculated using GIS.

FIGURES



N
W E
S

Feet
0 500 1,000 2,000 3,000 4,000

LEGEND

Base Image Data Source:
1:24,000 Digital Raster Graph Mosaic of Humboldt County, California

ALL LOCATIONS APPROXIMATE

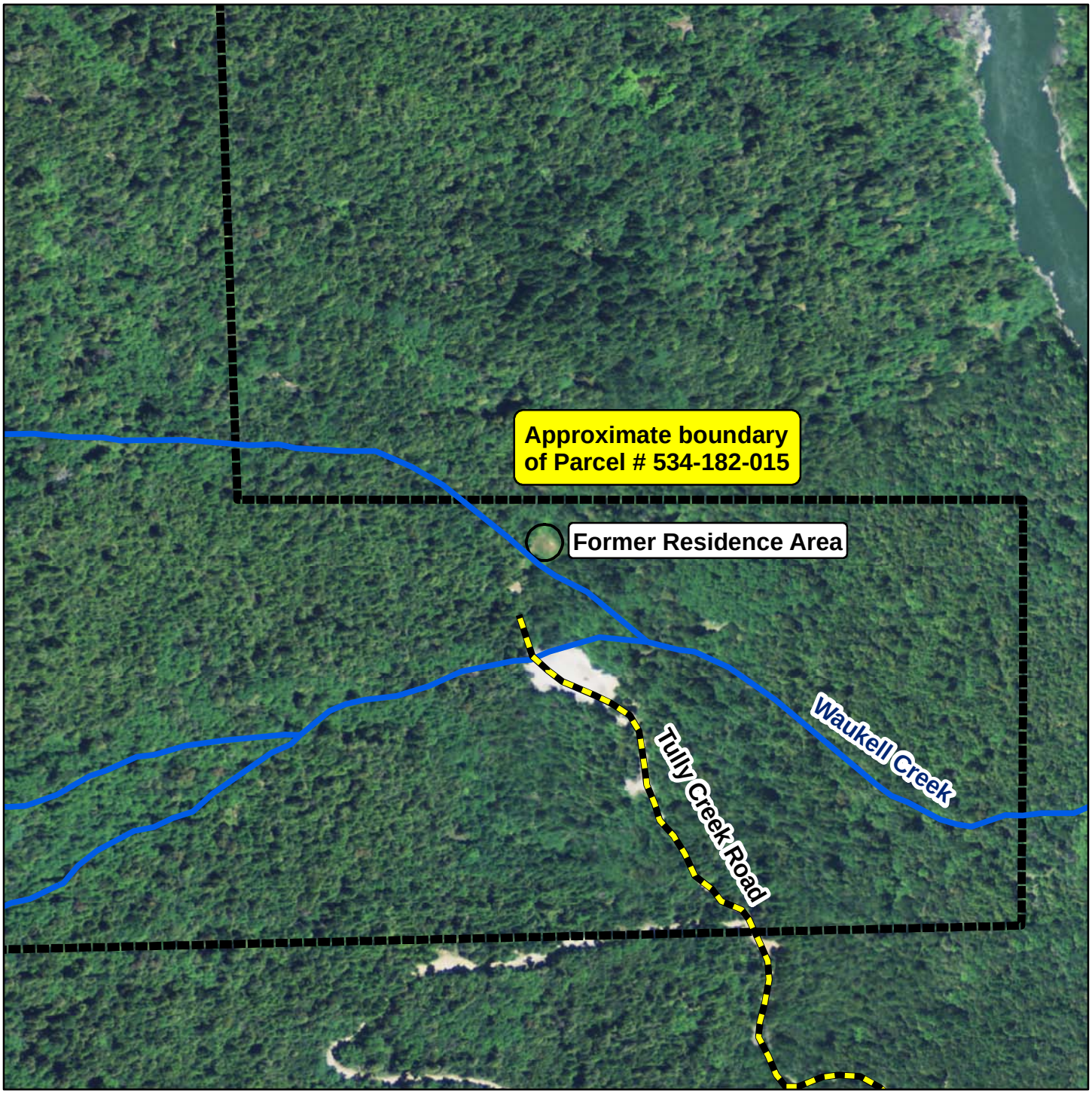
Yurok Tribe
Environmental Program

Figure 1
Site Location Map
Tully Creek Subject Property
Humboldt County, California

Freshwater Environmental Services

Date: 5-16-13

By: SJT



N
W E
S

Feet
0 100 200 400 600 800 1,000

LEGEND

Base Image Data Source:USDA-FSA Aerial Photography Field Office Color Digital Ortho Photo Quad, Image Date May 31, 2012.

