Prepared for

Mr. William M. Shea Executor of Estate of Robert H. Bohna 285 Second Street Sonoma, California 95476

REPORT OF INVESTIGATION

870 BROADWAY

SONOMA, CALIFORNIA

JANUARY 2011

EBA Project No. 10-1639

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No. 30888

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1.0 INTRODUCTION

Mr. William Shea, Executor of the Estate of Robert Bohna (Client), contracted with EBA Engineering (EBA) to perform a subsurface investigation at 870 Broadway in Sonoma, California, hereafter referred to as the project site (Figure 1, Appendix A). This report outlines findings from the investigation performed at various locations on the project site property. The purpose of this investigation was to determine if environmental impacts existed at the project site from historic uses of the project site as identified in a *Phase I Environmental Site Assessment* (EBA, 2010a). The scope of work for this investigation was performed in general accordance with EBA's *Cost Estimate for Environmental Services* dated August 11, 2010 (EBA, 2010b).

2.0 BACKGROUND INFORMATION

2.1 General

The project site is located at 870 Broadway in Sonoma, California (Figure 1, Appendix A). The project site contains a main commercial building with an automotive repair shop and showroom, an alignment building and a historic school building. The project site buildings are currently used for automotive sales, repair and maintenance. The surrounding properties include residential properties to the east and commercial properties to the north of the project site property. Broadway borders the western portion of the project site property and East MacArthur Street borders the southern portion of the project site. A site plan showing the general site features and environmental sampling locations is presented as Figure 2 (Appendix A).

2.2 Site History

The project site was originally developed in the late 1860's and used as a school until the early 1920's. The project site was then developed commercially some time between 1923 and 1941 and has been used for automotive purposes including sales, services and maintenance since that time. In September 2010 a Phase I Environmental Site Assessment completed at the site identified four areas of potential concern on the project site property as follows:

- The use of the southwestern portion of the project site as a gasoline services station in the early 1940's.
- The use of one project site building for autobody work including body work and painting.
- The use of former underground hydraulic hoists in the shop and the autobody/alignment buildings.
- Observations of stained soil in the area between the shop and historic school building.

This report provides findings and recommendations with regard to the potential impacts from these structures and/or uses on the project site over time.

2.3 Regional Hydrogeologic Setting

The project site is located within the Coast Range Geomorphic Province of northern California.

The Coast Range Geomorphic Province is generally characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The province includes many separate ranges, coalescing mountain masses, and several major structural valleys. The regional structure of the Coast Range is considered to be a number of independent fault blocks with different stratigraphic and structural histories.

The project site is located in the Valley of the Moon along the southern extension of the Kenwood Syncline. The Kenwood Syncline is a northwest-trending structural downfold formed during the Pliocene Epoch. The Valley of the Moon is flanked to the northeast by the Mayacama Mountains and to the southwest by the Sonoma Mountains (California Department of Water Resources [DWR], 1975).

Surface deposits in this region consist of Quaternary alluvium comprised of unconsolidated clays, silts, sands and gravels. These surface deposits, in turn, are underlain by Glen Ellen Formation and/or Sonoma Volcanic materials. The Glen Ellen Formation is of Pliocene-Pleistocene age and consists of heterogeneous mixtures of consolidated clays, silts, sands and gravels. The Sonoma Volcanics are of middle to late Pliocene age and consist of mixed volcanic materials, including flows, dikes, plugs, and beds of andesite, rhyolite, basalt, tuff breccia, and tuff (DWR, 1975).

3.0 FIELD INVESTIGATION

3.1 Soil Boring Advancement

On November 1, 2010, EBA personnel supervised the drilling of six soil borings (SB-1 through SB-6) by RSI Drilling, Inc., a C-57 licensed driller headquartered in Woodland, California.

Prior to the start of drilling activities, the drilling locations were marked for Underground Service Alert (USA) in order to locate subsurface utilities. In addition, a drilling permit was obtained from the County of Sonoma Department of Health Services – Environmental Health Division.

A truck mounted direct push drill rig equipped with two-inch diameter hollow-stem augers was used to advance the soil borings to depths ranging from 12 to 26 feet below ground surface (BGS). The locations of the soil borings are depicted on Figure 2 in Appendix A and were chosen to assess potential environmental impacts from historic uses and/or structures at the project site.

3.1.1 Autobody/Alignment Building

Four soil borings (SB-1 through SB-4) were advanced on all four sides of the autobody/alignment building. Please see Figure 2, Appendix A for the boring locations. Soil borings, SB-1 and SB-2, were advanced to 24 feet BGS and soil borings, SB-3 and SB-4, were advanced to 26 feet BGS.

3.1.2 Former Gasoline Service Station

Two phases of investigation were completed in the area of the former gasoline service station. The first phase consisted of the completion of a geophysical survey to identify subsurface structures (i.e. buried tanks, metallic objects, building foundations etc). The second phase consisted of the advancement of a soil boring in the expected downgradient location from the former station footprint for the purpose of collecting soil and groundwater samples for chemical analysis. The following subsections provide details of the work completed in this area of the project site property.

3.1.2.1 Geophysical Survey

The Phase I Environmental Assessment documented the historic presence of a gasoline service station located on the southwestern corner of the project site. Remnants of the fuel dispensing island are present within the sidewalk adjacent to Broadway.

A geophysical survey was performed in the area of the former gasoline service station to determine if underground fuel storage tanks (USTs), buried structures and/or building components existed at the project site property. The survey was conducted by Norcal Geophysical Consultants under the supervision of EBA Engineering. The approximate size of the area of interest measured 50 feet by 85 feet and included the areas of the existing sidewalk in which remnants of fueling dispensers are visible in the sidewalk adjacent to Broadway.

The survey used a magnetometer (MAG) and electromagnetic conductivity (EM) meter on a 5-ft. grid to define localized magnetic and conductivity variations that may be due to subsurface metallic and non-metallic debris. The survey also used ground penetrating radar to further define the nature of MAG and EM anomalies as well as an electromagnetic metal detector.

A copy of the Geophysical Investigation from Norcal Geophysical is presented in Appendix E.

3.1.2.2 Soil Boring Advancement

One soil boring (SB-5) was advanced to a depth of 24 feet BGS in the area of the former gasoline service station. The boring was installed following the completion of the field survey and mark out of the geophysical survey. The boring was placed in the anticipated downgradient location from the former station footprint as determined by groundwater flow data of several nearby site investigations.

3.1.3 Former Hydraulic Hoist Locations

One soil boring (SB-6) was advanced to a depth of 12 feet BGS in the main shop building in the area of a former hydraulic hoist. The presence of the former in-ground hydraulic hoist had been documented in this area of the project site during the Phase I Environmental Site Assessment. The hoist had reportedly been removed some time in the past with no regulatory oversight or soil sampling. The boring was installed within the footprint of the former hoist to collect soil samples from the anticipated total depth of the former hoist.

On November 22, 2010 hand auger boring HA-3 was advanced within the alignment shop in a second area in which an in-ground hydraulic hoist was historically used at the project site. The boring was advanced using a hand auger due to access limitations in this structure. The boring was advanced to a depth of seven feet BGS for the purpose of collecting a soil sample for chemical analysis.

3.1.4 Surface Soil Sampling

Two hand auger borings (HA-1 and HA-2) were advanced in the area of soil staining between the shop and the historic school building as identified in the Phase I Environmental Site Assessment. The hand auger borings were advanced to depths of 20 and 24 inches BGS, respectively. Two soil samples were collected from the surface of each hand auger boring in addition to samples collected at depths of 16 to 20 inches in HA-1 and 18 to 24 inches in HA-2. Please refer to Figure 2 in Appendix B for Hand Auger locations.

3.2 Soil Sample Collection

Continuous core soil samples were collected from each boring from the ground surface to total depth of the boring. Selected soil samples were collected from the recovered drilling core in twoinch diameter by six inch long steel tubes. Upon collection the soil samples were sealed and placed under refrigerated conditions pending transport to a State certified analytical laboratory for chemical analysis.

The subsurface conditions encountered in each boring were logged in accordance with the Unified Soil Classification System. In addition, soil samples were screened for the presence of volatile organic compounds (VOCs) during the course of drilling using a photo-ionization detector (PID). Please refer to the soil boring logs enclosed in Appendix C for a summary of the sampling intervals, PID readings, and subsurface lithology recorded during the drilling.

3.3 Groundwater Grab Sample Collection

Groundwater grab samples were collected from each of the boreholes upon completion of the soil sampling activities with the exception of soil boring SB-6 which was installed for the purpose of collecting soil samples from the former hoist location. Once the final depth was reached in each borehole, the drilling tooling was removed and one-inch diameter poly-vinyl chloride casing and screen were temporarily placed within the borehole to allow for groundwater infiltration. The groundwater grab samples were collected using a disposable bailer.

Upon sample collection, the groundwater grab samples were transferred into properly labeled, laboratory supplied sample containers. The groundwater grab samples were subsequently logged on a chain-of-custody form and placed under refrigerated conditions pending transport to K Prime Inc., a California State-certified analytical laboratory located in Santa Rosa, California, for chemical analysis.

3.4 Laboratory Testing

Grab groundwater and soil samples collected from the soil borings SB-1 through SB-5 and hand auger borings HA-1 and HA-2 were analyzed for Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and Heavy Range Organics (HRO) using EPA Method 8015. The groundwater samples were also analyzed for volatile organic compounds using EPA Method 8260B and the metals cadmium, chromium, lead, nickel and zinc using EPA Method 3050/6020.

The soil sample collected from soil boring SB-6 was analyzed for DRO and HRO using EPA Method 8015 in addition to polychlorinated biphenyls (PCBs) using EPA Method 3550/8082, the volatile organic compounds benzene, toluene, xylenes and ethylbenzene (BTEX) using EPA Method 8260B and the metals cadmium, chromium, lead, nickel and zinc using EPA Method 3050/6020.

The soil sample from the hand auger HA-3 was analyzed for DRO using EPA Method 8015 and BTEX constituents by EPA Method 8260B.

3.5 Equipment Decontamination and Borehole Abandonment

The drilling and sampling equipment were steam cleaned between each boring to minimize cross contamination. Decontamination water from the process was retained on-site in properly labeled DOT-17H 55-gallon drums pending characterization and disposal.

Following the completion of the soil and groundwater sampling activities, the soil borings were properly abandoned by backfilling with cement grout to six inches BGS and capped with asphalt to grade. The hand auger borings were backfilled with native material.

4.0 FINDINGS

4.1 Geology and Hydrogeology

Materials encountered during drilling activities consisted of varying amounts of gravel, sand, silt and clay. Groundwater was initially encountered during the drilling activities at depths ranging from eight to 22 feet BGS. Depth to groundwater was observed to subsequently rise after the drilling was completed which may be indicative of confined or semi-confined groundwater aquifer conditions. Please refer to the soil boring logs included in Appendix C for a complete description of the materials encountered during the drilling activities.

4.2 Autobody/Alignment Building

Soil and groundwater samples collected from soil borings SB-1 through SB-4 in the area of the alignment shop did not indicate detections of petroleum hydrocarbons or VOCs above laboratory detection limits. Metals including chromium, lead, nickel and zinc were detected in all soil and groundwater samples collected from these borings with the exception of lead in soil boring SB-4



grab groundwater sample. Cadmium was not detected above laboratory detection limits in any of the soil or groundwater samples collected from these soil borings.

Please refer to Tables 1 through 6 in Appendix B for soil and groundwater analytical results from soil borings SB-1 through SB-4.

4.3 Former Hydraulic Hoist Locations

Soil samples collected from the former hoist locations (SB-6 and HA-3) did not indicate the presence of petroleum hydrocarbons or PCB's above the laboratory detection limit. Metals including chromium, lead, nickel and zinc were detected in the soil sample collected from SB-6.

Please refer to Tables 7 and 8 in Appendix B for soil and groundwater analytical results from SB-6 and HA-3.

4.4 Former Gasoline Service Station

4.4.1 Geophysical Survey

The geophysical survey indicated a large subsurface debris pile in the footprint of the former gasoline service station. The subsurface debris was indicated as being consistent with a structure foundation. The survey did not indicate the presence of buried metallic objects such as hoists or UST's within the survey area. Please refer to the report prepared by NorCal Geophys cal dated December 10, 2010 that is included in Appendix E.

4.4.2 Soil Boring Advancement

Soil and groundwater samples collected from soil boring SB-5 located in the expected downgradient location of the gasoline service station did not indicate the presence of petroleum hydrocarbons or VOCs above laboratory detection limits. The metals chromium, lead, nickel and zinc were detected in the soil and groundwater samples collected from SB-5

Please refer to Tables 9 through 13 in Appendix B or soil and groundwater analytical results from SB-5.

4.5 Surface Soil Sampling

Surface soil samples collected on the east side of the main shop indicated DRO and HRO at concentrations of 575 and 1,030 milligrams per kilograms (mg/kg), respectively in hand auger boring HA-1 and 11,700 and 17,900 mg/kg respectively, in hand auger boring HA-2. Please note that the laboratory flagged the DRO detections as having heavier hydrocarbons contributing to the diesel range quantitation.

The deeper soil samples collected from the hand auger borings at depth intervals of 16 to 20 inches BGS in hand auger boring HA-1 and 18 to 24 inches BGS in hand auger boring HA-2 were non detect for both DRO and HRO.

Several VOCs were detected in the soil sample collected from the ground surface in hand auger boring HA-2 including the butylbenzene, sec-Butylbenzene, ethylbenzene, isopropyltoluene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,pxylenes and o-xylenes. These VOC detections ranged in concentration from p-isopropyltoleune at 18.5 micrograms per kilogram (ug/kg) to 1,3,5-trimethylbenzene at 472 ug/kg. No other VOCs were detected in the HA-1 and HA-2 soil samples.

Metals including cadmium, chromium, lead, nickel and zinc were detected in all the soil samples collected from these hand auger boring samples with the exception that cadmium was not detected in both the deeper soil samples. The concentrations of lead in these samples was significantly elevated.

Please refer to Tables 14 through 16 in Appendix B for analytical results from HA-1 and HA-2.

Copies of the all of the corresponding Certified Analytical Reports (CARs) and chain-of-custody records are enclosed in Appendix D.

5.0 CONCLUSIONS

Based on results from the soil and groundwater grab samples collected during this investigation, EBA presents the following conclusions:

- Based on soil and groundwater data collected from soil borings SB-1 through SB-4, there appears to be no impacts to soil or groundwater from the historic uses of the autobody/alignment building.
- Based on soil data collected from soil borings SB-6 and HA-3, there appears to be no impacts from the former hydraulic hoists located in the main shop building and the alignment shop.
- Based on the findings from the geophysical survey it appears that subsurface debris and remnants of the former gasoline service station are present on the southwest side of the project site property. The geophysical survey did not indicate the presence of buried metallic objects such as hydraulic hoists or USTs.
- Soil and groundwater samples collected from soil boring SB-5 in the area of the former gasoline service station did not indicate the presence of petroleum hydrocarbons or volatile organic compounds.
- Soil data collected from the area located between the main shop and the former school structure indicated shallow surface impacts from middle to heavy range petroleum hydrocarbons in the diesel and motor oil weight range. In addition, significant concentrations of lead were detected in the surface soil samples in this area of the project site. The concentrations of these compounds exceed regulatory limits as defined by the

Environmental Screening Levels as published by the San Francisco Bay Regional Water Quality Control Board. Deeper soil samples collected from this area indicated significantly lower to non-detectable levels of these compounds.

6.0 **RECOMMENDATIONS**

Based on soil and groundwater data collected during this investigation, EBA recommends the following:

- Remove petroleum hydrocarbon and lead impacted soil from the area between the main shop building and the historic school building.
- No additional investigation is warranted regarding the former gasoline services station, former hydraulic hoists or historic uses of the autobody/alignment building.

7.0 LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental geological practice at the place and time this investigation was performed. This warranty is in lieu of all other warranties, either expressed or implied. This investigation was conducted solely for the purpose of evaluating environmental conditions of first-encountered groundwater with respect to environmental conditions previously identified at the site. No soil engineering or geotechnical references are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. Subsurface conditions may vary away from the data points available. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation. This report has been prepared solely for the Client and any reliance on this report by third parties shall be at such party's sole risk.

8.0 **REFERENCES**

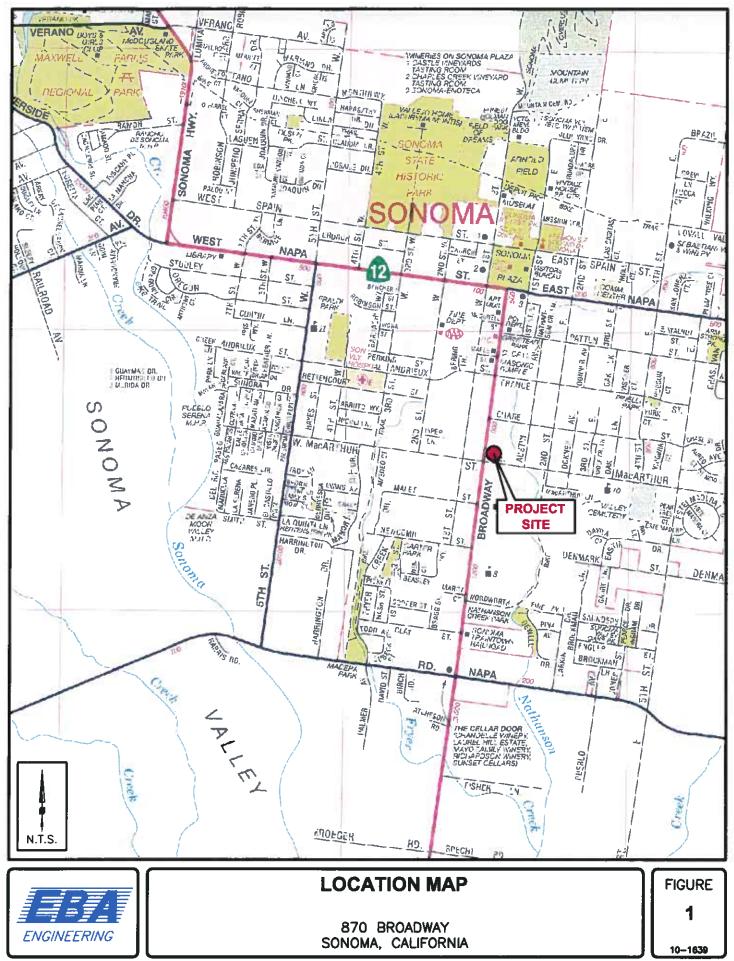
California Department of Water Resources, Evaluation of Groundwater Resources: Sonoma County, December 1992.

EBA Engineering, 2010a. Phase I Environmental Site Assessment, 870 Broadway, Sonoma, California. July 2010.

EBA Engineering, 2010b; Cost Estimate for Environmental Services, 870 Broadway, Sonoma, California. September 11, 2010.

