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**STAGE 1 & 2  
REPORTS**

**DATE:**

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# **WESTGATE SUBDIVISION**

## **W. D. Grimes Well No. 8 Investigation Additional Stage 1 Abatement Plan Activities**

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**ENVIRONMENTAL BUREAU  
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## 1.0 INTRODUCTION

This Addendum to the Stage 2 Abatement Plan for the Westgate Subdivision, Grimes Battery and Tasker Road, addresses the requirements noted by the New Mexico Oil Conservation Division (NMOCD) in their letter dated December 21, 2000.

The format of this report corresponds to each of the requirements of the NMOCD in the December 21, 2000 letter. Additional information is also provided concerning the test data received by both Shell Exploration and Production Company (SEPCo) and the Requesting Parties during the investigations of the area around the abandoned well, W. D. Grimes No. 8, and near the Chandler residence located at 1506 Cobb Drive.

## 2.0 PAST INVESTIGATIONS AND SITE ACTIVITIES

Stage 1 Abatement activities as approved by the New Mexico Oil Conservation Division (NMOCD) were conducted during the period of July 27, 1998 through October 7, 1998 and January 25, 1999 through May 21, 1999.

The work involved soil vapor surveys with mobile laboratory analysis, drilling soil borings, installation of monitor wells, free product removal from monitor wells, near surface soil sampling, and assessment/remediation of soils. All field activities were performed in accordance with the Stage 1 Abatement Plan (Site Assessment Investigation) as modified and approved by NMOCD.

Work conducted during the period of July 27, 1998 through October 7, 1998 involved a soil vapor survey, drilling soil borings, and installation of monitor wells. The soil vapor survey consisted of two hundred and sixty-eight (268) sample locations spaced at approximately 100-foot intervals. A total of twenty-four (24) soil borings were drilled. Thirteen (13) monitor wells were installed and sampled. Soil and groundwater samples were submitted for laboratory analysis. A detailed description of site activities and results for this period can be found in the report submitted to NMOCD on November 6, 1998 entitled *Westgate Subdivision, Grimes Battery, and Tasker Road Stage 1 Abatement Plan Interim Report (Site Assessment Report)*.

Work conducted during the period of January 25, 1999 through May 17, 1999 consisted of soil vapor surveys (103 sample locations), drilling and sampling of 13 soil borings, installation of three monitor wells, sampling of sixteen (16) monitor wells, free product removal from one monitor well, assessment/remediation of soils and near-surface soil sampling. Soil and groundwater samples were submitted for laboratory analysis. A detailed description of site activities and results for this period, and discussion of data included in both reports can be found in the report submitted to NMOCD on July 1, 1999 entitled *Westgate Subdivision, Grimes Battery, and Tasker Road Stage 1 Abatement Plan Report (Site Assessment Report)*.

NMOCD approved the Stage 1 site investigation report on August 13, 1999.

A Stage 2 Abatement Plan, which included a Risk-Based Corrective Action (RBCA) plan, was submitted to the NMOCD on October 12, 1999. This plan detailed the various remedial actions that SEPCo proposed in remediating the hydrocarbon-impacted areas of the Westgate Subdivision. The plan also detailed the risk-based clean up levels that SEPCo was proposing for near-surface contamination.

After review of this plan by the NMOCD, the agency requested additional clarifications and additions to the Stage 2 Abatement Plan in a letter dated April 14, 2000. On May 4, 2000, SEPCo submitted another Stage 2 Abatement Plan addressing the concerns of the NMOCD. This Stage 2 Abatement Plan was deemed by the NMOCD in compliance with all NMOCD rules and administratively

approvable in a letter to Mr. William G. Rosch, III, an attorney for the Requesting Parties, dated September 19, 2000.

### 3.0 RECENT INVESTIGATIONS AND SITE ACTIVITIES

During the NMOCD review of the May 2000 Stage 2 Abatement Report, the Requesting Parties requested the NMOCD to further investigate the area of the abandoned W. D. Grimes Well No. 8. The well is between homes located at 1506 (Ms. Glenda Chandler) and 1510 Cobb Drive.

In accordance with the instructions from the NMOCD that SEPCo provide all test results in the area of the abandoned well, a summary of soil vapor test results conducted on August 4 and August 12, 1998 and February 2, 1999 can be found in **Table 1, Appendix I**. As indicated, the results found no evidence of volatile hydrocarbons. The sample points discussed can be found on the site map (**Appendix IX**). In addition, both SEPCo's and the NMOCD's files were researched for historical information on Well No. 8 that did not identify any additional information that has not already been provided. A copy of the well information is located in **Appendix VIII**.

On August 24, 2000, the NMOCD investigated the area around Ms. Chandler's home and took two samples, which were split with SEPCo. SEPCo's results are in **Table 2, Appendix I** and the NMOCD's results are in **Table 3, Appendix I**. The samples showed conflicting results in BTEX and TPH, in part, due to the different analytical methods employed. Although the results were low and below previous established RBCA levels, the NMOCD requested SEPCo to conduct additional sampling near the abandoned well in a letter to SEPCo dated November 1, 2000. The sample points discussed can be found on the site map (**Appendix IX**).

In the meantime, the Requesting Parties conducted sampling in the Westgate Subdivision on October 11 and 12, 2000. On October 11, the Requesting Parties conducted sampling in the backyard of Mrs. Rising's home located at 1330 Tasker. Their results (sample nos. SB-13-03-01 3-5', 8-11', 20-23') can be found in **Table 4, Appendix I** and SEPCo's results (sample nos. SB-13-03-01 5-6', 10-11', 22-23') can be found in **Table 7, Appendix I**. In addition, the Requesting Parties sampled two areas west of the Former Grimes Battery, and their results can be found in **Table 7, Appendix I** with SEPCo's results in **Table 4, Appendix I**. These areas are not in the area of discussion for this report, but are nevertheless being submitted by SEPCo to the NMOCD. In addition, a site activities report (with pictures) has been submitted and can be found in **Appendix IV**. The sample points discussed can be found on the site map (**Appendix IX**).

On October 12, 2000, the Requesting Parties sampled near the abandoned well. Their results (SB-1510-01) can be found in **Table 7, Appendix I** and SEPCo's (SB-15-10-01 "A", SB-15-10-01 "B") can be found in **Table 4, Appendix I**. The Requesting Parties were responsible for the disposition of all sampling wastes; such disposition is unknown to SEPCo. The sample points discussed can be found on the site map (**Appendix IX**).

On December 6, 2000, SEPCo submitted a letter in response to the NMOCD's letter of November 1, 2000. In the December 6 letter, SEPCo submitted copies of SEPCo's test results from the split with the NMOCD in August 2000 and detailed a sampling plan for additional sampling near the abandoned well and Ms. Chandler's residence. On December 21, 2000, the NMOCD approved SEPCo's plan with conditions, which conditions are addressed in this report.

The additional sampling detailed in SEPCo's plan was conducted on January 12, 2001.

A direct push sampling rig was used to collect soil samples near Ms. Chandler's home and around the abandoned well area. The Requesting Parties collected split samples with SEPCo. SEPCo's results can be found in **Table 5, Appendix I**, and the Requesting Parties results can be found in

**Table 7, Appendix I.** Photographs of the sampling activities can be found in [Appendix V](#). All wastes generated from this sampling event by SEPCo were disposed of at the NMOCD-approved disposal facility of Sundance Services, Inc. near Eunice, NM. The sample points discussed can be found on the site map ([Appendix IX](#)).

The soil was analyzed for TPH using 418.1 and 8015 MOD DRO/GRO, method 8260B for BTEX, and 6010B for total metals using the NMOCD's list for total metals. The BTEX and GRO results were non-detect in all samples. At the depth range of 0–3 feet, TPH and DRO results ranged from a low of non-detect to a high of 322 mg/kg for 418.1 and a high of 88 mg/kg for DRO. At the depth range of 3–6 feet, the 418.1 TPH results ranged from a low of 2,460 mg/kg to a high of 12,100 mg/kg. The DRO results ranged from a low of 55 mg/kg to a high of 538 mg/kg. The metals results were consistent with the previous readings from the prior sampling activities throughout the neighborhood except for barium, which was elevated and is most likely attributed to drilling mud residuals from the drilling of the well. Visual observations of the soil samples indicated a clay-like substance consistent with weathered drilling mud.

In addition to these analytical tests, the samples with the highest 418.1 TPH and 8015 MOD DRO readings were analyzed for hydrocarbon fractionations using method TX 1006 and analyzed for PAHs using method 8270C. These samples were 1506-02 3-6 feet and 1506-03 6-8 feet. As stated in SEPCo's letter of December 6, 2000, these analyses were ran for inclusion in a RBCA plan of this area consistent with the previous RBCA plan submitted in May 2000.

All original data sets with the appropriate QA/QC information can be found in [Appendix VII](#).

The following is a discussion of the RBCA analysis and conclusions.

#### 4.0 RISK-BASED CORRECTIVE ACTION (RBCA) ASSESSMENT OF W. D. GRIMES WELL NO. 8 SITE AREA BETWEEN 1506 AND 1510 COBB DRIVE

The following report is a risk-based corrective action (RBCA) plan commissioned by SEPCo and authored by Dr. George DeVaul of Equilon Enterprises LLC of Houston, Texas. Dr. DeVaul is also the author of the previously submitted RBCA plan of May 2000.

##### 4.0.1 Site Description

The site under investigation is a residentially developed property located in west Hobbs, NM. It is located between homes at 1506 and 1510 Cobb Drive. This site is co-located with a previously plugged and abandoned oil well (W. D. Grimes Well No. 8). The site is approximately 6 ft by 6 ft in lateral dimensions.

The site is in the Westgate Subdivision neighborhood. A previous assessment (Westgate Subdivision, Grimes Battery & Tasker Road, Stage 2 Abatement Plan Report, May 2000, RBCA Tier 1 Summary Assessment Report) discusses the surrounding area and the assessment methodology. This report follows an assessment methodology that is substantially identical to the prior report. The reader is referred to the prior report for additional details on the assessment methodology and regional background information.

The purpose of this report is to assess the extent, concentration, and exposure risk of chemicals, particularly petroleum and other oilfield-related chemicals, potentially present in the surface soils and subsurface soils in the vicinity of W. D. Grimes Well No. 8. Results of this assessment are intended to help estimate the potential levels and extent of remediation that may be needed to meet conservative risk-based criteria. This assessment is not an evaluation of any actual current or future exposure at

the site, but an estimate of criteria that would conservatively meet a number of exposure and risk-based goals.

#### 4.0.2 Potentially Completed Exposure Pathways

The identified potential source in this assessment is in the vicinity of the plugged and abandoned W. D. Grimes Well No. 8. The chemicals of potential interest are those likely originating from historical oil field operations, primarily crude oil and its chemical components, and produced water, including salts. Relevant indicator compounds for crude oil potentially include benzene, ethyl benzene, toluene, xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAHs). Other individual chemicals have also been included in the sample analysis in accordance with 20 NMAC 6.2 3103 and 1101. Summary tables included in this report (**Appendix II**) include only detected chemicals and selected chemicals associated with petroleum, not the complete chemical analyte list.

The site currently is residential, with residences surrounding both sides of the site. Relevant exposure pathways for evaluating potential human exposure for this site include:

- 1) Potential exposure to surficial soils, including combined soil ingestion, dermal contact, dust inhalation, and inhalation of volatile chemicals, for residential receptors. The top two centimeters is usually considered surface soil by USEPA (1996, p.84, section 4.14), while surface soil is taken as the top one meter of soil in ASTM E 1739-95 and ASTM E2081-00.
- 2) Potential exposure to volatile emissions from subsurface soils, through inhalation, for residential receptors.
- 3) Potential leaching of chemicals to groundwater, with ingestion of the groundwater. This assessment includes soil analytical data. Chemicals are screened with respect to their leaching potential.
- 4) Potential mobility of non-aqueous phase liquids (crude oil) in unsaturated soils. As in (3) the potential concern is with groundwater, but in terms of bulk migration of crude oil to ground water.
- 5) Potential effects on vegetation - soil pH and soil total dissolved solids, TDS, are evaluated based on ranges of acceptable agricultural parameters.

The risk-based assessment in this evaluation includes two parts. The first is an evaluation of detected individual indicator chemicals. These are screened using conservative risk-based screening level (RBSL) concentrations for individual indicator chemicals. The second is an evaluation of the crude oil.

Crude oil is a mixture of many thousands of petroleum hydrocarbon chemical constituents; evaluating each individual chemical using conventional risk assessment methods is impracticable. In this assessment, a RBSL for crude oil is derived from samples analyzed as a distribution of petroleum boiling point ranges and chemical types (aromatic and aliphatic). For details on deriving RBSL values for crude oil, the reader is referred to the prior mentioned assessment (Westgate Subdivision, Grimes Battery & Tasker Road, Stage 2 Abatement Plan Report, May 2000, RBCA Tier 1 Summary Assessment Report).

#### 4.0.3 Analytical Summary

##### Potential exposure to surficial soils

No sorting of samples into surficial and subsurface soil data sets has been attempted in the following comparisons, but we note that the surface soil criteria is relevant only for soils which are exposed at the ground surface (and is otherwise over conservative). The top two centimeters is usually

considered surface soil by USEPA (1996, p.84, section 4.14), while surface soil is taken as the top one meter of soil in ASTM E 1739-95 and ASTM PS 104-98.

Soil data for the site is summarized in **Tables 9 and 10 (Appendix II)**. All of the soil samples were taken within the defined site boundary at various sampling depths. A number of duplicate analyses are included.

A summary of measured soil concentrations for organic chemicals is shown in the attached **Table 9 (Appendix II)**. Most of the detected organic chemicals are associated with crude oil.

The TRPHC (418.1) results for "Total Petroleum Hydrocarbons" or TPH are an extraction from soil with infrared detection (calibrated against a standard mixture). This analysis tends to detect heavier molecular weight and heavier carbon number range petroleum compounds. Analysis of TPH by gas chromatography / flame ionization detection, within a specified carbon number range is accomplished with DRO, Diesel Range Organics (C22<); GRO, Gasoline Range Organics (C12<); and method TX 1005 (C35<). Fractionation of hydrocarbons into carbon number ranges and chemical classes (aromatic and aliphatic) is accomplished with Method TX 1006, another gas chromatography / flame ionization detection method. Comparison of 418.1 results with the other results shows that most of the detected TPH is in the range of >C35. This is consistent with petroleum oil that is heavily weathered, that is, depleted in volatile and lighter molecular weight fractions. A summary of this data is as follows:

<u>method</u>	<u>detection/samples</u>	<u>maximum</u>
(infrared) TRPHC (418.1)	10 of 17	12100 mg/kg
(C6-C35<) (TX1005)	2 of 2 (after 418.1 screening)	1074 mg/kg
(C22<) DRO (Mod. 8015B)	9 of 14	808 mg/kg
(C12<) GRO (8015B)	0 of 14	5 mg/kg <

For individual indicator chemicals, low levels of BTEX (benzene, toluene, ethyl benzene, and xylene isomers) are detected in three discrete samples out of 19; most values are non-detect. No Polycyclic Aromatic Hydrocarbons (PAHs) are present above background concentrations in any measured sample.

Chloroform at low levels was detected in one sample (Sample 155945). Acetone, 2-butanone (methyl ethyl ketone), and di-n-butyl phthalate were detected in a single sample (Sample 0010061-06). None of these four chemicals is an expected site contaminant, based on prior site operations. None is pervasive at the site. In sample (0010061-06) we note that acetone and methyl ethyl ketone are common laboratory solvents, and that di-n-butyl phthalate is a plasticizer, which can be present in plastic sampling and laboratory equipment. Further, this sample (0010061-06) was a split analysis. The duplicate showed no detection for these three chemicals.

Inorganic chemicals are summarized in **Table 10 (Appendix II)**. This includes many pervasive elements normally present in soils and soil minerals.

#### 4.0.4 Risk-Based Screening Levels and Other Screening Parameters

Screening levels for most detected indicator chemicals in this analysis are identical to those used in the prior assessment (Westgate Subdivision, Grimes Battery & Tasker Road, Stage 2 Abatement Plan Report, May 2000, RBCA Tier 1 Summary Assessment Report). The screening values and comparison to data is shown in **Tables 11 and 12 (Appendix II)**. Where additional chemicals not in the prior assessment have been detected, the same references and calculation methods have been used to derive and reference appropriate screening concentration values. These values are noted in the tables.

For petroleum oil, the TX 1006 and 418.1 analyses for samples 162446 and 162450 were used in deriving an overall carbon number distribution of petroleum, including the >C35 fraction, which was estimated as a difference between the co-located 418.1 results and the summed TX 1006 results. This method estimates between 97.5 to 99.7% of the petroleum distribution in the >C35 fraction range. Estimates of TPH screening levels were made using the same calculation method discussed in the prior report assessment (Westgate Subdivision, Grimes Battery & Tasker Road, Stage 2 Abatement Plan Report, May 2000, RBCA Tier 1 Summary Assessment Report). Results, along with results for a presumed 100% >C35 petroleum mixture, follow (all for residential exposure):

sample:	surficial soil, direct exposure (mg/kg)	soil volatilization indoors (mg/kg)	soil volatilization outdoors (mg/kg)	soil leaching to groundwater ingestion (mg/kg)
162446	2346	NA	NA	NA
162450	2361	NA	NA	NA
100% >C35	2339	NA	NA	NA

The minimum values, for Sample 162446, are used in this assessment for comparison to measured 418.1 TPH values. There is no substantial difference between any of the above sample compositions with respect to the calculated screening levels. The "NA" indicates that the TPH is not a potential problem for the indicated exposure route and exposure scenario (residential).

#### 4.0.5 Comparison of Data with Screening Levels

Screening levels for organic chemicals and petroleum are compared to the maximum detected levels in [Table 11 \(Appendix II\)](#). Inorganic chemical screening levels and maximum detected concentrations are shown in [Table 12 \(Appendix II\)](#).

##### organic chemicals

The only applicable potential exposure pathway for the heavily weathered TPH at this site is direct contact, with a residential screening level concentration of 2,340 mg/kg TPH in soil. This screening level is exceeded by 6 of 17 samples in the data set, as shown in [Table 11 \(Appendix II\)](#). None of the BTEX or other organic chemical concentrations exceeds the screening level concentration for direct surficial soil exposure.

The single (of 19 samples) detected benzene concentration (0.0357 mg/kg) shows a potential exceedence of the soil volatilization level indoors and the leaching to groundwater screening value. However, given:

- the low detection frequency and low concentration level for benzene in this data set,
- the model conservatism (an infinite volume of benzene and no biodegradation assumed),
- no detected benzene in the soil gas screening ([Table 1, Appendix 1](#)),

we do not expect this to be a probable concern at this site. Note that this benzene level does not exceed the NMOCD guideline screening level, nor the USEPA Region 6 screening levels.

Chloroform similarly shows a potential exceedence of the soil volatilization to inhalation exposure route and the leaching to groundwater exposure pathways. Again, this is a low concentration (0.0483 mg/kg), detected in a single sample. For reasons similar to benzene screening, we do not expect this to be a probable concern at this site. Note that this chloroform level does not exceed the direct exposure screening level, nor the USEPA Region 6 screening levels.

Acetone shows potential exceedence of the soil volatilization to inhalation exposure route and the leaching to groundwater exposure pathways. 2-butanone (methyl ethyl ketone) shows potential exceedence of the leaching to groundwater exposure pathway. Both of these chemicals were detected in the same single sample (0010061-06) at concentrations substantially above the method detection limit, along with di-n-butyl phthalate, which meets all applicable screening levels, but is also present at concentrations significantly above the detection limit. This sample (0010061-06) was a sample split. The duplicate sample analyses showed none of these chemicals, nor were these chemicals detected in any other samples at this site. Given this information and the prior discussion of these chemicals as potential laboratory and sampling contaminants, we can reasonably discount the select results for these chemicals.

#### inorganic chemicals

Results for inorganic chemical analyses are compared to applicable screening levels in **Table 12 (Appendix II)**. Arsenic and barium are the only chemicals which indicate an exceedence of any potentially applicable RBCA or USEPA Region 6 screening level.

#### arsenic

Arsenic was detected in 12 of 17 samples in this Well No. 8 data set. The highest measured value is 9.32 mg/kg. The average (taking ND values as 0.5 x ND) is 5.1 mg/kg.

Risk-based surficial soil screening levels for arsenic range from 0.43 mg/kg (direct soil exposure - RBCA) to 0.39 mg/kg (residential soil - Region 6). These initial screening-level values use consistent assumptions, and the risk-based values are reasonably close to each other.

For comparison purposes only, typical values for background arsenic in soil for USEPA Region 6 states (including NM) range from 1.1 to 16.7 mg/kg (from Region 6 guidance). In the continental United States, average surficial soil arsenic is 5.2 mg/kg (geometric mean, Shacklette and Boerngen, 1984). For the prior neighborhood assessment (Westgate Subdivision, Grimes Battery & Tasker Road, Stage 2 Abatement Plan Report, May 2000, RBCA Tier 1 Summary Assessment Report), we have arsenic at an average concentration of 1.32 mg/kg (including 1/2 ND (ND=0.5) for 52 samples, 106 total samples), and a maximum of 7.3 mg/kg. These values show that the initial RBSL screening value is below average background in many cases.

USEPA Region 9 guidance gives a specific example for arsenic:

"Generally EPA does not clean up below natural background. In some cases, the predictive risk-based models generate PRG [Preliminary Remediation Goals] levels that lie within or even below typical background. If natural background concentrations are higher than the risk-based PRGs, an adjustment of the PRG is probably needed. ... An illustrative example of this is naturally occurring arsenic in soils, which frequently is higher than the risk-based concentration set at a one-in-one-million cancer risk (the PRG for residential soils is 0.39 mg/kg). After considering background concentrations in a local area, EPA Region 9 has at times used the non-cancer PRG (22 mg/kg) to evaluate sites recognizing that this value tends to be above background levels yet still falls within the range of soil concentrations (0.39-39 mg/kg) that equates to EPA's "acceptable" cancer risk range of 10E-6 to 10E-4."

A value of 30 mg/kg for arsenic in soil has been used within New Mexico in at least one site clean-up [Record of Decision (ROD) Abstract, ROD Number: EPA/ROD/R06-93/078, ROD Date: 09/22/93, Site: CLEVELAND MILL, EPA ID Number: NMD981155930, Location: SILVER CITY, NM Operable Unit: 01].

Given this information, we find that:

- The initial RBSL value used in the analysis is conservative.

- All of the measured values of arsenic are below current clean-up levels that have been used in New Mexico and in USEPA Region 6.

Given this information, no further assessment or remediation of arsenic in soils at the site is planned.

#### barium

Barium in this data set was detected in 17 of 17 soil samples, the highest (8760 mg/kg) of which is above the average background level (580 mg/kg) by a factor of 15. The highest barium concentration (8760 mg/kg) marginally exceeds the USEPA Region 6 screening level, but does not exceed the RBCA surficial soil screening level (19200 mg/kg). The USEPA Region 6 screening level (5375 mg/kg) was exceeded in seven of 17 analyses. All of the screening levels are for direct exposure (ingestion and contact) only.

Barium is a common component of drilling mud, as barium sulfate. Barium sulfate is nearly insoluble (1.15 mg/L-water solubility limit, USEPA, 1999), in reasonable agreement with the TCLP data of **Table 10 (Appendix II)**, which show 1.6 and 1.5 mg/L, respectively, for Samples 0008241101 and 0008241118. Other forms of barium, such as barium chloride, are much more soluble in water (375,000 mg/L-water solubility limit, USEPA, 1999). Barium is also always present in these soils with calcium (in soil minerals), at a calcium concentration of at least 26920 mg/kg (**Table 10, Appendix II**). This calcium, according to information in USEPA (1999), will reduce the ingestion uptake of barium in the gut, and will reduce the potential effects of barium in the body.

Inorganic soil concentrations were not directly compared with estimated soil leaching screening levels in this analysis. Tabulated TCLP values have been compared with applicable screening levels. In this case, the only element detected in the TCLP analysis was barium, which met the applicable TCLP and RBCA leaching to groundwater screening criteria.

Given this information, no further assessment or remediation of barium in soils at the site is planned.

#### other criteria

A single measurement (Sample: 0010061-06) of soil TDS is above screening criteria of 3065 mg/L, based on plant toxicity. This sample also showed high pH (12.5), and high calcium 146,000 mg/kg concentration levels. Given the local geology (including limestone), this result is likely due to natural soil minerals in the vicinity.

Oil mobility is a screening of petroleum migration in the subsurface as a non-aqueous phase liquid (NAPL). The oil analysis showed heavily weathered oil, mainly in the >C35 carbon number range.

Given this composition, we find that this oil is unlikely to migrate as a NAPL in subsurface soils.

#### **4.0.6 Qualitative Uncertainty Description and Conservatism**

The risk-based screening levels (RBSLs) used in this evaluation are based on calculations using the upper range residential exposure parameters from USEPA. Most individuals will have exposure levels that are lower than indicated by these parameters, and many will have exposure levels that are significantly less than indicated by these parameters.

In particular, this site is limited in area. Residential exposure assumptions depend on an exposure unit that is typically the size of a residential lot. The site is only a fraction of the size of a single residential lot and we would expect any exposure to be a proportionate factor less than the upper range residential exposure parameters used in this analysis.

Toxicity parameters used in deriving the RBSLs are from USEPA and, for TPH, are based on USEPA methodology. The USEPA methods used in deriving the threshold (noncarcinogen) toxicity parameters are based on no observed adverse effects levels, with additional safety factors of up to 10,000 times greater than these "no observed adverse effects levels". Similarly, the USEPA development of toxicity parameters for potential carcinogens is extremely conservative.

In the calculation of TPH screening levels, the >C35 petroleum hydrocarbon fraction uses toxicity factors extrapolated from lighter weight petroleum constituents. This is a conservative assumption. This >C35 molecular weight range of chemical is expected to be less bioavailable than lower molecular weight hydrocarbons. Further, we note that in states which have implemented this TPH methodology in guidance and regulation (Texas - TRRP, Massachusetts - VPH/EPH), the >C35 petroleum hydrocarbon fraction has been neglected.

Inhalation of indoor air evolved from subsurface soils is an indirect exposure route. For benzene, significant biodegradation and diffusive attenuation will occur in the soil layer between the subsurface chemical and the indoor air. The model used in estimating this transport is necessarily conservative and neglects this biodegradation. The conservatism of this model for application to benzene and other aromatic hydrocarbons is recognized (USEPA, 1996).

## 5.0 PROPOSED CORRECTIVE ACTION

Although there is a slight potential for exposure to chemicals, primarily direct contact with TPH in surficial soil, at the abandoned W. D. Grimes Well No. 8 site, the TPH-impacted soils are at a depth greater than three feet.

Risk requires exposure. Exposure requires contact with the chemical of concern. In the absence of contact with the chemical there can be no exposure. In exposure estimates, the top two centimeters are usually considered surface soil by USEPA (1996, p.84, section 4.14), while surface soil is taken as the top one meter (approximately three feet) in ASTM E 1739-95 and ASTM PS 104-98.

TPH concentrations of less than approximately 2,350 mg/kg, in a defined surficial soil layer, would meet conservatively defined risk and exposure criteria for residential use of this site. This would be protective of current site use, as well as for future use and reasonable future excavation depths. All analyzed soil samples at a depth of 3 ft or less meet this 2,350 mg/kg criteria by a wide margin.

Considering the discussion in Section 4.0.5, and **Table 11 (Appendix II)**, no other petroleum-related indicator chemicals are above screening levels at this site. No other viable exposure pathways, other than direct contact, are applicable for organic chemicals identified and quantified at this site.

Considering the discussion in Section 4.0.5, and **Table 12 (Appendix II)**, the only inorganic chemical of potential concern is barium. As with TPH, the barium screening level is based on direct exposure. We note that the barium concentration is only marginally above the lowest applicable screening level. These screening levels do not account for the expected chemical form (barium sulfate), which is relatively insoluble, and also do not account for the mediating effect of calcium, which is present in all soil samples. Therefore no remedial action for barium is necessary at this site.

Using the USEPA and ASTM surficial soil layer depths of either two centimeters or one meter (approximately three feet), and the test results of non-detect to a high of 322 mg/kg TPH in the 0-3 foot range of all sample points at the site, it is determined that no removal of soils at this site is necessary. Additionally, there is no visible impact on the surface vegetation due to any chemicals. Grass has been and is growing at the site. Again, risk requires exposure and there are no indications of surface exposure.

Based on the risk analysis, SEPCo recommends that no further action is necessary at this site.

## 6.0 REFERENCE DOCUMENTS

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**TABLE 1**  
**SOIL GAS RESULTS**

Table 1 - Soil Gas Results  
 Westgate Subdivision - August 1998  
 BBC International, Inc. \* Hobbs, New Mexico

SAMPLE ID	SV-190	SV-191	SV-191A	SV-191B	SV-191C	SV-191D	SV-259	SV-260
DEPTH (FT)	5	5	5	5	5	5	5	8
PURGE (CC)	60	60	60	60	60	60	60	60
DATE ANALYZED	8/12/98	8/4/98	8/4/98	8/4/98	8/4/98	8/4/98	2/2/99	2/2/99
TIME ANALYZED	9:28	10:49	10:24	11:18	11:46	12:13	11:58	12:22
<b>Method 8021</b>								
Benzene	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND
<b>Method 8015</b>								
TPH	ND	1	ND	ND	ND	ND	ND	ND
Methane	6	5	3	3	4	4	7	2
Ethane	ND	ND	ND	ND	ND	ND	ND	ND
Propane	ND	ND	ND	ND	ND	ND	ND	ND
Butane	ND	ND	ND	ND	ND	ND	ND	ND
Pentane	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND

"ND" INDICATES NOT DETECTED AT OR BELOW 1 ug/L FOR EACH ANALYTE FOR METHOD 8021 AND 1PPMV FOR METHOD 8015.  
 ANALYSES PERFORMED ON-SITE IN TEG'S MOBILE ENVIRONMENTAL LABORATORY  
 ANALYSES PERFORMED BY: Richard Rodriguez

**TABLE 2**  
**BBC INTERNATIONAL'S**  
**RESULTS FROM SPLIT**  
**SAMPLING WITH NMOCD**  
**AUGUST 24, 2000**

Table 2 - Soil Lab Results - 2000  
 Westgate Subdivision - August 24, 2000  
 BBC International's Results from Split with NMOCD at 1506 N. Cobb

Analyte	Method	0008241101	0008241118
		Sample: 152139	Sample: 152140
		mg/Kg	mg/Kg
Bromochloromethane	S-8260B	ND	ND
Dichlorodifluoromethane	S-8260B	ND	ND
Chloromethane (methyl chloride)	S-8260B	ND	ND
Vinyl Chloride	S-8260B	ND	ND
Bromomethane (methyl bromide)	S-8260B	ND	ND
Chloroethane	S-8260B	ND	ND
Trichlorofluoromethane	S-8260B	ND	ND
Acetone	S-8260B	ND	ND
Iodomethane (methyl iodide)	S-8260B	ND	ND
Carbon Disulfide	S-8260B	ND	ND
Acrylonitrile	S-8260B	ND	ND
2-Butanone (MEK)	S-8260B	ND	ND
4-methyl-2-pentanone (MIBK)	S-8260B	ND	ND
2-hexanone	S-8260B	ND	ND
trans 1,4-Dichloro-2-butene	S-8260B	ND	ND
1,1-Dichloroethene	S-8260B	ND	ND
Methylene chloride	S-8260B	ND	ND
MTBE	S-8260B	ND	ND
trans-1,2-Dichloroethene	S-8260B	ND	ND
1,1-Dichloroethane	S-8260B	ND	ND
cis-1,2-dichloroethene	S-8260B	ND	ND
2,2-Dichloropropane	S-8260B	ND	ND
1,2-Dichloroethane (EDC)	S-8260B	ND	ND
Chloroform	S-8260B	ND	ND
1,1,1-Trichloroethane	S-8260B	ND	ND
1,1-Dichloropropene	S-8260B	ND	ND
Benzene	S-8260B	ND	ND
Carbon Tetrachloride	S-8260B	ND	ND
1,2-Dichloropropane	S-8260B	ND	ND
Trichloroethene (TCE)	S-8260B	ND	ND
Dibromomethane (methylene bromide)	S-8260B	ND	ND
Bromodichloromethane	S-8260B	ND	ND
2-Chloroethyl vinyl ether	S-8260B	ND	ND
cis-1,3-Dichloropropene	S-8260B	ND	ND
trans-1,3-Dichloropropene	S-8260B	ND	ND
Toluene	S-8260B	ND	ND
1,1,2-Trichloroethane	S-8260B	ND	ND
1,3-Dichloropropane	S-8260B	ND	ND
Dibromochloromethane	S-8260B	ND	ND
1,2-Dibromoethane (EDB)	S-8260B	ND	ND
Tetrachloroethene (PCE)	S-8260B	ND	ND
Chlorobenzene	S-8260B	ND	ND
1,1,1,2-Tetrachloroethane	S-8260B	ND	ND
Ethylbenzene	S-8260B	ND	ND
m,p-Xylene	S-8260B	ND	ND
Bromoform	S-8260B	ND	ND
Styrene	S-8260B	ND	ND
o-Xylene	S-8260B	ND	ND
1,1,2,2-Tetrachloroethane	S-8260B	ND	ND
2-Chlorotoluene	S-8260B	ND	ND
1,2,3-Trichloropropane	S-8260B	ND	ND

ND = Not Detected

Table 2 - Soil Lab Results - 2000  
 Westgate Subdivision - August 24, 2000  
 BBC International's Results from Split with NMOCD at 1506 N. Cobb

Page 2

Analyte	Method	Sample: 152139	Sample: 152140
Isopropylbenzene	S-8260B	ND	ND
Bromobenzene	S-8260B	ND	ND
n-Propylbenzene	S-8260B	ND	ND
1,3,5-Trimethylbenzene	S-8260B	ND	ND
tert-Butylbenzene	S-8260B	ND	ND
1,2,4-Trimethylbenzene	S-8260B	ND	ND
1,4-Dichlorobenzene (para)	S-8260B	ND	ND
sec-Butylbenzene	S-8260B	ND	ND
1,3-Dichlorobenzene	S-8260B	ND	ND
p-Isopropyltoluene	S-8260B	ND	ND
4-Chlorotoluene	S-8260B	ND	ND
1,2-Dichlorobenzene (ortho)	S-8260B	ND	ND
n-Butylbenzene	S-8260B	ND	ND
1,2-Dibromo-3-chloropropane	S-8260B	ND	ND
1,2,3-Trichlorobenzene	S-8260B	ND	ND
1,2,4-Trichlorobenzene	S-8260B	ND	ND
Naphthalene	S-8260B	ND	ND
Hexachlorobutadiene	S-8260B	ND	ND

		mg/L	mg/L
TCLP Mercury	S 7470 A	ND	ND

		mg/L	mg/L
TCLP Arsenic	S 6010B	ND	ND
TCLP Barium	S 6010B	1.6	1.5
TCLP Cadmium	S 6010B	ND	ND
TCLP Chromium	S 6010B	ND	ND
TCLP Lead	S 6010B	ND	ND
TCLP Selenium	S 6010B	ND	ND
TCLP Silver	S 6010B	ND	ND

		mg/Kg	mg/Kg
TRPHC	E 418.1	726	ND

ND = Not Detected

**TABLE 3**  
**NMOCD RESULTS FROM SPLIT**  
**SAMPLING WITH BBC**  
**INTERNATIONAL**  
**AUGUST 24, 2000**

**Table 3 - Soil Lab Results-2000**  
**Westgate Subdivision - August 24, 2000**  
**NMOCD's Results from Sampling at 1506 N. Cobb**

		<b>0008241101</b>	<b>0008241118</b>
<b>Analyte</b>	<b>Method</b>	<b>North Side</b>	<b>South Side</b>
		<b>Sample: 152302</b>	<b>Sample: 152303</b>
<b>Benzene</b>	S 8021B	ND	ND
<b>Toluene</b>	S 8021B	ND	ND
<b>Ethylbenzene</b>	S 8021B	ND	ND
<b>M,P,O,-Xylene</b>	S 8021B	<b>0.084</b>	ND
<b>Total BTEX</b>	S 8021B	<b>0.084</b>	ND
 <b>Total Mercury</b>	 S 7471A	 ND	 ND
 <b>DRO</b>	 Mod. 8015B	 <b>64</b>	 ND
 <b>GRO</b>	 8015B	 ND	 ND
 <b>Total Arsenic</b>	 S 6010B	 <b>3.4</b>	 <b>3.2</b>
<b>Total Barium</b>	S 6010B	<b>168</b>	<b>108</b>
<b>Total Boron</b>	S 6010B	<b>25</b>	<b>34</b>
<b>Total Cadmium</b>	S 6010B	<b>0.28</b>	<b>0.46</b>
<b>Total Chromium</b>	S 6010B	<b>6.8</b>	<b>10</b>
<b>Total Cobalt</b>	S 6010B	<b>2.8</b>	<b>4</b>
<b>Total Copper</b>	S 6010B	<b>5.3</b>	<b>7.1</b>
<b>Total Lead</b>	S 6010B	<b>4.6</b>	<b>5.3</b>
<b>Total Manganese</b>	S 6010B	<b>90</b>	<b>156</b>
<b>Total Molybdenum</b>	S 6010B	ND	ND
<b>Total Nickel</b>	S 6010B	<b>11</b>	<b>15</b>
<b>Total Selenium</b>	S 6010B	ND	ND
<b>Total Silica</b>	S 6010B	<b>230</b>	<b>400</b>
<b>Total Silver</b>	S 6010B	ND	ND
<b>Total Zinc</b>	S 6010B	<b>18</b>	<b>29</b>

ND = Not Detected

**TABLE 4**  
**BBC INTERNATIONAL'S**  
**RESULTS FROM SPLIT**  
**SAMPLING WITH PLAINTIFFS**  
**OCTOBER 11-12, 2000**

Table 4 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 BBC International's Results from Split Sampling with Plaintiffs at 1506 N. Cobb

		SB-13-03-01 5'-6'	SB-13-03-01 10'-11'	SB-13-03-01 22'-23'	WSB-01	WSB-02	SB-15-10-01 "A"	SB-15-10-01 "B"
Analyte	Method	Sample: 155939	Sample: 155940	Sample: 155941	Sample: 155942	Sample: 155943	Sample: 155944	Sample: 155945
Volatile Organics		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dichlorodifluoromethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
Chloromethane (methyl chloride)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	S-8260B	ND	ND	ND	ND	ND	ND	ND
Bromomethane (methyl bromide)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Trichlorodifluoromethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	S-8260B	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	S-8260B	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane (EDC)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Chloroform	S-8260B	ND	ND	ND	ND	ND	ND	0.0483
1,1,1-Trichloroethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
Benzene	S-8260B	ND	ND	ND	ND	ND	ND	0.0357
Carbon Tetrachloride	S-8260B	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	S-8260B	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	S-8260B	ND	ND	ND	ND	ND	ND	ND
Toluene	S-8260B	ND	<b>0.0465</b>	ND	ND	ND	ND	<b>0.0982</b>
1,1,2-Trichloroethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	S-8260B	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	S-8260B	ND	<b>1.374</b>	<b>4.884</b>	ND	ND	ND	ND
m,p-Xylene	S-8260B	ND	<b>1.513</b>	<sup>6</sup> <b>12.959</b>	<b>0.0506</b>	ND	ND	<b>0.099</b>
o-Xylene	S-8260B	ND	<b>0.0545</b>	ND	ND	ND	ND	<b>0.0271</b>
1,1,2,2-Tetrachloroethane	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene (para)	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	S-8260B	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (ortho)	S-8260B	ND	ND	ND	ND	ND	ND	ND
Test Comments		1	2	1	2	2	1	1

| Semi-volatile Organics        |         | mg/Kg |
|-------------------------------|---------|-------|-------|-------|-------|-------|-------|-------|
| Pyridine                      | S-8270C | ND    |
| n-Nitrosodimethylamine        | S-8270C | ND    |
| 2-Picoline                    | S-8270C | ND    |
| Methyl methanesulfonate       | S-8270C | ND    |
| Ethyl methanesulfonate        | S-8270C | ND    |
| Phenol                        | S-8270C | ND    |
| Aniline                       | S-8270C | ND    |
| bis (2-chloroethyl) ether     | S-8270C | ND    |
| 2-Chlorophenol                | S-8270C | ND    |
| 1,3-Dichlorobenzene           | S-8270C | ND    |
| 1,4-Dichlorobenzene           | S-8270C | ND    |
| Benzyl alcohol                | S-8270C | ND    |
| 1,2-Dichlorobenzene           | S-8270C | ND    |
| 2-Methylphenol                | S-8270C | ND    |
| bis (2-chloroisopropyl) ether | S-8270C | ND    |
| 4-Methylphenol/3-Methylphenol | S-8270C | ND    |
| Acetophenone                  | S-8270C | ND    |
| n-Nitrosodi-n-propylamine     | S-8270C | ND    |
| Hexachloroethane              | S-8270C | ND    |

Table 4 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 BBC International's Results from Split Sampling with Plaintiffs at 1506 N. Cobb

		<b>SB-13-03-01 5'-6'</b>	<b>SB-13-03-01 10'-11'</b>	<b>SB-13-03-01 22'-23'</b>	<b>WSB-01</b>	<b>WSB-02</b>	<b>SB-15-10-01 "A"</b>	<b>SB-15-10-01 "B"</b>
<b>Analyte</b>	<b>Method</b>	Sample: 155939	Sample: 155940	Sample: 155941	Sample: 155942	Sample: 155943	Sample: 155944	Sample: 155945
<b>Volatile Organics</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
<b>Nitrobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>n-Nitrosopiperidine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Isophorone</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2-Nitrophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4-Dimethylphenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>bis (2-chloroethoxy) methane</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Benzoic acid</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4-Dichlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>1,2,4-Trichlorobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>a,a-Dimethylphenethylamine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Naphthalene</b>	S-8270C	ND	<b>7.48</b>	<b>6.11</b>	ND	ND	ND	ND
<b>4-Chloroaniline</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,6-Dichlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Hexachlorobutadiene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>n-Nitroso-di-n-butylamine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Chloro-3-methylphenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>1-Methylnaphthalene</b>	S-8270C	ND	<b>15.93</b>	<b>14.23</b>	ND	ND	ND	ND
<b>2-Methylnaphthalene</b>	S-8270C	ND	<b>17.46</b>	<b>15.3</b>	ND	ND	ND	ND
<b>1,2,4,5-Tetrachlorobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Hexachlorocyclopentadiene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4,6-Trichlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4,5-Trichlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2-Chloronaphthalene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>1-Chloronaphthalene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2-Nitroaniline</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Dimethylphthalate</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Acenaphthylene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,6-Dinitrotoluene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>3-Nitroaniline</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Acenaphthene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4-Dinitrophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Dibenzofuran</b>	S-8270C	ND	<b>2.6</b>	ND	ND	ND	ND	ND
<b>Pentachlorobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Nitrophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>1-Naphthylamine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,4-Dinitrotoluene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2-Naphthylamine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>2,3,4,6-Tetrachlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Fluorene</b>	S-8270C	ND	<b>2.62</b>	ND	ND	ND	ND	ND
<b>Diethylphthalate</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Chlorophenyl-phenylether</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Nitroaniline</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4,6-Dinitro-2-methylphenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Diphenylamine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Diphenylhydrazine</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Bromophenyl-phenylether</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Phenacetin</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Hexachlorobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>4-Aminobiphenyl</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Pentachlorophenol</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Pentachloronitrobenzene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Pronamide</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Phenanthrene</b>	S-8270C	ND	<b>4.29</b>	<b>3.56</b>	ND	ND	ND	ND
<b>Anthracene</b>	S-8270C	ND	ND	ND	ND	ND	ND	ND

Table 4 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 BBC International's Results from Split Sampling with Plaintiffs at 1506 N. Cobb

		SB-13-03-01 5'-6'	SB-13-03-01 10'-11'	SB-13-03-01 22'-23'	WSB-01	WSB-02	SB-15-10-01 "A"	SB-15-10-01 "B"
Analyte	Method	Sample: 155939	Sample: 155940	Sample: 155941	Sample: 155942	Sample: 155943	Sample: 155944	Sample: 155945
<b>Volatile Organics</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Di-n-butylphthalate	S-8270C	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzidine	S-8270C	ND	ND	ND	ND	ND	ND	ND
Pyrene	S-8270C	ND	ND	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	S-8270C	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	S-8270C	ND	ND	ND	ND	ND	ND	ND
Chrysene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Bis (2-ethylhexyl) phthalate	S-8270C	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	S-8270C	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)anthracene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	S-8270C	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,j)acridine	S-8270C	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	S-8270C	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i) perylene	S-8270C	ND	ND	ND	ND	ND	ND	ND
<b>Test Comments</b>			3	3				
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Total Mercury	S-7471A	ND	0.2	ND	ND	ND	ND	ND
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
CL	E-300.0QC	13	<sup>4</sup> 9.2	9.7	9.7	53	16	280
Fluoride	E-300.0QC	3.3	<sup>5</sup> 9.9	1.7	ND	ND	1.8	3.5
Nitrate-N	E-300.0QC	2.1	ND	1.0	22	38	1.9	1.3
Sulfate	E-300.0QC	150	33	10	17	110	32	10
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Phenolics	SM-5530D	<sup>7</sup> ND	6.24	<sup>7</sup> 2.66	<sup>7</sup> ND	<sup>7</sup> 1.76	<sup>7</sup> ND	<sup>7</sup> 5.09
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Total Dissolved Solids	E-160.1	540	260	240	340	900	680	1900
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
TRPHC	E 418.1	4000	25700	27600	ND	1120	877	4260
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Total Cyanide	SM 4500-CN	ND	ND	ND	ND	ND	ND	ND
		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Total Arsenic	S 6010B	ND	ND	ND	ND	ND	ND	ND
Total Barium	S 6010B	320	100	140	130	130	4750	3900
Total Cadmium	S 6010B	ND	ND	ND	ND	ND	ND	ND
Total Chromium	S 6010B	ND	<b>5.6</b>	ND	<b>5.8</b>	ND	<b>7.1</b>	<b>6.4</b>
Total Lead	S 6010B	ND	ND	ND	ND	ND	<b>53</b>	<b>31</b>
Total Selenium	S 6010B	ND	ND	ND	ND	ND	ND	ND
Total Silver	S 6010B	ND	ND	ND	ND	ND	ND	<b>2.0</b>
Total Vanadium	S 6010B	<b>5.9</b>	17	23	12	9.7	15	<b>15</b>

Table 4 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 BBC International's Results from Split Sampling with Plaintiffs at 1506 N. Cobb

		SB-13-03-01 5'-6"	SB-13-03-01 10'-11"	SB-13-03-01 22"-23"	WSB-01	WSB-02	SB-15-10-01 "A"	SB-15-10-01 "B"
Analyte	Method	Sample: 155939	Sample: 155940	Sample: 155941	Sample: 155942	Sample: 155943	Sample: 155944	Sample: 155945
Volatile Organics		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
pH	E 150.1	7.9	8.2	8.4	8.1	8.0	8.2	12.4

<sup>1</sup> - TIC: Acrolein has estimated concentration <250 ug/kg.