ALL LOCATIONS APPROXIMATE

Yurok Tribe
Environmental Program

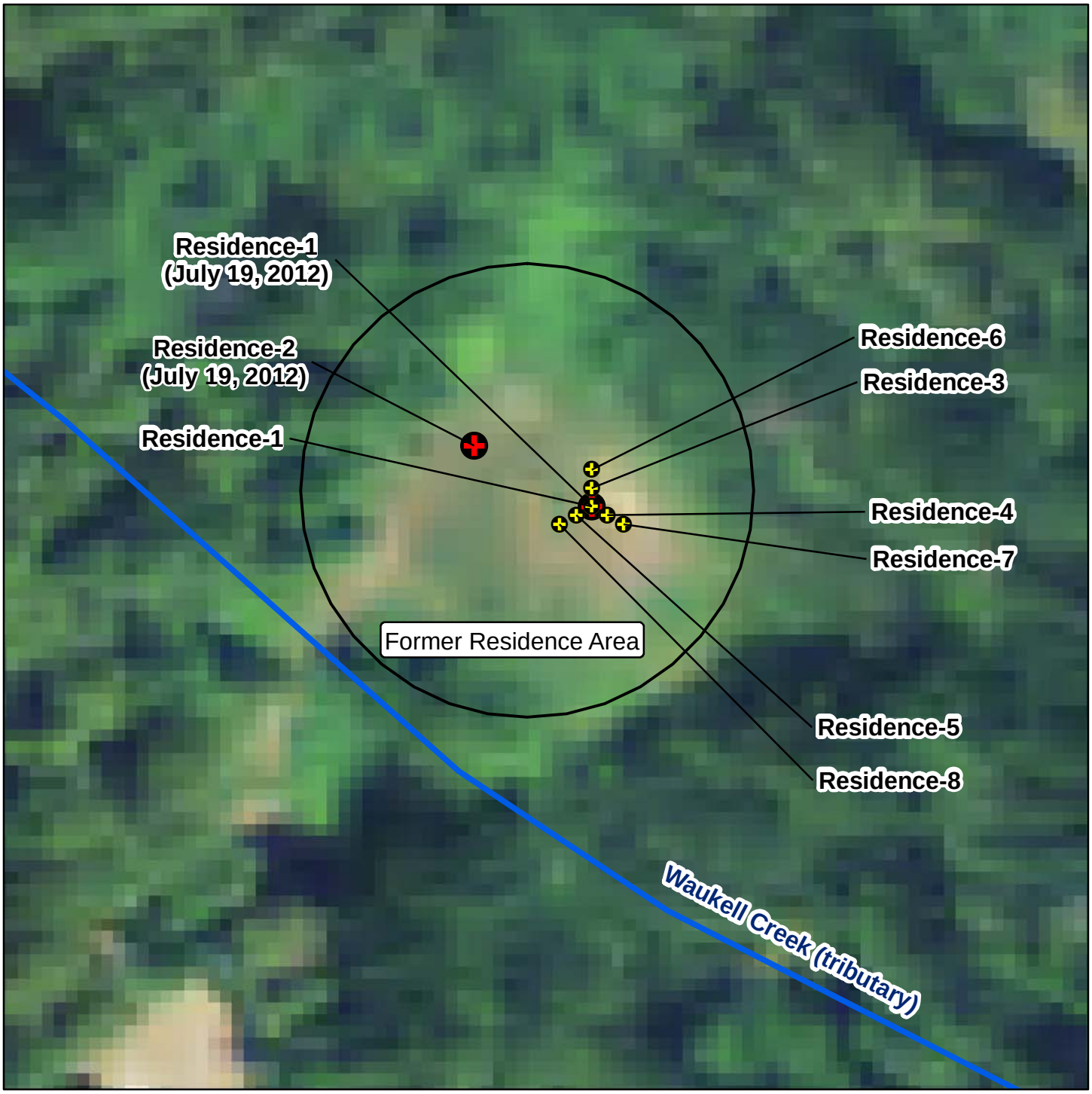
Figure 2

Former Residence Area
Tully Creek Subject Property
Humboldt County, California

Freshwater Environmental Services

Date: 5-16-13

By: SJT



N
W E
S

Feet
0 10 20 40 60 80

LEGEND

Sample Locations 4-9-13

Sample Locations 7-19-12

Base Image Data Source:USDA-FSA Aerial Photography Field Office Color Digital Ortho Photo Quad, Image Date May 31, 2012.

ALL LOCATIONS APPROXIMATE

Yurok Tribe
Environmental Program

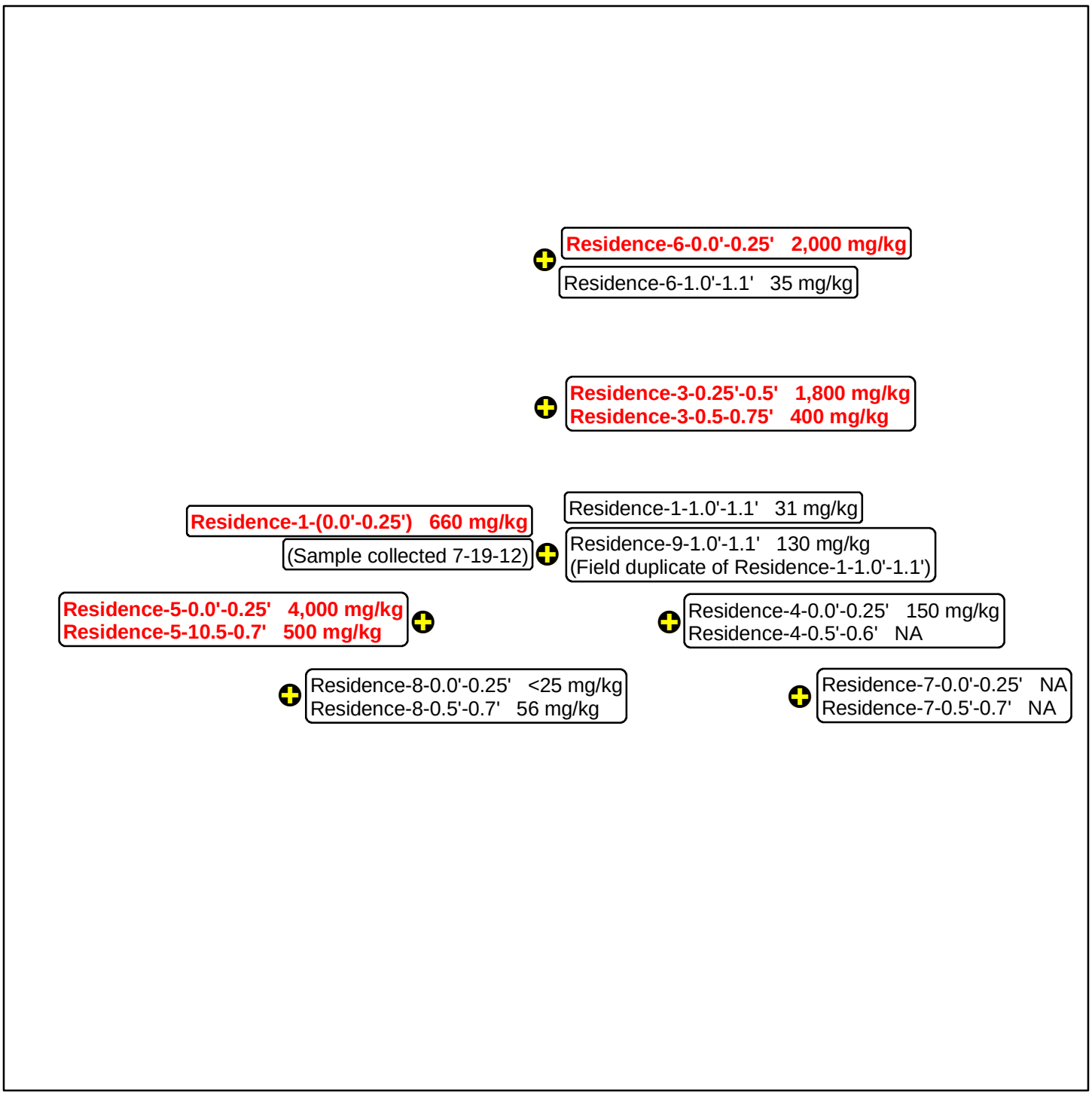
Figure 3

Sample Locations April 9, 2013 and July 19, 2012
Humboldt County, California

Freshwater Environmental Services

Date: 5-16-13

By: SJT



N
W E
S

Feet
0 2.5 5 10

LEGEND

Sample Locations 4-9-13

ALL LOCATIONS APPROXIMATE

Yurok Tribe
Environmental Program

Figure 4

Sample Locations July 19, 2012
Sample Locations April 9, 2013
Humboldt County, California

Freshwater Environmental Services

Date: 8-7-13

By: SJT

APPENDIX A
Boring Logs

Log of Boring **Residence-1**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0			**Ground Surface**
100%	0.1 – 0.2	~50% gravel and cobbles up to 4 inches diameter, ~25% roots and organics, ~20% silt, ~5% sand, fine to medium, moist, 10YR 4/1 (dark gray).	GM	**Soil Sample:** Residence-1-(0.0'-0.25') (Collected 7-19-12) (**660** mg/kg – TPH-Motor Oil)
	0.3 – 1.0	~75% gravel consisting of schist fragments up to ¾" long, angular to subangular, ~15% sand, medium to coarse, subangular to subrounded, ~5% silt, ~5% clay, moist, 10YR 4/1 (dark gray).	GM	**Soil Sample:** Residence-1-(1.0'-1.1') (Collected 4-9-13) (31 mg/kg – TPH-Motor Oil)
	1.1			**BOH ~ 1.1'**
	1.2 – 1.5			