APPENDIX A

FIGURES



Q:\1639\Location Map.dwg, Location Map, 7/8/2010 4:23:39 PM



Q:\1639\Report of Investigation - 2010\Soli and Hand Auger Boring Locations.dwg, Site Map, 11/30/2010 10:55:11 AM

APPENDIX B

TABLES

GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS AUTOBODY/ALIGNMENT BUILDING PETROLEUM HYDROCARBONS **TABLE 1**

870 BROADWAY

<0.050 <0.050 <0.050 <0.050 (mg/L) HRO (mg/L) <0.050 <0.050 <0.050 <0.050 DRO SONOMA, CALIFORNIA <0.050 <0.050 <0.050 <0.050 (mg/L) GRO 11/1/2010 11/1/2010 11/1/2010 11/1/2010 Date Sample ID SB-1-W SB-2-W SB-3-W SB-4-W

DRO = diesel range organics analyzed by EPA Method 8015DRO HRO =heavy range organics analyzed by EPA Method 8015DRO GRO =gasoline range organics analyzed by EPA Method 8015B mg/L = milligrams per liter



AUTOBODY/ALIGNMENT BUILDING GRAB GROUNDWATER ANALYTICAL RESULTS VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B 870 BROADWAY SONOMA, CALIFORNIA

Analyte	Date	Units	SB-I-W	SB-2-W	SB-3-W	SB-4-W
Acetone	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Benzene	11/1/2010	<u>µg/L</u>	<0.500	<0.500	<0.500	<0.500
Bromobenzene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0,500
Bromochloromethane	11/1/2010	μ <u>g</u> /L	<0.500	<0.500	<0.500	<0.500
Bromodichloromethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Bromoform	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Bromomethane	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
n-Butylbenzene sec-Butylbenzene	11/1/2010	μ <u>g/L</u> μg/L	<0.500	<0.500	<0.500	<0.500
tert-Butylbenzene	11/1/2010	μ <u>α/L</u> μα/L	<0.500	<0.500	<0.500	<0.500
Carbon Tetrachloride	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Chlorobenzene	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
Chloroethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Chloroform	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Chloromethane	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
2-Chlorotoluene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
4-Chlorotoluene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Dibromochloromethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
1,2-Dibromo-3-chloropropane	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,2-Dibromoethane	11/1/2010	μχ/L	<0.500	<0.500	<0.500	<0.500
Dibromomethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
1,2-Dichlorobenzene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,3-Dichlorobenzene	11/1/2010	μg/L	<0,500	<0.500	<0.500	<0.500
1,4-Dichlorobenzene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Dichlorodifluoromethane	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,1-Dichloroethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
1,2-Dichloroethane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
1,1-Dichloroethene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
cis-1,2-Dichloroethene	11/1/2010	μց/Ղ	<0.500	<0.500	<0.500	<0.500
trans-1,2-Dichloroethene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,2-Dichloropropane	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
1.3-Dichloropropane	11/1/2010	μg/Ĺ	<0.500	<0.500	<0.500	<0.500
2.2-Dichloropropane	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,1-Dichloropropene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
cis-1.3-Dichloropropene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
trans-1,3-Dichloropropene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Ethylbenzene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Hexachlorobutadiene	11/1/2010	μg/L	<1.00	<1.00	<1.00	<1.00
Isopropythenzene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
p-Isopropyltoluene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Methyl Ethyl Ketone	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Methyl Isobutyl Ketone	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Methyl tert-butyl ether	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Methylene Chloride	11/1/2010	µg/L	<2.50	<2.50	<2.50	<2.50
Naphihalene	11/1/2010	μg/L.	<1.00	<1.00	<1.00	<1.00
n-Propylbenzene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
Styrene 1,1,1,2-Tetrachloroethane	11/1/2010	μ <u>g</u> /L	<0.500	<0.500	<0.500	<0.500
1,1,1,2-Tetrachloroethane	11/1/2010	μ <u>g</u> /L	<0.500	<0.500	<0.500	<0.500
1,1,2,2-1 etrachloroethane Tetrachloroethene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
Toluene	11/1/2010	µg/L	<0.500	<0.500	<0.500	<0.500
1,2,3-Trichlorobenzene	11/1/2010	<u>με/L</u> με/L	<0.500	<0.500	<0.500	<0.500
1.2.4-Trichlorobenzene	11/1/2010		<1.00	<1.00		<1.00
1,1,1-Trichloroethane	11/1/2010	μg/L μg/L	<0.500	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
Trichloroethene	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
Trichlorofluoromethane	11/1/2010	μ <u>g/L</u>	<0.500	<0.500	<0.500	<0.500
Trichlorotrifluoroethane	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
1,2,3-Trichloropropane	11/1/2010	μ <u>g</u> /L	<0.500	<0.500	<0.500	<0.500
1,2,4-Trimethylbenzene	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
1,3,5-Trimethylbenzene	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
Vinyl Chloride	11/1/2010	μg/L μg/L	<0.500	<0.500	<0.500	<0.500
m,p-Xylene	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500
and a share	117174010		NU-,TUU	~0.000	~0.000	1 50.000
o-Xylenes	11/1/2010	μg/L	<0.500	<0.500	<0.500	<0.500

µg/L: micrograms per liter.

EBA ENGINEERING

TABLE 3 AUTOBODY/ALIGNMENT BUILDING GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS CAM 5 METALS 870 BROADWAY

SONOMA, CALIFORNIA

μg/L <1.00 μg/L <1.00 μg/L <1.00 μg/L <1.00	Sample ID Units	Cadmium	Chromium	Lead	Nickel	Zinc
μg/L <1.00 μg/L <1.00			7.79	1.96	52.1	16.2
μg/L <1.00			7.58	9.54	44.7	15.7
			10.8	12.6	98.0	24.3
		<1.00	10.8	<1.00	79.5	16.1

µg/L: micrograms per liter.



AUTOBODY/ALIGNMENT BUILDING SOIL SAMPLE ANALYTICAL RESULTS

PETROLEUM HYDROCARBONS

870 BROADWAY SONOMA, CALIFORNIA

Sample ID	Date	GRO (mg/kg)	DRO (mg/kg)	HRO (mg/kg)
SB-2@9'	11/1/2010	<1.00	<10.0	<10.0
SB-3@16'	11/1/2010	<1.00	<10.0	<10.0
SB-4@16'	11/1/2010	<1.00	<10.0	<10.0

GRO =gasoline range organics analyzed by EPA Method 8015B DRO = diesel range organics analyzed by EPA Method 8015DRO HRO =heavy range organics analyzed by EPA Method 8015DRO mg/kg = milligrams per kilogram



AUTOBODY/ALIGNMENT BUILDING SOIL SAMPLE ANALYTICAL RESULTS VOLATILE ORGANIC COMPUNDS BY EPA METHOD 8260B 870 BROADWAY

SONOMA, CALIFORNIA

Analyte	Date	Units	SB-2@9'	SB-3@16'	SB-4@16'
Acetone	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Benzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Bromobenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Bromochloromethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Bromodichloromethane Bromoform	11/1/2010	μ <u>g/kg</u>	<1.50	<1.50	<1.50
Bromonorm	11/1/2010	μ <u>g/kg</u>	<1.50	<1.50	<1.50
n-Butylbenzene	11/1/2010	μ <u>g/kg</u> μg/kg	<1.50	<1.50	<1.50
sec-Butylbenzene	11/1/2010	με/κε	<1.50	<1.50	<1.50
tert-Butylbenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Carbon Tetrachloride	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Chlorobenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Chloroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Chloroform	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Chloromethane	11/1/2010	μg/kg	<1.50	<1.50	<1.50
2-Chlorotoluene	11/1/2010	µ <u>e/kg</u>	<1.50	<1.50	<1.50
4-Chlorotoluene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Dibromochloromethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,2-Dibromo-3-chloropropane	11/1/2010	μg/kg	<1.50	<1.50	<1.50
1,2-Dibromoethane Dibromomethane	11/1/2010	μg/kg μg/kg	<1.50 <1.50	<1.50	<1.50 <1.50
1,2-Dichlorobenzene	11/1/2010	μ <u>ε/τε</u> με/τε	<1.50	<1.50	<1.50
1,3-Dichlorobenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,4-Dichlorobenzene	11/1/2010	μg/kg	<1.50	<1.50	<1.50
Dichlorodifluoromethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1-Dichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,2-Dichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1-Dichloroethene	11/1/2010	μg/kg	<1.50	<1.50	<1.50
cis-1,2-Dichloroethene	11/1/2010	μg/kg	<1.50	<1.50	<1.50
trans-1,2-Dichloroethene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,2-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,3-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
2.2-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1-Dichloropropene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Ethylbenzene	11/1/2010	μ <u>g/kg</u>	<1.50	<1.50	<1.50
Hexachlorobutadicne	11/1/2010	µg/kg	<3.00	<3.00	<3.00
Isopropyibenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
p-lsopropyltoluene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Methyl Ethyl Kctone	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Methyl Isobutyl Ketone	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Methyl tert-butyl ether	11/1/2010	μ <u>g/kg</u>	<1.50	<1.50	<1.50
Methylene Chloride	11/1/2010	µg/kg	<7.50	<7.50	<7.50
Naphthalene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
n-Propylbenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Styrene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1,1,2-Tetrachloroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1,2,2-Tetrachioroethane Tetrachioroethene	11/1/2010	µg/kg	<1.50	<1.50	<1.50 <1.50
Toluene	11/1/2010	μ <u>g/kg</u> μg/kg	<1.50	<1.50	<1.50
1,2,3-Trichlorobenzene	11/1/2010	με/kg	<3.00	<3.00	<1.00
1,2,4-Trichlorobenzene	11/1/2010	µg/kg	<3.00	<3.00	<3.00
1,1,1-Trichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,1,2-Trichloroethane	11/1/2010	μg/kg	<1.50	<1.50	<1.50
Trichloroethene	11/1/2010	μg/kg	<1.50	<1.50	<1.50
Trichlorofluoromethane	11/1/2010	μg/kg	<1.50	<1.50	<1.50
Trichlorotrifluoroethane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,2,3-Trichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,2,4-Trimethylbenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
1,3,5-Trimethylbenzene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
Vinyl Chloride	11/1/2010	µg/kg	c1.50	<1.50	<1.50
m,p-Xylene	11/1/2010	µg/kg	<1.50	<1.50	<1.50
o-Xylenes Total Xylenes	11/1/2010	µg/kg	<1.50	<1.50	<1.50
I OTAL AVIENES		µg/kg	<1.30	VC.1>	<1.50

µg/kg: micrograms per kilogram.



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TABLE 6	Y/ALIGNMENT F
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SOIL SAMPLE ANALYTICAL RESULTS DING AUTOBC

CAM 5 METALS

870 BROADWAY

SONOMA, CALIFORNIA

Sample ID	Units	Cadmium	Chromium	Lead	Nickel	Zinc
SB-2@9'	mg/kg	<2.50	214	3.01	90.9	30.3
SB-3@16'	mg/kg	<2.50	49.2	4.99	72.3	29.2
SB-4@16'	mg/kg	<2.50	24.8	3.59	18.2	14.4

mg/kg = milligrams per kilogram



FORMER HYDRAULIC HOIST LOCATIONS SOIL SAMPLE ANALYTICAL RESULTS

870 BROADWAY

SONOMA, CALIFORNIA

Sample ID	Date	DRO (mg/kg)	HRO (mg/kg)	PCBs (ug/kg)	BTEX (ug/kg)
SB-6@10'	11/1/2010	<10.0	<10.0	<100	<1.50
HA-3 @7	11/22/2010	<10.0	NA	NA	<1.50
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ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

DRO = diesel range organics analyzed by EPA Method 8015DRO

HRO =heavy range organics analyzed by EPA Method 8015DRO

PCBs = polychlorinated biphenyls by EPA Method 3550/8082

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B.

NA = not analyzed

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TABLE 8 PHVDBAILTIC HOI

FORMER HYDRAULIC HOISTS SOIL SAMPLE ANALYTICAL RESULTS

CAM 5 METALS

870 BROADWAY

SONOMA, CALIFORNIA

Zinc	30.2
Nickel	55.8
Lead	7.17
Chromium	32.2
Cadmium	<2.50
Units	mg/kg
Sample ID	SB-6@10'

mg/kg = milligrams per kilogram



TABLE 9 FORMER GASOLINE SERVICE STATION GROUNDWATER GRAB SAMPLE ANALYTICAL RESULTS PETROLEUM HYDROCARBONS 870 BROADWAY SONOMA, CALIFORNIA

Sample ID	Date	GRO (mg/L)	DRO (mg/L)	HRO (mg/L)
SB-5-W	11/1/2010	<0.050	<0.050	<0.050
GRO =gasoline range organics analyzed by EPA Method 8015B	ed by EPA Method 8015F	8		

DRO = diesel range organics analyzed by EPA Method 8015DRO HRO = heavy range organics analyzed by EPA Method 8015DRO mg/L = milligrams per liter



FORMER GASOLINE SERVICE STATION GRAB GROUNDWATER ANALYTICAL RESULTS VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B 870 BROADWAY

SONOMA, CALIFORNIA

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Analyte	Date	Units	SB-5-W
Acetone	11/1/2010	_µg/L	<0.500
Benzene	11/1/2010	µg/L	<0.500
Bromobenzene	11/1/2010		<0.500
Bromochloromethane	11/1/2010	μg/L	<0.500
Bromodichloromethane	11/1/2010	μ <u>ε</u> /L.	<0.500
Bromoform	11/1/2010	μ <u>ε</u> /L	<0.500
Bromomethane	11/1/2010	μg/L	<0.500
n-Butylbenzene	11/1/2010	<u>μg/L</u>	<0.500
sec-Butymenzene	11/1/2010	μg/L	<0.500
tert-Butylbenzene	11/1/2010	µg/L	<0.500
Carbon Tetrachloride	11/1/2010	µg/L	<0.500
Chlorobenzene	11/1/2010	με/L	<0.500
Chioroethane	11/1/2010	µg/L	<0.500
Chloroform	11/1/2010	με/L	<0.500
Chloromethane	11/1/2010	_μ <u>α/</u> L	<0.500
2-Chlorotoluene	11/1/2010	μg/L	<0.500
4-Chlorotoluene	11/1/2010	μ <u>g/</u> L 	<0.500
Dibromochloromethane 1,2-Dibromo-3-chloropropane	11/1/2010	μ <u>g</u> /L	<0.500 <0.500
1.2-Dibromo-3-chioropropane	11/1/2010	μ <u>ρ/L</u>	<0.500
Dibromomethane	11/1/2010	μg/L.	<0.500
1,2-Dichlorobenzene	11/1/2010	μ <u>ε/L</u> με/L	<0.500
1,3-Dichlorobenzene	11/1/2010	μ <u>στ.</u> μg/L	<0.500
1,4-Dichlorobenzene	11/1/2010	με/L	<0.500
Dichlorodifluoromethane	11/1/2010	μg/L	<0.500
1,1-Dichloroethane	11/1/2010	µg/L	<0.500
.2-Dichloroethane	11/1/2010	μg/L	<0.500
I, I-Dichloroethene	11/1/2010	μg/L	<0.500
cis-1,2-Dichloroethene	11/1/2010	μ <u>g</u> /L	<0.500
rans-1,2-Dichloroethene	11/1/2010	µg/L	<0.500
1,2-Dichloropropane	11/1/2010	μg/L	<0.500
1,3-Dichloropropane	11/1/2010	μg/L	<0.500
2.2-Dichloropropane	11/1/2010	μg/L	<0.500
, I-Dichloropropene	11/1/2010	μg/L	<0.500
cis-1,3-Dichloropropene	11/1/2010	με/L	<0.500
rans-1,3-Dichloropropene	11/1/2010	µg/L	<0.500
Ethylbenzene	11/1/2010	μ <u>g</u> /L.	<0.500
Hexachlorobutadiene	11/1/2010	μg/L	<1.00
sopropybenzene	11/1/2010	μg/L	<0.500
-Isopropyltoluene	11/1/2010	µg/L	<0.500
Methyl Ethyl Ketone	11/1/2010	μ <u>ε</u> /L	<0.500
Methyl Isobutyl Ketone	11/1/2010	μg/L	<0.500
Methyl tert-butyl ethet	11/1/2010	µg/L	<0.500
Methylene Chioride	11/1/2010	μg/L	<2.50
Naphthalene	11/1/2010	μ <u>g</u> /L.	<1.00
1-Propylbenzene	11/1/2010	μg/L	<0.500
Styrene	11/1/2010	µg/L	<0.500
1,1,1,2-Tetrachloroethane	11/1/2010	<u>με/L</u>	<0.500
1,1,2,2-Tetrachioroethane	11/1/2010	µg/L	<0.500
Fetrachloroethene	11/1/2010	μ g/Ĺ	<0.500
Coluene ,2,3-Trichlorobenzene	11/1/2010	<u>μ<u>α</u>/L</u>	<0.500
,2,4-Trichlorobenzene	11/1/2010	µg/L	<1.00
1,1,1-Trichloroethane	11/1/2010	<u>μg/L</u> μg/L	<0.500
1,2-Trichloroethane	11/1/2010	μg/L μg/L	<0.500
Frichloroethene	11/1/2010	μ <u>g</u> /L μg/L	<0.500
Frichlorofluoromethane	11/1/2010	μg/L	<0.500
Friehlorotrifluoroethane	11/1/2010	μ <u>ρ/</u> μ	<0.500
,2,3-Trichloropropane	11/1/2010	με/L με/L	<0.500
,2,4-Trimethylbenzene	11/1/2010	μ <u>g</u> /L	<0.500
.3.5-Trimethylbenzene	11/1/2010	μ <u>g</u> /L	<0.500
/inyl Chloride	11/1/2010	μ <u>g</u> /L	<0.500
n,p-Xylene	11/1/2010	<u>ир/L</u>	<0.500
-Xvlenes	11/1/2010	µg/L	<0.500

µg/L: micrograms pet litet,

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	Zinc	25.0
	Nickel	89.7
VIA	Lead	6.43
SUNUMA, CALIFURNIA	Chromium	27.5
	Cadmium	<1.00
	Units	Л/дц
	Sample ID	SB-5-W

µg/L: micrograms per liter.

TABLE 11

GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS FORMER GASOLINE SERVICE STATION

CAM 5 METALS

870 BROADWAY

SONOMA CALIBODNI

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TABLE 12 FORMER GASOLINE SERVICE STATION SOIL SAMPLE ANALYTICAL RESULTS GRO, DRO & HRO 870 BROADWAY

SONOMA, CALIFORNIA

Sample ID	Date	GRO (mg/kg)	DRO (mg/kg)	HRO (mg/kg)
SB-5@16'	11/1/2010	<1.00	<10.0	<10.0

GRO =gasoline range organics analyzed by EPA Method 8015B

DRO = diesel range organics analyzed by EPA Method 8015DRO HRO =heavy range organics analyzed by EPA Method 8015DRO mg/kg = milligrams per kilogram



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TABLE

FORMER GASOLINE SERVICE STATION SOIL SAMPLE ANALYTICAL RESULTS CAM 5 METALS

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Zinc	19.2
Nickel	44.7
Lead	5.34
Chromium	30.4
Cadmium	<2.50
Units	mg/kg
Sample ID	SB-5@16'

mg/kg = milligrams per kilogram

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TABLE 14 HAND AUGER SOIL SAMPLE ANALYTICAL RESULTS PETROLEUM HYDROCARBONS \$70 BPOADWAY

870 BROADWAY

SONOMA, CALIFORNIA

Sample ID	Date	GRO (mg/kg)	DRO (mg/kg)	HRO (mg/kg)
HA-1@ SURFACE	11/1/2010	<1.0	575 ^A	1,030
HA-1@16"-20"	11/1/2010	<1.0	<10.0	<10.0
HA-2@ SURFACE	11/1/2010	8.29	11,700 ^A	17,900
HA-2 @18"-24"	11/1/2010	<1.00	<10.0	<10.0
ESL		83	83	2,500

mg/kg = milligrams per kilogram

GRO= gasoline range organics analyzed by EPA Method 8015B DRO= diesel range organics analyzed by EPA Method 8015 HRO= heavy range organics analyzed by EPA Method 8015



A = Heavier hydrocarbons contributing to diesel range quantititation ESI = San Francisco Ray Regional Water Quality Control Roard Environ-

ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for shallow soil in a commercial setting.