<sup>2</sup> - TIC: Acrolein has estimated concentration <240 ug/kg.

<sup>3</sup> - Elevated reporting limit due to dilution necessitated by analyte concentration.

<sup>4</sup> - Chloride re-ran on IC110200-1.sch (PB05414; QC06195). ICV %IA = 100; CCV %IA = 102; Matrix spikes RPD = 1; Matrix spikes %EA = 104

<sup>5</sup> - Fluoride re-ran on IC110200-1.sch (PB05414; QC06195). ICV %IA = 105; CCV %IA = 106; Matrix spikes RPD = 1; Matrix spikes %EA = 104

<sup>6</sup> - Estimated concentration, response above standard range.

<sup>7</sup> - Sample ran at a x25 dilution.

**TABLE 5**  
**BBC INTERNATIONAL'S**  
**RESULTS FROM SAMPLING AT**  
**1506 N. COBB**  
**JANUARY 12, 2001**

Table 5 - Soil Lab Results - 2000  
 Westgate Subdivision  
 January 12, 2001  
 BBC International's Results from Sampling at 1506 N. Cobb

		1506-02	1506-02	1506-02	1506-03	1506-03	1506-04	1506-04	1506-05	1506-05	1506-06
		0'-3'	3'-6'	6'-7'	0'-3'	3'-6'	6'-8'	0'-3'	3'-4'	0'-3'	3'-6'
Analyte	Method	Sample: 162445	Sample: 162446	Sample: 162447	Sample: 162448	Sample: 162449	Sample: 162450	Sample: 162451	Sample: 162452	Sample: 162453	Sample: 162456
Benzene	S 8260B	mg/Kg									
Toluene	S 8260B	ND									
Ethylbenzene	S 8260B	ND									
m,p-Xylene	S 8260B	ND									
o-Xylene	S 8260B	ND									
Total Mercury	S-7471A	mg/Kg									
TRPHC	E 418.1	163	12100	734	ND	2460	4940	ND	2720	322	432
DRO	Mod. 8015B	mg/Kg									
GRO	8015B	ND	538	142	ND	55	808	ND	103	88	ND
Total Aluminum	S 6010B	mg/Kg									
Total Arsenic	S 6010B	6.96	7.59	6.57	ND	ND	7	5.53	9.32	5.36	5.04
Total Barium	S 6010B	6670	6300	1090	272	884	204	5100	7200	8760	6170
Total Boron	S 6010B	20.8	26.6	21.8	17.4	11.6	18.5	20.7	28.8	24.2	23.7
Total Cadmium	S 6010B	ND									
Total Calcium	S 6010B	31050	26920	107200	71110	234000	122000	43110	36800	35500	43000
Total Chromium	S 6010B	5.02	ND	ND	ND	ND	ND	ND	7.41	6.66	6.51
Total Cobalt	S 6010B	7.61	7.45	5.75	5.02	4.74	4.34	7.08	9.23	8.76	8.44
Total Copper	S 6010B	26.7	26.4	22.5	23	19.2	15.9	22.4	22.5	23.9	21.7
Total Iron	S 6010B	9190	11100	6780	7240	2860	5290	10200	12000	10900	12800
Total Lead	S 6010B	65.9	144	36.3	11.9	12.9	ND	40.9	122	121	80.3
Total Magnesium	S 6010B	4734	3461	6840	3270	6140	9070	4390	5450	5180	5360
Total Manganese	S 6010B	186	198	116	139	33.4	38.7	200	242	210	232
Total Molybdenum	S 6010B	ND									
Total Nickel	S 6010B	19.6	20.3	15.2	14.9	12.7	14.6	19.7	24.8	22.2	25.9
Total Potassium	S 6010B	2653	2519	2700	3094	1390	3240	3660	3530	3767	3688
Total Selenium	S 6010B	ND									
Total Silica	S 6010B	209	260	200	190	161	191	192	220	233	173
Total Silver	S 6010B	ND									
Total Sodium	S 6010B	1185	1076	1383	884	1310	1084	990	1290	1218	1225
Total Zinc	S 6010B	59.5	179	41.7	41.6	10.5	17.2	63.2	142	112	103

**TABLE 6**  
**PLAINTIFFS' RESULTS FROM**  
**SPLIT SAMPLING WITH BBC**  
**INTERNATIONAL**  
**OCTOBER 11-12, 2000**

Table 6 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 Plaintiffs' Results from Split Sampling at 1506 N. Cobb

		SB-13-03-01 3'-5'	SB-13-03-01 8'-11'	SB-12-03-01 20'-23'	WSB-01	WSB-02	SB-1510-01 5'-7'
Analyte	Method	Sample: 0010061-01	Sample: 0010061-02	Sample: 0010061-03	Sample: 0010061-04	Sample: 0010061-05	Sample: 0010061-06
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>							
Chloride	E300	ND	ND	ND		74	400
Fluoride	E300	ND	39	ND		ND	ND
Nitrate-Nitrate (As N)	E300	ND	ND	ND		56	ND
Sulfate	E300	310	ND	ND		210	52
<b>PETROLEUM HYDROCARBONS, T/R</b>							
Petroleum Hydrocarbons, T/R	E418.1	4200	36000	35000		880	2100
<b>TCL VOLATILE ORGANICS</b>							
1,1,1-Trichloroethane	SW8260	ND	ND	ND		ND	ND
1,1,2,2-Tetrachloroethane	SW8260	ND	ND	ND		ND	ND
1,1,2-Trichloroethane	SW8260	ND	ND	ND		ND	ND
1,1-Dichloroethane	SW8260	ND	ND	ND		ND	ND
1,1-Dichloroethene	SW8260	ND	ND	ND		ND	ND
1,2-Dichloroethane	SW8260	ND	ND	ND		ND	ND
1,2-Dichloropropane	SW8260	ND	ND	ND		ND	ND
2-Butanone	SW8260	ND	41	64		ND	21
2-Hexanone	SW8260	ND	ND	ND		ND	ND
4-Methyl-2-pentanone	SW8260	ND	ND	ND		ND	ND
Acetone	SW8260	ND	350	320		ND	250
Benzene	SW8260	ND	ND	20		ND	ND
Bromodichloromethane	SW8260	ND	ND	ND		ND	ND
Bromoform	SW8260	ND	ND	ND		ND	ND
Bromomethane	SW8260	ND	ND	ND		ND	ND
Carbon disulfide	SW8260	ND	ND	ND		ND	ND
Carbon tetrachloride	SW8260	ND	ND	ND		ND	ND
Chlorobenzene	SW8260	ND	ND	ND		ND	ND
Chloroethane	SW8260	ND	ND	ND		ND	ND
Chloroform	SW8260	ND	ND	ND		ND	ND
Chloromethane	SW8260	ND	ND	ND		ND	ND
cis-1,2-Dichloroethene	SW8260	ND	ND	ND		ND	ND
cis-1,3-Dichloropropene	SW8260	ND	ND	ND		ND	ND
Dibromochloromethane	SW8260	ND	ND	ND		ND	ND
Dichloromethane	SW8260	ND	ND	ND		ND	ND
Ethylbenzene	SW8260	ND	430	13000		ND	ND
Styrene	SW8260	ND	ND	ND		ND	ND
Tetrachloroethene	SW8260	ND	ND	ND		ND	ND
Toluene	SW8260	ND	ND	ND		ND	5.20
trans-1,2-Dichloroethene	SW8260	ND	ND	ND		ND	ND
trans-1,3-Dichloropropene	SW8260	ND	ND	ND		ND	ND
Trichloroethene	SW8260	ND	ND	ND		ND	ND
Vinyl chloride	SW8260	ND	ND	ND		ND	ND
Xylenes, Total	SW8260	ND	ND	43000	ND	ND	32
<b>TCL SEMI-VOLATILE ORGANICS</b>							
1,2,4-Trichlorobenzene	SW8270	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	SW8270	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	SW8270	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	SW8270	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	SW8270	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	SW8270	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	SW8270	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	SW8270	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	SW8270	ND	ND	ND	ND	ND	ND

Table 6 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 Plaintiffs' Results from Split Sampling at 1506 N. Cobb

		SB-13-03-01 3'-5'	SB-13-03-01 8'-11'	SB-12-03-01 20'-23'	WSB-01	WSB-02	SB-1510-01 5'-7'
Analyte	Method	Sample: 0010061-01	Sample: 0010061-02	Sample: 0010061-03	Sample: 0010061-04	Sample: 0010061-05	Sample: 0010061-06
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>							
2,4-Dinitrotoluene	SW8270	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	SW8270	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	SW8270	ND	ND	ND	ND	ND	ND
2-Chlorophenol	SW8270	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	SW8270	ND	<b>30000</b>	<b>29000</b>	ND	ND	ND
2-Methylphenol	SW8270	ND	ND	ND	ND	ND	ND
2-Nitroaniline	SW8270	ND	ND	ND	ND	ND	ND
2-Nitrophenol	SW8270	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	SW8270	ND	ND	ND	ND	ND	ND
3-Nitroaniline	SW8270	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	SW8270	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	SW8270	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	SW8270	ND	ND	ND	ND	ND	ND
4-Chloroaniline	SW8270	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenyl ether	SW8270	ND	ND	ND	ND	ND	ND
4-Methylphenol	SW8270	ND	ND	ND	ND	ND	ND
4-Nitroaniline	SW8270	ND	ND	ND	ND	ND	ND
4-Nitrophenol	SW8270	ND	ND	ND	ND	ND	ND
Acenaphthene	SW8270	ND	ND	ND	ND	ND	ND
Acenaphthylene	SW8270	ND	ND	ND	ND	ND	ND
Anthracene	SW8270	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	SW8270	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	SW8270	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	SW8270	ND	ND	ND	ND	ND	ND
Benzo(g,h,i) perylene	SW8270	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	SW8270	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	SW8270	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	SW8270	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether	SW8270	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	SW8270	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	SW8270	ND	ND	ND	ND	ND	ND
Carbazole	SW8270	ND	ND	ND	ND	ND	ND
Chrysene	SW8270	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	SW8270	ND	ND	ND	ND	ND	480
Di-n-octyl phthalate	SW8270	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	SW8270	ND	ND	ND	ND	ND	ND
Dibenzofuran	SW8270	ND	<b>3900</b>	<b>4200</b>	ND	ND	ND
Diethyl phthalate	SW8270	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	SW8270	ND	ND	ND	ND	ND	ND
Fluoranthene	SW8270	ND	ND	ND	ND	ND	ND
Fluorene	SW8270	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	SW8270	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	SW8270	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	SW8270	ND	ND	ND	ND	ND	ND
Hexachloroethane	SW8270	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	SW8270	ND	ND	ND	ND	ND	ND
Isophorone	SW8270	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	SW8270	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	SW8270	ND	ND	ND	ND	ND	ND
Naphthalene	SW8270	ND	<b>12000</b>	<b>12000</b>	ND	ND	ND
Nitrobenzene	SW8270	ND	ND	ND	ND	ND	ND
Pentachlorophenol	SW8270	ND	ND	ND	ND	ND	ND
Phenanthrene	SW8270	ND	<b>5800</b>	<b>5800</b>	ND	ND	ND
Phenol	SW8270	ND	ND	ND	ND	ND	ND

Table 6 - Soil Lab Results - 2000  
 Westgate Subdivision - October 11 - 12, 2000  
 Plaintiffs' Results from Split Sampling at 1506 N. Cobb

		SB-13-03-01 3'-5'	SB-13-03-01 8'-11'	SB-12-03-01 20'-23'	WSB-01	WSB-02	SB-1510-01 5'-7'
Analyte	Method	Sample: 0010061-01	Sample: 0010061-02	Sample: 0010061-03	Sample: 0010061-04	Sample: 0010061-05	Sample: 0010061-06
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Pyrene	SW8270	ND	ND	ND	ND	ND	ND
<b>CYANIDE, TOTAL</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Cyanide	S-7471A	ND	ND	ND	ND	ND	ND
<b>MERCURY, SOIL</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Mercury	S-7471A	ND	ND	ND	ND	ND	ND
<b>ICP METALS, TOTAL</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Aluminum	SW6020	4730	15800	526	9830	8010	9760
Antimony	SW6020	ND	ND	ND	ND	ND	ND
Arsenic	SW6020	ND	ND	ND	ND	ND	ND
Barium	SW6020	283	164	121	147	126	5150
Beryllium	SW6020	ND	ND	ND	ND	ND	ND
Cadmium	SW6020	ND	ND	ND	ND	ND	ND
Calcium	SW6020	186000	92400	184000	NO TEST	48400	146000
Chromium	SW6020	ND	10.2	ND	9.55	7.54	11.4
Cobalt	SW6020	ND	ND	ND	ND	ND	ND
Copper	SW6020	ND	ND	ND	7.72	5.32	7.22
Iron	SW6020	3290	8440	1710	8820	6620	8410
Lead	SW6020	ND	ND	ND	6.96	ND	37.5
Magnesium	SW6020	4560	11300	10400	3500	2950	5410
Manganese	SW6020	26.1	55.4	21.3	231	113	186
Nickel	SW6020	7.79	11.1	ND	9.64	7.72	10.6
Potassium	SW6020	847	3140	305	2540	1780	1220
Selenium	SW6020	ND	ND	ND	ND	ND	ND
Silver	SW6020	ND	ND	ND	ND	ND	ND
Sodium	SW6020	151	239	61.4	27.2	111	178
Thallium	SW6020	ND	ND	ND	ND	ND	ND
Vanadium	SW6020	9.92	24.2	27.3	11.5	10.6	17.3
Zinc	SW6020	41.1	46.4	19.8	44.4	43.1	642
<b>CORROSIVITY</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
pH	SW9045B	9.00	8.94	9.13	8.78	8.53	12.15
<b>PHENOLICS</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Phenolics, Total Recoverable	SW9065	0.55	1.5	1.2	0.39	ND	0.97
<b>TOTAL DISSOLVED SOLIDS</b>		<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Total Dissolved Solids (Residue, Filterable)	E160.1	760	860	290	3100	1900	7300
<b>GAMMA SPECTROSCOPY</b>							
Radium-226		1.2+/-0.3	1.6+/-0.5	1.3+/-0.3	1.3+/-0.4	1.1+/-0.2	1.4+/-0.4
Radium-228		0.8+/-0.3	1.1+/-0.8	0.5+/-0.4	1+/-0.5	0.6+/-0.3	<0.6+/-0.4

**TABLE 7**  
**PLAINTIFF'S RESULTS FROM**  
**SAMPLING AT 1506 N. COBB**  
**JANUARY 12, 2001**

Table 7 - Soil Lab Results - 2000  
 Westgate Subdivision - January 12, 2001  
 Plaintiffs' Results from Split Sampling at 1506 N. Cobb

		1510-05 0'-3'	1510-05 3'-3.5'	1510-06 3'-6'	1510-06 6'-9'
Analyte	Method	Sample: 0101050-06	Sample: 0101050-07	Sample: 0101050-08	Sample: 0101050-09

TCL VOLATILE ORGANICS		mg/Kg	mg/Kg	mg/Kg	mg/Kg
1,1,1-Trichloroethane	SW8260	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	SW8260	ND	ND	ND	ND
1,1,2-Trichloroethane	SW8260	ND	ND	ND	ND
1,1-Dichloroethane	SW8260	ND	ND	ND	ND
1,1-Dichloroethene	SW8260	ND	ND	ND	ND
1,2-Dichloroethane	SW8260	ND	ND	ND	ND
1,2-Dichloropropane	SW8260	ND	ND	ND	ND
2-Butanone	SW8260	ND	ND	ND	ND
2-Hexanone	SW8260	ND	ND	ND	ND
4-Methyl-2-pentanone	SW8260	ND	ND	ND	ND
Acetone	SW8260	ND	ND	ND	ND
Benzene	SW8260	ND	ND	ND	ND
Bromodichloromethane	SW8260	ND	ND	ND	ND
Bromoform	SW8260	ND	ND	ND	ND
Bromomethane	SW8260	ND	ND	ND	ND
Carbon disulfide	SW8260	ND	ND	ND	ND
Carbon tetrachloride	SW8260	ND	ND	ND	ND
Chlorobenzene	SW8260	ND	ND	ND	ND
Chloroethane	SW8260	ND	ND	ND	ND
Chloroform	SW8260	ND	ND	<b>0.011</b>	ND
Chloromethane	SW8260	ND	ND	ND	ND
cis-1,2-Dichloroethene	SW8260	ND	ND	ND	ND
cis-1,3-Dichloropropene	SW8260	ND	ND	ND	ND
Dibromochloromethane	SW8260	ND	ND	ND	ND
Dichloromethane	SW8260	<b>0.08</b>	<b>0.092</b>	<b>0.32</b>	<b>0.055</b>
Ethylbenzene	SW8260	ND	ND	ND	ND
Styrene	SW8260	ND	ND	ND	ND
Tetrachloroethene	SW8260	ND	ND	ND	ND
Toluene	SW8260	ND	ND	<b>0.0085</b>	ND
trans-1,2-Dichloroethene	SW8260	ND	ND	ND	ND
trans-1,3-Dichloropropene	SW8260	ND	ND	ND	ND
Trichloroethene	SW8260	ND	ND	ND	ND
Vinyl chloride	SW8260	ND	ND	ND	ND
Xylenes, Total	SW8260	ND	ND	ND	ND

BTEX, SOIL		mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	SW8021B	ND	ND	ND	ND
Benzene	SW8021B			ND	
Toluene	SW8021B	<b>0.0012</b>	<b>0.0016</b>	<b>0.0016</b>	ND
Toluene	SW8021B			<b>0.0016</b>	
Ethylbenzene	SW8021B	ND	ND	ND	ND
Ethylbenzene	SW8021B			ND	
Xylenes, Total	SW8021B	ND	ND	<b>0.0075</b>	ND
Xylenes, Total	SW8021B			ND	

CORROSIVITY		pH Units	pH Units	pH Units	pH Units
pH	SW9045B	<b>8.55</b>	<b>8.43</b>	<b>7.97</b>	<b>8.50</b>

TOTAL PETROLEUM HYDROCARBONS		mg/Kg	mg/Kg	mg/Kg	mg/Kg
C6-C10	TX1005	ND	ND	ND	ND
>C10-C28	TX1005	ND	ND	<b>120</b>	<b>80</b>
Total Petroleum Hydrocarbons	TX1005	ND	ND	<b>120</b>	ND

**TABLE 8**  
**FRACTIONATION RESULTS**  
**RBCA REPORT**

Table 8 - Fractionation Results for RBCA Report

Sample ID		(mg/L) Method-TX 1005 Unfractionated C6-C35	(mg/L) Method-TX 1006 Aliphatic						
			C6	>C6-8	>C8-10	>C10-12	>C12-16	>C16-21	>C21-35
162446	1506-02 3'-6'	1074	<1	<1	<1	<1	<1	10	25
162450	1506-03 6'-8'	243	<1	<1	<1	<1	<1	3	51

Sample ID		(mg/L) Method-TX 1006 Aromatic							(mg/L) Aliphatic + Aromatic	% Recovery
		>C6-C7	>C7-8	>C8-10	>C10-12	>C12-16	>C16-21	>C21-35		
162446	1506-02 3'-6'	<1	<1	<1	<1	<1	<1	<1	35	3
162450	1506-03 6'-8'	<1	<1	<1	<1	1	56	15	126	52

Analyte	1506-02 3'-6'	1506-03 6'-8'	
	Method	Sample: 162446	Sample: 162450
		mg/Kg	mg/Kg
Naphthalene	S 8270C	ND	ND
Acenaphthylene	S 8270C	ND	ND
Acenaphthene	S 8270C	ND	ND
Fluorene	S 8270C	ND	ND
Phenanthrene	S 8270C	ND	ND
Antbracene	S 8270C	ND	ND
Fluoranthene	S 8270C	ND	ND
Pyrene	S 8270C	ND	ND
Benzo(a)anthraeene	S 8270C	ND	ND
Chrysene	S 8270C	ND	ND
Benzo(b)fluoranthene	S 8270C	ND	ND
Benzo(k)fluoranthene	S 8270C	ND	ND
Benzo(a)pyrene	S 8270C	ND	ND
Indeno(1,2,3-cd)pyrene	S 8270C	ND	ND
Dibenzo(a,h)anthracene	S 8270C	ND	ND
Benzo(g,h,i)perylene	S 8270C	ND	ND
Test Comments		*	*

\* Elevated reporting limit due to dilution necessitated by unknown analytes in matrix.

**TABLE 9**  
**SUMMARY ANALYTICAL**  
**RESULTS FOR ORGANIC**  
**CHEMICAL ANALYSIS**

**Table 9** Summary Analytical Results for Organic Chemical Analysis.

Notes:  
BBC 8/24/00 (1) Naphthalene by S-8260B  
NMOC 8/24/00 (2) BTEX by S-8021B method

**TABLE 10**  
**SUMMARY ANALYTICAL**  
**RESULTS FOR INORGANIC**  
**CHEMICAL ANALYSIS**

Table 1 Summary Analytical Results for Inorganic Chemical Analysis

Date: 8 February 2001  
consolidated from data tables supplied by  
BBC on 2/1/01, 2/6/01, and 2/8/01.

**TABLE 11**  
**COMPARISON OF**  
**ANALYTICAL RESULTS TO**  
**SCREENING LEVELS FOR**  
**ORGANIC CHEMICALS**

**Table 11** Comparison of Analytical Results to Screening Levels for Organic Chemicals

## Screening Level Criteria Descriptions (residential exposure, minimum of HQ = 1 or Risk = 1E-6):

- Date: 8 February 2001  
concentrated from data in Table 1 method b

  - 1) direct soil exposure, ingestion, dermal contact, dust & vapor inhalation - RBCA
  - 2) volatilization from subsurface soil to ambient (outdoor) air - RBCA
  - 3) volatilization from subsurface soil to indoor air - RBCA
  - 4) leaching from soil to groundwater - RBCA (includes min. SFCM if relevant)

Analyte	nominal detection limit (mg/kg)	number of samples analyzed	maximum measured value	number of detect.	(mg/kg)
TREHC					
DRO	10	17	14	9	12100
GRO	50	14	0	0	808
CB-235 unfractionated	5	2	2	2	1074
C8 Aliphatic	1	2	0	0	
>C8-8 Aliphatic	1	2	0	0	
>C8-10 Aliphatic	1	2	0	0	
>C10-12 Aliphatic	1	2	0	0	
>C12-16 Aliphatic	1	2	0	0	
>C16-21 Aliphatic	1	2	0	0	
>C2-35 Aliphatic	1	2	0	0	
>C8-7 Aromatic	1	2	0	0	
>C7-8 Aromatic	1	2	0	0	
>C8-10 Aromatic	1	2	0	0	
>C10-12 Aromatic	1	2	0	0	
>C12-16 Aromatic	1	2	0	0	
>C16-21 Aromatic	1	2	0	0	
>C2-35 Aromatic	1	2	0	0	
Benzene	0.025	19	1	1	0.0357
Toiline	0.025	19	2	2	5.2
Ethylbenzene	0.025	19	0	0	
m,p-Xylene	0.025	16	1	1	0.098
<i>o</i> -Xylene	0.025	16	1	1	0.0271
Xylene (mixed isomers)	0.05	19	3	3	32
Total BTEX	0.125	19	3	3	37.2
Naphthalene	1.25	7	0	0	
Acenaphthylene	1.25	5	0	0	
Acenaphthene	1.25	5	0	0	
Fluorene	1.25	5	0	0	
Phenanthrene	1.25	5	0	0	
Anthracene	1.25	5	0	0	
Fluoranthene	1.25	5	0	0	
Pyrene	1.25	5	0	0	
Benz(a)anthracene	1.25	5	0	0	
Chrysene	1.25	5	0	0	
Benz(b)fluoranthene	1.25	5	0	0	
Benz(a)pyrene	1.25	5	0	0	
Indeno(1,2,3-cd)pyrene	1.25	5	0	0	
Dibenz(a,h)anthracene	1.25	5	0	0	
Benz(g,h,i) perylene	1.25	5	0	0	
Piperidines		3	2	2	5.09
		2	0	0	
		3	0	0	
Chloroform	5	1	1	1	0.0483
2-Butanone		2	0	0	
Di-n-butyl phthalate		1	1	1	21
		1	1	1	250
		1	1	1	480

elines for Remediation, 8/13/93, NMOCD,, IV.2.a, Ranking Criteria (>19)

Note

Unless noted, screening values are from 9/17/1999 RBCA Tier 1 Summary Assessment Report for the Westgate Subdivision.

**Grimes Battery, and Tasker Road, Hobbs, New Mexico;** and Addendum 2/18/2000, Revision Date: 16 Aug 1999      March 6, 2000

Licenced USEPA Region 6 Human Health Medium-Specific Screening Levels from <http://www.epa.gov/earthrisc/index.cfm?screen=screen>

**TABLE 12**  
**COMPARISON OF**  
**ANALYTICAL RESULTS TO**  
**SCREENING LEVELS FOR**  
**INORGANIC CHEMICALS**



**TABLE 13**  
**ANALYTICAL SUMMARY –**  
**PETROLEUM HYDROCARBON**  
**ANALYSIS**

Table 13

## ANALYTICAL SUMMARY - PETROLEUM HYDROCARBON ANALYSIS

Site Name: Well No. 8 Site Location: Hobbs, NM	Completed By: G. E. DeVaul Revision Date: 2/8/01
sample identifier: Analytical Data from BBC International, Hobbs, NM sample description: Soil between 1506 and 1510 Cobb Drive, in yard. sample type: □ oil sample ■ soil sample	field sample ID: 1506-02 3'-6', 162446, Trace Analysis, Inc., 1/26/2001 sampling unit: sampling depth: (3-6') sample interval: 3' field sampling date: 01/12/01
one sheet per sample	
Total or Summation Analysis Results description	analytical method number
TPH - Total Petroleum Hydrocarbon (Infrared) DRO - Diesel Range Organics GRO - Gasoline Range Organics	418.1 Mod. 8115B 8015B
	analysis date
	ID code
	measured chemical concentration (mg/kg)
	detection limit (mg/kg)
	QA/QC code

Equivalent Carbon Number Range Analysis Results							
identifier	T <sub>nbp</sub> (°C)	description	formula	homolog			
1. TPH-LT6AL1	51	EC <6 aliphatic	C5.5	aliphatic fraction	TX1006	162446	0
2. TPH-6TO8AL2	96	EC =>6 to 8 aliphatic	C7	aliphatic fraction	TX1006	162446	0
3. TPH-8TO10AL3	150	EC >8 to 10 aliphatic	C9	aliphatic fraction	TX1006	162446	0
4. TPH-10TO12AL4	200	EC >10 to 12 aliphatic	C11	aliphatic fraction	TX1006	162446	0
5. TPH-12TO16AL5	260	EC >12 to 16 aliphatic	C14	aliphatic fraction	TX1006	162446	0
6. TPH-16TO35AL6	320	EC >16 to 35 aliphatic	C19	aliphatic fraction	TX1006	162446	35
7. TPH-6TO7AR1	80	Benzene (EC <6 to 7) arom.	C6.5	aromatic fraction	TX1006	162446	0
8. TPH-7TO8AR2	110	Toluene (EC >7 to 8) arom.	C7.6	aromatic fraction	TX1006	162446	0
9. TPH-8TO10AR3	150	EC > 8 to 10 aromatic	C9	aromatic fraction	TX1006	162446	0
10. TPH-10TO12AR4	200	EC > 10 to 12 aromatic	C11	aromatic fraction	TX1006	162446	0
11. TPH-12TO16AR5	260	EC >12 to 16 aromatic	C14	aromatic fraction	TX1006	162446	0
12. TPH-16TO21AR6	320	EC >16 to 21 aromatic	C19	aromatic fraction	TX1006	162446	0
13. TPH-21TO35AR7	340	EC >21 to 35 aromatic	C28	aromatic fraction	TX1006	162446	0
14. TPH-GT35AT1	>627.98	>C35 total		total fraction			12065
		aliphatic and aromatic (C35<) sum (above, 1. thru 13.)				162446	35
		unfractionated analysis			TX1005	162446	1074

Indicator Chemical Analysis Results									
CASRN	T <sub>nbp</sub> (°C)	name	formula	homolog	within range:				
71-43-2	80.1	benzene	C6H6	alkyl benzenes	7.	S-8260B	162446	0	0.025<
108-88-3	110.7	toluene	C7H8	alkyl benzenes	8.	S-8260B	162446	0	0.025<
100-41-4	136.2	ethylbenzene	C8H10	alkyl benzenes	9.	S-8260B	162446	0	0.025<
1330-20-7	140	xylene (mixed isomers)	C8 H10	alkyl benzenes	9.	S-8260B	162446	0	0.05<
91-20-3	217.9	naphthalene	C10H8	alkyl naphthalenes	11.	S-8270C	162446	0	12.5<
208-96-8	265	acenaphthalene	C12H8	naphtheno-benzenes	11.	S-8270C	162446	0	12.5<
83-32-9	278	acenaphthene	C12H10	naphtheno-benzenes	11.	S-8270C	162446	0	12.5<
86-73-7	295	fluorene	C13H10	naphtheno-benzenes	12.	S-8270C	162446	0	12.5<
85-01-8	340	phenanthrene	C14H10	polynuclear aromatics	12.	S-8270C	162446	0	12.5<
120-12-7	339.9	anthracene	C14H10	polynuclear aromatics	12.	S-8270C	162446	0	12.5<
206-44-0	384	fluoranthene	C16H10	naphtheno-benzenes	13.	S-8270C	162446	0	12.5<
129-00-0	404	pyrene	C16H10	polynuclear aromatics	13.	S-8270C	162446	0	12.5<
56-55-3	433.85	benzanthracene	C18H12	polynuclear aromatics	13.	S-8270C	162446	0	12.5<
218-01-9	447.85	chrysene	C18H12	polynuclear aromatics	13.	S-8270C	162446	0	12.5<
205-99-2	481	benzo(b)fluoranthene	C20 H12	naphtheno-benzenes	13.	S-8270C	162446	0	12.5<
207-08-9	480	benzo(k)fluoranthene	C20 H12	naphtheno-benzenes	13.	S-8270C	162446	0	12.5<
50-32-8	526.85	3,4-benzopyrene	C20 H12	polynuclear aromatics	13.	S-8270C	162446	0	12.5<
193-39-5	536	indeno(1,2,3-cd)pyrene	C21 H24	naphtheno-benzenes	13.	S-8270C	162446	0	12.5<
53-70-3	524	dibenz[1,2,5,6]anthracene	C22 H14	polynuclear aromatics	13.	S-8270C	162446	0	12.5<
191-24-2	616.85	benzo(g,h,i)perylene	C22 H12	polynuclear aromatics	13.	S-8270C	162446	0	12.5<

Notes (where applicable):

All detected petroleum hydrocarbon indicator chemicals and cuts are included in the above list.

Non-detects are omitted from the list.

The &gt;C35 sample is taken as the 418.1 TPH result minus the aliphatic and aromatic (C35&lt;) sum

**TABLE 14**  
**ANALYTICAL RESULTS –**  
**PETROLEUM MASS FRACTION**  
**DISTRIBUTION**

Table 14

## ANALYTICAL RESULTS - PETROLEUM MASS FRACTION DISTRIBUTION

Site Name:	Well No. 8	Completed By:	G. E. DeVaul
Site Location:	Hobbs, NM	Revision Date:	02/08/01
sample identifier: Analytical Data from BBC International, Hobbs, NM		field sample ID: 1506-02 3'-6', 162446, Trace Analysis, Inc., 1/26/2001	
sample description: Soil between 1506 and 1510 Cobb Drive, in yard.		sampling unit: sampling depth: (3-6') sample interval: 3' field sampling date: 01/12/01	
sample type: <input type="checkbox"/> oil sample <input checked="" type="checkbox"/> soil sample			

one sheet per sample

## Calculated Mass Fraction Distributions

identifier	description	equivalent carbon number distribution only (1)		equivalent carbon number distribution with indicator chemicals included (2)		initial measured
		mass fraction (g/g)	mass conc. (mg/kg)	mass fraction (g/g)	mass conc. (mg/kg)	
1. TPH-LT6AL1	EC 6< aliphatic	0	0	0	0	0
2. TPH-6TO8AL2	EC = &>6 to 8 aliphatic	0	0	0	0	0
3. TPH-8TO10AL3	EC >8 to 10 aliphatic	0	0	0	0	0
4. TPH-10TO12AL4	EC >10 to 12 aliphatic	0	0	0	0	0
5. TPH-12TO16AL5	EC >12 to 16 aliphatic	0	0	0	0	0
6. TPH-16TO35AL6	EC >16 to 35 aliphatic	0.002892562	35	0.002892562	35	35
7. TPH-6TO7AR1	Benzene (EC <6 to 7) arom.	0	0	0	0	0 (1)
8. TPH-7TO8AR2	Toluene (EC >7 to 8) arom.	0	0	0	0	0 (1)
9. TPH-8TO10AR3	EC > 8 to 10 aromatic	0	0	0	0	0
10. TPH-10TO12AR4	EC > 10 to 12 aromatic	0	0	0	0	0
11. TPH-12TO16AR5	EC >12 to 16 aromatic	0	0	0	0	0
12. TPH-16TO21AR6	EC >16 to 21 aromatic	0	0	0	0	0
13. TPH-21TO35AR7	EC >21 to 35 aromatic	0	0	0	0	0
14. TPH-GT35AT1	>C35 total	0.997107438	12065	0.997107438	12065	12065
	sum	1	12100			

within range

CASRN	name	mass fraction (g/g)	mass conc. (mg/kg)	mass fraction (g/g)	mass conc. (mg/kg)	mass conc. (mg/kg)
71-43-2	benzene	7.	0	0	0	0
108-88-3	toluene	8.	0	0	0	0
100-41-4	ethylbenzene	9.	0	0	0	0
1330-20-7	xylene (mixed isomers)	9.	0	0	0	0
91-20-3	naphthalene	11.	0	0	0	0
208-96-8	acenaphthalene	11.	0	0	0	0
83-32-9	acenaphthene	11.	0	0	0	0
86-73-7	fluorene	12.	0	0	0	0
85-01-8	phenanthrene	12.	0	0	0	0
120-12-7	anthracene	12.	0	0	0	0
206-44-0	fluoranthene	13.	0	0	0	0
129-00-0	pyrene	13.	0	0	0	0
56-55-3	benzanthracene	13.	0	0	0	0
218-01-9	chrysene	13.	0	0	0	0
205-99-2	benzo(b)fluoranthene	13.	0	0	0	0
207-08-9	benzo(k)fluoranthene	13.	0	0	0	0
50-32-8	3,4-benzopyrene	13.	0	0	0	0
193-39-5	indeno(1,2,3-cd)pyrene	13.	0	0	0	0
53-70-3	dibenz[1,2,5,6]anthracene	13.	0	0	0	0
191-24-2	benzo(g,h,i)perylene	13.	0	0	0	0
	sum	1	12100			

Notes (where applicable):

(1) EPA 8260 (GC/MS) results, if available, are used for benzene and toluene aromatic cuts.

(2) Indicator concentrations subtracted from applicable cut range and distribution is re-normalized.

**TABLE 15**  
**ANALYTICAL SUMMARY –**  
**PETROLEUM HYDROCARBON**  
**ANALYSIS**

**Table 15****ANALYTICAL SUMMARY - PETROLEUM HYDROCARBON ANALYSIS**

Site Name: Well No. 8 Site Location: Hobbs, NM	Completed By: G. E. DeVaul Revision Date: 2/8/01
sample identifier: Analytical Data from BBC International, Hobbs, NM sample description: Soil between 1506 and 1510 Cobb Drive, in yard. sample type: □ oil sample ■ soil sample	field sample ID: 1506-03 6'-8', 162450, Trace Analysis, Inc., 1/26/2001 sampling unit: sampling depth: (6-8') sample interval: 2' field sampling date: 01/13/01
<i>one sheet per sample</i>	
<b>Total or Summation Analysis Results</b> <small>description</small>	analytical method number
TPH - Total Petroleum Hydrocarbon (Infrared) DRO - Diesel Range Organics GRO - Gasoline Range Organics	418.1 Mod. 8115B 8015B
	162450 162450 162450
	4940 808 5<

**Equivalent Carbon Number Range Analysis Results**

identifier	T <sub>nbp</sub> (°C)	description	formula	homolog					
1. TPH-LT6AL1	51	EC <6 aliphatic	C5.5	aliphatic fraction	TX1006		162450	0	
2. TPH-6TO8AL2	96	EC =&>6 to 8 aliphatic	C7	aliphatic fraction	TX1006		162450	0	1<
3. TPH-8TO10AL3	150	EC >8 to 10 aliphatic	C9	aliphatic fraction	TX1006		162450	0	1<
4. TPH-10TO12AL4	200	EC >10 to 12 aliphatic	C11	aliphatic fraction	TX1006		162450	0	1<
5. TPH-12TO16AL5	260	EC >12 to 16 aliphatic	C14	aliphatic fraction	TX1006		162450	3	1<
6. TPH-16TO35AL6	320	EC >16 to 35 aliphatic	C19	aliphatic fraction	TX1006		162450	51	1<
7. TPH-6TO7AR1	80	Benzene (EC <6 to 7) arom.	C6.5	aromatic fraction	TX1006		162450	0	1<
8. TPH-7TO8AR2	110	Toluene (EC >7 to 8) arom.	C7.6	aromatic fraction	TX1006		162450	0	1<
9. TPH-8TO10AR3	150	EC > 8 to 10 aromatic	C9	aromatic fraction	TX1006		162450	0	1<
10. TPH-10TO12AR4	200	EC > 10 to 12 aromatic	C11	aromatic fraction	TX1006		162450	0	1<
11. TPH-12TO16AR5	260	EC >12 to 16 aromatic	C14	aromatic fraction	TX1006		162450	0	1<
12. TPH-16TO21AR6	320	EC >16 to 21 aromatic	C19	aromatic fraction	TX1006		162450	56	1<
13. TPH-21TO35AR7	340	EC >21 to 35 aromatic	C28	aromatic fraction	TX1006		162450	15	1<
14. TPH-GT35AT1	> 627.98	>C35 total		total fraction				4815	
		aliphatic and aromatic (C35<) sum (above, 1. thru 13.)					162450	125	
		unfractionated analysis			TX1005		162450	243	

**Indicator Chemical Analysis Results**

CASRN	T <sub>nbp</sub> (°C)	name	formula	homolog	within range:				
71-43-2	80.1	benzene	C6H6	alkyl benzenes	7.	S-8260B	162450	0	0.025<
108-88-3	110.7	toluene	C7H8	alkyl benzenes	8.	S-8260B	162450	0	0.025<
100-41-4	136.2	ethylbenzene	C8H10	alkyl benzenes	9.	S-8260B	162450	0	0.025<
1330-20-7	140	xylene (mixed isomers)	C8 H10	alkyl benzenes	9.	S-8260B	162450	0	0.05<
91-20-3	217.9	naphthalene	C10H8	alkyl naphthalenes	11.	S-8270C	162450	0	12.5<
208-96-8	265	acenaphthalene	C12H8	naphtheno-benzenes	11.	S-8270C	162450	0	12.5<
83-32-9	278	acenaphthene	C12H10	naphtheno-benzenes	11.	S-8270C	162450	0	12.5<
86-73-7	295	fluorene	C13H10	naphtheno-benzenes	12.	S-8270C	162450	0	12.5<
85-01-8	340	phenanthrene	C14H10	polynuclear aromatics	12.	S-8270C	162450	0	12.5<
120-12-7	339.9	anthracene	C14H10	polynuclear aromatics	12.	S-8270C	162450	0	12.5<
206-44-0	384	fluoranthene	C16H10	naphtheno-benzenes	13.	S-8270C	162450	0	12.5<
129-00-0	404	pyrene	C16H10	polynuclear aromatics	13.	S-8270C	162450	0	12.5<
56-55-3	433.85	benzanthracene	C18H12	polynuclear aromatics	13.	S-8270C	162450	0	12.5<
218-01-9	447.85	chrysene	C18H12	polynuclear aromatics	13.	S-8270C	162450	0	12.5<
205-99-2	481	benzo(b)fluoranthene	C20 H12	naphtheno-benzenes	13.	S-8270C	162450	0	12.5<
207-08-9	480	benzo(k)fluoranthene	C20 H12	naphtheno-benzenes	13.	S-8270C	162450	0	12.5<
50-32-8	526.85	3,4-benzopyrene	C20 H12	polynuclear aromatics	13.	S-8270C	162450	0	12.5<
193-39-5	536	indeno(1,2,3-cd)pyrene	C21 H24	naphtheno-benzenes	13.	S-8270C	162450	0	12.5<
53-70-3	524	dibenz[1,2,5,6]anthracene	C22 H14	polynuclear aromatics	13.	S-8270C	162450	0	12.5<
191-24-2	616.85	benzo(g,h,i)perylene	C22 H12	polynuclear aromatics	13.	S-8270C	162450	0	12.5<

Notes (where applicable):

All detected petroleum hydrocarbon indicator chemicals and cuts are included in the above list.