Total Depth: ~ 1.1 feet

Freshwater Environmental Services

Residence-1

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-3**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0	**Ground Surface**		
100%	0.1 – 0.2	~70% silt, ~25% roots and organics, ~5% fine sand, moist, 10YR 3/1 (very dark gray). Fragments of asphalt shingles mixed with soil.	ML	
	0.3 – 0.4 – 0.5	~70% silt, ~20% gravel consisting of schist fragments up to ½" long, ~5% fine sand, ~5% roots and organics, moist, 10YR 3/1 (very dark gray).	ML	**Soil Sample:** Residence-3-(0.25'-0.5') (Collected 4-9-13) (**1,800** mg/kg – TPH-Motor Oil)
	0.6 – 0.7	~70% gravel consisting of schist fragments up to 3" long, ~25% fine sand, moist, ~5% silt, 10YR 3/1 (very dark gray).	GM	**Soil Sample:** Residence-3-(0.5'-0.75') (Collected 4-9-13) (**400** mg/kg – TPH-Motor Oil)
	0.8	**BOH ~ 0.75'**		
	0.9 – 1.0 – 1.1 – 1.2 – 1.3 – 1.4 – 1.5			

Total Depth: ~ 0.75 feet

Freshwater Environmental Services

Residence-3

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-4**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0			**Ground Surface**
100%	0.1 – 0.2	~60% gravel up to ¾" long, angular to subangular, ~15% fine sand, ~15% fine sand, ~10% roots and organics, moist, 10YR 4/1 (dark gray).	GM	**Soil Sample:** Residence-4-(0.0'-0.25') (Collected 4-9-13) (150 mg/kg – TPH-Motor Oil)
	0.3 – 0.5	~60% gravel and cobbles consisting of schist fragments up to 4" long, angular to subangular, ~15% fine sand, ~15% silt, ~10% roots and organics, moist, 10YR 4/1 (dark gray).	GM	**Soil Sample:** Residence-4-(0.5'-0.6') (Collected 4-9-13) (Not Analyzed)
	0.6			**BOH ~ 0.6'**
	0.7 – 1.5			

Total Depth: ~ 0.6 feet

Freshwater Environmental Services

Residence-4

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-5**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0	**Ground Surface**		
100%	0.1 – 0.2	~70% silt, ~25% roots and organics, ~5% fine sand, moist, 10YR 4/1 (dark gray).	ML	**Soil Sample:** Residence-5-(0.0'-0.25') (Collected 4-9-13) (**4,000** mg/kg – TPH-Motor Oil)
	0.3 – 0.7	~50% gravel, angular to subangular, ~25% coarse sand, ~25% silt, moist, 10YR 4/3 (brown).	GM	**Soil Sample:** Residence-5-(0.5'-0.7') (Collected 4-9-13) (**500** mg/kg – TPH-Motor Oil)
	0.7	**BOH ~ 0.7'**		
	0.8 – 1.5			

Total Depth: ~ 0.7 feet

Freshwater Environmental Services

Residence-5

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-6**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0			**Ground Surface**
100%	0.1 – 0.2	~70% silt, ~25% roots and organics, ~5% fine sand, moist, 10YR 3/1 (very dark gray).	ML	**Soil Sample:** Residence-6-(0.0'-0.25') (Collected 4-9-13) (**2,000** mg/kg – TPH-Motor Oil)
	0.3 – 1.0	~90% gravel up to 1" long, angular, ~5% silt, ~5% clay, moist, 10YR 4/3 (brown).	GM	**Soil Sample:** Residence-6-(1.0'-1.1') (Collected 4-9-13) (35 mg/kg – TPH-Motor Oil)
	1.1			**BOH ~ 1.1'**
	1.2 – 1.5			

Total Depth: ~ 1.1 feet

Freshwater Environmental Services

Residence-6

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-7**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0	**Ground Surface**		
100%	0.1 – 0.2	~70% silt, ~25% roots and organics, ~5% fine sand, moist, 10YR 4/3 (brown).	ML	**Soil Sample:** Residence-7-(0.0'-0.25') (Collected 4-9-13) (Not Analyzed)
	0.3 – 0.5	~50% gravel, angular to subangular, ~25% coarse sand, ~25% silt, moist, 10YR 5/4 (yellowish brown).	GM	**Soil Sample:** Residence-7-(0.5'-0.7') (Collected 4-9-13) (Not Analyzed)
	0.7	**BOH ~ 0.7'**		
	0.8 – 1.5			

Total Depth: ~ 0.7 feet

Freshwater Environmental Services

Residence-7

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

Log of Boring **Residence-8**

Date Started: April 9, 2013
Date Completed: April 9, 2013

Driller: Freshwater Environmental Services
Drilling Method: Shovel and Rock Bar

Recovery	Depth (ft)	Description	USCS	Remarks
	0	**Ground Surface**		
100%	0.1	~40% gravel up to ½" long, subangular to subrounded, 30% silt, ~25% roots and organics, ~5% fine sand, moist, 10YR 4/1 (dark gray).	GM	**Soil Sample:** Residence-8-(0.0'-0.25') (Collected 4-9-13) (<25 mg/kg)
	0.2			
	0.3	~60% gravel up to ½" long, subangular to subrounded, ~30% silt, ~10% fine sand, moist, 10YR 4/1 (dark gray).	GM	
	0.4			
	0.5			**Soil Sample:** Residence-8-(0.5'-0.7') (Collected 4-9-13) (56 mg/kg)
	0.6			
	0.7	**BOH ~ 0.7'**		
	0.8			
	0.9			
	1.0			
	1.1			
	1.2			
	1.3			
	1.4			
	1.5			

Total Depth: ~ 0.7 feet

Freshwater Environmental Services

Residence-8

Yurok Tribe Environmental Program
Tully Site (APN 534-182-015)

Date: 5-23-13 | By: SJT

APPENDIX B
Sample Location Photographs

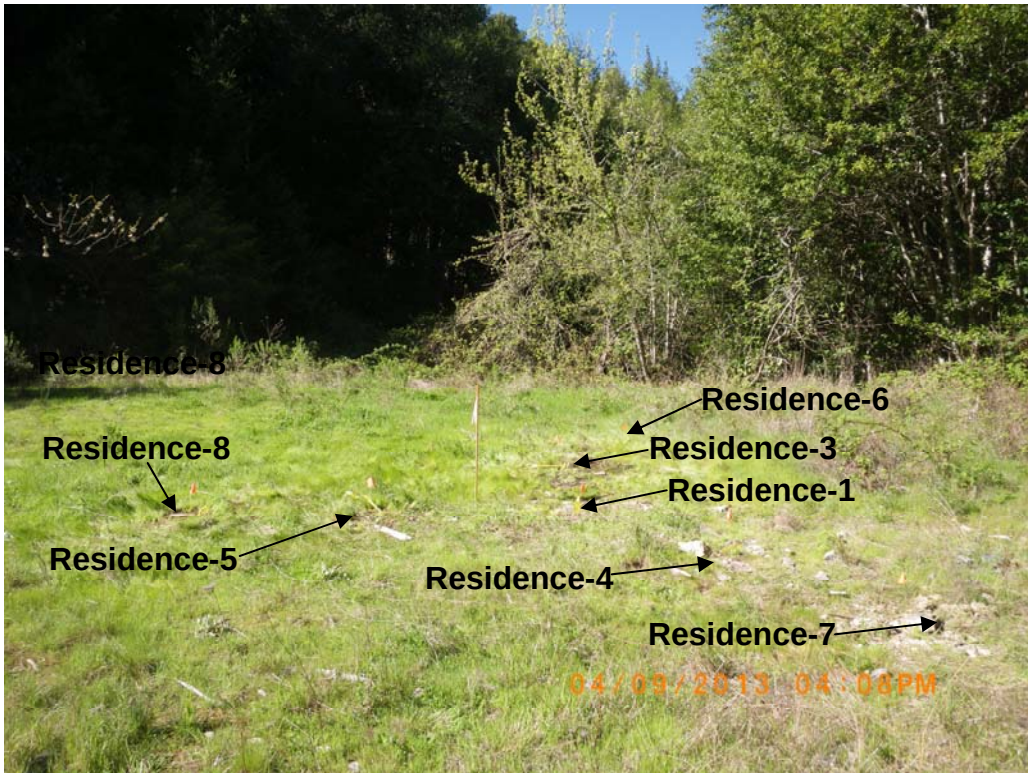


Photo 1. Looking north at sample locations.
Image date: April 9, 2013.