HAND AUGER SOIL SAMPLE ANALYTICAL RESULTS VOLATILE ORGANIC COMPUNDS BY EPA METHOD 8260B 870 BROADWAY

SONOMA, CALIFORNIA

		_	SONOWA, CALIF	ORTH		
Analyte	Date	Units	HA-1@ SURFACE	HA-1 @ 16"-20"	HA-2@ SURFACE	HA-2 @18"-24"
Acetone	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Benzene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Bromobenzene	11/1/2010	μg/kg	<1.50	<1.50	<7.50	<1.50
Bromochloromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Bromodichloromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Bromoform	11/1/2010	μ <u>ε/kg</u>	<1.50	<1.50	<7.50	<1.50
Bromomethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
n-Butylbenzene	11/1/2010	μg/kg	<1.50	<1.50	122	<1.50
sec-Butylbenzene	11/1/2010	μ <u>α</u> /kg	<1.50	<1.50	21.8	<1.50
tert-Butylbenzene	11/1/2010	μ <u>g/kg</u>	<1.50	<1.50	<7.50	<1.50
Carbon Tetrachloride	11/1/2010		<1.50	<1.50	<7.50	
Chlorobenzene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
	11/1/2010	µg/kg	<1.50			<1.50
Chloroethane		µg/kg		<1.50	<7.50	<1.50
Chloroform	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Chloromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
2-Chlorotoluene	11/1/2010	μg/kg	<1.50	<1.50	<7.50	<1.50
4-Chlorotoluene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Dibromochloromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,2-Dibromo-3-chloropropane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1.2-Dibromoethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Dibromomethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,2-Dichlorobenzene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,3-Dichlorobenzene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,4-Dichlorobenzene	11/1/2010	μg/kg	<1.50	<1.50	<7.50	<1.50
Dichlorodifluoromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,1-Dichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1.2-Dichloroethane	11/1/2010	μg/kg	<1.50	<1.50	<7.50	<1.50
1,1-Dichloroethene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
cis-1,2-Dichloroethene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
trans-1,2-Dichloroethene	11/1/2010	μg/kg	<1.50	<1.50	<7,50	<1.50
1,2-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1.3-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
2,2-Dichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,1-Dichloropropene	11/1/2010	μg/kg	<1.50	<1.50	<7.50	<1.50
cis-1,3-Dichloropropene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
trans-1,3-Dichloropropene	11/1/2010	μ <u>ε/kg</u>	<1.50	<1.50	<7.50	<1.50
Ethylbenzene	11/1/2010		<1.50	<1.50		
		µg/kg			43.8	<1.50
Hexachlorobutadiene	11/1/2010	µg/kg	<3.00	<3.00	<15.0	<3.00
Isopropylbenzene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
p-lsopropyltoluene	11/1/2010	µg/kg	<1.50	<1.50	18.5	<1.50
Methyl Ethyl Ketone	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Methyl Isobutyl Ketone	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Methyl tert-butyl cther	11/1/2010	µg/kg	<1.50	<1,50	<7.50	<1.50
Methylene Chloride	11/1/2010	µg/kg	<7.50	<7.50	<7.50	<7.50
Naphthalene	11/1/2010	µg/kg	<3.00	<3.00	28.5	<3.00
n-Propylbenzene	11/1/2010	µg/kg	<1.50	<1.50	88.0	<1.50
Styrene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,1,1,2-Tetrachloroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,1,2,2-Tetrachloroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Tetrachloroethene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Toluene	11/1/2010	µg/kg	<1.50	<1,50	63.2	<1.50
1,2,3-Trichlorobenzene	11/1/2010	µg/kg	<3.00	<3.00	<15.0	<3.00
1,2,4-Trichlorobenzene	11/1/2010	µg/kg	<3.00	<3.00	<15.0	<3.00
1,1,1-Trichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1.1.2-Trichloroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Trichloroethene	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Trichlorofluoromethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
Trichlorotrifluoroethane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,2,3-Trichloropropane	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50
1,2,4-Trimethylbenzene	11/1/2010	μg/kg	<1.50	<1.50	431	<1.50
1,3,5-Trimethylbenzene	11/1/2010	µg/kg	<1.50	<1.50	472	<1.50
Vinyl Chloride	11/1/2010		<1.50	<1.50	<7.50	<1.50
m,p-Xylene	11/1/2010	µg/kg	<1.50	<1.50	249	
		µg/kg				<1.50
o-Xylenes	11/1/2010	μg/kg	<1.50	<1.50	420	<1.50
Total Xylenes	11/1/2010	µg/kg	<1.50	<1.50	<7.50	<1.50

µg/kg: micrograms per kilogram.



HAND AUGER SOIL SAMPLE ANALYTICAL RESULTS CAM 5 METALS

870 BROADWAY

SONOMA, CALIFORNIA

Sample ID	Units	Cadmium	Chromium	Lead	Nickel	Zinc
HA-1@ SURFACE	mg/kg	14.8	06	837	62	1,090
HA-1@16"-20"	mg/kg	<2.50	137	5.12	124	ङ
HA-2@ SURFACE	mg/kg	8.1	68	1,200	55.1	111
HA-2 @18"-24"	mg/kg	<2.50	96.5	7.64	89	40.1

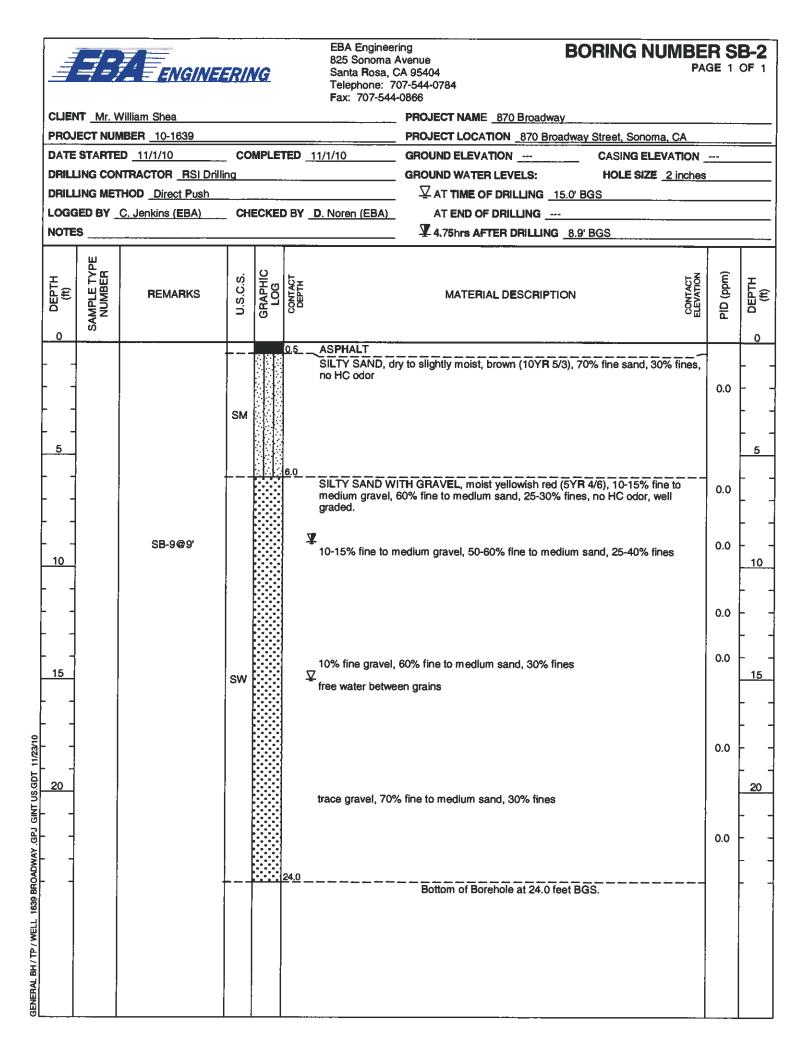
mg/kg = milligrams per kilogram



APPENDIX C

BORING LOGS

Ê		7.	E	EBA Englneering 825 Sonoma AvenueBORING NUMBEINGINEERINGSanta Rosa, CA 95404PAGTelephone: 707-544-0784Fax: 707-544-0866	R SI	
CLIEI	NT <u>Mr. N</u>	<u> Nillian</u>	n Shea	PROJECT NAME 870 Broadway		
PRO	ECT NU	MBER	<u>t0-1</u>			
DATE	STARTE	ED _t	<u>t/t/t0</u>	COMPLETED <u>t1/t/t0</u> GROUND ELEVATION CASING ELEVATION		
DRILI	LING CO	NTRA	CTOR	RSI Drilling GROUND WATER LEVELS: HOLE SIZE _2 inches		
DRILI	LING ME	THOD	Dire			
LOGO	ED BY _	C. Je	nkins	(EBA) CHECKED BY D. Noren (EBA) AT END OF DRILLING		
NOTE	s					
o DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	o DEPTH (ft)
		<u> </u>		Q5ASPHALT		Ŭ
				SANDY CLAY WITH GRAVEL, moist, yellowish red (5YR 4/6), 20% fine to medium gravel, 20% fine to coarse sand, 60% fines, well graded, no HC odor.	0.0	
		SC		30% fine to medium gravel, 30% fine to coarse sand, 40% fines, no HC odor	0.0	
		┝		B.0		
		sw		9.0		
tO		sc		SILTY SAND, moist, yellowish red (5YR 4/6), 60-70% flne sand, 30-40% fines, no HC odor		to
				SILTY SAND WITH GRAVEL, yellowish red (5YR 4/6), 30% fine to medium gravel, 40% fine to medium sand, 30% fines, no HC odor	0.0	
<u>t5</u>		sw		trace gravel, 50-60% fine to medium sand, 40-50% fines		
				moist to wet, 10-15% fine to medium gravel, 60% fine to medlum sand, 25-30% fines, no HC odor	0.0	20
				free water between grains	0.0	
				Bottom of Borehole at 24.0 feet BGS.		
5			L			



			<u>'ER//</u>	<u>VG</u>		EBA Englineering 825 Sonoma Avenue Santa Rosa, CA 95404 Telephone: 707-544-0784 Fax: 707-544-0866		B-3 OF 1
CLIEI	NT Mr. \	Willlam Shea				PROJECT NAME 870 Broadway		
PRO	ECT NU	MBER 10-1639				PROJECT LOCATION 870 Broadway Street, Sonoma, CA		
DATE	STARTE	ED <u>11/1/10</u>	_ co	MPLE	TED _	11/1/10 GROUND ELEVATION CASING ELEVATION		
DRIL	LING COI	NTRACTOR RSI Dril	lling					
		THOD Direct Push				AT TIME OF DRILLING 21.0' BGS		
	-	C. Jenkins (EBA)	_ сн	ECKE	DBY			
NOTE	S			,				
o DEPTH	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	CONTACT DEPTH	MATERIAL DESCRIPTION	PID (ppm)	o DEPTH (ft)
				101500	0,5	ASPHALT		, v
						SILTY SAND, moist, yellowish red (5YR 4/6), 60-70% fine sand, 30-40% fines, free water betwwen grains from surface infiltration?		
						g	0.0	
5								5
L .		1						L.
						dry to slightly moist, 60% fine sand, 40% fines	0.0	
10						increase in graIn size, free water in coarser lenses		10
						•		
							0.0	
								L .
			SM		2	2		
15								15
		SB-3@16'						
								-
20								20
					1 2	gravel lense		Ľ.
						70% flne to medium fine sand, 30% fines	0.0	[
<u>ا</u> _;	i							Γ-
			1					-
								-
25								25
į⊢ -			 		<u>26.0</u>	Bottom of Borehole at 26.0 feet BGS.		-
				ļ				
·					·			L

Proje	ECT NUM	illam Shea BER <u>10-1639</u>				PROJECT NAME 870 Broadway PROJECT LOCATION 870 Broadway Street, Sonoma, CA		
DATE DRILLI DRILLI LOGG	STARTED JNG CON JNG METI	D _11/1/10 TRACTOR _RSI Dri HOD _Direct Push C. Jenkins (EBA)	lling					
o DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	CONTACT DEPTH	MATERIAL DESCRIPTION	PID (ppm)	DEPTH
-			SM		0.5	ASPHALT SILTY SAND WITH GRAVEL, dry to slightly moist, yellowish red (5YR 4/6), 10-20% fine to medium gravel, 60% fine to medium sand, 20-30% fines, no HC odor	0.0	-
_ 5 ~ ~					4.0	SILTY SAND, moist, yellowish red (5YR 4/6), 70-80% fine sand, 20-30% fines, no HC odor	0.0	-
- - - - -			SM			gravel lense 70-80% fine to medlum sand, 20-30% fines, no HC odor hard drilling	0.0	
- 15 - -		SB-4@16'			2	trace fine gravels, 80% fine to medium sand, 20% flnes ⊈ free water between grains	0.0	
20					<u>22.0</u>	gravel lense	0.0	
-			CL		<u>24.0</u> _	SANDY CLAY, dry, yellowish red (5YR 4/6), 10-20% fine sand, 80-90% fines, medlum plasticity, no HC odor	0.0	-
25			SM		26.0	SILTY SAND, moist to wet, yellowish red (5YR 4/6), 60% fine sand, 40% fines		2

Ĩ			<u>ERII</u>	<u>VG</u>	82 Sa Te	BA Engineering 25 Sonoma Avenue anta Rosa, CA 95404 elephone: 707-544-0784 ax: 707-544-0866		SB-5 1 OF 1
CLIEI	NT <u>Mr. N</u>	Villiam Shea				PROJECT NAME 870 Broadway		
		MBER <u>10-1639</u>				PROJECT LOCATION _870 Broadway Street, Sonoma, CA	\	
		D <u>11/1/10</u>					ON	
		NTRACTOR RSI Dril						
DRILI	JNG ME	THOD Direct Push				AT TIME OF DRILLING <u>8.0' BGS</u>		
		C, Jenkins (EBA)	_ СН	ECKE	D BY D. No			
NOTE	:s					1hrs AFTER DRILLING 6.0' BGS		
o DEPTH (ft)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG	CONTACT OEPTH	MATERIAL DESCRIPTION	CONTACT ELEVATION PID (nnm)	o DEPTH (ft)
			 	51 50 X		PHALT		
	1				SIL	TY SAND WITH GRAVEL, moist, yellowish red (5YR 4/6), 10% fine to dium gravel, 70% fine to coarse sand, 20% fines, no HC odor		+ -
							0.	o
5								5
					¥			
					-#-			
			SM		⊊ free	water between grains	0.0	□
10								10
			Í					Í
								Γ
					trace	e gravel, 50-60% sand, 40-50% fines		
15								<u>t5</u>
		SB-5@16'			<u>16.0</u>			
					med	IDY CLAY, moist, yellowish red (5YR 4/6), 20% fine sand, 80% fines, lium plasticity, no HC odor		
			1	<i>\////</i>				
					sand	dy lense with trace fine gravel	0.0	, [_
20								F
S LO			CL					_20
<u>-</u>					20-4	0% fine cand 60 70% fines	0.0)
≩					30-4	0% fine sand, 60-70% fines		
					24.0			
						Bottom of Borehole at 24.0 feet BGS.	-1	
GENERAL BH / TP / WELL 1639 BROADWAY. GPJ GINT US.GOT 11/23/10	ĺ							
3								
¥								
ž								
·								

			EBA Engineer 825 Sonoma / Santa Rosa, C Telephone: 7 Fax: 707-544	Avenue CA 95404 07-544-0784	BORING NUM		RS Ge 1				
							PROJECT NAME 870				
		MBER 10-1639						870 Broadway Street, Sonoma, 0			
								CASING ELEVA ELS: HOLE SIZE _2			
		THOD Direct Push						ELS: HOLE SIZE <u>2</u> LUNG <u></u>			
1		C. Jenkins (EBA)						LUNG			ł
								G			
o DEPTH (11)	SAMPLE TYPE NUMBER	REMARKS	U.S.C.S.	GRAPHIC LOG			MATERIAL DE		CONTACT ELEVATION	PID (ppm)	o DEPTH (ft)
			+		0,5		lama to moint walterright	red (EVID 4/6) 200% first cond. 700			
						fines, medium p	amp to moist, yellowish asticity, no HC odor	red (5YR 4/6), 30% fine sand, 70%	/o		F 1
		{	1							0.0	
											┞┫
											┟╶┥
5											5
			CL								
											┝╶┥
						increasing sand	10 40-50%			0.0	
10		SB-6@10'	ł			organica				0.0	10
						organics					
			⊢		12.0						
							Bottom of Borehole	at 12.0 feet BGS.			
	i								Ì		
Í											
		- w.									

APPENDIX D

CERTIFIED ANALYTICAL REPORTS

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd. Santa Rosa CA 95403 Phone: 707 527 7574 FAX: 707 527 7879

9986

10-1645

ACCT:

PROJ:

TRANSMITTAL

	DATE:	11/23/2010
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TO: MR. DAVID NOREN EBA ENGINEERING 825 SONOMA AVENUE SANTA ROSA, CA 95404

Phone :	707-544-0784
Fax:	707-544-0866
Email:	dataeba1@ebagroup.com
	dnoren@ebagroup.com

Richard A. Kagel, Ph.D. RAKM W 10010 Laboratory Director RAKM W 100 FROM:

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT 10-1645

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	ΤΥΡΕ	DATE	TIME	KPI LAB #
SB-1@10	SOIL	11/16/10	10:00	86933
SB-206	SOIL	11/16/10	1I I5	86934
S8-2@11	SOIL	II/16/10	11:30	86935
S8-3@5.5	SOIL	11/16/10	13:45	86936
S8-3@10	SOIL	11/16/10	14:00	86937
S8-4@11	SOIL	11/16/10	14 50	86938
SB-5@7.5	SOIL	11/16/10	16:00	86939

The above listed sample group was received on 11/17/10 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information. Thank you for this opportunity to be of service.

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645 SAMPLE ID: SB-1@10 LAB NO: 86933 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 10:00

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	15.0	ND
TOLUENE	108-88-3	15.0	ND
ETHYLBENZENE	100-41-4	15.0	ND
XYLENE (M+P)	1330-20-7	15.0	ND
XYLENE (O)	1330-20-7	15.0	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	103
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	98

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: _____ DATE: _____ 2010

Υ.

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645 SAMPLE ID: SB-2@6 LAB NO: 86934 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 11:15

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE CONC
BENZENE	71-43-2	1.37	ND
TOLUENE	108-88-3	1.37	ND
ETHYLBENZENE	100-41-4	1.37	ND
XYLENE (M+P)	1330-20-7	1.37	ND
XYLENE (O)	1330-20-7	1.37	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	94
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	98

NOTES:

APPROVED BY: _______ DATE: _________

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645 SAMPLE ID: SB-2@11 LAB NO: 86935 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 11:30

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.48	ND
TOLUENE	108-88-3	1.48	ND
ETHYLBENZENE	100-41-4	1.48	ND
XYLENE (M+P)	1330-20-7	1.48	ND
XYLENE (O)	1330-20-7	1.48	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	102
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	98

NOTES:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645 SAMPLE ID: SB-3@5.5 LAB NO: 86936 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 13:45

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.53	ND
TOLUENE	108-88-3	1.53	ND
ETHYLBENZENE	100-41-4	1.53	ND
XYLENE (M+P)	1330-20-7	1.53	ND
XYLENE (O)	1330-20-7	1.53	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	102
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	98

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: DATE: 11 23 2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: SB-3@10 LAB NO: 86937 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 14:00

BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.16	ND
TOLUENE	108-88-3	1.16	ND
ETHYLBENZENE	100-41-4	1.16	ND
XYLENE (M+P)	1330-20-7	1.16	ND
XYLENE (O)	1330-20-7	1.16	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	108
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	100

NOTES:

APPROVED BY: _____ DATE: 11/23/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: SB-4@11 LAB NO: 86938 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 14:50

BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE
BENZENE	71-43-2	1.57	ND
TOLUENE	108-88-3	1.57	ND
ETHYLBENZENE	100-41-4	1.57	ND
XYLENE (M+P)	1330-20-7	1.57	ND
XYLENE (O)	1330-20-7	1.57	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	110
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	97

NOTES:

APPROVED BY:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: SB-5@7.5 LAB NO: 86939 SAMPLE TYPE: SOIL DATE SAMPLED: 11/16/2010 TIME SAMPLED: 16:00

BATCH #: 111710S1 DATE ANALYZED: 11/18/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.33	ND
TOLUENE	108-88-3	1.33	ND
ETHYLBENZENE	100-41-4	1.33	ND
XYLENE (M+P)	1330-20-7	1.33	ND
XYLENE (O)	1330-20-7	1.33	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	98

NOTES:

APPROVED BY: _____ DATE: 1123/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

METHOD: DRO REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	DRO
		SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
SB-1@10	86933	11/16/10	111710S1	11/17/10	11/17/10	10.0	287	
SB-2@6	86934	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	
SB-2@11	86935	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	
SB-3@5.5	86936	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	
SB-3@10	86937	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	
SB-4@11	86938	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	
SB-5@7.5	86939	11/16/10	111710S1	11/17/10	11/17/10	10.0	ND	

NOTES:

- DRO Diesel Range Organics (C12-C34) with Silica Gel Cleanup
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AD Typical pattern for diesel
- AC Heavier hydrocarbons contributing to diesel range quantitation
- AJ Heavier hydrocarbon than diesel
- AK Lighter hydrocarbon than diesel
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

APPROVED BY: DATE: 2010 11

K PRIME, INC.

