

**PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT**  
311 2<sup>nd</sup> Street  
Oakland, California

Prepared for:  
The Olson Company

May 18, 2005

SECOR Project No.: 04OT.29220.22

**Alameda County**

**SEP 29 2005**

**Environmental Health**



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May 18, 2005

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RE: PHASE II ENVIRONMENTAL SITE ASSESSMENT  
311 2<sup>nd</sup> Street  
Oakland, California  
SECOR Project No.: 04OT.29220.22

Dear Mrs. Maybrun:

At the request and authorization of The Olson Company, SECOR International Incorporated (SECOR) is pleased to present this report detailing the findings of the Phase II Environmental Site Assessment (ESA) of the property located at 311 2<sup>nd</sup> Street, Oakland, California (referred to herein as the Site). This work was conducted in accordance with SECOR's proposal dated April 25, 2005 and the terms provided in The Olson Company's Master Consulting Services Agreement with SECOR dated November 28, 2001.

The purpose of this work was to assess the extent of soils impact from a former UST located on the Site as well as to better assess off-site sources of potential groundwater contamination. The findings of the Phase II ESA are contained in the attached document. In addition, SECOR has provided below, a brief summary of the findings of the completed assessment.

### EXECUTIVE SUMMARY

At the request and authorization of the Olson Company, SECOR conducted a Phase II Environmental Site Assessment (ESA) of the subject property located at 311 2<sup>nd</sup> Street, Oakland, California. This work was conducted in accordance with SECOR's proposal dated April 25, 2005 and the terms provided in The Olson Company's Master Consulting Services Agreement with SECOR dated November 28, 2001. This Phase II ESA was conducted based on the results of SECOR's Draft Phase I ESA dated April 22, 2005 which identified the following recognized environmental conditions (RECs) as warranting further investigation:

- According to groundwater monitoring well data near the Site and previous subsurface investigations, groundwater is expected to be encountered at a depth of approximately 7 feet below the ground surface. As in the following text, the EDR reports identify a total of 48 leaking underground storage tank (LUST) facilities within a half-mile radius of the Site. Of these 48 sites, 32 are located up-gradient with respect to groundwater flow beneath the Site. Given the numerous LUST facilities, SECOR considered it possible that groundwater in the vicinity of the Site is impacted with petroleum hydrocarbons. As a result of the potential groundwater contamination, SECOR recommended analyzing groundwater on the up- and down-gradient sides of the Site in order to assess whether contaminants (i.e. petroleum

hydrocarbons and volatile organic compounds (VOCs)) are present at levels which exceed the acceptable human health risk criteria or regulatory clean up levels for residential development.

- The 1950 through 1957 Sanborn Fire Insurance maps indicate that a steel fabrication and welding shop is located on the Site. Potential contamination of Site soils may have occurred during the time when the shop and associated scrap iron storage yard were located on the Site. SECOR recommended sampling the Site soils for metals and petroleum hydrocarbons in order to assess whether these contaminants at levels which exceed human health risk criteria for residential development.
- According to the EDR report, the Site is listed under the LUST and Cortese databases for having a leaking underground storage tank. SECOR reviewed previous environmental reports supplied by the seller which discussed subsurface investigations relating to this UST under the oversight of the County of Alameda Department Environmental Health (ACDEH). A 1,000-gallon UST was reportedly closed in place prior to 1976 by filling it with concrete. This UST is reportedly still located on the property. It is unknown whether the UST stored gasoline or diesel. Previous soil and groundwater investigations indicated residual petroleum hydrocarbon contamination exists in the soil and groundwater in the vicinity of the UST, discussed as follows:
  - In September of 1993, two angled soil borings (SB-1 and SB-2) were drilled under the UST by Blymer Engineers, Inc. (BEI). BEI was contracted by Meyer Plumbing Supply to perform a closure site assessment for the UST. Soil samples were obtained from SB-1 and SB-2 at 5.5 and 7.0 feet, respectively. Analytical results for borings SB-1 and SB-2 showed that TPH-D was detected at concentrations of 4.2 and 15,000 parts per million (ppm), respectively, and that lead was detected in concentrations of 71 and 84 ppm, respectively. In boring SB-1, TPH-G and BTEX were not detected except for 0.0090 ppm xylenes. In boring SB-2, TPH-G was detected at a concentration of 34 ppm while ethylbenzene and xylenes were detected at concentrations of 0.65 and 0.82 ppm, respectively. The groundwater sample from boring SB-2 showed 5.5 ppm TPH-D, 0.085 ppm TPH-G, and benzene, toluene and xylenes at concentrations of 0.0027, 0.00066, and 0.00051 ppm, respectively.
  - After receipt of the BEI report, the Alameda County Department of Environmental Health (ACDEH) indicated that further investigation would be necessary to vertically and laterally delineate the detected contamination. In response to this request, Meyer Plumbing contracted AllPro Environmental Corporation (AllPro) in March of 1996. At this time, AllPro obtained soil and groundwater samples from four borings placed down-, cross-, and up-gradient of the UST identified as B3 & B4, B5, and B6, respectively. All of these borings were placed outside the neighboring warehouse structure. According to the AllPro report, analytical results of soil samples obtained from all the borings showed that TPH-g, BTEX, MTBE and TPH-D were not detected except for the samples obtained from boring B6 at a depth of 4.5 feet, where TPH-D was detected at a concentration of 16 ppm. Lead was detected in the soil samples from borings B3, B4, B5, and B6 at concentrations of 58, 310, 9.3, and 23 ppm, respectively. According to the AllPro report, analytical results of groundwater samples obtained from all the borings

showed that TPH-g, BTEX, MTBE and TPH-D were not detected. Lead was detected in the groundwater samples from borings B3, B4, B5, and B6 at concentrations of 0.049, 1.7, 0.68, and 0.49 mg/L, respectively.

- o In response to the AIIPro report, the ACDEH issued a no further action letter dated June 18, 1996 whereupon case closure was granted for the former UST on the Site. This letter does state that any Site modifications such as a change in land use may require a "re-evaluation of the chemical exposure pathways, receptor sensitivities (i.e. residential vs. commercial/industrial), and other applicable criteria which may have been used to assess potential human health risk during the case closure process."
- o SECOR recommended that future case closure requirements, if any, be determined through discussions with the ACDEH and Regional Water Board, based on the intended residential land use and in accordance with the department's requirements as set forth during initial case closure. SECOR also recommended additional soil and groundwater sampling be performed adjacent to the UST, including the interior of the warehouse structure where the former fuel dispenser was located, in order to confirm that contaminant levels exist below regulatory guidelines for residential development or to better estimate the volume of soils that must be excavated and the degree of groundwater remediation that may be necessary, if any, prior to such development. SECOR also recommended that the concrete-filled UST be removed as part of Site development.

SECOR conducted the Phase II subsurface soils investigation of the Site on May 3, 2005. SECOR's investigation of the property consisted of four (4) exploratory borings (B-1, B-2, B-3, & B-4) to a maximum depth of 12 feet below ground surface (bgs) adjacent to the former UST location, one (1) exploratory boring (B-6) to a depth of 12 feet bgs located in the northern up-gradient corner of the Site, and one (1) exploratory borings (B-10) to a depth of 5 feet bgs centrally located within the warehouse structure in the vicinity of the former steel fabrication and weld shop. The analytical results obtained during SECOR's Phase II ESA are attached in Tables 1, 2 and 3.

As presented in the attached tables of analytical results, it appears that petroleum hydrocarbons (primarily diesel fuels) and lead contamination exist in the majority of the Site at levels which will require further characterization. The detected concentrations of lead are at hazardous levels (based both on total and soluble threshold limit concentration) and will require disposal as a hazardous waste if removed from the Site. For development purposes, a human health risk assessment will be necessary to evaluate options for capping of the Site to manage the lead without removing it from the Site. Government agency interaction and approval will be necessary if the lead is to be left at the Site. It is unclear from the data collected whether the lead in soil is from an onsite source or is a regional problem, resulting from placement of old fill on the Site. Therefore, additional assessment may be necessary to determine the source and extent of lead contamination on the Site.

SECOR recommends that a human health risk assessment (HHRA) be conducted to evaluate if a risk exists with regards to vapor intrusion, due to diesel fuel contamination detected in groundwater at shallow depths (approximately 5 to 6 feet below ground surface). This HHRA could then be used to evaluate whether any clean up is necessary to allow development as residential property and assure future residents no excess health risk exist due to the residual contamination on Site. Another option

the HHRA could help evaluate is whether a vapor barrier will be necessary to control potential vapor intrusion created by the diesel fuel in the groundwater in the vicinity of the former UST if that is the driver of risk. In addition, the extent of diesel fuel and, to a lesser extent, gasoline in groundwater and soil are not defined. It is unclear whether the Site is the source of all detected impact on the property or if a regional groundwater plume exists which is also affecting the Site. The ACDEH may require further assessment of this impact as part of the Site revaluation for residential development.

The groundwater sample from boring B-6, which was located in the northern up-gradient corner of the Site, reported a tetrachloroethene (PCE) concentration of 8.2 µg/L. This exceeds the state Maximum Contaminant Level (MCL) for PCE in drinking water of 5.0 µg/L. Given that this PCE appears to originate from an off-site source and that a potable water source is not planned as part of future Site development, SECOR recommends no additional investigation. However, SECOR recommends this detection of PCE be addressed in the recommended HHRA.


The Alameda County Department of Environmental Health (ACDEH) issued a no further action letter dated June 18, 1996, whereupon case closure was granted for the former UST on the Site. This UST still exists on the Site and is filled with concrete. This UST will need to be removed during planned demolition activities. The ACDEH letter states that any Site modifications, such as a change in land use, may require a "re-evaluation of the chemical exposure pathways, receptor sensitivities (i.e. residential vs. commercial/industrial), and other applicable criteria which may have been used to assess potential human health risk during the case closure process." A copy of the no further action letter is attached as Appendix A.

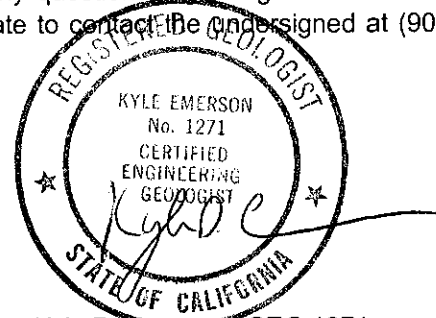
Based on the planned land use change of the Site, it is recommended that the ACDEH receive a copy of this report to evaluate if any additional assessment, a HHRA or potential remediation will be necessary to obtain a new case closure for residential use.

### CLOSURE

It has been a pleasure to provide environmental consulting services for you on this project and we look forward to working with you in the future. Should there be any questions regarding the information provided within the accompanying report, please do not hesitate to contact the undersigned at (909) 335-6116.

Respectfully submitted,  
**SECOR International Incorporated**

  
Justin R. Hone  
Project Geologist



Kyle D. Emerson, CEG 1271  
Senior Vice President

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## 1.0 INTRODUCTION

This report documents the methodology and findings of a Phase II environmental site assessment (ESA) completed by SECOR International Incorporated (SECOR) at the property located at 311 2<sup>nd</sup> Street, Oakland, California. The Phase II ESA was conducted to address the recognized environmental conditions (RECs) identified within SECOR's Draft Phase I ESA investigation dated April 22, 2005 (SECOR, 2004a).

Based on the recommendations contained in the above referenced Phase I ESA, SECOR developed a scope of work to address the RECs (subsurface soil impacts) at the above referenced property. The investigation was conducted in accordance with the scope of work and terms provided in The Olson Company's Master Consulting Services Agreement dated November 28, 2001. The scope of work completed and the results of that investigation are provided below.

### 1.1 SITE DESCRIPTION AND OPERATIONS

The Site consists of approximately 1.1 acres of land located at 311 2<sup>nd</sup> Street in the City of Oakland, County of Alameda, California. The Site consists of 14 contiguous plots in addition to a redistributed portion of Harrison Street which comprise one parcel. Currently, the Site is occupied by Meyer Plumbing Supply.

The Site is located in a commercial/industrial area of Oakland. The Site is bounded to the northwest by the Jack London Square Bath Gallery showroom and offices, a second office building, and an asphalt parking lot followed by Webster Street; to the northeast by 2<sup>nd</sup> Street then industrial buildings, a parking lot and offices; to the southwest by the Amtrak rail line followed by Embarcadero Street, a parking lot, and then a marina; and to southeast by an asphalt parking lot followed by the Jack London Square Amtrak Station.

The current structure on the Site is used predominantly to store plumbing parts and equipment (i.e. pipe, fittings, and tools). A small portion of the structure is also used as office space. Based on information obtained during this Phase I ESA (see below for additional detail) the Site has been occupied by this warehouse since prior to 1965. According to SECOR's review of historical documents, prior to 1939 until sometime before 1959 the Site was occupied by a smaller commercial structure. This structure is identified on Sanborn fire insurance maps as a steel fabricating and welding shop from sometime prior to 1950 until 1957.

### 1.2 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located at an approximate elevation of approximately 15 feet above mean sea level (msl) as shown on Figure 1. The Site is located in the California Coast Range Geomorphic Province characterized by northwest-southeast trending mountains and faults. Basement rocks underlying the Site are mapped as Late Jurassic to Early Cretaceous Franciscan Formation (CDMG, 1961). The Franciscan Formation consists of intensely deformed subduction mélange containing sedimentary rocks, volcanics, and metamorphic serpentinites. The subject property lies in a topographic depression caused by localized east-west extension caused by transtension between the Hayward and San Andreas faults.

Although no active faults are mapped within 1-mile of the subject property (CDMG, 1998), the Site is located within a seismically active area. The nearest recently active faults include: the northern segment of the Hayward fault, located approximately 1.5 miles northeast of the Site; the San Andreas fault located approximately 15 miles to the southwest; and the Calaveras fault located approximately 12.5 miles northeast of the Site. These faults are capable of generating seismic moments greater than magnitude 7.0.

The Site is located within the California Regional Water Quality Control Board (RWQCB), San Francisco Region (2). A groundwater monitoring well located approximately one-eighth mile north of the Site indicates groundwater at 7 feet below ground surface (bgs) with groundwater flow towards the southwest. Previous subsurface investigations conducted on the Site agree with this reported depth to groundwater of approximately 7 feet. The San Francisco Bay is located to the southwest of the Site. Based on the location of the Site and topographic gradient, inferred groundwater gradient would be to the southwest.



## 2.0 BACKGROUND INFORMATION

This Phase II ESA was conducted, based in-part on the results of SECOR's Phase I ESA, which identified the following recognized environmental conditions (RECs) as warranting further investigation:

- According to groundwater monitoring well data near the Site and previous subsurface investigations, groundwater is expected to be encountered at a depth of approximately 7 feet below the ground surface. As in the following text, the EDR reports identify a total of 48 leaking underground storage tank (LUST) facilities within a half-mile radius of the Site. Of these 48 sites, 32 are located up-gradient with respect to groundwater flow of the Site. Given the numerous LUST facilities, SECOR considers it possible that groundwater in the vicinity of the Site is impacted with petroleum hydrocarbons. SECOR recommends as a result of the potential groundwater contamination analyzing groundwater on the up- and down-gradient sides of the Site in order to assess whether contaminants (i.e. petroleum hydrocarbons and volatile organic compounds) are present at levels which exceed the acceptable human health risk criteria for residential development.
- The 1950 through 1957 Sanborn Fire Insurance maps indicate that a steel fabrication and welding shop is located on the Site. Potential contamination of Site soils may have occurred during the time when the shop and associated scrap iron storage yard were located on the Site. SECOR recommends sampling the Site soils for metals and petroleum hydrocarbons in order to assess whether these contaminants at levels which exceed human health risk criteria for residential development.
- According to the EDR report, the Site is listed under the LUST and Cortese databases for having a leaking underground storage tank. SECOR reviewed previous environmental reports supplied by the seller which discussed subsurface investigations relating to this UST under the oversight of the County of Alameda Department Environmental Health (ACDEH). A 1,000-gallon UST was reportedly closed in place prior to 1976 by filling it with concrete. This UST is reportedly still located on the property. It is unknown whether the UST stored gasoline or diesel. Previous soil and groundwater investigations indicated residual petroleum hydrocarbon contamination in the soil and groundwater in the vicinity of the UST, discussed as follows:
  - In September of 1993, two angled soil borings (SB-1 and SB-2) were drilled under the UST by Blymer Engineers, Inc. (BEI). BEI was contracted by Meter Plumbing Supply to perform a closure site assessment for the UST. Soil samples were obtained from SB-1 and SB-2 at 5.5 and 7.0 feet, respectively. Analytical results for borings SB-1 and SB-2 showed that TPH-D was detected at concentrations of 4.2 and 15,000 parts per million (ppm), respectively, and that lead was detected in concentrations of 71 and 84 ppm, respectively. In boring SB-1, TPH-G and BTEX were not detected except for 0.0090 ppm xylenes. In boring SB-2, TPH-G was detected at a concentration of 34 ppm while ethylbenzene and xylenes were detected at concentrations of 0.65 and 0.82 ppm, respectively. The groundwater sample from boring SB-2 showed 5.5 ppm TPH-D, 0.085 ppm TPH-G, and benzene, toluene and xylenes at concentrations of 0.0027, 0.00066, and 0.00051 ppm, respectively.

- After receipt of the BEI report, the Alameda County Department of Environmental Health (ACDEH) indicated that further investigation would be necessary to vertically and laterally delineate the detected contamination. In response to this request, Meyer Plumbing contracted AllPro Environmental Corporation (AllPro) in March of 1996. At this time, AllPro obtained soil and groundwater samples from four borings placed down-, cross-, and up-gradient of the UST identified as B3 & B4, B5, and B6, respectively. All of these borings were placed outside the neighboring warehouse structure. According to the AllPro report, analytical results of soil samples obtained from all the borings showed that TPH-g, BTEX, MTBE and TPH-D were not detected except for the samples obtained from boring B6 at a depth of 4.5 feet, where TPH-D was detected at a concentration of 16 ppm. Lead was detected in the soil samples from borings B3, B4, B5, and B6 at concentrations of 58, 310, 9.3, and 23 ppm, respectively. According to the AllPro report, analytical results of groundwater samples obtained from all the borings showed that TPH-g, BTEX, MTBE and TPH-D were not detected. Lead was detected in the groundwater samples from borings B3, B4, B5, and B6 at concentrations of 0.049, 1.7, 0.68, and 0.49 ppm, respectively.
- In response to the AllPro report, the ACDEH issued a no further action letter dated June 18, 1996 whereupon case closure was granted for the former UST on the Site. This letter does state that any Site modifications such as a change in land use may require a "re-evaluation of the chemical exposure pathways, receptor sensitivities (i.e. residential vs. commercial/industrial), and other applicable criteria which may have been used to assess potential human health risk during the case closure process."
- SECOR recommends that future case closure requirements, if any, be determined through discussions with the ACDEH and Regional Water Board, based on the intended residential land use and in accordance with the department's requirements as set forth during initial case closure. SECOR also recommends additional soil and groundwater sampling be performed adjacent to the UST, including the interior of the warehouse structure where the former fuel dispenser was located, in order to confirm that contaminant levels exist below regulatory guidelines for residential development or to better estimate the volume of soils that must be excavated and the degree of groundwater remediation that may be necessary, if any, prior to such development. SECOR also recommends that the concrete-filled UST be removed as part of Site development.

The results of the Phase II investigation are reported herein. The approximate locations of the borings are shown on the Plot Plan, Figure 2.