Non-detects are omitted from the list.

The &gt;C35 sample is taken as the 418.1 TPH result minus the aliphatic and aromatic (C35&lt;) sum

**TABLE 16**  
**ANALYTICAL RESULTS –**  
**PETROLEUM MASS FRACTION**  
**DISTRIBUTION**

**Table 16****ANALYTICAL RESULTS - PETROLEUM MASS FRACTION DISTRIBUTION**

Site Name:	Well No. 8	Completed By:	G. E. DeVaul
Site Location:	Hobbs, NM	Revision Date:	2/8/01
sample identifier: Analytical Data from BBC International, Hobbs, NM		field sample ID: 1506-03 6'-8', 162450, Trace Analysis, Inc., 1/26/2001	
sample description: Soil between 1506 and 1510 Cobb Drive, in yard.		sampling unit:	
sample type:			sampling depth: (6-8')
<input type="checkbox"/> oil sample <input checked="" type="checkbox"/> soil sample			sample interval: 2'
			field sampling date: 01/13/01

*one sheet per sample***Calculated Mass Fraction Distributions**

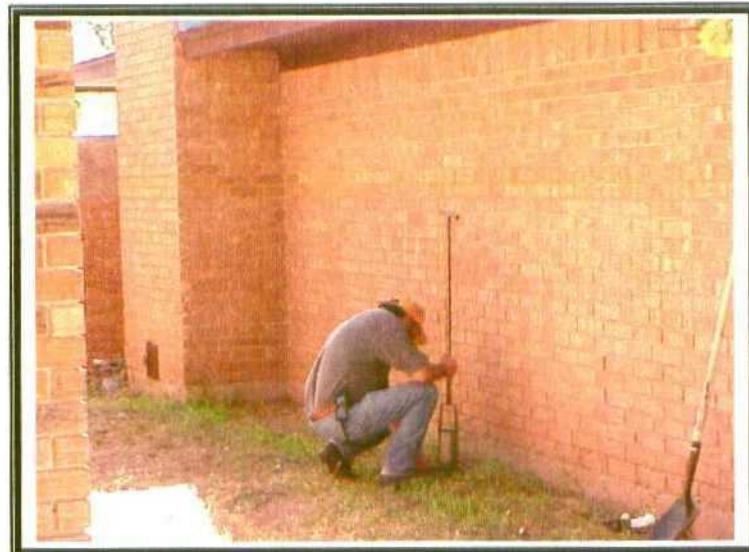
identifier	description	equivalent carbon number distribution only (1)		equivalent carbon number distribution with indicator chemicals included (2)		initial measured
		mass fraction (g/g)	mass conc. (mg/kg)	mass fraction (g/g)	mass conc. (mg/kg)	
1. TPH-LT6AL1	EC 6< aliphatic	0	0	0	0	0
2. TPH-6TO8AL2	EC = &>6 to 8 aliphatic	0	0	0	0	0
3. TPH-8TO10AL3	EC >8 to 10 aliphatic	0	0	0	0	0
4. TPH-10TO12AL4	EC >10 to 12 aliphatic	0	0	0	0	0
5. TPH-12TO16AL5	EC >12 to 16 aliphatic	0.00060729	3	0.00060729	3	3
6. TPH-16TO35AL6	EC >16 to 35 aliphatic	0.01032389	51	0.01032389	51	51
7. TPH-6TO7AR1	Benzene (EC <6 to 7) arom.	0	0	0	0	(1)
8. TPH-7TO8AR2	Toluene (EC >7 to 8) arom.	0	0	0	0	(1)
9. TPH-8TO10AR3	EC > 8 to 10 aromatic	0	0	0	0	0
10. TPH-10TO12AR4	EC > 10 to 12 aromatic	0	0	0	0	0
11. TPH-12TO16AR5	EC >12 to 16 aromatic	0	0	0	0	0
12. TPH-16TO21AR6	EC >16 to 21 aromatic	0.01133603	56	0.01133603	56	56
13. TPH-21TO35AR7	EC >21 to 35 aromatic	0.00303644	15	0.00303644	15	15
14. TPH-GT35AT1	>C35 total	0.97469636	4815	0.97469636	4815	4815
	sum	1	4940			
within range						
CASRN	name					
71-43-2	benzene	7.	0	0	0	0
108-88-3	toluene	8.	0	0	0	0
100-41-4	ethylbenzene	9.	0	0	0	0
1330-20-7	xylene (mixed isomers)	9.	0	0	0	0
91-20-3	naphthalene	11.	0	0	0	0
208-96-8	acenaphthalene	11.	0	0	0	0
83-32-9	acenaphthene	11.	0	0	0	0
86-73-7	fluorene	12.	0	0	0	0
85-01-8	phenanthrene	12.	0	0	0	0
120-12-7	anthracene	12.	0	0	0	0
206-44-0	fluoranthene	13.	0	0	0	0
129-00-0	pyrene	13.	0	0	0	0
56-55-3	benzanthracene	13.	0	0	0	0
218-01-9	chrysene	13.	0	0	0	0
205-99-2	benzo(b)fluoranthene	13.	0	0	0	0
207-08-9	benzo(k)fluoranthene	13.	0	0	0	0
50-32-8	3,4-benzopyrene	13.	0	0	0	0
193-39-5	indeno(1,2,3-cd)pyrene	13.	0	0	0	0
53-70-3	dibenz[1,2;5,6]anthracene	13.	0	0	0	0
191-24-2	benzo(g,h,i)perylene	13.	0	0	0	0
	sum	1	4940			

Notes (where applicable):

(1) EPA 8260 (GC/MS) results, if available, are used for benzene and toluene aromatic cuts.

(2) Indicator concentrations subtracted from applicable cut range and distribution is re-normalized.

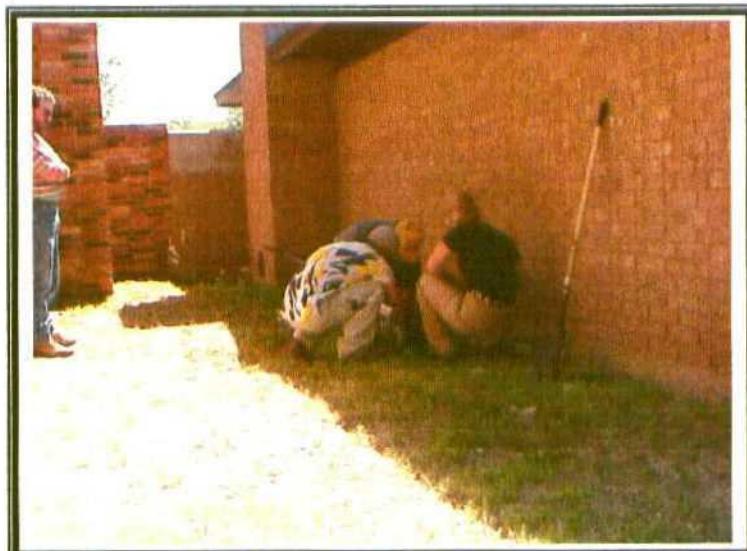
## Split Sampling Activity – August 24, 2000



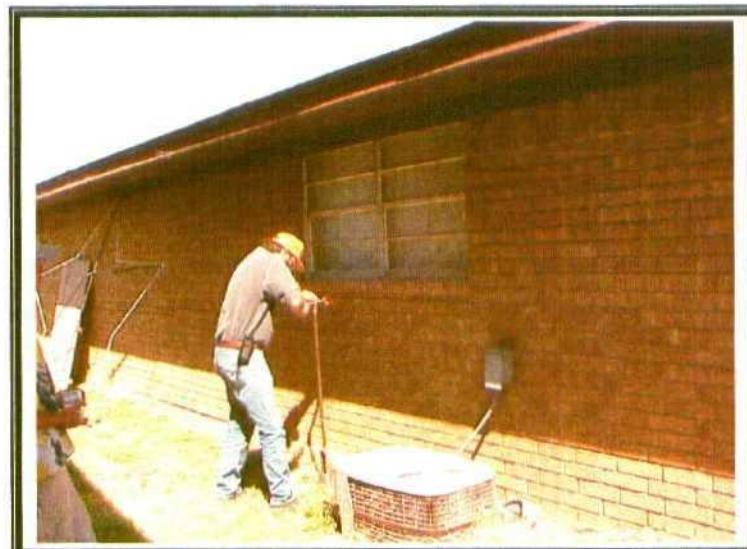
OCD representative coring sample on North side of 1506 Cobb.



OCD representatives taking sample on North side of 1506 Cobb.



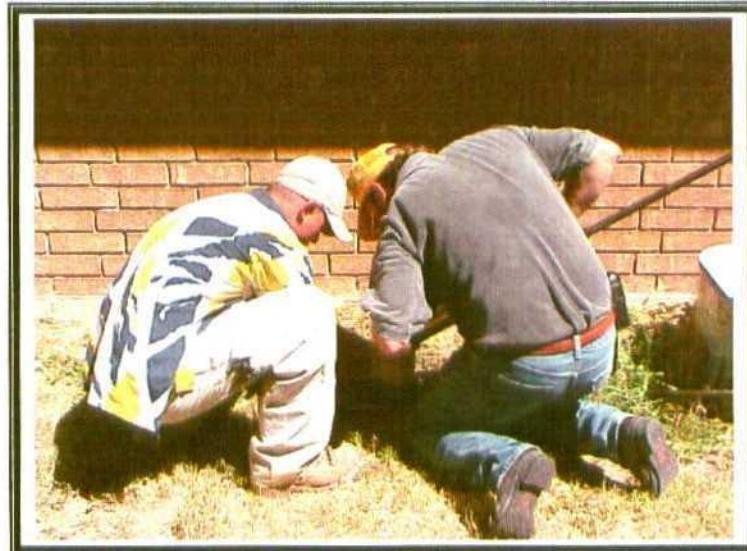
BBC representative splitting sample with OCD on North side of 1506 Cobb.



OCD representative coring sample on South side of 1506 Cobb.



OCD representatives taking sample on South side of 1506 Cobb.



BBC representative splitting sample on South side of 1506 Cobb.



### BBC's Field Notes:

**Plaintiffs' split sampling activities: 1330 Tasker; Rising's backyard; southwest corner**

**Wednesday, October 11, 2000**

#### Personnel on Site:

- BBC International, Inc. - Cliff Brunson, Ken Swinney, David Wadley, Joe Tooker
- Safety & Environmental Solutions, Inc. (drilling contractor) - Dee Whatley, Gabriel Tarruzas
- Plaintiffs - Patrick McMahon (Samberson, Newell, Cox Law Firm)  
Joe Frank Dean (Dean Consulting)  
Paul Farenthold (Farenthold & Associates, Inc.)

8:00 a.m.- Sample point 13-03-01: Drilling rig began rigging up and drilling started approximately 8:30 am. (See Picture 1) First sample taken at 3' – 5', sample taken for PID. BBC's PID used because plaintiff's PID was inoperable. Plaintiffs filled bags. Diesel pickup running whole time while sampling at tailgate; pickup also downwind of gasoline powered rig, which was also running. A split spoon was used for sampling tool, and we observed plaintiffs' field personnel carrying sampling tool and wrenches while wearing same latex gloves and using dirty pipe wrenches to open split spoon and then filling sample jars without changing gloves. (See Pictures 2, 3, 4, 5 & 6) BBC observed plaintiffs putting on latex gloves, then putting hand in coat and pants pockets while awaiting sample. (See Picture 7) Plaintiffs not using methanol for VOCs preservation and no other obvious preservatives were being used. Due to small size of split spoon, not enough sample is taken for BBC to get its sample, so a decision was made to take BBC's sample at one foot deeper than the plaintiff's.

9:10 a.m.- Sample point 13-03-01 5'-6': Our first sample was taken at 5' to 6' feet. The volatile samples are methanol preserved. The others are ice preserved. Results of PID are zero.

Drilling commenced to next sample interval target 8' to 10'

9:27 a.m. - Plaintiffs sample taken 8' – 10'. Sample taken for PID, reading of 430. Plaintiff took samples, again plaintiffs' field personnel were observed handling wrenches, touching the rig, and touching the fence, then handling samples without changing gloves. (**See Picture 10**) Farenthold was observed with large amount of pipe dope, grease, or hydraulic fluid on latex gloves and was then observed taking soil sample from split spoon and using palm of hand, where contaminates were present, to pack sample into sample jars.

Drilling commenced for BBC's sample.

10:45 a.m. – Sample point 13-03-01 10'-11': BBC's sample taken at 10' to 11' interval.

Drilling commenced - Drilling is very slow. Small rig unable to penetrate rock. Sampling attempted at approximately 15', unable to grab sample (too hard for split spoon)

Drilling commenced – P. Farenthold left to return home.

2:15 p.m. - Plaintiffs sample attempt approximately 20' to 21'; unable to gather enough sample.

Drilling commenced.

2:42 p.m. - Plaintiffs obtained sample at 20' to 22' interval, sample taken for PID – PID reading 560, sample taken by plaintiffs.

Drilling commenced.

3:16 p.m. – Sample point 13-03-01 22'-23': BBC sample taken at 22' – 23' interval. (**See Picture 11**)

Drilling commenced 3:30 p.m.

Drilling very slow very hard rock drilling stopped. Approximately 5:30 pm decision made to continue next morning.

**Comments:** Plaintiffs' representatives Joe Frank Dean and Patrick McMahon left. Drilling crew chief, Dee Whatley, then informed Cliff Brunson and Ken Swinney that Joe Frank Dean had apparently left his sample ice chest and samples with him. Dee said he guessed that Joe Frank assumed that Dee would take the samples to his office and store them in their refrigerator. Dee also expressed surprise that no official chain of custody was filled out and said "oops".

**Thursday, October 12, 2000**

**Plaintiffs' split sampling activities: 1330 Tasker; Rising's backyard; southwest corner**

Personnel on site:

- BBC International, Inc. - Cliff Brunson, Ken Swinney, David Wadley, Joe Tooker
- Safety & Environmental Solutions, Inc. (drilling contractor) - Dee Whatley, Gabriel Tarrazes, Sergio Contraras
- Plaintiffs - Patrick McMahon ( Samberson, Newell, Cox Law Firm)  
Joe Frank Dean (Dean Consulting)

8:00 a.m. - Soil boring in Risings' backyard abandoned at 26', rig could not drill further.  
No samples were taken.

8:30 a.m. - Sample point WSB-01: Plaintiffs sample taken just west of GMW-2 next to former Grimes Battery. Sample was hand augered to 18" to 20". No PID was taken. No visible staining or odor was detected. (**See Pictures 12 & 13**)

8:43 a.m. - BBC's sample was taken approximately 6" away from plaintiffs WSB-01 sample due to hard soil. Sample was hand, augured to 18" to 20". No PID was taken. No visible staining or odor was detected. (**See Picture 14**)

9:25 a.m. - Sample point WSB-02: Plaintiffs sample taken approximately 32' northwest of GMW – 10. Sample taken in the road with hand auger at 13" to 24". Estimated depth, no measurement taken by plaintiffs. No PID taken. No visible staining or odor detected. (**See Picture 15**)

9:40 a.m. - BBC's sample WSB-02 taken at approximately 8" from plaintiff sample. Sample taken in the road with hand auger at 14" to 16" depth measured with tape. No PID taken. No visible staining or odor detected. (**See Picture 15**)

**1510 Cobb**

10:16 a.m. - Sample point SB 15-10-01 "A": Plaintiffs' field representatives began hand augering approximately 12" from abandoned Well #8. (**See Pictures 16 & 17**)

10:21 a.m. - Plaintiff sample taken with hand auger at about 4.5' for PID. (**See Picture 18**) Insufficient data from PID. Sample bag then placed in back of pickup connected to drilling rig. Decision was made by plaintiffs' representative Joe Frank Dean to move in portable rig and obtain deeper sample.

10:35 a.m. - Sample point SB 15-10-01 "A". Portable drilling rig moved in and began to rig up. (See Picture 19) Rig was moved from 1330 Tasker to abandoned Well #8 with no decontamination procedures observed. Rig moved in over previous hand augered sample hole and rigged up hollow stem auger section over borehole. (See Picture 20) Cliff Brunson then asked plaintiffs' representative Joe Frank Dean if auger had been deconned; rig up procedure was then stopped and drilling crew began decontamination. The drilling crew attempted to decontaminate the drill stem used at Rising's in a 5-gallon bucket. (See Picture 21) This was determined not feasible so "unused" augers were then brought from 1330 Tasker where they had been stored overnight in a pile of contaminated drill cuttings with the dirty augers that had been used for drilling in Rising's backyard. No decontamination procedures were performed. Drilling began and then BBC observation was made that the stabilization foot on drill rig, approximately 2 inches from bore hole, was covered with contaminated soil from boring at Rising's (1330 Tasker). (See Pictures 22 & 23) This was documented with photographs. Drill crew then used their hands to sweep away the soil onto the property at 1510 and 1506 Cobb. (See Picture 24) After observing us photographing this, Joe Frank Dean instructed them to pick it up with a shovel and put it in a bucket, which they did. Disposition of soil in bucket unknown. (See Pictures 25 & 26)

Drilling commenced.

At approximately 5.5' steel pieces came to the surface, sample taken for PID. (See Pictures 27 & 28) Again BBC's PID was used with zero reading, no visible staining, and no odor. Plaintiffs' representative Dean decided to take a sample. As rig crew began to decon split spoon it was observed that it still contained contaminated soil from 1330 Tasker which was dumped out onto deck of drill rig. (See Picture 29) The contaminated soil was then swept into a stainless steel bowl. (See Picture 30) Disposition of contaminated soil unknown. Cliff Brunson then requested that fresh decon solution be made because the solution was very dirty from the earlier attempt to decon the auger stem. Rig crewmember then went to the street and emptied the bucket full of dirty solution into the street (See Picture 31) and mixed a fresh bucket. Rig crew then noticed a crack in the split spoon and a decision was made to grab the sample with the hand auger. It was deconned. Sample was taken, 15-10-01 "A", (and split) because plaintiffs' representatives said he saw black specks. There was no odor. Because of the metal the rig was re-spotted approximately 6" further West. Plaintiffs' representative Dean commented that there were two 2" lines discovered a year or so ago by Glenda Chander's ex-husband when he dug around the well bore. These lines supposedly travel West and South.

Drilling commenced on second boring.

Approximately 1:00 p.m. - Sample taken for PID no reading, no visible staining, no odor, and no sample taken. (See Pictures 32 & 33)

1:25 p.m. - Plaintiffs sample taken for PID no reading, sample taken with hand auger, 5  $\frac{1}{2}$ ' to 7'. Representative Dean again saw black specks. There was no odor. (**See Picture 34**)

1:30 p.m. – Sample point 15-10-01 “B”: BBC’s sample taken with hand auger 5  $\frac{1}{2}$ ' to 7'. There was no odor. (**See Picture 35**)

Drilling commenced.

2:05 p.m. - Plaintiff sample taken with hand auger for PID reading. There was no PID reading and no sample taken. Soil was sand and white caliche powder.

3:30 p.m. - Drilling stopped all activities ceased.

Plaintiffs samples sent to:

e Labs  
10450 Starcliff Rd. Ste. 210  
Houston, Texas 77094  
(281) 530-5656

BBC’s samples sent to:

Trace Analysis, Inc.  
6701 Aberdeen Avenue, Suite 9  
Lubbock, Texas 79424  
(806) 794-1296

**Comments:** Both borings on 1510 Cobb property, not Chandler’s. Cliff Brunson asked rig crew chief, Dee Whatley, if the new auger stem and inside pipe were deconned before today’s activities and he said the stem was clean and they had put the dirty stem and equipment on the bottom of the rig’s storage box and unused stem on top. No official decontamination of all equipment and the drill rig was performed after Rising’s soil boring and before drilling around abandoned well. Drilling crew also commented as to why drilling continued since nothing had been found.

Westgate: Plaintiff Split Sampling Activities  
October 11, 2000



1) Portable rig setup in Rising's backyard. Sample point 13-03-01.



2) Plaintiff consultant (Joe F. Dean) carrying pipe wrench (dirty) with the same latex gloves used for sampling.



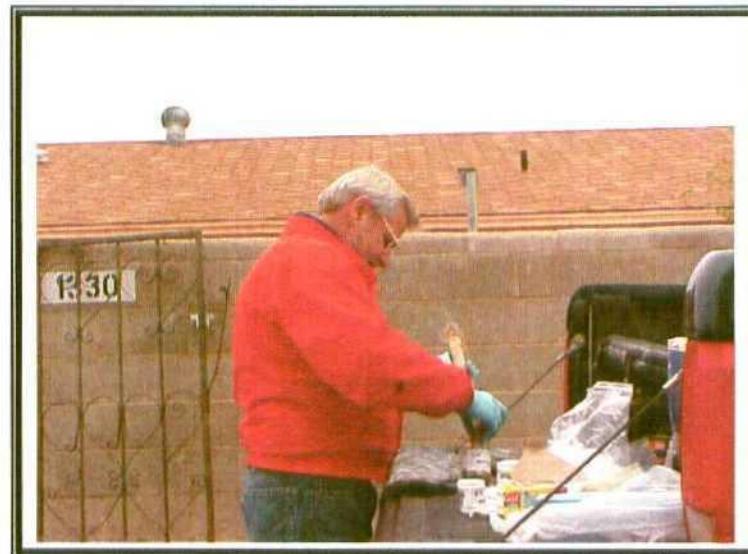
- 3) Opening of split spoon sampling tool with dirty latex gloves – Note red pipe wrench on tailgate of truck.



- 4) Plaintiff consultants using wrenches to open split spoon tool wearing same latex gloves used to handle soil samples into sample jars.



- 5) Plaintiff consultant (Paul Farenthold) filling sample jar wearing same gloves used to handle dirty wrenches.



- 6) Plaintiff consultant (Paul Farenthold) filling sample jar wearing same gloves used to handle dirty wrenches.



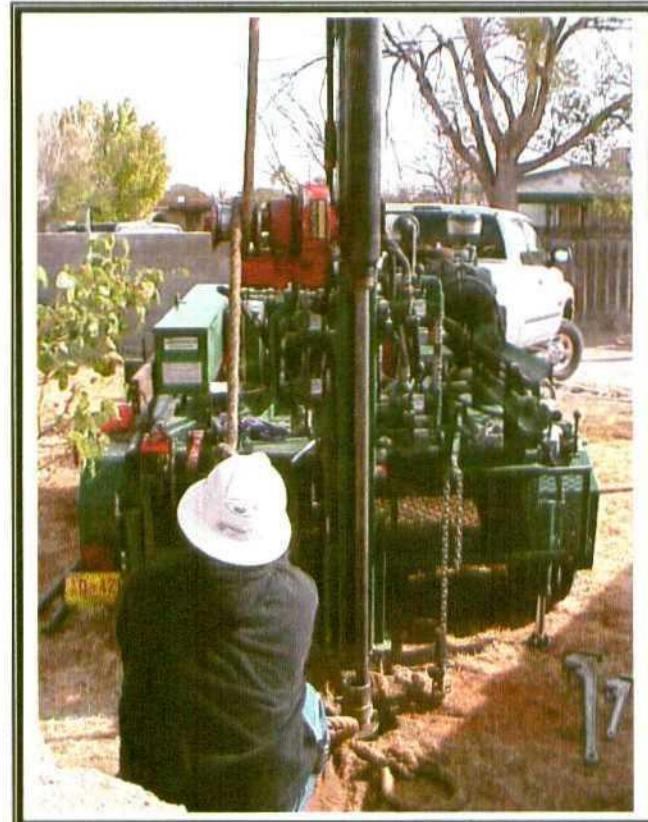
7) Cleaning of split spoon sampling tool. Note: Plaintiff consultant has hands in pockets wearing same latex sampling gloves.



8) Drilling crew repairing sampling tool.



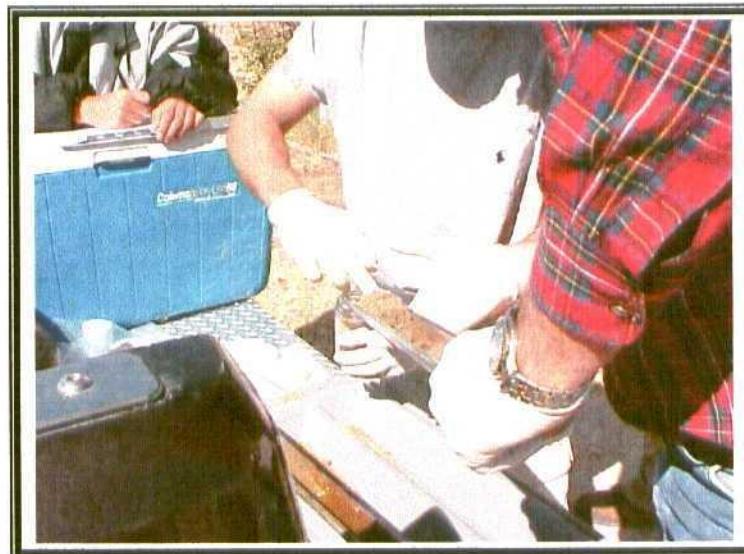
Westgate: Plaintiff Split Sampling Activities  
October 11, 2000



- 9) Manual hammering of auger stem to collect sampling after rig could not drill deeper.



10) Plaintiff consultant (Joe F. Dean) filling sample jar. Note: Two dirty pipe wrenches on tailgate used by consultant to open sample tool, then handle soil sample into jar.



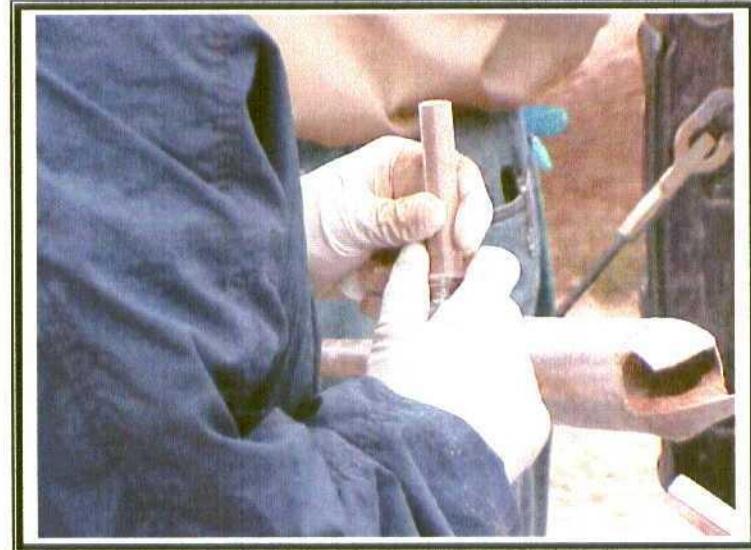
11) BBC field technician (David Wadley) filling sample jar with plaintiff consultant holding sample tool.



12) Plaintiff consulting taking WSB-01 sample west of GMW-2 monitor well.



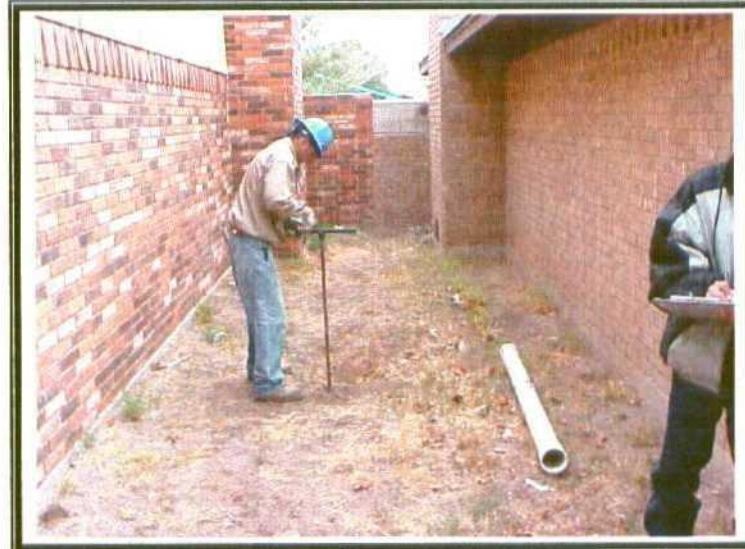
13) Plaintiff's filling sample jar with sample from WSB-01 sample point.



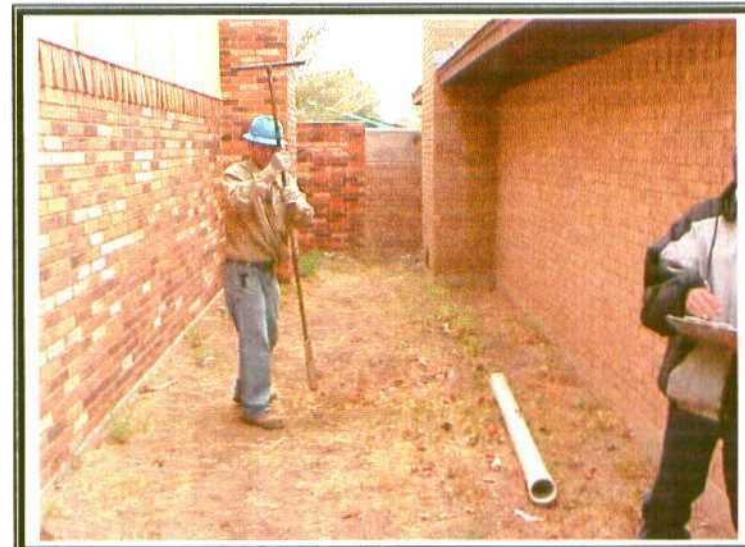
14) BBC technician filling methanol preserved sample vial at WSB-01 sample point.



15) Sample point WSB-02 located behind weeds in center of picture. Small orange flag is visible. GMW-10 monitoring well is in the foreground.



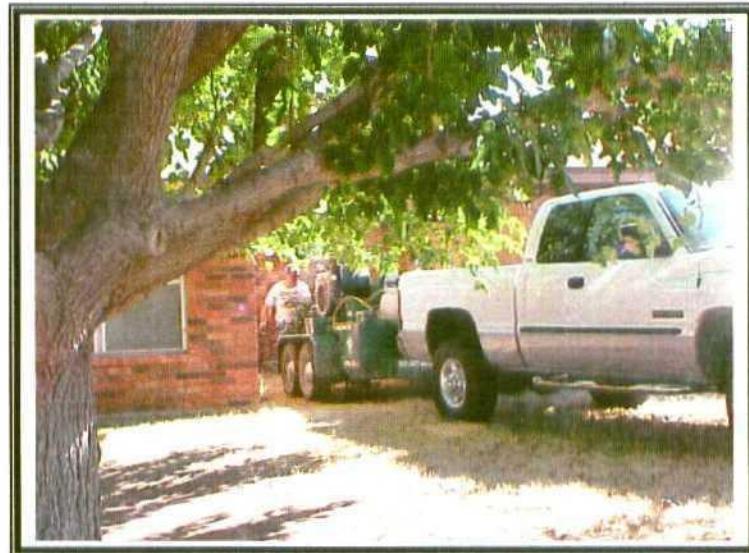
16) Plaintiff contractor taking sample at sample point  
15-10-01 "A".



17) Plaintiff contractor taking sample at sample point  
15-10-01 "A".



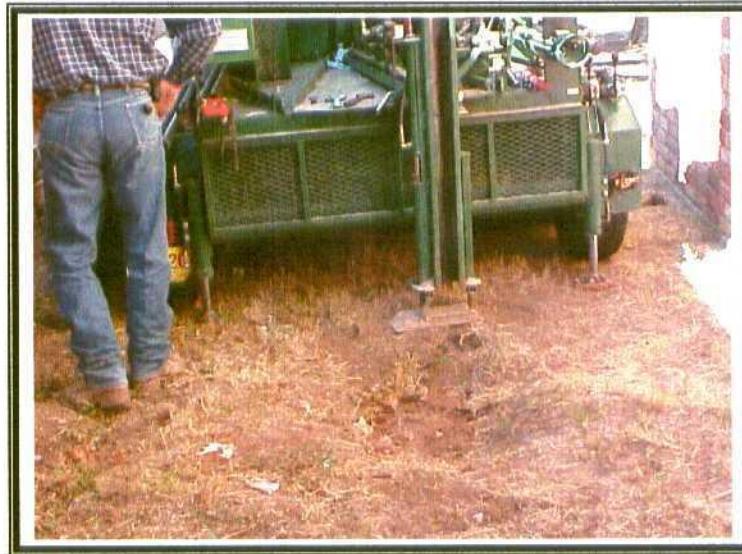
18) Plaintiff sample taken for PID reading at sample point 15-10-01 "A".



19) Portable rig being moved into position in between houses.



20) Rig crew attempting to decontaminate drill stem used at Rising's yard with 5 gallon bucket. Attempt was abandoned when it was realized it would not be possible. Rig and tools had not been decontaminated prior to moving between the houses.



21) Rig placement for Sample Point 15-10-01 "A".



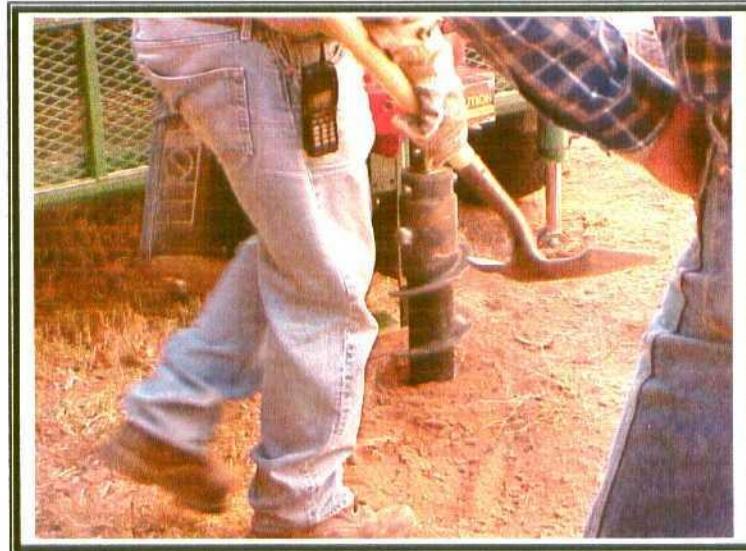
- 22) Start of drilling of 15-10-01 "A". Note: Lighter colored soil on rig stabilizing foot is contaminated soil from Rising's property. More evidence rig not decontaminated prior to locating at this point.



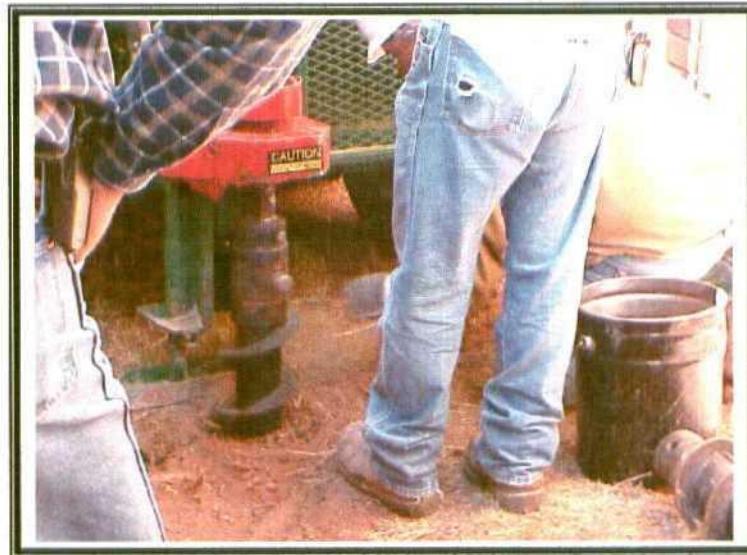
- 23) Start of drilling of 15-10-01 "A". Note: Lighter colored soil on rig stabilizing foot is contaminated soil from Rising's property. More evidence rig not decontaminated prior to locating at this point.



24) Drilling rig crew using hands to sweep off Rising's contaminated soil from stabilization foot on ground between 1506 and 1510 Cobb.



25) Drilling rig crew using shovels to pick up Rising's contaminated soil that had been swept off stabilization foot.



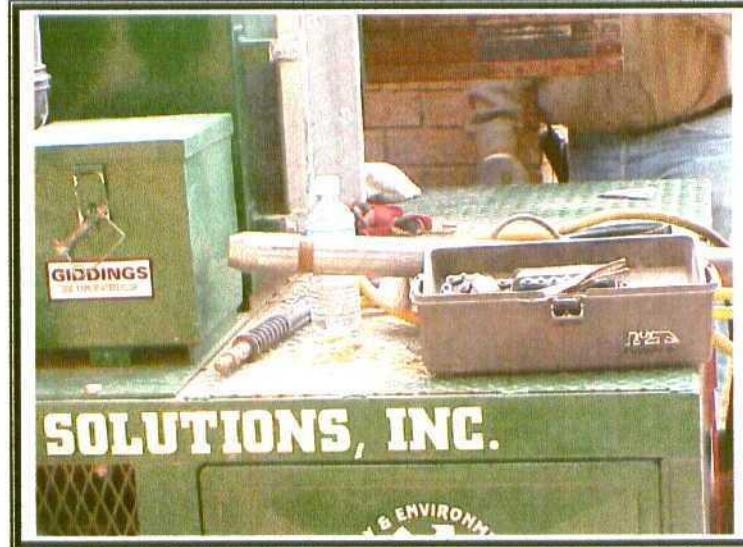
26) Drilling rig crew using shovels to pick up Rising's contaminated soil that had been swept off stabilization foot. Note: Black bucket on right was used to collect Rising's contaminated soil. Disposition unknown.



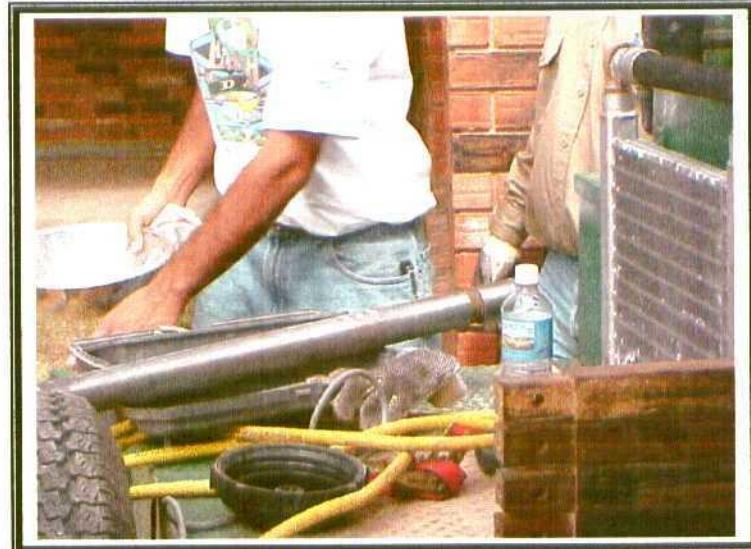
27) Pieces of steel coming to surface.



28) Close up of pieces of steel.



29) Contaminated soil from Rising's left in split spoon sampling tool. Discovered when tool was to be used for the first time at sample point 15-10-01 "A".



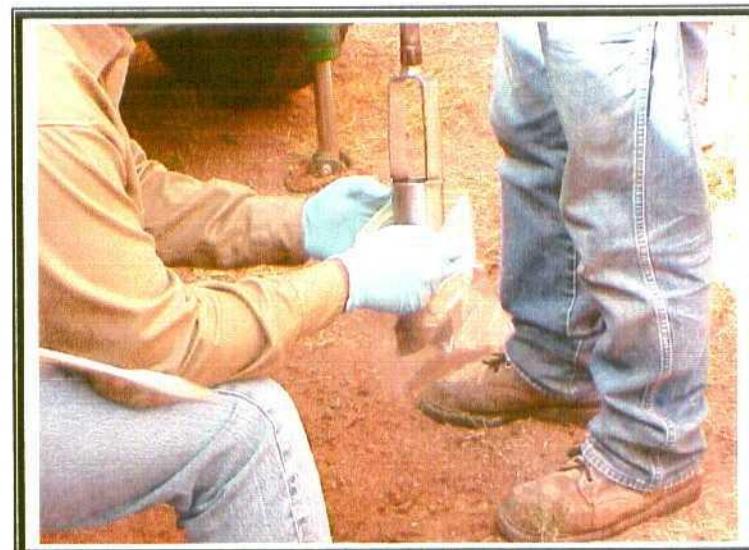
30) Contaminated soil from Rising's that was placed on rig deck being swept into bowl. Disposition of soil unknown.



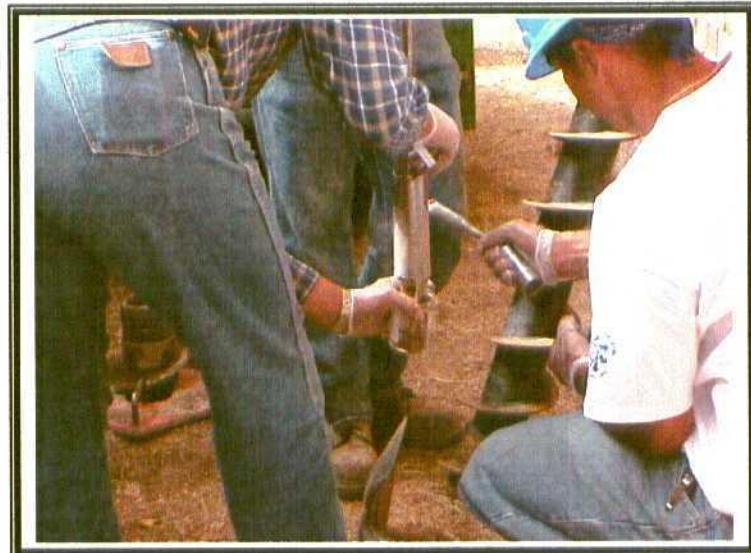
31) Contaminated decon soapy water dumped into street and gutter by drill rig crew member.



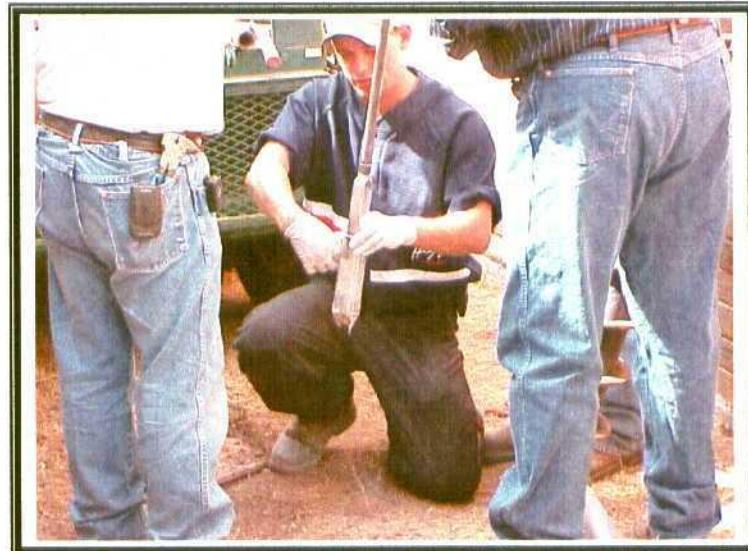
32) Hand auger sampling of second sample point 15-10-01 "B". Hand auger tool used because split spoon tool damaged.