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B111710S1

BATCH #: 111710S1 DATE ANALYZED: 11/17/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.50	ND
TOLUENE	108-88-3	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1 3 30-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	97
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	97

NOTES:

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: B111710S1 SPIKE ID: L111710S1 DUPLICATE ID: D111710S1 BATCH #: 111710S1 SAMPLE TYPE: SOIL UNITS: μg/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	30.0	ND	30.3	101	60-140
BENZENE	30.0	ND	29.6	99	60-140
TRICHLOROETHENE	30.0	ND	27.1	90	60-140
TOLUENE	30.0	ND	27.7	92	60-140
CHLOROBENZENE	30.0	ND	28.9	96	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1.1 DICHLOROETHENE	1.50	30.3	28.9	4.8	±20
BENZENE	1.50	29.6	28.4	4.1	±20
TRICHLOROETHENE	1.50	27.1	25.9	4.4	±20
TOLUENE	1.50	27.7	27.0	2.7	±20
CHLOROBENZENE	1.50	28.9	28.2	2.3	±20

NOTES:

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	BATCH ID: DATE EXTRACTED: DATE ANALYZED:	11/17/2010
METHOD: DRO	SAMPLE TYPE:	SOIL
REFERENCE: EPA 8015B	UNITS:	mg/Kg

METHOD BLANK ID: B111710S1

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
DRO	10.0	ND

SAMPLE ID:	L111710S1
DUPLICATE ID:	D111710S1

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
DRO	500	ND	409	82	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	10.0	409	415	1.5	±20

NOTES: DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.	NC.						CHAIN	CHAIN OF CUSTODY RECORD	ODY RE	CORD
CONSULTING ANALYTICAL CHEMISTS	L CHEMISTS		3621 Westwind Blvd.,		Santa Rosa, CA 95403	503	PHONE: (707) 527-7574	.7574	FAX: (707) 527-7879	527-7879
Client/Project ID EBA Engineering	5 LING		Address/Phone 825 Sonema Au (707) 5444-0784	ne he sut	Santa Rosa,	,ch	ANALYSES		KPI Project No.	t No.
Project Location 10-1645 Colist	Calistoga, CA		Client Project No. 10-1645	1 No. 1645						
Contact David Noren		Sampler (Signature)	1 and the	who find						
Sample Identification No.	Date	Time	Lab Sample No.	Type of Sample	No. of Containers	DR0 DR0		Expected Turnaround Time	Вел	Remarks
58-1010	11/16/10	10:00	86933	Soil	4	×		346	EOF	
58-226)	51=11	86934	<u> </u>						
56-2011	_	11:30	86935		_					
5B-385.5		13545	86936							
53-3010	+	14:00	86937							
		14-20	86938							
513-527.5	>	00-41	86939	>	>	> 7		>		
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Relinquished by: (Signature)	Jre)	bunk		600		Becetyed by:	: (Signature)		Date 11-17-10	Time 10:24
Relinquished by: (Signature)	lre) (er					Received by	Received by: (Signature)		Date	Time
Relinquished by: (Signature)	Jre)					Received by	by: (Signature)		Date	Time
Disposal Method							White Copy : Accompanies	anies Samples		
Disposed by: (Signature)				Date	Time		Yellow Copy : Sampler	, ,		

3621 Westwind Blvd. Santa Rosa CA 95403 Phone: 707 527 7574

707 527 7879

9986

10-1645

FAX:

ACCT:

PROJ:

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

TRANSMITTAL

DATE: 11/24/2010

TO: MR. DAVID NOREN E8A ENGINEERING 825 SONOMA AVENUE SANTA ROSA, CA 95404

Phone :	707-544-0784
Fax:	707-544-0866
Email:	dataebal@ebagroup.com
	dnoren@ebagroup.com

FROM: Richard A. Kagel, Ph.D. Laboratory Director RDF-M UP 1700

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	ΤΥΡΕ	DATE	TIME	KPI LAB #
S8-1-W	WATER	11/16/10	12:25	86940
S8-2-W	WATER	11/16/10	12:00	86941
S8-3-W	WATER	11/16/10	16:30	86942
S8-4-W	WATER	11/16/10	17:00	86943
S8-5-W	WATER	11/16/10	16:45	86944

The above listed sample group was received on on the chain of custody document.

11/17/10 and tested as requested

10-1645

Please call me if you have any questions or need further information. Thank you for this opportunity to be of service.

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

REFERENCE: EPA 5030/8260

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: SB-1-W LAB NO: 86940 SAMPLE TYPE: WATER DATE SAMPLED: 11/16/2010 TIME SAMPLED: 12:25

BATCH #: 111710W1 DATE ANALYZED: 11/18/2010 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE
BENZENE	71-43-2	5.00	ND
TOLUENE	108-88-3	5.00	ND
ETHYLBENZENE	100-41-4	5.00	ND
XYLENE (M+P)	1330-20-7	5.00	ND
XYLENE (O)	1330-20-7	5.00	5.72

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	102
TOLUENE-D8	99
4-BROMOFLUOROBENZENE	98

NOTES:

APPROVED BY: 2010 DATE:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

REFERENCE: EPA 5030/8260

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: SB-2-W LAB NO: 86941 SAMPLE TYPE: WATER DATE SAMPLED: 11/16/2010 TIME SAMPLED: 12:00

BATCH #: 111710W1 DATE ANALYZED: 11/18/2010 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	0.500	ND
TOLUENE	108-88-3	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	95
TOLUENE-D8	99
4-BROMOFLUOROBENZENE	96

NOTES:

APPROVED BY: <u>()</u> DATE: <u>11/23/2010</u>

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

REFERENCE: EPA 5030/8260

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: SB-3-W LAB NO: 86942 SAMPLE TYPE: WATER DATE SAMPLED: 11/16/2010 TIME SAMPLED: 16:30

BATCH #: 111710W1 DATE ANALYZED: 11/17/2010 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	
BENZENE	71-43-2	0.500	ND
TOLUENE	108-88-3	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	101
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	99

NOTES:

APPROVED BY: DATE: 2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

REFERENCE: EPA 5030/8260

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: SB-4-W LAB NO: 86943 SAMPLE TYPE: WATER DATE SAMPLED: 11/16/2010 TIME SAMPLED: 17:00

BATCH #: 111710W1 DATE ANALYZED: 11/17/2010 UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	0.500	ND
TOLUENE	108-88-3	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	104
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	97

NOTES:

APPROVED BY 2010 DATE:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

REFERENCE: EPA 5030/8260

ETHYLBENZENE

XYLENE (M+P)

XYLENE (O)

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: SB-5-W LAB NO: 86944 SAMPLE TYPE: WATER DATE SAMPLED: 11/16/2010 TIME SAMPLED: 16:45

BATCH #: 111710W1 DATE ANALYZED: 11/18/2010 UNITS: ug/L

0.500

0.500

0.500

SAMPLE CONC ND ND

ND

ND

ND

			•
COMPOUND NAME	CAS NO.	REPORTING	
		LIMIT	
BENZENE	71-43-2	0.500	
TOLUENE	108-88-3	0.500	

100-41-4

1330-20-7

1330-20-7

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	98
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	96

NOTES:

APPROVED BY: 2010 DATE:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1645

METHOD: DRO REFERENCE: EPA 8015B

SAMPLE TYPE: WATER UNITS: mg/L

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	DRO
		SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
SB-1-W	8 6940	11/16/10	112210W01	11/22/10	11/23/10	0.050	652	
SB-2-W	86941	11/16/10	112210W01	11/22/10	11/23/10	0.050	3.39	
SB-3-W	86942	11/16/10	112210W01	11/22/10	11/23/10	0.050	ND	
SB-4-W	86943	11/16/10	112210W01	11/22/10	11/23/10	0.050	ND	
SB-5-W	86944	11/16/10	112210W 0 1	11/22/10	11/23/10	0.050	ND	

NOTES:

- DRO Diesel Range Organics (C12-C34) with Silica Gel Cleanup
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AD Typical pattern for diesel
- AM Hydrocarbon response is in the C12-C22 range
- AC Heavier hydrocarbons contributing to diesel range quantitation
- AJ Heavier hydrocarbon than diesel
- AK Lighter hydrocarbon than diesel
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

APPROVED BY: (1) DATE: 11/24/2010

K PRIME, INC. LABORATORY METHOD BLANK REPORT METHOD BLANK ID: B111710W1

SAMPLE TYPE: WATER

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

BATCH #:	111710W1
DATE ANALYZED:	11/17/2010
UNITS:	ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE
BENZENE	71-43-2	0.500	ND
TOLUENE	108-88-3	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	96
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	95

NOTES:

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE ID: B111710W1 SPIKE ID: L111710W1 DUPLICATE ID: D111710W1 BATCH #: 111710W1 SAMPLE TYPE: WATER UNITS: μg/L

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	10.0	ND	10.0	100	60-140
BENZENE	10.0	ND	9.54	95	60-140
TRICHLOROETHENE	10.0	ND	8.97	90	60-140
TOLUENE	10.0	ND	9.13	91	60-140
CHLOROBENZENE	10.0	ND	9.23	92	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	0.500	10.0	10.1	0.4	±20
BENZENE	0.500	9.54	9.40	1.5	±20
TRICHLOROETHENE	0.500	8.97	8.72	2.8	±20
TOLUENE	0.500	9.13	9.06	0.8	±20
CHLOROBENZENE	0.500	9.23	9.36	1.4	±20

NOTES:

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	BATCH ID: DATE EXTRACTED: DATE ANALYZED:	
METHOD: DRO	SAMPLE TYPE:	WATER
REFERENCE: EPA 8015B	UNITS:	mg/L

METHOD BLANK ID: B112210W01

COMPOUND NAME	REPORTING	SAMPLE
	LIMIT	CONC
DRO	0.050	ND

SAMPLE ID: L112210W01 DUPLICATE ID: D112210W01

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
DRO	2.50	ND	2.08	83	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	0.050	2.08	1.82	13	±20

NOTES:

DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.	NC.						CHAIN (CHAIN OF CUSTODY RECORD	ODY RE	CORD
CONSULTING ANALYTICAL CHEMISTS	AL CHEMISTS		3621 Westwind Blvd., Santa Rosa, CA 95403	vd., Santa F	losa, CA 95.	103	PHONE: (707) 527-7574	574	FAX: (707) 527-7879	527-7879
Client/Project ID EBA Engineering	وبر		Address/Phone 825 Sovoma Au (707) S44-0784	ne oma Auc.	Sauta	Dusa, CA	ANALYSES		KPI Project No.	no.
Project Location	Calistosa, CA		Client Project No	plect No.						
Contact David Norun		Sampler (Signature)	gnature)	L ALL						
Sample Identification No.	Date	Time	Lab Sample No.	Type of Sample	No. of Containers	BTEA		Expected Turnaround Time	Реп	Remarks
5B-1-W	01/19/11	12:25	86940	Water	2	××		346	EDF	
58-2-W		12:00	14698					_		
5B-3-W		16-30	86942							
SB-4-W		17:00	86943	-						
5B-5-W	≯	16-45	86944	>	•	> >		2		
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Relinquished by: (Signature)	ure) VV	9000				Received by:	(Signature)			TIme
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Disposed by: (Signature)				Date	Time	×	Yellow Copy : Sampler			



RECT DEC 1 3 2010

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

TRANSMITTAL

- DATE: 11/16/2010
- TO: MR. DAVID NOREN EBA ENGINEERING 825 SONOMA AVENUE SANTA ROSA, CA 95404

Phone :	707-544-0784
Fax:	707-544-0866
Email:	dataebal@ebagroup.com
	dnoren@ebagroup.com
	5 F

FROM: Richard A. Kagel. Ph.D. RAKIM W 170P Laboratory Director

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	ТҮРЕ	DATE	TIME	KPI LAB #
S8-1-W	WATER	11/01/10	12:52	86622
S8-2@9'	SOIL	11/01/10	10:35	86623
S8-2-W	WATER	11/01/10	14:50	86624
S8-3016'	SOIL	11/01/10	12:50	86625
S8-3-W	WATER	11/01/10	15:10	86626
S8-4016'	SOIL	11/01/10	13:40	86627
S8-4-W	WATER	11/01/10	14:28	86628
S8-5@16'	SOIL	11/01/10	15:00	86629
S8-5-W	WATER	11/01/10	16:10	86630
S8-6010'	SOIL	11/01/10	15:45	86631

The above listed sample group was received on on the chain of custody document.

11/02/10 and tested as requested

10-1639

Please call me if you have any questions or need further information. Thank you for this opportunity to be of service.

3621 Westwind Blvd. Santa Rosa CA 95403 Phone: 707 527 7574 FAX: 707 527 7879

ACCT:	9986
PROJ:	10-1639

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

> METHOD: GRO-GASOLINE RANGE ORGANICS SAMPLE TYPE: WATER REFERENCE: EPA 8015B UNITS: mg/L

SAMPLE ID	LAB NO.	DATE	TIME	BATCH	DATE	MRL	SAMPLE	GRO
		SAMPLED	SAMPLED	ID	ANALYZED		CONC	PATTERN
SB-1-W	86622	11/1/2010	12:52	110210W1	11/2/2010	0.050	ND	
 SB-2-W	86624	11/1/2010	14:50	110210W1	11/2/2010	0.050	ND	
SB-3-W	86626	11/1/2010	15:10	110210W1	11/2/2010	0.050	ND	
SB-4-W	86628	11/1/2010	14:28	110210W1	11/2/2010	0.050	ND	
SB-5-W	86630	11/1/2010	16:10	110210W1	11/2/2010	0.050	ND	

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

AE - UNKNOWN HYDROCARBON WITH A SINGLE PEAK

AN - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS

AS - HEAVIER HYDROCARBON THAN GASOLINE CONTRIBUTING TO GRO VALUE

CO - HYDROCARBON RESPONSE IN GASOLINE RANGE BUT DOES NOT RESEMBLE GASOLINE

APPROVED BY: (1) DATE: 11/15/2010 K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: REFERENCE:	GRO-GAS EPA 8015E		IGE ORGAN	NICS	SAMPL	E TYPE: UNITS:	SOIL mg/Kg	
		DATE	TIME	BATCH	DATE	MDI	SAMDI E	G

SAMPLE ID	LAB NO.	DATE	TIME	BATCH	DATE	MRL	SAMPLE	GRO
		SAMPLED	SAMPLED	ID .	ANALYZED		CONC	PATTERN
SB-2@9'	86623	11/1/2010	10:35	110210S1	11/2/2010	1.00	ND	
SB-3@16'	86625	11/1/2010	12:50	110210S1	11/2/2010	1.00	ND	
SB-4@16'	86627	11/1/2010	13:40	110210S1	11/2/2010	1.00	ND	
SB-5@16'	86629	11/1/2010	15:00	11021 0 S1	11/2/2010	1.00	ND	

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

AE - UNKNOWN HYDROCARBON WITH A SINGLE PEAK

AN - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS

AS - HEAVIER HYDROCARBON THAN GASOLINE CONTRIBUTING TO GRO VALUE

CO - HYDROCARBON RESPONSE IN GASOLINE RANGE BUT DOES NOT RESEMBLE GASOLINE

APPROVED BY: (//) DATE: 11/15/2010

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-1-W LAB NO: 86622 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:52 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-1-W LAB NO: 86622 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:52 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	112
TOLUENE-D8	103
4-BROMOFLUOROBENZENE	97

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: 1/1/15/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-2-W LAB NO: 86624 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 14:50 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-2-W LAB NO: 86624 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 14:50 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	118
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	96

NOTES:

APPROVED BY:	ich.	
DATE:	11/15/2010	

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-3-W LAB NO: 86626 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 15:10 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BRÓMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	NĎ
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98- 8 2-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE ID: SB-3-W LAB NO: 86626 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 15:10 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	115
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	98

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY:	N	S	
DATE:	1	/15/	2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-4-W LAB NO: 86628 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 14:28 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-4-W LAB NO: 86628 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 14:28 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	114
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	95

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: 11/15/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-5-W LAB NO: 86630 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 16:10 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTIN G LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-5-W LAB NO: 86630 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 16:10 BATCH #: 111010W1 DATE ANALYZED: 11/5/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.		SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLÜENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	116
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	95

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY:	NW		
DATE:	11/15,	2010	

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-2@9' LAB NO: 86623 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 10:35 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	Reporting Limit	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-2@9' LAB NO: 86623 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 10:35 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	97
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	95

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: U DATE: 15/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-3@16' LAB NO: 86625 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:50 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-3@16' LAB NO: 86625 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:50 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	RÉPORTING LIMIT	SAMPLÉ CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	100
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	96

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: (15/2010 DATE: /

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-4@16' LAB NO: 86627 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 13:40 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-4@16' LAB NO: 86627 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 13:40 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	95
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	95

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: KW DATE: 11/15/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-5@16' LAB NO: 86629 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 15:00 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	reporting Limit	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBÉNZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZÊNE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-5@16' LAB NO: 86629 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 15:00 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE
			CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	98
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	94

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: Ch DATE: 11/15/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-6@10' LAB NO: 86631 SAMPLE TYPE: SOIL DATE SAMPLED: 11/1/2010 TIME SAMPLED: 15:45

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010 UNITS: µg/Kg

	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.50	ND
TOLUENE	108-88-3	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	97

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: UCA DATE: 11/15/2-010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: DRO REFERENCE: EPA 8015B

SAMPLE TYPE: WATER UNITS: mg/L

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	DRO
		SAMPLED	tD	DATE	ANALYZED		CONC	PATTERN
SB-1-W	86622	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-2-W	86624	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-3-W	86626	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-4-W	86628	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-5-W	86630	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	

NOTES:

- DRO Diesel Range Organics (C12-C23) with Silica Gel Cleanup
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AD Typical Pattern for Diesel
- AM Hydrocarbon response is in the C12-C22 range
- AC Heavier hydrocarbons contributing to diesel range quantitation
- AJ Heavier hydrocarbon than diesel
- AK Lighter hydrocarbon than diesel
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

APPROVED BY: 100

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: HRO REFERENCE: EPA 8015B

SAMPLE TYPE: WATER UNITS: mg/L

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	HRO
		SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
SB-1-W	86622	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-2-W	86624	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-3-W	86626	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-4-W	86628	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	
SB-5-W	86630	11/01/10	102810W01	11/03/10	11/03/10	0.050	ND	