## 3.0 FIELD INVESTIGATION PROGRAM

### 3.1 SCOPE OF WORK

SECOR proposed to advance a total of four (4) borings in the vicinity of the former UST on the Site in order to sample the soil and groundwater for petroleum hydrocarbons (TPH) carbon-chain (C6-C40), VOCs, and lead. Soil samples were to be collected using a hand auger to depths of 5 feet below ground surface (bgs). After clearing 5 feet bgs, groundwater and soil samples will be collected using a direct push Geoprobe rig. A photo-ionization detector (PID) was to be used to evaluate the soil samples in the field. Soil samples were to be collected at intervals of 2 ½ feet until 12.5 feet bgs or until PID readings are no longer elevated. A maximum of two (2) soil samples were to be collected from each of the borings. These included the sample exhibiting the highest PID reading in parts per million per volume (ppm/V) and the deepest soil sample exhibiting an elevated PID reading (> 50 ppm/V). Note that a single sample may fulfill both the above-mentioned criteria and in such a case, only one sample would be collected from the boring. All soil and groundwater samples from these borings were to be submitted to a state certified laboratory for total petroleum hydrocarbons (TPH) carbon-chain (C6-C40), VOCs, and lead analysis. Due to poor recharge rates of the groundwater, however, only the soil samples were analyzed for lead content.

SECOR proposed to advance four (4) borings on the Site in order to sample the groundwater for petroleum hydrocarbons and VOCs analysis. Groundwater samples were to be collected at a depth where water is first encountered, estimated to be approximately 5-7 feet bgs. One (1) boring was to be located in each of the corners of the Site in order to best determine the lateral extent of potential contamination of groundwater by nearby LUST facilities as well as to better evaluate the contribution from potential onsite sources of contamination. All groundwater samples were to be submitted to a state certified laboratory for TPH carbon-chain (C6-C40) and VOCs analysis. Due to time constraints, only boring B-6, located in the northern corner of the Site, was completed.

SECOR proposed three (3) shallow borings from the interior of the structure on the Site in the area of the former steel fabrication, weld shop, and scrap iron yard. Soil samples were to be collected at a depth of approximately 6 inches to one foot bgs and 18 inches to two feet bgs and submitted to a state certified laboratory for TPH carbon-chain (C6-C40), VOCs, and CAM metals analysis.

### 3.2 SOIL SAMPLING PROCEDURES

The soil sampling methods and procedures were performed in general accordance with SECOR's proposal dated April 25, 2005.

#### HAND AUGER SOIL SAMPLING PROCEDURES

All boring locations were hand-augered to a depth of five feet bgs. Soil samples were collected for TPH, VOCs and Metals analysis at approximately 2 and 5 feet bgs at three (3) locations within the Site's warehouse structure, identified as B-3, B-6, and B-10. A photo-ionization detector (PID) was used to monitor the soils collected for volatile organic compound (VOC) vapors of these samples. Soil was removed from the auger and placed in a zip-lock type baggie and the PID probe was inserted into the baggie to monitor the headspace for VOC vapors.

### DIRECT PUSH SOIL SAMPLING PROCEDURES

At a depth of five feet bgs, the borings were advanced using a GeoProbe™, truck-mounted drilling rig, and were completed by driving 2-inch outer-diameter hollow steel rods into the underlying soils using a hydraulic ram mounted on the drilling rig. During advancement at each location, sampling of encountered subsurface soils was performed starting at a depth of five feet bgs using a 48-inch long by 2-inch inner diameter plastic sampler. At each sampling interval, the sampler was driven into undisturbed soil using a hydraulic ram on the GeoProbe™ rig until 48 inches of penetration was achieved. Upon advancement of the sampler to the full 48-inch length, the steel rods were extracted from the boring and the sampler sleeve was removed. The drilling and sampling sequence was then repeated at various intervals for the entire depth of each boring.

Upon extracting the sampler at each depth interval, the soils contained therein were visually examined by SECOR field personnel who then classified the soils. A summary of the soil classifications obtained are presented in the boring logs included as Appendix B.

After soil classification, the soil samples were collected from the sampling tube. A photo-ionization detector (PID) was used to monitor the soils collected for volatile organic compound (VOC) vapors of these samples. Soil was removed from the auger and placed in a zip-lock type baggie and the PID probe was inserted into the baggie to monitor the headspace for VOC vapors. All soil samples were carefully packaged for chemical analysis in glass jars and labeled with appropriate identification information (boring number, sample depth, sample collection date, sample collection time and job number). The samples were then logged on a chain-of-custody form and placed in a chilled cooler for transport to the laboratory. Copies of the chain-of-custody forms are included in Appendix C.

### 3.3 GROUNDWATER SAMPLING PROCEDURES

#### DIRECT PUSH GROUNDWATER SAMPLING PROCEDURES

Saturated soils were observed at depths between approximately 5 and 10 feet bgs in borings B-1, B-2, B-3, B-4, and B-6. Upon reaching this approximate depth interval, each boring was terminated approximately 2 feet beneath first observed saturated soils (approximately 12 feet bgs) and a 48-inch long, 1-inch outer-diameter, slotted, PVC sampling pipe was inserted into the open bore hole. Additional PVC pipes without slots (risers) were attached to the top of the first pipe via water tight gasket fittings until the bottom of the borehole was reached. Poly tubing was then inserted in the PVC riser with a one way valve attached to its tip. Surging and bailing was completed as close as possible to the top of the groundwater level at each location.

Groundwater sampling was performed at borings B-1, B-2, B-3, B-4, and B-6. During sampling, groundwater was transferred directly from the top of the poly tubing bailer into clean glass containers (three 40mL vials and one 1 liter bottle for TPH-g/VOCs and TPH-Diesel analysis, respectively, for each boring) provided by the laboratory. The recharge rate of boring B-2, located south of the former diesel UST on Site, was inadequate to provide the 1-liter sample necessary for diesel analysis. Three 40mL vials were obtained from this location and were analyzed for TPH-gasoline and VOCs. Once the containers were full, threaded lids were attached, the containers labeled and placed into an iced cooler pending transport, under Chain-of-Custody, to a laboratory for chemical analysis. The Chain-of-Custody records for the groundwater sample collected during this investigation are presented in Appendix C.

### **3.4 BORING ABANDONMENT PROCEDURES**

Following the completion of borehole advancement and groundwater sampling, the borings were abandoned by removing the sampling equipment from the borehole and subsequently backfilling with neat cement, as prescribe by the Alameda County Public Works Department.

### **3.5 DECONTAMINATION PROCEDURES**

To maintain quality control during soil sampling, prior to each sampling interval, the sampling equipment was rinsed in distilled water.

#### 4.0 LABORATORY TESTING PROGRAM

All soil samples obtained from the subsurface investigation which were analyzed for TPH-gasoline range, VOCs, and metals were delivered under chain-of-custody (Appendix C) to Centrum Analytical Laboratories, Inc. (Centrum) located in Riverside, California. All soil samples obtained from the subsurface investigation which were analyzed for TPH-diesel range were delivered under chain-of-custody (Appendix C) to Curtiss-Tompkins Analytical Laboratories, Inc. (Curtiss-Tompkins) located in Berkeley, California. Both Centrum and Curtiss-Tompkins are certified to perform hazardous waste testing by the State of California Department of Health Services, Environmental Laboratory Accreditation Program.

Soil samples were analyzed for TPH (diesel and gasoline ranges), VOCs, and metals by EPA Test Methods 8015M, 8260B, and 6010/7000, respectively. Groundwater samples were analyzed for TPH (diesel and gasoline ranges) and VOCs by EPA Test Methods 8015M and 8260B, respectively.

## 5.0 INVESTIGATION FINDINGS

### 5.1 FIELD OBSERVATIONS

The lithology encountered during drilling consisted of predominantly clays, with some silty sands, to the maximum explored depth of approximately 12 feet bgs. Groundwater was encountered approximately 5-9 feet bgs.

Volatile organic vapors were detected in soil samples at concentrations up to 155 parts per million by volume (ppm/V) using a MiniRae photoionization detector (PID) calibrated to isobutylene. Strong hydrocarbon odors were noted in boring B-3 during drilling operations. A summary of the PID readings is included on the above-referenced boring logs (Appendix B).

Several borings were not completed as proposed due to time constraints and poor groundwater recharge rates. These alterations to the proposed scope of work are discussed as follows:

- **B-5:** Boring B-5 had been proposed to sample soil and groundwater in the west corner of the Site.
- **B-7:** Boring B-7 had been proposed to sample soil and groundwater in the east corner of the Site.
- **B-8 and B-9:** Borings B-8 and B-9 had been proposed to sample soil from within the interior of the warehouse structure on the Site for petroleum hydrocarbons, VOCs, and metals.

### 5.2 ANALYTICAL RESULTS

The laboratory test results are discussed below. A summary of the laboratory test results are found in Tables 1, 2, and 3 and the complete laboratory analytical test results are presented on the laboratory data sheets attached as Appendix C. Boring locations are presented on the attached Plot Plan, Figure 2.

A brief summary of the soil analysis is as follows:

#### TPH and VOCs in Groundwater:

Chemical analysis of groundwater samples indicated the following for each boring location:

- **Boring B-1** – The groundwater sample from this boring reported a non-detectable concentration ( $< 0.50 \mu\text{g/L}$ ) of gasoline range hydrocarbons. Diesel range hydrocarbons were detected at a concentration of  $11,000 \mu\text{g/L}$  in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
- **Boring B-2** – The groundwater sample from this boring location reported a non-detectable concentration ( $< 0.50 \mu\text{g/L}$ ) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample due to an insufficient recharge rate.

No VOCs were measured above their respective laboratory detection limits in this sample.

- **Boring B-3** – The groundwater sample from this boring location reported gasoline range hydrocarbons at a concentration of 5,400 µg/L. Diesel range hydrocarbons were detected at a concentration of 200 µg/L in this sample. The VOCs Benzene, n-Butylbenzene, sec-Butylbenzene, Ethylbenzene, p-Isopropylbenzene, p-Isopropyltoluene, Napthalene, n-Propylbenzene, Toluene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Xylenes (m-, p-) and Xylenes (o-) were detected in this sample at concentrations of 15, 60, 20, 51, 57, 3.3, 160, 160, 6.0, 90, 24, 29, and 1.5 µg/L, respectively. No established state maximum contaminant levels (MCLs) exist for n-Butylbenzene, sec-Butylbenzene, p-Isopropylbenzene, p-Isopropyltoluene, Napthalene, n-Propylbenzene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene. The state MCL for Benzene, Ethylbenzene, and Xylenes is 1.0, 700, and 1750 µg/L, respectively. Benzene, at a concentration of 15 µg/L, was found to exceed its respective state MCL for drinking water of 1.0 µg/L.
- **Boring B-4** – The groundwater sample from this boring location reported non-detectable concentrations of gasoline and diesel range hydrocarbons (< 0.50 and < 50 µg/L, respectively). No VOCs were measured above their respective laboratory detection limits in this sample.
- **Boring B-6** – The groundwater sample from this boring location reported non-detectable concentrations of gasoline range hydrocarbons (< 0.50 µg/L). Diesel range hydrocarbons were detected at a concentration of 8,100 µg/L in this sample. The VOCs 1,2-Dichloroethane, cis-1,2-Dichloroethene, Tetrachlorethene, and Trichloroethene were detected at concentrations of 1.0, 0.7, 8.2 and 1.5 µg/L, respectively. No established MCLs exist for 1,2-Dichloroethane and cis-1,2-Dichloroethene. The state MCL for both tetrachlorethene, and trichloroethene is 5.0 µg/L. Tetrachlorethene, at a concentration of 8.2 µg/L, was found to exceed this state MCL.

#### TPH and VOCs in Soil:

Chemical analysis of soil samples indicated the following for each boring location:

- **Boring B-1:**
  - **5 feet bgs** – The soil sample from a depth of 5 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were detected at a concentration of 44 mg/kg in this sample. The VOCs 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and Xylenes (o-) were detected at 0.002, 0.001 and 0.001 mg/kg, respectively. The US EPA Region IX preliminary remediation goals (PRGs) for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and Xylenes (o-) are 210, 17, and 270 mg/kg, respectively.
  - **10 feet bgs** – The soil sample from a depth of 10 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were detected at a concentration of 6.0 mg/kg in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.



- **Boring B-2:**
  - **6 feet bgs** – The soil sample from a depth of 6 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were detected at a concentration of 39 mg/kg in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
  
- **Boring B-3:**
  - **2 feet bgs** – The soil sample from a depth of 2 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
  - **5 feet bgs** – The soil sample from a depth of 5 feet bgs reported gasoline range hydrocarbons at a concentration of 1.1 mg/kg. Diesel range hydrocarbons were not analyzed in this sample. The VOCs n-Butylbenzene, Ethylbenzene, Isopropylbenzene, p-Isopropyltoluene, Napthalene, n-Propylbenzene, 1,2,4-Trimethylbenzene, and Xylenes (m-, p-) were detected in this sample at concentrations of 0.014, 0.07, 0.004, 0.003, 0.052, 0.020, 0.055, and 0.005 mg/kg, respectively. No PRGs have been established for Isopropylbenzene, p-Isopropylbenzene, or p-Isopropyltoluene. The PRGs for n-Butylbenzene, Ethylbenzene, Napthalene, n-Propylbenzene, 1,2,4-Trimethylbenzene, and Xylenes (m-, p-) are 240, 400, 1.7, 240, 520, and 270 mg/kg, respectively. No VOC contaminant was found to exceed its respective PRG in this sample.
  - **7 feet bgs** – The soil sample from a depth of 7 feet bgs reported gasoline range hydrocarbons at a concentration of 160 mg/kg. Diesel range hydrocarbons were detected at a concentration of 390 mg/kg in this sample. The VOCs n-Butylbenzene, Isopropylbenzene, Napthalene, and n-Propylbenzene were detected in this sample at concentrations of 1.6, 0.82, 4.5, and 3.4 mg/kg, respectively. No PRG has been established for Isopropylbenzene. The PRGs for n-Butylbenzene, Napthalene, and n-Propylbenzene are 240, 1.7, and 240 mg/kg, respectively. Napthalene, detected at a concentration of 4.5 mg/kg, was found to exceed its respective PRG for residential soil of 1.7 mg/kg.
  - **12 feet bgs** – The soil sample from a depth of 12 feet bgs reported non-detectable concentrations of gasoline and diesel range hydrocarbons (< 0.50 and <1.0 mg/kg, respectively). The VOCs Isopropylbenzene and n-Propylbenzene were detected in this sample at concentrations of 0.005 and 0.009 mg/kg, respectively. No PRG has been established for Isopropylbenzene. The PRG for n-Propylbenzene is 240 mg/kg. No VOC contaminant was found to exceed its respective PRG in this sample.
  
- **Boring B-4:**
  - **5 feet bgs** – The soil sample from a depth of 5 feet bgs reported non-detectable concentrations of gasoline and diesel range hydrocarbons (< 0.50

and <1.0 mg/kg, respectively). No VOCs were measured above their respective laboratory detection limits in this sample.

○ **Boring B-6:**

- **2 feet bgs** – The soil sample from a depth of 2 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
- **5 feet bgs** – The soil sample from a depth of 5 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
- **8 feet bgs** – The soil sample from a depth of 8 feet bgs reported non-detectable concentrations of gasoline and diesel range hydrocarbons (< 0.50 and <1.0 mg/kg, respectively). No VOCs were measured above their respective laboratory detection limits in this sample.
- **12 feet bgs** – The soil sample from a depth of 8 feet bgs reported non-detectable concentrations of gasoline and diesel range hydrocarbons (< 0.50 and <1.0 mg/kg, respectively). The VOC Tetrachloroethene was detected in this sample at a concentration of 0.004 mg/kg. The PRG for Tetrachloroethene is 0.48 mg/kg. No VOC contaminant was found to exceed its respective PRG in this sample.

○ **Boring B-10:**

- **2 feet bgs** – The soil sample from a depth of 2 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.
- **5 feet bgs** – The soil sample from a depth of 5 feet bgs reported a non-detectable concentration (< 0.50 mg/kg) of gasoline range hydrocarbons. Diesel range hydrocarbons were not analyzed in this sample. No VOCs were measured above their respective laboratory detection limits in this sample.

**Metals in Soil:**

- Chemical analysis of all soil samples from borings B-3, B-6, and B-10 reported concentrations of arsenic which were above the US EPA PRGs for Arsenic of 0.39 mg/Kg. Typical background arsenic levels in California are between 0.6 and 11 mg/Kg. All samples contained arsenic at concentrations which fall within the naturally occurring background levels for California soils and therefore, no further investigation is recommended.
- Chemical analysis of the five foot bgs sample obtained from boring B-6 reported a concentration of chromium which was above the US EPA PRGs for chromium of 30 mg/Kg. Typical background chromium levels in California soils are between 23 and 1,579 mg/Kg. Therefore, no further investigation is recommended with respect to chromium in the Site soils.

- Chemical analysis of the soil samples collected from borings B-3 at 2 feet bgs, B-4 at 5 feet bgs, and B-10 at two and five feet bgs reported concentrations of lead of 160, 1200, 320, and 180 mg/kg, respectively. All of these samples contained lead at concentrations which exceeded the US EPA PRG for lead in residential soil of 150 mg/Kg. SECOR re-submitted all samples which exhibited elevated lead concentrations to the laboratory for Soluble Threshold Limit Concentration (STLC) analysis and sample B-4 at five feet bgs for Toxicity Characteristic Leaching Procedure (TCLP) analysis as well. Soil in which the lead STLC is greater 5.0 mg/L is classified as hazardous waste by the state of California. Chemical analysis of samples B-1 at 5', B-3 at 2', B-4 at 5', B-10 at 2', and B-10 at 5' reported lead STLCs of 6.1, 7.8, 25, 19, and 4.8 mg/L, respectively.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

At the request and authorization of the Olson Company, SECOR conducted a Phase II Environmental Site Assessment (ESA) of the subject property located at 311 2<sup>nd</sup> Street, Oakland, California. This work was conducted in accordance with SECOR's proposal dated April 25, 2005 and the terms provided in The Olson Company's Master Consulting Services Agreement with SECOR dated November 28, 2001. This Phase II ESA was conducted based on the results of SECOR's Draft Phase I ESA dated April 22, 2005 which identified the following recognized environmental conditions (RECs) as warranting further investigation:

- According to groundwater monitoring well data near the Site and previous subsurface investigations, groundwater is expected to be encountered at a depth of approximately 7 feet below the ground surface. As in the following text, the EDR reports identify a total of 48 leaking underground storage tank (LUST) facilities within a half-mile radius of the Site. Of these 48 sites, 32 are located up-gradient with respect to groundwater flow beneath the Site. Given the numerous LUST facilities, SECOR considered it possible that groundwater in the vicinity of the Site is impacted with petroleum hydrocarbons. As a result of the potential groundwater contamination, SECOR recommended analyzing groundwater on the up- and down-gradient sides of the Site in order to assess whether contaminants (i.e. petroleum hydrocarbons and volatile organic compounds (VOCs)) are present at levels which exceed the acceptable human health risk criteria or regulatory clean up levels for residential development.
- The 1950 through 1957 Sanborn Fire Insurance maps indicate that a steel fabrication and welding shop is located on the Site. Potential contamination of Site soils may have occurred during the time when the shop and associated scrap iron storage yard were located on the Site. SECOR recommended sampling the Site soils for metals and petroleum hydrocarbons in order to assess whether these contaminants at levels which exceed human health risk criteria for residential development.
- According to the EDR report, the Site is listed under the LUST and Cortese databases for having a leaking underground storage tank. SECOR reviewed previous environmental reports supplied by the seller which discussed subsurface investigations relating to this UST under the oversight of the County of Alameda Department Environmental Health (ACDEH). A 1,000-gallon UST was reportedly closed in place prior to 1976 by filling it with concrete. This UST is reportedly still located on the property. It is unknown whether the UST stored gasoline or diesel. Previous soil and groundwater investigations indicated residual petroleum hydrocarbon contamination exists in the soil and groundwater in the vicinity of the UST, discussed as follows:
  - In September of 1993, two angled soil borings (SB-1 and SB-2) were drilled under the UST by Blymer Engineers, Inc. (BEI). BEI was contracted by Meyer Plumbing Supply to perform a closure site assessment for the UST. Soil samples were obtained from SB-1 and SB-2 at 5.5 and 7.0 feet, respectively. Analytical results for borings SB-1 and SB-2 showed that TPH-D was detected at concentrations of 4.2 and 15,000 parts per million (ppm), respectively, and that lead was detected in concentrations of 71 and 84 ppm, respectively. In boring SB-1, TPH-G and BTEX were not detected except for 0.0090 ppm xylenes. In boring SB-2, TPH-G was detected at a concentration of 34 ppm while ethylbenzene and xylenes were detected at concentrations of 0.65 and 0.82 ppm, respectively. The groundwater

sample from boring SB-2 showed 5.5 ppm TPH-D, 0.085 ppm TPH-G, and benzene, toluene and xylenes at concentrations of 0.0027, 0.00066, and 0.00051 ppm, respectively.