33) Sample for point 15-10-01 "B" taken for PID reading.



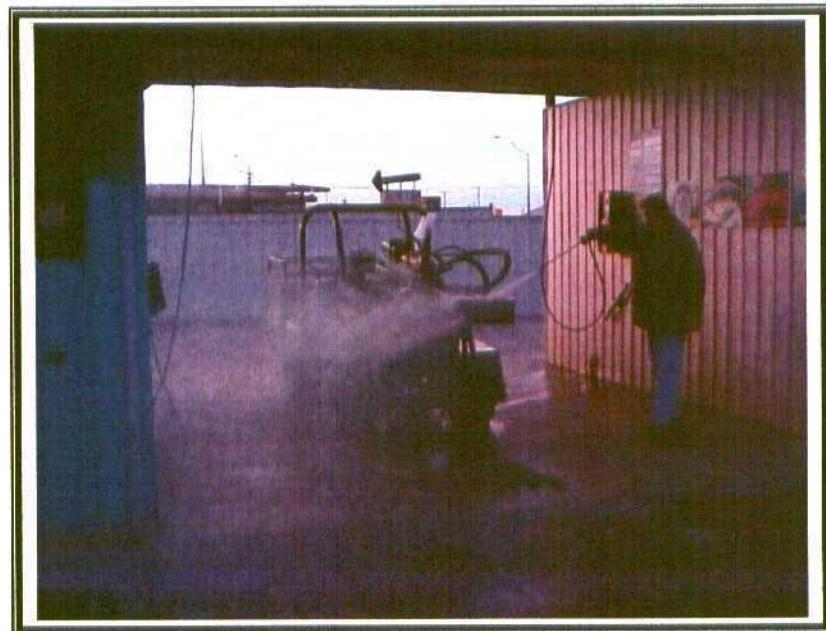
34) Plaintiff sample taken at sample point 15-10-01  
“B”.



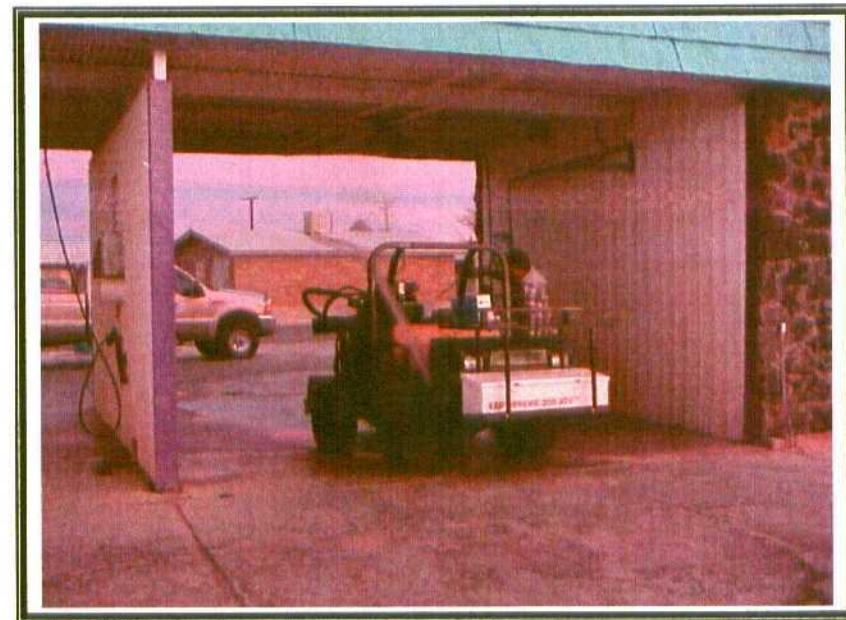
35) BBC technician taking a sample at sample point  
15-10-01 “B”.



**Sampling Activities – Abandoned Well #8/ Chandler Residence**  
January 12, 2001



Decontamination of Direct Push Sampling Rig

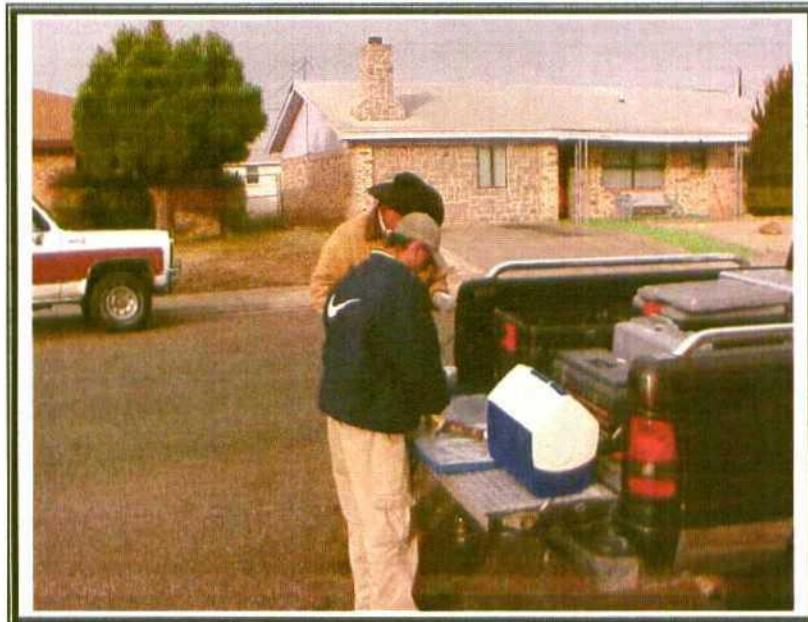


Decontamination of Direct Push Sampling Rig

Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001

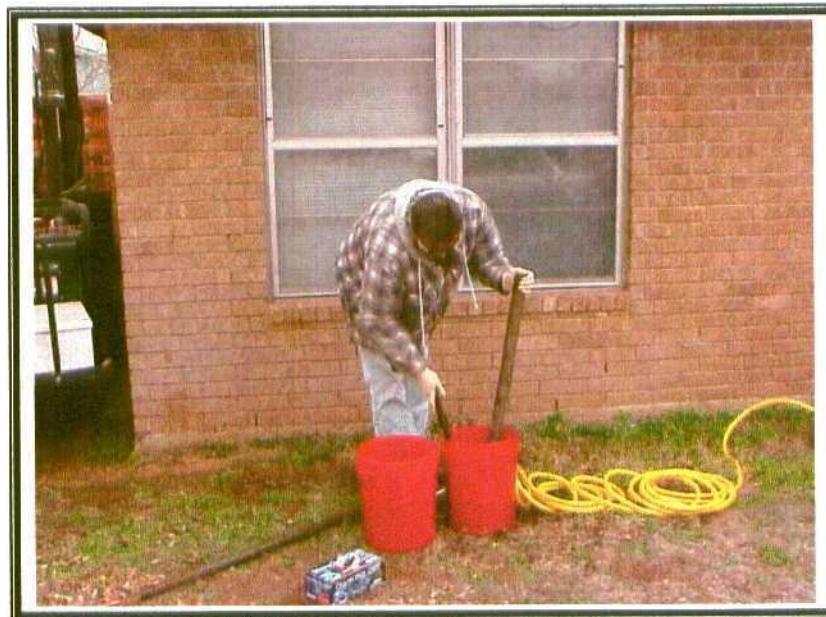


Soil Sampling – Borehole # 1506-02



Sampling of soil - Borehole # 1506-02

Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



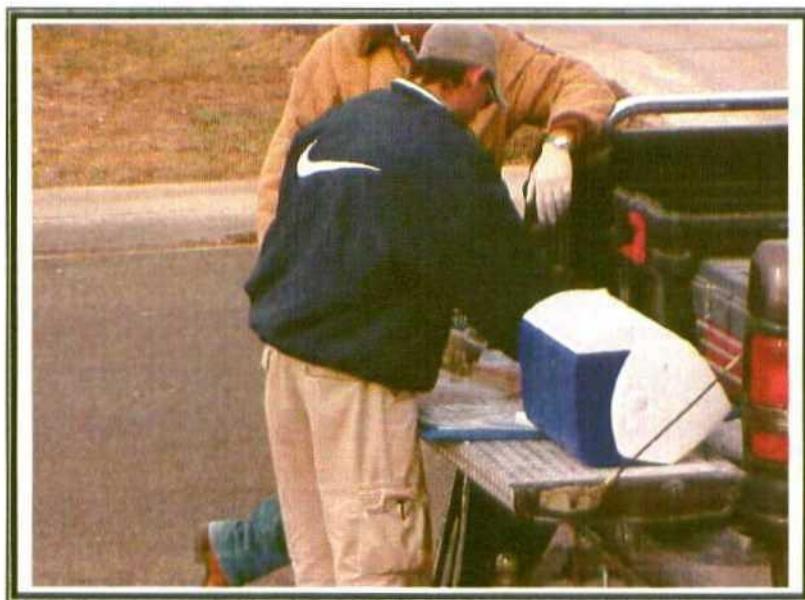
Decontamination of split spoon sampling tool



Soil Sampling - Borehole # 1506-03



Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



Sampling of Soil - Borehole # 1506-03



Soil Sampling - Borehole # 1506-04

Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



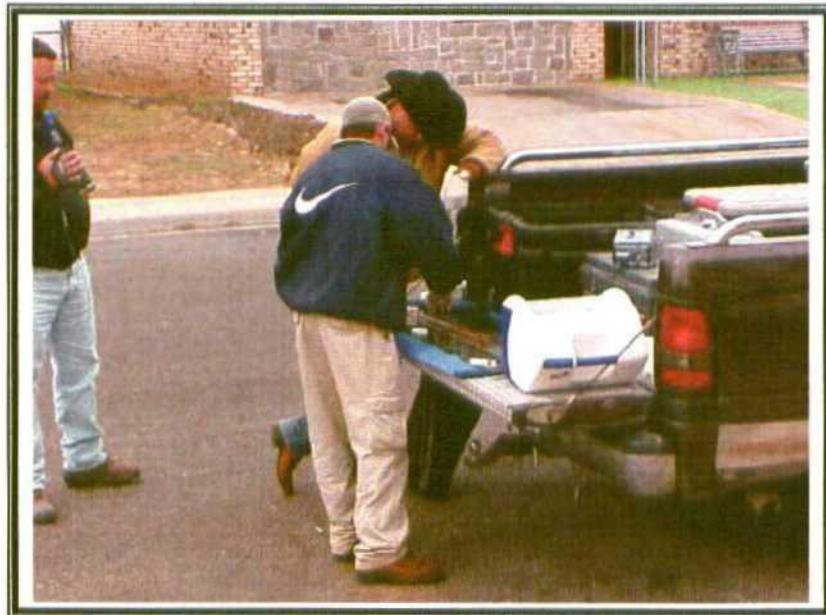
Sampling of Soil - Borehole # 1506-04



Soil Sampling - Borehole # 1506-05



Decontamination of split spoon sampling tool



Sampling of Soil - Borehole # 1506-05



Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



Soil Sample – Borehole #1506-05



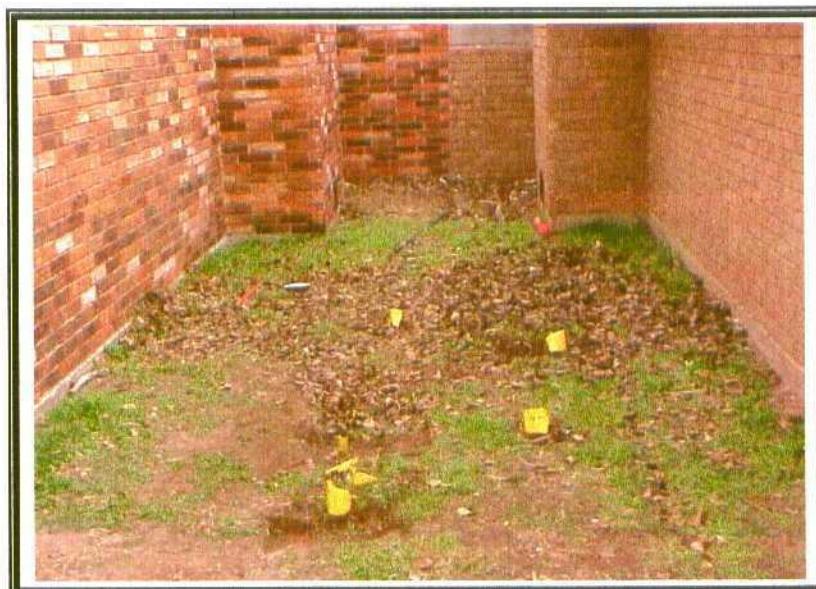
Soil Sampling – Borehole #1506-06



Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



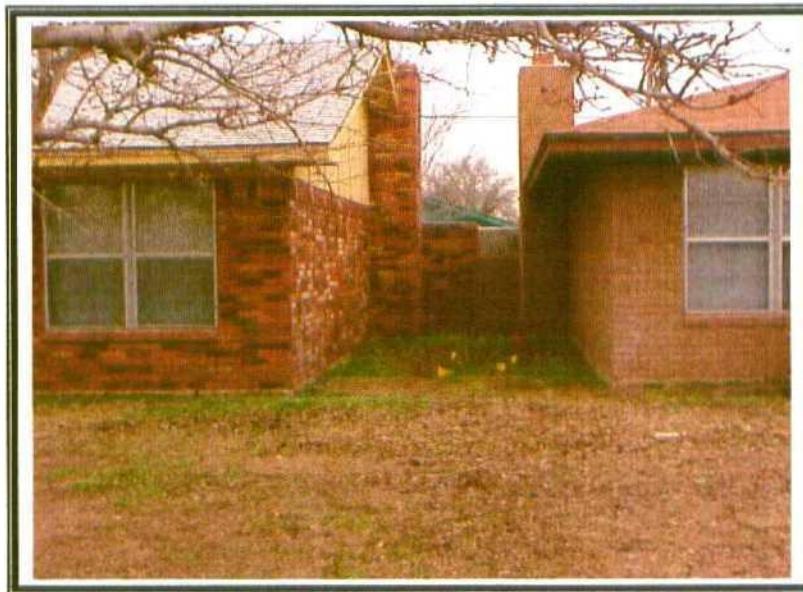
Sample of Soil – Borehole #1506-06



Locations of sample points – 1506 N. Cobb



Sampling Activities – Abandoned Well #8/ Chandler Residence  
January 12, 2001



Locations of sample points – 1506 N. Cobb

**BORING LOGS  
AUGUST 24, 2000**



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 0008241101 (North Side)  
Drilled by: Bill Olson - OCD  
Date/Time Started: August 24, 2000  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Hand Auger  
Date/Time Completed: 10:40 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0'- - 3'	0008241101	0' - 3'	SS	Sand, Caliche trace	NA		No Stain, no odor
- 5'							
- 10'							
- 15'							
- 20'							
- 25'							
- 30'							
- 35'							
- 40'							

Comments: Total Depth: 2' - 3'

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 0008241118 (South Side)  
Drilled by: Bill Olson - OCD  
Date/Time Started: August 24, 2000  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Hand Auger  
Date/Time Completed: 11:00 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0'-							
-3'	0008241118	0' - 3'	SS	Sand, Caliche traces	NA		No Stain, no odor
-5'							
-7'							
-9'							
-10'							
-12'							
-14'							
-16'							
-18'							
-20'							
-22'							
-24'							
-26'							
-28'							
-30'							
-32'							
-34'							
-36'							
-38'							
-40'							

Comments: Total Depth: 2' - 3'

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_

**BORING LOGS  
OCTOBER 11-12, 2000**



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: SB13301  
Drilled by: Safety & Environmental Solutions, Inc.  
Date/Time Started: 8:28 am October 11, 2000  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: Joe Tooker  
Drilling/Rig Method(s): Auger Stem Rig  
Date/Time Completed: 5:00 pm  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0-							
-	SB 301	3' - 5'	SS	Sand, Rock	10.5		No odor, No Staining (Plaintiff only) (9:00 am)
5	SB 301	5' - 6'	SS	Sand, Rock	N/A		No odor, No Staining
-							
-							
-10	SB 301	8' - 10'	SS	Sand	430		Plaintiff Only (9:27 am)
-	SB 301	10' - 11'	SS	Sand	N/A		Light Odor, Light Staining (10:45 am)
-							
-							
-15							
-							
-							
-20	SB 301	20' - 22'	SS	No Sample	N/A		Plaintiff Only (2:15 pm)
-	SB 301	20' - 22'	SS	Sand	560		Plaintiff Only (2:42 pm)
-	SB 301	22' - 23'	SS	Sand	N/A		(3:16 pm)
-							
-							
--25							
-							
-							
-30							
-							
-							
-35							
-							
-							
-40							

Comments: Total Depth: 26' (hit rock)

\*NOTE: Red is the Plaintiff's sampling; Blue is BBC's sampling

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: WSB 01  
Drilled by: Safety & Environmental Solutions, Inc.  
Date/Time Started: 8:31 am   October 12, 2000  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: Joe Tooker  
Drilling/Rig Method(s): Hand Auger  
Date/Time Completed: 8:43 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0- 20"	WSB 01	18"- 20"	HA	Sand, Dirt	N/A		Plaintiff Only
- 18"	WSB 01	18"- 20"	HA	Sand, Dirt	N/A		Plaintiff Only
- 18"	WSB 01	18"	HA	Sand, Dirt	N/A		(8:43 am)
5							
-							
-							
-							
-							
-10							
-							
-							
-							
-15							
-							
-							
-							
-20							
-							
-							
-							
-25							
-							
-							
-							
-30							
-							
-							
-							
-35							
-							
-							
-							
-40							

Comments: Total Depth: 20"

\*NOTE: Red is the Plaintiff's sampling; Blue is BBC's sampling

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: WSB 02  
Drilled by: Safety & Environmental Solutions, Inc.  
Date/Time Started: 9:25 am October 12, 2000  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: Joe Tooker  
Drilling/Rig Method(s): Hand Auger  
Date/Time Completed: 9:50 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0- 24 1/2"	WSB 02	13" - 24 1/2"	HA	Sand	N/A		Plaintiff Only
- 13"	WSB 02	13" - 24 1/2"	HA	Sand	N/A		Plaintiff Only
- 13"-16"	WSB 02	13" - 16"	HA	Sand	N/A		Plaintiff Only
- 5							
-							
-							
-10							
-							
-							
-15							
-							
-							
-20							
-							
-							
-25							
-							
-							
-30							
-							
-							
-35							
-							
-							
-40							

Comments: Total Depth: 24 1/2"

\*NOTE: Red is the Plaintiff's sampling; Blue is BBC's sampling

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

**Project Name:** Westgate Subdivision

**Borehole Number:** SB - 1510-01

**Drilled by:** Safety & Environmental Solutions, Inc.

**Date/Time Started:** 10:05 am October 12, 2000

**Air Monitoring Type:** None

**Project No.:** \_\_\_\_\_

**Logged by:** Joe Tooker

**Drilling/Rig Method(s):** Hand Auger/Auger Stem Rig

**Date/Time Completed:** 2:10 pm

**GWL Depth:** \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0-							
-							
-	SB-1510-01	2'6" - 3'	HA	Sand	N/A		Plaintiff Only (10:16 am)
-	SB-1510-01	2'7" - 3'	HA	Sand	N/A		None
5	SB-1510-01	4'5"	HA	Sample for PID	0		Plaintiff
-	SB-1510-01	10' - 11'	SS	No Sample	N/A		Hit metal had to move
-	SB-1510-01B	5'	SS	Sample for PID	N/A		Plaintiff's equipment did not work
-							Plaintiff Only (1:25 pm)
-	SB-1510-01B	5 1/2" - 7'	HA	Sand	N/A		No Odor, No Stain (1:30 pm)
-10	SB-1510-01B	5 1/2"	HA	Sand	N/A		Plaintiff decided to quit
-	SB-1510-01B	10' - 10'6"	HA	Sample for PID	11		Digging, No Odor, No Stain (2:05 pm)
-							
-15							
-20							
-25							
-30							
-35							
-40							

**Comments:** Total Depth: SB 1510-01: 2'6" SB 1510-01B: 10'6"

**\*NOTE:** Red is the Plaintiff's sampling; Blue is BBC's sampling

**Technician Signature:** \_\_\_\_\_

**BORING LOGS**  
**JANUARY 12, 2001**



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 1506-02  
Drilled by: ESN South  
Date/Time Started: 8:35 am January 12, 2001  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Direct Push  
Date/Time Completed: January 12, 2001 / 9:00 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description		PID Readings (ppm)	USCS Symbol	Comments
0-	1506-02	0'-3'	SS	Sand	8:35 am	NA		No Stain, no odor
-	1506-02	3'-6'	SS	Sand	8:45 am	NA		No Stain, no odor
5-	1506-02	6'-7.5'	SS	Sand	9:00am	NA		No Stain, no odor
-								
-								
-10								
-								
-15								
-								
-20								
-								
-25								
-								
-30								
-								
-35								
-								
-40								

Comments: \_\_\_\_\_

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 1506-03  
Drilled by: ESN South  
Date/Time Started: 9:12 am January 12, 2001  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Direct Push  
Date/Time Completed: January 12, 2001 / 9:35 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description		PID Readings (ppm)	USCS Symbol	Comments
				Material	Time			
0-	1506-03	0'-3'	SS	Sand	9:12 am	NA		No Stain, no odor
-	1506-03	3'-6'	SS	Sand	9:24 am	NA		No Stain, no odor
5	1506-03	6'-8'	SS	Sand	9:35am	NA		No Stain, no odor
-								
-10								
-								
-15								
-								
-20								
-								
-25								
-								
-30								
-								
-35								
-								
-40								

Comments: \_\_\_\_\_

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 1506-04  
Drilled by: ESN South  
Date/Time Started: 9:44 am January 12, 2001  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Direct Push  
Date/Time Completed: January 12, 2001 / 10:00 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0-							
-	1506-04	3'-6"	SS	Sand	9:44 am	NA	No Stain, no odor
-	1506-04	3'-4"	SS	Sand	10:00 am	NA	No Stain, no odor
5							
-							
-							
-							
-10							
-							
-							
-							
-15							
-							
-							
-							
-20							
-							
-							
-							
-25							
-							
-							
-							
-30							
-							
-							
-							
-35							
-							
-							
-							
-40							

Comments: \_\_\_\_\_

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 1506-05  
Drilled by: ESN South  
Date/Time Started: 10:50 am January 12, 2001  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Direct Push  
Date/Time Completed: January 12, 2001 / 11:10 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description	PID Readings (ppm)	USCS Symbol	Comments
0'-	1506-05	0'-3'	SS	Sand 10:50 am	NA		No Stain, no odor
' 5	1506-05	3'-4.5'	SS	Sand 10:55 am	NA		No Stain, no odor
' 10	1506-05	3'-6'	SS	Sand 11:10 am	NA		No Stain, no odor
' 15							
' 20							
' 25							
' 30							
' 35							
' 40							

Comments: \_\_\_\_\_

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_



## RECORD OF SUBSURFACE EXPLORATION

Project Name: Westgate Subdivision  
Borehole Number: 1506-06  
Drilled by: ESN South  
Date/Time Started: 11:15 am January 12, 2001  
Air Monitoring Type: None

Project No.: \_\_\_\_\_  
Logged by: David Paul Wadley  
Drilling/Rig Method(s): Direct Push  
Date/Time Completed: January 12, 2001 / 11:30 am  
GWL Depth: \_\_\_\_\_

Depth (feet)	Sample Number	Sample Interval	Sample Type	Sample Description		PID Readings (ppm)	USCS Symbol	Comments
0-								
-								
-								
5								
-								
-								
10								
-								
-								
-15								
-								
-								
-20								
-								
-								
-25								
-								
-								
-30								
-								
-								
-35								
-								
-								
-40								

Comments:

\*NOTE: Blue represents sample submitted by BBC

Technician Signature: \_\_\_\_\_

**BBC INTERNATIONAL'S  
RESULTS FROM SPLIT  
SAMPLING WITH NMOCD  
AUGUST 24, 2000**

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9   Lubbock, Texas 79424   800•378•1296   806•794•1296   FAX 806•794•1298  
4725 Ripley Avenue, Suite A   El Paso, Texas 79922   888•588•3443   915•585•3443   FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cliff Brunson  
BBC International Inc.  
P.O. Box 805  
Hobbs, NM 88241

Report Date: September 1, 2000

Order ID Number: A00082506

Project Number: N/A  
Project Name: Shell Westgate  
Project Location: Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
152139	0008241101	Soil	8/24/00	10:40	8/25/00
152140	0008241118	Soil	8/24/00	11:00	8/25/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leftwich, Director

# Analytical and Quality Control Report

Sample: 152139 - 0008241101

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC04568      Date Analyzed: 8/29/00  
Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB03973      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
Bromochloromethane		<50	µg/Kg	25	2
Dichlorodifluoromethane		<50	µg/Kg	25	2
Chloromethane (methyl chloride)		<50	µg/Kg	25	2
Vinyl Chloride		<50	µg/Kg	25	2
Bromoform (methyl bromide)		<125	µg/Kg	25	5
Chloroethane		<50	µg/Kg	25	2
Trichlorofluoromethane		<50	µg/Kg	25	2
Acetone		<250	µg/Kg	25	10
Iodomethane (methyl iodide)		<50	µg/Kg	25	2
Carbon Disulfide		<50	µg/Kg	25	2
Acrylonitrile		<50	µg/Kg	25	2
2-Butanone (MEK)		<50	µg/Kg	25	2
4-methyl-2-pentanone (MIBK)		<250	µg/Kg	25	10
2-hexanone		<50	µg/Kg	25	2
trans-1,4-Dichloro-2-butene		<250	µg/Kg	25	10
1,1-Dichloroethene		<50	µg/Kg	25	2
Methylene chloride		<125	µg/Kg	25	5
MTBE		<50	µg/Kg	25	2
trans-1,2-Dichloroethene		<50	µg/Kg	25	2
1,1-Dichloroethane		<50	µg/Kg	25	2
cis-1,2-dichloroethene		<50	µg/Kg	25	2
2,2-Dichloropropane		<50	µg/Kg	25	2
1,2-Dichloroethane (EDC)		<50	µg/Kg	25	2
Chloroform		<50	µg/Kg	25	2
1,1,1-Trichloroethane		<50	µg/Kg	25	2
1,1-Dichloropropene		<50	µg/Kg	25	2
Benzene		<50	µg/Kg	25	2
Carbon Tetrachloride		<50	µg/Kg	25	2
1,2-Dichloropropane		<50	µg/Kg	25	2
Trichloroethene (TCE)		<50	µg/Kg	25	2
Dibromomethane (methylene bromide)		<50	µg/Kg	25	2
Bromodichloromethane		<50	µg/Kg	25	2
2-Chloroethyl vinyl ether		<250	µg/Kg	25	10
cis-1,3-Dichloropropene		<50	µg/Kg	25	2
trans-1,3-Dichloropropene		<50	µg/Kg	25	2
Toluene		<50	µg/Kg	25	2
1,1,2-Trichloroethane		<50	µg/Kg	25	2
1,3-Dichloropropane		<50	µg/Kg	25	2
Dibromochloromethane		<50	µg/Kg	25	2
1,2-Dibromoethane (EDB)		<50	µg/Kg	25	2
Tetrachloroethene (PCE)		<50	µg/Kg	25	2
Chlorobenzene		<50	µg/Kg	25	2
1,1,1,2-Tetrachloroethane		<50	µg/Kg	25	2
Ethyl Benzene		<50	µg/Kg	25	2
m,p-Xylene		<50	µg/Kg	25	2

Continued ...

Report Date: September 1, 2000  
N/A

Order Number: A00082506  
Shell Westgate

Page Number: 3 of 13  
Hobbs,NM

...Continued Sample: 152139 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
Bromoform		<50	µg/Kg	25	2
Styrene		<50	µg/Kg	25	2
o-Xylene		<50	µg/Kg	25	2
1,1,2,2-Tetrachloroethane		<50	µg/Kg	25	2
2-Chlorotoluene		<50	µg/Kg	25	2
1,2,3-Trichloropropane		<50	µg/Kg	25	2
Isopropylbenzene		<50	µg/Kg	25	2
Bromobenzene		<50	µg/Kg	25	2
n-Propylbenzene		<50	µg/Kg	25	2
1,3,5-Trimethylbenzene		<50	µg/Kg	25	2
tert-Butylbenzene		<50	µg/Kg	25	2
1,2,4-Trimethylbenzene		<50	µg/Kg	25	2
1,4-Dichlorobenzene (para)		<50	µg/Kg	25	2
sec-Butylbenzene		<50	µg/Kg	25	2
1,3-Dichlorobenzene		<50	µg/Kg	25	2
p-Isopropyltoluene		<50	µg/Kg	25	2
4-Chlorotoluene		<50	µg/Kg	25	2
1,2-Dichlorobenzene (ortho)		<50	µg/Kg	25	2
n-Butylbenzene		<50	µg/Kg	25	2
1,2-Dibromo-3-chloropropane		<125	µg/Kg	25	5
1,2,3,4-Tetrachlorobenzene		<125	µg/Kg	25	5
1,2,4-Trichlorobenzene		<125	µg/Kg	25	5
Naphthalene		<50	µg/Kg	25	2
Hexachlorobutadiene		<125	µg/Kg	25	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.00	µg/Kg	1	50	94	69 - 116
Toluene-d8		49.50	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		50.68	µg/Kg	1	50	101	74 - 110

Sample: 152139 - 0008241101

Analysis: TCLP Hg      Analytical Method: S 7470A      QC Batch: QC04618      Date Analyzed: 8/30/00  
Analyst: MS              Preparation Method: E 1311      Prep Batch: PB04021      Date Prepared: 8/30/00

Param	Flag	Result	Units	Dilution	RDL
TCLP Mercury		<0.010	mg/L	1	0.01

Sample: 152139 - 0008241101

Analysis: TCLP Metals      Analytical Method: S 6010B      QC Batch: QC04617      Date Analyzed: 8/31/00  
Analyst: RR              Preparation Method: E 1311      Prep Batch: PB03933      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
TCLP Arsenic		<0.10	mg/L	1	0.10
TCLP Barium		1.6	mg/L	1	0.10
TCLP Cadmium		<0.02	mg/L	1	0.02
TCLP Chromium		<0.05	mg/L	1	0.05

Continued ...

...Continued Sample: 152139 Analysis: TCLP Metals

Param	Flag	Result	Units	Dilution	RDL
TCLP Lead		<0.10	mg/L	1	0.10
TCLP Selenium		<0.10	mg/L	1	0.10
TCLP Silver		<0.05	mg/L	1	0.05

Sample: 152140 - 0008241118

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC04568 Date Analyzed: 8/29/00  
Analyst: JG Preparation Method: E 5030B Prep Batch: PB03973 Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
Bromochloromethane		<50	µg/Kg	25	2
Dichlorodifluoromethane		<50	µg/Kg	25	2
Chloromethane (methyl chloride)		<50	µg/Kg	25	2
Vinyl Chloride		<50	µg/Kg	25	2
Bromomethane (methyl bromide)		<125	µg/Kg	25	5
Chloroethane		<50	µg/Kg	25	2
Trichlorofluoromethane		<50	µg/Kg	25	2
Acetone		<250	µg/Kg	25	10
Iodomethane (methyl iodide)		<50	µg/Kg	25	2
Carbon Disulfide		<50	µg/Kg	25	2
Acrylonitrile		<50	µg/Kg	25	2
2-Butanone (MEK)		<50	µg/Kg	25	2
4-methyl-2-pentanone (MIBK)		<250	µg/Kg	25	10
2-hexanone		<50	µg/Kg	25	2
trans 1,4-Dichloro-2-butene		<250	µg/Kg	25	10
1,1-Dichloroethene		<50	µg/Kg	25	2
Methylene chloride		<125	µg/Kg	25	5
MTBE		<50	µg/Kg	25	2
trans-1,2-Dichloroethene		<50	µg/Kg	25	2
1,1-Dichloroethane		<50	µg/Kg	25	2
cis-1,2-dichloroethene		<50	µg/Kg	25	2
2,2-Dichloropropane		<50	µg/Kg	25	2
1,2-Dichloroethane (EDC)		<50	µg/Kg	25	2
Chloroform		<50	µg/Kg	25	2
1,1,1-Trichloroethane		<50	µg/Kg	25	2
1,1-Dichloropropene		<50	µg/Kg	25	2
Benzene		<50	µg/Kg	25	2
Carbon Tetrachloride		<50	µg/Kg	25	2
1,2-Dichloropropane		<50	µg/Kg	25	2
Trichloroethene (TCE)		<50	µg/Kg	25	2
Dibromomethane (methylene bromide)		<50	µg/Kg	25	2
Bromodichloromethane		<50	µg/Kg	25	2
2-Chloroethyl vinyl ether		<250	µg/Kg	25	10
cis-1,3-Dichloropropene		<50	µg/Kg	25	2
trans-1,3-Dichloropropene		<50	µg/Kg	25	2
Toluene		<50	µg/Kg	25	2
1,1,2-Trichloroethane		<50	µg/Kg	25	2
1,3-Dichloropropane		<50	µg/Kg	25	2
Dibromochloromethane		<50	µg/Kg	25	2
1,2-Dibromoethane (EDB)		<50	µg/Kg	25	2
Tetrachloroethene (PCE)		<50	µg/Kg	25	2

Continued ...

Report Date: September 1, 2000  
N/A

Order Number: A00082506  
Shell Westgate

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...Continued Sample: 152140 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
Chlorobenzene		<50	µg/Kg	25	2
1,1,1,2-Tetrachloroethane		<50	µg/Kg	25	2
Ethylbenzene		<50	µg/Kg	25	2
m,p-Xylene		<50	µg/Kg	25	2
Bromoform		<50	µg/Kg	25	2
Styrene		<50	µg/Kg	25	2
o-Xylene		<50	µg/Kg	25	2
1,1,2,2-Tetrachloroethane		<50	µg/Kg	25	2
2-Chlorotoluene		<50	µg/Kg	25	2
1,2,3-Trichloropropane		<50	µg/Kg	25	2
Isopropylbenzene		<50	µg/Kg	25	2
Bromobenzene		<50	µg/Kg	25	2
n-Propylbenzene		<50	µg/Kg	25	2
1,3,5-Trimethylbenzene		<50	µg/Kg	25	2
tert-Butylbenzene		<50	µg/Kg	25	2
1,2,4-Trimethylbenzene		<50	µg/Kg	25	2
1,4-Dichlorobenzene (para)		<50	µg/Kg	25	2
sec-Butylbenzene		<50	µg/Kg	25	2
1,3-Dichlorobenzene		<50	µg/Kg	25	2
p-Isopropyltoluene		<50	µg/Kg	25	2
4-Chlorotoluene		<50	µg/Kg	25	2
1,2-Dichlorobenzene (ortho)		<50	µg/Kg	25	2
n-Butylbenzene		<50	µg/Kg	25	2
1,2-Dibromo-3-chloropropane		<125	µg/Kg	25	5
1,2,3-Trichlorobenzene		<125	µg/Kg	25	5
1,2,4-Trichlorobenzene		<125	µg/Kg	25	5
Naphthalene		<50	µg/Kg	25	2
Hexachlorobutadiene		<125	µg/Kg	25	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.80	µg/Kg	1	50	95	69 - 116
Toluene-d8		49.96	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		49.83	µg/Kg	1	50	99	74 - 110

Sample: 152140 - 0008241118

Analysis: TCLP Hg      Analytical Method: S 7470A      QC Batch: QC04618      Date Analyzed: 8/30/00  
Analyst: MS      Preparation Method: E 1311      Prep Batch: PB04021      Date Prepared: 8/30/00

Param	Flag	Result	Units	Dilution	RDL
TCLP Mercury		<0.010	mg/L	1	0.01

Sample: 152140 - 0008241118

Analysis: TCLP Metals      Analytical Method: S 6010B      QC Batch: QC04617      Date Analyzed: 8/31/00  
Analyst: RR      Preparation Method: E 1311      Prep Batch: PB03933      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
TCLP Arsenic		<0.10	mg/L	1	0.10
TCLP Barium		1.5	mg/L	1	0.10
TCLP Cadmium		<0.02	mg/L	1	0.02
TCLP Chromium		<0.05	mg/L	1	0.05
TCLP Lead		<0.10	mg/L	1	0.10
TCLP Selenium		<0.10	mg/L	1	0.10
TCLP Silver		<0.05	mg/L	1	0.05

## Quality Control Report Method Blank

Sample: Method Blank

QCBatch: QC04568

Param	Flag	Results	Units	Reporting Limit
Bromochloromethane		<50	µg/Kg	2
Dichlorodifluoromethane		<50	µg/Kg	2
Chloromethane (methyl chloride)		<50	µg/Kg	2
Vinyl Chloride		<50	µg/Kg	2
Bromomethane (methyl bromide)		<125	µg/Kg	5
Chloroethane		<50	µg/Kg	2
Trichlorofluoromethane		<50	µg/Kg	2
Acetone		<250	µg/Kg	10
Iodomethane (methyl iodide)		<50	µg/Kg	2
Carbon Disulfide		<50	µg/Kg	2
Acrylonitrile		<50	µg/Kg	2
2-Butanone (MEK)		<50	µg/Kg	2
4-methyl-2-pentanone (MIBK)		<250	µg/Kg	10
2-hexanone		<50	µg/Kg	2
trans 1,4-Dichloro-2-butene		<250	µg/Kg	10
1,1-Dichloroethene		<50	µg/Kg	2
Methylene chloride		<125	µg/Kg	5
MTBE		<50	µg/Kg	2
trans-1,2-Dichloroethene		<50	µg/Kg	2
1,1-Dichloroethane		<50	µg/Kg	2
cis-1,2-dichloroethene		<50	µg/Kg	2
2,2-Dichloropropane		<50	µg/Kg	2
1,2-Dichloroethane (EDC)		<50	µg/Kg	2
Chloroform		<50	µg/Kg	2
1,1,1-Trichloroethane		<50	µg/Kg	2
1,1-Dichloropropene		<50	µg/Kg	2
Benzene		<50	µg/Kg	2
Carbon Tetrachloride		<50	µg/Kg	2
1,2-Dichloropropane		<50	µg/Kg	2
Trichloroethene (TCE)		<50	µg/Kg	2
Dibromomethane (methylene bromide)		<50	µg/Kg	2
Bromodichloromethane		<50	µg/Kg	2
2-Chloroethyl vinyl ether		<250	µg/Kg	10

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Param	Flag	Results	Units	Reporting Limit
cis-1,3-Dichloropropene		<50	µg/Kg	2
trans-1,3-Dichloropropene		<50	µg/Kg	2
Toluene		<50	µg/Kg	2
1,1,2-Trichloroethane		<50	µg/Kg	2
1,3-Dichloropropane		<50	µg/Kg	2
Dibromochloromethane		<50	µg/Kg	2
1,2-Dibromoethane (EDB)		<50	µg/Kg	2
Tetrachloroethene (PCE)		<50	µg/Kg	2
Chlorobenzene		<50	µg/Kg	2
1,1,1,2-Tetrachloroethane		<50	µg/Kg	2
Ethylbenzene		<50	µg/Kg	2
m,p-Xylene		<50	µg/Kg	2
Bromoform		<50	µg/Kg	2
Styrene		<50	µg/Kg	2
o-Xylene		<50	µg/Kg	2
1,1,2,2-Tetrachloroethane		<50	µg/Kg	2
2-Chlorotoluene		<50	µg/Kg	2
1,2,3-Trichloropropane		<50	µg/Kg	2
Isopropylbenzene		<50	µg/Kg	2
Bromobenzene		<50	µg/Kg	2
n-Propylbenzene		<50	µg/Kg	2
1,3,5-Trimethylbenzene		<50	µg/Kg	2
tert-Butylbenzene		<50	µg/Kg	2
1,2,4-Trimethylbenzene		<50	µg/Kg	2
1,4-Dichlorobenzene (para)		<50	µg/Kg	2
sec-Butylbenzene		<50	µg/Kg	2
1,3-Dichlorobenzene		<50	µg/Kg	2
p-Isopropyltoluene		<50	µg/Kg	2
4-Chlorotoluene		<50	µg/Kg	2
1,2-Dichlorobenzene (ortho)		<50	µg/Kg	2
n-Butylbenzene		<50	µg/Kg	2
1,2-Dibromo-3-chloropropane		<125	µg/Kg	5
1,2,3-Trichlorobenzene		<125	µg/Kg	5
1,2,4-Trichlorobenzene		<125	µg/Kg	5
Naphthalene		<50	µg/Kg	2
Hexachlorobutadiene		<125	µg/Kg	5

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		49.59	µg/Kg	50	99	69 - 116
Toluene-d8		52.64	µg/Kg	50	105	88 - 114
4-Bromofluorobenzene		44.53	µg/Kg	50	89	74 - 110

Sample: Method Blank      QCBatch: QC04617

Param	Flag	Results	Units	Reporting Limit
TCLP Arsenic		<0.10	mg/L	0.10

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Param	Flag	Results	Units	Reporting Limit
TCLP Barium		<0.10	mg/L	0.10
TCLP Cadmium		<0.02	mg/L	0.02
TCLP Chromium		<0.05	mg/L	0.05
TCLP Lead		<0.10	mg/L	0.10
TCLP Selenium		<0.10	mg/L	0.10
TCLP Silver		<0.05	mg/L	0.05

Sample: Method Blank      QC Batch: QC04618

Param	Flag	Results	Units	Reporting Limit
TCLP Mercury		<0.010	mg/L	0.01

## Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS      QC Batch: QC04568

Param	Flag	Sample Result	Units	Spike		% Rec.	% Rec. Limit	RPD Limit
				Dil.	Amount Added			
1,1-Dichloroethene		88	µg/Kg	1	100	<50	88	80 - 120
Benzene		89	µg/Kg	1	100	<50	89	80 - 120
Trichloroethene (TCE)		89	µg/Kg	1	100	<50	89	80 - 120
Toluene		89	µg/Kg	1	100	<50	89	80 - 120
Chlorobenzene		93	µg/Kg	1	100	<50	93	80 - 120

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		49.77	µg/Kg	1	50	99	69 - 116
Toluene-d8		50.34	µg/Kg	1	50	100	88 - 114
4-Bromofluorobenzene		46.07	µg/Kg	1	50	92	74 - 110

Sample: LCSD      QC Batch: QC04568

Param	Flag	Sample Result	Units	Spike		% Rec.	% Rec. Limit	RPD Limit
				Dil.	Amount Added			
1,1-Dichloroethene		91	µg/Kg	1	100	<50	91	3
Benzene		93	µg/Kg	1	100	<50	93	4
Trichloroethene (TCE)		93	µg/Kg	1	100	<50	93	4

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Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
Toluene		93	µg/Kg	1	100	<50	93	4	80 - 120
Chlorobenzene		96	µg/Kg	1	100	<50	96	3	80 - 120

Surrogate	Flag	Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount				
Dibromofluoromethane		49.55	µg/Kg	1	50	99		69 - 116	
Toluene-d8		50.36	µg/Kg	1	50	100		88 - 114	
4-Bromofluorobenzene		45.68	µg/Kg	1	50	91		74 - 110	