NOTES:

- HRO Heavy Range Organics (C24-C34) with Silica Gel Cleanup
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

APPROVED BY:		
DATE:	/08/	2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: DRO REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL UNITS: mg/Kg

	SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	DRÓ
			SAMPLED	١D	DATE	ANALYZED		CONC	PATTERN
[SB-2@9'	86623	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-3@16'	86625	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-4@16'	86627	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-5@16'	86629	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-6@10'	86631	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	

NOTES:	
DRO	Diesel Range Organics (C12-C23) with Silica Gel Cleanup
ND	Not Detected at or above the stated MRL
NA	Not Applicable or Available
MRL	Method Reporting Limit
AD	Typical Pattern for Diesel
AM	Hydrocarbon response is in the C12-C22 range
AC	Heavier hydrocarbons contributing to diesel range quantitation
AJ	Heavier hydrocarbon than diesel
AK	Lighter hydrocarbon than diesel
AE	Unknown hydrocarbon with a single peak
AN	Unknown hydrocarbon with several peaks

APPROVED BY: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: HRO REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL UNITS: mg/Kg

:	SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	HRÓ
			SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
	SB-2@9'	86623	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-3@16'	86625	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-4@16'	86627	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-5@16'	86629	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
	SB-6@10'	86631	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	

NOTES:	
HRO	Heavy Range Organics (C24-C34) with Silica Gel Cleanup
ND	Not Detected at or above the stated MRL
NA	Not Applicable or Available
MRL	Method Reporting Limit
AE	Unknown hydrocarbon with a single peak
AN	Unknown hydrocarbon with several peaks

APPROVED BY: 100 DATE: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: SB-6@10' LAB NO: 86631 DATE SAMPLED: 11/01/10 TIME SAMPLED: 15:45 BATCH #: 110810S01 DATE EXTRACTED: 11/8/2010 DATE ANALYZED: 11/16/2010

METHOD: POLYCHLORINATED BIPHENYLS REFERENCE: EPA 3550/8082

SAMPLE TYPE: SOIL UNITS: ug/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
AROCLOR 1016	12674-11-2	100	ND
AROCLOR 1221	11104-28-2	100	ND
AROCLOR 1232	11141-16-5	100	ND
AROCLOR 1242	53469-21-9	100	ND
AROCLOR 1248	12672-29-6	100	ND
AROCLOR 1254	11097-69-1	100	ND
AROCLOR 1260	11096-82-5	100	ND

SURROGATE RECOVERY	%
TCMX	104
DCBP	60

NOTES:

APPROVED BY: DATE: ____ 1111/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8 SAMPLE ID: SB-1-W LAB NO: 86622 DATE SAMPLED: 11/01/10 TIME SAMPLED: 12:52 BATCH ID: 101104W01

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/08/10	1.00	ND
CHROMIUM	Cr	11/08/10	1.00	7.79
LEAD	Pb	11/08/10	1.00	1.96
NICKEL	Ni	11/08/10	1.00	52.1
ZINC	Zn	11/08/10	1.00	16.2

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: 100

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8 SAMPLE ID: SB-2-W LAB NO: 86624 DATE SAMPLED: 11/01/10 TIME SAMPLED: 14:50 BATCH ID: 101104W01

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/08/10	1.00	ND
CHROMIUM	Cr	11/08/10	1.00	7.58
LEAD	Pb	11/08/10	1.00	9.54
NICKEL	Ni	11/08/10	1.00	44.7
ZINC	Zn	11/08/10	1.00	15.7

APPROVED BY: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8 SAMPLE ID: SB-3-W LAB NO: 86626 DATE SAMPLED: 11/01/10 TIME SAMPLED: 15:10 BATCH ID: 101104W01

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/08/10	1.00	ND
CHRÖMIUM	Cr	11/08/10	1.00	10.8
LEAD	Pb	11/08/10	1.00	12.6
NICKEL	Ni	11/08/10	1.00	98.0
ZINC	Zn	11/08/10	1.00	24.3

APPROVED BY: DATE: 1 1/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8 SAMPLE ID: SB-4-W LAB NO: 86628 DATE SAMPLED: 11/01/10 TIME SAMPLED: 14:28 BATCH ID: 101104W01

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/08/10	1.00	ND
CHROMIUM	Cr	11/08/10	1.00	10.8
LEAD	Pb	11/08/10	1.00	ND
NICKEL	Ni	11/08/10	1.00	79.5
ZINC	Zn	11/08/10	1.00	16.1

APPROVED BY: 100 DATE: 11/06/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8 SAMPLE ID: SB-5-W LAB NO: 86630 DATE SAMPLED: 11/01/10 TIME SAMPLED: 16:10 BATCH ID: 101104W01

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/08/10	1.00	ND
CHROMIUM	Cr	11/08/10	1.00	27.5
LEAD	Pb	11/08/10	1.00	6.43
NICKEL	Ni	11/08/10	1.00	89.7
ZINC	Zn	11/08/10	1.00	25.0

APPROVED BY: 00/2010 DATE:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: SB-2@9' LAB NO: 86623 DATE SAMPLED: 11/01/10 TIME SAMPLED: 10:35 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	214
LEAD	Pb	11/04/10	2.50	3.01
NICKEL	Ni	11/04/10	2.50	90.9
ZINC	Zn	11/04/10	2.50	30.3

APPROVED BY: 1/10 DATE: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: SB-3@16' LAB NO: 86625 DATE SAMPLED: 11/01/10 TIME SAMPLED: 12:50 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	49.2
LEAD	Pb	11/04/10	2.50	4.99
NICKEL	Ni	11/04/10	2.50	72.3
ZINC	Zn	11/04/10	2.50	29.2

APPROVED BY: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: SB-4@16' LAB NO: 86627 DATE SAMPLED: 11/01/10 TIME SAMPLED: 13:40 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	24.8
LEAD	Pb	11/04/10	2.50	3.59
NICKEL	Ni	11/04/10	2.50	18.2
ZINC	Zn	11/04/10	2.50	14.4

APPROVED BY: 100 DATE: 11/08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: SB-5@16' LAB NO: 86629 DATE SAMPLED: 11/01/10 TIME SAMPLED: 15:00 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	30.4
LEAD	Pb	11/04/10	2.50	5.34
NICKEL	Ni	11/04/10	2.50	44.7
ZINC	Zn	11/04/10	2.50	19.2

APPROVED BY: DATE: 08/2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: SB-6@10' LAB NO: 86631 DATE SAMPLED: 11/01/10 TIME SAMPLED: 15:45 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	32.2
LEAD	Pb	11/04/10	2.50	7.17
NICKEL	Ni	11/04/10	2.50	55.8
ZINC	Zn	11/04/10	2.50	30.2

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

> APPROVED BY: <u>Ch</u> DATE: <u>1/08/2010</u>

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	METHOD BLANK ID: SAMPLE TYPE:	B110210W1 WATER
METHOD: GRO-GASOLINE RANGE ORGANICS REFERENCE: EPA 8015B	BATCH #: DATE EXTRACTED: DATE ANALYZED:	110210W1 11/2/2010 11/2/2010
	UNITS:	mg/L
	REPORTING LIMIT	SAMPLE CONC
TPH-G	0.050	ND

SAMPLE ID:	L110210W1
DUPLICATE ID:	D110210W1
BATCH #:	110210W1
SAMPLE TYPE:	WATER
UNITS:	mg/L
DATE EXTRACTED:	11/2/2010
DATE ANALYZED:	11/2/2010

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
TPH-G	0.250	ND	0.272	109	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
TPH-G	0.050	0.272	0.242	11.7	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE

K PRIME, INC.	METHOD BLANK ID:	B110210S1
LABORATORY QC REPORT	SAMPLE TYPE:	SOIL
METHOD: GRO-GASOLINE RANGE ORGANICS		
REFERENCE: EPA 8015B	BATCH #:	110210 S 1
	DATE EXTRACTED:	11/2/2010
	DATE ANALYZED:	11/2/2010
	UNITS:	mg/kg
COMPOUND NAME	REPORTING LIMIT	SAMPLE
TPH-G	1.00	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

SAMPLE ID:	L110210S1
DUPLICATE ID:	D110210S1
BATCH #:	110210S1
SAMPLE TYPE:	SOIL
UNITS:	mg/kg
DATE EXTRACTED:	11/2/2010
DATE ANALYZED:	11/2/2010

.

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
TPH-G	5.00	ND	4.70	94	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
TPH-G	1.00	4.70	4.46	5.1	±20

NOTES:

LABORATORY METHOD BLANK REPORT

BATCH #: 111010W1 DATE ANALYZED: 11/10/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND
CHLOROMETHANE	74-87-3	0.500	ND
VINYL CHLORIDE	75-01-4	0.500	ND
BROMOMETHANE	74-83-9	0.500	ND
CHLOROETHANE	75-00-3	0.500	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND
METHYLENE CHLORIDE	75-09-2	2.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	0.500	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND
CIS-1,2-DICHLOROETHENE	156-59-2	0.500	ND
2,2-DICHLOROPROPANE	594-20-7	0.500	ND
BROMOCHLOROMETHANE	74-97-5	0.500	ND
CHLOROFORM	67-66-3	0.500	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND
1,1-DICHLOROPROPENE	563-58-6	0.500	ND
BENZENE	71-43-2	0.500	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND
TRICHLOROETHENE	79-01-6	0.500	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND
DIBROMOMETHANE	74-95-3	0.500	ND
BROMODICHLOROMETHANE	75-27-4	0.500	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND
TOLUENE	108-88-3	0.500	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND
TETRACHLOROETHENE	127-18-4	0.500	ND
1,3-DICHLOROPROPANE	142-28-9	0.500	ND
DIBROMOCHLOROMETHANE	124-48-1	0.500	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND
CHLOROBENZENE	108-90-7	0.500	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	0.500	ND
ETHYLBENZENE	100-41-4	0.500	ND
XYLENE (M+P)	1330-20-7	0.500	ND
XYLENE (O)	1330-20-7	0.500	ND
STYRENE	100-42-5	0.500	ND
BROMOFORM	75-25-2	0.500	ND
ISOPROPYLBENZENE	98-82-8	0.500	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND
BROMOBENZENE	108-86-1	0.500	ND
1,2,3-TRICHLOROPROPANE	96-18-4	0.500	ND
N-PROPYLBENZENE	103-65-1	0.500	ND
2-CHLOROTOLUENE	95-49-8	0.500	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND

LABORATORY METHOD BLANK REPORT METHOD BLANK ID: B111010W1

BATCH #: 111010W1 DATE ANALYZED: 11/10/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260

SAMPLE TYPE: WATER UNITS: ug/L

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	0.500	ND
TERT-BUTYLBENZENE	98-06-6	0.500	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND
SEC-BUTYLBENZENE	135-98-8	0.500	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND
4-ISOPROPYLTOLUENE	99-87-6	0.500	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND
N-BUTYLBENZENE	104-51-8	0.500	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND
1.2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.500	ŇD
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND
NAPHTHALENE	91-20-3	1.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	1.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	96
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	94

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5030/8260 SAMPLE ID: B111010W1 SPIKE ID: L111010W1 DUPLICATE ID: D111010W1 BATCH #: 111010W1 SAMPLE TYPE: WATER UNITS: μg/L

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1.1 DICHLOROETHENE	10.0	ND	8.61	86	60-140
BENZENE	10.0	ND	9.08	91	60-140
TRICHLOROETHENE	10.0	ND	8.31	83	60-140
TOLUENE	10.0	ND	9.10	91	60-140
CHLOROBENZENE	10.0	ND	9.23	92	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1.1 DICHLOROETHENE	0.500	8.61	8.96	4.0	±20
BENZENE	0.500	9.08	9.40	3.5	±20
TRICHLOROETHENE	0.500	8.31	8.71	4.7	±20
TOLUENE	0.500	9.10	9.72	6.6	±20
CHLOROBENZENE	0.500	9.23	9.54	3.3	±20

NOTES:

BATCH #: 111110S1 DATE ANALYZED: 11/11/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1.1.1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

BATCH #: 111110S1 DATE ANALYZED: 11/11/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	96
TOLUENE-D8	98
4-BROMOFLUOROBENZENE	97

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: B111110S1 SPIKE ID: L111110S1 DUPLICATE ID: D111110S1 BATCH #: 111110S1 SAMPLE TYPE: SOIL UNITS: µg/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	30.0	ND	27.9	93	60-140
BENZENE	30.0	ND	29.6	99	60-140
TRICHLOROETHENE	30.0	ND	27.5	92	60-140
TOLUENE	30.0	ND	31.1	104	60-140
CHLOROBENZENE	30.0	ND	30.4	101	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1.1 DICHLOROETHENE	1.50	27.9	27.3	2.1	±20
BENZENE	1.50	29.6	29.0	2.3	±20
TRICHLOROETHENE	1.50	27.5	25.9	5.8	±20
TOLUENE	1.50	31.1	30.0	3.5	±20
CHLOROBENZENE	1.50	30.4	29.6	2.5	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC.	BATCH ID:	102810W01
LABORATORY QUALITY CONTROL REPORT	DATE EXTRACTED:	10/28/2010
	DATE ANALYZED:	10/28/2010
METHOD: DRO	SAMPLE TYPE:	WATER
REFERENCE: EPA 8015B	UNITS:	mg/L

METHOD BLANK ID: B102810W01

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
DRO	0.050	ND

SAMPLE ID: L102810W01 DUPLICATE ID: D102810W01

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
DRO	2.50	ND	2.21	88	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	0.050	2.21	2.38	7.4	±20

NOTES: DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	BATCH ID: DATE EXTRACTED: DATE ANALYZED:	11/2/2010
METHOD: DRO	SAMPLE TYPE:	SOIL
REFERENCE: EPA 8015B	UNITS:	mg/Kg

METHOD BLANK ID: B110210S1

COMPOUND NAME	REPORTING LIMIT	SAMPLE
DRO	10.0	ND

SAMPLE ID:	L110210S1
DUPLICATE ID:	D110210S1

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
DRO	500	ND	472	94	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	10.0	472	482	2.1	±20

NOTES: DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

METHOD BLANK ID: B11081001 BATCH #: 110810S01 DATE EXTRACTED: 11/8/2010 DATE ANALYZED: 11/16/2010

METHOD: POLYCHLORINATED BIPHENYLS REFERENCE: EPA 3550/8082

SAMPLE TYPE: SOIL UNITS: ug/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
AROCLOR 1016	12674-11-2	100	ND
AROCLOR 1221	11104-28-2	100	ND
AROCLOR 1232	11141-16-5	100	ND
AROCLOR 1242	53469-21-9	100	ND
AROCLOR 1248	12672-29-6	100	ND
AROCLOR 1254	11097-69-1	100	ND
AROCLOR 1260	11096-82-5	100	ND

SURROGATE RECOVERY	%
TCMX	86
DCBP	76

NOTES:

ND - NOT DETECTED ABOVE THE STATED REPORTING LIMIT

NA - NOT AVAILABLE OR APPLICABLE

SAMPLE ID: L11081001 DUPLICATE ID: D11081001 BATCH #: 110810S01 DATE EXTRACTED: 11/8/2010 DATE ANALYZED: 11/16/2010

METHOD: POLYCHLORINATED BIPHENYLS REFERENCE: EPA 3550/8082

SAMPLE TYPE: SOIL UNITS: ug/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
AROCLOR 1260	5000	ND	536 8	107	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
AROCLOR 1260	100	5370	5339	0.6	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC. LABORATORY BATCH QC REPORT

SAMPLE ID: L110410-W DUPLICATE ID: D110410-W METHOD BLANK ID: B110410-W BATCH #: 101104W01 DATE ANALYZED: 11/08/2010

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 200.8

SAMPLE TYPE: WATER UNITS: ug/L

ELEMENT		MB	SA	SR	SP	SPD	SP	RPD
		ug/L	ug/L	ug/L	ug/L	ug/L	%R	%
CADMIUM	Cd	<1.00	200	0.0	192	192	96	0.1
CHROMIUM	Cr	<1.00	200	0.0	215	214	108	0.6
LEAD	Pb	<1.00	200	0.0	205	204	103	0.6
NICKEL	Ni	<1.00	200	0.0	204	203	102	0.5
ZINC	Zn	<1.00	200	0.0	190	1 8 9	95	0.5

NOTES:

ND: NOT DETECTED MB: METHOD BLANK SA: SPIKE ADDED SR: SAMPLE RESULT SP: SPIKE RESULT SPD: SPIKE DUPLICATE RESULT SP(%R): SPIKE % RECOVERY RPD: RELATIVE PERCENT DIFFERENCE

K PRIME, INC. LABORATORY BATCH QC REPORT

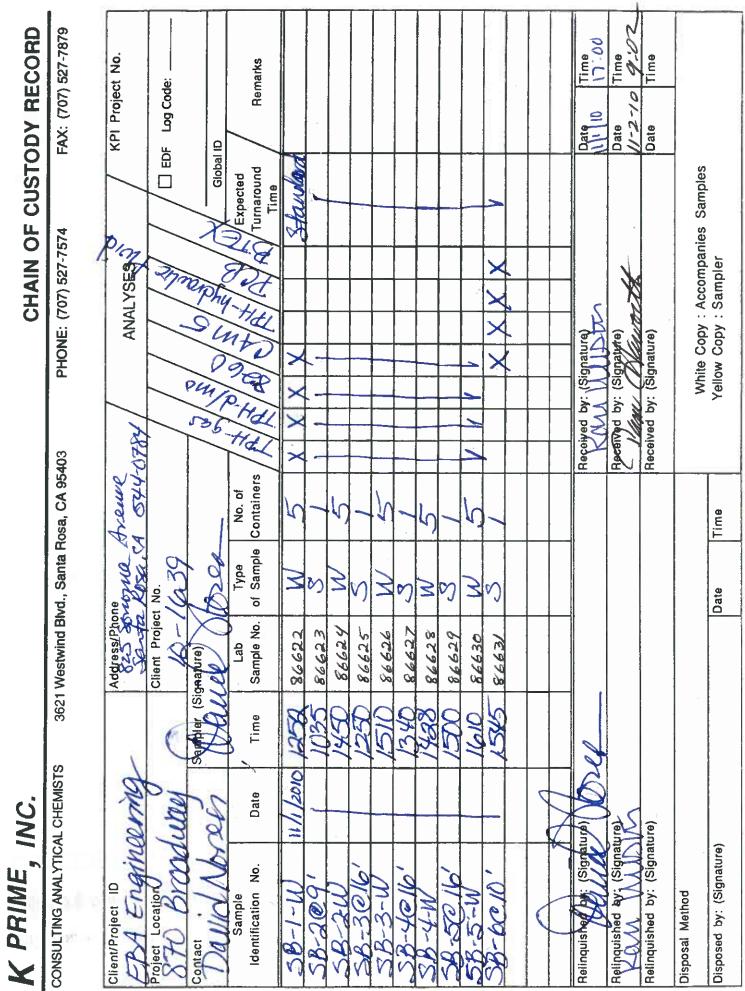
SAMPLE ID: L102610-S DUPLICATE ID: D102610-S METHOD BLANK ID: B102610-S BATCH #: 101026S01 DATE ANALYZED: 10/27/10