- o After receipt of the BEI report, the Alameda County Department of Environmental Health (ACDEH) indicated that further investigation would be necessary to vertically and laterally delineate the detected contamination. In response to this request, Meyer Plumbing contracted AllPro Environmental Corporation (AllPro) in March of 1996. At this time, AllPro obtained soil and groundwater samples from four borings placed down-, cross-, and up-gradient of the UST identified as B3 & B4, B5, and B6, respectively. All of these borings were placed outside the neighboring warehouse structure. According to the AllPro report, analytical results of soil samples obtained from all the borings showed that TPH-g, BTEX, MTBE and TPH-D were not detected except for the samples obtained from boring B6 at a depth of 4.5 feet, where TPH-D was detected at a concentration of 16 ppm. Lead was detected in the soil samples from borings B3, B4, B5, and B6 at concentrations of 58, 310, 9.3, and 23 ppm, respectively. According to the AllPro report, analytical results of groundwater samples obtained from all the borings showed that TPH-g, BTEX, MTBE and TPH-D were not detected. Lead was detected in the groundwater samples from borings B3, B4, B5, and B6 at concentrations of 0.049, 1.7, 0.68, and 0.49 mg/L, respectively.
- o In response to the AllPro report, the ACDEH issued a no further action letter dated June 18, 1996 whereupon case closure was granted for the former UST on the Site. This letter does state that any Site modifications such as a change in land use may require a "re-evaluation of the chemical exposure pathways, receptor sensitivities (i.e. residential vs. commercial/industrial), and other applicable criteria which may have been used to assess potential human health risk during the case closure process."
- o SECOR recommended that future case closure requirements, if any, be determined through discussions with the ACDEH and Regional Water Board, based on the intended residential land use and in accordance with the department's requirements as set forth during initial case closure. SECOR also recommended additional soil and groundwater sampling be performed adjacent to the UST, including the interior of the warehouse structure where the former fuel dispenser was located, in order to confirm that contaminant levels exist below regulatory guidelines for residential development or to better estimate the volume of soils that must be excavated and the degree of groundwater remediation that may be necessary, if any, prior to such development. SECOR also recommended that the concrete-filled UST be removed as part of Site development.

SECOR conducted the Phase II subsurface soils investigation of the Site on May 3, 2005. SECOR's investigation of the property consisted of four (4) exploratory borings (B-1, B-2, B-3, & B-4) to a maximum depth of 12 feet below ground surface (bgs) adjacent to the former UST location, one (1) exploratory boring (B-6) to a depth of 12 feet bgs located in the northern up-gradient corner of the Site, and one (1) exploratory borings (B-10) to a depth of 5 feet bgs centrally located within the warehouse structure in the vicinity of the former steel fabrication and weld shop. The analytical results obtained during SECOR's Phase II ESA are attached in Tables 1, 2 and 3.

As presented in the attached tables of analytical results, it appears that petroleum hydrocarbons (primarily diesel fuels) and lead contamination exist in the majority of the Site at levels which will require further characterization. The detected concentrations of lead are at hazardous levels (based both on total and soluble threshold limit concentration) and will require disposal as a hazardous waste if removed from the Site. For development purposes, a human health risk assessment will be necessary to evaluate options for capping of the Site to manage the lead without removing it from the Site. Government agency interaction and approval will be necessary if the lead is to be left at the Site. It is unclear from the data collected whether the lead in soil is from an onsite source or is a regional problem, resulting from placement of old fill on the Site. Therefore, additional assessment may be necessary to determine the source and extent of lead contamination on the Site.

SECOR recommends that a human health risk assessment (HHRA) be conducted to evaluate if a risk exists with regards to vapor intrusion, due to diesel fuel contamination detected in groundwater at shallow depths (approximately 5 to 6 feet below ground surface). This HHRA could then be used to evaluate whether any clean up is necessary to allow development as residential property and assure future residents no excess health risk exist due to the residual contamination on Site. Another option the HHRA could help evaluate is whether a vapor barrier will be necessary to control potential vapor intrusion created by the diesel fuel in the groundwater in the vicinity of the former UST if that is the driver of risk. In addition, the extent of diesel fuel and, to a lesser extent, gasoline in groundwater and soil are not defined. It is unclear whether the Site is the source of all detected impact on the property or if a regional groundwater plume exists which is also affecting the Site. The ACDEH may require further assessment of this impact as part of the Site revaluation for residential development.

The groundwater sample from boring B-6, which was located in the northern up-gradient corner of the Site, reported a tetrachloroethene (PCE) concentration of 8.2 µg/L. This exceeds the state Maximum Contaminant Level (MCL) for PCE in drinking water of 5.0 µg/L. Given that this PCE appears to originate from an off-site source and that a potable water source is not planned as part of future Site development, SECOR recommends no additional investigation. However, SECOR recommends this detection of PCE be addressed in the recommended HHRA.

The Alameda County Department of Environmental Health (ACDEH) issued a no further action letter dated June 18, 1996, whereupon case closure was granted for the former UST on the Site. This UST still exists on the Site and is filled with concrete. This UST will need to be removed during planned demolition activities. The ACDEH letter states that any Site modifications, such as a change in land use, may require a "re-evaluation of the chemical exposure pathways, receptor sensitivities (i.e. residential vs. commercial/industrial), and other applicable criteria which may have been used to assess potential human health risk during the case closure process." A copy of the no further action letter is attached as Appendix A.

Based on the planned land use change of the Site, it is recommended that the ACDEH receive a copy of this report to evaluate if any additional assessment, a HHRA or potential remediation will be necessary to obtain a new case closure for residential use.

## 7.0 CLOSURE

SECOR's investigation has been performed with the degree of skill generally exercised by practicing engineers and geologists in the environmental field. SECOR makes no other warranty, either expressed or implied, concerning the conclusions and professional advice that is contained within the body of this report.

Inherent in most projects performed in a heterogeneous subsurface environment, continuing excavation and assessments may reveal findings that are different than those presented herein. This facet of the environmental profession should be considered when formulating professional opinions on the limited data collected on these projects.

This report has been issued with the clear understanding that it is the responsibility of the owner, or their representative, to make appropriate notifications to regulatory agencies. It is specifically not the responsibility of SECOR to conduct appropriate notifications as specified by current County and State regulations.

The information presented in this report is valid as of the date our exploration was performed. Site conditions may degrade with time; consequently, the findings presented herein are subject to change.

## 8.0 REFERENCES

### Technical References

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, website.

California Division of Mines and Geology (CDMG), 1961, Geologic Map of California, San Francisco Sheet, California, Scale 1:250,000.

CDMG, 1998, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada.

Environmental Data Resources, Inquiry Number: 1396212.2s

United States Geologic Survey (USGS), 1980, Oakland West 7.5 Minute Quadrangle, photo-revised 1959, Scale 1:24,000.

### Agency Contacts

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City of Oakland Fire Department, Hazardous Materials Management Program, Mr. Vibhor Jain: (510) 238-7491.

City of Oakland Building and Safety Department: (510) 238-3344.

### Previous Reports

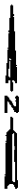
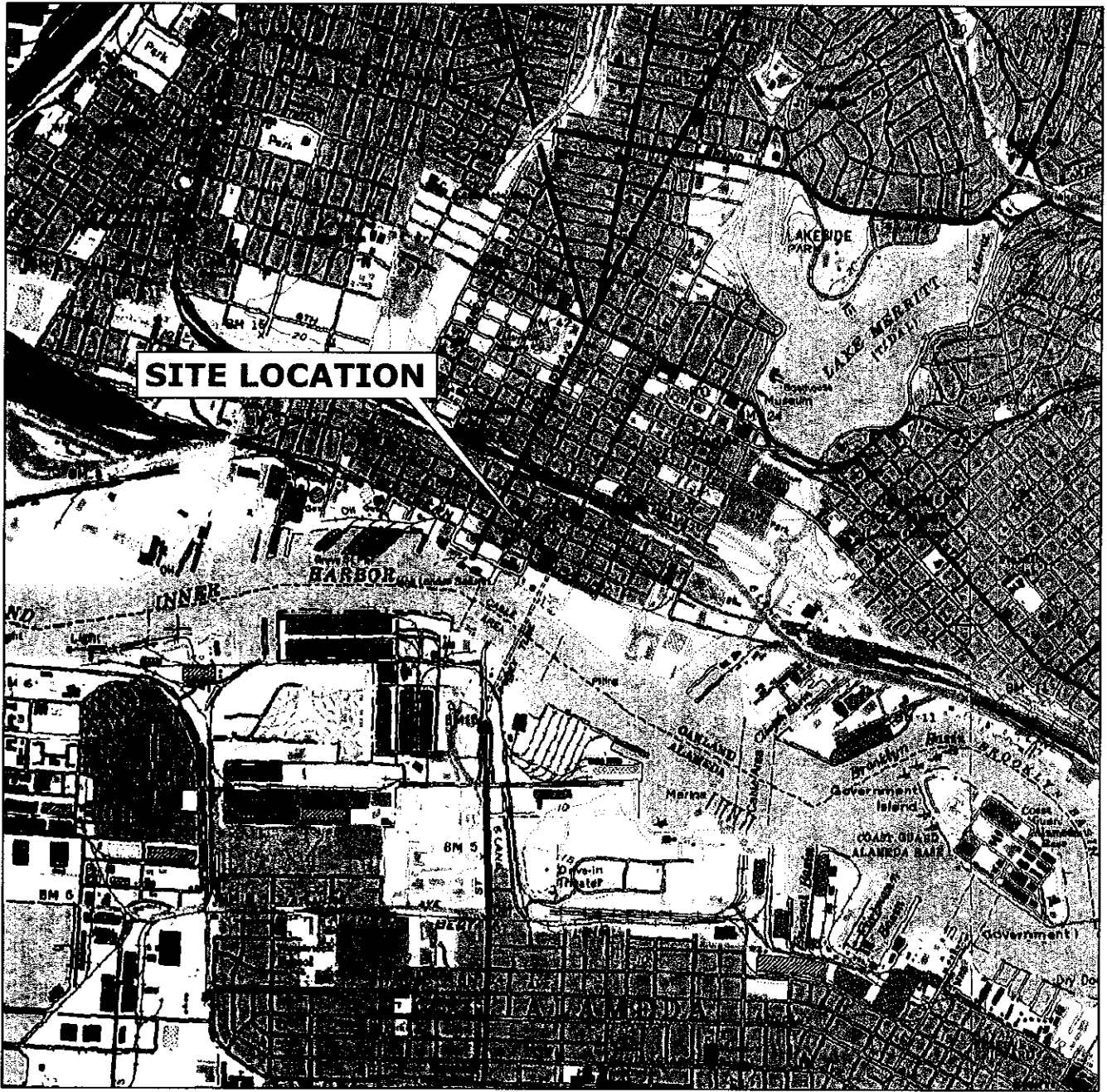
AllPro Environmental Corporation (AllPro), 1996, *Soil and Groundwater Investigation Report, Meyer Plumbing Supply Facility, 311 Second Street, Oakland, California*, dated April 5, 1996.

SECOR International, Inc [SECOR], 2004a, *Draft Phase I Environmental Site Assessment, 311 2<sup>nd</sup> Street, Oakland, California*, dated April 22, 2005.

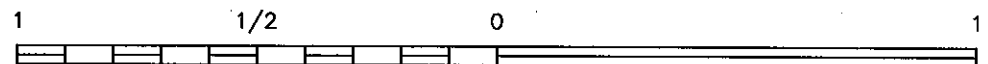
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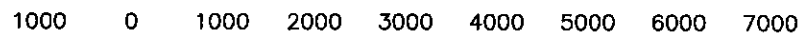
FIGURES



CALIFORNIA



SCALE (MILES)



SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; OAKLAND WEST, CALIFORNIA; 1993



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PREPARED FOR:

THE OLSON COMPANY

311 2nd STREET  
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE:

1

JOB NUMBER:

04OT.29220.21

DRAWN BY:

S. SIMMONS

CHECKED BY:

APPROVED BY:

DATE:

4/21/05



TABLES

Table 1

Summary of Chemical Analysis of Groundwater Samples Collected from Borings B-1, B-2, B-3, B-4, and B-6, EPA Test Methods 8015B, 8260B, and GCMS

Location	Depth (ft)	Date	Petroleum Hydrocarbons (TPH) ug/L		Volatile Organic Compounds (VOCs) ug/L																		
			TPH (gasoline range)	TPH (diesel range)	Benzene	n-Butylbenzene	sec-Butylbenzene	1,2-Dichloroethane	cis-1,2-Dichloroethene	Ethylbenzene	p-isopropylbenzene	p-isopropyltoluene	Napthalene	n-Propylbenzene	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl ether (MTBE)	Xylenes, m-, p-	Xylenes, o-	
B-1	5.0	5/3/2005	ND	11000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	7.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	7.0	5/3/2005	5300	200	15	60	20	ND	ND	51	57	3.3	160	160	ND	6.0	ND	90	24	ND	29	1.5	ND
B-4	5.0	5/3/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	9.0	5/3/2005	ND	8100	ND	ND	ND	1.0	0.7	ND	ND	ND	ND	ND	8.2	ND	1.5	ND	ND	ND	ND	ND	ND
Federal/State MCL for Drinking Water µg/L					1.0					700					5.0	150	5.0			13	1,750	1,750	
Reporting Limit			0.50	50	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	

\*NA= Not Applicable, groundwater sample HP-2 was not analyzed for TPH-diesel or motor oil due to insufficient sample volume.

\*\* shaded boxes indicate contaminants for which there is no established MCL.

ND = Not detected above the given laboratory detection limits.

Table 2

Summary of Chemical Analysis of Soil Samples Collected from Borings B-1, B-2, B-3, B-4, B-6, and B-10, EPA Test Methods 8015B, 8260B, and GCMS

Location	Depth (ft)	Date	Petroleum Hydrocarbons (TPH) mg/kg		Volatile Organic Compounds (VOCs) mg/kg																		
			TPH (gasoline range)	TPH (diesel range)	Benzene	n-Butylbenzene	sec-Butylbenzene	1,2-Dichloroethane	cis-1,2-Dichloroethane	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Naphthalene	n-Propylbenzene	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl ether (MTBE)	Xylenes, m-, p-	Xylenes, o-	
B-1	5.0	5/3/2005	ND	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.001	ND	ND	0.001
B-1	10.0	5/3/2005	ND	6.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	6.0	5/3/2005	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	2.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	5.0	5/3/2005	1.1	NA	ND	0.014	ND	ND	ND	0.07	0.004	0.003	0.052	0.020	ND	ND	ND	0.055	ND	ND	0.005	ND	ND
B-3	7.0	5/3/2005	160	390	ND	1.6	ND	ND	ND	ND	0.82	ND	4.5	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	12.0	5/3/2005	ND	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	0.009	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4	5.0	5/3/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	2.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	5.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	8.0	5/3/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	12.0	5/3/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004	ND	ND	ND	ND	ND	ND	ND	ND
B-10	2.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10	5.0	5/3/2005	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
US EPA Region IX PRGs					0.64	240	220	0.28		400			1.7	240	0.48	520	2.9	520	210	17	270	270	
Reporting Limit			0.50	50	0.001	0.00	0.002	0.001	0.002	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.002	0.001

\*NA= Not Applicable, soil samples at 2 and 5 feet bgs from borings B-3 and B-6 were not analyzed for diesel HP-2 was not analyzed for TPH-diesel or motor oil due to insufficient sample volume.

\*\* shaded boxes indicate contaminants for which there is no established PRG.

ND = Not detected above the given laboratory detection limits.

Table 3

Summary of Metals Analysis of Select Soil Samples Collected from Soil Borings SB-9, SB-10, SB-11, SB-12, SB-13 and SB-14, EPA Test Method 6010/7000.

Location	Depth (ft)	Date	CAM 17 Metals mg/kg														
			Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Nickel	Mercury	Vanadium	Zinc	Lead STLC mg/L	Lead TCLP mg/L	
B-1	5	5/3/2005	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	6.1	NA
B-1	10	5/3/2005	NA	NA	NA	NA	NA	NA	NA	NA	1.9	NA	NA	NA	NA	NA	NA
B-2	6	5/3/2005	NA	NA	NA	NA	NA	NA	NA	NA	47	NA	NA	NA	NA	NA	NA
B-3	2	5/3/2005	<b>4.3</b>	110	ND	0.52	27	4.8	57	<b>160</b>	16	2.0	22	130	<b>7.8</b>	NA	NA
B-3	5	5/3/2005	<b>2.1</b>	54	ND	ND	30	3.5	7.3	8.3	12	0.04	19	18	NA	NA	NA
B-3	8	5/3/2005	NA	NA	NA	NA	NA	NA	NA	3.0	NA	NA	NA	NA	NA	NA	NA
B-3	12	5/3/2005	NA	NA	NA	NA	NA	NA	NA	3.0	NA	NA	NA	NA	NA	NA	NA
B-4	5	5/3/2005	NA	NA	NA	NA	NA	NA	NA	1200	NA	NA	NA	NA	NA	25	1.2
B-6	2	5/3/2005	<b>3.2</b>	59	ND	ND	30	3.0	7.8	27	11	0.05	19	19	NA	NA	NA
B-6	5	5/3/2005	<b>1.8</b>	30	ND	ND	<b>32</b>	2.2	5.1	3.9	10	ND	19	10	NA	NA	NA
B-6	8	5/3/2005	NA	NA	NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA	NA	NA
B-6	10	5/3/2005	NA	NA	NA	NA	NA	NA	NA	2.8	NA	NA	NA	NA	NA	NA	NA
B-10	2	5/3/2005	<b>6</b>	130	ND	0.85	19	5.4	870	<b>320</b>	16	0.81	21	410	<b>19</b>	NA	NA
B-10	5	5/3/2005	<b>2.3</b>	50	ND	ND	24	2.5	16	180	11	0.08	17	36	4.8	NA	NA
US EPA PRGs mg/Kg			<b>0.39</b>	<b>5,400</b>	<b>150</b>	<b>37</b>	<b>30</b>	<b>900</b>	<b>3,100</b>	<b>150</b>	<b>1,600</b>	<b>23</b>	<b>78</b>	<b>23,000</b>			
Typical background levels in California			<b>0.6-11</b>	<b>133-1400</b>	<b>0.25-2.7</b>	<b>0.05-1.7</b>	<b>23-1579</b>	<b>2.7-46.9</b>	<b>9.1-96.4</b>	<b>12.4-97.1</b>	<b>9-509</b>	<b>0.05-0.90</b>	<b>39-288</b>	<b>88-236</b>			
Reporting Limit mg/Kg			<b>1.0</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>1.0</b>	<b>1.0</b>	<b>0.02</b>	<b>5.0</b>	<b>10</b>			
Reporting Limit mg/L															<b>2.0</b>	<b>0.30</b>	

\*metal concentrations which exceeded their respective US EPA PRGs are highlighted in bold print.