Photo 2. Looking west at sample locations.
Image date: April 9, 2013.

Photo 3. Looking north-northeast at sample location Residence-1. Image date: July 19, 2012.

Photo 4. Looking north-northeast at sample location Residence-1. Image date: July 19, 2012.

APPENDIX C
Laboratory Reports and Chain-of-Custody Records

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-04-0828

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Freshwater Environmental Services

Client Project Name: Tully Creek Additional Assessment

Attention: Stan Thiesen
78 Sunny Brae Center
Arcata, CA 95521-6742

Approved for release on 04/18/2013 by:
Don Burley
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Tully Creek Additional Assessment
Work Order Number: 13-04-0828

Calscience Environmental Laboratories, Inc.

Work Order Narrative

ACCREDITED IN ACCORDANCE WITH nelac

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 04/11/2013. They were assigned to Work Order 13-04-0828.

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

Holding Times:

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

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with an immediate holding time (HT </= 15 minutes --40CFR-136.3 Table II footnote 4), is considered a "field" test and reported samples results are not flagged unless the analysis is performed beyond 24 hours of the time of collection.

Quality Control:

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

Additional Comments:

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

Subcontract Information:

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

Return to Contents

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services
78 Sunny Brae Center
Arcata, CA 95521-6742

Date Received: 04/11/13
Work Order No: 13-04-0828
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: Tully Creek Additional Assessment

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-1-1.0'-1.1'	**13-04-0828-1-A**	**04/09/13 14:25**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 14:53**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	31	25	1	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	77	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-3-0.25''-0.5'	**13-04-0828-2-A**	**04/09/13 14:30**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 15:12**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	1800	1200	50	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	105	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-4-0.0'-0.25'	**13-04-0828-4-A**	**04/09/13 14:52**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 15:30**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	150	120	5	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	81	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-5-0.0'-0.25'	**13-04-0828-6-A**	**04/09/13 15:11**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 15:48**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	4000	2500	100	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	96	61-145	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Freshwater Environmental Services
78 Sunny Brae Center
Arcata, CA 95521-6742

Date Received: 04/11/13
Work Order No: 13-04-0828
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: Tully Creek Additional Assessment

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-9-1.0'-1.1'	**13-04-0828-14-A**	**04/09/13 15:00**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 16:06**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	130	120	5	SG,HD	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	83	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-400**	**N/A**	**Solid**	**GC 45**	**04/12/13**	**04/13/13 09:01**	**130412B04S**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	69	61-145	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services
78 Sunny Brae Center
Arcata, CA 95521-6742

Date Received: 04/11/13
Work Order No: 13-04-0828
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project Tully Creek Additional Assessment

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Residence-1-1.0'-1.1'	**Solid**	**GC 45**	**04/12/13**	**04/18/13**	**130412S04S**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	30.93	400.0	364.0	83	371.0	85	64-130	2	0-15	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services		Date Received:	N/A
78 Sunny Brae Center		Work Order No:	13-04-0828
Arcata, CA 95521-6742		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: Tully Creek Additional Assessment

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-420-400	**Solid**	**GC 45**	**04/12/13**	**04/13/13**	**130412B04S**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	400.0	313.7	78	315.6	79	75-123	1	0-12	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 13-04-0828

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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

For any analysis identified as a "field" test with a holding time (HT) </= 15 minutes where the sample is received outside of HT, Calscience will adhere to its internal HT of 24 hours. In cases where sample analysis does not meet Calscience's internal HT, results will be appropriately qualified.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 13-04-0828

DATE: 04/10/13

PAGE: 1 OF 2

LABORATORY CLIENT: Freshwater Environmental Services

ADDRESS: 78 Sunny Brae Center

CITY: Arcata STATE: CA ZIP: 95521

TEL: 707 839-0091 E-MAIL: stan@freshwaterenvironmentalservices.com

CLIENT PROJECT NAME / NUMBER: Tully Creek Additional Assessment

P.O. NO.:

PROJECT CONTACT: Stan Thiesen

SAMPLER(S): (PRINT) Orrin Plocher

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS 10 DAYS

☐ COELT EDF GLOBAL ID: NA LOG CODE: NA

SPECIAL INSTRUCTIONS:

Please Homogenize Samples prior to Analysis

TPH-Motor Oil by EPA Method 8015B with silica gel

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH-Motor Oil by EPA 8015 with silica ge	BTEX / MTBE (8260) or (	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	RUSH (5 Days)	Normal (10 Days)	HOLD		MS/MSD
1	Residence-1-1.0'-1.1'	4/9/2013	14:25	Soil	1	1	NA	NA			x												X				X
2	Residence-3-0.25"-0.5'	4/9/2013	14:30	Soil	1	1	NA	NA			x											X					
3	Residence-3-0.5'-0.75'	4/9/2013	14:40	Soil	1	1	NA	NA			x														X		
4	Residence-4-0.0'-0.25'	4/9/2013	14:52	Soil	1	1	NA	NA			x											X					
5	Residence-4-0.5'-0.6'	4/9/2013	15:00	Soil	1	1	NA	NA			x														X		
6	Residence-5-0.0'-0.25'	4/9/2013	15:11	Soil	1	1	NA	NA			x											X					
7	Residence-5-0.5'-0.7'	4/9/2013	15:15	Soil	1	1	NA	NA			x														X		
8	Residence-6-0.0'-0.25'	4/9/2013	14:43	Soil	1	1	NA	NA			x														X		
9	Residence-6-1.0'-1.1'	4/9/2013	14:47	Soil	1	1	NA	NA			x														X		
10	Residence-7-0.0'-0.25'	4/9/2013	15:05	Soil	1	1	NA	NA			x														X		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] 4/10/13	1400		
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	[signature]	4/11/13	1130
Relinquished by: (Signature) (FEDEX)	Received by: (Signature/Affiliation)	Date:	Time:

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 04-0628

DATE: 04/10/13

PAGE: 2 OF 2

LABORATORY CLIENT: Freshwater Environmental Services

ADDRESS: 78 Sunny Brae Center

CITY: Arcata STATE: CA ZIP: 95521

TEL: 707 839-0091 E-MAIL: stan@freshwaterenvironmentalservices.com

CLIENT PROJECT NAME / NUMBER: Tully Creek Additional Assessment

P.O. NO.:

PROJECT CONTACT: Stan Thiesen

SAMPLER(S): (PRINT) Orrin Plocher

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

☐ COELT EDF GLOBAL ID: NA LOG CODE: NA

SPECIAL INSTRUCTIONS:

Please Homogenize Samples prior to Analysis

TPH-Motor Oil by EPA Method 8015B with silica gel

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH-Motor Oil by EPA 8015 with silica gel	BTEX / MTBE (8260) or (	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	RUSH (5 Days)	Normal (10 Days)	HOLD
11	Residence-7-0.5'-0.7'	4/9/2013	15:07	Soil	1	1	NA	NA			x													X
12	Residence-8-0.0'-0.25'	4/9/2013	15:20	Soil	1	1	NA	NA			x													X
13	Residence-8-0.5'-0.7'	4/9/2013	15:25	Soil	1	1	NA	NA			x													X
14	Residence-9-1.0'-1.1'	4/9/2013	15:00	Soil	1	1	NA	NA			x												X	

Relinquished by: (Signature) 4/10/13 1400	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 4/11/13	Time: 1130
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/01/10 Revision

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From: (707) 839-0091
Stan Thiesen
Freshwater Environmental
78 Sunny Brae Center

Arcata, CA 95521

Origin ID: EKAA

FedEx Express

J13111302120326

Ship Date: 10APR13
ActWgt: 50.0 LB
CAD: 4822189/INET3370

Dims: 24 X 15 X 15 IN

0828

Delivery Address Bar Code

Ref # YTEP Projects
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494 BILL SENDER

Alan Kemp
Calscience Environmental Laboratory
7440 Lincoln Way

Garden Grove, CA 92841

THU - 11 APR 3:00P
STANDARD OVERNIGHT

TRK# 0201 7994 9448 4746

DSR
92841
CA-US
SNA

92 APVA

518G1/64BE/93AB

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-04-[0][8][2][8]

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Freshwater Env. DATE: 04/11/13

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JP

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☑4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** WC

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Calscience Environmental Laboratories, Inc.

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.

CALSCIENCE

WORK ORDER NUMBER: 13-04-0828

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Freshwater Environmental Services

Client Project Name: Tully Creek Additional Assessment

Attention: Stan Thiesen
78 Sunny Brae Center
Arcata, CA 95521-6742

Approved for release on 04/25/2013 by:
Don Burley
Project Manager

ResultLink

Email your PM

ACCREDITED IN ACCORDANCE WITH nelac

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Tully Creek Additional Assessment
Work Order Number: 13-04-0828

Calscience Environmental Laboratories, Inc.

Work Order Narrative

ACCREDITED IN ACCORDANCE WITH nelac

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 04/11/2013. They were assigned to Work Order 13-04-0828.

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

Holding Times:

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

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with an immediate holding time (HT </= 15 minutes --40CFR-136.3 Table II footnote 4), is considered a "field" test and reported samples results are not flagged unless the analysis is performed beyond 24 hours of the time of collection.

Quality Control:

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

Additional Comments:

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

Subcontract Information:

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services
78 Sunny Brae Center
Arcata, CA 95521-6742

Date Received: 04/11/13
Work Order No: 13-04-0828
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: Tully Creek Additional Assessment

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-3-0.5'-0.75'	**13-04-0828-3-B**	**04/09/13 14:40**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 04:01**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	400	250	10	HD,SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	87	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-5-0.5'-0.7'	**13-04-0828-7-B**	**04/09/13 15:15**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 04:17**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	500	250	10	HD,SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	89	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-6-0.0'-0.25'	**13-04-0828-8-B**	**04/09/13 14:43**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 04:33**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	2000	1200	50	HD,SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	86	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-6-1.0'-1.1'	**13-04-0828-9-B**	**04/09/13 14:47**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 04:49**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	35	25	1	HD,SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	73	61-145	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services		Date Received:	04/11/13
78 Sunny Brae Center		Work Order No:	13-04-0828
Arcata, CA 95521-6742		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: Tully Creek Additional Assessment

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-8-0.0'-0.25'	**13-04-0828-12-B**	**04/09/13 15:20**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 05:04**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1	SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	72	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Residence-8-0.5'-0.7'	**13-04-0828-13-B**	**04/09/13 15:25**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 05:20**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	56	25	1	HD,SG	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	70	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-407**	**N/A**	**Solid**	**GC 48**	**04/18/13**	**04/19/13 02:59**	**130418B17**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
n-Octacosane	69	61-145	

Return to Contents

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services
78 Sunny Brae Center
Arcata, CA 95521-6742

Date Received: 04/11/13
Work Order No: 13-04-0828
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project Tully Creek Additional Assessment

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Residence-8-0.0'-0.25'	**Solid**	**GC 48**	**04/18/13**	**04/19/13**	**130418S17**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	ND	400.0	344.4	86	369.8	92	64-130	7	0-15	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

ACCREDITED IN ACCORDANCE WITH nelac

Freshwater Environmental Services		Date Received:	N/A
78 Sunny Brae Center		Work Order No:	13-04-0828
Arcata, CA 95521-6742		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: Tully Creek Additional Assessment

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-15-420-407	**Solid**	**GC 48**	**04/19/13**	**13041857**	**130418B17**

Parameter	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
TPH as Motor Oil	400.0	318.2	80	75-123	

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RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 13-04-0828

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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

For any analysis identified as a "field" test with a holding time (HT) </= 15 minutes where the sample is received outside of HT, Calscience will adhere to its internal HT of 24 hours. In cases where sample analysis does not meet Calscience's internal HT, results will be appropriately qualified.

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Don Burley

From: Stan Thiesen [stan@freshwaterenvironmentalservices.com]
Sent: Thursday, April 18, 2013 11:31 AM
To: Don Burley
Subject: RE: Tully Creek Additional Assessment / CEL 13-04-0828
Attachments: image001.jpg; image002.jpg

Don,

Please analyze the following samples:

- Residence-3-0.5'-0.75'
- Residence-5-0.5'-0.7'
- Residence-6-0.0'-0.25'
- Residence-6-1.0'-1.1'
- Residence-8-0.0'-0.25'
- Residence-8-0.5'-0.7'

Thanks, Stan

Stan Thiesen, P.G.
Geologist
Freshwater Environmental Services
stan@freshwaterenvironmentalservices.com
78 Sunny Brae Center
Arcata, CA 95521
Office: 707 839-0091
Cell: 707 498-0793

From: Don Burley [mailto:dburley@calscience.com]
Sent: Thursday, April 18, 2013 11:15 AM
To: stan@freshwaterenvironmentalservices.com
Subject: Tully Creek Additional Assessment / CEL 13-04-0828

Stan,

The following two samples had TPH Motor Oil concentrations >370 mg/kg:

Residence-3-0.25"-0.5'
Residence-5-0.0'-0.25'

Please confirm that you want us to proceed with EPA 8015B TPH Motor Oil (silica gel) analysis on the following samples (or other samples):

Residence-3-0.5'-0.75'
Residence-5-0.5'-0.7'

Thanks.