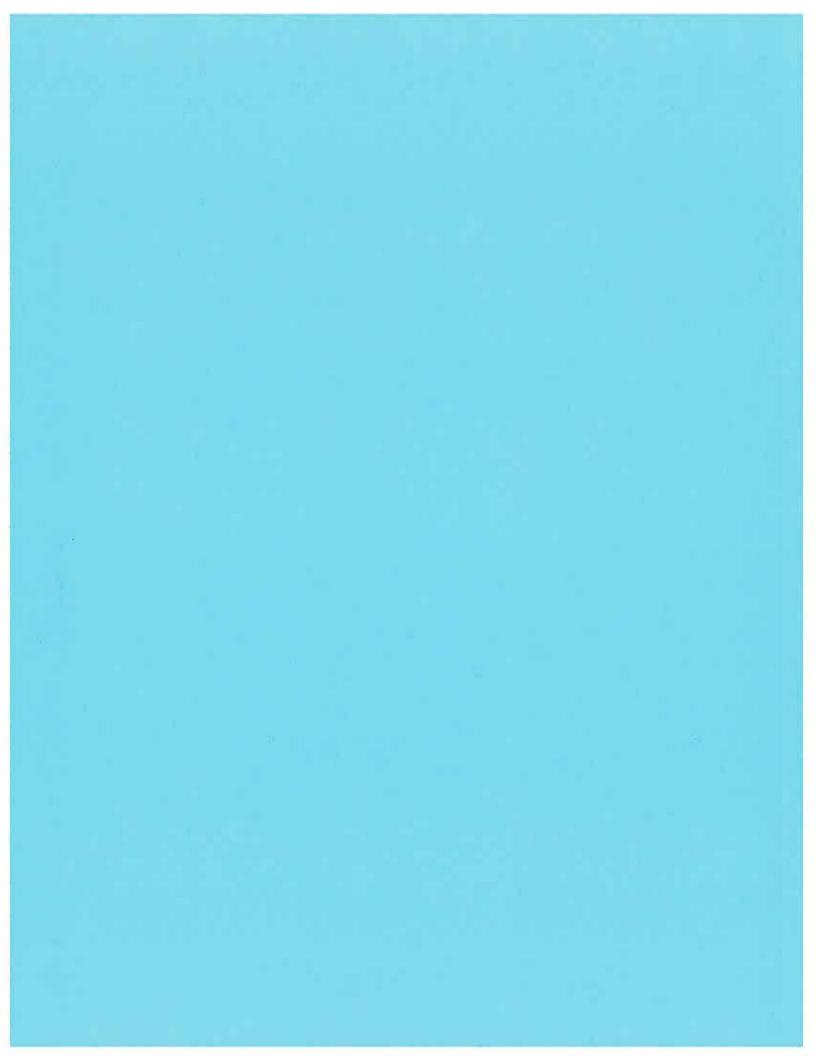
METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOLID UNITS: mg/Kg

ELEMENT		MB	SA	SR	SP	SPD	SP	RPD
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%R	%
CADMIUM	Cd	<2.50	100	0.0	97	98	97	0.2
CHROMIUM	Cr	<2.50	100	0.0	99	100	99	0.9
LEAD	Pb	<2.50	100	0.0	107	109	107	1.7
NICKEL	Ni	<2.50	100	0.0	98	98	98	0.2
ZINC	Zn	<2.50	100	0.0	93	94	93	0.6

NOTES: ND: NOT DETECTED MB: METHOD BLANK SA: SPIKE ADDED SR: SAMPLE RESULT SP: SPIKE RESULT SPD: SPIKE DUPLICATE RESULT SP(%R): SPIKE % RECOVERY RPD: RELATIVE PERCENT DIFFERENCE





707 527 7879

9986

10-1639

3621 Westwind Blvd. Santa Rosa CA 95403 Phone: 707 527 7574

FAX:

ACCT:

PROJ:

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

TRANSMITTAL

- **DATE:** 11/16/2010
- TO: MR. DAV1D NOREN E8A ENG1NEER1NG 825 SONOMA AVENUE SANTA ROSA, CA 95404

Phone:	707-544-0784
Fax:	707-544-0866
Email:	dataebal@ebagroup.com
	dnoren@ebagroup.com

- FROM: Richard A. Kagel, Ph.D. RAMM Laboratory Director
- SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	ΤΥΡΕ	DATE	TIME	KPI LAB #
HA-10SURFACE	SOIL	11/01/10	11:31	86618
HA-1016"-20"	SOIL	11/01/10	11:29	86619
HA-2@SURFACE	SOIL	11/01/10	11:18	86620
HA-2@18"-24"	SOIL	11/01/10	12:08	86621

The above listed sample group was received on on the chain of custody document. 11/02/10 and tested as requested

10-1639

Please call me if you have any questions or need further information. Thank you for this opportunity to be of service. K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD:	GRO-GASOLINE RANGE ORGANICS	SAMPLE TYPE:	SOIL	
REFERENCE:	EPA 8015B	UNITS:	mg/Kg	

SAMPLE ID	LAB NO.	DATE	TIME	BATCH	DATE	MRL	SAMPLE	GRO
		SAMPLED	SAMPLED	ID 🔅	ANALYZED		CONC	PATTERN
HA-1@SURFAC	E 86618	11/1/2010	11:31	110210S1	11/2/2010	1.00	ND	
HA-1@16"-20"	86619	11/1/2010	11:29	110210\$1	11/2/2010	1.00	ND	
HA-2@SURFAC	E 86620	11/1/2010	11:18	110210S1	11/2/2010	1.00	8.29	
HA-2@18"-24"	86621	11/1/2010	12:08	110210S1	11/2/2010	1.00	ND	

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

MRL - METHOD REPORTING LIMIT

AE - UNKNOWN HYDROCARBON WITH A SINGLE PEAK

AN - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS

AS - HEAVIER HYDROCARBON THAN GASOLINE CONTRIBUTING TO GRO VALUE

CO - HYDROCARBON RESPONSE IN GASOLINE RANGE BUT DOES NOT RESEMBLE GASOLINE

APPROVED BY: WW DATE: 11/12/2010

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

REFERENCE: EPA 5035/8260

METHOD: VOLATILE ORGANIC COMPOUNDS

SAMPLE ID: HA-1@SURFACE LAB NO: 86618 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:31 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: HA-1@SURFACE LAB NO: 86618 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:S1 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE
		LIMIT	CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1.2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	106
TOLUENE-D8	89
4-BROMOFLUOROBENZENE	76

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY:			
DATE:	Π	12	2010

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260

SAMPLE ID: HA-1@16"-20" LAB NO: 86619 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:29 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REP OR TI NG LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ŇD

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: HA-1@16"-20" LAB NO: 86619 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:29 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	96
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	94

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: <u>()</u> DATE: <u>()/12/2010</u>

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: HA-2@SURFACE LAB NO: 86620 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:18 BATCH #: 111110S1 DATE ANALYZED: 11/12/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	re po rti ng Li m it	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	7.50	ND
CHLOROMETHANE	74-87-3	7.50	ND
VINYL CHLORIDE	75-01-4	7.50	ND
BROMOMETHANE	74-83-9	7.50	ND
CHLOROETHANE	75-00-3	7.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	7.50	ND
1,1-DICHLOROETHENE	75-35-4	7.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	7.50	ND
METHYLENE CHLORIDE	75-09-2	37.5	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	7.50	ND
1,1-DICHLOROETHANE	75-34-3	7.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	7.50	ND
2,2-DICHLOROPROPANE	594-20-7	7.50	ND
BROMOCHLOROMETHANE	74-97-5	7.50	ND
CHLOROFORM	67-66-3	7.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	7.50	ND
CARBON TETRACHLORIDE	56-23-5	7.50	ND
1,1-DICHLOROPROPENE	563-58-6	7.50	ND
BENZENE	71-43-2	7.50	ND
1,2-DICHLOROETHANE	107-06-2	7.50	ND
TRICHLOROETHENE	79-01-6	7.50	ND
1,2-DICHLOROPROPANE	78-87-5	7.50	ND
DIBROMOMETHANE	74-95-3	7.50	ND
BROMODICHLOROMETHANE	75-27-4	7.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	7.50	ND
TOLUENE	108-88-3	7.50	63.2
CIS-1,3-DICHLOROPROPENE	10061-01-5	7.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	7.50	ND
TETRACHLOROETHENE	127-18-4	7.50	ND
1,3-DICHLOROPROPANE	142-28-9	7.50	ND
DIBROMOCHLOROMETHANE	124-48-1	7.50	ND
1,2-DIBROMOETHÂNE	106-93-4	7.50	ND
CHLOROBENZENE	108-90-7	7.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	7.50	ND
ETHYLBENZENE	100-41-4	7.50	43.8
XYLENE (M+P)	1330-20-7	7.50	249
XYLENE (O)	1330-20-7	7.50	420
STYRENE	100-42-5	7.50	ND
BROMOFORM	75-25-2	7.50	ND
ISOPROPYLBENZENE	98-82-8	7.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	7.50	ND
BROMOBENZENE	108-86-1	7.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	7.50	ND
N-PROPYLBENZENE	103-65-1	7.50	88.0
2-CHLOROTOLUENE	95-49-8	7.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	7.50	472

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: HA-2@SURFACE LAB NO: 86620 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 11:18 BATCH #: 111110S1 DATE ANALYZED: 11/12/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	7.50	ND
TERT-BUTYLBENZENE	98-06-6	7.50	ND
1,2,4-TRIMETHYLBENZËNE	95-63-6	7.50	431
SEC-BUTYLBENZENE	135-98-8	7.50	21.8
1,3-DICHLOROBENZENE	541-73-1	7.50	ND
4-ISOPROPYLTOLUENE	99-87-6	7.50	18.5
1,4-DICHLOROBENZENE	106-46-7	7.50	ND
N-BUTYLBENZENE	104-51-8	7.50	122
1,2-DICHLOROBENZENE	95-50-1	7.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	7.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	15.0	ND
HEXACHLOROBUTADIENE	87-68-3	15.0	ND
NAPHTHALENE	91-20-3	15.0	28.5
1,2,3-TRICHLOROBENZENE	87-61-6	15.0	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	109
TOLUENE-D8	95
4-BROMOFLUOROBENZENE	89

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY:			
DATE:	1	12/	2010

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639 SAMPLE ID: HA-2@18"-24" LAB NO: 86621 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:08 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1.1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1.2-DICHLOROETHENE	156-60-5	1.50	ND
1.1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2.2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1.2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1.3-DICHLOROPROPENE	10061-01-5	1.50	ND
1.1.2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1.3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1.1.1.2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1.1.2.2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1.2.3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND
	1 100-07-0	1.00	110

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: HA-2@18"-24" LAB NO: 86621 DATE SAMPLED: 11/1/2010 TIME SAMPLED: 12:08 BATCH #: 111110S1 DATE ANALYZED: 11/9/2010

SAMPLE TYPE:	SOIL
UNITS:	µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND _
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95- 5 0-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	96

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY:	\mathcal{N}	W		
DATE:	11	/12	2010	

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: DRO REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	DRO
		SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
HA-1@SURFACE	86618	11/01/10	110210S1	11/2/2010	11/02/10	10.0	575	AC
HA-1@16"-20"	86619	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
HA-2@SURFACE	86620	11/01/10	110210S1	11/3/2010	11/03/10	10.0	11700	AC
HA-2@18"-24"	86621	11/01/10	11021051	11/2/2010	11/02/10	10.0	ND	

NOTES:

DRO Diesel Range Organics (C12-C23)	with Silica Gel Cleanup
ND Not Detected at or above the stated	MRL
NA Not Applicable or Available	
MRL Method Reporting Limit	
AD Typical Pattern for Diesel	
AM Hydrocarbon response is in the C12	-C22 range
AC Heavier hydrocarbons contributing to	o diesel range quantitation
AJ Heavier hydrocarbon than diesel	
AK Lighter hydrocarbon than diesel	
AE Unknown hydrocarbon with a single	peak
AN Unknown hydrocarbon with several p	peaks

APPROVED BY: 11/05 2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: HRO REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE	BATCH	EXTRACT	DATE	MRL	SAMPLE	HRO
		SAMPLED	ID	DATE	ANALYZED		CONC	PATTERN
HA-1@SURFACE	86618	11/01/10	110210S1	11/2/2010	11/02/10	10.0	1030	
HA-1@16"-20"	86619	11/01/10	110210S1	11/2/2010	11/02/10	10.0	ND	
HA-2@SURFACE	86620	11/01/10	110210S1	11/3/2010	11/03/10	10.0	17900	
HA-2@18"-24"	86621	11/01/10	11021051	11/2/2010	11/02/10	10.0	ND	

NOTES:

Heavy Range Organics (C24-C34) with Silica Gel Cleanup
Not Detected at or above the stated MRL
Not Applicable or Available
Method Reporting Limit
Unknown hydrocarbon with a single peak
Unknown hydrocarbon with several peaks

APPROVED BY: 1/05 2010

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: HA-1@SURFACE LAB NO: 86618 DATE SAMPLED: 11/01/10 TIME SAMPLED: 11:31 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	14.8
CHROMIUM	Cr	11/04/10	2.50	89.8
LEAD	Pb	11/04/10	2.50	837
NICKEL	Ni	11/04/10	2.50	62.0
ZINC	Zn	11/04/10	2.50	1090

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: <u>M</u> DATE: <u>///05/2010</u>

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: HA-1@16"-20" LAB NO: 86619 DATE SAMPLED: 11/01/10 TIME SAMPLED: 11:29 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	137
LEAD	Pb	11/04/10	2.50	5.12
NICKEL	Ni	11/04/10	2.50	124
ZINC	Zn	11/04/10	2.50	34.0

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: <u>Chr</u> DATE: <u>////2010</u>

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: HA-2@SURFACE LAB NO: 86620 DATE SAMPLED: 11/01/10 TIME SAMPLED: 11:18 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	8.11
CHROMIUM	Cr	11/04/10	2.50	89.3
LEAD	Рb	11/04/10	2.50	1200
NICKEL	Ni	11/04/10	2.50	55.1
ZINC	Zn	11/04/10	2.50	777

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

> APPROVED BY: <u>1/65/2010</u> DATE: <u>///05/2010</u>

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A SAMPLE ID: HA-2@18"-24" LAB NO: 86621 DATE SAMPLED: 11/01/10 TIME SAMPLED: 12:08 BATCH ID: 101026S01

SAMPLE TYPE: SOIL UNITS: mg/Kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
CADMIUM	Cd	11/04/10	2.50	ND
CHROMIUM	Cr	11/04/10	2.50	96.5
LEAD	Pb	11/04/10	2.50	7.64
NICKEL	Ni	11/04/10	2.50	89.0
ZINC	Zn	11/04/10	2.50	40.1

NOTES: ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

> APPROVED BY: <u>*CW*</u> DATE: <u>///*05/&010*</u>

K PRIME, INC. LABORATORY QC REPORT	METHOD BLANK ID: SAMPLE TYPE:	B110210S1 SOIL
METHOD: GRO-GASOLINE RANGE ORGANICS		
REFERENCE: EPA 8015B	BATCH #:	110210S1
	DATE EXTRACTED:	11/2/2010
	DATE ANALYZED:	11/2/2010
	UNITS:	mg/kg
COMPOUND NAME	REPORTING	SAMPLE
	LIMIT	CONC
TPH-G	1.00	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

SAMPLE ID:	L110210S1
DUPLICATE ID:	D110210S1
BATCH #:	110210S1
SAMPLE TYPE:	SOIL
UNITS:	mg/kg
DATE EXTRACTED:	11/2/2010
DATE ANALYZED:	11/2/2010

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
TPH-G	5.00	ND	4.70	94	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
TPH-G	1.00	4.70	4.46	5.1	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

LABORATORY METHOD BLANK REPORT

BATCH #: 111110S1 DATE ANALYZED: 11/11/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LI M IT	SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	1.50	ND
CHLOROMETHANE	74-87-3	1.50	ND
VINYL CHLORIDE	75-01-4	1.50	ND
BROMOMETHANE	74-83-9	1.50	ND
CHLOROETHANE	75-00-3	1.50	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.50	ND
1,1-DICHLOROETHENE	75-35-4	1.50	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.50	ND
METHYLENE CHLORIDE	75-09-2	7.50	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	1.50	ND
1,1-DICHLOROETHANE	75-34-3	1.50	ND
CIS-1,2-DICHLOROETHENE	156-59-2	1.50	ND
2,2-DICHLOROPROPANE	594-20-7	1.50	ND
BROMOCHLOROMETHANE	74-97-5	1.50	ND
CHLOROFORM	67-66-3	1.50	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.50	ND
CARBON TETRACHLORIDE	56-23-5	1.50	ND
1,1-DICHLOROPROPENE	563-58-6	1.50	ND
BENZENE	71-43-2	1.50	ND
1,2-DICHLOROETHANE	107-06-2	1.50	ND
TRICHLOROETHENE	79-01-6	1.50	ND
1,2-DICHLOROPROPANE	78-87-5	1.50	ND
DIBROMOMETHANE	74-95-3	1.50	ND
BROMODICHLOROMETHANE	75-27-4	1.50	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.50	ND
TOLUENE	108-88-3	1.50	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.50	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.50	ND
TETRACHLOROETHENE	127-18-4	1.50	ND
1,3-DICHLOROPROPANE	142-28-9	1.50	ND
DIBROMOCHLOROMETHANE	124-48-1	1.50	ND
1,2-DIBROMOETHANE	106-93-4	1.50	ND
CHLOROBENZENE	108-90-7	1.50	ND
1,1,1,2-TETRACHLOROETHANE	630-20-6	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
STYRENE	100-42-5	1.50	ND
BROMOFORM	75-25-2	1.50	ND
ISOPROPYLBENZENE	98-82-8	1.50	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.50	ND
BROMOBENZENE	108-86-1	1.50	ND
1,2,3-TRICHLOROPROPANE	96-18-4	1.50	ND
N-PROPYLBENZENE	103-65-1	1.50	ND
2-CHLOROTOLUENE	95-49-8	1.50	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.50	ND

LABORATORY METHOD BLANK REPORT METHOD BLANK ID: B111110S1

BATCH #: 111110S1 DATE ANALYZED: 11/11/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE
		LIMIT	CONC
4-CHLOROTOLUENE	106-43-4	1.50	ND
TERT-BUTYLBENZENE	98-06-6	1.50	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.50	ND
SEC-BUTYLBENZENE	135-98-8	1.50	ND
1,3-DICHLOROBENZENE	541-73-1	1.50	ND
4-ISOPROPYLTOLUENE	99-87-6	1.50	ND
1,4-DICHLOROBENZENE	106-46-7	1.50	ND
N-BUTYLBENZENE	104-51-8	1.50	ND
1,2-DICHLOROBENZENE	95-50-1	1.50	ND
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	1.50	ND
1,2,4-TRICHLOROBENZENE	120-82-1	3.00	ND
HEXACHLOROBUTADIENE	87-68-3	3.00	ND
NAPHTHALENE	91-20-3	3.00	ND
1,2,3-TRICHLOROBENZENE	87-61-6	3.00	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	96
TOLUENE-D8	98
4-BROMOFLUOROBENZENE	97

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: B111110S1 SPIKE ID: L111110S1 DUPLICATE ID: D111110S1 BATCH #: 111110S1 SAMPLE TYPE: SOIL UNITS: µg/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	30.0	ND	27.9	93	60-140
BENZENE	30.0	ND	29.6	99	60-1 4 0
TRICHLOROETHENE	30.0	ND	27.5	92	60-1 4 0
TOLUENE	30.0	ND	31.1	104	60-140
CHLOROBENZENE	30.0	ND	30.4	101	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	1.50	27.9	27.3	2.1	±20
BENZENE	1.50	29.6	29.0	2.3	±20
TRICHLOROETHENE	1.50	27.5	25.9	5.8	±20
TOLUENE	1.50	31.1	30.0	3.5	±20
CHLOROBENZENE	1.50	30.4	29.6	2.5	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	BATCH ID: DATE EXTRACTED: DATE ANALYZED:	110210S1 11/2/2010 11/2/2010
METHOD: DRO	SAMPLE TYPE:	SOIL
REFERENCE: EPA 8015B	UNITS:	mg/Kg