\*\* shaded boxes indicate contaminants for which there is no established MCL.

NA = Not Analyzed

ND = Not detected above the given laboratory detection limits.

**APPENDIX A**  
**SUPPORTING DOCUMENTS**



ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



Alameda County CC4580  
Environmental Protection Services  
1131 Harbor Bay Parkway, Room 250  
Alameda CA 94502-6577

June 18, 1996  
LOP STID 4616  
page 1 of 2

**REMEDIAL ACTION COMPLETION CERTIFICATION**

Edward Myall and Ray Weymouth  
311-2nd St.  
Oakland CA 94607

RE: Meyer Plumbing Supply, 311-2nd St., Oakland CA 94607

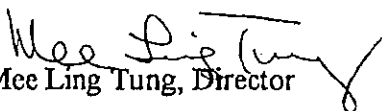
Dear Mr. Myall and Mr. Weymouth,

This letter confirms the completion of site investigation and remedial action for the 1,000-gallon underground storage tank at the above referenced site. Based on the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, **no further action related to the underground tank release is required at this time.** Please be aware that this does not free present or future landowners or operators from cleanup responsibilities in the event that new information indicates a pollutant problem on the site or originating from the site.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations. The owner must promptly notify this agency if there is a proposal for a change in land use, site activity, or structural configuration of the site (ie basements in new buildings where none were before). Such site modifications may require a re-evaluation of the chemical exposure pathways, receptor sensitivities (ie residential vs commercial/industrial), and/or other applicable criteria which may have been employed to assess potential human health risk during the case closure process.

If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761. Attached is a copy of the Case Closure Summary, which was reviewed and approved by this agency and the RWQCB.

Very truly yours,

  
Mee Ling Tung, Director

**APPENDIX B  
BORING LOGS**





# LOG OF BORING

Logged by <b>DIGN</b>	Date Drilled <b>5-3-05</b>	Drilling Contractor <b>VIRONEX</b>	Method/Equipment <b>GEO PROBE</b>	Boring Number <b>B-3</b>
Time Start <b>1345</b>	Boring Diam <b>2"</b>	Surface Elev. (ft) <b>—</b>	Groundwater Depth (ft) <b>7'</b>	Total Depth(ft.) <b>12'</b>
Time End <b>1430</b>				Hammer Drop (140 Lb.) <b>—</b>
Job No <b>040T-29220-2Z</b>	Project <b>JLS - OAKLAND</b>	Location <b>UST - NE</b>		

WELL CONSTRUCTION Casing Dia.	Depth/ Sampling Method Interval	Blow Count	Graphic Log	Sample	DESCRIPTION Soil Type, Gradation, Consistency, Moisture, Color, USCS, etc.	HNU, ppm	COMMENTS
	0				CONCRETE		
	1				↓		
	2		X	B-307 SOIL	PG SAND, LESS THAN 5% FINES, LOW MOISTURE, NO ODOR	Ø	1350
	3				↓		
	4				↓		
	5		X	B-305 SOIL	PG SAND w/ SILT; MUST; HC ODOR	155	1350
	6				↓		
	7		X	B-31 GW	HC ODOR, NO SHEEN		
	8		X	B-308 SOIL	PG SAND w/ SILT, MOIST; HC ODOR	50	1400
	9				WG SAND; GRAY; MOIST, STRONG HC ODOR		
	10				↓		
	11				↓		
	12		X	B-302 SOIL		Ø	1415
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	0						

CEMENT ↑  
 GROUT ↓

# LOG OF BORING

Logged by <b>DION</b>	Date Drilled <b>5-3-05</b>	Drilling Contractor <b>VIRONEX</b>	Method/Equipment <b>GEO PROBE</b>	Boring Number <b>B-4</b>
Time Start <b>900</b>	Boring Diam <b>2"</b>	Surface Elev. (ft)	Groundwater Depth (ft) <b>5'</b>	Total Depth (ft) <b>12'</b>
Time End <b>0945</b>				Hammer Drop (140 Lb.) <b>—</b>
Job No <b>040T-29220.22</b>		Project <b>OAKLAND PH II</b>		Location <b>UST - NORTH WEST</b>

WELL CONSTRUCTION Casing Dia.	Depth Sampling Method Interval	Blow Count	Graphic Log	Sample *	DESCRIPTION Soil Type, Gradation, Consistency, Moisture, Color, USCS, etc.	HNU, ppm	COMMENTS
	0				<b>ASPHALT</b>		
	1				PG SAND, REDDISH BROWN; NO MOISTURE; NO ODOR	0.0	900
	2				PG SAND W/ SILT, DARK BROWN; LOW MOISTURE; NO ODOR	0.0	910
	3				PG SAND W/ SILT, DARK BROWN; LOW MOISTURE; NO ODOR	0.0	915
	4						
	5		X	B-4 SOIL	→ NO ODOR; ↓ NO SHEEN	0.0	930
	6		X	B-4 GW	PG SAND W/ SILT, BROWN; MOIST; NO ODOR		
	7						
	8				FINE SAND W/ SILT, VERY DARK BROWN; MOIST; NO ODOR	0.0	930
	9						
	10						
	11						
	12						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	0						

CEMENT →  
 ← GROUT

# LOG OF BORING

Logged by <b>JUSTIN</b>	Date Drilled <b>5/3/05</b>	Drilling Contractor <b>VIRONEX</b>	Method/Equipment <b>GEO PROBE</b>	Boring Number: <b>B-6</b>
Time Start <b>1500</b>	Boring Diam <b>2"</b>	Surface Elev. (ft): <b>—</b>	Groundwater Depth (ft.): <b>9'</b>	Total Depth(ft.): <b>12'</b>
Time End <b>1540</b>				Hammer Drop (140 Lb.) <b>—</b>
Job No <b>040T. 29220. 22</b>		Project <b>OAKLAND PH. II</b>		Location: <b>NE - INSIDE (UPGRAD.)</b>

WELL CONSTRUCTION Casing Dia	Depth/ Sampling Method	Interval	Blow Count	Graphic Log	Sample *	DESCRIPTION Soil Type, Gradation, Consistency, Moisture, Color, USCS, etc.	HNU, ppm	COMMENTS
		0				CONCRETE		
		1				↓		
		2		X	B-6 PT SOIL	PG SAND, LESS THAN 5% FINES; LOW MOISTURE, NO ODOR	Ø	1510
		3				↓		
		4						
		5		X	B-6 PT SOIL	PG SAND W/SILT; MOIST; NO ODOR	Ø	1515
		6						
		7						
		8		X	B-6 PT SOIL	PG SAND W/SILT; MOIST; NO - HC ODOR	2.1	1530
		9						
		10		X	B-6 GW	NO ODOR/NO SHEEN		1530
		11						
		12		X	B-6 PT SOIL	↓	Ø	1550
		3						
		4						
		5						
		6						
		7						
		8						
		9						
		0						

CEMENT  
GRAOUT  
↑  
←  
↓

# LOG OF BORING

Logged by <b>DION</b>	Date Drilled <b>5/3/05</b>	Drilling Contractor <b>VIRONEX</b>	Method/Equipment <b>HA</b>	Boring Number <b>B-10</b>
Time Start <b>1500</b>	Boring Diam <b>2"</b>	Surface Elev. (ft) <b>-</b>	Groundwater Depth (ft) <b>-</b>	Total Depth(ft.) <b>5'</b>
Time End <b>1530</b>				Hammer Drop (140 Lb.) <b>-</b>
Job No <b>0407.29220.22</b>		Project <b>OAKLAND PH #</b>		Location <b>INTERIOR - MID.</b>

WELL CONSTRUCTION Casing Dia.	Depth Sampling Method Interval	Blow Count	Graphic Log	Sample	DESCRIPTION Soil Type, Gradation, Consistency, Moisture, Color, USCS, etc.	HNU, ppm	COMMENTS
	0				<b>CONCRETE</b>		
<b>CEMENT</b> → <b>GROUT</b> ←	1		X	B-10 SOIL	<b>PG SAND, LESS THAN 5% FINES; LOW MOISTURE; NO ODOR</b>	Ø	<b>1500</b>
	2						
	3						
	4						
	5		X	B-10 SOIL	<b>PG SAND/SILT; MOIST; NO HC ODOR</b>	Ø	<b>1520</b>
	6						
	7						
	8						
	9						
	0						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	0						



**APPENDIX C  
LABORATORY DATA SHEETS  
QA/QC RESULTS  
AND CHAIN-OF -CUSTODY RECORDS**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T


Prepared for:

Secor International  
25864-F Business Center Dr  
Redlands, CA 92374

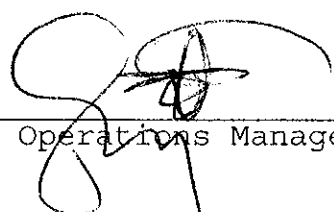
Date: 12-MAY-05  
Lab Job Number: 179230  
Project ID: 040T.29220.52  
Location: Oakland-JLS

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

  
Project Manager

Reviewed by:

  
Operations Manager

This package may be reproduced only in its entirety.

## CASE NARRATIVE

Laboratory number: 179230  
Client: Secor International  
Project: 040T.29220.52  
Location: Oakland-JLS  
Request Date: 05/03/05  
Samples Received: 05/03/05

This hardcopy data package contains sample and QC results for eight soil samples and four water samples, requested for the above referenced project on 05/03/05. The samples were received on ice and intact.

TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Soil:

No analytical problems were encountered.



# SECOR CHAIN-OF-CUSTODY RECORD

COC # 03902  
Page 1 of 2

FIELD OFFICE INFORMATION		PROJECT INFORMATION				ANALYSES / METHOD REQUEST	REMARKS / PRECAUTIONS	
OFFICE: <b>REDLANDS</b>	Project No.: <b>040T.29220.52</b> Task:	Project Name: <b>OAKLAND - JLS</b>		Number of Containers	TPH - DIESEL		TAT	REPORTING REQUIREMENTS
Send Report To: <b>JUSTIN HONE</b>	Project Manager: <b>JUSTIN HONE</b>	Laboratory: <b>CURTISS - TOMPKINS</b>						
Telephone: <b>(909) 335-6116 x2240</b>	Fax / E-Mail: <b>jhone@secor.com</b>							
Sample No. / Identification	Date	SAMPLE		Container & Size **	Preservative			
		Time	Matrix*					
-1 B-1	5/3/05	1110	H <sub>2</sub> O	1L glass	NONE	X	3 DAY RUSH!! EXTRA 50% IS OK. JPH	
-2 B-2		1615	H <sub>2</sub> O			X		
-3 B-3		1435	H <sub>2</sub> O			X		
-4 B-4		0945	H <sub>2</sub> O			X		
-5 B-6		1530	H <sub>2</sub> O			X		
-6 B-1 @ 10'		1110	soil	2- 4oz glass		X		
-7 B-1 @ 5'		1045	soil			X		
-8 B-2 @ 6'		1235	soil			X		
-9 B-3 @ 7'		1400	soil			X		
-10 B-3 @ 12'		1415	soil			X		
		0930	soil			X		
Possible Hazard Identification				Sample Disposal				
<input type="checkbox"/> Non-Hazardous <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown				<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months				

Sampled by: <b>DION MONDE / JUSTIN HONE</b>		Shipment Method:		Airbill Number:	
Signature		Print Name		Company	
1a Relinquished by:		<b>JUSTIN HONE</b>		<b>SECOR</b>	
1b Received by:		<i>Jawannetis</i>		<i>CS</i>	
2a Relinquished by:				Date: <b>5/3/05</b>	
2b Received by:				Time: <b>5:00pm</b>	
3a Relinquished by:					
3b Received by:					

\*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other    \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

REC'D intact; on ice

179230



# SECOR CHAIN-OF-CUSTODY RECORD

COC # **03903**  
Page **2** of **2**

FIELD OFFICE INFORMATION		PROJECT INFORMATION				Number of Containers	ANALYSES / METHOD REQUEST						REMARKS / PRECAUTIONS		
OFFICE: <b>REDLANDS</b>		Project No.: <b>040T. 29220.22</b> Task:					Number of Containers							TAT <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Other REPORTING REQUIREMENTS <input type="checkbox"/> MB & SURGS <input type="checkbox"/> Dup/MS/MSD <input type="checkbox"/> Raw Data <input type="checkbox"/> CLP Rpt <input type="checkbox"/> EDD <input type="checkbox"/> Other	
Send Report To: <b>JUSTIN HONE</b>		Project Name: <b>OAKLAND - JLS</b>													
Telephone: <b>(909) 335-6116 x2240</b>		Project Manager: <b>JUSTIN HONE</b>													
Fax / E-Mail: <b>jhone@secor.com</b>		Laboratory: <b>CURTISS - TOMPKINS</b>													
Sample No. / Identification	Date	SAMPLE Time	Matrix*	Container & Size **	Preservative										
<b>B6 @ 8'</b>	<b>5/3/05</b>	<b>1525</b>	<b>soil</b>	<b>2-4oz</b>	<b>NONE</b>	XX <b>TPH - DIESEL</b>						<b>3 DAY RUSH!!!</b> <b>EXTRA 50%.</b> <b>IS O.K.</b> <i>[Signature]</i>			
<b>B6</b>	<b>5/3/05</b>	<b>1525</b>	<b>soil</b>	<b>glass</b>	<b>NONE</b>										
Possible Hazard Identification		Sample Disposal													
<input type="checkbox"/> Non-Hazardous <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months													

-11  
-12

Signature		Print Name		Company		Date		Time	
1a Relinquished by:		<b>JUSTIN HONE</b>		<b>SECOR</b>		<b>5/3/05</b>		<b>5:00p</b>	
1b Received by:		<i>[Signature]</i>		<b>CAT</b>		<b>5/3/05</b>		<b>5:20p</b>	
2a Relinquished by:									
2b Received by:									
3a Relinquished by:									
3b Received by:									

\*Matrix Key: AO = Aqueous AR = Air SO = Soil WA = Waste OT = Other \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

Received *[Signature]*  
 Cold *[Signature]* intact



## Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	EPA 3520C
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	05/03/05
Units:	ug/L	Received:	05/03/05
Batch#:	101697	Prepared:	05/03/05

Field ID:	B-1	Diln Fac:	10.00
Type:	SAMPLE	Analyzed:	05/05/05
Lab ID:	179230-001		

Analyte	Result	RL
Diesel C10-C24	11,000 H Y	500

Surrogate	%REC	Limits
Hexacosane	DO	55-143

Field ID:	B-3	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	05/04/05
Lab ID:	179230-002		

Analyte	Result	RL
Diesel C10-C24	200 H Y	50

Surrogate	%REC	Limits
Hexacosane	69	55-143

Field ID:	B-4	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	05/05/05
Lab ID:	179230-003		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	76	55-143

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

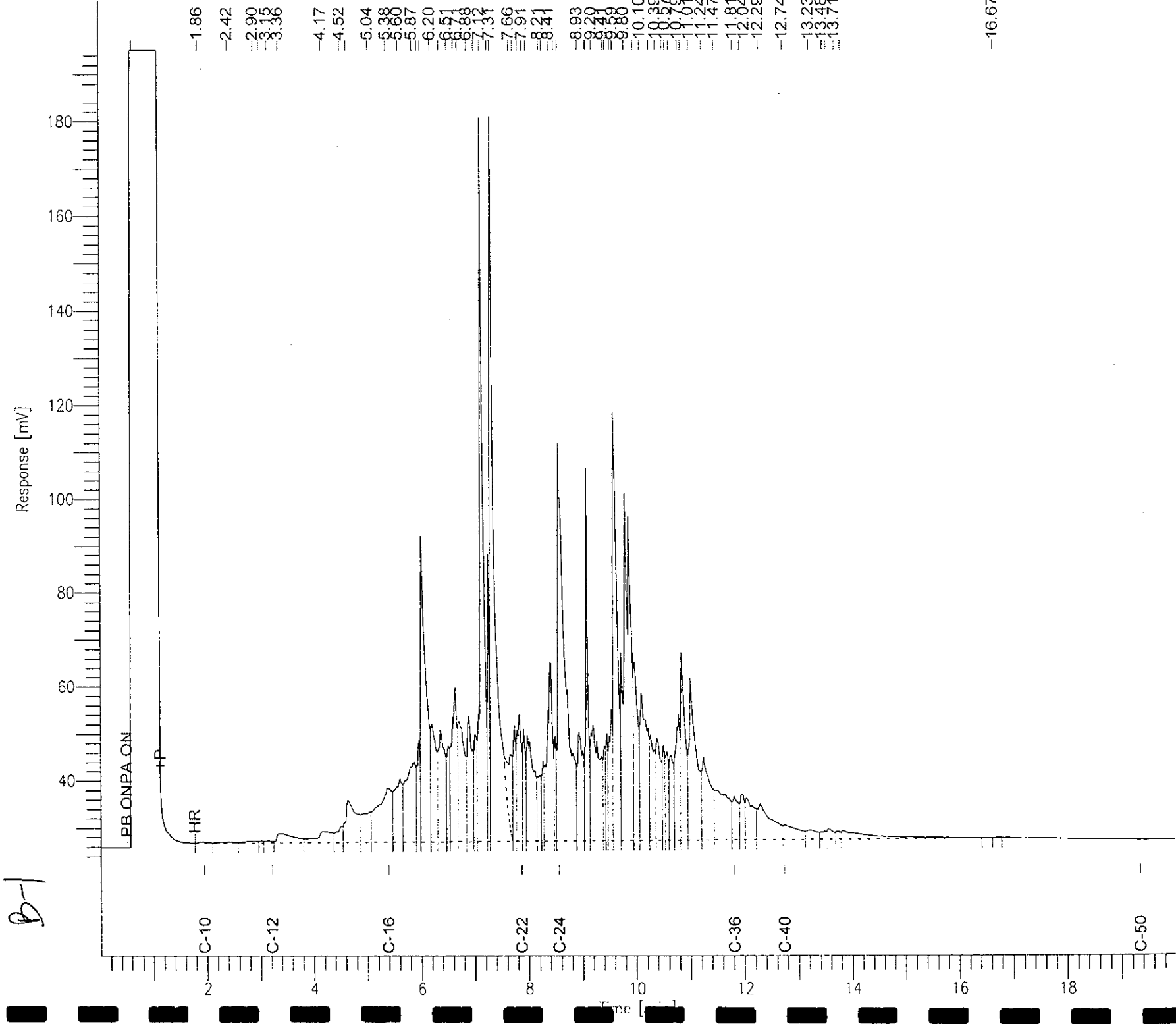
# Chromatogram

Sample Name : 179230-001,101697  
FileName : G:\GC15\CHB\124B031.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 22 mV