Don Burley

Calscience
7440 Lincoln Way

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 13-04-0828

DATE: 04/10/13

PAGE: 1 OF 2

LABORATORY CLIENT: Freshwater Environmental Services

ADDRESS: 78 Sunny Brae Center

CITY: Arcata STATE: CA ZIP: 95521

TEL: 707 839-0091 E-MAIL: stan@freshwaterenvironmentalservices.com

CLIENT PROJECT NAME / NUMBER: Tully Creek Additional Assessment

P.O. NO.:

PROJECT CONTACT: Stan Thiesen

SAMPLER(S): (PRINT) Orrin Plocher

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS 10 DAYS

☐ COELT EDF GLOBAL ID: NA LOG CODE: NA

SPECIAL INSTRUCTIONS:

Please Homogenize Samples prior to Analysis

TPH-Motor Oil by EPA Method 8015B with silica gel

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH-Motor Oil by EPA 8015 with silica ge	BTEX / MTBE (8260) or (	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	RUSH (5 Days)	Normal (10 Days)	HOLD		MS/MSD
1	Residence-1-1.0'-1.1'	4/9/2013	14:25	Soil	1	1	NA	NA			x												X				X
2	Residence-3-0.25"-0.5'	4/9/2013	14:30	Soil	1	1	NA	NA			x												X				
3	Residence-3-0.5'-0.75'	4/9/2013	14:40	Soil	1	1	NA	NA			x														X		
4	Residence-4-0.0'-0.25'	4/9/2013	14:52	Soil	1	1	NA	NA			x												X				
5	Residence-4-0.5'-0.6'	4/9/2013	15:00	Soil	1	1	NA	NA			x														X		
6	Residence-5-0.0'-0.25'	4/9/2013	15:11	Soil	1	1	NA	NA			x												X				
7	Residence-5-0.5'-0.7'	4/9/2013	15:15	Soil	1	1	NA	NA			x														X		
8	Residence-6-0.0'-0.25'	4/9/2013	14:43	Soil	1	1	NA	NA			x														X		
9	Residence-6-1.0'-1.1'	4/9/2013	14:47	Soil	1	1	NA	NA			x														X		
10	Residence-7-0.0'-0.25'	4/9/2013	15:05	Soil	1	1	NA	NA			x														X		

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] 4/10/13	1400		
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	[signature]	4/11/13	1130
Relinquished by: (Signature) (FEDEX)	Received by: (Signature/Affiliation)	Date:	Time:

06/01/10 Revision

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Calscience Environmental Laboratories, Inc.
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TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 04-0628

DATE: 04/10/13

PAGE: 2 OF 2

LABORATORY CLIENT: Freshwater Environmental Services

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PROJECT CONTACT: Stan Thiesen

SAMPLER(S): (PRINT) Orrin Plocher

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

☐ COELT EDF GLOBAL ID: NA LOG CODE: NA

SPECIAL INSTRUCTIONS:

Please Homogenize Samples prior to Analysis

TPH-Motor Oil by EPA Method 8015B with silica gel

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) or GRO	TPH(d) or DRO or (C6-C36) or (C6-C44)	TPH-Motor Oil by EPA 8015 with silica gel	BTEX / MTBE (8260) or (	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	RUSH (5 Days)	Normal (10 Days)	HOLD		
11	Residence-7-0.5'-0.7'	4/9/2013	15:07	Soil	1	1	NA	NA			x													X		
12	Residence-8-0.0'-0.25'	4/9/2013	15:20	Soil	1	1	NA	NA			x													X		
13	Residence-8-0.5'-0.7'	4/9/2013	15:25	Soil	1	1	NA	NA			x													X		
14	Residence-9-1.0'-1.1'	4/9/2013	15:00	Soil	1	1	NA	NA			x												X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] 4/10/13	1400		
Relinquished by: (Signature)	Received by: (Signature/Affiliation) [signature]	Date: 4/11/13	Time: 1130
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/01/10 Revision

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From: (707) 839-0091
Stan Thiesen
Freshwater Environmental
78 Sunny Brae Center

Arcata, CA 95521

Origin ID: EKAA

FedEx Express

J13111302120326

Ship Date: 10APR13
ActWgt: 50.0 LB
CAD: 4822189/INET3370

Dims: 24 X 15 X 15 IN

0828

Delivery Address Bar Code

Ref # YTEP Projects
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494 BILL SENDER

Alan Kemp
Calscience Environmental Laboratory
7440 Lincoln Way

Garden Grove, CA 92841

THU - 11 APR 3:00P
STANDARD OVERNIGHT

TRK# 0201 7994 9448 4746

DSR
92841
CA-US
SNA

92 APVA

518G1/64BE/93AB

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-04-[0][8][2][8]

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Freshwater Env. DATE: 04/11/13

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler	☐_____	☐ No (Not Intact)	☐ Not Present	☐ N/A	Initial: JP
☐ Sample	☐_____	☐ No (Not Intact)	☑ Not Present		Initial: TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☑4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** WC

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APPENDIX D
Cultural Resources Management Permit Application

Yurok Tribe Cultural Resources Management Permit Application

FOR OFFICIAL USE ONLY
Date Received: 1-28-13
Staff Received: 1-28-13
Copy Sent To: ✓ Tribal Heritage Preservation Officer (THPO)
_____ Native American Graves Protection and Repatriation Act (NAGPRA) Coordinator
_____ Tribal Archaeologist
_____ Permit Applicant

Instructions: Complete and return this application form and necessary supporting documentation to the Yurok Tribal Office in Klamath. All information requested must be completed before the application will be considered. Use separate pages if more space is needed to complete a section and attach.

1. Name of Applicant (Yurok Tribal Department, Corporation, Lead Agency, Individual, or Other Entity)

Yurok Tribe Environmental Program - Suzanne Fluharty

2. Mailing Address

P.O. Box 1027, Klamath, California 95548

3. Telephone Number

707-482-1822 x1013

4. Email Address

sfluharty@yuroktribe.nsn.us

5. Fax Number

707-482-1722

6. Location of Proposed Work:

a. Description of lands involved using the best available location information (complete all boxes possible).

i. Latitude and Longitude	ii. UTM Coordinates	iii. PLSS (township, range, and section)	iv. APN (parcel) Number	v. Assignment/ allotment	vi. Physical Address
41.2549 -123.7854		10N Range 3E Sec 3, 5	534-182-015		Tully Creek Dump Site

b. Attach a map and other relevant supporting documentation identifying the location of proposed work, defined as the Area of Potential Effect, which should include all areas proposed for use in the project, such as staging, implementation, cleanup, or otherwise included in the Proposed Work described below. Location should preferably be mapped on a 1:24,000, 7.5-Minute Series U.S. Geological Survey (USGS) Topographic Quadrangle map. Additional supporting Documentation that may be attached could include photos, parcel maps, site plans, surveys, and engineer drawings.

7. Nature of Proposed Work:

a. Please check all that apply:

☐ trenching	☐ road construction	☐ boring	☐ drilling	☐ plowing
☐ excavation	☐ road grading	☐ digging	☐ tunneling	☐ topsoil stripping
☒ auguring	☐ backfilling	☐ blasting	☐ land leveling	☐ install utility pole
☐ quarrying	☐ ground clearing	☐ grading	☐ vegetation removal	☐ other (explain below)

b. Please describe in detail the proposed work, particularly as related to ground-disturbing activities, including the depth and width of each activity as checked in 7a.