Sample: LCS

QC Batch: QC04617

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
TCLP Arsenic		9.83	mg/L	1	10	<0.10	98	75 - 125	20
TCLP Barium		20	mg/L	1	20	<0.10	100	75 - 125	20
TCLP Cadmium		1.99	mg/L	1	2	<0.02	99	75 - 125	20
TCLP Chromium		4.09	mg/L	1	4	<0.05	102	75 - 125	20
TCLP Lead		10.1	mg/L	1	10	<0.10	101	75 - 125	20
TCLP Selenium		8.83	mg/L	1	10	<0.10	88	75 - 125	20
TCLP Silver		1.96	mg/L	1	2	<0.05	98	75 - 125	20

Sample: LCSD

QC Batch: QC04617

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
TCLP Arsenic		10.3	mg/L	1	10	<0.10	103	4	75 - 125
TCLP Barium		20.7	mg/L	1	20	<0.10	103	3	75 - 125
TCLP Cadmium		2.04	mg/L	1	2	<0.02	102	2	75 - 125
TCLP Chromium		4.17	mg/L	1	4	<0.05	104	2	75 - 125
TCLP Lead		10.3	mg/L	1	10	<0.10	103	2	75 - 125
TCLP Selenium		9.01	mg/L	1	10	<0.10	90	2	75 - 125
TCLP Silver		2.04	mg/L	1	2	<0.05	102	4	75 - 125

Sample: LCS

QC Batch: QC04618

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
TCLP Mercury		0.0412	mg/L	1	0.05	<0.010	82	80 - 120	20

Sample: LCSD

QC Batch: QC04618

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit	
					Amount Added	Matrix Result				
TCLP Mercury		0.0468	mg/L	1	0.05	<0.010	93	13	80 - 120	20

## Quality Control Report

### Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC04568

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result			
1,1-Dichloroethene		93	µg/Kg	1	100		93	80 - 120	20
1,1-Dichloroethene		93	µg/Kg	1	100	<50	93	80 - 120	20
Benzene		95	µg/Kg	1	100		95	74 - 121	20
Benzene		95	µg/Kg	1	100	<50	95	74 - 121	20
Trichloroethene (TCE)		92	µg/Kg	1	100		92	72 - 121	20
Trichloroethene (TCE)		92	µg/Kg	1	100	<50	92	72 - 121	20
Toluene		94	µg/Kg	1	100		94	75 - 134	20
Toluene		94	µg/Kg	1	100	<50	94	75 - 134	20
Chlorobenzene		97	µg/Kg	1	100		97	83 - 120	20
Chlorobenzene		97	µg/Kg	1	100	<50	97	83 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	% Rec.		
Dibromofluoromethane		47.75	µg/Kg	1	50	95	69 - 116	
Toluene-d8		48.76	µg/Kg	1	50	97	88 - 114	
4-Bromofluorobenzene		50.05	µg/Kg	1	50	100	74 - 110	

Sample: MSD

QC Batch: QC04568

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result			
1,1-Dichloroethene		92	µg/Kg	1	100		92	80 - 120	20
1,1-Dichloroethene		92	µg/Kg	1	100	<50	92	80 - 120	20
Benzene		96	µg/Kg	1	100		96	74 - 121	20
Benzene		96	µg/Kg	1	100	<50	96	74 - 121	20
Trichloroethene (TCE)		93	µg/Kg	1	100		93	72 - 121	20
Trichloroethene (TCE)		93	µg/Kg	1	100	<50	93	72 - 121	20
Toluene		95	µg/Kg	1	100		95	75 - 134	20
Toluene		95	µg/Kg	1	100	<50	95	75 - 134	20
Chlorobenzene		97	µg/Kg	1	100		97	83 - 120	20

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Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD	RPD Limit
					Amount Added	Matrix Result				
Chlorobenzene		97	µg/Kg	1	100	<50	97	0	83 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	% Rec.		
Dibromofluoromethane		47.80	µg/Kg	1	50	95	69 - 116	
Toluene-d8		49.10	µg/Kg	1	50	98	88 - 114	
4-Bromofluorobenzene		50.22	µg/Kg	1	50	100	74 - 110	

Sample: MS      QC Batch: QC04617

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD	RPD Limit
					Amount Added	Matrix Result				
TCLP Arsenic		10.7	mg/L	1	10	<0.10	107	75 - 125	20	
TCLP Barium		21.6	mg/L	1	20	<0.10	108	75 - 125	20	
TCLP Cadmium		2.08	mg/L	1	2	<0.02	104	75 - 125	20	
TCLP Chromium		4.34	mg/L	1	4	<0.05	108	75 - 125	20	
TCLP Lead		11.1	mg/L	1	10	0.17	109	75 - 125	20	
TCLP Selenium		9.56	mg/L	1	10	<0.10	95	75 - 125	20	
TCLP Silver		2.14	mg/L	1	2	<0.05	107	75 - 125	20	

Sample: MSD      QC Batch: QC04617

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD	RPD Limit
					Amount Added	Matrix Result				
TCLP Arsenic		9.97	mg/L	1	10	<0.10	99	7	75 - 125	20
TCLP Barium		20.4	mg/L	1	20	<0.10	102	6	75 - 125	20
TCLP Cadmium		1.99	mg/L	1	2	<0.02	99	4	75 - 125	20
TCLP Chromium		4.10	mg/L	1	4	<0.05	102	6	75 - 125	20
TCLP Lead		10.5	mg/L	1	10	0.17	103	6	75 - 125	20
TCLP Selenium		8.81	mg/L	1	10	<0.10	88	8	75 - 125	20
TCLP Silver		1.99	mg/L	1	2	<0.05	99	7	75 - 125	20

Sample: MS      QC Batch: QC04618

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD	RPD Limit
					Amount Added	Matrix Result				
TCLP Mercury		0.0412	mg/L	1	0.05	<0.010	82	80 - 120	20	

Sample: MSD

QC Batch: QC04618

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit	
					Amount Added	Matrix Result				
TCLP Mercury		0.0449	mg/L	1	0.05	<0.010	89	8	80 - 120	20

## Quality Control Report

### Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC04568

Param	Flag	Units	CCVs	CCVs	CCVs	Percent Recovery	Date
			True Conc.	Found Conc.	Percent Recovery	Limits	Analyzed
Vinyl Chloride		µg/Kg	100	109	109	80 - 120	8/29/00
1,1-Dichloroethene		µg/Kg	100	114	114	64 - 149	8/29/00
Chloroform		µg/Kg	100	104	104	80 - 120	8/29/00
1,2-Dichloropropane		µg/Kg	100	107	107	80 - 120	8/29/00
Toluene		µg/Kg	100	106	106	70 - 127	8/29/00
Chlorobenzene		µg/Kg	100	105	105	76 - 122	8/29/00
Ethylbenzene		µg/Kg	100	108	108	80 - 120	8/29/00
Dibromofluoromethane		µg/Kg	50	50.66	101	73 - 129	8/29/00
Toluene-d8		µg/Kg	50	48.62	97	87 - 114	8/29/00
4-Bromofluorobenzene		µg/Kg	50	51.81	103	65 - 112	8/29/00

Sample: CCV (1)

QC Batch: QC04617

Param	Flag	Units	CCVs	CCVs	CCVs	Percent Recovery	Date
			True Conc.	Found Conc.	Percent Recovery	Limits	Analyzed
TCLP Arsenic		mg/L	2.50	2.41	96	75 - 125	8/31/00
TCLP Barium		mg/L	5	4.81	96	75 - 125	8/31/00
TCLP Cadmium		mg/L	0.50	0.48	96	75 - 125	8/31/00
TCLP Chromium		mg/L	1	0.95	95	75 - 125	8/31/00
TCLP Lead		mg/L	2.50	2.39	95	75 - 125	8/31/00
TCLP Selenium		mg/L	2.50	2.43	97	75 - 125	8/31/00
TCLP Silver		mg/L	0.50	0.48	96	75 - 125	8/31/00

Sample: ICV (1)

QC Batch: QC04617

Param	Flag	Units	CCVs	CCVs	CCVs	Percent Recovery	Date
			True Conc.	Found Conc.	Percent Recovery	Limits	Analyzed
TCLP Arsenic		mg/L	2.50	2.62	104	75 - 125	8/31/00

*Continued ...*

*... Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TCLP Barium		mg/L	5	5.24	104	75 - 125	8/31/00
TCLP Cadmium		mg/L	0.50	0.52	104	75 - 125	8/31/00
TCLP Chromium		mg/L	1	1.04	104	75 - 125	8/31/00
TCLP Lead		mg/L	2.50	2.61	104	75 - 125	8/31/00
TCLP Selenium		mg/L	2.50	2.65	106	75 - 125	8/31/00
TCLP Silver		mg/L	0.50	0.52	104	75 - 125	8/31/00

Sample: CCV (1)

QC Batch: QC04618

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TCLP Mercury		mg/L	0.005	0.00512	102	80 - 120	8/30/00

Sample: ICV (1)

QC Batch: QC04618

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TCLP Mercury		mg/L	0.005	0.00508	101	80 - 120	8/30/00

# TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cliff Brunson  
BBC International Inc.  
P.O. Box 805  
Hobbs, NM 88241

Report Date: September 6, 2000

Order ID Number: A00082506

Project Number: N/A  
Project Name: Shell Westgate  
Project Location: Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
152139	0008241101	Soil	8/24/00	10:40	8/25/00
152140	0008241118	Soil	8/24/00	11:00	8/25/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 4 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

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BY: .....

## Analytical and Quality Control Report

Sample: 152139 - 0008241101

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC04675      Date Analyzed: 9/6/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04072      Date Prepared: 9/5/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		726	mg/Kg	1	10

Sample: 152140 - 0008241118

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC04675      Date Analyzed: 9/6/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04072      Date Prepared: 9/5/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

## Quality Control Report Method Blank

Sample: Method Blank      QC Batch: QC04675

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

## Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS      QC Batch: QC04675

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		235	mg/Kg	1	250	<10.0	94		70 - 130	20

Sample: LCSD      QC Batch: QC04675

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		233	mg/Kg	1	250	<10.0	93	1	70 - 130	20

## Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS      QC Batch: QC04675

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		245	mg/Kg	1	250	<10.0	98		70 - 130	20

Sample: MSD      QC Batch: QC04675

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		278	mg/Kg	1	250	<10.0	111	13	70 - 130	20

## Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1)      QC Batch: QC04675

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	93.9	93	70 - 130	9/6/00

Sample: CCV (2)      QC Batch: QC04675

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	103	103	70 - 130	9/6/00

Report Date: September 6, 2000  
N/A

Order Number: A00082506  
Shell Westgate

Page Number: 4 of 4  
Hobbs,NM

Sample: ICV (1)

QC Batch: QC04675

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	92	92	70 - 130	9/6/00



**NMOCD RESULTS FROM SPLIT  
SAMPLING WITH BBC  
INTERNATIONAL  
AUGUST 24, 2000**

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
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E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Bill Olson  
OCD  
2040 S. Pacheco  
Santa Fe, NM 87505

Report Date: September 5, 2000

Order ID Number: A00082803

Project Number: N/A  
Project Name: Chandler  
Project Location: N/A

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Duty Received
152302	0008241101 (North Side)	Soil	8/24/00	11:01	\$ 25.00
152303	0008241118 (South Side)	Soil	8/24/00	11:18	\$ 25.00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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Dr. Blair Leftwich, Director

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BY: -----

# Analytical and Quality Control Report

**Sample: 152302 - 0008241101 (North Side)**

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC04530      Date Analyzed: 8/29/00  
Analyst: RC      Preparation Method: 5035      Prep Batch: PB03945      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M P O-Xylene		0.084	mg/Kg	50	0.001
Total BTEX		0.084	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.09	mg/Kg	1	0.10	101	72 - 128
4-BFB		4.71	mg/Kg	1	0.10	94	72 - 128

**Sample: 152302 - 0008241101 (North Side)**

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC04583      Date Analyzed: 8/30/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB03994      Date Prepared: 8/30/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 152302 - 0008241101 (North Side)**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC04623      Date Analyzed: 9/1/00  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB04027      Date Prepared: 8/31/00

Param	Flag	Result	Units	Dilution	RDL
DRO		64	mg/Kg	1	50

**Sample: 152302 - 0008241101 (North Side)**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC04531      Date Analyzed: 8/29/00  
Analyst: RC      Preparation Method:      Prep Batch: PB03946      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

**Sample: 152302 - 0008241101 (North Side)**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC04570      Date Analyzed: 8/30/00  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB03931      Date Prepared: 8/29/00

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

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N/A

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		3.4	mg/Kg	1	1
Total Barium		168	mg/Kg	1	1
Total Boron		25	mg/Kg	1	5
Total Cadmium		0.28	mg/Kg	1	0.20
Total Chromium		6.8	mg/Kg	1	0.50
Total Cobalt		2.8	mg/Kg	1	1
Total Copper		5.3	mg/Kg	1	1
Total Lead		4.6	mg/Kg	1	1
Total Manganese		90	mg/Kg	1	1
Total Molybdenum		<1.0	mg/Kg	1	1
Total Nickel		11	mg/Kg	1	1
Total Selenium		<1.0	mg/Kg	1	1
Total Silica		230	mg/Kg	1	10
Total Silver		<0.50	mg/Kg	1	0.50
Total Zinc		18	mg/Kg	1	1

Sample: 152303 - 0008241118 (South Side)

Analysis: BTEX      Analytical Method: S 8021B      QC Batch: QC04530      Date Analyzed: 8/29/00  
Analyst: RC      Preparation Method: 5035      Prep Batch: PB03945      Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.05	mg/Kg	50	0.001
Toluene		<0.05	mg/Kg	50	0.001
Ethylbenzene		<0.05	mg/Kg	50	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	0.001
Total BTEX		<0.05	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		5.15	mg/Kg	1	0.10	103	72 - 128
t-BFB		4.73	mg/Kg	1	0.10	94	72 - 128

Sample: 152303 - 0008241118 (South Side)

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC04588      Date Analyzed: 8/30/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB03994      Date Prepared: 8/30/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 152303 - 0008241118 (South Side)

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC04623      Date Analyzed: 9/1/00  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB04027      Date Prepared: 8/31/00

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

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Sample: 152303 - 0008241118 (South Side)

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC04531 Date Analyzed: 8/29/00  
Analyst: RC Preparation Method: Prep Batch: PB03946 Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
GRO		<5	mg/Kg	1	0.10

Sample: 152303 - 0008241118 (South Side)

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC04570 Date Analyzed: 8/30/00  
Analyst: RR Preparation Method: E 3050B Prep Batch: PB03931 Date Prepared: 8/29/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		3.2	mg/Kg	1	1
Total Barium		108	mg/Kg	1	1
Total Boron		34	mg/Kg	1	5
Total Cadmium		0.46	mg/Kg	1	0.20
Total Chromium		10	mg/Kg	1	0.50
Total Cobalt		4.0	mg/Kg	1	1
Total Copper		7.1	mg/Kg	1	1
Total Lead		5.3	mg/Kg	1	1
Total Manganese		156	mg/Kg	1	1
Total Molybdenum		<1.0	mg/Kg	1	1
Total Nickel		15	mg/Kg	1	1
Total Selenium		<1.0	mg/Kg	1	1
Total Silica		400	mg/Kg	1	10
Total Silver		<0.50	mg/Kg	1	0.50
Total Zinc		29	mg/Kg	1	1

## Quality Control Report Method Blank

Sample: Method Blank QCBatch: QC04530

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.05	mg/Kg	0.001
Toluene		<0.05	mg/Kg	0.001
Ethylbenzene		<0.05	mg/Kg	0.001
M,P,O-Xylene		<0.05	mg/Kg	0.001
Total BTEX		<0.05	mg/Kg	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		4.65	mg/Kg	0.10	93	72 - 128
4-BFB		4.16	mg/Kg	0.10	83	72 - 128

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

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N/A

Sample: Method Blank      QCBatch: QC04531

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Sample: Method Blank      QCBatch: QC04570

Param	Flag	Results	Units	Reporting Limit
Total Arsenic		<1.0	mg/Kg	1
Total Barium		<1.0	mg/Kg	1
Total Boron		<5.0	mg/Kg	5
Total Cadmium		<0.20	mg/Kg	0.20
Total Chromium		<0.50	mg/Kg	0.50
Total Cobalt		<1.0	mg/Kg	1
Total Copper		<1.0	mg/Kg	1
Total Lead		<1.0	mg/Kg	1
Total Manganese		<1.0	mg/Kg	1
Total Molybdenum		<1.0	mg/Kg	1
Total Nickel		<1.0	mg/Kg	1
Total Selenium		<1.0	mg/Kg	1
Total Silica		<10.0	mg/Kg	10
Total Silver		<0.50	mg/Kg	0.50
Total Zinc		<1.0	mg/Kg	1

Sample: Method Blank      QCBatch: QC04588

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Sample: Method Blank      QCBatch: QC04623

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

## Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS      QC Batch: QC04530

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

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N/A

Param	Flag	Sample Result	Spike						% Rec.	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD		
MTBE		4.55	mg/Kg	50	0.10	<0.05	91		80 - 120	20
Benzene		4.2	mg/Kg	50	0.10	<0.05	84		80 - 120	20
Toluene		4.08	mg/Kg	50	0.10	<0.05	82		80 - 120	20
Ethylbenzene		4.04	mg/Kg	50	0.10	<0.05	81		80 - 120	20
M.P.O-Xylene		12.53	mg/Kg	50	0.30	<0.05	83		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	% Rec.		
TFT		4.15	mg/Kg	50	0.10	83		72 - 128
4-BFB		3.87	mg/Kg	50	0.10	77		72 - 128

Sample: LCSD

QC Batch: QC04530

Param	Flag	Sample Result	Spike						% Rec.	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD		
MTBE		4.92	mg/Kg	50	0.10	<0.05	98	8	80 - 120	20
Benzene		4.53	mg/Kg	50	0.10	<0.05	90	8	80 - 120	20
Toluene		4.3	mg/Kg	50	0.10	<0.05	86	8	80 - 120	20
Ethylbenzene		4.29	mg/Kg	50	0.10	<0.05	86	8	80 - 120	20
M.P.O-Xylene		13.6	mg/Kg	50	0.30	<0.05	91	8	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	% Rec.		
TFT		4.42	mg/Kg	50	0.10	88		72 - 128
4-BFB		4.11	mg/Kg	50	0.10	92		72 - 128

Sample: LCS

QC Batch: QC04531

Param	Flag	Sample Result	Spike						% Rec.	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD		
GRO		0.897	mg/Kg	1	1	<5	89		80 - 120	20

Sample: LCSD

QC Batch: QC04531

Param	Flag	Sample Result	Spike						% Rec.	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD		
GRO		1.02	mg/Kg	1	1	<5	102	13	80 - 120	20

Sample: LCS QC Batch: QC04570

Param	Flag	Sample Result	Spike						% Rec.	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD			
Total Silica		171	mg/Kg	1	200	<10.0	85		75 - 125	20	
Total Silver		19	mg/Kg	1	20	<0.50	95		75 - 125	20	
Total Zinc		21	mg/Kg	1	20	<1.0	105		75 - 125	20	
Total Calcium		18	mg/Kg	1	20	<0.20	90		75 - 125	20	
Total Chromium		37	mg/Kg	1	40	<0.50	92		75 - 125	20	
Total Cobalt		89	mg/Kg	1	100	<1.0	89		75 - 125	20	
Total Copper		38	mg/Kg	1	40	<1.0	95		75 - 125	20	
Total Lead		91	mg/Kg	1	100	<1.0	91		75 - 125	20	
Total Manganese		16	mg/Kg	1	20	<1.0	80		75 - 125	20	
Total Molybdenum		93	mg/Kg	1	100	<1.0	93		75 - 125	20	
Total Nickel		93	mg/Kg	1	100	<1.0	93		75 - 125	20	
Total Selenium		78	mg/Kg	1	100	<1.0	78		75 - 125	20	

Sample: LCSD QC Batch: QC04570

Param	Flag	Sample Result	Spike						% Rec.	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD			
Total Arsenic		90	mg/Kg	1	100	<1.0	90	1	75 - 125	20	
Total Barium		183	mg/Kg	1	200	<1.0	91	1	75 - 125	20	
Total Boron		91	mg/Kg	1	100	<5.0	91	0	75 - 125	20	
Total Cadmium		17	mg/Kg	1	20	<0.20	85	6	75 - 125	20	
Total Chromium		37	mg/Kg	1	40	<0.50	92	0	75 - 125	20	
Total Cobalt		88	mg/Kg	1	100	<1.0	88	1	75 - 125	20	
Total Copper		38	mg/Kg	1	40	<1.0	95	0	75 - 125	20	
Total Lead		90	mg/Kg	1	100	<1.0	90	1	75 - 125	20	
Total Manganese		16	mg/Kg	1	20	<1.0	80	0	75 - 125	20	
Total Molybdenum		92	mg/Kg	1	100	<1.0	92	1	75 - 125	20	
Total Nickel		91	mg/Kg	1	100	<1.0	91	2	75 - 125	20	
Total Selenium		78	mg/Kg	1	100	<1.0	78	0	75 - 125	20	
Total Silica		175	mg/Kg	1	100	<10.0	87	2	75 - 125	20	
Total Silver		19	mg/Kg	1	20	<0.50	95	0	75 - 125	20	
Total Zinc		22	mg/Kg	1	20	<1.0	110	5	75 - 125	20	

Sample: LCS QC Batch: QC04588

Param	Flag	Sample Result	Spike						% Rec.	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added	Matrix Result	% Rec.	RPD			
Total Mercury		2.39	mg/Kg	1	2.50	<0.19	95		80 - 120	20	

Sample: LCSD QC Batch: QC04588

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

Page Number: 8 of 13  
N/A

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Mercury		2.32	mg/Kg	1	2.50	<0.19	92	3	80 - 120	20

Sample: LCS QC Batch: QC04623

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
DRO		532	mg/Kg	1	250	<50	212		70 - 130	20

Sample: LCSD QC Batch: QC04623

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
DRO		285	mg/Kg	1	250	<50	114	60	70 - 130	20

## Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC04530

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Benzene		5.13	mg/Kg	50	0.10	0.148	100		80 - 120	20
Toluene		10.8	mg/Kg	50	0.10	6.05	95		80 - 120	20
Ethylbenzene		8.81	mg/Kg	50	0.10	4.11	94		80 - 120	20
M.P.O-Xylene		71	mg/Kg	50	0.30	60.8	68		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	Limit
					Amount	Rec.		
TFT		4.6	mg/Kg	50	0.10	92		72 - 128
4-BFB	1	8.25	mg/Kg	50	0.10	165		72 - 128

Sample: MSD QC Batch: QC04530

<sup>1</sup> Surrogate recovery out of limits due to matrix effect.

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Benzene		4.69	mg/Kg	50	0.10	0.148	90	9	80 - 120	20
Toluene		10.8	mg/Kg	50	0.10	6.05	95	0	80 - 120	20
Ethylbenzene		8.62	mg/Kg	50	0.10	4.11	90	4	80 - 120	20
M,P,O-Xylene		70.9	mg/Kg	50	0.30	60.8	67	1	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	Result		
TFT		4.88	mg/Kg	50	0.10	97	72 - 128	
4-BFB	2	8.06	mg/Kg	50	0.10	161	72 - 128	

Sample: MS      QC Batch: QC04570

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Arsenic		88	mg/Kg	1	100	3.4	84	75 - 125	20	
Total Barium		309	mg/Kg	1	200	168	115	75 - 125	20	
Total Boron		113	mg/Kg	1	100	25	88	75 - 125	20	
Total Cadmium		16	mg/Kg	1	20	0.28	78	75 - 125	20	
Total Chromium		43	mg/Kg	1	40	6.5	90	75 - 125	20	
Total Cobalt		84	mg/Kg	1	100	2.8	81	75 - 125	20	
Total Copper		42	mg/Kg	1	40	5.3	91	75 - 125	20	
Total Lead		90	mg/Kg	1	100	4.6	85	75 - 125	20	
Total Manganese	3	118	mg/Kg	1	20	90	140	75 - 125	20	
Total Molybdenum		84	mg/Kg	1	100	<1.0	84	75 - 125	20	
Total Nickel		98	mg/Kg	1	100	11	87	75 - 125	20	
Total Selenium		74	mg/Kg	1	100	<1.0	74	75 - 125	20	
Total Silica	4	537	mg/Kg	1	200	230	153	75 - 125	20	
Total Silver		16	mg/Kg	1	20	<0.50	80	75 - 125	20	
Total Zinc		39	mg/Kg	1	20	18	105	75 - 125	20	

Sample: MSD      QC Batch: QC04570

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Arsenic		88	mg/Kg	1	100	3.4	84	0	75 - 125	20
Total Barium		352	mg/Kg	1	200	168	92	23	75 - 125	20
Total Boron		113	mg/Kg	1	100	25	88	0	75 - 125	20
Total Cadmium		16	mg/Kg	1	20	0.28	78	0	75 - 125	20
Total Chromium		42	mg/Kg	1	40	6.8	88	3	75 - 125	20
Total Cobalt		83	mg/Kg	1	100	2.8	80	1	75 - 125	20

*Continued .*<sup>2</sup>Surrogate recovery out of limits due to matrix effect.<sup>3</sup>Poor matrix spike recovery due to nature of sample. LCS demonstrates process under control.<sup>4</sup>Poor matrix spike recovery due to nature of sample. LCS demonstrates process under control.

...Continued

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Total Copper		42	mg/Kg	1	40	5.3	91	0	75 - 125
Total Lead		89	mg/Kg	1	100	4.6	84	1	75 - 125
Total Manganese	<sup>5</sup>	122	mg/Kg	1	20	90	160	13	75 - 125
Total Molybdenum		83	mg/Kg	1	100	<1.0	83	1	75 - 125
Total Nickel		97	mg/Kg	1	100	11	86	1	75 - 125
Total Selenium		73	mg/Kg	1	100	<1.0	73	1	75 - 125
Total Silica	<sup>5</sup>	505	mg/Kg	1	100	230	137	11	75 - 125
Total Silver		16	mg/Kg	1	20	<0.50	80	0	75 - 125
Total Zinc		39	mg/Kg	1	20	18	105	0	75 - 125

Sample: MS      QC Batch: QC04588

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Total Mercury		2.48	mg/Kg	1	2.50	<0.19	99		80 - 120

Sample: MSD      QC Batch: QC04588

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Total Mercury		2.45	mg/Kg	1	2.50	<0.19	98	1	80 - 120

Sample: MS      QC Batch: QC04623

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
DRO		313	mg/Kg	1	250	<50	125		70 - 130

Sample: MSD      QC Batch: QC04623

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
DRO		317	mg/Kg	1	250	<50	126	1	70 - 130

<sup>5</sup>Poor matrix spike recovery due to nature of sample. LCS demonstrates process under control.<sup>6</sup>Poor matrix spike recovery due to nature of sample. LCS demonstrates process under control.

# Quality Control Report

## Continuing Calibration Verification Standards

Sample: CCV (1)

QC Batch: QC04530

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.096	96	80 - 120	8/29/00
Toluene		mg/Kg	0.10	0.092	92	80 - 120	8/29/00
Ethylbenzene		mg/Kg	0.10	0.092	92	80 - 120	8/29/00
M,P,O-Xylene		mg/Kg	0.30	0.295	98	80 - 120	8/29/00

Sample: CCV (2)

QC Batch: QC04530

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.102	102	80 - 120	8/29/00
Toluene		mg/Kg	0.10	0.098	98	80 - 120	8/29/00
Ethylbenzene		mg/Kg	0.10	0.096	96	80 - 120	8/29/00
M,P,O-Xylene		mg/Kg	0.30	0.312	104	80 - 120	8/29/00

Sample: ICV (1)

QC Batch: QC04530

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.10	0.096	96	80 - 120	8/29/00
Toluene		mg/Kg	0.10	0.092	92	80 - 120	8/29/00
Ethylbenzene		mg/Kg	0.10	0.092	92	80 - 120	8/29/00
M,P,O-Xylene		mg/Kg	0.30	0.295	98	80 - 120	8/29/00

Sample: CCV (1)

QC Batch: QC04531

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.19	119	80 - 120	8/29/00

Sample: ICV (1)

QC Batch: QC04531

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

Page Number: 12 of 13  
N/A

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.13	113	80 - 120	8/29/00

Sample: CCV (1)

QC Batch: QC04570

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/Kg	2.50	2.52	100	75 - 125	8/30/00
Total Barium		mg/Kg	.5	5.00	100	75 - 125	8/30/00
Total Boron		mg/Kg	2.50	2.50	100	75 - 125	8/30/00
Total Cadmium		mg/Kg	0.50	0.50	100	75 - 125	8/30/00
Total Chromium		mg/Kg	1	0.99	99	75 - 125	8/30/00
Total Cobalt		mg/Kg	2.50	2.50	100	75 - 125	8/30/00
Total Copper		mg/Kg	1	1.00	100	75 - 125	8/30/00
Total Lead		mg/Kg	2.50	2.43	99	75 - 125	8/30/00
Total Manganese		mg/Kg	0.50	0.50	100	75 - 125	8/30/00
Total Molybdenum		mg/Kg	2.50	2.50	100	75 - 125	8/30/00
Total Nickel		mg/Kg	2.50	2.50	100	75 - 125	8/30/00
Total Selenium		mg/Kg	2.50	2.53	101	75 - 125	8/30/00
Total Silica		mg/Kg	2.50	2.43	97	75 - 125	8/30/00
Total Silver		mg/Kg	0.50	0.50	100	75 - 125	8/30/00
Total Zinc		mg/Kg	0.50	0.49	98	75 - 125	8/30/00

Sample: ICV (1)

QC Batch: QC04570

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/Kg	2.50	2.51	104	75 - 125	8/30/00
Total Barium		mg/Kg	.5	5.21	104	75 - 125	8/30/00
Total Boron		mg/Kg	2.50	2.70	108	75 - 125	8/30/00
Total Cadmium		mg/Kg	0.50	0.52	104	75 - 125	8/30/00
Total Chromium		mg/Kg	1	1.03	103	75 - 125	8/30/00
Total Cobalt		mg/Kg	2.50	2.61	104	75 - 125	8/30/00
Total Copper		mg/Kg	1	1.04	104	75 - 125	8/30/00
Total Lead		mg/Kg	2.50	2.60	104	75 - 125	8/30/00
Total Manganese		mg/Kg	0.50	0.52	104	75 - 125	8/30/00
Total Molybdenum		mg/Kg	2.50	2.62	104	75 - 125	8/30/00
Total Nickel		mg/Kg	2.50	2.51	104	75 - 125	8/30/00
Total Selenium		mg/Kg	2.50	2.63	105	75 - 125	8/30/00
Total Silica		mg/Kg	2.50	2.51	100	75 - 125	8/30/00
Total Silver		mg/Kg	0.50	0.52	104	75 - 125	8/30/00
Total Zinc		mg/Kg	0.50	0.51	102	75 - 125	8/30/00

Sample: CCV (1)

QC Batch: QC04588

Report Date: September 5, 2000  
N/A

Order Number: A00082803  
Chandler

Page Number: 13 of 13  
N/A

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.005	0.00467	93	80 - 120	8/30/00

Sample: ICV (1) QC Batch: QC04588

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.005	0.00536	107	80 - 120	8/30/00

Sample: CCV (1) QC Batch: QC04623

Param	Flag	Units	CCVs True Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
DRO		mg/Kg	250	304	121	70 - 130	9/1/00

Sample: ICV (1) QC Batch: QC04623

Param	Flag	Units	CCVs True Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
DRO		mg/Kg	250	295	118	70 - 130	9/1/00

6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

# TraceAnalysis, Inc.

Company Name:  
**New Mexico Oil Conservation Division**  
Address:  
**2040 S. Padre, Suite 705, NM 87505**  
Contact Person:  
**Bill Olson**

Invoice to:  
(if different from above)  
**Same**

Project #:

Project Location:

Sampler Signature:  
*Will Olson*

Project Name:  
**Chandler**

LAB #	FIELD CODE	# CONTAINERS	WATER	SOIL	SLUDGE	HCl	None	DATE	TIME	SAMPLING	
										PRESERVATIVE METHOD	
152301	000824110 (North side)	1	4 oz	✓				8/24/01	10:18		
303	000824118 (South side)	1	4 oz					8/24/01	10:18		

Relinquished by:  
*Will Olson* Date: **8/25/01** Time: **10:30**

Relinquished by: Date: Time: Received by: Date: Time:

Received at Laboratory by: Date: Time: Received by: Date: Time:

Log-in Review: Carrier # *Trace Gas, 439 1st fl 2*

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Headspace *Y* / N  
Temp. *74*  
Log-in Review: *M*

Intact *Y* / N

REMARKS: *OK*

LAB USE  
ONLY

Time if different from standard

Hold

Turn Around Time if different from standard

LAB Order ID # **100082803**

CHAIN-OFF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

(Circle or Specify Method No.)

GC/MS VG, 8260B/624

GC/MS SEMI VOL, 8270C-E25

PC/ES 8062/608

Pesticides 8081A-608

TCLP Semivolatile

TCLP Volatiles

TCLP Metals 4g AS BE CC C, PC SE HS 50109/2007

TCLP Metals Log AS BE CC C, PC SE HS 50109/2007

MTBE 802-B/602

BTX 8021B/602

RAH 8270C

RCI

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**BBC INTERNATIONAL'S  
RESULTS FROM SPLIT  
SAMPLING WITH PLAINTIFFS  
OCTOBER 11-12, 2000**

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
4725 Ridley Avenue, Suite A El Paso, Texas 79922 883•588•3443 915•585•3443 FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cliff Brunson  
BBC International Inc  
P.O. Box 805  
Hobbs, NM 88241

Report Date: November 15, 2000

Order ID Number: A00101306

Project Number: N/A  
Project Name: Shell Westgate  
Project Location: Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
155939	SB-13-03-01 5'-6'	Soil	10/11/00	9:10	10/13/00
155940	SB-13-03-01 10'-11'	Soil	10/11/00	10:45	10/13/00
155941	SB-13-03-01 22'-23'	Soil	10/11/00	15:16	10/13/00
155942	WSB-01	Soil	10/12/00	8:43	10/13/00
155943	WSB-02	Soil	10/12/00	9:43	10/13/00
155944	SB-15-10-01- "A"	Soil	10/12/00	10:18	10/13/00
155945	SB-15-10-01 "B"	Soil	10/12/00	13:30	10/13/00
155946	Trip Blank	Water	10/12/00	:	10/13/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 57 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

# Analytical and Quality Control Report

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC05875 Date Analyzed: 10/23/00  
Analyst: JG Preparation Method: E 5030B Prep Batch: PB05144 Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<25.0	µg/Kg	25	1
Chloromethane (methyl chloride)		<25.0	µg/Kg	25	1
Vinyl Chloride		<25.0	µg/Kg	25	1
Bromomethane (methyl bromide)		<25.0	µg/Kg	25	1
Trichlorofluoromethane		<25.0	µg/Kg	25	1
Acrylonitrile		<25.0	µg/Kg	25	1
1,1-Dichloroethene		<25.0	µg/Kg	25	1
Methylene chloride		<125	µg/Kg	25	5
trans-1,2-Dichloroethene		<25.0	µg/Kg	25	1
1,1-Dichloroethane		<25.0	µg/Kg	25	1
cis-1,2-dichloroethene		<25.0	µg/Kg	25	1
1,2-Dichloroethane (EDC)		<25.0	µg/Kg	25	1
Chloroform		<25.0	µg/Kg	25	1
1,1,1-Trichloroethane		<25.0	µg/Kg	25	1
Benzene		<25.0	µg/Kg	25	1
Carbon Tetrachloride		<25.0	µg/Kg	25	1
Trichloroethene (TCE)		<25.0	µg/Kg	25	1
Bromodichloromethane		<25.0	µg/Kg	25	1
cis-1,3-Dichloropropene		<25.0	µg/Kg	25	1
trans-1,3-Dichloropropene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
1,1,2-Trichloroethane		<25.0	µg/Kg	25	1
1,2-Dibromoethane (EDB)		<25.0	µg/Kg	25	1
Tetrachloroethene (PCE)		<25.0	µg/Kg	25	1
Chlorobenzene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
1,1,2,2-Tetrachloroethane		<25.0	µg/Kg	25	1
1,4-Dichlorobenzene (para)		<25.0	µg/Kg	25	1
1,3-Dichlorobenzene		<25.0	µg/Kg	25	1
1,2-Dichlorobenzene (ortho)		<25.0	µg/Kg	25	1
Test Comments	1	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.09	µg/Kg	1	50	102	69 - 116
Toluene-d8		49.91	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		47.84	µg/Kg	1	50	95	74 - 110

¹ TIC: Acrolein has estimated concentration &lt;250 µg/kg.

**Sample: 155939 - SB-13-03-01 5'-6'**

Analysis:	8270	Analytical Method:	S 8270C	QC Batch:	QC05913	Date Analyzed:	10/25/00
Analyst:	MA	Preparation Method:	E 3510C	Prep Batch:	PB05172	Date Prepared:	10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.25	mg/Kg	1	0.25
n-Nitroso-di-methylamine		<0.25	mg/Kg	1	0.25
2-Picoline		<0.25	mg/Kg	1	0.25
Methyl methanesulfonate		<0.25	mg/Kg	1	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	1	0.25
Phenol		<0.25	mg/Kg	1	0.25
Aniline		<0.25	mg/Kg	1	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	1	0.25
2-Chlorophenol		<0.25	mg/Kg	1	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	1	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	1	0.25
Benzyl alcohol		<0.25	mg/Kg	1	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	1	0.25
2-Methylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	1	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	1	0.25
Acetophenone		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-propylamine		<0.25	mg/Kg	1	0.25
Hexachloroethane		<0.25	mg/Kg	1	0.25
Nitrobenzene		<0.25	mg/Kg	1	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	1	0.25
Isophorone		<0.25	mg/Kg	1	0.25
2-Nitrophenol		<0.25	mg/Kg	1	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	1	0.25
Benzoic acid		<0.25	mg/Kg	1	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	1	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	1	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	1	0.25
Naphthalene		<0.25	mg/Kg	1	0.25
4-Chloroaniline		<0.25	mg/Kg	1	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	1	0.25
Hexachlorobutadiene		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	1	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	1	0.25
1-Methylnaphthalene		<0.25	mg/Kg	1	0.25
2-Methylnaphthalene		<0.25	mg/Kg	1	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	1	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	1	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	1	0.25
2-Chloronaphthalene		<0.25	mg/Kg	1	0.25
1-Chloronaphthalene		<0.25	mg/Kg	1	0.25
2-Nitroaniline		<0.25	mg/Kg	1	0.25
Dimethylphthalate		<0.25	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	1	0.25
3-Nitroaniline		<0.25	mg/Kg	1	0.25

*Continued ..*

...Continued Sample: 155939 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Acenaphthene		<0.25	mg/Kg	1	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	1	0.25
Dibenzofuran		<0.25	mg/Kg	1	0.25
Pentachlorobenzene		<0.25	mg/Kg	1	0.25
4-Nitrophenol		<0.25	mg/Kg	1	0.25
1-Naphthylamine		<0.25	mg/Kg	1	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	1	0.25
2-Naphthylamine		<0.25	mg/Kg	1	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Diethylphthalate		<0.25	mg/Kg	1	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	1	0.25
4-Nitroaniline		<0.25	mg/Kg	1	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	1	0.25
Diphenylamine		<0.25	mg/Kg	1	0.25
Diphenylhydrazine		<0.25	mg/Kg	1	0.25
4-Bromo-2-methyl-phenylether		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Hexachlorobenzene		<0.25	mg/Kg	1	0.25
4-Aminobiphenyl		<0.25	mg/Kg	1	0.25
Pentachlorophenol		<0.25	mg/Kg	1	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	1	0.25
Pronamide		<0.25	mg/Kg	1	0.25
Phenanthrone		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Benzidine		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
p-Dimethylaminoazobenzene		<0.25	mg/Kg	1	0.25
Butylbenzylphthalate		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	1	0.25
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
3-Methylcholanthrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,j)acridine		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		38.11	mg/Kg	1	80	47	22 - 103
Phenol-d5		46.20	mg/Kg	1	80	57	32 - 112
Nitrobenzene-d5		49.12	mg/Kg	1	80	61	45 - 111

Continued ...

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorobiphenyl		52.91	mg/Kg	1	80	66	43 - 110
2,4,6-Tribromophenol	<sup>2</sup>	50.62	mg/Kg	1	80	63	34 - 136
Terphenyl-d14	<sup>3</sup>	103.92	mg/Kg	1	80	129	47 - 120

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: Ion Chromatography (IC)      Analytical Method: E 300.0      QC Batch: QC05721      Date Analyzed: 10/17/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05010      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
CL		13	mg/Kg	1	0.50
Fluoride		3.3	mg/Kg	1	0.20
Nitrate-N		2.1	mg/Kg	1	0.20
Sulfate		150	mg/Kg	1	0.50

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: Phenolics      Analytical Method: SM 5530D      QC Batch: QC05952      Date Analyzed: 10/27/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05216      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	<sup>4</sup>	<1.75	mg/Kg	25	0.07

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: TDS      Analytical Method: E 160.1      QC Batch: QC06272      Date Analyzed: 10/30/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05479      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		540	mg/L	1	10

Sample: 155939 - SB-13-03-01 5'-6'

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC05658      Date Analyzed: 10/16/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04949      Date Prepared: 10/16/00

<sup>2</sup>Surrogate below range due to dilution.

<sup>3</sup>Surrogate below range due to dilution.

<sup>4</sup>Sample ran at a x25 dilution.