Sample #: 101697  
Date : 5/5/05 08:17 AM  
Time of Injection: 5/5/05 01:18 AM  
Low Point : 22.20 mV  
Plot Scale: 173.0 mV  
High Point : 195.18 mV

Page 1 of 1



# Chromatogram

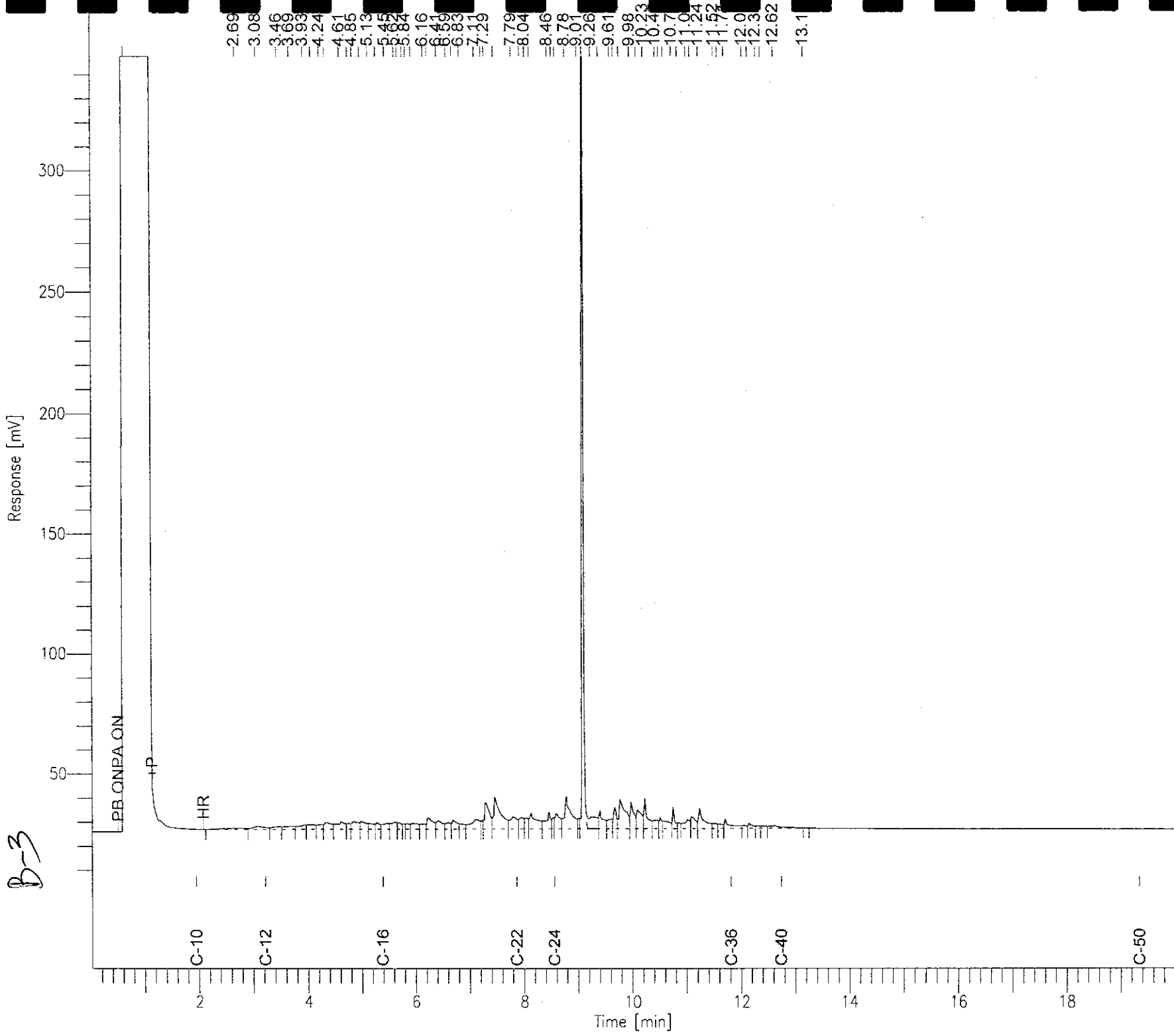
Sample Name : 179230-002,101697  
FileName : G:\GC15\CHB\124B028.RAW  
Method : BPEHI22S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 7 mV

Sample #: 101697  
Date : 5/5/05 08:16 AM  
Time of Injection: 5/4/05 11:51 PM  
Low Point : 7.39 mV  
Plot Scale: 340.2 mV

Page 1 of 1  
High Point : 347.62 mV

B-3







Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	EPA 3520C
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	05/03/05
Units:	ug/L	Received:	05/03/05
Batch#:	101697	Prepared:	05/03/05

Field ID: B-6 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 05/05/05  
 Lab ID: 179230-004

Analyte	Result	RL
Diesel C10-C24	8,100 L Y	50

Surrogate	%REC	Limits
Hexacosane	106	55-143

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC292524 Analyzed: 05/04/05

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	106	55-143

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

# Chromatogram

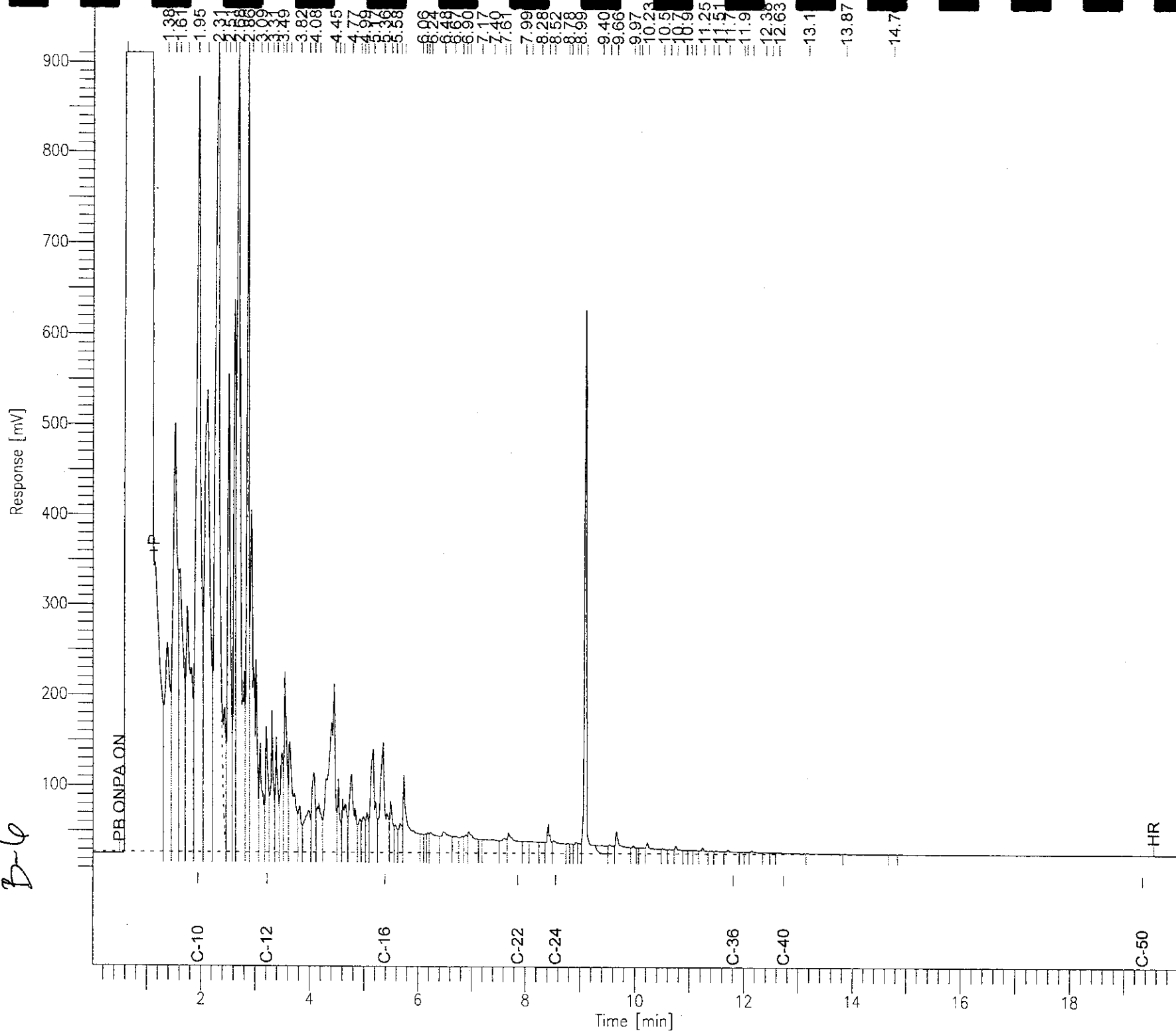
Sample Name : 179230-004,101697  
FileName : G:\GC15\CHB\124B030.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 4 mV

Sample #: 101697  
Date : 5/5/05 08:17 AM  
Time of Injection: 5/5/05 12:49 AM  
Low Point : 3.60 mV  
Plot Scale: 907.1 mV

Page 1 of 1  
High Point : 910.69 mV

*D-6*



# Chromatogram

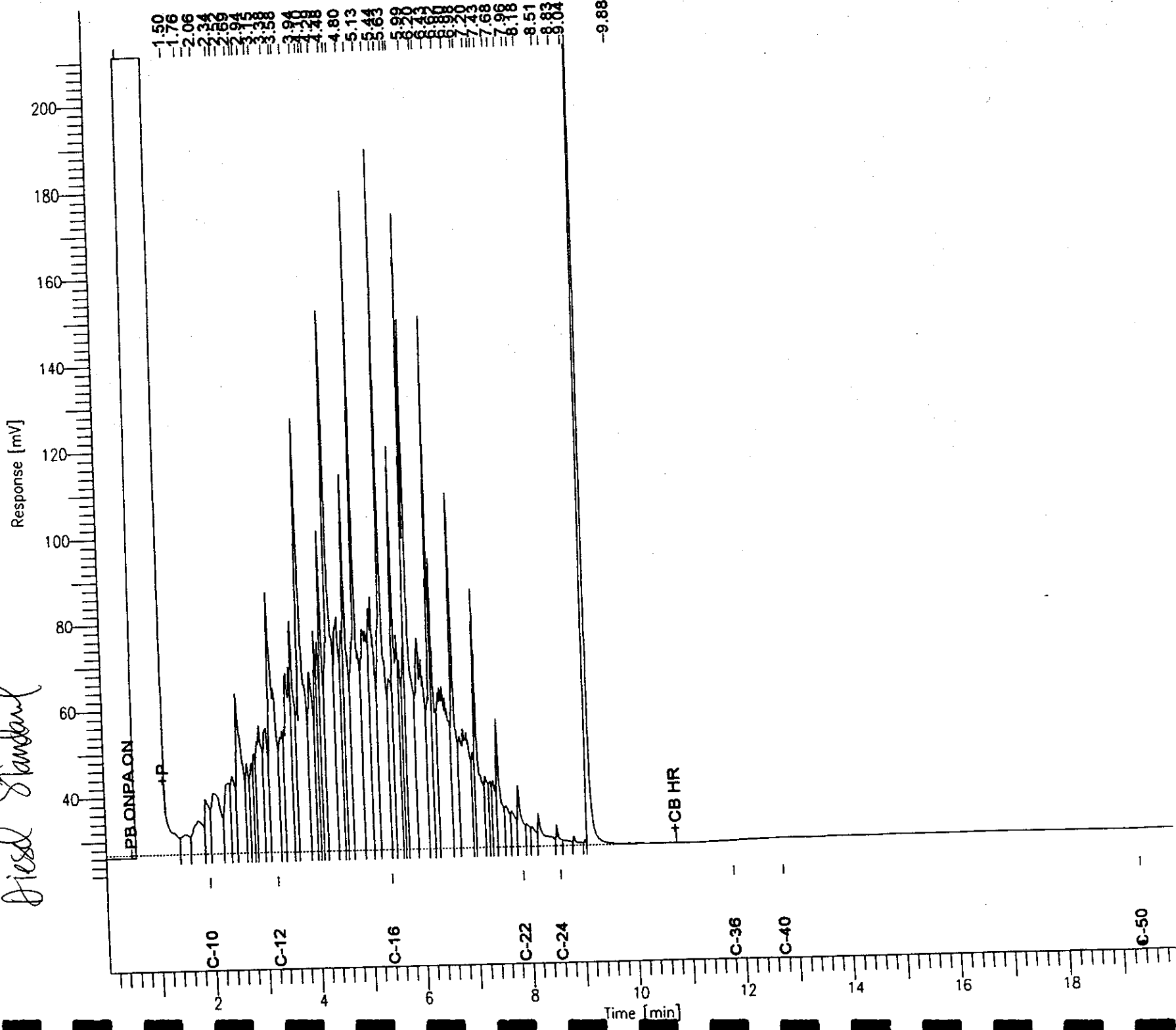
Page 1 of 1

Sample #: 500mg/L  
Date : 5/4/05 12:17 PM  
Time of Injection: 5/4/05 11:19 AM  
Low Point : 21.17 mV  
High Point : 211.02 mV  
Plot Scale: 189.9 mV

End Time : 19.99 min  
Plot Offset: 21 mV

Sample Name : ccv\_S467.dsl  
FilePath : G:\GC15\CHB\124B003.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

*Fixed Standard*





## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	EPA 3520C
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	101697
Units:	ug/L	Prepared:	05/03/05
Diln Fac:	1.000	Analyzed:	05/04/05

Type: BS Lab ID: QC292525

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,626	105	50-133

Surrogate	%REC	Limits
Hexacosane	107	55-143

Type: BSD Lab ID: QC292526

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,553	102	50-133	3	40

Surrogate	%REC	Limits
Hexacosane	106	55-143

### Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	SHAKER TABLE
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	05/03/05
Units:	mg/Kg	Received:	05/03/05
Basis:	as received	Prepared:	05/04/05
Batch#:	101711	Analyzed:	05/04/05

Field ID: B-1@10'	Lab ID: 179230-005
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	6.0 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	102	51-136

Field ID: B-1@5'	Lab ID: 179230-006
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	44 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	121	51-136

Field ID: B-2@6'	Lab ID: 179230-007
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	39 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	93	51-136

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

# Chromatogram

Sample Name : 179230-005,101711  
File Name : G:\GC15\CHB\124B010.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

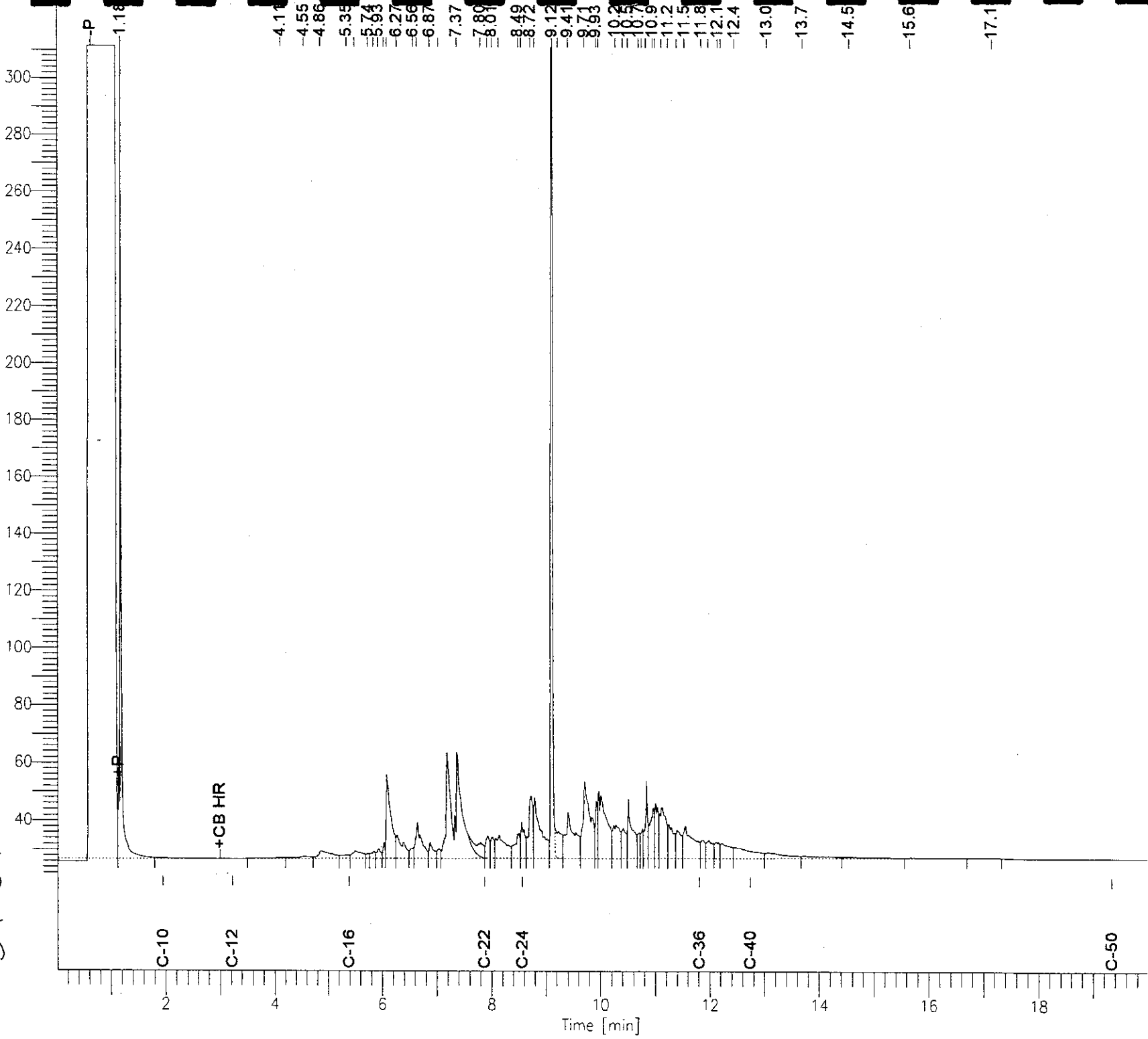
Sample #: 101711  
Date : 5/4/05 04:03 PM  
Time of Injection: 5/4/05 03:11 PM  
Low Point : 20.83 mV  
Plot Scale: 290.6 mV

End Time : 19.99 min  
Plot Offset: 21 mV

Page 1 of 1  
High Point : 311.41 mV

Response [mV]

B-1 @ 10'