A Phase II ESA determined that in the residential site located at the Tully Creek Dump property, levels of motor oil contamination were above the environmental screening levels considered safe for residential use. The Yurok Tribe Environmental Program proposes to collect additional soil samples at the previously CRM permitted site, signed on June 14, 2012 (attached) to determine the extent of contamination around the single point of the previously sampled site labeled Residence- 1. In total, 8 shallow soil samples to be taken by hand auger with 4-inch bores; three approximately 3 feet out from the previous sample location in a triangle , three approximately 6 feet from the previous sample location in a triangle, and two soil sample at 1 foot and 2 foot depths under the location of the previous soil sample for vertical delineation. The work is scheduled to last one day.

8. Date of Proposed Work:

final date to be determined during May 2013

9. Time of Proposed Work:

8:30 AM to 5:00 PM

10. Permit Applicant Contact Information:

a. Name: Suzanne Fluharty

b. Title: Environmental Specialist

c. Organization: Yurok Tribe Environmental Program

d. Telephone number(s): 707-482-1822 x1013

e. Email Address: sfluharty@yuroktribe.nsn.us

f. Mailing Address: P.O. Box 1027, Klamath, California 95548

10. Landowner(s) Contact Information:

a. Name(s): Yurok Tibe

b. Telephone number(s):

c. Email Address(es):

d. Mailing Address(es):

Please complete the following additional project contact information as applicable:

12. Project Manager:

a. Name: Suzanne Fluharty

b. Title: Environmental Specialist

c. Organization: Yurok Tribe Environmental Program

d. Telephone number(s): 707-482-1822 x1013

e. Email Address: sfluharty@yuroktribe.nsn.us

f. Mailing Address: P.O. Box 1027, Klamath, California 95548

13. Project Contractor:

a. Name: Orrin W. Plocher

b. Title: Project Geologist

c. Organization: Freshwater Environmental Services

d. Telephone number(s): 707-839-0091

e. Email Address: orrin@freshwaterenvironmentalservices.com

f. Mailing Address: 78 Sunny Brae Center, Arcata, California 95521

14. Project Inspector:

a. Name: Kate Sloan

b. Title: Director

c. Organization: Yurok Tribe Environmental Program

d. Telephone number(s): 707-482-1822 x1009

e. Email Address: kslolan@yuroktribe.nsn.us

f. Mailing Address: P.O. Box 1027, Klamath, California 95548

15. Project Subcontractor:

a. Name:

b. Title:

c. Organization: N/A

d. Telephone number(s):

e. Email Address:

f. Mailing Address:

15. Does this proposed project involve Federal funds, proposed to occur on federal lands, or could otherwise be defined as an "undertaking" according to Section 301 (7) of the National Historic Preservation Act of 1966 as amended through 2006? Check applicable: ☒ Yes ☐ No
16. To your knowledge, is the proposed project in an area that likely contains cultural resources? Check applicable: ☐ Yes ☒ No

Certification

I, SUZANNE FLUHARTY (Permit Applicant) certify that I have read the Cultural Resources Protection Ordinance, understand work may not begin until the proposed project is permitted, and agree to the terms and conditions that may be applied to the permit, and have the full consent of all pertaining landowners to conduct the proposed work. SF (Initial)

I certify and declare under penalty of perjury that I have read and understand all items on this application and have had the opportunity to consult legal counsel in regard to this Permit. I further declare under penalty of perjury that all information contained herein is true and correct to the best of my knowledge and belief and agree to submit to the jurisdiction of the Yurok Tribal Court for all actions arising out of, or related to, the project associated with this Permit. SF (Initial)

Suzanne Fluharty Signature of Permit Applicant	Jan 23, 2013 Date

Please deliver this Application to the Yurok Tribal Office in Klamath, CA
P.O. Box 1027
Klamath, CA 95548
(707) 482-1377 – Fax
Attention: Yurok Tribal Heritage Preservation Officer

Yurok Tribe Cultural Resources Management Permit Application

FOR OFFICIAL USE ONLY

Application Staff Review and Recommendations (Staff has 15 calendar days to review unless requiring input from Culture and/or NAGPRA Committees, then Staff has 15 calendar days from Committee decision date):

Application Reviewed (provide signature)	Reviewing Tribal Staff	Recommendations (attach additional sheets as necessary)
Robert B. McConnell 1-28-13	Tribal Heritage Preservation Officer (THPO)	None
RMS	Native American Graves Protection and Repatriation Act (NAGPRA) Coordinator	Follow inadvertant discovery protocol
2-1-13	Tribal Archaeologist	N/A

If all reviewing Tribal staff determine that the proposed project will have no impact to cultural resources and provide no recommendations that suggest conditions and/or mitigation measures then the Tribal Chair may authorize the Permit Application without Council Consent.

Council Action (if applicable):

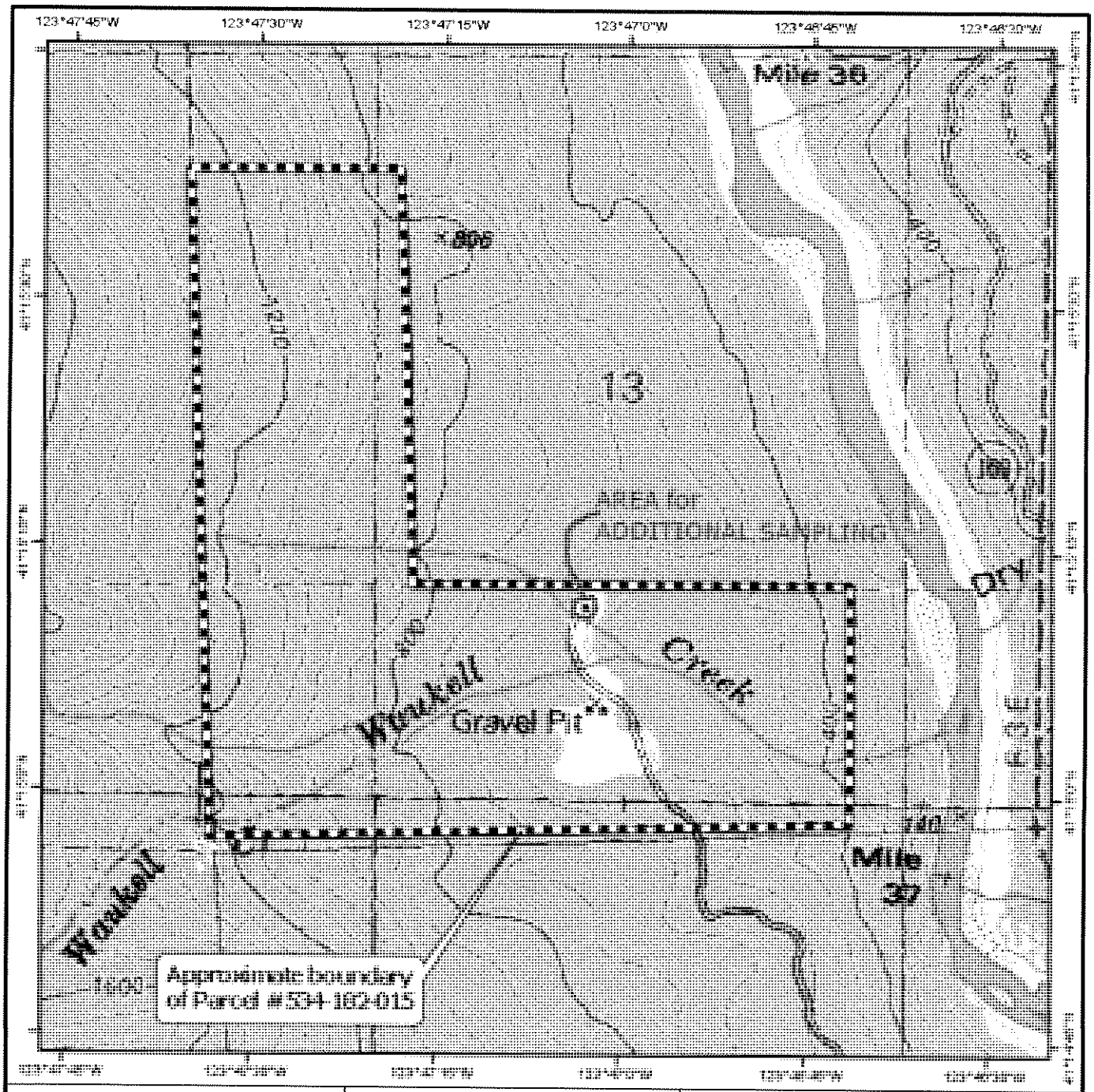
Permit Application	Council Agenda Number	Date of Council Session	With Conditions (if yes, explain below)
☐ Approved ☐ Denied			☐ Yes ☐ No