METHOD BLANK ID: B110210S1

	REPORTING LIMIT	SAMPLE CONC
DRO	10.0	ND

SAMPLE ID:	L110210S1
DUPLICATE ID:	D110210S1

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE SAMPLE SPIKE		RECOVERY	LIMITS	
	ADDED	RESULT	RESULT	(%)	(%)
DRO	500	ND	472	94	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	10.0	472	482	2.1	±20

NOTES:

DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC. LABORATORY BATCH QC REPORT

SAMPLE ID: L102610-S DUPLICATE ID: D102610-S METHOD BLANK ID: B102610-S BATCH #: 101026S01 DATE ANALYZED: 10/27/10

METHOD: TOTAL METALS BY ICP/MS REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOLID UNITS: mg/Kg

ELEMENT		MB	SA	\$R	SP	SPD	SP	RPD
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%R	%
CADMIUM	Cd	<2.50	100	0.0	97	98	97	0.2
CHROMIUM	Cr	<2.50	100	0.0	99	100	99	0.9
LEAD	Pb	<2.50	100	0.0	107	109	107	1.7
NICKEL	Ni	<2.50	100	0.0	98	98	98	0.2
ZINC	Zn	<2.50	100	0.0	93	94	93	0.6

NOTES: ND: NOT DETECTED MB: METHOD BLANK SA: SPIKE ADDED SR: SAMPLE RESULT SP: SPIKE RESULT SPD: SPIKE DUPLICATE RESULT SP(%R): SPIKE % RECOVERY RPD: RELATIVE PERCENT DIFFERENCE

K PRIME, INC.			CHAIN OF CUSTODY RECORD	/ RECORD
CONSULTING ANALYTICAL CHEMISTS 3621 W	3621 Westwind Blvd., Santa Rosa, CA 95403		PHONE: (707) 527-7574 FAX:	FAX: (707) 527-7879
Client/Project ID AC	Address/Phone Res America the	NA /2840-145	ANALYSES	KPI Project No.
(Jean	Project No			Log Code:
Contact - Norce Sampler (Signalura	and the com	C1 0 15 0	Global ID	
Identilication No. Date Time S	e elqr	No. of A A O O	Turnaround Time	Remarks
HA-10Sorties 11/1/10 1131	86618 5 1		Staudard	
6211				
HA-Zesurana 1118 8	<u> </u>			
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Disposal Method		White Copy	White Copy : Accompanies Samples	
Disposed by: (Signature)	Date Time		: Sampler	
		_		



K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

1127 JV Hilling 211. 2010

9986

10-1639

Santa Rosa CA 95403 Phone: 707 527 7574 FAX: 707 527 7879

ACCT:

PROI:

TRANSMITTAL

- DATE: 12/1/2010
- TO: MR. OAVIO NOREN E8A ENGINEERING 825 SONOMA AVENUE SANTA ROSA, CA 95404

Phone:	707-544-0784
Fax:	707-544-0866
Email:	dataebal@ebagroup.com
	dnoren@ebagroup.com

- FROM: Richard A. Kagel, Ph.O. Laboratory Director RDHM W 121100
- SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
HA-307'	SOIL	11/22/10	02:30	87151

10-1639

The above listed sample group was received on 11/22/10 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information. Thank you for this opportunity to be of service.

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: HA-3@7' LAB NO: 87151 SAMPLE TYPE: SOIL DATE SAMPLED: 11/22/2010 TIME SAMPLED: 2:30

BATCH #: 111710S1 DATE ANALYZED: 11/23/2010 UNITS: μg/Kg

COMPOUND NAME	CAS NO.	REPORTING	SAMPLE CONC
BENZENE	71-43-2	1.50	ND
TOLUENE	108-88-3	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	113
TOLUENE-D8	102
4-BROMOFLUOROBENZENE	95

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: 010 DATE:

K PRIME PROJECT: 9986 CLIENT PROJECT: 10-1639

METHOD: DRO REFERENCE: EP/	A 8015B				SAMPLE U	TYPE: INITS:	SOIL mg/Kg	
SAMPLE ID	LAB NO.	DATE SAMPLED	BATCH ID	EXTRACT DATE	DATE ANALYZED	MRL	SAMPLE CONC	DRO PATTERN
HA-3@7'	87151	11/22/10	11221051	11/23/10	11/24/10	10.0	ND	

NOTES:

- DRO Diesel Range Organics (C12-C34) with Silica Gel Cleanup
- ND Not Detected at or above the stated MRL
- NA Not Applicable or Available
- MRL Method Reporting Limit
- AD Typical pattern for diesel
- AC Heavier hydrocarbons contributing to diesel range quantitation
- AJ Heavier hydrocarbon than diesel
- AK Lighter hydrocarbon than diesel
- AE Unknown hydrocarbon with a single peak
- AN Unknown hydrocarbon with several peaks

APPROVED BY: DATE:

BATCH #: 111710S1 DATE ANALYZED: 11/17/2010

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE TYPE: SOIL UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.50	ND
TOLUENE	108-88-3	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	97
TOLUENE-D8	100
4-BROMOFLUOROBENZENE	97

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA -NOT APPLICABLE OR AVAILABLE

K PRIME, INC. LABORATORY QC REPORT

METHOD: VOLATILE ORGANIC COMPOUNDS REFERENCE: EPA 5035/8260 SAMPLE ID: B111710S1 SPIKE ID: L111710S1 DUPLICATE ID: D111710S1 BATCH #: 111710S1 SAMPLE TYPE: SOIL UNITS: µg/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	30.0	ND	30.3	101	60-140
BENZENE	30.0	ND	29.6	99	60-140
TRICHLOROETHENE	30.0	ND	27.1	90	60-140
TOLUENE	30.0	ND	27.7	92	60-140
CHLOROBENZENE	30.0	ND	28.9	96	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
1,1 DICHLOROETHENE	1.50	30.3	28.9	4.8	±20
BENZENE	1.50	29.6	28.4	4.1	±20
TRICHLOROETHENE	1.50	27.1	25.9	4.4	±20
TOLUENE	1.50	27.7	27.0	2.7	±20
CHLOROBENZENE	1.50	28.9	28.2	2.3	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC. LABORATORY QUALITY CONTROL REPORT	BATCH ID: DATE EXTRACTED: DATE ANALYZED:	11/22/2010
METHOD: DRO	SAMPLE TYPE:	SOIL
REFERENCE: EPA 8015B	UNITS:	mg/Kg

METHOD BLANK ID: B112210S1

	REPORTING LIMIT	SAMPLE CONC
DRO	10.0	ND

ACCURACY (MATRIX SPIKE)

SAMPLE ID:	L112210S1
DUPLICATE ID:	D112210S1

PARAMETER	SPIKE	SAMPLE	SPIKE	RECOVERY	LIMITS
	ADDED	RESULT	RESULT	(%)	(%)
DRO	500	ND	412	82	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING	SPIKE	DUPLICATE	RPD	LIMITS
	LIMIT	RESULT	RESULT	(%)	(%)
DRO	10.0	412	420	1.9	±20

NOTES: DRO - DIESEL RANGE ORGANICS (C12-C34) ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.		CHAIN OF CUSTODY RECORD	TODY RECOR
CONSULTING ANALYTICAL CHEMISTS	3621 Westwind Blvd., Santa Rosa, CA 95403	5403 PHONE: (707) 527-7574	FAX: (707) 527-7879
Client/Project ID	Address/Phone Averw &	ALYNA ANALYSES	KP1 Project No.
Project Location	s. S.S.		EDF Log Code:
0.00	apily (Signature)		Giobal ID
No. Date	Time Sample No. of Sample Containers		l Remarks
HA-307' Ulzz/10 2.	:30 87151 8t31 1		
Relinquished by: (Signature)	When	Reparved by: (Signative)	Date Time
Relinquished by: (Signature)		Received by: (Signature)	Date
Relinquished by: (Signature)		Received by: (Signature)	Date Time
Disposal Method		White Copy - Accompanies Samples	
Disposed by: (Signature)	Date Time	Yellow Copy : Sampler	2

APPENDIX E

GEOPHYSICAL REPORT

NORCAL GEOPHYSICAL CONSULTANTS, INC.



December 10, 2010

Mr. David Noren EBA Engineering 825 Sonoma Avenue, Suite C Santa Rosa, California 95405

Subject: Geophysical Investigation Sonoma Auto and Truck 890 Broadway Sonoma, California

NORCAL Job No. 10-282.35

Dear Mr. Noren:

This report presents the findings of the geophysical investigation performed by NORCAL Geophysical Consultants, Inc. on a portion of the Sonoma Auto and Truck Facility in Sonoma California. The field survey was conducted on November 1, 2010 by NORCAL California Professional Geophysicist David Bissiri (PGp 1009). Logistical support was provided by David Noren of EBA Engineering.

1.0 SITE DESCRIPTION AND PURPOSE

The Sonoma Auto and Truck facility is located on the northwest corner of Broadway and East MacArthur Street in Sonoma, California. It comprises several showroom and service buildings located in the northern and eastern portions and an asphalt parking lot in the southwest portion. The survey area, as designated by EBA Engineering, consists of an approximately 85- by 50-foot rectangular area in the southwest portion of the parking lot (see Plate 1).

According to verbal reports from EBA Engineering, this site was once the location of a gasoline station dating from the early 1920's. The station was demolished many years ago, but the records are unclear as to the final disposition of the USTs associated with the former facility. Though all above-ground structures associated with the former station appear to be gone, a suspected on-grade former pump island still exists and makes up a portion of the sidewalk along Broadway within the survey area. Because this remnant of the former station still exists, it is thought that additional on-grade or below grade features may also be present. Therefore, the purpose of the geophysical investigation is to obtain subsurface information to aid in further identifying the location of possible detectable buried metallic and non-metallic objects and debris, as well as detectable utilities within the limits of the designated survey.



EBA Engineering December 10, 2010 Page 2

2.0 FIELD INVESTIGATIONS

2.1 METHODOLOGY

Buried objects and debris are often both metallic and nonmetallic in nature. These materials can produce subsurface magnetic and conductivity contrasts that can be delineated by certain geophysical methods. These include, but are not limited to electromagnetic terrain conductivity (TC), ground penetrating radar (GPR), and metal detection (MD) methods.

We used the TC method to delineate variations in the electrical conductivity of the shallow subsurface to a depth of approximately 7 feet. The effect that metallic or nonmetallic material will have on the TC measurements is dependent upon the depth and size of the object, and the contrast in electrical conductivity with the surrounding materials. We performed the TC survey using a Geophysical Survey Systems, Inc. (GSSI) Profiler EMP-400 Electromagnetic Induction instrument.

We used the MD (metal detection) method to scan for near surface metal and the presence of utilities. This method also uses electromagnetic induction, but differs from the TC method in that only metallic objects are characterized and no recordable data is obtained. The GPR method was used to aid in further characterizing the source of detected MD anomalies. This method provides graphic images of the shallow subsurface that are evaluated typically for evidence of buried objects and disturbed soil. We used a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar System equipped with a 400 megahertz (MHz) antenna. Descriptions of the TC, MD, and GPR methods are provided in Appendix A.

2.2 TC/MD GEOPHYSICAL SURVEY

Prior to proceeding with the geophysical work, we established a survey grid to provide horizontal control. The position of the grid was based on the four corners of an approximately 85- by 50-foot rectangular area delineated by EBA Engineers in the southwest portion of the site. We created the grid in the field using a fiberglass measuring tape and marking paint. The origin (0E, 0N) was located along the curb facing Broadway, approximately 10 feet north of MacArthur Street, with grid nodes marked every 5 feet on the ground. This grid was then used to guide the TC and MD surveys.

We then conducted a TC and MD survey over the established grid. TC data were acquired at five foot intervals (stations) along south-north trending traverses spaced five feet apart. Following data acquisition, we transferred the TC data to a personal computer and converted the data into a format for contouring. The contouring program (*SURFER Version 9.0 by Golden Software*) calculates an evenly spaced array of values (grid) based on the observed field data. Finally, these gridded values are contoured to produce a TC contour map. This map provided a general characterization of the conductivity variations and can be used to assess the existence of buried debris and other subsurface features.



EBA Engineering December 9, 2010 Page 3

The MD was used to scan along both north-south and east-west trending traverses spaced 5 to 10 feet apart. During this reconnaissance, we detected numerous subsurface targets. The locations of these targets were marked on the ground surface with pink spray paint and mapped. Subsequently, we used GPR to verify the approximate depths and lateral limits of the MD anomalies.

2.3 GPR SURVEY

We used the GPR to collect radar data within an approximately 34- by 35-foot subarea located in the central portion of the larger survey area. We collected GPR data along a series of southto-north traverses spaced 2-feet apart starting at Grid 10 East/30 North and ending at Grid 44 East/65 North. The radar data acquired was uploaded to a computer and processed using Geophysical Survey System Inc.'s **RADAN** program to produce a series of three-dimensional (3-D) "time-slice" images of the subsurface. These images represent horizontal images (a.k.a. "plan view") of the subsurface at various depths below ground surface (bgs). These images were then evaluated for reflection patterns suggestive of USTs, piping, buried debris, and backfilled areas.

3.0 RESULTS

The results of the geophysical investigation are presented on the Site Map, Plate 1. The results of the TC and GPR surveys are shown on Plates 2 and 3, respectively.

3.1 TC/MD SURVEY

The results of the TC and MD surveys are presented on the Geophysical Survey Map, Plate 1. This map shows the limits of the designated geophysical survey area, pertinent site features, and the locations of the detected subsurface features. These subsurface features include a zone of suspected debris and utility alignments. The zone of suspected debris is located east of the suspected former pump island in the center of the survey area as depicted by the red shaded figure on Plate 1. This zone is irregular in shape and produced a variable response in the MD instrument readings, which suggests this zone is comprised of several individual objects rather than a single object with well-defined boundaries. The TC results presented on Plate 2 corroborate this interpretation as the contour closures in the immediate vicinity of the suspected debris zone are contorted in a pattern consistent with that due to numerous metallic objects buried within a debris zones. Additional TC contour closures are evident in the southwest and northeast portions of the survey area, especially along the boundaries. However the contour closures in the southwest are attributed to the effects of known above-ground features such as the traffic signal, light standards, and a fire hydrant, while the closures in the northeast are attributable to suspected underground utilities.

The underground utilities consist of five lines. One line is an active water line parallel to the eastern boundary of the survey area. This line extends northward through the survey area from a water meter box in the sidewalk along East MacArthur Street. The other four utility lines are



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undifferentiated utilities located in the vicinity of the suspected debris zone and pump island and depicted on Plate 1 as the dashed black lines labeled "-uu-". Two of the lines are oriented diagonally southwest to northeast and range in length from approximately 15- to 20-feet. One of these diagonal lines lies partially within the suspected debris zone and the other is located a few feet to the west. Both of these lines appear to be abandoned and may be associated with a former structure that was located where the debris zone is now. The other two lines are longer and form a "T" perpendicular to the sidewalk along Broadway. One leg of the "T" extends eastward from the southern end of the former pump island for a distance of 37 feet, whereupon another leg extends southward for a distance of approximately 6-feet and a third leg extends northward a distance of at least 50 feet, out of the survey area. While these utility lines appear to be associated with the former pump island, their purpose could not be determined.

3.2 GPR SURVEY

The GPR results are presented as a 3-D time-slice image on Plate 3. This image is a plan view, or "slice" of GPR data within an approximately 34-foot wide by 35-foot long sub-area of the larger survey area. The GPR area was approximately centered on the suspected debris zone and the "slice" represents radar signal amplitude obtained at a depth of approximately 1.8 feet below ground surface. Low amplitude reflections are depicted in shades of white and gray, while higher amplitude reflections are depicted in shades of yellow, reds, and purple.

Based on our evaluation of the GPR data, we did not see evidence of USTs or specific targets within the debris zone. However, we were able to clearly delineate three of the four undifferentiated utility lines that exist in this portion of the survey area. These are the two short diagonal lines in the vicinity of the debris zone and the eastward trending leg of the "T" extending from the pump island. These lines appear on the GPR image as the linear assemblages of high amplitude reflections in the central and southern portions of the image. The two northward trending legs of the utility line "T" are not clearly evident, which we attribute to a lack of data resulting at exactly this easting position, which resulted from the 2-foot spacing of the GPR traverses.

4.0 LIMITATIONS

In general, there are limitations unique to the geophysical methods used for this investigation. For example, subsurface objects may be buried deeper than the detection capabilities of the geophysical method. There may be a lack of contrast in physical properties between native soils and buried objects. Above or below ground cultural features, such as utilities, fences, and debris, may cause interference that limits or masks the detection of nearby buried objects. Since the accuracy of our findings is subject to these limitations, it should be noted it is possible that not all buried objects or features may be detected or characterized. A more detailed discussion of the limitations with regard to each of the geophysical methods used for this investigation is presented in Appendix A.



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5.0 STANDARD CARE AND WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. We performed our services in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the performance of services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate having the opportunity to provide our services to you for this investigation.

Respectfully,

NORCAL Geophysical Consultants, Inc.