# Chromatogram

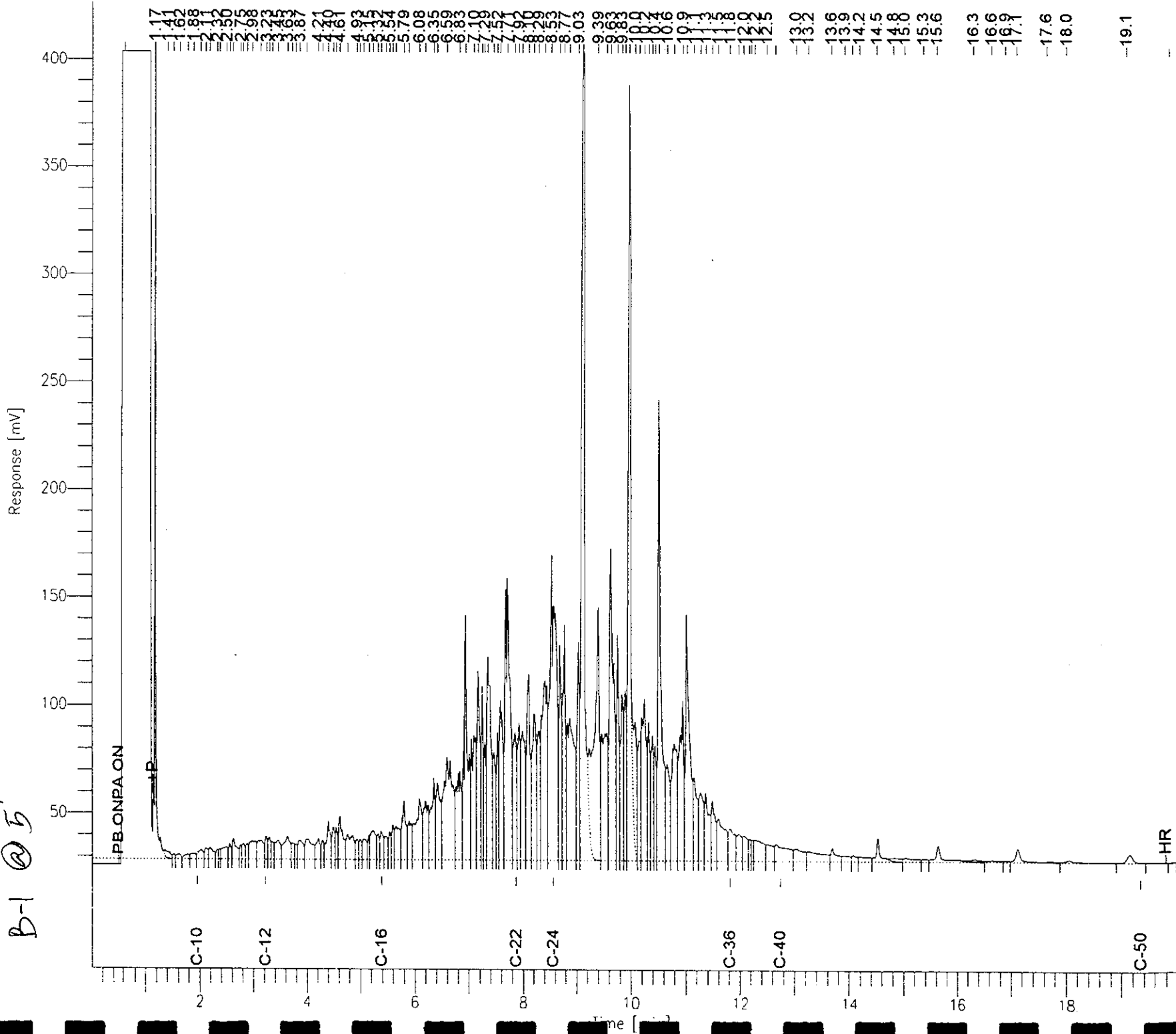
Sample Name : 179230-006,101711  
FileName : G:\GC15\CHB\124B014.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 21 mV

Sample #: 101711  
Date : 5/4/05 05:27 PM  
Time of Injection: 5/4/05 05:06 PM  
Low Point : 20.98 mV  
High Point : 403.81 mV  
Plot Scale: 382.8 mV

Page 1 of 1

B-1 @ 5'



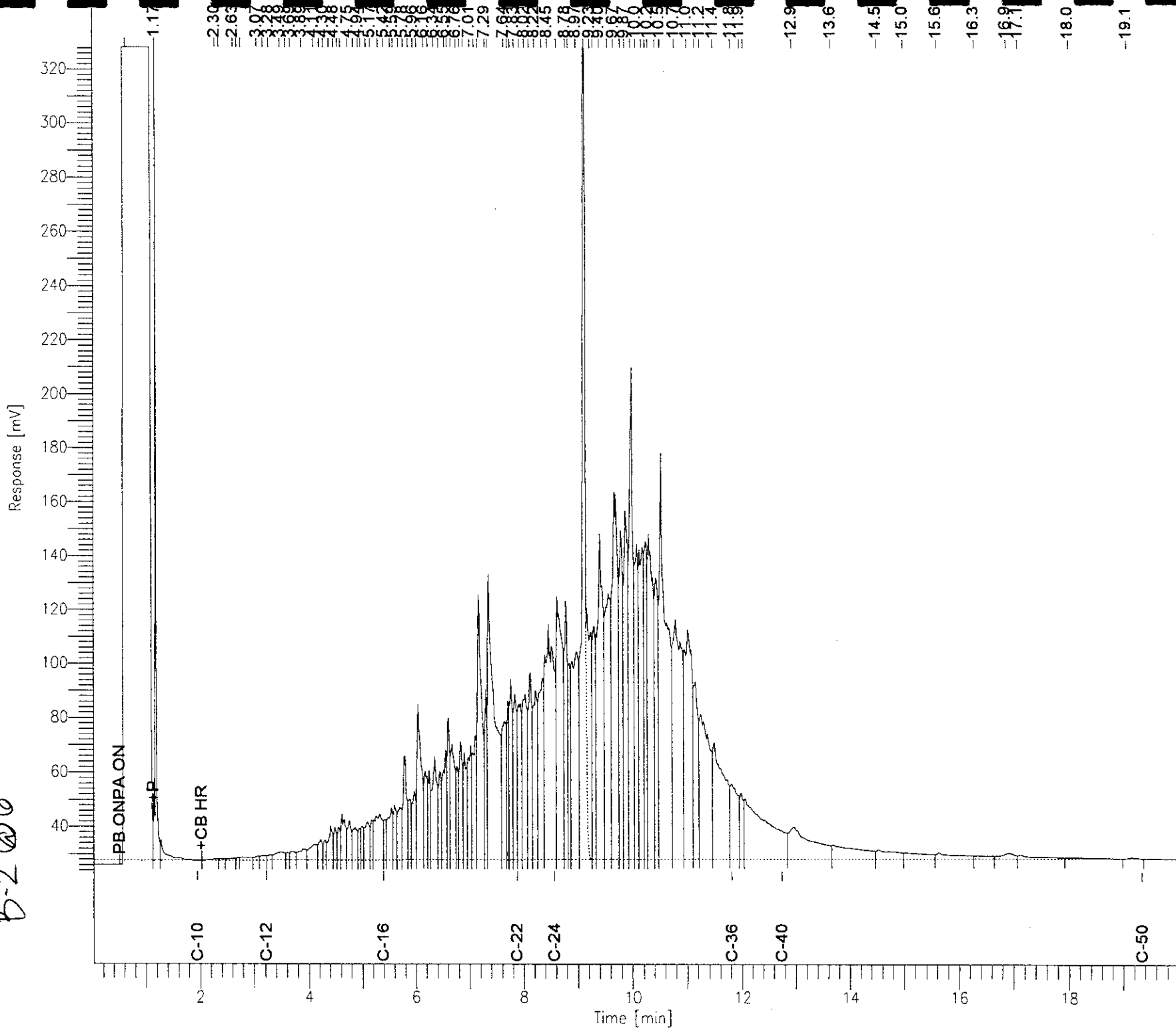
# Chromatogram

Sample Name : 179230-007,101711  
FileName : G:\GC15\CHB\124B015.RAW  
Method : BTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 24 mV

Page 1 of 1  
Date : 5/4/05 05:56 PM  
Time of Injection: 5/4/05 05:35 PM  
Low Point : 23.87 mV  
High Point : 328.35 mV  
Plot Scale: 304.5 mV

*P-2 @ 6*





### Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	SHAKER TABLE
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	05/03/05
Units:	mg/Kg	Received:	05/03/05
Basis:	as received	Prepared:	05/04/05
Batch#:	101711	Analyzed:	05/04/05

Field ID: B-3@7'	Lab ID: 179230-008
Type: SAMPLE	Diln Fac: 10.00

Analyte	Result	RL
Diesel C10-C24	390 L Y	10

Surrogate	%REC	Limits
Hexacosane	DO	51-136

Field ID: B-3@12'	Lab ID: 179230-009
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	ND	0.99

Surrogate	%REC	Limits
Hexacosane	99	51-136

Field ID: B-4@5'	Lab ID: 179230-010
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	104	51-136

- H= Heavier hydrocarbons contributed to the quantitation
- L= Lighter hydrocarbons contributed to the quantitation
- Y= Sample exhibits chromatographic pattern which does not resemble standard
- D= Diluted Out
- ND= Not Detected
- L= Reporting Limit

# Chromatogram

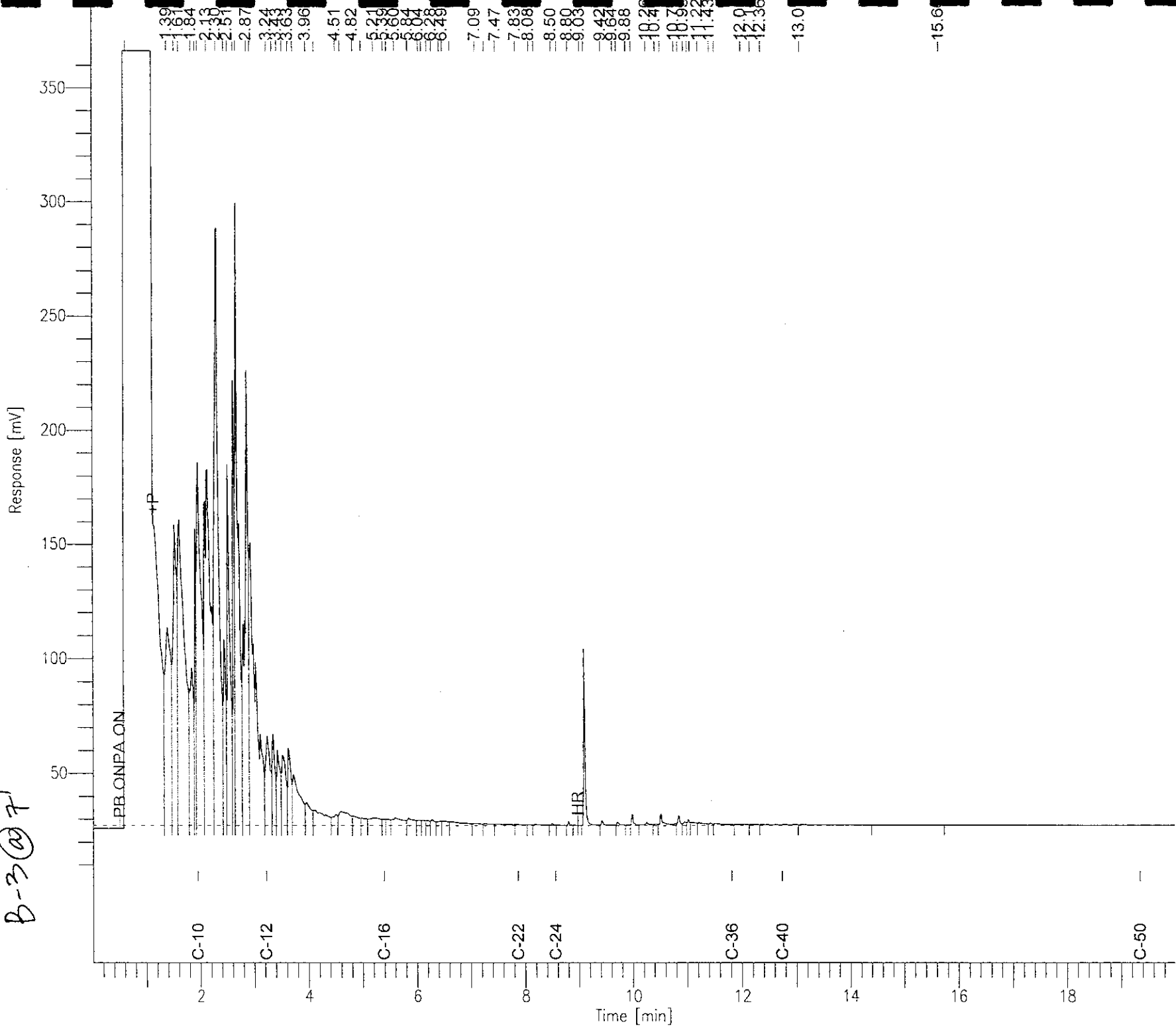
Sample Name : 179230-008,101711  
FileName : G:\GC15\CHB\124B022.RAW  
Method : RTEH122S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 19.99 min  
Plot Offset: 7 mV

Page 1 of 1

Date : 5/5/05 08:13 AM  
Time of Injection: 5/4/05 08:57 PM  
Low Point : 7.48 mV  
High Point : 366.45 mV  
Plot Scale: 359.0 mV

*B-3 @ 7*



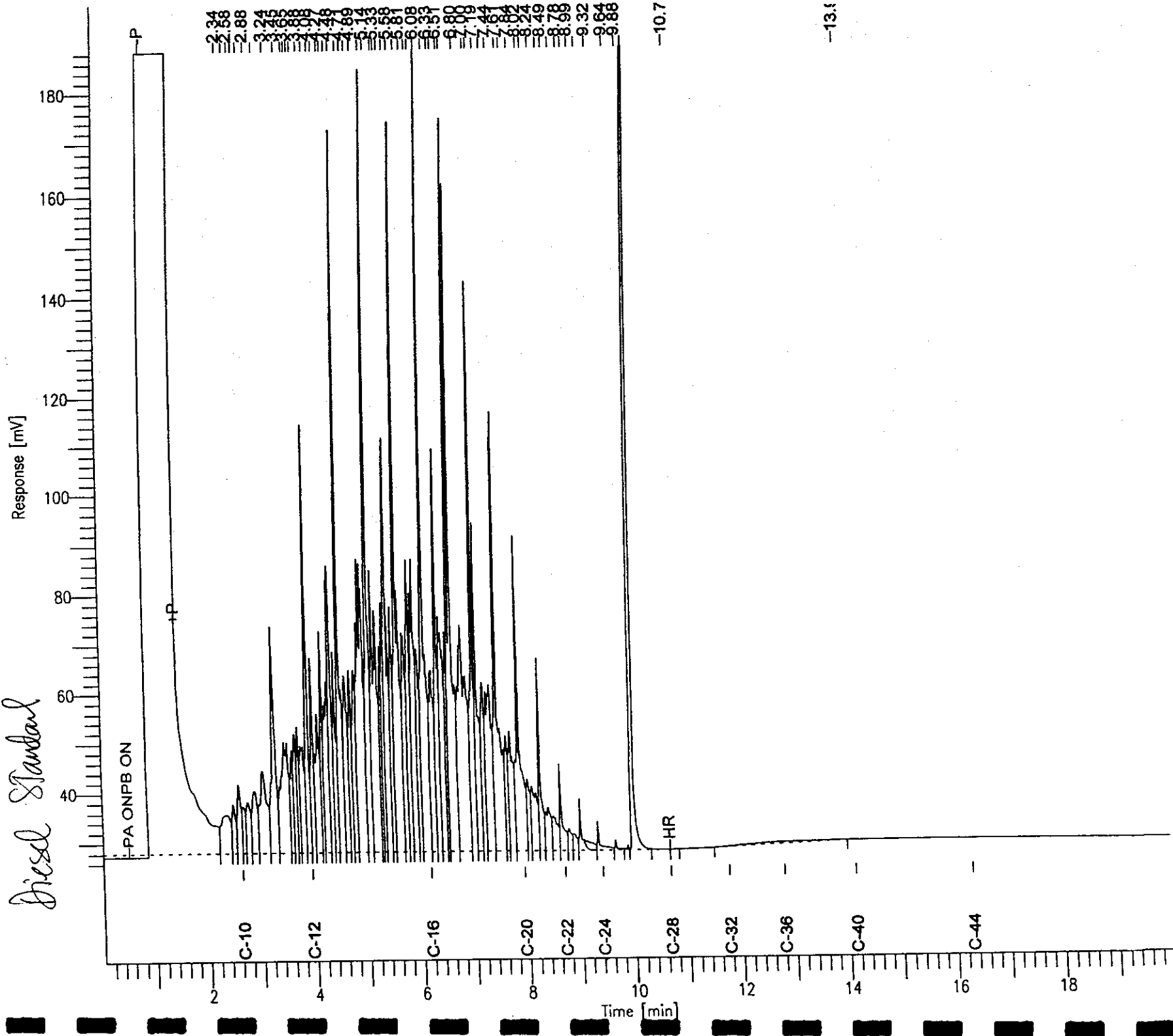
# Chromatogram

Page 1 of 1

Sample #: 500mg/L  
Date : 5/4/05 02:42 PM  
Time of Injection: 5/4/05 02:00 PM  
Low Point : 24.86 mV  
High Point : 188.27 mV  
Plot Scale: 163.4 mV

Sample Name : ccv\_S467.ds1  
File Name : G:\GC13\CHR\124B003.RAW  
Method : BTEH115S.MTH  
Start Time : 0.01 min  
End Time : 19.99 min  
Plot Offset: 25 mV  
Scale Factor: 0.0

*Diesel Standard*



**Total Extractable Hydrocarbons**

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	SHAKER TABLE
Project#:	040T.29220.52	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	05/03/05
Units:	mg/Kg	Received:	05/03/05
Basis:	as received	Prepared:	05/04/05
Batch#:	101711	Analyzed:	05/04/05

Field ID:	B-6@8'	Lab ID:	179230-011
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	94	51-136

Field ID:	B-6	Lab ID:	179230-012
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	93	51-136

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC292579		

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	89	51-136

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
 Page 3 of 3

## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	SHAKER TABLE
Project#:	040T.29220.52	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC292580	Batch#:	101711
Matrix:	Soil	Prepared:	05/04/05
Units:	mg/Kg	Analyzed:	05/04/05
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.60	45.03	91	52-137

Surrogate	%REC	Limits
Hexacosane	87	51-136



Batch QC Report

Total Extractable Hydrocarbons

Lab #:	179230	Location:	Oakland-JLS
Client:	Secor International	Prep:	SHAKER TABLE
Project#:	040T.29220.52	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	101711
MSS Lab ID:	179144-001	Sampled:	04/27/05
Matrix:	Soil	Received:	04/28/05
Units:	mg/Kg	Prepared:	05/04/05
Basis:	as received	Analyzed:	05/04/05
Diln Fac:	5.000		

Type: MS Lab ID: QC292581

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	31.81	49.80	79.29	95	11-169

Surrogate	%REC	Limits
Hexacosane	111	51-136

Type: MSD Lab ID: QC292582

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.22	85.95	108	11-169	8	49

Surrogate	%REC	Limits
Hexacosane	115	51-136



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Chemical, Physical, Water Testing, Metals & Inorganic Laboratories

Client: SECOR  
25864-F Business Center Drive  
Redlands, CA 92374-4515

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Job Number: 26233

Project: Oakland - JLS

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**CASE NARRATIVE**

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The following information applies to samples which were received on 05/04/05:

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/11/05.