Permit Conditions: _____

_____

_____

Signature of Tribal Chair	Date
	2-1-13



N
W E
S

Feet
0 250 500 1,000 1,500

LEGEND

Base Image Data Source:
1:24,000 Digital Raster Graph Mosaic of Humboldt County, California

ALL LOCATIONS APPROXIMATE

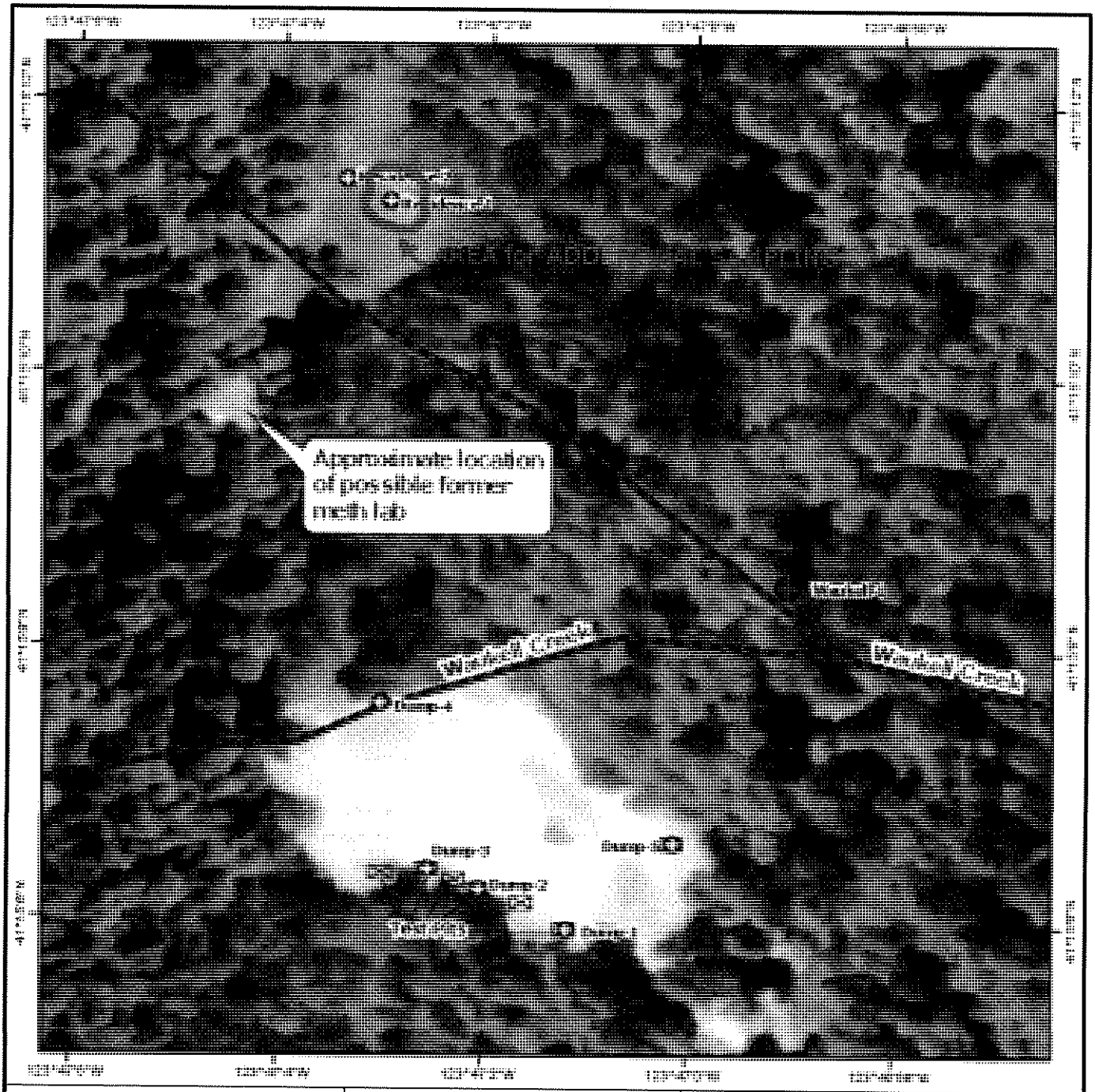
Yurok Tribe Environmental Program

Figure 2
USGS Topographic Map
Tully Creek Site
Humboldt County, California

Freshwater Environmental Services

Date: 9-20-12

By: SJT



N
W E
S

Feet
0 25 50 100 150 200

LEGEND

Base Image Data Source:USDA-FSA Aerial Photography Field Office Color Digital Ortho Photo Quad, Image Date May 31, 2012.

ALL LOCATIONS APPROXIMATE

Yurok Tribe
Environmental Program

Figure 5
Sample Locations
Tully Creek Site
Humboldt County, California

Freshwater Environmental Services

Date: 10-1-12

By: SJT

Yurok Tribe Environmental Program

15900 Highway 101 N • Klamath • California, 95548
Office: 707.482.1822
Fax: 707.482.1722

January 23, 2013

Robert McConnell
Yurok Tribe Heritage Preservation Officer
P.O. Box 1027
Klamath, CA 95548

RE: Yurok Tribe Environmental Program
On behalf of the U.S. Environmental Protection Agency
Determination of No Adverse Effect
Supplemental Testing:
Tully Creek Rd
(10N R3E S13)

Dear Mr. McConnell:

Please accept this letter as notification that Yurok Tribe Environmental Program, acting on behalf of US Environmental Protection Agency, determines that the proposed Supplemental Soil Sampling at Tully Creek Rd (10N R3E S13), will result in No Adverse Effect per 36CFR800 for the National Historic Preservation Act (NHPA).

The Yurok Tribe Environmental Program will be conducting Supplemental Soil Sampling activities on the property specified above. Please indicate your concurrence with the NHPA determination by signing below:

Chairman: _____ Date: _____

Concurrence: Robert B McConnell Date: 1-28-13

Please contact me if require additional information regarding this determination.

Sincerely,

Suzanne Fluharty

Suzanne Fluharty
Environmental Specialist
Yurok Tribe Environmental Program