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Param	Flag	Result	Units	Dilution	RDL
TRPHC		4000	mg/Kg	1	10

**Sample: 155939 - SB-13-03-01 5'-6'**

Analysis: Total Cyanide Analytical Method: SM 4500-CN C.E QC Batch: QC05838 Date Analyzed: 10/24/00  
Analyst: LD Preparation Method: N/A Prep Batch: PB05114 Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

**Sample: 155939 - SB-13-03-01 5'-6'**

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC06422 Date Analyzed: 10/22/00  
Analyst: RR Preparation Method: E 3050B Prep Batch: PB05614 Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		320	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		<5.0	mg/Kg	1	5
Total Lead		<5.0	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		5.9	mg/Kg	1	5

**Sample: 155939 - SB-13-03-01 5'-6'**

Analysis: pH Analytical Method: E 150.1 QC Batch: QC05919 Date Analyzed: 10/18/00  
Analyst: RS Preparation Method: N/A Prep Batch: PB05180 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
pH		7.9	s.u.	1	1

**Sample: 155940 - SB-13-03-01 10'-11'**

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC05875 Date Analyzed: 10/23/00  
Analyst: JG Preparation Method: E 5030B Prep Batch: PB05144 Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<24.0	µg/Kg	24	1
Chloromethane (methyl chloride)		<24.0	µg/Kg	24	1
Vinyl Chloride		<24.0	µg/Kg	24	1
Bromomethane (methyl bromide)		<24.0	µg/Kg	24	1
Trichlorofluoromethane		<24.0	µg/Kg	24	1
Acrylonitrile		<24.0	µg/Kg	24	1
1,1-Dichloroethene		<24.0	µg/Kg	24	1
Methylene chloride		<120	µg/Kg	24	5
trans-1,2-Dichloroethene		<24.0	µg/Kg	24	1
1,1-Dichloroethane		<24.0	µg/Kg	24	1

*Continued ...*

...Continued Sample: 155940 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
cis-1,2-dichloroethene		<24.0	µg/Kg	24	1
1,2-Dichloroethane (EDC)		<24.0	µg/Kg	24	1
Chloroform		<24.0	µg/Kg	24	1
1,1,1-Trichloroethane		<24.0	µg/Kg	24	1
Benzene		<24.0	µg/Kg	24	1
Carbon Tetrachloride		<24.0	µg/Kg	24	1
Trichloroethene (TCE)		<24.0	µg/Kg	24	1
Bromodichloromethane		<24.0	µg/Kg	24	1
cis-1,3-Dichloropropene		<24.0	µg/Kg	24	1
trans-1,3-Dichloropropene		<24.0	µg/Kg	24	1
Toluene		46.5	µg/Kg	24	1
1,1,2-Trichloroethane		<24.0	µg/Kg	24	1
1,2-Dibromoethane (EDB)		<24.0	µg/Kg	24	1
Tetrachloroethene (PCE)		<24.0	µg/Kg	24	1
Chlorobenzene		<24.0	µg/Kg	24	1
Ethylbenzene		1374	µg/Kg	24	1
m,p-Xylene		1513	µg/Kg	24	1
o-Xylene		54.5	µg/Kg	24	1
1,1,2,2-Tetrachloroethane		<24.0	µg/Kg	24	1
1,4-Dichlorobenzene (para)		<24.0	µg/Kg	24	1
1,3-Dichlorobenzene		<24.0	µg/Kg	24	1
1,2-Dichlorobenzene (ortho)		<24.0	µg/Kg	24	1
Test Comments	5	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.58	µg/Kg	1	50	101	69 - 116
Toluene-d8		51.49	µg/Kg	1	50	102	88 - 114
4-Bromofluorobenzene		52.45	µg/Kg	1	50	104	74 - 110

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC06007 Date Analyzed: 10/27/00  
Analyst: MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<2.50	mg/Kg	10	0.25
n-Nitrosodimethylamine		<2.50	mg/Kg	10	0.25
2-Picoline		<2.50	mg/Kg	10	0.25
Methyl methanesulfonate		<2.50	mg/Kg	10	0.25
Ethyl methanesulfonate		<2.50	mg/Kg	10	0.25
Phenol		<2.50	mg/Kg	10	0.25
Aniline		<2.50	mg/Kg	10	0.25
bis (2-chloroethyl) ether		<2.50	mg/Kg	10	0.25
2-Chlorophenol		<2.50	mg/Kg	10	0.25
1,3-Dichlorobenzene		<2.50	mg/Kg	10	0.25
1,4-Dichlorobenzene		<2.50	mg/Kg	10	0.25
Benzyl alcohol		<2.50	mg/Kg	10	0.25

Continued ...

<sup>5</sup>TIC: Acrolein has estimated concentration <240 µg/kg.

*...Continued* Sample: 155940 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
1,2-Dichlorobenzene		<2.50	mg/Kg	10	0.25
2-Methylphenol		<2.50	mg/Kg	10	0.25
bis (2-chloroisopropyl) ether		<2.50	mg/Kg	10	0.25
4-Methylphenol/3-Methylphenol		<2.50	mg/Kg	10	0.25
Acetophenone		<2.50	mg/Kg	10	0.25
n-Nitroso-di-n-propylamine		<2.50	mg/Kg	10	0.25
Hexachlorobutane		<2.50	mg/Kg	10	0.25
Nitrobenzene		<2.50	mg/Kg	10	0.25
n-Nitrosopiperidine		<2.50	mg/Kg	10	0.25
Isophorone		<2.50	mg/Kg	10	0.25
2-Nitrophenol		<2.50	mg/Kg	10	0.25
2,4-Dimethylphenol		<2.50	mg/Kg	10	0.25
bis (2-chloroethoxy) methane		<2.50	mg/Kg	10	0.25
Benzoic acid		<2.50	mg/Kg	10	0.25
2,4-Dichlorophenol		<2.50	mg/Kg	10	0.25
1,2,4-Trichlorobenzene		<2.50	mg/Kg	10	0.25
a,a-Dimethylphenethylamine		<2.50	mg/Kg	10	0.25
Naphthalene		7.48	mg/Kg	10	0.25
4-Chloraniline		<2.50	mg/Kg	10	0.25
2-Chloroaniline		<2.50	mg/Kg	10	0.25
Hexachlorobutadiene		<2.50	mg/Kg	10	0.25
n-Nitroso-di-n-butylamine		<2.50	mg/Kg	10	0.25
4-Chloro-3-methylphenol		<2.50	mg/Kg	10	0.25
1-Methylnaphthalene		15.93	mg/Kg	10	0.25
2-Methylnaphthalene		17.46	mg/Kg	10	0.25
1,2,4,5-Tetrachlorobenzene		<2.50	mg/Kg	10	0.25
Hexachlorocyclopentadiene		<2.50	mg/Kg	10	0.25
2,4,6-Trichlorophenol		<2.50	mg/Kg	10	0.25
2,4,5-Trichlorophenol		<2.50	mg/Kg	10	0.25
2-Chloronaphthalene		<2.50	mg/Kg	10	0.25
1-Chloronaphthalene		<2.50	mg/Kg	10	0.25
2-Nitroaniline		<2.50	mg/Kg	10	0.25
Dimethylphthalate		<2.50	mg/Kg	10	0.25
Acenaphthylene		<2.50	mg/Kg	10	0.25
2,6-Dinitrotoluene		<2.50	mg/Kg	10	0.25
3-Nitroaniline		<2.50	mg/Kg	10	0.25
Acenaphthene		<2.50	mg/Kg	10	0.25
2,4-Dinitrophenol		<2.50	mg/Kg	10	0.25
Dibenzofuran		2.60	mg/Kg	10	0.25
Pentachlorobenzene		<2.50	mg/Kg	10	0.25
4-Nitrophenol		<2.50	mg/Kg	10	0.25
1-Naphthylamine		<2.50	mg/Kg	10	0.25
2,4-Dinitrotoluene		<2.50	mg/Kg	10	0.25
2-Naphthylamine		<2.50	mg/Kg	10	0.25
2,3,4,6-Tetrachlorophenol		<2.50	mg/Kg	10	0.25
Fluorene		2.62	mg/Kg	10	0.25
Diethylphthalate		<2.50	mg/Kg	10	0.25
4-Chlorophenyl-phenylether		<2.50	mg/Kg	10	0.25
4-Nitroaniline		<2.50	mg/Kg	10	0.25
4,6-Dinitro-2-methylphenol		<2.50	mg/Kg	10	0.25
Diphenylamine		<2.50	mg/Kg	10	0.25

*Continued ...*

...Continued Sample: 155940 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Diphenylhydrazine		<2.50	mg/Kg	10	0.25
4-Bromophenyl-phenylether		<2.50	mg/Kg	10	0.25
Phenacetin		<2.50	mg/Kg	10	0.25
Hexachlorobenzene		<2.50	mg/Kg	10	0.25
4-Aminobiphenyl		<2.50	mg/Kg	10	0.25
Pentachlorophenol		<2.50	mg/Kg	10	0.25
Pentachloronitrobenzene		<2.50	mg/Kg	10	0.25
Pronamide		<2.50	mg/Kg	10	0.25
Phenanthrene		4.29	mg/Kg	10	0.25
Anthracene		<2.50	mg/Kg	10	0.25
Di-n-butylphthalate		<2.50	mg/Kg	10	0.25
Fluoranthene		<2.50	mg/Kg	10	0.25
Benzidine		<2.50	mg/Kg	10	0.25
Pyrene		<2.50	mg/Kg	10	0.25
p-Dimethylaminoazobenzene		<2.50	mg/Kg	10	0.25
Butylbenzylphthalate		<2.50	mg/Kg	10	0.25
Benzo(a)anthracene		<2.50	mg/Kg	10	0.25
3,3-Dichlorobenzidine		<2.50	mg/Kg	10	0.25
Chrysene		<2.50	mg/Kg	10	0.25
Bis (2-ethylhexyl) phthalate		<2.50	mg/Kg	10	0.25
Di-n-octylphthalate		<2.50	mg/Kg	10	0.25
Benzo(b)fluoranthene		<2.50	mg/Kg	10	0.25
7,12-Dimethylbenz(a)anthracene		<2.50	mg/Kg	10	0.25
Benzo(k)fluoranthene		<2.50	mg/Kg	10	0.25
Benzo(a)pyrene		<2.50	mg/Kg	10	0.25
3-Methylcholanthrene		<2.50	mg/Kg	10	0.25
Dibenz(a,j)acridine		<2.50	mg/Kg	10	0.25
Indeno(1,2,3-cd)pyrene		<2.50	mg/Kg	10	0.25
Dibenz(a,h)anthracene		<2.50	mg/Kg	10	0.25
Benzo(g,h,i)perylene		<2.50	mg/Kg	10	0.25
Test Comments		6	*	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		22.91	mg/Kg	10	80	28	22 - 103
Phenol-d5		27.44	mg/Kg	10	80	34	32 - 112
Nitrobenzene-d5		46.28	mg/Kg	10	80	57	45 - 111
2-Fluorobiphenyl		39.53	mg/Kg	10	80	49	43 - 110
2,4,6-Tribromophenol	7	25.63	mg/Kg	10	80	32	34 - 136
Terphenyl-d14	8	32.67	mg/Kg	10	80	40	47 - 120

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00<sup>6</sup>Elevated reporting limit due to dilution necessitated by analyte concentration.<sup>7</sup>Surrogate below range due to dilution.<sup>8</sup>Surrogate below range due to dilution.

Report Date: November 15, 2000  
N/A

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Param	Flag	Result	Units	Dilution	RDL
Total Mercury		0.20	mg/Kg	1	0.19

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC05994 Date Analyzed: 10/30/00  
Analyst: JS Preparation Method: N/A Prep Batch: PB05248 Date Prepared: 10/25/00

Param	Flag	Result	Units	Dilution	RDL
CL	<sup>9</sup>	9.2	mg/Kg	1	0.50
Fluoride	<sup>10</sup>	9.9	mg/Kg	1	0.20
Nitrate-N		<1.0	mg/Kg	1	0.20
Sulfate		33	mg/Kg	1	0.50

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: Phenolics Analytical Method: SM 5530D QC Batch: QC05952 Date Analyzed: 10/27/00  
Analyst: LD Preparation Method: N/A Prep Batch: PB05216 Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	<sup>11</sup>	6.24	mg/Kg	25	0.07

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC06272 Date Analyzed: 10/30/00  
Analyst: JS Preparation Method: N/A Prep Batch: PB05479 Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		260	mg/L	1	10

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC05658 Date Analyzed: 10/16/00  
Analyst: BP Preparation Method: E 3550B Prep Batch: PB04949 Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		25700	mg/Kg	1	10

Sample: 155940 - SB-13-03-01 10'-11'

Analysis: Total Cyanide Analytical Method: SM 4500-CN C,E QC Batch: QC05838 Date Analyzed: 10/24/00  
Analyst: LD Preparation Method: N/A Prep Batch: PB05114 Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

<sup>9</sup>Chloride re-ran on IC110200-1.sch (PB05414; QC06195). ICV %IA = 100; CCV %IA = 102; Matrix spikes RPD = 1; Matrix spikes %EA = 104.

<sup>10</sup>Fluoride re-ran on IC110200-1.sch (PB05414; QC06195). ICV %IA = 105; CCV %IA = 106; Matrix spikes RPD = 1; Matrix spikes %EA = 104.

<sup>11</sup>Sample ran at a x25 dilution.

**Sample: 155940 - SB-13-03-01 10'-11'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC06422      Date Analyzed: 10/22/00  
 Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB05614      Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		100	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		5.6	mg/Kg	1	5
Total Lead		<5.0	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		17	mg/Kg	1	5

**Sample: 155940 - SB-13-03-01 10'-11'**

Analysis: pH      Analytical Method: E 150.1      QC Batch: QC06096      Date Analyzed: 10/27/00  
 Analyst: RS      Preparation Method: N/A      Prep Batch: PB05341      Date Prepared: 10/27/00

Param	Flag	Result	Units	Dilution	RDL
pH		8.2	s.u.	1	1

**Sample: 155941 - SB-13-03-01 22'-23'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC05875      Date Analyzed: 10/23/00  
 Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB05144      Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<25.0	µg/Kg	25	1
Chloromethane (methyl chloride)		<25.0	µg/Kg	25	1
Vinyl Chloride		<25.0	µg/Kg	25	1
Bromomethane (methyl bromide)		<25.0	µg/Kg	25	1
Trichlorofluoromethane		<25.0	µg/Kg	25	1
Acrylonitrile		<25.0	µg/Kg	25	1
1,1-Dichloroethene		<25.0	µg/Kg	25	1
Methylene chloride		<125	µg/Kg	25	5
trans-1,2-Dichloroethene		<25.0	µg/Kg	25	1
1,1-Dichloroethane		<25.0	µg/Kg	25	1
cis-1,2-dichloroethene		<25.0	µg/Kg	25	1
1,2-Dichloroethane (EDC)		<25.0	µg/Kg	25	1
Chloroform		<25.0	µg/Kg	25	1
1,1,1-Trichloroethane		<25.0	µg/Kg	25	1
Benzene		<25.0	µg/Kg	25	1
Carbon Tetrachloride		<25.0	µg/Kg	25	1
Trichloroethene (TCE)		<25.0	µg/Kg	25	1
Bromodichloromethane		<25.0	µg/Kg	25	1
cis-1,3-Dichloropropene		<25.0	µg/Kg	25	1
trans-1,3-Dichloropropene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
1,1,2-Trichloroethane		<25.0	µg/Kg	25	1
1,2-Dibromoethane (EDB)		<25.0	µg/Kg	25	1

*Continued ...*

...Continued Sample: 155941 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
Tetrachloroethene (PCE)		<25.0	µg/Kg	25	1
Chlorobenzene		<25.0	µg/Kg	25	1
Ethylbenzene		4884	µg/Kg	25	1
m,p-Xylene	12	12959	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
1,1,2,2-Tetrachloroethane		<25.0	µg/Kg	25	1
1,4-Dichlorobenzene (para)		<25.0	µg/Kg	25	1
1,3-Dichlorobenzene		<25.0	µg/Kg	25	1
1,2-Dichlorobenzene (ortho)		<25.0	µg/Kg	25	1
Test Comments	13	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.01	µg/Kg	1	50	100	69 - 116
Toluene-d8		55.16	µg/Kg	1	50	110	88 - 114
4-Bromofluorobenzene		52.69	µg/Kg	1	50	105	74 - 110

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC06007 Date Analyzed: 10/27/00  
Analyst: MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<2.50	mg/Kg	10	0.25
n-Nitrosodimethylamine		<2.50	mg/Kg	10	0.25
2-Picoline		<2.50	mg/Kg	10	0.25
Methyl methanesulfonate		<2.50	mg/Kg	10	0.25
Ethyl methanesulfonate		<2.50	mg/Kg	10	0.25
Phenol		<2.50	mg/Kg	10	0.25
Aniline		<2.50	mg/Kg	10	0.25
bis (2-chloroethyl) ether		<2.50	mg/Kg	10	0.25
2-Chlorophenol		<2.50	mg/Kg	10	0.25
1,3-Dichlorobenzene		<2.50	mg/Kg	10	0.25
1,4-Dichlorobenzene		<2.50	mg/Kg	10	0.25
Benzyl alcohol		<2.50	mg/Kg	10	0.25
1,2-Dichlorobenzene		<2.50	mg/Kg	10	0.25
2-Methylphenol		<2.50	mg/Kg	10	0.25
bis (2-chloroisopropyl) ether		<2.50	mg/Kg	10	0.25
4-Methylphenol/3-Methylphenol		<2.50	mg/Kg	10	0.25
Acetophenone		<2.50	mg/Kg	10	0.25
n-Nitrosodi-n-propylamine		<2.50	mg/Kg	10	0.25
Hexachloroethane		<2.50	mg/Kg	10	0.25
Nitrobenzene		<2.50	mg/Kg	10	0.25
n-Nitrosopiperidine		<2.50	mg/Kg	10	0.25
Isophorone		<2.50	mg/Kg	10	0.25
2-Nitrophenol		<2.50	mg/Kg	10	0.25
2,4-Dimethylphenol		<2.50	mg/Kg	10	0.25

Continued...

<sup>12</sup>estimated concentration, response above standard range

<sup>13</sup>TIC: Acrolein has estimated concentration <250 µg/kg.

...Continued Sample: 155941 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
bis (2-chloroethoxy) methane		<2.50	mg/Kg	10	0.25
Benzoic acid		<2.50	mg/Kg	10	0.25
2,4-Dichlorophenol		<2.50	mg/Kg	10	0.25
1,2,4-Trichlorobenzene		<2.50	mg/Kg	10	0.25
alpha-Dimethylphenethylamine		<2.50	mg/Kg	10	0.25
Naphthalene		6.11	mg/Kg	10	0.25
4-Chloroaniline		<2.50	mg/Kg	10	0.25
2,6-Dichlorophenol		<2.50	mg/Kg	10	0.25
Hexachlorobutadiene		<2.50	mg/Kg	10	0.25
n-Nitroso-di-n-butylamine		<2.50	mg/Kg	10	0.25
4-Chloro-3-methylphenol		<2.50	mg/Kg	10	0.25
1-Methylnaphthalene		14.23	mg/Kg	10	0.25
2-Methylnaphthalene		15.30	mg/Kg	10	0.25
1,2,4,5-Tetrachlorobenzene		<2.50	mg/Kg	10	0.25
Hexachlorocyclopentadiene		<2.50	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<2.50	mg/Kg	10	0.25
2,4,5-Trichlorophenol		<2.50	mg/Kg	10	0.25
2-Chloronaphthalene		<2.50	mg/Kg	10	0.25
1-Chloronaphthalene		<2.50	mg/Kg	10	0.25
2-Nitroaniline		<2.50	mg/Kg	10	0.25
Dimethylphthalate		<2.50	mg/Kg	10	0.25
Acenaphthylene		<2.50	mg/Kg	10	0.25
2,6-Dinitrotoluene		<2.50	mg/Kg	10	0.25
3-Nitroaniline		<2.50	mg/Kg	10	0.25
Acenaphthene		<2.50	mg/Kg	10	0.25
2,4-Dinitrophenol		<2.50	mg/Kg	10	0.25
Dibenzofuran		<2.50	mg/Kg	10	0.25
Pentachlorobenzene		<2.50	mg/Kg	10	0.25
4-Nitrophenol		<2.50	mg/Kg	10	0.25
1-Naphthylamine		<2.50	mg/Kg	10	0.25
2,4-Dinitrotoluene		<2.50	mg/Kg	10	0.25
2-Naphthylamine		<2.50	mg/Kg	10	0.25
2,3,4,6-Tetrachlorophenol		<2.50	mg/Kg	10	0.25
Fluorene		<2.50	mg/Kg	10	0.25
Diethylphthalate		<2.50	mg/Kg	10	0.25
4-Chlorophenyl-phenylether		<2.50	mg/Kg	10	0.25
4-Nitroaniline		<2.50	mg/Kg	10	0.25
4,6-Dinitro-2-methylphenol		<2.50	mg/Kg	10	0.25
Diphenylamine		<2.50	mg/Kg	10	0.25
Diphenylhydrazine		<2.50	mg/Kg	10	0.25
4-Bromophenyl-phenylether		<2.50	mg/Kg	10	0.25
Phenacetin		<2.50	mg/Kg	10	0.25
Hexachlorobenzene		<2.50	mg/Kg	10	0.25
4-Aminobiphenyl		<2.50	mg/Kg	10	0.25
Pentachlorophenol		<2.50	mg/Kg	10	0.25
Pentachloronitrobenzene		<2.50	mg/Kg	10	0.25
Pronamide		<2.50	mg/Kg	10	0.25
Phenanthrene		3.56	mg/Kg	10	0.25
Anthracene		<2.50	mg/Kg	10	0.25
Di-n-butylphthalate		<2.50	mg/Kg	10	0.25
Fluoranthene		<2.50	mg/Kg	10	0.25

Continued ...

...Continued Sample: 155941 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Benzidine		<2.50	mg/Kg	10	0.25
Pyrene		<2.50	mg/Kg	10	0.25
p-Dimethylaminoazobenzene		<2.50	mg/Kg	10	0.25
Butylbenzylphthalate		<2.50	mg/Kg	10	0.25
Benzo(a)anthracene		<2.50	mg/Kg	10	0.25
3,3-Dichlorobenzidine		<2.50	mg/Kg	10	0.25
Chrysene		<2.50	mg/Kg	10	0.25
Bis (2-ethylhexyl) phthalate		<2.50	mg/Kg	10	0.25
Di-n-octylphthalate		<2.50	mg/Kg	10	0.25
Benzo(b)fluoranthene		<2.50	mg/Kg	10	0.25
7,12-Dimethylbenz(a)anthracene		<2.50	mg/Kg	10	0.25
Benzo(k)fluoranthene		<2.50	mg/Kg	10	0.25
Benzo(a)pyrene		<2.50	mg/Kg	10	0.25
3-Methylcholanthrene		<2.50	mg/Kg	10	0.25
Dibenzo(a,j)acridine		<2.50	mg/Kg	10	0.25
Indeno(1,2,3-cd)pyrene		<2.50	mg/Kg	10	0.25
Dibenzo(a,h)anthracene		<2.50	mg/Kg	10	0.25
Benzo(g,h,i)perylene		<2.50	mg/Kg	10	0.25
Test Comments		14	*	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		21.75	mg/Kg	10	80	27	22 - 100
Phenol-d5	<sup>15</sup>	24.86	mg/Kg	10	80	31	32 - 112
Nitrobenzene-d5		38.43	mg/Kg	10	80	48	45 - 111
2-Fluorobiphenyl	<sup>16</sup>	30.88	mg/Kg	10	80	38	43 - 110
2,4,6-Tribromophenol	<sup>17</sup>	24.33	mg/Kg	10	80	30	34 - 136
Terphenyl-d14	<sup>18</sup>	29.21	mg/Kg	10	80	36	47 - 126

**Sample: 155941 - SB-13-03-01 22'-23'**Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 155941 - SB-13-03-01 22'-23'**Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC05721 Date Analyzed: 10/17/00  
Analyst JS      Preparation Method: N/A      Prep Batch: PB05010 Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
CL		9.7	mg/Kg	1	0.50

*Continued . . .*<sup>14</sup>Elevated reporting limit due to dilution necessitated by analyte concentration.<sup>15</sup>Surrogate below range due to dilution.<sup>16</sup>Surrogate below range due to dilution.<sup>17</sup>Surrogate below range due to dilution.<sup>18</sup>Surrogate below range due to dilution.

...Continued Sample: 155941 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Fluoride		1.7	mg/Kg	1	0.20
Nitrate-N		1.0	mg/Kg	1	0.20
Sulfate		10	mg/Kg	1	0.50

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: Phenolics Analytical Method: SM 5530D QC Batch: QC05952 Date Analyzed: 10/27/00  
Analyst: LD Preparation Method: N/A Prep Batch: PB05216 Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	<sup>19</sup>	2.66	mg/Kg	25	0.07

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC06272 Date Analyzed: 10/30/00  
Analyst: JS Preparation Method: N/A Prep Batch: PB05479 Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		240	mg/L	1	10

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC05658 Date Analyzed: 10/16/00  
Analyst: BP Preparation Method: E 3550B Prep Batch: PB04949 Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		27600	mg/Kg	1	10

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: Total Cyanide Analytical Method: SM 4500-CN C,E QC Batch: QC05838 Date Analyzed: 10/24/00  
Analyst: LD Preparation Method: N/A Prep Batch: PB05114 Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC06422 Date Analyzed: 10/22/00  
Analyst: RR Preparation Method: E 3050B Prep Batch: PB05614 Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		140	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2

Continued ...

<sup>19</sup> Sample ran at a x25 dilution.

...Continued Sample: 155941 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Chromium		<5.0	mg/Kg	1	5
Total Lead		<5.0	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		23	mg/Kg	1	5

Sample: 155941 - SB-13-03-01 22'-23'

Analysis: pH Analytical Method: E 150.1 QC Batch: QC05919 Date Analyzed: 10/18/00  
Analyst: RS Preparation Method: N/A Prep Batch: PB05180 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
pH		8.4	s.u.	1	1

Sample: 155942 - WSB-01

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC05875 Date Analyzed: 10/23/00  
Analyst: JG Preparation Method: E 5030B Prep Batch: PB05144 Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<24.0	µg/Kg	24	1
Chloromethane (methyl chloride)		<24.0	µg/Kg	24	1
Vinyl Chloride		<24.0	µg/Kg	24	1
Bromomethane (methyl bromide)		<24.0	µg/Kg	24	1
1,1,1-Trichloroethane		<24.0	µg/Kg	24	1
Acrylonitrile		<24.0	µg/Kg	24	1
1,1-Dichloroethene		<24.0	µg/Kg	24	1
Methylene chloride		<120	µg/Kg	24	5
trans-1,2-Dichloroethene		<24.0	µg/Kg	24	1
1,1-Dichloroethane		<24.0	µg/Kg	24	1
cis-1,2-dichloroethene		<24.0	µg/Kg	24	1
1,2-Dichloroethane (EDC)		<24.0	µg/Kg	24	1
Chloroform		<24.0	µg/Kg	24	1
1,1,1-Trichloroethane		<24.0	µg/Kg	24	1
Benzene		<24.0	µg/Kg	24	1
Carbon Tetrachloride		<24.0	µg/Kg	24	1
Trichloroethene (TCE)		<24.0	µg/Kg	24	1
Bromodichloromethane		<24.0	µg/Kg	24	1
cis-1,3-Dichloropropene		<24.0	µg/Kg	24	1
trans-1,3-Dichloropropene		<24.0	µg/Kg	24	1
Toluene		<24.0	µg/Kg	24	1
1,1,2-Trichloroethane		<24.0	µg/Kg	24	1
1,2-Dibromoethane (EDB)		<24.0	µg/Kg	24	1
Tetrachloroethene (PCE)		<24.0	µg/Kg	24	1
Chlorobenzene		<24.0	µg/Kg	24	1
Ethylbenzene		<24.0	µg/Kg	24	1
m,p-Xylene		50.6	µg/Kg	24	1
o-Xylene		<24.0	µg/Kg	24	1
1,1,2-Tetrachloroethane		<24.0	µg/Kg	24	1
1,4-Dichlorobenzene (para)		<24.0	µg/Kg	24	1

Continued ...

*...Continued* Sample: 155942 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
1,3-Dichlorobenzene		<24.0	µg/Kg	24	1
1,2-Dichlorobenzene (ortho)		<24.0	µg/Kg	24	1
Test Comments	20	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromoformmethane		50.29	µg/Kg	1	50	100	69 - 116
Toluene-d <sub>8</sub>		49.64	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		48.59	µg/Kg	1	50	97	74 - 110

## Sample: 155942 - WSB-01

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC05913 Date Analyzed: 10/25/00  
Analyst: MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.25	mg/Kg	1	0.25
n-Nitrosodiimethylamine		<0.25	mg/Kg	1	0.25
2-Picoline		<0.25	mg/Kg	1	0.25
Methyl methanesulfonate		<0.25	mg/Kg	1	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	1	0.25
Phenol		<0.25	mg/Kg	1	0.25
Aniline		<0.25	mg/Kg	1	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	1	0.25
2-Chlorophenol		<0.25	mg/Kg	1	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	1	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	1	0.25
Benzyl alcohol		<0.25	mg/Kg	1	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	1	0.25
2-Methylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	1	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	1	0.25
Acetophenone		<0.25	mg/Kg	1	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	1	0.25
Hexachloroethane		<0.25	mg/Kg	1	0.25
Nitrobenzene		<0.25	mg/Kg	1	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	1	0.25
Isophorone		<0.25	mg/Kg	1	0.25
2-Nitrophenol		<0.25	mg/Kg	1	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	1	0.25
Benzoic acid		<0.25	mg/Kg	1	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	1	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	1	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	1	0.25
Naphthalene		<0.25	mg/Kg	1	0.25
4-Chloroaniline		<0.25	mg/Kg	1	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	1	0.25

*Continued ...*<sup>20</sup>TIC: Acrolein has estimated concentration <240 µg/kg.

*...Continued* Sample: 155942 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Hexachlorobutadiene		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	1	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	1	0.25
1-Methylnaphthalene		<0.25	mg/Kg	1	0.25
2-Methylnaphthalene		<0.25	mg/Kg	1	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	1	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	1	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	1	0.25
2-Chloronaphthalene		<0.25	mg/Kg	1	0.25
1-Chloronaphthalene		<0.25	mg/Kg	1	0.25
2-Nitroaniline		<0.25	mg/Kg	1	0.25
Dimethylphthalate		<0.25	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	1	0.25
3-Nitroaniline		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	1	0.25
Dibenzofuran		<0.25	mg/Kg	1	0.25
Pentachlorobenzene		<0.25	mg/Kg	1	0.25
4-Nitrophenol		<0.25	mg/Kg	1	0.25
1-Naphthylamine		<0.25	mg/Kg	1	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	1	0.25
2-Naphthylamine		<0.25	mg/Kg	1	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Diethylphthalate		<0.25	mg/Kg	1	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	1	0.25
4-Nitroaniline		<0.25	mg/Kg	1	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	1	0.25
Diphenylamine		<0.25	mg/Kg	1	0.25
Diphenylhydrazine		<0.25	mg/Kg	1	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	1	0.25
Phenacetin		<0.25	mg/Kg	1	0.25
Hexachlorobenzene		<0.25	mg/Kg	1	0.25
4-Aminobiphenyl		<0.25	mg/Kg	1	0.25
Pentachlorophenol		<0.25	mg/Kg	1	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	1	0.25
Pronamide		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Di-n-butylphthalate		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Benzidine		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
p-Dimethylaminoazobenzene		<0.25	mg/Kg	1	0.25
Butylbenzylphthalate		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	1	0.25

*Continued ...*

*...Continued* Sample: 155942 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
3-Methylcholanthrene		<0.25	mg/Kg	1	0.25
Dibenz(a,j)acridine		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		38.19	mg/Kg	1	80	47	22 - 103
Phenol-d5		43.74	mg/Kg	1	80	54	32 - 112
Nitrobenzene-d5		47.89	mg/Kg	1	80	59	45 - 111
2-Fluorobiphenyl		48.03	mg/Kg	1	80	60	43 - 110
2,4,6-Tribromophenol		51.31	mg/Kg	1	80	64	34 - 136
Terphenyl-d14		94.91	mg/Kg	1	80	118	47 - 120

## Sample: 155942 - WSB-01

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

## Sample: 155942 - WSB-01

Analysis: Ion Chromatography (IC)      Analytical Method: E 300.0      QC Batch: QC05721      Date Analyzed: 10/17/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05010      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
CL		9.7	mg/Kg	1	0.50
Fluoride		<1.0	mg/Kg	1	0.20
Nitrate-N		22	mg/Kg	1	0.20
Sulfate		17	mg/Kg	1	0.50

## Sample: 155942 - WSB-01

Analysis: Phenolics      Analytical Method: SM 5530D      QC Batch: QC05952      Date Analyzed: 10/27/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05216      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	21	<1.75	mg/Kg	25	0.07

<sup>21</sup> Sample ran at a x25 dilution.

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**Sample: 155942 - WSB-01**

Analysis: TDS      Analytical Method: E 160.1      QC Batch: QC06272      Date Analyzed: 10/30/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05479      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		340	mg/L	1	10

**Sample: 155942 - WSB-01**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC05658      Date Analyzed: 10/16/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04949      Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

**Sample: 155942 - WSB-01**

Analysis: Total Cyanide      Analytical Method: SM 4500-CN C.E QC Batch: QC05838 Date Analyzed: 10/24/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05114 Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

**Sample: 155942 - WSB-01**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC06422 Date Analyzed: 10/22/00  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB05614 Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		130	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		5.8	mg/Kg	1	5
Total Lead		<5.0	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		12	mg/Kg	1	5

**Sample: 155942 - WSB-01**

Analysis: pH      Analytical Method: E 150.1      QC Batch: QC05919 Date Analyzed: 10/18/00  
Analyst: RS      Preparation Method: N/A      Prep Batch: PB05180 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
pH		8.1	s.u.	1	1

**Sample: 155943 - WSB-02**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC05875 Date Analyzed: 10/23/00  
Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB05144 Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<24.0	µg/Kg	24	1
Chloromethane (methyl chloride)		<24.0	µg/Kg	24	1
Vinyl Chloride		<24.0	µg/Kg	24	1
Bromoethane (methyl bromide)		<24.0	µg/Kg	24	1
Trichlorofluoromethane		<24.0	µg/Kg	24	1
Acrylonitrile		<24.0	µg/Kg	24	1
1,1-Dichloroethene		<24.0	µg/Kg	24	1
Methylene chloride		<120	µg/Kg	24	5
trans-1,2-Dichloroethene		<24.0	µg/Kg	24	1
1,1-Dichloroethane		<24.0	µg/Kg	24	1
cis-1,2-dichloroethene		<24.0	µg/Kg	24	1
1,2-Dichloroethane (EDC)		<24.0	µg/Kg	24	1
Chloroform		<24.0	µg/Kg	24	1
1,1,1-Trichloroethane		<24.0	µg/Kg	24	1
Benzene		<24.0	µg/Kg	24	1
Carbon Tetrachloride		<24.0	µg/Kg	24	1
Trichloroethene (TCE)		<24.0	µg/Kg	24	1
Bromodichloromethane		<24.0	µg/Kg	24	1
cis-1,3-Dichloropropene		<24.0	µg/Kg	24	1
trans-1,3-Dichloropropene		<24.0	µg/Kg	24	1
Toluene		<24.0	µg/Kg	24	1
1,1,2-Trichloroethane		<24.0	µg/Kg	24	1
1,2-Dibromoethane (EDB)		<24.0	µg/Kg	24	1
Tetrachloroethene (PCE)		<24.0	µg/Kg	24	1
Chlorobenzene		<24.0	µg/Kg	24	1
Ethylbenzene		<24.0	µg/Kg	24	1
m,p-Xylene		<24.0	µg/Kg	24	1
o-Xylene		<24.0	µg/Kg	24	1
1,1,2,2-Tetrachloroethane		<24.0	µg/Kg	24	1
1,4-Dichlorobenzene (para)		<24.0	µg/Kg	24	1
1,3-Dichlorobenzene		<24.0	µg/Kg	24	1
1,2-Dichlorobenzene (ortho)		<24.0	µg/Kg	24	1
Test Comments	<sup>22</sup>	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.24	µg/Kg	1	50	100	69 - 116
Toluene-d8		49.64	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		48.20	µg/Kg	1	50	96	74 - 110

## Sample: 155943 - WSB-02

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC05913 Date Analyzed: 10/25/00  
Analyst: MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.25	mg/Kg	1	0.25
n-Nitrosodimethylamine		<0.25	mg/Kg	1	0.25

*Continued ...*<sup>22</sup>TIC: Acrolein has estimated concentration <240 µg/kg.

...Continued Sample: 155943 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
2-Picoline		<0.25	mg/Kg	1	0.25
Methyl methanesulfonate		<0.25	mg/Kg	1	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	1	0.25
Phenol		<0.25	mg/Kg	1	0.25
Antiline		<0.25	mg/Kg	1	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	1	0.25
2-Chlorophenol		<0.25	mg/Kg	1	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	1	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	1	0.25
Benzyl alcohol		<0.25	mg/Kg	1	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	1	0.25
2-Methylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	1	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	1	0.25
Acetophenone		<0.25	mg/Kg	1	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	1	0.25
Hexachloroethane		<0.25	mg/Kg	1	0.25
Nitrobenzene		<0.25	mg/Kg	1	0.25
n-Nitroso-2-pyridine		<0.25	mg/Kg	1	0.25
Iso-phorone		<0.25	mg/Kg	1	0.25
2-Nitrophenol		<0.25	mg/Kg	1	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	1	0.25
Benzoic acid		<0.25	mg/Kg	1	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	1	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	1	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	1	0.25
Naphthalene		<0.25	mg/Kg	1	0.25
4-Chloroaniline		<0.25	mg/Kg	1	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	1	0.25
Hexachlorobutadiene		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	1	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	1	0.25
1-Methylnaphthalene		<0.25	mg/Kg	1	0.25
2-Methylnaphthalene		<0.25	mg/Kg	1	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	1	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	1	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	1	0.25
2-Chloronaphthalene		<0.25	mg/Kg	1	0.25
1-Chloronaphthalene		<0.25	mg/Kg	1	0.25
2-Nitroaniline		<0.25	mg/Kg	1	0.25
Dimethylphthalate		<0.25	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	1	0.25
3-Nitroaniline		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	1	0.25
Dibenzofuran		<0.25	mg/Kg	1	0.25
Penta-chlorobenzene		<0.25	mg/Kg	1	0.25
4-Nitrophenol		<0.25	mg/Kg	1	0.25

Continued ..

...Continued Sample: 155943 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
1-Naphthylamine		<0.25	mg/Kg	1	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	1	0.25
2-Naphthylamine		<0.25	mg/Kg	1	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Diethylphthalate		<0.25	mg/Kg	1	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	1	0.25
4-Nitroaniline		<0.25	mg/Kg	1	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	1	0.25
Diphenylamine		<0.25	mg/Kg	1	0.25
Diphenylhydrazine		<0.25	mg/Kg	1	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	1	0.25
Phenacetin		<0.25	mg/Kg	1	0.25
Hexachlorobenzene		<0.25	mg/Kg	1	0.25
4-Aminobiphenyl		<0.25	mg/Kg	1	0.25
Pentachlorophenol		<0.25	mg/Kg	1	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	1	0.25
Pronamide		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Di-n-butylphthalate		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Benzidine		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
p-Dimethylaminoazobenzene		<0.25	mg/Kg	1	0.25
Butylbenzylphthalate		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	1	0.25
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
3-Methylcholanthrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,j)acridine		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		32.69	mg/Kg	1	80	40	22 - 103
Phenol-d5		34.60	mg/Kg	1	80	43	32 - 112
Nitrobenzene-d5		35.12	mg/Kg	1	80	43	45 - 111
2-Fluorobiphenyl		45.58	mg/Kg	1	80	56	43 - 110
2,4,6-Tribromoanophenol		36.10	mg/Kg	1	80	45	34 - 136
Terphenyl-d14		82.37	mg/Kg	1	80	102	47 - 120

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**Sample: 155943 - WSB-02**

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 155943 - WSB-02**

Analysis: Ion Chromatography (IC)      Analytical Method: E 300.0      QC Batch: QC05721      Date Analyzed: 10/17/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05010      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
CL		53	mg/Kg	1	0.50
Fluoride		<1.0	mg/Kg	1	0.20
Nitrate-N		38	mg/Kg	1	0.20
Sulfate		110	mg/Kg	1	0.50

**Sample: 155943 - WSB-02**

Analysis: Phenolics      Analytical Method: SM 5530D      QC Batch: QC05952      Date Analyzed: 10/27/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05216      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	23	1.76	mg/Kg	25	0.07

**Sample: 155943 - WSB-02**

Analysis: TDS      Analytical Method: E 160.1      QC Batch: QC06272      Date Analyzed: 10/30/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05479      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		900	mg/L	1	10

**Sample: 155943 - WSB-02**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC05658      Date Analyzed: 10/16/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04949      Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		1120	mg/Kg	1	10

**Sample: 155943 - WSB-02**

Analysis: Total Cyanide      Analytical Method: SM 4500-CN C.E      QC Batch: QC05838      Date Analyzed: 10/24/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05114      Date Prepared: 10/24/00

<sup>23</sup> Sample ran at a x25 dilution.

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Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

Sample: 155943 - WSB-02

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC06422      Date Analyzed: 10/22/00  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB05614      Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		130	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		<5.0	mg/Kg	1	5
Total Lead		<5.0	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		9.7	mg/Kg	1	5

Sample: 155943 - WSB-02

Analysis: pH      Analytical Method: E 150.1      QC Batch: QC05919      Date Analyzed: 10/18/00  
Analyst: RS      Preparation Method: N/A      Prep Batch: PB05180      Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
pH		8.0	s.u.	1	1

Sample: 155944 - SB-15-10-01- "A"

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC05875      Date Analyzed: 10/23/00  
Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB05144      Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<25.0	µg/Kg	25	1
Chloromethane (methyl chloride)		<25.0	µg/Kg	25	1
Vinyl Chloride		<25.0	µg/Kg	25	1
Bromomethane (methyl bromide)		<25.0	µg/Kg	25	1
Trichlorofluoromethane		<25.0	µg/Kg	25	1
Acrylonitrile		<25.0	µg/Kg	25	1
1,1-Dichloroethene		<25.0	µg/Kg	25	1
Methylene chloride		<125	µg/Kg	25	5
trans-1,2-Dichloroethene		<25.0	µg/Kg	25	1
1,1-Dichloroethane		<25.0	µg/Kg	25	1
cis-1,2-dichloroethene		<25.0	µg/Kg	25	1
1,2-Dichloroethane (EDC)		<25.0	µg/Kg	25	1
Chloroform		<25.0	µg/Kg	25	1
1,1,1-Trichloroethane		<25.0	µg/Kg	25	1
Benzene		<25.0	µg/Kg	25	1
Carbon Tetrachloride		<25.0	µg/Kg	25	1
Trichloroethene (TCE)		<25.0	µg/Kg	25	1
Bromodichloromethane		<25.0	µg/Kg	25	1
cis-1,3-Dichloropropene		<25.0	µg/Kg	25	1

Continued ..

...Continued Sample: 155944 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
trans-1,3-Dichloropropene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
1,1,2-Trichloroethane		<25.0	µg/Kg	25	1
1,2-Dibromoethane (EDB)		<25.0	µg/Kg	25	1
Tetrachloroethene (PCE)		<25.0	µg/Kg	25	1
Chlorobenzene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
1,1,2,2-Tetrachloroethane		<25.0	µg/Kg	25	1
1,4-Dichlorobenzene (para)		<25.0	µg/Kg	25	1
1,3-Dichlorobenzene		<25.0	µg/Kg	25	1
1,2-Dichlorobenzene (ortho)		<25.0	µg/Kg	25	1
Test Comments	<sup>24</sup>	NOTE	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.96	µg/Kg	1	50	99	69 - 116
Toluene-d8		49.82	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		47.95	µg/Kg	1	50	95	74 - 110

## Sample: 155944 - SB-15-10-01- "A"

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC05913 Date Analyzed: 10/25/00  
Analyst: MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.25	mg/Kg	1	0.25
n-Nitrosodimethylamine		<0.25	mg/Kg	1	0.25
2-Picoline		<0.25	mg/Kg	1	0.25
Methyl methanesulfonate		<0.25	mg/Kg	1	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	1	0.25
Phenol		<0.25	mg/Kg	1	0.25
Aniline		<0.25	mg/Kg	1	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	1	0.25
2-Chlorophenol		<0.25	mg/Kg	1	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	1	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	1	0.25
Benzyl alcohol		<0.25	mg/Kg	1	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	1	0.25
2-Methylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	1	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	1	0.25
Acetophenone		<0.25	mg/Kg	1	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	1	0.25
Hexachloroethane		<0.25	mg/Kg	1	0.25
Nitrobenzene		<0.25	mg/Kg	1	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	1	0.25

*Continued .*<sup>24</sup>TIC: Acrolein has estimated concentration <250 µg/kg.