**8260B:** Samples B-1, B-3, B-4 and B-6 were received at a pH greater than 2.

Report approved by:

Tom Wilson  
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.  
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.  
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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**Lead by EPA 6010B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: TLB

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Digested: 05/04/05  
Date Analyzed: 05/05/05  
Batch Number: 6010S3332

Sample ID	Reporting Limit mg/Kg	Lead mg/Kg
Method Blank	1.0	ND
B-1@5'	1.0	100
B-1@10'	1.0	1.9
B-2@6'	1.0	47
B-3@8'	1.0	3.0
B-3@12'	1.0	3.0
B-4@5'	1.0	1,200
B-6@8'	1.0	21
B-6@12'	1.0	2.8





**QC Sample Report - Lead by EPA 6010B**

Matrix: Soil  
Batch Number: 6010S3332

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lead	50	98	75 - 125	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: 26223-3

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lead	48.34	50.16	4%	20%	Pass

Analytical Notes:

MS: Matrix Spike                      LCS: Laboratory Control Sample  
MSD: Matrix Spike Duplicate        LCSD: Laboratory Control Sample Duplicate



**Metals by EPA 6010B and EPA 7471A**

Client: SECOR  
 Project: Oakland - JLS  
 Job No: 26233  
 Matrix: Soil  
 Analyst: TLB

Date Sampled: 05/03/05  
 Date Received: 05/04/05  
 Date Digested: 05/04/05  
 Date Analyzed: 05/05/05  
 Batch Number: 6010S3332  
 7471S1208

Metals	Method	Sample ID:	Blank	B-6@2'	B-6@5'	B-10@2'	B-10@5'	B-3@2'
		RL	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	6010B	5.0	ND	ND	ND	ND	ND	ND
Arsenic	6010B	1.0	ND	3.2	1.8	6.0	2.3	4.3
Barium	6010B	0.50	ND	59	30	130	50	110
Beryllium	6010B	0.50	ND	ND	ND	ND	ND	ND
Cadmium	6010B	0.50	ND	ND	ND	0.85	ND	0.52
Chromium	6010B	0.50	ND	30	32	19	24	27
Cobalt	6010B	0.50	ND	3.0	2.2	5.4	2.5	4.8
Copper	6010B	1.5	ND	7.8	5.1	870	16	57
Lead	6010B	1.0	ND	27	3.9	320	180	160
Molybdenum	6010B	5.0	ND	ND	ND	ND	ND	ND
Nickel	6010B	1.0	ND	11	10	16	11	16
Selenium	6010B	5.0	ND	ND	ND	ND	ND	ND
Silver	6010B	2.0	ND	ND	ND	ND	ND	ND
Thallium	6010B	5.0	ND	ND	ND	ND	ND	ND
Vanadium	6010B	5.0	ND	19	19	21	17	22
Zinc	6010B	10	ND	19	10	410	36	130
Mercury	7471A	0.02	ND	0.05	ND	0.81	0.08	2.0



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Laboratories, Inc.**

**Metals by EPA 6010B and EPA 7471A**

Client: SECOR  
Project: Oakland - JLS  
Job No: 26233  
Matrix: Soil  
Analyst: TLB

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Digested: 05/04/05  
Date Analyzed: 05/05/05  
Batch Number: 6010S3332  
7471S1208

Sample ID: B-3@5'			
Metals	Method	RL	mg/Kg
Antimony	6010B	5.0	ND
Arsenic	6010B	1.0	2.1
Barium	6010B	0.50	54
Beryllium	6010B	0.50	ND
Cadmium	6010B	0.50	ND
Chromium	6010B	0.50	30
Cobalt	6010B	0.50	3.5
Copper	6010B	1.5	7.3
Lead	6010B	1.0	8.3
Molybdenum	6010B	5.0	ND
Nickel	6010B	1.0	12
Selenium	6010B	5.0	ND
Silver	6010B	2.0	ND
Thallium	6010B	5.0	ND
Vanadium	6010B	5.0	19
Zinc	6010B	10	18
Mercury	7471A	0.02	0.04

**QC Sample Report - Metals by EPA 6010B and EPA 7471A**

Matrix: Soil

**Metals by EPA 6010B**

Batch Number: 6010S3332

Spike Sample ID: Laboratory Control Sample

MS/MSD Sample ID: 26223-3

Analytical Notes:

Compound	Batch Accuracy Results				Batch Precision Results				
	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Antimony	50	107	75 - 125	Pass	44.79	46.45	4%	20%	Pass
Arsenic	50	101	75 - 125	Pass	48.98	48.27	1%	20%	Pass
Barium	50	90	75 - 125	Pass	75.89	78.93	4%	20%	Pass
Beryllium	50	98	75 - 125	Pass	45.61	44.47	3%	20%	Pass
Cadmium	50	100	75 - 125	Pass	41.34	41.28	0%	20%	Pass
Chromium	50	101	75 - 125	Pass	50.90	53.18	4%	20%	Pass
Cobalt	50	97	75 - 125	Pass	47.61	49.72	4%	20%	Pass
Copper	50	99	75 - 125	Pass	51.03	53.85	5%	20%	Pass
Lead	50	98	75 - 125	Pass	48.34	50.16	4%	20%	Pass
Molybdenum	50	97	75 - 125	Pass	42.05	42.61	1%	20%	Pass
Nickel	50	100	75 - 125	Pass	42.67	44.01	3%	20%	Pass
Selenium	50	97	75 - 125	Pass	43.26	43.19	0%	20%	Pass
Silver	50	102	75 - 125	Pass	47.03	46.27	2%	20%	Pass
Thallium	50	99	75 - 125	Pass	44.26	42.40	4%	20%	Pass
Vanadium	50	100	75 - 125	Pass	77.91	88.54	13%	20%	Pass
Zinc	50	102	75 - 125	Pass	91.05	109.6	18%	20%	Pass

Analytical Notes:

**Mercury by EPA 7471A**

Batch Number: 7471S1208

Spike Sample ID: Laboratory Control Sample

MS/MSD Sample ID: 26223-3

Analytical Notes:

Compound	Batch Accuracy Results				Batch Precision Results				
	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Mercury	0.42	102	75 - 125	Pass	0.477	0.490	3%	20%	Pass

Analytical Notes:

MS: Matrix Spike

LCS: Laboratory Control Sample

MSD: Matrix Spike Duplicate

LCSD: Laboratory Control Sample Duplicate



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### Volatile Hydrocarbons as Gasoline by GCMS

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS2TPHGS851

Sample ID	Reporting Limit mg/Kg	Volatile Hydrocarbons as Gasoline mg/Kg
Method Blank	0.50	ND
B-1@5'	0.50	ND
B-1@10'	0.50	ND
B-2-@6'	0.50	ND
B-3@7'	125	160
B-3@12'	0.50	ND
B-4@5'	0.50	ND
B-6@8'	0.50	ND
B-6@12'	0.50	ND
B-6@2'	0.50	ND
B-6@5'	0.50	ND
B-10@2'	0.50	ND
B-10@5'	0.50	ND
B-3@2'	0.50	ND
B-3@5'	0.50	1.1

**QC Sample Report - Volatile Hydrocarbons as Gasoline by GCMS**

Matrix: Soil  
Batch Number: MS2TPHGS851

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	2.0	105	70 - 130	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	2.10	2.24	6%	25%	Pass

Analytical Notes:

MS: Matrix Spike                      LCS: Laboratory Control Sample  
MSD: Matrix Spike Duplicate        LCSD: Laboratory Control Sample Duplicate



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### Volatile Hydrocarbons as Gasoline by GCMS

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Water  
Analyst: GF

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS4TPHGW3466

Sample ID	Reporting Limit mg/L	Volatile Hydrocarbons as Gasoline mg/L
Method Blank	0.50	ND
B-1	0.50	ND
B-2	0.50	ND
B-3	0.50	5.3
B-4	0.50	ND
B-6	0.50	ND

**QC Sample Report - Volatile Hydrocarbons as Gasoline by GCMS**

Matrix: Water  
Batch Number: MS4TPHW3466

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/L)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	2.0	107	70 - 130	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/L)	MSD Sample Result (mg/L)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	2.15	2.39	11%	25%	Pass

Analytical Notes:

MS: Matrix Spike  
MSD: Matrix Spike Duplicate

LCS: Laboratory Control Sample  
LCSD: Laboratory Control Sample Duplicate



**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Compounds	Sample ID: RL	Blank mg/Kg	B-1@5' mg/Kg	B-1@10' mg/Kg	B-2@6' mg/Kg	B-3@12' mg/Kg	B-4@5' mg/Kg
Acetone	0.050	ND	ND	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	0.005	ND	ND	ND	ND	ND	ND
Benzene	0.001	ND	ND	ND	ND	ND	ND
Bromobenzene	0.005	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.005	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.001	ND	ND	ND	ND	ND	ND
Bromoform	0.005	ND	ND	ND	ND	ND	ND
Bromomethane	0.005	ND	ND	ND	ND	ND	ND
tert-Butanol (TBA)	0.020	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.010	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
Carbon disulfide	0.010	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	0.001	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.001	ND	ND	ND	ND	ND	ND
Chloroethane	0.005	ND	ND	ND	ND	ND	ND
Chloroform	0.002	ND	ND	ND	ND	ND	ND
Chloromethane	0.001	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.002	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.002	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.002	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.002	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.010	ND	ND	ND	ND	ND	ND
Dibromomethane	0.001	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.001	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.005	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.005	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.002	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.002	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND

**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Compounds	Sample ID: RL	Blank mg/Kg	B-1@5' mg/Kg	B-1@10' mg/Kg	B-2@6' mg/Kg	B-3@12' mg/Kg	B-4@5' mg/Kg
cis-1,3-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	0.005	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.001	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether (EtBE)	0.005	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.001	ND	ND	ND	ND	ND	ND
2-Hexanone	0.010	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.001	ND	ND	ND	ND	0.005	ND
p-Isopropyltoluene	0.002	ND	ND	ND	ND	ND	ND
Methylene chloride	0.050	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	0.010	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether (MtBE)	0.005	ND	ND	ND	ND	ND	ND
Naphthalene	0.002	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.001	ND	ND	ND	ND	0.009	ND
Styrene	0.001	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.002	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.001	ND	ND	ND	ND	ND	ND
Toluene	0.001	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.003	ND	ND	ND	ND	ND	ND
Trichloroethene	0.001	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.003	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.001	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	0.005	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.001	ND	0.002	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.001	ND	0.001	ND	ND	ND	ND
Vinyl chloride	0.002	ND	ND	ND	ND	ND	ND
Xylenes, m-,p-	0.002	ND	ND	ND	ND	ND	ND
Xylene, o-	0.001	ND	0.001	ND	ND	ND	ND

**Surrogates in % Recovery** (Acceptance Limits: 70 - 130%)

Sample ID:	Blank	B-1@5'	B-1@10'	B-2@6'	B-3@12'	B-4@5'
Dibromofluoromethane	98	99	99	97	98	100
Toluene-d8	100	99	100	100	101	99
Bromofluorobenzene	116	102	114	115	115	100



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### Volatile Organic Compounds by EPA 8260B

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Compounds	Sample ID: RL	B-6@8' mg/Kg	B-6@12' mg/Kg	B-6@2' mg/Kg	B-6@5' mg/Kg	B-10@2' mg/Kg	B-10@5' mg/Kg
Acetone	0.050	ND	ND	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	0.005	ND	ND	ND	ND	ND	ND
Benzene	0.001	ND	ND	ND	ND	ND	ND
Bromobenzene	0.005	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.005	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.001	ND	ND	ND	ND	ND	ND
Bromoform	0.005	ND	ND	ND	ND	ND	ND
Bromomethane	0.005	ND	ND	ND	ND	ND	ND
tert-Butanol (TBA)	0.020	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	0.010	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0.002	ND	ND	ND	ND	ND	ND
Carbon disulfide	0.010	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	0.001	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.001	ND	ND	ND	ND	ND	ND
Chloroethane	0.005	ND	ND	ND	ND	ND	ND
Chloroform	0.002	ND	ND	ND	ND	ND	ND
Chloromethane	0.001	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.002	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.002	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.002	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.002	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.010	ND	ND	ND	ND	ND	ND
Dibromomethane	0.001	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.001	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.005	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.005	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.002	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.002	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.001	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND

**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
 Project: Oakland - JLS  
 Job No.: 26233  
 Matrix: Soil  
 Analyst: JL

Date Sampled: 05/03/05  
 Date Received: 05/04/05  
 Date Analyzed: 05/04-05/05  
 Batch Number: MS28260S851

Compounds	Sample ID:	B-6@8'	B-6@12'	B-6@2'	B-6@5'	B-10@2'	B-10@5'
	RL	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
cis-1,3-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.001	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	0.005	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.001	ND	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether (EtBE)	0.005	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.001	ND	ND	ND	ND	ND	ND
2-Hexanone	0.010	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.001	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0.002	ND	ND	ND	ND	ND	ND
Methylene chloride	0.050	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	0.010	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether (MtBE)	0.005	ND	ND	ND	ND	ND	ND
Naphthalene	0.002	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.001	ND	ND	ND	ND	ND	ND
Styrene	0.001	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.002	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.001	ND	0.004	ND	ND	ND	ND
Toluene	0.001	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.002	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.001	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.003	ND	ND	ND	ND	ND	ND
Trichloroethene	0.001	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.003	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.001	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	0.005	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.001	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.001	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.002	ND	ND	ND	ND	ND	ND
Xylenes, m-,p-	0.002	ND	ND	ND	ND	ND	ND
Xylene, o-	0.001	ND	ND	ND	ND	ND	ND

**Surrogates in % Recovery** (Acceptance Limits: 70 - 130%)

Sample ID:	B-6@8'	B-6@12'	B-6@2'	B-6@5'	B-10@2'	B-10@5'
Dibromofluoromethane	99	99	99	99	102	106
Toluene-d8	100	101	99	101	97	100
Bromofluorobenzene	113	114	103	111	98	108



**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Compounds	Sample ID: B-3@2'		B-3@5'
	RL	mg/Kg	mg/Kg
Acetone	0.050	ND	ND
tert-Amyl Methyl Ether (TAME)	0.005	ND	ND
Benzene	0.001	ND	ND
Bromobenzene	0.005	ND	ND
Bromochloromethane	0.005	ND	ND
Bromodichloromethane	0.001	ND	ND
Bromoform	0.005	ND	ND
Bromomethane	0.005	ND	ND
tert-Butanol (TBA)	0.020	ND	ND
2-Butanone (MEK)	0.010	ND	ND
n-Butylbenzene	0.002	ND	0.014
sec-Butylbenzene	0.002	ND	ND
tert-Butylbenzene	0.002	ND	ND
Carbon disulfide	0.010	ND	ND
Carbon tetrachloride	0.001	ND	ND
Chlorobenzene	0.001	ND	ND
Chloroethane	0.005	ND	ND
Chloroform	0.002	ND	ND
Chloromethane	0.001	ND	ND
2-Chlorotoluene	0.002	ND	ND
4-Chlorotoluene	0.002	ND	ND
Dibromochloromethane	0.002	ND	ND
1,2-Dibromoethane	0.002	ND	ND
1,2-Dibromo-3-chloropropane	0.010	ND	ND
Dibromomethane	0.001	ND	ND
1,2-Dichlorobenzene	0.001	ND	ND
1,3-Dichlorobenzene	0.002	ND	ND
1,4-Dichlorobenzene	0.002	ND	ND
Dichlorodifluoromethane	0.005	ND	ND
1,1-Dichloroethane	0.001	ND	ND
1,2-Dichloroethane	0.001	ND	ND
1,1-Dichloroethene	0.005	ND	ND
cis-1,2-Dichloroethene	0.002	ND	ND
trans-1,2-Dichloroethene	0.002	ND	ND
1,2-Dichloropropane	0.001	ND	ND
1,3-Dichloropropane	0.001	ND	ND
2,2-Dichloropropane	0.001	ND	ND
1,1-Dichloropropene	0.001	ND	ND

**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
 Project: Oakland - JLS  
 Job No.: 26233  
 Matrix: Soil  
 Analyst: JL

Date Sampled: 05/03/05  
 Date Received: 05/04/05  
 Date Analyzed: 05/04-05/05  
 Batch Number: MS28260S851

Compounds	Sample ID: B-3@2'		B-3@5'	
	RL	mg/Kg	mg/Kg	
cis-1,3-Dichloropropene	0.001	ND	ND	
trans-1,3-Dichloropropene	0.001	ND	ND	
Diisopropyl Ether (DIPE)	0.005	ND	ND	
Ethylbenzene	0.001	ND	0.007	
Ethyl tert-Butyl Ether (EtBE)	0.005	ND	ND	
Hexachlorobutadiene	0.001	ND	ND	
2-Hexanone	0.010	ND	ND	
Isopropylbenzene	0.001	ND	0.004	
p-Isopropyltoluene	0.002	ND	0.003	
Methylene chloride	0.050	ND	ND	
4-Methyl-2-pentanone	0.010	ND	ND	
Methyl tert-Butyl Ether (MTBE)	0.005	ND	ND	
Naphthalene	0.002	ND	0.052	
n-Propylbenzene	0.001	ND	0.020	
Styrene	0.001	ND	ND	
1,1,1,2-Tetrachloroethane	0.001	ND	ND	
1,1,2,2-Tetrachloroethane	0.002	ND	ND	
Tetrachloroethene	0.001	ND	ND	
Toluene	0.001	ND	ND	
1,2,3-Trichlorobenzene	0.002	ND	ND	
1,2,4-Trichlorobenzene	0.002	ND	ND	
1,1,1-Trichloroethane	0.001	ND	ND	
1,1,2-Trichloroethane	0.003	ND	ND	
Trichloroethene	0.001	ND	ND	
1,2,3-Trichloropropane	0.003	ND	ND	
Trichlorofluoromethane	0.001	ND	ND	
Trichlorotrifluoroethane	0.005	ND	ND	
1,2,4-Trimethylbenzene	0.001	ND	0.055	
1,3,5-Trimethylbenzene	0.001	ND	ND	
Vinyl chloride	0.002	ND	ND	
Xylenes, m-,p-	0.002	ND	0.005	
Xylene, o-	0.001	ND	ND	

**Surrogates in % Recovery (Acceptance Limits: 70 - 130%)**

	Sample ID: B-3@2'		B-3@5'	
Dibromofluoromethane		103		99
Toluene-d8		97		99
Bromofluorobenzene		99		111



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### Volatile Organic Compounds by EPA 8260B

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Sample ID: B-3@7'		
Compounds	RL	mg/Kg
Acetone	13	ND
tert-Amyl Methyl Ether (TAME)	1.25	ND
Benzene	0.25	ND
Bromobenzene	1.25	ND
Bromochloromethane	1.25	ND
Bromodichloromethane	0.25	ND
Bromoform	1.25	ND
Bromomethane	1.25	ND
tert-Butanol (TBA)	5.0	ND
2-Butanone (MEK)	2.5	ND
n-Butylbenzene	0.50	1.6
sec-Butylbenzene	0.50	ND
tert-Butylbenzene	0.50	ND
Carbon disulfide	2.5	ND
Carbon tetrachloride	0.25	ND
Chlorobenzene	0.25	ND
Chloroethane	1.3	ND
Chloroform	0.50	ND
Chloromethane	0.25	ND
2-Chlorotoluene	0.50	ND
4-Chlorotoluene	0.50	ND
Dibromochloromethane	0.50	ND
1,2-Dibromoethane	0.50	ND
1,2-Dibromo-3-chloropropane	2.50	ND
Dibromomethane	0.25	ND
1,2-Dichlorobenzene	0.25	ND
1,3-Dichlorobenzene	0.50	ND
1,4-Dichlorobenzene	0.50	ND
Dichlorodifluoromethane	1.3	ND
1,1-Dichloroethane	0.25	ND
1,2-Dichloroethane	0.25	ND
1,1-Dichloroethene	1.3	ND
cis-1,2-Dichloroethene	0.50	ND
trans-1,2-Dichloroethene	0.50	ND
1,2-Dichloropropane	0.25	ND
1,3-Dichloropropane	0.25	ND
2,2-Dichloropropane	0.25	ND
1,1-Dichloropropene	0.25	ND