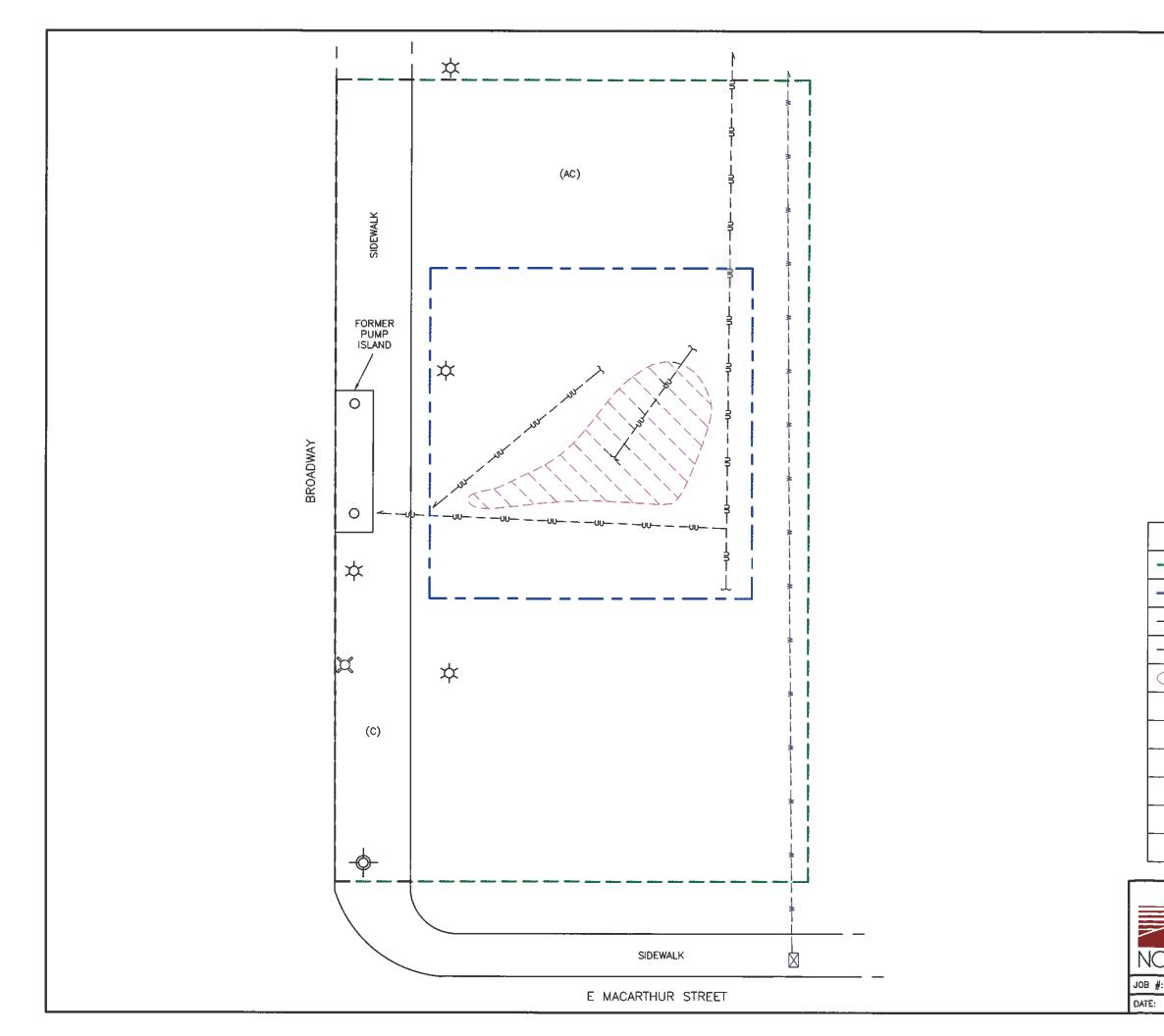
David Bissiri Professional Geophysicist, PGp-1009

DJB/KGB/tt

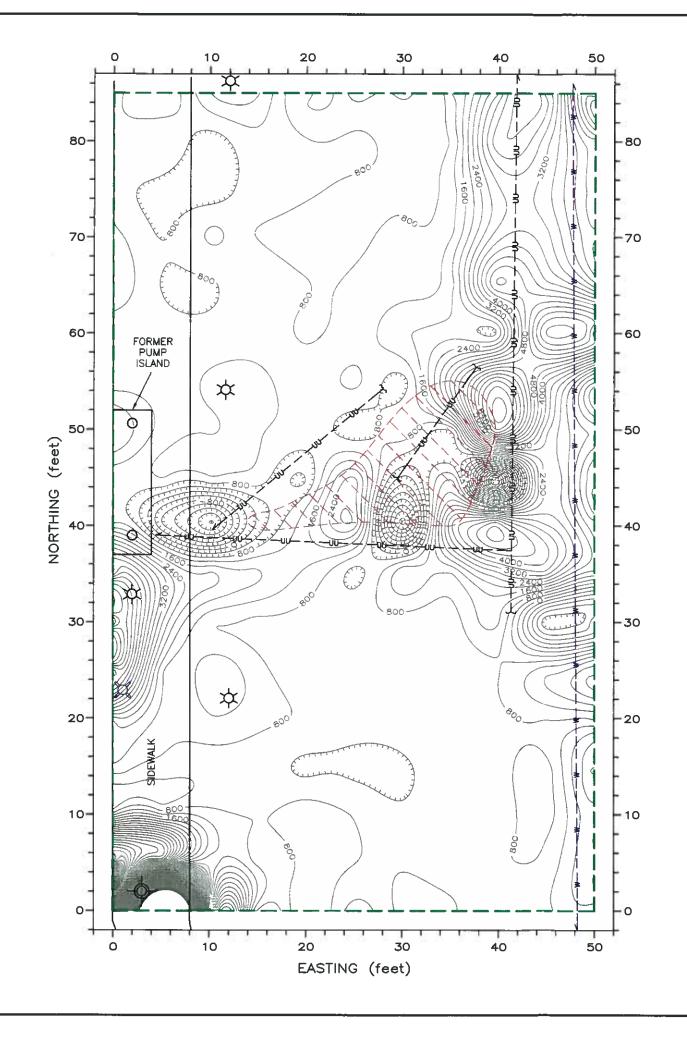
Enclosure: Plate

Plates 1 -3

Appendix A Geophysical Methodology, Instrumentation, Data Analysis and Limitations

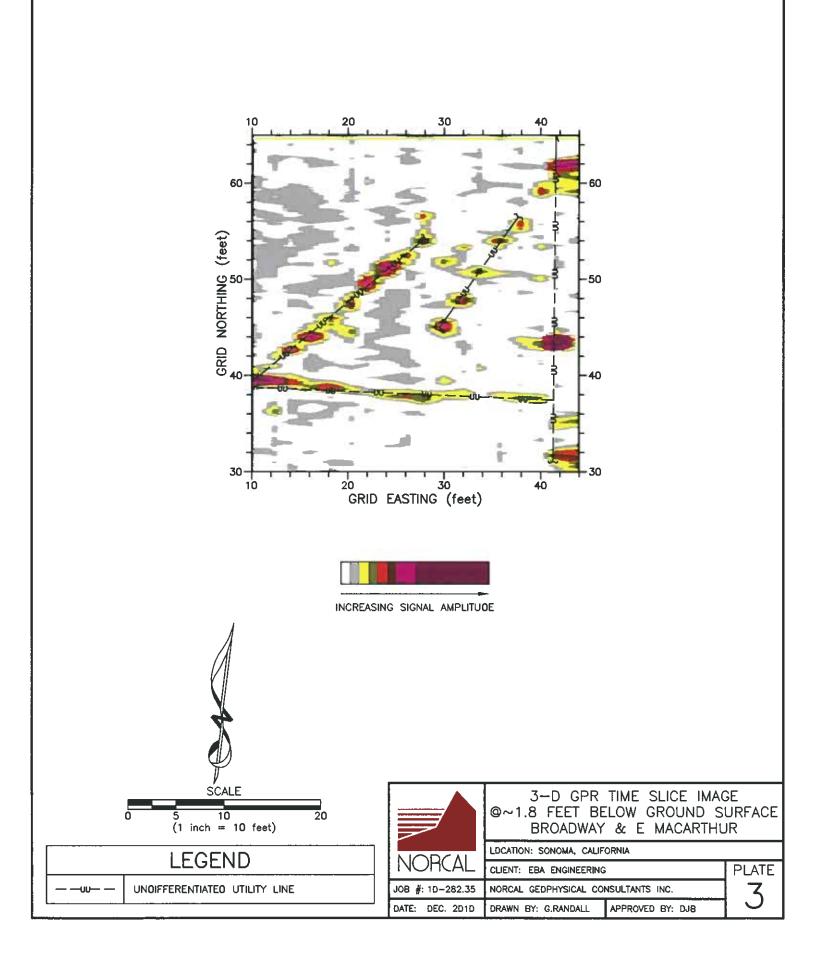


	SCALE
	LEGEND
	LIMITS OF GEOPHYSICAL SURVEY
	3–D GPR SURVEY AREA
	UNDIFFERENTIATED UTILITY LINE
	WATER LINE
(55)	SUSPECTED DEBRIS ZONE
X	FIRE HYDRANT
×	LIGHT STANDARD
-0-	TRAFFIC SIGNAL
	WATER METER BOX
(AC)	ASPHALT
(C)	CONCRETE
NORCAL JOB #: 10-282.35	SITE MAP BROADWAY & E MACARTHUR GEOPHYSICAL SURVEY LOCATION: SONOMA, CALIFORNIA CUENT: EBA ENGINEERING NORCAL GEDPHYSICAL CONSULTANTS INC.
DATE: DEC. 2010	ORAWN BY: G.RANDALL APPROVED BY: DJB





	SCALE	
	0 5 10 20 (1 inch = 10 feet)	
	LEGEND	
	LIMITS OF TERRAIN CONDUCTIVITY SURVEY	
-0	TERRAIN CONDUCTIVITY CONTOLIR (CONTOUR INTERVAL = 400 ppm)	
	UNDIFFERENTIATED LITILITY LINE	
	WATER LINE	
([])	SUSPECTED DEBRIS ZONE	
	FIRE HYDRANT	
<u>х</u> ф	LIGHT STANDARD	
	TRAFFIC SIGNAL	
····	·····	
	TERRAIN CONDUCTIVITY CONTOU 5 KHz QUADRATURE DATA BROADWAY & E MACARTHU	
ORCAL	LOCATION: SONOMA, CALIFORNIA CLIENT: EBA ENGINEERING	PLATE
10-2B2.35	NORCAL GEOPHYSICAL CONSULTANTS INC.	I
DEC. 2010	DRAWN BY: G.RANDALL APPROVED BY: DJB	2





Appendix A

Geophysical Methodology, Instrumentation, Data Analysis and Limitations



Terrain Conductivity (TC)

Methodology

The TC method provides information on the lateral variation of the electrical conductivity of the subsurface. These changes in conductivity can arise from natural changes in soil composition or from buried foreign objects. Operating on the principle of electromagnetic induction, the method utilizes an instrument having two coils separated by a fixed distance. One of these coils transmits a primary radio-frequency signal that induces a current flow (secondary signal) in the earth. The other coil senses a secondary signal resulting from the induced current flow. For measurement purposes the secondary signal is broken down into both quadrature and in-phase components. The quadrature component is used to determine the value of electrical conductivity and is often measured in either milliSiemens/meter (mS/m) for absolute units or parts-per-million (ppm) for relative units. This component is useful for detecting both metallic and non-metallic objects. The in-phase component. This component is useful when only the location of metallic objects is of interest. In-phase measurements are expressed in parts-per-million (ppm).

The principle behind the electromagnetic induction method is based on the fact that when highly resistive material is subjected to a time-varying electromagnetic field (such with RF) there is a linear relationship between the quadrature component and conductivity. In contrast, when highly conductive materials like metals are encountered, both quadrature and in-phase components can be quite large and their behavior is often non-linear. When trying to characterize resistive material, such as soil and rock, measurement of the quadrature component is most useful, though the quadrature component is also affected by conductive metals. When only trying to characterize metallic material, then the In-phase component is typically used.

Instrumentation

The instrument used by NORCAL for shallow subsurface investigations is a Geophysical Survey Systems Multi-Frequency Profiler EMP 400 terrain conductivity meter. This instrument consists of transmitting and receiving coils mounted at opposites ends of a horizontal boom with a control console in between. The separation distance of the coils is approximately 4 feet. By using up to four selectable induction frequencies ranging from 1 KHz to 16 KHz at the same time, different effective sampling depths can be obtained. In most cases these sampling depths range from less than a foot to greater than 15 feet. Data is obtained by carrying the instrument at ankle-level and taking readings taken at regular intervals, usually between 2- to 10-feet apart. The resulting TC data is automatically stored in digital memory, along with station locations and any field notes.

Computer Processing

TC data are typically processed in the field on a portable computer. The uploaded data are converted into a format suitable for contouring using the program **SURFER** from Golden



Software. This program calculates an evenly spaced array of values (data grid) based on the measured field data which are then contoured to produce TC contour maps of each induction frequency for interpretation.

Contour Map Interpretation

Generally speaking, in a region with fairly uniform conductivity conditions the TC values will vary smoothly from one area to another. Under these conditions, contour lines are usually spaced far apart. In contrast, in those areas where lateral TC variations are stronger, the contours are more closely spaced. In some cases the variations are so strong that the contours become highly contorted. These contorted contours may form roughly concentric circles suggestive of bull's-eyes, tightly wound loops and whorls similar to finger prints, or elongated parallel lines. Actual magnitude and shape of the contour lines is dependent on the how rapidly the conductivity of the subsurface changes and if there are any metallic objects present that can affect the instrument readings.

Roughly concentric circles are generally referred to as monopoles. Monopoles that are roughly limited in extent to the data point spacing of the sampling grid are often caused by relatively small, near surface metallic objects with limited cross-section. These typically consist of well caps, pull boxes, balls of wire, etc. On the other hand, larger monopoles that extend across an area of several data points are typically associated with larger, deeper objects such USTs, concrete pads, backfilled zones, etc.

Irregular patterns of loops and whorls are often indicative of several conductive objects with variable shape, size, conductivity, and distribution being present. These irregular TC patterns are the most difficult to interpret. Past experience has shown that such patterns are usually associated with debris fields, landfills, and demolition sites.

A series of generally parallel contour lines typically indicates the source is an elongate object such as a building wall, fence, or underground pipeline. If the parallel contours are more or less straight, then this indicates the object was oriented roughly parallel to the direction of the EM31's coil boom during data collection. If the contour lines form a series of parallel, undulating contours (also referred to as a "herring bone" pattern), then this indicates the source was oriented roughly perpendicular to the EM31's boom during data collection.

Regardless of whether the contours form discrete monopoles, irregular patterns, or parallel lines, if there are no obvious nearby above ground sources that could cause such variations, then subsurface objects are suspected. TC contours are typically considered anomalous when differences larger than a few tens of milliSiemens per meter (mS/m) are displayed from one data station to the next.

Limitations

Buried ferrous metal objects often produce large localized variations, or anomalies, in terrain conductivity. As a general rule, anomaly magnitude typically decreases, and anomaly width increases, as distance (depth) to the source increases. This can make detection of small, deeply



buried metallic objects difficult. In addition, the ability to detect a buried metal object is based on the intensity of these variations in contrast to the intensity of background variations. The intensity of background variations is based on the conductivity of the soil and the amount of above and below ground metal present within a survey area. Cultural features such as chain link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce variations with high intensities. These variations may mask the TC effects of buried metal objects and thus make it very difficult to determine whether the variations are associated with below ground metal or known above/below ground cultural features.

Apart from the physical limitations of the instrument and the unwanted effects from secondary objects, the ability to detect subsurface features is also dependent upon the density of data acquisition points. If the distance between data acquisition points is significantly larger than the size of the target object, then the object may not be detected.

Metal Detection (MD)

MD Methodology

This method uses the principle of electromagnetic induction to detect shallowly buried metal objects such as USTs, metal utility conduits, rebar in concrete, manhole covers, and various metallic debris. This is done by carrying a hand-held radio transmitter-receiver unit above the ground and continuously scanning the surface. A primary coil broadcasts a radio signal from a transmitter which induces secondary electrical currents in metal objects. These secondary currents in turn produce a magnetic field which is detected by the receiver.

Instrumentation

The MD instrument that we typically use for shallow subsurface investigations is a Fisher TW-6 pipe and cable locator. This instrument is expressly designed to detect metallic pipes, cables, USTs, manhole covers, and other large, shallowly buried metallic objects. The instrument operates by generating both a meter reading (unitless) and an audible response when near a metal object. The peak instrument response usually occurs when the unit is directly over the object. The TW-6 does not provide a recordable data output that can be used for later computer processing. Results are generally limited to marking the interpreted outlines of detected objects in the field and mapping their locations.

Limitations

In general, the response of the MD instrument is roughly proportional to the horizontal surface area of near surface buried objects (typically in the upper three or four feet). This relationship can be used to advantage in discriminating between metal debris, reinforced concrete pads, and pipelines. However, in the presence of above ground metal objects such as fences, walls, parked cars, and metal debris, this is no longer valid. In some instances, the presence of such objects can make it very difficult to determine whether the instrument responses are associated with below ground targets or above ground cultural features. When multiple sources are present it



may not be possible to identify individual targets. Also, relatively large objects that have a limited horizontal cross-section such as well casing and fence posts are sometimes difficult to detect.

Ground Penetrating Radar (GPR)

GPR Methodology

Ground penetrating radar is a method that provides a continuous, high resolution graphical cross-section of the shallow subsurface. The method entails repeatedly radiating an electromagnetic pulse into the ground from an antenna as it is moved along a traverse. Reflected signals are received by an antenna (often the same one used to generate the signal) and sent to a control unit for processing. The control unit then converts the varying amplitude of reflected radar signals as a function of time into a cross-sectional image showing signal amplitude as a function of depth.

GPR is particularly sensitive to variations of two electrical properties. One property is conductivity (the ability of a material to conduct a charge when a field is applied) and the other is permittivity (the ability of a material to hold a charge when a field is applied). These two properties determine how far a signal can propagate. They also determine the strength of reflected signals that can be generated at material boundaries. Reflections result because of the differences in these electrical properties on either side of a boundary.

Most soil and earthen-like materials such as concrete are electrically resistive and have a relatively low permittivity. As a result, they are relatively transparent to electromagnetic energy. This means that only a portion of the radar signal incident upon them is reflected back to the surface. On the other hand, when the signal encounters an object composed of a material that has the opposite electrical properties, especially one with a high permittivity (such as metal) much of the incident energy is reflected. This difference in transmittivity and reflectivity determines how deep a given radar signal can penetrate into the ground and still yield interpretable results.

Instrumentation

We typically perform GPR surveys using a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar System equipped with either a 400 or 500 megahertz (MHz) transducer. This unit is comprised of a combined control/data recording console that is connected by a telemetry cable to the antenna. This system is often chosen for investigating environmental sites since it usually provides both the resolution and depth penetration needed for characterizing the upper three to four feet of the subsurface.

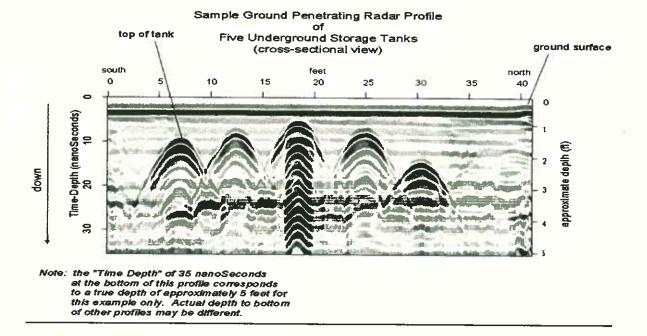
Data Interpretation

The interpretation of GPR data can be done in two ways. The first is referred to as two-dimensional (2-D) and involves examining the graphical records for reflections from buried objects. 2-D GPR records represent a vertical "slice" of the subsurface along a single traverse (or profile) which displays changes in reflected signal strength with horizontal position as a function of arrival time. Reflections that arrive earlier in time are placed in the upper portions of the record and reflections that arrive later are placed lower, towards the bottom of the records. Horizontal position is across the top of the record. For display purposes, almost any color range



can be used to denote differences in reflected signal strength, but typically a simple black-and-white display is used.

In areas with relatively uniform conditions, with no buried objects producing reflections, 2-D records, or profiles, typically appear as a series of alternating dark and light horizontal bands. In areas where there are subsurface objects producing reflections, the horizontal banding is disrupted. Discrete objects typically produce reflections having the appearance of inverted "U"s, forming what are known as "hyperbolic reflections". Metallic objects often produce markedly strong reflections, in many cases forming multiple reflections appearing as a series of inverted U's cascading down the record. Non-metallic objects can produce similar reflections, but the multiples are typically much weaker.



A sample profile from a different site with five adjacent steel USTs is presented below:

An object's burial depth may also be estimated from GPR profiles. As mentioned above, GPR measures signal amplitude as a function of time. However, the translation of the radar signal's travel time (technically known as time-depth) to an actual distance (true depth) is not always a simple one. Strictly speaking, in order to translate from time-depth to true depth the signal velocity within each time interval must be known. Since this is not routinely determined in the field, estimated velocities are often used for determining the approximate depth to a reflector. The empirical values for GPR signal propagation velocities within commonly encountered soils are obtained from published tables.

The second way GPR data can be displayed is referred to as a three-dimensional (3-D) time-slice. In this case, the data is displayed as a horizontal "slice" of a plan area at a specified depth below grade. The data is obtained from multiple parallel 2-D traverses and are processed to display variations in signal amplitude in both horizontal and vertical directions. A sample time-slice from



a site different than the one investigated in this investigation is presented below.

Time-Slice image of two former pump islands buried under approximately 2-foot of asphalt and base material. Diagonal linear feature extending from top center to lower right is an electrical conduit located below asphalt but above former pump islands.

Limitations

The ability to detect subsurface targets is dependent on specific site conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the depth of detection will be reduced as the clay and/or moisture content in the subsurface increases. As a result, depths of detection (using a 500 MHz antenna) typically range from as deep as six feet to as little as a few inches.