...Continued Sample: 155944 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Isophorone		<0.25	mg/Kg	1	0.25
2-Nitrophenol		<0.25	mg/Kg	1	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	1	0.25
Benzoic acid		<0.25	mg/Kg	1	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	1	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	1	0.25
alpha-Dimethylphenethylamine		<0.25	mg/Kg	1	0.25
Naphthalene		<0.25	mg/Kg	1	0.25
4-Chloraniline		<0.25	mg/Kg	1	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	1	0.25
Hexachlorobutadiene		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	1	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	1	0.25
1-Methylnaphthalene		<0.25	mg/Kg	1	0.25
2-Methylnaphthalene		<0.25	mg/Kg	1	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	1	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	1	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	1	0.25
2-Chloronaphthalene		<0.25	mg/Kg	1	0.25
1-Chloronaphthalene		<0.25	mg/Kg	1	0.25
2-Nitroaniline		<0.25	mg/Kg	1	0.25
Dimethylphthalate		<0.25	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	1	0.25
3-Nitroaniline		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	1	0.25
Dibenzofuran		<0.25	mg/Kg	1	0.25
Pentachlorobenzene		<0.25	mg/Kg	1	0.25
4-Nitrophenol		<0.25	mg/Kg	1	0.25
1-Naphthylamine		<0.25	mg/Kg	1	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	1	0.25
2-Naphthylamine		<0.25	mg/Kg	1	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Diethylphthalate		<0.25	mg/Kg	1	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	1	0.25
4-Nitroaniline		<0.25	mg/Kg	1	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	1	0.25
Diphenylamine		<0.25	mg/Kg	1	0.25
Diphenylhydrazine		<0.25	mg/Kg	1	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	1	0.25
Phenacetin		<0.25	mg/Kg	1	0.25
Hexachlorobenzene		<0.25	mg/Kg	1	0.25
1-Aminobiphenyl		<0.25	mg/Kg	1	0.25
Pentachlorophenol		<0.25	mg/Kg	1	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	1	0.25
Pronamide		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25

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...Continued Sample: 155944 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
Anthracene		<0.25	mg/Kg	1	0.25
Di-n-butylphthalate		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Benzidine		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
p-Dimethylaminoazobenzene		<0.25	mg/Kg	1	0.25
Butylbenzylphthalate		<0.25	mg/Kg	1	0.25
Benzo(a)anthracene		<0.25	mg/Kg	1	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	1	0.25
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
3-Methylcholanthrene		<0.25	mg/Kg	1	0.25
Dibenz(a,j)acridine		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenz(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		40.03	mg/Kg	1	80	50	22 - 103
Phenol-d5		47.66	mg/Kg	1	80	59	32 - 112
Nitrobenzene-d5		52.08	mg/Kg	1	80	65	45 - 111
2-Fluorobiphenyl		55.96	mg/Kg	1	80	69	43 - 110
2,4,6-Tribromophenol		53.77	mg/Kg	1	80	67	34 - 136
Terphenyl-d14		117.44	mg/Kg	1	80	146	47 - 120

Sample: 155944 - SB-15-10-01- "A"

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 155944 - SB-15-10-01- "A"

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC05721 Date Analyzed: 10/17/00  
Analyst: JS Preparation Method: N/A Prep Batch: PB05010 Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Cl		16	mg/Kg	1	0.50
Fluoride		1.8	mg/Kg	1	0.20
Nitrate-N		1.9	mg/Kg	1	0.20
Sulfate		32	mg/Kg	1	0.50

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**Sample: 155944 - SB-15-10-01- "A"**

Analysis: Phenolics      Analytical Method: SM 5530D      QC Batch: QC05952      Date Analyzed: 10/27/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05216      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	25	<1.75	mg/Kg	25	0.07

**Sample: 155944 - SB-15-10-01- "A"**

Analysis: TDS      Analytical Method: E 160.1      QC Batch: QC06272      Date Analyzed: 10/30/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05479      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		680	mg/L	1	10

**Sample: 155944 - SB-15-10-01- "A"**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC05658      Date Analyzed: 10/16/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04949      Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		877	mg/Kg	1	10

**Sample: 155944 - SB-15-10-01- "A"**

Analysis: Total Cyanide      Analytical Method: SM 4500-CN C.E      QC Batch: QC05838 Date Analyzed: 10/24/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05114 Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

**Sample: 155944 - SB-15-10-01- "A"**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC06422 Date Analyzed: 10/22/00  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB05614 Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		4750	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		7.1	mg/Kg	1	5
Total Lead		53	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		<2.0	mg/Kg	1	2
Total Vanadium		15	mg/Kg	1	5

<sup>25</sup> Sample ran at a x25 dilution.

**Sample: 155944 - SB-15-10-01- "A"**

Analysis: pH      Analytical Method: E 150.1      QC Batch: QC05919      Date Analyzed: 10/18/00  
Analyst: RS      Preparation Method: N/A      Prep Batch: PB05180      Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
pH		8.2	s.u.	1	1

**Sample: 155945 - SB-15-10-01 "B"**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC05875      Date Analyzed: 10/23/00  
Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB05144      Date Prepared: 10/23/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<25.0	µg/Kg	25	1
Chloromethane (methyl chloride)		<25.0	µg/Kg	25	1
Vinyl Chloride		<25.0	µg/Kg	25	1
Bromomethane (methyl bromide)		<25.0	µg/Kg	25	1
Trichlorofluoromethane		<25.0	µg/Kg	25	1
Acrylonitrile		<25.0	µg/Kg	25	1
1,1-Dichloroethene		<25.0	µg/Kg	25	1
Methylene chloride		<125	µg/Kg	25	5
trans-1,2-Dichloroethene		<25.0	µg/Kg	25	1
1,1-Dichloroethane		<25.0	µg/Kg	25	1
cis-1,2-dichloroethene		<25.0	µg/Kg	25	1
1,2-Dichloroethane (EDC)		<25.0	µg/Kg	25	1
Chloroform		48.3	µg/Kg	25	1
1,1,1-Trichloroethane		<25.0	µg/Kg	25	1
Benzene		35.7	µg/Kg	25	1
Carbon Tetrachloride		<25.0	µg/Kg	25	1
Trichloroethene (TCE)		<25.0	µg/Kg	25	1
Bromodichloromethane		<25.0	µg/Kg	25	1
cis-1,3-Dichloropropene		<25.0	µg/Kg	25	1
trans-1,3-Dichloropropene		<25.0	µg/Kg	25	1
Toluene		98.2	µg/Kg	25	1
1,1,2-Trichloroethane		<25.0	µg/Kg	25	1
1,2-Dibromoethane (EDB)		<25.0	µg/Kg	25	1
Tetrachloroethene (PCE)		<25.0	µg/Kg	25	1
Chlorobenzene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		99.0	µg/Kg	25	1
o-Xylene		27.1	µg/Kg	25	1
1,1,2,2-Tetrachloroethane		<25.0	µg/Kg	25	1
1,4-Dichlorobenzene (para)		<25.0	µg/Kg	25	1
1,3-Dichlorobenzene		<25.0	µg/Kg	25	1
1,2-Dichlorobenzene (ortho)		<25.0	µg/Kg	25	1
Test Comments		26	NOTE	µg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.07	µg/Kg	1	50	100	69 - 116

*Continued ...*<sup>26</sup>TIC: Acrolein has estimated concentration <250 µg/kg.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Toluene-d8		49.70	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		48.43	µg/Kg	1	50	96	74 - 110

## Sample: 155945 - SB-15-10-01 "B"

Analysis: 8270 Analytical Method: S 8270C QC Batch: QC05913 Date Analyzed: 10/25/00  
Analyst MA Preparation Method: E 3510C Prep Batch: PB05172 Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
Pyridine		<0.25	mg/Kg	1	0.25
n-Nitrosodimethylamine		<0.25	mg/Kg	1	0.25
2-Picoline		<0.25	mg/Kg	1	0.25
Methyl methanesulfonate		<0.25	mg/Kg	1	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	1	0.25
1,1,1-trifluoroethane		<0.25	mg/Kg	1	0.25
Aniline		<0.25	mg/Kg	1	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	1	0.25
2-Chloroaniline		<0.25	mg/Kg	1	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	1	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	1	0.25
Benzyl alcohol		<0.25	mg/Kg	1	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	1	0.25
2-Methylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	1	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	1	0.25
Acetophenone		<0.25	mg/Kg	1	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	1	0.25
Hexachloroethane		<0.25	mg/Kg	1	0.25
Nitrobenzene		<0.25	mg/Kg	1	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	1	0.25
Isoferone		<0.25	mg/Kg	1	0.25
2-Nitrophenol		<0.25	mg/Kg	1	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	1	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	1	0.25
Benzoic acid		<0.25	mg/Kg	1	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	1	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	1	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	1	0.25
Naphthalene		<0.25	mg/Kg	1	0.25
4-Chloroaniline		<0.25	mg/Kg	1	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	1	0.25
Hexachlorobutadiene		<0.25	mg/Kg	1	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	1	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	1	0.25
1-Methylnaphthalene		<0.25	mg/Kg	1	0.25
2-Methylnaphthalene		<0.25	mg/Kg	1	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	1	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	1	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	1	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	1	0.25
2-Chloronaphthalene		<0.25	mg/Kg	1	0.25

Continued ..

...Continued Sample: 155945 Analysis: 8270

Param	Flag	Result	Units	Dilution	RDL
1-Chloronaphthalene		<0.25	mg/Kg	1	0.25
2-Nitroaniline		<0.25	mg/Kg	1	0.25
Dimethylphthalate		<0.25	mg/Kg	1	0.25
Acenaphthylene		<0.25	mg/Kg	1	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	1	0.25
3-Nitroaniline		<0.25	mg/Kg	1	0.25
Acenaphthene		<0.25	mg/Kg	1	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	1	0.25
Dibenzofuran		<0.25	mg/Kg	1	0.25
Pentachlorobenzene		<0.25	mg/Kg	1	0.25
1-Nitrophenol		<0.25	mg/Kg	1	0.25
1-Naphthylamine		<0.25	mg/Kg	1	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	1	0.25
2-Naphthylamine		<0.25	mg/Kg	1	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	1	0.25
Fluorene		<0.25	mg/Kg	1	0.25
Diethylphthalate		<0.25	mg/Kg	1	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	1	0.25
4-Nitroaniline		<0.25	mg/Kg	1	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	1	0.25
Diphenylamine		<0.25	mg/Kg	1	0.25
Diphenylhydrazine		<0.25	mg/Kg	1	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	1	0.25
Phenacetin		<0.25	mg/Kg	1	0.25
Hexachlorobenzene		<0.25	mg/Kg	1	0.25
4-Aminobiphenyl		<0.25	mg/Kg	1	0.25
Pentachlorophenol		<0.25	mg/Kg	1	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	1	0.25
Pronamide		<0.25	mg/Kg	1	0.25
Phenanthrene		<0.25	mg/Kg	1	0.25
Anthracene		<0.25	mg/Kg	1	0.25
Di-n-butylphthalate		<0.25	mg/Kg	1	0.25
Fluoranthene		<0.25	mg/Kg	1	0.25
Benzidine		<0.25	mg/Kg	1	0.25
Pyrene		<0.25	mg/Kg	1	0.25
p-Dimethylaminoazobenzene		<0.25	mg/Kg	1	0.25
Butylbenzylphthalate		<0.25	mg/Kg	1	0.25
Benz(a)anthracene		<0.25	mg/Kg	1	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	1	0.25
Chrysene		<0.25	mg/Kg	1	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	1	0.25
Di-n-octylphthalate		<0.25	mg/Kg	1	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	1	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	1	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	1	0.25
Benzo(a)pyrene		<0.25	mg/Kg	1	0.25
3-Methylcholanthrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,j)acridine		<0.25	mg/Kg	1	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	1	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	1	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	1	0.25

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N/A

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol	<sup>27</sup>	1.65	mg/Kg	1	80	2	22 - 103
Phenol-d5	<sup>28</sup>	16.05	mg/Kg	1	80	20	32 - 112
Nitrobenzene-d5	<sup>29</sup>	33.57	mg/Kg	1	80	41	45 - 111
2-Fluorobiphenyl		40.55	mg/Kg	1	80	50	43 - 110
2,4,6-Tribromophenol	<sup>30</sup>	0.00	mg/Kg	1	80	0	34 - 136
Terphenyl-d14		93.24	mg/Kg	1	80	116	47 - 120

Sample: 155945 - SB-15-10-01 "B"

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC06421      Date Analyzed: 10/26/00  
Analyst: MS      Preparation Method: N/A      Prep Batch: PB05613      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 155945 - SB-15-10-01 "B"

Analysis: Ion Chromatography (IC) Analytical Method: E 300 0 QC Batch: QC05721 Date Analyzed: 10/17/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05010 Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
CL		280	mg/Kg	1	0.50
Fluoride		3.5	mg/Kg	1	0.20
Nitrate-N		1.3	mg/Kg	1	0.20
Sulfate		10	mg/Kg	1	0.50

Sample: 155945 - SB-15-10-01 "B"

Analysis: Phenolics      Analytical Method: SM 5530D      QC Batch: QC05952      Date Analyzed: 10/27/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05216      Date Prepared: 10/26/00

Param	Flag	Result	Units	Dilution	RDL
Phenolics	<sup>31</sup>	5.09	mg/Kg	25	0.07

Sample: 155945 - SB-15-10-01 "B"

Analysis: TDS      Analytical Method: E 160.1      QC Batch: QC06272      Date Analyzed: 10/30/00  
Analyst: JS      Preparation Method: N/A      Prep Batch: PB05479      Date Prepared: 10/17/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		1900	mg/L	1	10

<sup>27</sup> Poor recovery of acidic surrogates due to the matrix retaining specific analytes.

<sup>28</sup> Poor recovery of acidic surrogates due to the matrix retaining specific analytes.

<sup>29</sup> Poor recovery of acidic surrogates due to the matrix retaining specific analytes.

<sup>30</sup> Poor recovery of acidic surrogates due to the matrix retaining specific analytes.

<sup>31</sup> Sample ran at a x25 dilution.

**Sample: 155945 - SB-15-10-01 "B"**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC05658      Date Analyzed: 10/16/00  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB04949      Date Prepared: 10/16/00

Param	Flag	Result	Units	Dilution	RDL
TRPHC		4260	mg/Kg	1	10

**Sample: 155945 - SB-15-10-01 "B"**

Analysis: Total Cyanide      Analytical Method: SM 4500-CN C.E      QC Batch: QC05838      Date Analyzed: 10/24/00  
Analyst: LD      Preparation Method: N/A      Prep Batch: PB05114      Date Prepared: 10/24/00

Param	Flag	Result	Units	Dilution	RDL
Total Cyanide		<0.25	mg/Kg	1	0.01

**Sample: 155945 - SB-15-10-01 "B"**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC06422      Date Analyzed: 10/22/00  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB05614      Date Prepared: 10/19/00

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5.0	mg/Kg	1	5
Total Barium		3900	mg/Kg	1	5
Total Cadmium		<2.0	mg/Kg	1	2
Total Chromium		6.4	mg/Kg	1	5
Total Lead		31	mg/Kg	1	5
Total Selenium		<5.0	mg/Kg	1	5
Total Silver		2.0	mg/Kg	1	2
Total Vanadium		15	mg/Kg	1	5

**Sample: 155945 - SB-15-10-01 "B"**

Analysis: pH      Analytical Method: E 150.1      QC Batch: QC05919      Date Analyzed: 10/18/00  
Analyst: RS      Preparation Method: N/A      Prep Batch: PB05180      Date Prepared: 10/18/00

Param	Flag	Result	Units	Dilution	RDL
		7.24	s.t.	1	1

**Sample: 155946 - Trip Blank**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC06040      Date Analyzed: 10/25/00  
Analyst: JG      Preparation Method: E 5030B      Prep Batch: PB05291      Date Prepared: 9/20/00

Param	Flag	Result	Units	Dilution	RDL
Dichlorodifluoromethane		<1.0	µg/L	1	1
Chloromethane (methyl chloride)		<1.0	µg/L	1	1
Vinyl Chloride		<1.0	µg/L	1	1
Bromomethane (methyl bromide)		<1.0	µg/L	1	1
Trichlorofluoromethane		<1.0	µg/L	1	1
Acrylonitrile		<1.0	µg/L	1	1

*Continued ...*

...Continued Sample: 155946 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
1,1-Dichloroethene		<1.0	µg/L	1	1
Methylene chloride		<5.0	µg/L	1	5
trans-1,2-Dichloroethene		<1.0	µg/L	1	1
1,1-Dichloroethane		<1.0	µg/L	1	1
cis-1,2-dichloroethene		<1.0	µg/L	1	1
1,2-Dichloroethane (EDC)		<1.0	µg/L	1	1
Chloroform		<1.0	µg/L	1	1
1,1,1-Trichloroethane		<1.0	µg/L	1	1
Benzene		<1.0	µg/L	1	1
Carbon Tetrachloride		<1.0	µg/L	1	1
Trichloroethene (TCE)		<1.0	µg/L	1	1
Bromodichloromethane		<1.0	µg/L	1	1
cis-1,3-Dichloropropene		<1.0	µg/L	1	1
trans-1,3-Dichloropropene		<1.0	µg/L	1	1
Toluene		<1.0	µg/L	1	1
1,1,2-Trichloroethane		<1.0	µg/L	1	1
1,2-Dibromoethane (EDB)		<1.0	µg/L	1	1
Tetrachloroethene (PCE)		<1.0	µg/L	1	1
Chlorobenzene		<1.0	µg/L	1	1
Ethylbenzene		<1.0	µg/L	1	1
m,p-Xylene		<1.0	µg/L	1	1
o-Xylene		<1.0	µg/L	1	1
1,1,2,2-Tetrachloroethane		<1.0	µg/L	1	1
1,4-Dichlorobenzene (para)		<1.0	µg/L	1	1
1,3-Dichlorobenzene		<1.0	µg/L	1	1
1,2-Dichlorobenzene (ortho)		<1.0	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.97	µg/L	1	50	97	85 - 117
Toluene-d8		51.68	µg/L	1	50	103	93 - 109
4-Bromofluorobenzene		41.94	µg/L	1	50	83	76 - 109

## Quality Control Report Method Blank

Sample: Method Blank      QCBatch: QC05658

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Sample: Method Blank      QCBatch: QC05721

Param	Flag	Results	Units	Reporting Limit
CL		1.43	mg/Kg	0.50
Fluoride		<0.5	mg/Kg	0.20
Nitrate-N		<0.2	mg/Kg	0.20
Sulfate		6.37	mg/Kg	0.50

Sample: Method Blank      QCBatch: QC05838

Param	Flag	Results	Units	Reporting Limit
Total Cyanide		<0.25	mg/Kg	0.01

Sample: Method Blank      QCBatch: QC05875

Param	Flag	Results	Units	Reporting Limit
Dichlorodifluoromethane		<20.0	µg/Kg	1
Chloroethane (methyl chloride)		<20.0	µg/Kg	1
Vinyl Chloride		<20.0	µg/Kg	1
Bromomethane (methyl bromide)		<20.0	µg/Kg	1
Trichlorofluoromethane		<20.0	µg/Kg	1
Acrylonitrile		<20.0	µg/Kg	1
1,1-Dichloroethene		<20.0	µg/Kg	1
Methylene chloride		<100	µg/Kg	5
trans-1,2-Dichloroethene		<20.0	µg/Kg	1
1,1-Dichloroethane		<20.0	µg/Kg	1
cis-1,2-dichloroethene		<20.0	µg/Kg	1
1,2-Dichloroethane (EDC)		<20.0	µg/Kg	1
Chloroform		<20.0	µg/Kg	1
1,1,1-Trichloroethane		<20.0	µg/Kg	1
Benzene		<20.0	µg/Kg	1
Carbon Tetrachloride		<20.0	µg/Kg	1
Trichloroethene (TCE)		<20.0	µg/Kg	1
Bromodichloromethane		<20.0	µg/Kg	1
cis-1,3-Dichloropropene		<20.0	µg/Kg	1
trans-1,3-Dichloropropene		<20.0	µg/Kg	1
Toluene		<20.0	µg/Kg	1
1,1,2-Trichloroethane		<20.0	µg/Kg	1
1,2-Dibromoethane (EDB)		<20.0	µg/Kg	1
Tetrachloroethene (PCE)		<20.0	µg/Kg	1
Chlorobenzene		<20.0	µg/Kg	1
Ethylbenzene		<20.0	µg/Kg	1
m,p-Xylene		<20.0	µg/Kg	1
o-Xylene		<20.0	µg/Kg	1
1,1,2,2-Tetrachloroethane		<20.0	µg/Kg	1
1,4-Dichlorobenzene (para)		<20.0	µg/Kg	1
1,3-Dichlorobenzene		<20.0	µg/Kg	1
1,2-Dichlorobenzene (ortho)		<20.0	µg/Kg	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		51.85	µg/Kg	50	103	69 - 116
Toluene-d8		52.03	µg/Kg	50	104	88 - 114
4-Bromofluorobenzene		43.25	µg/Kg	50	86	74 - 110

Sample: Method Blank

QCBatch: QC05913

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.25	mg/Kg	0.25
n-Nitrosodimethylamine		<0.25	mg/Kg	0.25
2-Picoline		<0.25	mg/Kg	0.25
Methyl methanesulfonate		<0.25	mg/Kg	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	0.25
Phenol		<0.25	mg/Kg	0.25
Aniline		<0.25	mg/Kg	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	0.25
2-Chlorophenol		<0.25	mg/Kg	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	0.25
Benzyl alcohol		<0.25	mg/Kg	0.25
1,2-Dichlorobenzene		<0.25	mg/Kg	0.25
2-Methylphenol		<0.25	mg/Kg	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	0.25
Acetophenone		<0.25	mg/Kg	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	0.25
Hexachloroethane		<0.25	mg/Kg	0.25
Nitrobenzene		<0.25	mg/Kg	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	0.25
Isopropylone		<0.25	mg/Kg	0.25
2-Nitrophenol		<0.25	mg/Kg	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	0.25
Benzoic acid		<0.25	mg/Kg	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	0.25
Naphthalene		<0.25	mg/Kg	0.25
4-Chloroaniline		<0.25	mg/Kg	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	0.25
Hexachlorobutadiene		<0.25	mg/Kg	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	0.25
1-Methylnaphthalene		<0.25	mg/Kg	0.25
2-Methylnaphthalene		<0.25	mg/Kg	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	0.25

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Param	Flag	Results	Units	Reporting Limit
2-Chloronaphthalene		<0.25	mg/Kg	0.25
1-Chloronaphthalene		<0.25	mg/Kg	0.25
2-Nitroaniline		<0.25	mg/Kg	0.25
Dimethylphthalate		<0.25	mg/Kg	0.25
Acenaphthylene		<0.25	mg/Kg	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	0.25
3-Nitroaniline		<0.25	mg/Kg	0.25
Acenaphthene		<0.25	mg/Kg	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	0.25
Dibenzofuran		<0.25	mg/Kg	0.25
Pentachlorobenzene		<0.25	mg/Kg	0.25
4-Nitrophenol		<0.25	mg/Kg	0.25
1-Naphthylamine		<0.25	mg/Kg	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	0.25
2-Naphthylamine		<0.25	mg/Kg	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	0.25
Fluorene		<0.25	mg/Kg	0.25
Diethylphthalate		<0.25	mg/Kg	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	0.25
4-Nitroaniline		<0.25	mg/Kg	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	0.25
Diphenylamine		<0.25	mg/Kg	0.25
Diphenylhydrazine		<0.25	mg/Kg	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	0.25
Phenacetin		<0.25	mg/Kg	0.25
Hexachlorobenzene		<0.25	mg/Kg	0.25
4-Aminobiphenyl		<0.25	mg/Kg	0.25
Pentachlorophenol		<0.25	mg/Kg	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	0.25
Pronamide		<0.25	mg/Kg	0.25
Phenanthrene		<0.25	mg/Kg	0.25
Anthracene		<0.25	mg/Kg	0.25
Di-n-butylphthalate		<0.25	mg/Kg	0.25
Fluoranthene		<0.25	mg/Kg	0.25
Benzidine		<0.25	mg/Kg	0.25
Pyrene		<0.25	mg/Kg	0.25
p-Famethylaminobiphenyl		<0.25	mg/Kg	0.25
Butylbenzylphthalate		<0.25	mg/Kg	0.25
Phenanthracene		<0.25	mg/Kg	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	0.25
Chrysene		<0.25	mg/Kg	0.25
Bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25
Di-n-octylphthalate		<0.25	mg/Kg	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	0.25
Benzof(k)fluoranthene		<0.25	mg/Kg	0.25
Benzo(a)pyrene		<0.25	mg/Kg	0.25
3-Methylcholanthrene		<0.25	mg/Kg	0.25
Dibenzo(a,j)acridine		<0.25	mg/Kg	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	0.25

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Param	Flag	Results	Units	Reporting Limit
Dibenzo(a,h)anthracene		<0.25	mg/Kg	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	0.25

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		38.71	mg/Kg	80	48	22 - 103
Phenol-d5		41.95	mg/Kg	80	52	32 - 112
Nitrobenzene-d5		47.45	mg/Kg	80	59	45 - 111
2-Fluorobiphenyl		48.37	mg/Kg	80	60	43 - 110
2,4,6-Tribromophenol		47.62	mg/Kg	80	59	34 - 136
Terphenyl-d14		55.85	mg/Kg	80	69	47 - 120

Sample: Method Blank      QCBatch: QC05952

Param	Flag	Results	Units	Reporting Limit
Phenolics		<1.75	mg/Kg	0.07

Sample: Method Blank      QCBatch: QC05994

Param	Flag	Results	Units	Reporting Limit
CL		2.32	mg/Kg	0.50
Fluoride		0.66	mg/Kg	0.20
Nitrate-N		0.20	mg/Kg	0.20
Sulfate		11.03	mg/Kg	0.50

Sample: Method Blank      QCBatch: QC06007

Param	Flag	Results	Units	Reporting Limit
Pyridine		<0.25	mg/Kg	0.25
n-Nitrosodimethylamine		<0.25	mg/Kg	0.25
2-Picoline		<0.25	mg/Kg	0.25
Methyl methanesulfonate		<0.25	mg/Kg	0.25
Ethyl methanesulfonate		<0.25	mg/Kg	0.25
Phenol		<0.25	mg/Kg	0.25
Aniline		<0.25	mg/Kg	0.25
bis (2-chloroethyl) ether		<0.25	mg/Kg	0.25
2-Chlorophenol		<0.25	mg/Kg	0.25
1,3-Dichlorobenzene		<0.25	mg/Kg	0.25
1,4-Dichlorobenzene		<0.25	mg/Kg	0.25
Benzyl alcohol		<0.25	mg/Kg	0.25

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Param	Flag	Results	Units	Reporting Limit
1,2-Dichlorobenzene		<0.25	mg/Kg	0.25
2-Methylphenol		<0.25	mg/Kg	0.25
bis (2-chloroisopropyl) ether		<0.25	mg/Kg	0.25
4-Methylphenol/3-Methylphenol		<0.25	mg/Kg	0.25
Acetophenone		<0.25	mg/Kg	0.25
n-Nitrosodi-n-propylamine		<0.25	mg/Kg	0.25
Hexachloroethane		<0.25	mg/Kg	0.25
Nitrobenzene		<0.25	mg/Kg	0.25
n-Nitrosopiperidine		<0.25	mg/Kg	0.25
Isophorone		<0.25	mg/Kg	0.25
2-Nitrophenol		<0.25	mg/Kg	0.25
2,4-Dimethylphenol		<0.25	mg/Kg	0.25
bis (2-chloroethoxy) methane		<0.25	mg/Kg	0.25
Benzoic acid		<0.25	mg/Kg	0.25
2,4-Dichlorophenol		<0.25	mg/Kg	0.25
1,2,4-Trichlorobenzene		<0.25	mg/Kg	0.25
a,a-Dimethylphenethylamine		<0.25	mg/Kg	0.25
Naphthalene		<0.25	mg/Kg	0.25
4-Chloroaniline		<0.25	mg/Kg	0.25
2,6-Dichlorophenol		<0.25	mg/Kg	0.25
Hexachlorobutadiene		<0.25	mg/Kg	0.25
n-Nitroso-di-n-butylamine		<0.25	mg/Kg	0.25
4-Chloro-3-methylphenol		<0.25	mg/Kg	0.25
1-Methylnaphthalene		<0.25	mg/Kg	0.25
2-Methylnaphthalene		<0.25	mg/Kg	0.25
1,2,4,5-Tetrachlorobenzene		<0.25	mg/Kg	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25
2,4,6-Trichlorophenol		<0.25	mg/Kg	0.25
2,4,5-Trichlorophenol		<0.25	mg/Kg	0.25
2-Chloronaphthalene		<0.25	mg/Kg	0.25
1-Chloronaphthalene		<0.25	mg/Kg	0.25
2-Nitroaniline		<0.25	mg/Kg	0.25
Dimethylphthalate		<0.25	mg/Kg	0.25
Acenaphthylene		<0.25	mg/Kg	0.25
2,6-Dinitrotoluene		<0.25	mg/Kg	0.25
3-Nitroaniline		<0.25	mg/Kg	0.25
Acenaphthene		<0.25	mg/Kg	0.25
2,4-Dinitrophenol		<0.25	mg/Kg	0.25
Dibenzofuran		<0.25	mg/Kg	0.25
Pentachlorobenzene		<0.25	mg/Kg	0.25
4-Nitrophenol		<0.25	mg/Kg	0.25
1-Naphthylamine		<0.25	mg/Kg	0.25
2,4-Dinitrotoluene		<0.25	mg/Kg	0.25
2-Naphthylamine		<0.25	mg/Kg	0.25
2,3,4,6-Tetrachlorophenol		<0.25	mg/Kg	0.25
Fluorene		<0.25	mg/Kg	0.25
Diethylphthalate		<0.25	mg/Kg	0.25
4-Chlorophenyl-phenylether		<0.25	mg/Kg	0.25
4-Nitroaniline		<0.25	mg/Kg	0.25
4,6-Dinitro-2-methylphenol		<0.25	mg/Kg	0.25

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Param	Flag	Results	Units	Reporting Limit
Diphenylamine		<0.25	mg/Kg	0.25
Diphenylhydrazine		<0.25	mg/Kg	0.25
4-Bromophenyl-phenylether		<0.25	mg/Kg	0.25
Phenacetin		<0.25	mg/Kg	0.25
Hexachlorobenzene		<0.25	mg/Kg	0.25
4-Aminobiphenyl		<0.25	mg/Kg	0.25
Pentachlorophenol		<0.25	mg/Kg	0.25
Pentachloronitrobenzene		<0.25	mg/Kg	0.25
Pronamide		<0.25	mg/Kg	0.25
Phenanthrene		<0.25	mg/Kg	0.25
Anthracene		<0.25	mg/Kg	0.25
Di-n-butylphthalate		<0.25	mg/Kg	0.25
Fluoranthene		<0.25	mg/Kg	0.25
Benzidine		<0.25	mg/Kg	0.25
Pyrene		<0.25	mg/Kg	0.25
4-Nitro-2-methoxybenzene		<0.25	mg/Kg	0.25
Butylbenzylphthalate		<0.25	mg/Kg	0.25
Benzo(a)anthracene		<0.25	mg/Kg	0.25
3,3-Dichlorobenzidine		<0.25	mg/Kg	0.25
Chrysene		<0.25	mg/Kg	0.25
Bis (2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25
Di-n-octylphthalate		<0.25	mg/Kg	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25
7,12-Dimethylbenz(a)anthracene		<0.25	mg/Kg	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25
Benzo(a)pyrene		<0.25	mg/Kg	0.25
3-Methylcholanthrene		<0.25	mg/Kg	0.25
Dibeno(a,j)acridine		<0.25	mg/Kg	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	0.25
Dibenzo(a,h)anthracene		<0.25	mg/Kg	0.25
Benz[ghi]perylene		<0.25	mg/Kg	0.25

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		43.34	mg/Kg	80	54	22 - 103
Phenol-d5		49.04	mg/Kg	80	61	32 - 112
Nitrobenzene-d5		48.98	mg/Kg	80	61	45 - 111
2-Fluorobiphenyl		50.13	mg/Kg	80	62	43 - 110
2,4,6-Tribromophenol		57.34	mg/Kg	80	71	34 - 136
Terphenyl-d14		48.45	mg/Kg	80	60	47 - 120

Sample: Method Blank      QCBatch: QC06040

Param	Flag	Results	Units	Reporting Limit
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1

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Param	Flag	Results	Units	Reporting Limit
Vinyl Chloride		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-dichloroethene		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
1,3-Dichlorobenzene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		49.27	µg/L	50	98	85 - 117
Toluene-d8		51.89	µg/L	50	103	93 - 109
4-Bromofluorobenzene		42.47	µg/L	50	84	76 - 109

Sample: Method Blank      QCBatch: QC06272

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Sample: Method Blank      QCBatch: QC06421

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Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Sample: Method Blank      QC Batch: QC06422

Param	Flag	Results	Units	Reporting Limit
Total Arsenic		<5.0	mg/Kg	5
Total Barium		<5.0	mg/Kg	5
Total Cadmium		<2.0	mg/Kg	2
Total Chromium		<5.0	mg/Kg	5
Total Lead		<5.0	mg/Kg	5
Total Selenium		<5.0	mg/Kg	5
Total Silver		<2.0	mg/Kg	2
Total Vanadium		<5.0	mg/Kg	5

## Quality Control Report Lab Control Spikes and Duplicate Spikes

Sample: LCS      QC Batch: QC05658

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		247	mg/Kg	1	250	<10.0	98		70 - 130	20

Sample: LCSD      QC Batch: QC05658

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		239	mg/Kg	1	250	<10.0	95	3	70 - 130	20

Sample: LCS      QC Batch: QC05838

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Cyanide		2.65	mg/Kg	1	3	<0.25	88		60 - 118	20

Sample: LCSD QC Batch: QC05838

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Cyanide		2.67	mg/Kg	1	3	<0.25	89	1	60 - 118	20

Sample: LCS QC Batch: QC05913

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Phenol		48.11	mg/Kg	1	80	<0.25	60		34 - 102	20
2-Chlorophenol		48.31	mg/Kg	1	80	<0.25	60		37 - 100	20
1,4-Dichlorobenzene		51.20	mg/Kg	1	80	<0.25	64		41 - 102	20
n-Nitrosodi-n-propylamine		57.18	mg/Kg	1	80	<0.25	71		45 - 107	20
1,2,4-Trichlorobenzene		52.99	mg/Kg	1	80	<0.25	66		39 - 103	20
4-Chloro-3-methylphenol		55.53	mg/Kg	1	80	<0.25	69		46 - 113	20
Acenaphthene		56.21	mg/Kg	1	80	<0.25	70		50 - 107	20
4-Nitrophenol		33.31	mg/Kg	1	80	<0.25	41		0 - 152	20
2,4-Dinitrotoluene		48.58	mg/Kg	1	80	<0.25	60		53 - 114	20
Pentachlorophenol		10.69	mg/Kg	1	80	<0.25	13		0 - 121	20
Pyrene		61.77	mg/Kg	1	80	<0.25	77		41 - 121	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	%		
2-Fluorophenol		48.20	mg/Kg	1	80	60	22 - 103	
Phenol-d5		55.14	mg/Kg	1	80	68	32 - 112	
Nitrobenzene-d5		56.33	mg/Kg	1	80	70	45 - 111	
2-Fluorobiphenyl		57.94	mg/Kg	1	80	72	43 - 110	
2,4,6-Tribromophenol		52.28	mg/Kg	1	80	65	34 - 136	
Terphenyl-d14		66.25	mg/Kg	1	80	82	47 - 120	

Sample: LCSD QC Batch: QC05913

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Phenol		40.30	mg/Kg	1	80	<0.25	50	18	34 - 102	20
2-Chlorophenol		39.71	mg/Kg	1	80	<0.25	49	20	37 - 100	20
1,4-Dichlorobenzene		44.32	mg/Kg	1	80	<0.25	55	14	41 - 102	20
n-Nitrosodi-n-propylamine		47.24	mg/Kg	1	80	<0.25	59	19	45 - 107	20
1,2,4-Trichlorobenzene		46.79	mg/Kg	1	80	<0.25	58	12	39 - 103	20
4-Chloro-3-methylphenol		46.77	mg/Kg	1	80	<0.25	58	17	46 - 113	20
Acenaphthene		51.42	mg/Kg	1	80	<0.25	64	9	50 - 107	20
4-Nitrophenol		36.94	mg/Kg	1	80	<0.25	46	10	0 - 152	20
2,4-Dinitrotoluene		48.23	mg/Kg	1	80	<0.25	60	1	53 - 114	20
Pentachlorophenol		11.80	mg/Kg	1	80	<0.25	14	10	0 - 121	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
Pyrene		68.68	mg/Kg	1	80	<0.25	85	10	41 - 121	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	%	% Rec.	% Rec. Limit
2-Fluorophenol		41.22	mg/Kg	1	80	51	22 - 103	
Phenol-d5		44.22	mg/Kg	1	80	55	32 - 112	
Nitrobenzene-d5		49.82	mg/Kg	1	80	62	45 - 111	
2-Fluorobiphenyl		52.64	mg/Kg	1	80	65	43 - 110	
2,4,6-Tribromophenol		53.88	mg/Kg	1	80	67	34 - 136	
Terphenyl-d14		72.42	mg/Kg	1	80	90	47 - 120	

Sample: LCS QC Batch: QC05952

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
Phenolics		19.54	mg/Kg	1	20	<1.75	97	80 - 120	20	

Sample: LCSD QC Batch: QC05952

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
Phenolics		19.80	mg/Kg	1	20	<1.75	99	1	80 - 120	20

Sample: LCS QC Batch: QC06007

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
Phenol		50.88	mg/Kg	1	80	<0.25	63	34 - 102	20	
2-Chlorophenol		48.68	mg/Kg	1	80	<0.25	60	37 - 100	20	
1,4-Dichlorobenzene		50.29	mg/Kg	1	80	<0.25	62	41 - 102	20	
n-Nitrosodi-n-propylamine		51.98	mg/Kg	1	80	<0.25	64	45 - 107	20	
1,2,4-Trichlorobenzene		52.85	mg/Kg	1	80	<0.25	66	39 - 103	20	
4-Chloro-3-methylphenol		50.99	mg/Kg	1	80	<0.25	63	46 - 113	20	
Acenaphthene		56.59	mg/Kg	1	80	<0.25	70	50 - 107	20	
4-Nitrophenol		37.67	mg/Kg	1	80	<0.25	47	0 - 152	20	
2,4-Dinitrotoluene		49.72	mg/Kg	1	80	<0.25	62	53 - 114	20	
Pentachlorophenol		18.13	mg/Kg	1	80	<0.25	22	0 - 121	20	
Pyrene		50.59	mg/Kg	1	80	<0.25	63	41 - 121	20	

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Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		50.75	mg/Kg	1	80	63	22 - 103
Phenol-d5		57.73	mg/Kg	1	80	72	32 - 112
Nitrobenzene-d5		55.04	mg/Kg	1	80	68	45 - 111
2-Fluorobiphenyl		59.08	mg/Kg	1	80	73	43 - 110
2,4,6-Tribromophenol		53.19	mg/Kg	1	80	66	34 - 136
Terphenyl-d14		53.42	mg/Kg	1	80	66	47 - 120

Sample: LCSD QC Batch: QC06007

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit
Phenol		44.33	mg/Kg	1	80	<0.25	55	14	34 - 102
2-Chlorophenol		43.49	mg/Kg	1	80	<0.25	54	11	37 - 100
1,4-Dichlorobenzene		43.84	mg/Kg	1	80	<0.25	54	14	41 - 102
n-Nitrosodi-n-propylamine		46.16	mg/Kg	1	80	<0.25	57	12	45 - 107
1,2,4-Trichlorobenzene		46.07	mg/Kg	1	80	<0.25	57	14	39 - 103
4-Chloro-3-methylphenol		51.40	mg/Kg	1	80	<0.25	64	1	46 - 113
Acenaphthene		52.59	mg/Kg	1	80	<0.25	65	7	50 - 107
4-Nitrophenol		52.23	mg/Kg	1	80	<0.25	65	32	0 - 152
2,4-Dinitrotoluene		55.46	mg/Kg	1	80	<0.25	69	11	53 - 114
Pentachlorophenol		21.75	mg/Kg	1	80	<0.25	27	18	0 - 121
Pyrene		51.59	mg/Kg	1	80	<0.25	64	2	41 - 121

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
2-Fluorophenol		43.98	mg/Kg	1	80	54	22 - 103
Phenol-d5		50.92	mg/Kg	1	80	63	32 - 112
Nitrobenzene-d5		49.76	mg/Kg	1	80	62	45 - 111
2-Fluorobiphenyl		52.99	mg/Kg	1	80	66	43 - 110
2,4,6-Tribromophenol		61.67	mg/Kg	1	80	77	34 - 136
Terphenyl-d14		53.51	mg/Kg	1	80	66	47 - 120

Sample: LCS QC Batch: QC06040

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit
1,1-Dichloroethene		108	µg/L	1	100	<1.00	108	65 - 147	20
Benzene		101	µg/L	1	100	<1.00	101	79 - 124	20
Trichloroethene (TCE)		99	µg/L	1	100	<1.00	99	80 - 119	20
Toluene		96	µg/L	1	100	<1.00	96	78 - 118	20
Chlorobenzene		103	µg/L	1	100	<1.00	103	85 - 118	20

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Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		49.39	µg/L	1	50	98	85 - 117
Toluene-d8		50.85	µg/L	1	50	101	93 - 109
4-Bromofluorobenzene		43.62	µg/L	1	50	87	76 - 109

Sample: LCSD

QC Batch: QC06040

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
1,1-Dichloroethene		107	µg/L	1	100	<1.00	107	1	65 - 147
Benzene		101	µg/L	1	100	<1.00	101	0	79 - 124
Trichloroethene (TCE)		99	µg/L	1	100	<1.00	99	0	80 - 119
Toluene		97	µg/L	1	100	<1.00	97	1	78 - 118
Chlorobenzene		103	µg/L	1	100	<1.00	103	0	85 - 118

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		49.02	µg/L	1	50	98	85 - 117
Toluene-d8		50.98	µg/L	1	50	101	93 - 109
4-Bromofluorobenzene		43.14	µg/L	1	50	86	76 - 109

Sample: LCS

QC Batch: QC06421

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
Total Mercury		2.37	mg/Kg	1	2.50	<0.19	94	80 - 120	20

Sample: LCSD

QC Batch: QC06421

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
Total Mercury		2.57	mg/Kg	1	2.50	<0.19	102	8	80 - 120

Sample: LCS

QC Batch: QC06422

Param	Flag	Sample Result	Spike			% Rec.	RPD	% Rec. Limit	RPD Limit
			Units	Dil.	Amount Added				
Total Arsenic		95	mg/Kg	1	100	<5.0	95	75 - 125	20
Total Barium		212	mg/Kg	1	200	<5.0	106	75 - 125	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit
Total Cadmium		19.9	mg/Kg	1	20	<2.0	99	75 - 125	20
Total Chromium		48.6	mg/Kg	1	40	<5.0	121	75 - 125	20
Total Lead		99	mg/Kg	1	100	<5.0	99	75 - 125	20
Total Selenium		86	mg/Kg	1	100	<5.0	86	75 - 125	20
Total Silver		4.8	mg/Kg	1	20	<2.0	24	75 - 125	20
Total Vanadium		102	mg/Kg	1	100	<5.0	102	75 - 125	20

Sample: LCSD

QC Batch: QC06422

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit	
Total Arsenic		95	mg/Kg	1	100	<5.0	95	0	75 - 125	20
Total Barium		213	mg/Kg	1	200	<5.0	196	0	75 - 125	20
Total Cadmium		19.9	mg/Kg	1	20	<2.0	99	0	75 - 125	20
Total Chromium		48.4	mg/Kg	1	40	<5.0	121	0	75 - 125	20
Total Lead		99	mg/Kg	1	100	<5.0	99	0	75 - 125	20
Total Selenium		85	mg/Kg	1	100	<5.0	85	1	75 - 125	20
Total Silver		4.8	mg/Kg	1	20	<2.0	24	0	75 - 125	20
Total Vanadium		102	mg/Kg	1	100	<5.0	102	0	75 - 125	20

## Quality Control Report Matrix Spikes and Duplicate Spikes

Sample: MS

QC Batch: QC05658

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit
TRPHC		207	mg/Kg	1	250	<10.0	82	70 - 130	20

Sample: MSD

QC Batch: QC05658

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD Limit
TRPHC		222	mg/Kg	1	250	<10.0	88	70 - 130	20

Sample: MS

QC Batch: QC05721

Report Date: November 15, 2000  
N/A

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		2689.98	mg/Kg	1	1250	1600	87		80 - 120	20
Fluoride		228.46	mg/Kg	1	250	15	85		80 - 120	20
Nitrate-N		254.20	mg/Kg	1	250	22	92		80 - 120	20
Sulfate		1478.99	mg/Kg	1	1250	368	88		80 - 120	20

Sample: MSD

QC Batch: QC05721

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		2685.85	mg/Kg	1	1250	1600	86	0	80 - 120	20
Fluoride		226.62	mg/Kg	1	250	15	84	1	80 - 120	20
Nitrate-N		252.06	mg/Kg	1	250	22	92	1	80 - 120	20
Sulfate		1471.52	mg/Kg	1	1250	368	88	1	80 - 120	20

Sample: MS

QC Batch: QC05994

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Nitrate-N		12.70	mg/Kg	1	12.50	<1.0	101		80 - 120	20
Sulfate		89.71	mg/Kg	1	62.50	33	90		80 - 120	20

Sample: MSD

QC Batch: QC05994

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Nitrate-N		12.14	mg/Kg	1	12.50	<1.0	97	4	80 - 120	20
Sulfate		90.46	mg/Kg	1	62.50	33	91	1	80 - 120	20

Sample: MS

QC Batch: QC06421

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		2.57	mg/Kg	1	2.50	<0.19	102		80 - 120	20

Sample: MSD

QC Batch: QC06421

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Mercury		2.64	mg/Kg	1	2.50	<0.19	105	3	80 - 120	20

Sample: MS      QC Batch: QC06422

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Arsenic		89	mg/Kg	1	100	<5.0	89	0	75 - 125	20
Total Barium		538	mg/Kg	1	200	320	109	26	75 - 125	20
Total Cadmium		16	mg/Kg	1	20	<2.0	80	0	75 - 125	20
Total Chromium		40	mg/Kg	1	40	<5.0	100	2	75 - 125	20
Total Lead		78	mg/Kg	1	100	<5.0	78	1	75 - 125	20
Total Selenium		77	mg/Kg	1	100	<5.0	77	2	75 - 125	20
Total Silver		4.8	mg/Kg	1	20	<2.0	24	10	75 - 125	20
Total Vanadium		12	mg/Kg	1	100	5.9	86	1	75 - 125	20

Sample: MSD      QC Batch: QC06422

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Arsenic		89	mg/Kg	1	100	<5.0	89	0	75 - 125	20
Total Barium		488	mg/Kg	1	200	320	84	26	75 - 125	20
Total Cadmium		16	mg/Kg	1	20	<2.0	80	0	75 - 125	20
Total Chromium		41	mg/Kg	1	40	<5.0	102	2	75 - 125	20
Total Lead		79	mg/Kg	1	100	<5.0	79	1	75 - 125	20
Total Selenium		79	mg/Kg	1	100	<5.0	79	2	75 - 125	20
Total Silver		5.3	mg/Kg	1	20	<2.0	26	10	75 - 125	20
Total Vanadium		93	mg/Kg	1	100	5.9	87	1	75 - 125	20

## Quality Control Report Duplicate Samples

Sample: Duplicate      QC Batch: QC05919

Param	Flag	Duplicate	Sample	Dilution	RPD	RPD Limit
		Result	Result			
pH		12.4	12.4	s.u.	1	0

Sample: Duplicate      QC Batch: QC06096

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		8.2	8.2	s.u.	1	0	20

Sample: Duplicate      QC Batch: QC06272

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	<sup>32</sup>	1510	1900	mg/L	1	23	20

## Quality Control Report Continuing Calibration Verification Standards

Sample: CCV (1)      QC Batch: QC05658

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	108	108	75 - 125	10/16/00

Sample: CCV (2)      QC Batch: QC05658

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	75 - 125	10/16/00

Sample: ICV (1)      QC Batch: QC05658

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	106	106	75 - 125	10/16/00

Sample: CCV (1)      QC Batch: QC05721

<sup>32</sup>The RPD was high. There was not enough of the samples to re-run.