### Volatile Organic Compounds by EPA 8260B

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Soil  
Analyst: JL

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS28260S851

Sample ID: B-3@7'		
Compounds	RL	mg/Kg
cis-1,3-Dichloropropene	0.25	ND
trans-1,3-Dichloropropene	0.25	ND
Diisopropyl Ether (DIPE)	1.3	ND
Ethylbenzene	0.25	ND
Ethyl tert-Butyl Ether (EtBE)	1.3	ND
Hexachlorobutadiene	0.25	ND
2-Hexanone	2.50	ND
Isopropylbenzene	0.25	0.82
p-Isopropyltoluene	0.50	ND
Methylene chloride	13	ND
4-Methyl-2-pentanone	2.5	ND
Methyl tert-Butyl Ether (MtBE)	1.3	ND
Naphthalene	0.50	4.5
n-Propylbenzene	0.25	3.4
Styrene	0.25	ND
1,1,1,2-Tetrachloroethane	0.25	ND
1,1,2,2-Tetrachloroethane	0.50	ND
Tetrachloroethene	0.25	ND
Toluene	0.25	ND
1,2,3-Trichlorobenzene	0.50	ND
1,2,4-Trichlorobenzene	0.50	ND
1,1,1-Trichloroethane	0.25	ND
1,1,2-Trichloroethane	0.75	ND
Trichloroethene	0.25	ND
1,2,3-Trichloropropane	0.75	ND
Trichlorofluoromethane	0.25	ND
Trichlorotrifluoroethane	1.3	ND
1,2,4-Trimethylbenzene	0.25	ND
1,3,5-Trimethylbenzene	0.25	ND
Vinyl chloride	0.50	ND
Xylenes, m-,p-	0.50	ND
Xylene, o-	0.25	ND

#### Surrogates in % Recovery (Acceptance Limits: 70 - 130%)

Sample ID: B-3@7'	
Dibromofluoromethane	100
Toluene-d8	101
Bromofluorobenzene	116





**QC Sample Report - Volatile Organic Compounds by EPA 8260B**

Matrix: Soil  
Batch Number: MS28260S851

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
1,1-Dichloroethene	0.050	104	70 - 130	Pass
Benzene	0.050	90	70 - 130	Pass
Trichloroethene	0.050	99	70 - 130	Pass
Toluene	0.050	96	70 - 130	Pass
Chlorobenzene	0.050	94	70 - 130	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
1,1-Dichloroethene	0.0522	0.0524	0%	25%	Pass
Benzene	0.0451	0.0500	10%	25%	Pass
Trichloroethene	0.0496	0.0510	3%	25%	Pass
Toluene	0.0483	0.0517	7%	25%	Pass
Chlorobenzene	0.0468	0.0538	14%	25%	Pass

Analytical Notes:

MS: Matrix Spike

LCS: Laboratory Control Sample

MSD: Matrix Spike Duplicate

LCSD: Laboratory Control Sample Duplicate

**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Water  
Analyst: GF

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS48260W3466

Compounds	Sample ID: RL	Blank µg/L	B-1 µg/L	B-2 µg/L	B-3 µg/L	B-4 µg/L	B-6 µg/L
Acetone	50	ND	ND	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	5.0	ND	ND	ND	ND	ND	ND
Benzene	0.5	ND	ND	ND	15	ND	ND
Bromobenzene	1.0	ND	ND	ND	ND	ND	ND
Bromochloromethane	1.0	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.5	ND	ND	ND	ND	ND	ND
Bromoform	0.5	ND	ND	ND	ND	ND	ND
Bromomethane	2.0	ND	ND	ND	ND	ND	ND
tert-Butanol (TBA)	10	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	10	ND	ND	ND	ND	ND	ND
n-Butylbenzene	1.0	ND	ND	ND	60	ND	ND
sec-Butylbenzene	0.5	ND	ND	ND	20	ND	ND
tert-Butylbenzene	0.5	ND	ND	ND	ND	ND	ND
Carbon disulfide	10	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	0.5	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.5	ND	ND	ND	ND	ND	ND
Chloroethane	0.5	ND	ND	ND	ND	ND	ND
Chloroform	0.5	ND	ND	ND	ND	ND	ND
Chloromethane	2.0	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	0.5	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	0.5	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.5	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.5	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	10	ND	ND	ND	ND	ND	ND
Dibromomethane	0.5	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.5	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.5	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.5	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0.5	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND	ND	1.0
1,1-Dichloroethene	0.5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.5	ND	ND	ND	ND	ND	0.7
trans-1,2-Dichloroethene	0.5	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.5	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.5	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.5	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.5	ND	ND	ND	ND	ND	ND

**Volatile Organic Compounds by EPA 8260B**

Client: SECOR  
Project: Oakland - JLS  
Job No.: 26233  
Matrix: Water  
Analyst: GF

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Date Analyzed: 05/04-05/05  
Batch Number: MS48260W3466

Compounds	Sample ID:	Blank	B-1	B-2	B-3	B-4	B-6
	RL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
cis-1,3-Dichloropropene	0.5	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.5	ND	ND	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	5.0	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	51	ND	ND
Ethyl tert-Butyl Ether (EtBE)	5.0	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND
2-Hexanone	10	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0.5	ND	ND	ND	57	ND	ND
p-Isopropyltoluene	0.5	ND	ND	ND	3.3	ND	ND
Methylene chloride	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	5.0	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl ether (MtBE)	1.0	ND	ND	ND	ND	ND	ND
Naphthalene	0.5	ND	ND	ND	160	ND	ND
n-Propylbenzene	0.5	ND	ND	ND	160	ND	ND
Styrene	0.5	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.5	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1.0	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.5	ND	ND	ND	ND	ND	8.2
Toluene	0.5	ND	ND	ND	6.0	ND	ND
1,2,3-Trichlorobenzene	0.5	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.5	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.5	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.5	ND	ND	ND	ND	ND	ND
Trichloroethene	0.5	ND	ND	ND	ND	ND	1.5
1,2,3-Trichloropropane	0.5	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.5	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	5.0	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.5	ND	ND	ND	90	ND	ND
1,3,5-Trimethylbenzene	0.5	ND	ND	ND	24	ND	ND
Vinyl chloride	0.5	ND	ND	ND	ND	ND	ND
Xylenes, m-,p-	1.0	ND	ND	ND	29	ND	ND
Xylene, o-	0.5	ND	ND	ND	1.5	ND	ND

**Surrogates in % Recovery** (Acceptance Limits: 70 - 130%)

Sample ID:	Blank	B-1	B-2	B-3	B-4	B-6
Dibromofluoromethane	98	98	98	101	104	100
Toluene-d8	103	102	103	107	106	103
Bromofluorobenzene	100	100	101	103	101	101

**QC Sample Report - Volatile Organic Compounds by EPA 8260B**

Matrix: Water  
Batch Number: MS48260W3466

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (µg/L)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
1,1-Dichloroethene	50	102	70 - 130	Pass
Benzene	50	103	70 - 130	Pass
Trichloroethene	50	101	70 - 130	Pass
Toluene	50	112	70 - 130	Pass
Chlorobenzene	50	93	70 - 130	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: 26224-3

Compound	MS Sample Result (µg/L)	MSD Sample Result (µg/L)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
1,1-Dichloroethene	58.39	54.60	7%	25%	Pass
Benzene	57.29	52.56	9%	25%	Pass
Trichloroethene	91.05	83.47	9%	25%	Pass
Toluene	56.90	53.00	7%	25%	Pass
Chlorobenzene	49.90	46.89	6%	25%	Pass

Analytical Notes:

MS: Matrix Spike                      LCS: Laboratory Control Sample  
MSD: Matrix Spike Duplicate        LCSD: Laboratory Control Sample Duplicate

# SECOR RUSH

## SECOR CHAIN-OF-CUSTODY RECORD

COC # 03911  
Page 1 of 2

FIELD OFFICE INFORMATION		PROJECT INFORMATION			ANALYSES / METHOD REQUEST	REMARKS / PRECAUTIONS		
OFFICE:	Send Report To:	Project No.:	Task:	Project Name:		Project Manager:	Laboratory:	
REDLANDS	JUSTIN HONE	040T.29220.22		OAKLAND - JLS	JUSTIN HONE	CENTRUM		
Telephone:	909 335 6116							
Fax / E-Mail:	jhone@secor.com							
Sample No. / Identification	Date	SAMPLE		Container & Size **	Preservative	Number of Containers	TAT	REPORTING REQUIREMENTS
		Time	Matrix*					
1 B-1 @ 5'	5/3/05	1045	soil	1-4oz glass	None	1	X	<input checked="" type="checkbox"/> Normal
2 B-1 @ 10'		1110	soil	1-4oz glass	None	1	X	<input type="checkbox"/> Rush
3 B-1		1110	H2O	3-4ml VOA	HCl	1	X	<input type="checkbox"/> Other
4 B-2 @ 6'		1235	soil	1-4oz glass	None	1	X	<input type="checkbox"/> MB & SURGS
5 B-2		1615	H2O	3-40ml VOA	HCl	1	X	<input type="checkbox"/> Dup/MS/MSD
6 B-3 @ 7'8" @		1400	soil	1-4oz glass	None	1	X	<input type="checkbox"/> Raw Data
7 B-3 @ 12'		1415	soil	1-4oz glass	None	1	X	<input type="checkbox"/> CLP Rpt
8 B-3		1435	H2O	3-40ml VOA	HCl	1	X	<input type="checkbox"/> EDD
9 B-4 @ 5'		0930	soil	1-4oz glass	None	1	X	<input type="checkbox"/> Other
10 B-4		0945	H2O	3-40ml VOA	HCl	1	X	
11 B-6 @ 8'		1525	soil	1-4oz glass	None	1	X	

Number of Containers

TPH - gasoline  
VOCs 82608  
~~Lead~~ Lead  
STLC Pb  
TCLP Pb

TAT  
 Normal  
 Rush  
 Other

REPORTING REQUIREMENTS  
 MB & SURGS  
 Dup/MS/MSD  
 Raw Data  
 CLP Rpt  
 EDD  
 Other

48 HOUR RUSH!  
EXTRA 50%  
IS OKAY.  
JPH

#10 CORRECTION PER JUSTIN

Lead added by JPH  
1:40pm 5/4/05

Possible Hazard Identification:  Non-Hazardous  Flammable  Skin Irritant  Poison B  Unknown

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Sampled by:		Shipment Method:	Airbill Number:	Date	Time
Signature	Print Name	Company			
Justin Hone	JUSTIN HONE	SECOR		5/2/05	1650
Jen Iniguez	JEN INIGUEZ	CENTRUM		5/4/05	10:00A

\*Matrix Key: AO = Aqueous AR = Air SO = Soil WA = Waste OT = Other \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other  
 @ STLCs + TCLPs added & given a new ID 26259 5/9/05 JPH  
 CHILLED + INTACT M/VOA

# RUSH

## SECOR CHAIN-OF-CUSTODY RECORD

\*Centrum JN 26233\*

COC # 03904  
Page 2 of 2

FIELD OFFICE INFORMATION		PROJECT INFORMATION				Number of Containers	ANALYSES / METHOD REQUEST					REMARKS / PRECAUTIONS	
OFFICE: <b>REDLANDS</b>	Send Report To: <b>JUSTIN HONE</b>	Project No.:	Task:	Project Name:	Project Manager:		TPH - gasoline	VOCs 8260B	CAM 17	Lead 6010	STLC Pb	TAT	REPORTING REQUIREMENTS
Telephone:	Fax / E-Mail:	Laboratory: <b>CENTRUM</b>									<input type="checkbox"/> Normal	<input type="checkbox"/> MB & SURGS	
											<input checked="" type="checkbox"/> Rush	<input type="checkbox"/> Dup/MS/MSD	
											<input type="checkbox"/> Other	<input type="checkbox"/> Raw Data	
												<input type="checkbox"/> CLP Rpt	
												<input type="checkbox"/> ESD	
												<input type="checkbox"/> Other	
Sample No. / Identification	Date	Time	Matrix	Container & Size **	Preservative								
12 B-6 @ 12'	5/3/05	1550	soil	1-4oz glass	None		X	X		X		48 Hour RUSH	
13 B-6 @ 2'		1510	soil	1			X	X				EXTRA 50%	
14 B-6 @ 5'		1515	soil	1			X	X				IS O.K.	
15 B-6		1530	H2O	3-40al vials	Hel		X	X				JMA	
16 B-10 @ 2'		1515	soil	1-4oz glass	None		X	X		X			
17 B-10 @ 5'		1520	soil	1-4oz glass	None		X	X		X			
18 B-3 @ 2'			soil	1-4oz glass	None		X	X		X			
19 B-3 @ 5'			soil	1-4oz glass	None		X	X					

Possible Hazard Identification:  Non-Hazardous  Flammable  Skin Irritant  Poison B  Unknown  Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Sampled by:	Signature	Print Name	Company	Airbill Number:	Date	Time
1a Relinquished by:	<i>JMA</i>	JUSTIN HONE	SECOR	FED EX	5/3/05	16:50
1b Received by:	<i>Jen Iniguez</i>	JEN INIGUEZ	CENTRUM		5/4/05	10:00A
2a Relinquished by:						
2b Received by:						
3a Relinquished by:						
3b Received by:						

\*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other  
① added & given a new JN 26259 5/9/05 GQ CHILLED & INTACT M/VOA



**Centrum  
Analytical  
Laboratories, Inc.**

Chemical, Physical, Microbiological & Environmental Laboratories

Client: SECOR  
25864-F Business Center Drive  
Redlands, CA 92374-4515

Date Sampled: 05/03/05  
Date Received: 05/04/05  
Job Number: 26259

Project: Oakland Phase II

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**CASE NARRATIVE**

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The following information applies to samples which were received on 05/04/05:

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/16/05.

Report approved by:

*Tom Wilson* 2005.05.16  
14:47:53 -  
07'00'

Tom Wilson  
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.

ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.

NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

Page 1 of 5

951•779•0310 or 800•798•9336 fax 951•779•0344  
www.centrum-labs.com 1401 Research Park Drive, Suite 100, Riverside, CA 92507







**QC Sample Report - Lead by EPA 6010B**

Matrix: Water  
Batch Number: 6010W3336

**Batch Accuracy Results**

Spike Sample ID: Initial Calibration Verification Standard

Compound	Spike Concentration (mg/L)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lead	1.00	102	75 - 125	Pass

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: Initial Calibration Verification Standard

Compound	MS Sample Result (mg/L)	MSD Sample Result (mg/L)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lead	1.020	1.009	1%	20%	Pass

Analytical Notes:

MS: Matrix Spike

MSD: Matrix Spike Duplicate

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate





**QC Sample Report - Lead by EPA 6010B**

Matrix: Water  
Batch Number: 6010W3335

**Batch Accuracy Results**

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/L)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lead	1.00	102	75 - 125	<b>Pass</b>

Analytical Notes:

**Batch Precision Results**

MS/MSD Sample ID: B-4@5'

Compound	MS Sample Result (mg/L)	MSD Sample Result (mg/L)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lead	1.189	1.243	4%	20%	<b>Pass</b>

Analytical Notes:

MS: Matrix Spike                      LCS: Laboratory Control Sample  
MSD: Matrix Spike Duplicate        LCSD: Laboratory Control Sample Duplicate

\*CURRENT IN 26259\*

\*Centrum IN 26233\*

SEC

**RUSH**

SECOR CHAIN-OF-CUSTODY RECORD

COC # 03911  
Page 1 of 2

OFFICE INFORMATION			PROJECT INFORMATION				ANALYSIS INFORMATION					REMARKS	
OFFICE:	Send Report To:		Project No.:	Task:			TPH - gasoline	VOCs	Lead	STLC Pb	TCLP Pb		
REDANIX	JUSTIN HONE		040T.29220.22	OAKLAND - JLS									
Telephone:	909 335 6116		Project Manager:			JUSTIN HONE							
Fax/E-Mail:	jhone@secor.com		Laboratory:			CENTRUM							
NO.	DESCRIPTION	DATE	QTY	MATRIX	CONTAINER	ANALYSIS	TPH - gasoline	VOCs	Lead	STLC Pb	TCLP Pb	REMARKS	
1	B-1 @ 5'	5/3/05	1045	soil	1-4oz glass	None	X	X	X	X		48 HOUR RUSH! EXTRA 50% IS OKAY. JPH *ID CORRECTION PER JUSTIN lead added by JPH 1:40pm 5/4/05	
2	B-1 @ 10'		1110	soil	1-4oz glass	None	X	X	X				
3	B-1		1110	H2O	3-4ml VOA	HCl	X	X					
4	B-2 @ 6'		1235	soil	1-4oz glass	None	X	X	X				
5	B-2		1615	H2O	3-40ml VOA	HCl	X	X					
6	B-3 @ 7'8" @		1400	soil	1-4oz glass	None	X	X	X				
7	B-3 @ 12'		1415	soil	1-4oz glass	None	X	X	X				
8	B-3		1435	H2O	3-40ml VOA	HCl	X	X					
9	B-4 @ 5'		0930	soil	1-4oz glass	None	X	X	X	X			
10	B-4		0945	H2O	3-40ml VOA	HCl	X	X					
11	B-6 @ 8'		1525	soil	1-4oz glass	None	X	X	X				

Signature		Print Name	Company	Date	Time
1a Relinquished by:	<i>Justin Hone</i>	JUSTIN HONE	SECOR	5/2/05	1650
1b Received by:	<i>Jen Iniguez</i>	JEN INIGUEZ	CENTRUM	5/4/05	10:00A
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

\*Matrix Key: AO = Aqueous AR = Air SO = Soil WA = Waste OT = Other \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tediar B = Brass P = Plastic OT = Other  
 STLCs + TCLPs added + given a new IN 26259 5/9/05 @ CHILLED + INTACT M/VOD

FIELD OFFICE INFORMATION			PROJECT INFORMATION							
OFFICE: <b>Redlands</b>	Project No.:	Task:								
Send Report To: <b>JUSTIN HOME</b>	Project Name:									
Telephone:	Project Manager:									
Fax / E-Mail:	Laboratory: <b>CENTRUM</b>									

						TPH - gasoline	VOCs 8260B	CAM 17	Lead 6010	STLC Pb	
12	B-6 @ 12'	5/3/05	1550	soil	1-4oz glass	None	X	X	X		48 Hour RUSH EXTRA 50% is O.K. JMA
13	B-6 @ 2'	}	1510	soil	1		X	X			
14	B-6 @ 5'		1515	soil	1		X	X			
15	B-6		1530	H2O	3-4oz vials	Hel	X	X			
16	B-10 @ 2'		1515	soil	1-4oz glass	None	X	X	X		
17	B-10 @ 5'		1520	soil	1-4oz glass	None	X	X	X		
18	B-3 @ 2'		}		soil	1-4oz glass	None	X	X	X	
19	B-3 @ 5'			soil	1-4oz glass	None	X	X	X		

Sampled by:		Shipment Method: <b>FED EX</b>		Airbill Number:	
Signature	Print Name	Company	Date	Time	
1a Relinquished by: <i>JMA</i>	<b>JUSTIN HOME</b>	<b>SECOR</b>	<b>5/3/05</b>	<b>16:50</b>	4°C
1b Received by: <i>Jen Iniguez</i>	<b>JEN INIGUEZ</b>	<b>CENTRUM</b>	<b>5/4/05</b>	<b>10:00A</b>	
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

\*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other \*\*Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic C = Other  
 @ added & given a new JN 26259 5/9/05 QD  
 CHILLED & INTACT **M/VOA**