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N/A

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.21	89	80 - 120	10/17/00
Fluoride		mg/L	2.50	2.26	90	80 - 120	10/17/00
Nitrate-N		mg/L	2.50	2.35	94	80 - 120	10/17/00
Sulfate		mg/L	12.50	11.19	89	80 - 120	10/17/00

Sample: ICV (1)

QC Batch: QC05721

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.19	89	80 - 120	10/17/00
Fluoride		mg/L	2.50	2.24	89	80 - 120	10/17/00
Nitrate-N		mg/L	2.50	2.35	94	80 - 120	10/17/00
Sulfate		mg/L	12.50	11.20	89	80 - 120	10/17/00

Sample: CCV (1)

QC Batch: QC05838

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/Kg	0.12	.118	98	60 - 118	10/24/00

Sample: ICV (1)

QC Batch: QC05838

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/Kg	0.12	.117	97	60 - 118	10/24/00

Sample: CCV (1)

QC Batch: QC05875

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	102	102	80 - 120	10/23/00
1,1-Dichloroethene		µg/L	100	93	93	73 - 154	10/23/00
Chloroform		µg/L	100	98	98	80 - 120	10/23/00
Toluene		µg/L	100	92	92	81 - 122	10/23/00
Chlorobenzene		µg/L	100	94	94	86 - 121	10/23/00
Ethylbenzene		µg/L	100	92	92	80 - 120	10/23/00
Dibromofluoromethane		µg/L	50	50.87	101	80 - 120	10/23/00
Toluene-d8		µg/L	50	49.43	98	80 - 120	10/23/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
4-Bromofluorobenzene		µg/L	50	48.23	96	80 - 120	10/23/00

## Sample: CCV (2)

QC Batch: QC05875

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	102	102	80 - 120	10/23/00
1,1-Dichloroethene		µg/L	100	93	93	73 - 154	10/23/00
Chloroform		µg/L	100	98	98	80 - 120	10/23/00
Toluene		µg/L	100	92	92	81 - 122	10/23/00
Chlorobenzene		µg/L	100	94	94	86 - 121	10/23/00
Ethylbenzene		µg/L	100	92	92	80 - 120	10/23/00
Dibromofluoromethane		µg/L	50	50.87	101	80 - 120	10/23/00
Toluene-d8		µg/L	50	49.43	98	80 - 120	10/23/00
4-Bromofluorobenzene		µg/L	50	48.23	96	80 - 120	10/23/00

## Sample: CCV (1)

QC Batch: QC05913

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/Kg	60	51.77	91	34 - 102	10/25/00
1,4-Dichlorobenzene		mg/Kg	60	59.57	99	41 - 102	10/25/00
2-Nitrophenol		mg/Kg	60	60.12	100	80 - 120	10/25/00
2,4-Dichlorophenol		mg/Kg	60	62.33	103	80 - 120	10/25/00
Hexachlorobutadiene		mg/Kg	60	60.91	101	80 - 120	10/25/00
4-Chloro-3-methylphenol		mg/Kg	60	62.39	103	46 - 113	10/25/00
2,4,6-Trichlorophenol		mg/Kg	60	58.51	97	80 - 120	10/25/00
Acenaphthene		mg/Kg	60	60.01	100	50 - 107	10/25/00
Diphenylamine		mg/Kg	60	60.56	100	80 - 120	10/25/00
Pentachlorophenol		mg/Kg	60	54.43	90	0 - 121	10/25/00
Fluoranthene		mg/Kg	60	56.42	94	80 - 120	10/25/00
Di-n-octylphthalate		mg/Kg	60	50.35	83	80 - 120	10/25/00
Benzo(a)pyrene		mg/Kg	60	59.31	98	80 - 120	10/25/00
2-Fluorophenol		mg/Kg	60	57.04	95	22 - 103	10/25/00
Phenol-d5		mg/Kg	60	55.30	92	32 - 112	10/25/00
Nitrobenzene-d5		mg/Kg	60	61.22	102	45 - 111	10/25/00
2-Fluorobiphenyl		mg/Kg	60	59.93	98	43 - 110	10/25/00
2,4,6-Tribromophenol		mg/Kg	60	57.18	95	34 - 136	10/25/00
Terphenyl-d14		mg/Kg	60	64.25	107	47 - 120	10/25/00

## Sample: CCV (1)

QC Batch: QC05919

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/18/00

Sample: ICV (1) QC Batch: QC05919

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/18/00

Sample: CCV (1) QC Batch: QC05952

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/Kg	0.80	.782	97	80 - 120	10/27/00

Sample: ICV (1) QC Batch: QC05952

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenolics		mg/Kg	0.80	.776	97	80 - 120	10/27/00

Sample: CCV (1) QC Batch: QC05994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.32	90	80 - 120	10/30/00
Fluoride		mg/L	2.50	2.34	93	80 - 120	10/30/00
Nitrate-N		mg/L	2.50	2.35	94	80 - 120	10/30/00
Sulfate		mg/L	12.50	11.51	92	80 - 120	10/30/00

Sample: ICV (1) QC Batch: QC05994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.36	90	80 - 120	10/30/00
Fluoride		mg/L	2.50	2.35	94	80 - 120	10/30/00

Continued ...

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.36	94	80 - 120	10/30/00
Sulfate		mg/L	12.50	11.58	92	80 - 120	10/30/00

Sample: CCV (1)

QC Batch: QC06007

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/Kg	60	61.96	103	34 - 102	10/27/00
1,4-Dichlorobenzene		mg/Kg	60	59.27	98	41 - 102	10/27/00
2-Nitrophenol		mg/Kg	60	60.47	100	80 - 120	10/27/00
2,4-Dichlorophenol		mg/Kg	60	61.78	102	80 - 120	10/27/00
Hexachlorobutadiene		mg/Kg	60	57.57	95	80 - 120	10/27/00
4-Chloro-3-methylphenol		mg/Kg	60	61.18	101	46 - 113	10/27/00
2,4,6-Trichlorophenol		mg/Kg	60	58.75	97	80 - 120	10/27/00
Acenaphthene		mg/Kg	60	57.94	96	50 - 107	10/27/00
Diphenylamine		mg/Kg	60	61.75	102	80 - 120	10/27/00
Pentachlorophenol		mg/Kg	60	57.42	95	0 - 121	10/27/00
Fluoranthene		mg/Kg	60	58.12	96	80 - 120	10/27/00
Di-n-octylphthalate		mg/Kg	60	60.25	100	80 - 120	10/27/00
Benzo(a)pyrene		mg/Kg	60	59.39	98	80 - 120	10/27/00
2-Fluorophenol		mg/Kg	60	59.92	99	22 - 103	10/27/00
Phenol-d5		mg/Kg	60	61.95	103	32 - 112	10/27/00
Nitrobenzene-d5		mg/Kg	60	59.52	99	45 - 111	10/27/00
2-Fluorobiphenyl		mg/Kg	60	59.51	99	43 - 110	10/27/00
2,4,6-Tribromophenol		mg/Kg	60	52.03	86	34 - 136	10/27/00
Terphenyl-d14		mg/Kg	60	65.21	108	47 - 120	10/27/00

Sample: CCV (1)

QC Batch: QC06040

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	100	100	80 - 120	10/25/00
1,1-Dichloroethene		µg/L	100	96	96	73 - 154	10/25/00
Chloroform		µg/L	100	99	99	80 - 120	10/25/00
Toluene		µg/L	100	96	96	81 - 122	10/25/00
Chlorobenzene		µg/L	100	99	99	86 - 121	10/25/00
Ethylbenzene		µg/L	100	98	98	80 - 120	10/25/00
Dibromofluoromethane		µg/L	50	49.65	99	80 - 120	10/25/00
Toluene-d8		µg/L	50	49.68	99	80 - 120	10/25/00
4-Bromofluorobenzene		µg/L	50	47.72	95	80 - 120	10/25/00

Sample: CCV (1)

QC Batch: QC06096

Report Date: November 15, 2000  
N/A

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Shell Westgate

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/27/00

Sample: ICV (1) QC Batch: QC06096

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/27/00

Sample: CCV (1) QC Batch: QC06272

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/Kg	1000	973	97	80 - 120	10/30/00

Sample: ICV (1) QC Batch: QC06272

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	973	97	80 - 120	10/30/00

Sample: CCV (1) QC Batch: QC06421

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00508	101	80 - 120	10/26/00

Sample: ICV (1) QC Batch: QC06421

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00458	91	80 - 120	10/26/00

Sample: CCV (1) QC Batch: QC06422

Report Date: November 15, 2000  
N/A

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Shell Westgate

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Hobbs, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/Kg	2.50	2.54	101	75 - 125	10/22/00
Total Barium		mg/Kg	5	5.29	105	75 - 125	10/22/00
Total Cadmium		mg/Kg	0.50	0.51	102	75 - 125	10/22/00
Total Chromium		mg/Kg	1	1.03	103	75 - 125	10/22/00
Total Lead		mg/Kg	2.50	2.57	102	75 - 125	10/22/00
Total Selenium		mg/Kg	2.50	2.55	102	75 - 125	10/22/00
Total Silver		mg/Kg	0.50	0.51	102	75 - 125	10/22/00
Total Vanadium		mg/Kg	2.50	2.54	101	75 - 125	10/22/00

Sample: ICV (1)

QC Batch: QC06422

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/Kg	2.50	2.51	100	75 - 125	10/22/00
Total Barium		mg/Kg	5	5.22	104	75 - 125	10/22/00
Total Cadmium		mg/Kg	0.50	0.51	102	75 - 125	10/22/00
Total Chromium		mg/Kg	1	1.02	102	75 - 125	10/22/00
Total Lead		mg/Kg	2.50	2.54	101	75 - 125	10/22/00
Total Selenium		mg/Kg	2.50	2.52	100	75 - 125	10/22/00
Total Silver		mg/Kg	0.50	0.50	100	75 - 125	10/22/00
Total Vanadium		mg/Kg	2.50	2.50	100	75 - 125	10/22/00

155439-1

P 1 of 2

# TraceAnalysis, Inc.

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4725 Ripley Dr., Ste A  
 El Paso, Texas 79922-1028  
 Tel (915) 585-3443  
 Fax (915) 585-1944  
 1 (888) 588-3443

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BLK? Identification/Ext.  
 Address: 1524 W. Highland Hills, RR. #620  
 Contact Person: Jeff Brown

Company Name:

(Street, City, Zip)

Address:

Contact Person:

Project #:

Invoice to:

(If different from above)

Project Name: Shell & P Company  
 Project #: 5100  
 Sample #: 5100

Project Location:

Project #:

Invoice to:

(If different from above)

Project Name:

Project #:

Invoice to:

(If different from above)

Project #:

Project Location:

Project #:

Invoice to:

(If different from above)

Project #:

Project Location:

Project #:

Invoice to:

(If different from above)

Project #:

Project Location:

Project #:

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(If different from above)

Project #:

Project Location:

Project #:

Invoice to:

(If different from above)

Project #:

Project Location:

Project #:

Invoice to:

(If different from above)

Project #:

Project Location:

Project #:

Phone #: 1515-397-6553Fax #: 

## ANALYSIS REQUEST

(Circle or Specify Method No.)



**PLAINTIFFS' RESULTS FROM  
SPLIT SAMPLING WITH BBC  
INTERNATIONAL  
OCTOBER 11-12, 2000**

**CLIENT:** Craig Lewis & Associates  
**Project:** Westgate  
**Lab Order:** 0010061  
**Date Received:** 10/13/00

**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>
0010061-01	SB13-30-01 (3'-5')		10/11/00 8:43:00 AM
0010061-02	SB 13-30-01(8'-11')		10/11/00 9:16:00 AM
0010061-03	SB 12-30-01 (20 - 23')		10/11/00 2:03:00 PM
0010061-04	WSB - 01		10/12/00 10:17:00 AM
0010061-05	WSB - 02		10/12/00 9:30:00 AM
0010061-06	SB 1510 - 01 (5-7')		10/12/00 1:28:00 PM
0010061-07	Trip Blank		10/12/00

**CLIENT:** Craig Lewis & Associates  
**Project:** Westgate  
**Lab Order:** 0010061

**CASE NARRATIVE**

The analyses for Total Petroleum Hydrocarbons, Chloride, Fluoride, Nitrate, Sulfate, Cyanide and Total Recoverable Phenolics were subcontracted to Severn Trent Laboratories in Houston, Texas.

The analyses for Radium 226 and Radium 228 were subcontracted to Enviro-Test Laboratories in Casper, Wyoming.

The analysis noted as Miscellaneous Analysis is being used to report Radium 226 and Radium 228.

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-01

Client Sample ID: SB13-30-01 (3'-5')  
 Collection Date: 10/11/00 8:43:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>						
				E300		Analyst: STH
Chloride	ND	40		mg/Kg	1	10/27/00
Fluoride	ND	20		mg/Kg	1	10/27/00
Nitrogen, Nitrate (As N)	ND	30		mg/Kg	1	10/27/00
Sulfate	310	40		mg/Kg	1	10/27/00
<b>PETROLEUM HYDROCARBONS, T/R</b>						
Petroleum Hydrocarbons, TR	4,200	200		ug/Kg	1	10/19/00
<b>TCL VOLATILE ORGANICS</b>						
				SW8260		Analyst: PC
1,1,1-Trichloroethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,1,2-Trichloroethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,1-Dichloroethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,1-Dichloroethene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,2-Dichloroethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
1,2-Dichloropropane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
2-Butanone	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
2-Hexanone	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
4-Methyl-2-pentanone	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
Acetone	ND	25		ug/Kg	1	10/17/00 9:57:00 PM
Benzene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Bromodichloromethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Bromoform	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
Bromomethane	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
Carbon disulfide	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Carbon tetrachloride	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Chlorobenzene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Chloroethane	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
Chloroform	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Chloromethane	ND	10		ug/Kg	1	10/17/00 9:57:00 PM
cis-1,2-Dichloroethene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
cis-1,3-Dichloropropene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Dibromochloromethane	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Dichloromethane	ND	25		ug/Kg	1	10/17/00 9:57:00 PM
Ethylbenzene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Styrene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Tetrachloroethene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Toluene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
trans-1,2-Dichloroethene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
trans-1,3-Dichloropropene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM
Trichloroethene	ND	5.0		ug/Kg	1	10/17/00 9:57:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-01

Client Sample ID: SB13-30-01 (3'-5')  
 Collection Date: 10/11/00 8:43:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/17/00 9:57:00 PM
Xylenes, Total	ND	15		µg/Kg	1	10/17/00 9:57:00 PM
Sum: 1,2-Dichloroethane-d4	129	70-130		%REC	1	10/17/00 9:57:00 PM
Sum: 4-Bromofluorobenzene	92.5	70-130		%REC	1	10/17/00 9:57:00 PM
Sum: Dibromo fluromethane	142	70-130	S	%REC	1	10/17/00 9:57:00 PM
Sum: Toluene-d8	135	70-130	S	%REC	1	10/17/00 9:57:00 PM
<b>VOLATILE LIBRARY SEARCH</b>						
Library Search (Attached)	See attached			SW8260		Analyst: PC
<b>TCL SEMIVOLATILE ORGANICS</b>						
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,4-Dichlorophenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,4-Dinitrophenol	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2-Chlorophenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2-Methylphenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
2-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
2-Nitrophenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
3,3'-Dichlorobenzidine	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
3-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
4,6-Dinitro-2-methylphenol	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
4-Bromophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
4-Chloro-3-methylphenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
4-Chloroaniline	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
4-Chlorophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
4-Methylphenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
4-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
4-Nitrophenol	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
Acenaphthene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Acenaphthylene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Anthracene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Benz(a)anthracene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM

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CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-01

Client Sample ID: SB13-30-01 (3'-5')  
 Collection Date: 10/11/00 8:43:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzo(a)pyrene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Butyl benzyl phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Carbazole	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Chrysene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Di-n-butyl phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Di-n-octyl phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Dibenzofuran	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Diethyl phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Dimethyl phthalate	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Fluoranthene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Fluorene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Hexachlorobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Hexachlorobutadiene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Hexachlorocyclopentadiene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Hexachloroethane	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Isophorone	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Naphthalene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Nitrobenzene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Pentachlorophenol	ND	1,600		µg/Kg	1	10/26/00 7:29:00 PM
Phenanthrene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Phenol	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Pyrene	ND	330		µg/Kg	1	10/26/00 7:29:00 PM
Sum: 2,4,6-Tribromophenol	101	19-122		%REC	1	10/26/00 7:29:00 PM
Sum: 2-Fluorobiphenyl	87.9	30-115		%REC	1	10/26/00 7:29:00 PM
Sum: 2-Fluorophenol	70.8	24-121		%REC	1	10/26/00 7:29:00 PM
Sum: 4-Terphenyl-d14	103	18-137		%REC	1	10/26/00 7:29:00 PM
Sum: Nitrobenzene-d5	75.4	23-120		%REC	1	10/26/00 7:29:00 PM
Sum: Phenol-d6	82.3	24-113		%REC	1	10/26/00 7:29:00 PM

## SEMICVOLATILE LIBRARY SEARCH

Library Search (Attached)

see attached

SW8270

Prep Date: 10/17/00

Analyst: HV

1

10/26/00 7:29:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

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4

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-01

**Client Sample ID:** SB13-30-01 (3'-5')  
**Collection Date:** 10/11/00 8:43:00 AM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CYANIDE, TOTAL				SW9012		Analyst: STH
Cyanide	ND	0.50		mg/Kg	1	10/20/00
MERCURY, SOIL				SW7471A	Prep Date: 10/17/00	Analyst: ALR
Mercury	ND	100		µg/Kg	1	10/17/00 4:54:48 PM
ICP METALS, TOTAL				SW6020	Prep Date: 10/18/00	Analyst: HC
Aluminum	4,730	2,500		mg/Kg	500	10/31/00 2:08:00 PM
Antimony	ND	5.00		mg/Kg	1	10/25/00 3:39:00 PM
Arsenic	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Banum	283	25.8		mg/Kg	5.158	10/26/00 3:43:00 PM
Beryllium	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Cadmium	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Calcium	186.000	5,000		mg/Kg	100	10/28/00 2:56:00 PM
Chromium	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Cobalt	ND	5.00		mg/Kg	1	10/20/00 6:03:00 PM
Copper	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Iron	3,290	10.0		mg/Kg	1	10/26/00 3:39:00 PM
Lead	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Magnesium	4,560	50.0		mg/Kg	1	10/26/00 3:39:00 PM
Manganese	26.1	5.00		mg/Kg	1	10/20/00 6:03:00 PM
Nickel	7.79	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Potassium	847	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Selenium	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Silver	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Sodium	151	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Thallium	ND	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Vanadium	9.92	5.00		mg/Kg	1	10/26/00 3:39:00 PM
Zinc	41.1	5.00		mg/Kg	1	10/28/00 3:05:00 PM
CORROSIVITY				SW9045B		Analyst: JLJ
pH	9.00	0.10		pH Units	1	10/16/00 4:30:00 PM
PHENOLICS				SW9065		Analyst: STH
Phenolics, Total Recoverable	0.55	0.0050		mg/kg	1	10/25/00
TOTAL DISSOLVED SOLIDS				E160.1		Analyst: MG
Total Dissolved Solids (Residue, Filterable)	780	50		mg/Kg	1	10/19/00 11:00:00 AM
MISCELLANEOUS SUBCONTRACT CODE				NA		Analyst: ETI
Miscellaneous Analysis	See Attached				1	10/18/00

Qualifiers: ND - Not Detected at the Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

01A

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-01A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101708

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/17/00

GC Column: DB624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (ml)

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

**SEMICVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS**

0010061-01B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-01B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102621

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/26/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 22

**CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg**

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 31295-56-4	DODECANE, 2,6,11-TRIMETHYL-	8.29	664.33	NJ
2. 629-59-4	TETRADECANE	8.43	975.38	NJ
3. 3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	8.78	1202.17	NJ
4. 629-62-9	PENTADECANE	8.98	1210.14	NJ
5. 544-76-3	HEXADECANE	9.49	873.78	NJ
6. 629-78-7	HEPTADECANE	9.96	1028.29	NJ
7. 1921-70-6	PENTADECANE, 2,6,10,14-TETRA	10.00	1522.03	NJ
8. 593-45-3	OCTADECANE	10.41	997.68	NJ
9. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM	10.46	1705.75	NJ
10. 629-92-5	NONADECANE	10.84	913.08	NJ
11.	UNKNOWN ALKANE	11.53	526.43	J
12. 629-94-7	HENEICOSANE	11.62	966.36	NJ
13. 629-97-0	DOCOSANE	11.98	881.07	NJ
14. 112-95-8	EICOSANE	12.34	834.31	NJ
15.	UNKNOWN ALKANE	12.70	866.87	J
16. 629-94-7	HENEICOSANE	13.51	822.20	NJ
17. 638-67-5	TRICOSANE	13.93	527.50	NJ
18. 20175-84-2	[1,2'-BINAPHTHENE]-5,5',8,	15.31	600.83	NJ
19. 24739-08-0	C(14A)-HOMO-27-NOR-14.BETA.-	15.65	592.10	NJ
20. 53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	16.00	451.72	NJ
21. 53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	16.44	650.24	NJ
22. 20175-84-2	[1,2'-BINAPHTHENE]-5,5',8,	17.02	411.70	NJ
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-02

Client Sample ID: SB 13-30-01(8'-11')  
 Collection Date: 10/11/00 9:16:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>						
				E300		Analyst: STH
Chloride	ND	40		mg/Kg	1	10/27/00
Fluoride	39	20		mg/Kg	1	10/27/00
Nitrogen, Nitrate (As N)	ND	30		mg/Kg	1	10/27/00
Sulfate	ND	40		mg/Kg	1	10/27/00
<b>PETROLEUM HYDROCARBONS, T/R</b>						
Petroleum Hydrocarbons, TR	36.000	1,000		mg/Kg	1	10/19/00
<b>TCL VOLATILE ORGANICS</b>						
				SW8260		Analyst: PC
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
2-Butanone	41	10		µg/Kg	1	10/17/00 8:38:00 PM
2-Hexanone	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
Acetone	350	120		µg/Kg	5	10/18/00 1:22:00 PM
Benzene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Bromoform	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
Bromomethane	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Chloroethane	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
Chloroform	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Chloromethane	ND	10		µg/Kg	1	10/17/00 8:38:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Dichloromethane	ND	25		µg/Kg	1	10/17/00 8:38:00 PM
Ethylbenzene	430	25		µg/Kg	5	10/18/00 1:22:00 PM
Styrene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Toluene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	10/17/00 8:38:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-02

Client Sample ID: SB 13-30-01(8'-11')  
 Collection Date: 10/11/00 9:16:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/17/00 8:38:00 PM
Xylenes, Total	ND	15		µg/Kg	1	10/17/00 8:38:00 PM
Sum: 1,2-Dichloroethane-d4	125	70-130	S	%REC	5	10/18/00 1:22:00 PM
Sum: 1,2-Dichloroethane-d4	139	70-130	S	%REC	1	10/17/00 8:38:00 PM
Sum: 4-Bromofluorobenzene	112	70-130		%REC	1	10/17/00 8:38:00 PM
Sum: 4-Bromofluorobenzene	87.5	70-130		%REC	5	10/18/00 1:22:00 PM
Sum: Dibromoformmethane	155	70-130	S	%REC	1	10/17/00 8:38:00 PM
Sum: Dibromoformmethane	143	70-130	S	%REC	5	10/18/00 1:22:00 PM
Sum: Toluene-d8	146	70-130	S	%REC	1	10/17/00 8:38:00 PM
Sum: Toluene-d8	136	70-130	S	%REC	5	10/18/00 1:22:00 PM
<b>VOLATILE LIBRARY SEARCH</b>		<b>SW8260</b>		Analyst: PC		
Library Search (Attached)	See attached				1	10/17/00 8:38:00 PM
<b>TCL SEMIVOLATILE ORGANICS</b>		<b>SW8270</b>		Prep Date:	10/17/00	Analyst: HV
1,2,4-Trichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
1,2-Dichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
1,3-Dichlorobenzene	ND	3,300		µg/Kg	10	10/25/00 6:35:00 PM
1,4-Dichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2,4,5-Trichlorophenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2,4,6-Trichlorophenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2,4-Dichlorophenol	ND	3,300		µg/Kg	10	10/25/00 6:35:00 PM
2,4-Dimethylphenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2,4-Dinitrophenol	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
2,4-Dinitrotoluene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2,6-Dinitrotoluene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2-Chloronaphthalene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2-Chlorophenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2-Methylnaphthalene	30,000	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2-Methylphenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
2-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
2-Nitroenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
3,3'-Dichlorobenzidine	ND	3,300		µg/Kg	10	10/25/00 6:35:00 PM
3-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
4,6-Dinitro-2-methylphenol	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
4-Bromophenyl phenyl ether	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
4-Chloro-3-methylphenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
4-Chloraniline	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
4-Chlorocenyl phenyl ether	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
4-Methylphenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
4-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
4-Nitrophenol	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-02

**Client Sample ID:** SB 13-30-01(8'-11')  
**Collection Date:** 10/11/00 9:16:00 AM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Acenaphthylene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Anthracene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Benz(a)anthracene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Benzo(a)pyrene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Benzo(b)fluoranthene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Benzo(g,h,i)perylene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Benzo(k)fluoranthene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Bis(2-chloroethoxy)methane	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Bis(2-chloroethyl)ether	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Bis(2-chloroisopropyl)ether	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Bis(2-ethylhexyl)phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Butyl benzyl phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Carbazole	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Chrysene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Di-n-butyl phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Di-n-octyl phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Dibenz(a,n)anthracene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Dibenzofuran	3,900	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Diethyl phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Dimethyl phthalate	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Fluoranthene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Fluorene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Hexachlorobenzene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Hexachlorobutadiene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Hexachlorocyclopentadiene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Hexachloroethane	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Indeno(1,2,3-cd)pyrene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Isophorone	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
N-Nitrosodi-n-propylamine	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
N-Nitrosodiphenylamine	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Naphthalene	12,000	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Nitrobenzene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Pentachlorophenol	ND	16,000		µg/Kg	10	10/26/00 6:35:00 PM
Phenanthrene	5,800	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Phenol	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Pyrene	ND	3,300		µg/Kg	10	10/26/00 6:35:00 PM
Sum: 2,4,6-Tribromophenol	87.7	19-122		%REC	10	10/26/00 6:35:00 PM
Sum: 2-Fluorobiphenyl	69.9	30-115		%REC	10	10/26/00 6:35:00 PM
Sum: 2-Fluorophenol	43.8	24-121		%REC	10	10/26/00 6:35:00 PM
Sum: 4-Terphenyl-d14	74.2	18-137		%REC	10	10/26/00 6:35:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

U - Analyzed for but Not Detected

E - Value above quantitation range

H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-02

**Client Sample ID:** SB 13-30-01(8'-11')  
**Collection Date:** 10/11/00 9:16:00 AM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Surf: Nitrobenzene-d5	108	23-120		%REC	10	10/26/00 6:35:00 PM
Surf: Phenol-d6	60.7	24-113		%REC	10	10/26/00 6:35:00 PM
<b>SEMIVOLATILE LIBRARY SEARCH</b>				<b>SW8270</b>	<b>Prep Date:</b> 10/17/00	<b>Analyst:</b> HV
Library Search (Attached)	see attached				10	10/26/00 6:35:00 PM
<b>CYANIDE, TOTAL</b>				<b>SW9012</b>		<b>Analyst:</b> STH
Cyanide	ND	0.50		mg/Kg	1	10/20/00
<b>MERCURY, SOIL</b>				<b>SW7471A</b>	<b>Prep Date:</b> 10/17/00	<b>Analyst:</b> ALR
Mercury	ND	100		µg/Kg	1	10/17/00 5:10:00 PM
<b>ICP METALS, TOTAL</b>				<b>SW6020</b>	<b>Prep Date:</b> 10/18/00	<b>Analyst:</b> HC
Aluminum	15,800	5,000		mg/Kg	1000	10/26/00 1:27:00 PM
Antimony	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Arsenic	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Banum	164	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Beryllium	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Cadmium	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Calcium	92,400	5,000		mg/Kg	100	10/26/00 3:13:00 PM
Chromium	10.2	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Cobalt	ND	5.00		mg/Kg	1	10/20/00 6:08:00 PM
Copper	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Iron	8,440	10.0		mg/Kg	1	10/26/00 5:33:00 PM
Lead	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Magnesium	11,300	50.0		mg/Kg	1	10/26/00 5:33:00 PM
Manganese	55.4	5.00		mg/Kg	1	10/20/00 6:08:00 PM
Nickel	11.1	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Potassium	3,140	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Selenium	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Silver	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Sodium	239	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Thallium	ND	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Vanadium	24.2	5.00		mg/Kg	1	10/26/00 5:33:00 PM
Zinc	46.4	5.00		mg/Kg	1	10/26/00 3:18:00 PM
<b>CORROSIVITY</b>				<b>SW9045B</b>		<b>Analyst:</b> JLJ
pH	8.94	0.10		pH Units	1	10/16/00 4:30:00 PM
<b>PHENOLICS</b>				<b>SW9065</b>		<b>Analyst:</b> STH
Phenolics, Total Recoverable	1.5	0.0050		mg/kg	1	10/25/00
<b>TOTAL DISSOLVED SOLIDS</b>				<b>E160.1</b>		<b>Analyst:</b> MG
Total Dissolved Solids (Residue, Filterable)	860	50		mg/Kg	1	10/19/00 11:00:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: 31-Oct-2000

CLIENT: Craig Lewis & Associates  
Lab Order: 0010061  
Project: Westgate  
Lab ID: 0010061-02

Client Sample ID: SB 13-30-01(8'-11')  
Collection Date: 10/11/00 9:16:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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MISCELLANEOUS SUBCONTRACT CODE  
Miscellaneous Analysis See Attached

NA

1

Analyst: ETI

10/18/00

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
U - Analyzed for but Not Detected  
E - Value above quantitation range  
H - Analyzed outside of Hold Time

FORM I  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

02A

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-02A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101705

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/17/00

GC Column: DB624 ID: 0.13 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (ml)

Number TICs found: 10

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 3728-54-9	CYCLOHEXANE, 1-ETHYL-2-METHYL-	10.65	1929.54	NJ
2. 2051-30-1	OCTANE, 2,6-DIMETHYL-	10.86	3254.84	NJ
3. 6783-92-2	CYCLOHEXANE, 1,1,2,3-TETRAHYDRO-	11.40	41.00	NJ
4. 108-67-3	BENZENE, 1,3,5-TRIMETHYL-	11.67	37.45	NJ
5. 611-14-3	BENZENE, 1-ETHYL-2-METHYL-	11.88	40.09	NJ
6. 95-63-6	BENZENE, 1,2,4-TRIMETHYL-	12.05	67.71	NJ
7. 933-98-2	BENZENE, 1-ETHYL-2,3-DIMETHYL-	12.75	55.53	NJ
8. 1074-17-5	BENZENE, 1-METHYL-2-PROPYL-	12.94	44.19	NJ
9. 95-93-2	BENZENE, 1,2,4,5-TETRAMETHYL-	14.00	37.63	NJ
10. 119-64-2	NAPHTHALENE, 1,2,3,4-TETRAHYDRO-	14.17	35.00	NJ
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I  
SEMICVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

0010061-02B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-02B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102619

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/26/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N

pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 19

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKYL BENZENE	4.95	14435.28	J
2. 2847-72-5	DECANE, 4-METHYL-	5.29	9313.63	NJ
3.	UNKNOWN ALKYL BENZENE	5.76	16633.26	J
4.	UNKNOWN ALKYL BENZENE	6.42	7850.39	J
5.	UNKNOWN ALKYL BENZENE	6.73	12720.32	J
6. 29053-04-1	CYCLOPENTANE, 1-METHYL-3-(2-	6.99	13333.33	NJ
7. 61142-20-9	CYCLOHEXANE, (4-METHYL)PENTYL	7.41	8935.23	NJ
8. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	7.62	14453.86	NJ
9. 31295-56-4	DODECANE, 2,6,11-TRIMETHYL-	8.30	13047.42	NJ
10. 3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	8.78	11537.40	NJ
11. 24251-86-3	DODECANE, 5,8-DIETHYL-	9.73	12690.82	NJ
12. 1921-70-6	PENTADECANE, 2,6,10,14-TETRA	10.00	51445.23	NJ
13.	UNKNOWN ALKANE	10.17	16653.96	J
14. 132-65-0	DIBENZOTHIOPHENE	10.41	19600.96	NJ
15. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM	10.46	75639.29	NJ
16. 4860-03-1	HEXADECANE, 1-CHLORO-	10.80	15254.58	NJ
17. 832-69-9	PHENANTHRENE, 1-METHYL-	11.04	15649.08	NJ
18. 21164-95-4	HEXADECANE, 7,9-DIMETHYL-	11.52	14041.42	NJ
19. 7469-40-1	NAPHTHALENE, 1,2-DIHYDRO-4-P	11.58	11054.98	NJ
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-03

Client Sample ID: SB 12-30-01 (20 - 23')  
 Collection Date: 10/11/00 2:03:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>						
Chloride	ND	40		mg/Kg	1	10/27/00
Fluoride	ND	20		mg/Kg	1	10/27/00
Nitrogen, Nitrate (As N)	ND	30		mg/Kg	1	10/27/00
Sulfate	ND	40		mg/Kg	1	10/27/00
<b>PETROLEUM HYDROCARBONS, T/R</b>						
Petroleum Hydrocarbons, TR	35,000	2,000		mg/Kg	1	10/19/00
<b>TCL VOLATILE ORGANICS</b>						
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
2-Butanone	64	10		µg/Kg	1	10/18/00 2:47:00 AM
2-Hexanone	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
Acetone	320	120		µg/Kg	5	10/19/00 2:27:00 PM
Benzene	20	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Bromodichloromethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Bromoform	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
Bromomethane	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
Carbon disulfide	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Carbon tetrachloride	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Chlorobenzene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Chloroethane	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
Chloroform	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Chloromethane	ND	10		µg/Kg	1	10/18/00 2:47:00 AM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Dibromochloromethane	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Dichloromethane	ND	25		µg/Kg	1	10/18/00 2:47:00 AM
Ethybenzene	13,000	620		µg/Kg	125	10/19/00 12:15:00 AM
Styrene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Tetrachloroethene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Toluene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM
Trichloroethene	ND	5.0		µg/Kg	1	10/18/00 2:47:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

I - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

11

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-03

Client Sample ID: SB 12-30-01 (20 - 23')  
 Collection Date: 10/11/00 2:03:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/18/00 2:47:00 AM
Xylenes, Total	43,000	1,900		µg/Kg	125	10/19/00 12:15:00 AM
Sur: 1,2-Dichloroethane-d4	239	70-130	S	%REC	1	10/18/00 2:47:00 AM
Sur: 1,2-Dichloroethane-d4	125	70-130		%REC	125	10/19/00 12:15:00 AM
Sur: 1,2-Dichloroethane-d4	158	70-130	S	%REC	5	10/19/00 2:27:00 PM
Sur: 4-Bromofluorobenzene	344	70-130	S	%REC	1	10/18/00 2:47:00 AM
Sur: 4-Bromofluorobenzene	85.4	70-130		%REC	5	10/19/00 2:27:00 PM
Sur: 4-Bromofluorobenzene	108	70-130		%REC	125	10/19/00 12:15:00 AM
Sur: Dibromofluoromethane	266	70-130	S	%REC	1	10/18/00 2:47:00 AM
Sur: Dibromofluoromethane	178	70-130	S	%REC	5	10/19/00 2:27:00 PM
Sur: Dibromofluoromethane	124	70-130		%REC	125	10/19/00 12:15:00 AM
Sum: Toluene-d8	172	70-130	S	%REC	5	10/19/00 2:27:00 PM
Sum: Toluene-d8	107	70-130		%REC	125	10/19/00 12:15:00 AM
Sum: Toluene-d8	430	70-130	S	%REC	1	10/18/00 2:47:00 AM
<b>VOLATILE LIBRARY SEARCH</b>		<b>SW8260</b>			Analyst: PC	
Library Search (Attached)	See attached				1	10/18/00 2:47:00 AM
<b>TCL SEMIVOLATILE ORGANICS</b>		<b>SW8270</b>			Prep Date: 10/17/00	Analyst: HV
1,2,4-Trichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
1,2-Dichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
1,3-Dichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
1,4-Dichlorobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,4,5-Trichlorophenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,4,6-Trichlorophenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,4-Dichlorophenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,4-Dimethylphenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,4-Dinitrophenol	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
2,4-Dinitrotoluene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2,6-Dinitrotoluene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2-Chloronaphthalene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2-Chlorophenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2-Methylnaphthalene	29,000	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2-Methylphenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
2-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
2-Nitrophenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
3,3'-Dichlorobenzidine	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
3-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
4,6-Dinitro-2-methylphenol	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
4-Bromoanenyl phenyl ether	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
4-Chloro-3-methylphenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
4-Chloroaniline	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-03

Client Sample ID: SB 12-30-01 (20 - 23)  
 Collection Date: 10/11/00 2:03:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
4-Chlorophenyl phenyl ether	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
4-Methylphenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
4-Nitroaniline	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
4-Nitrophenol	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
Acenaphthene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Acenaphthylene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Anthracene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Benz(a)anthracene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Benzo(a)pyrene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Benzo(b)fluoranthene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Benzo(g,h,i)perylene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Benzo(k)fluoranthene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Bis(2-chloroethoxy)methane	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Bis(2-chloroethyl)ether	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Bis(2-chloroisopropyl)ether	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Bis(2-ethylhexyl)phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Butyl benzyl phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Carbazole	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Chrysene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Di-n-butyl phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Di-n-octyl phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Dibenz(a,h)anthracene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Dibenzofuran	4,200	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Diethyl phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Dimethyl phthalate	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Fluoranthene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Fluorene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Hexachlorobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Hexachlorobutadiene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Hexachlorocyclooctadiene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Hexachloroethane	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Indeno(1,2,3-cd)pyrene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Isophorone	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
N-Nitrosodi-n-propylamine	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
N-Nitrosodiphenylamine	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Naphthalene	12,000	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Nitrobenzene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Pentachlorophenol	ND	16,000		µg/Kg	10	10/26/00 7:02:00 PM
Phenanthrene	5,800	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Phenol	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM
Pyrene	ND	3,300		µg/Kg	10	10/26/00 7:02:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-03

**Client Sample ID:** SB 12-30-01 (20 - 23')  
**Collection Date:** 10/11/00 2:03:00 PM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Sum: 2,4,6-Tribromophenol	99.4	19-122	%REC		10	10/26/00 7:02:00 PM
Sum: 2-Fluorobiphenyl	85.0	30-115	%REC		10	10/26/00 7:02:00 PM
Sum: 2-Fluorophenol	39.9	24-121	%REC		10	10/26/00 7:02:00 PM
Sum: 4-Terphenyl-d14	90.0	18-137	%REC		10	10/26/00 7:02:00 PM
Sum: Nitrobenzene-d5	112	23-120	%REC		10	10/26/00 7:02:00 PM
Sum: Phenol-d6	60.6	24-113	%REC		10	10/26/00 7:02:00 PM
<b>SEMIVOLATILE LIBRARY SEARCH</b>			<b>SW8270</b>		<b>Prep Date:</b> 10/17/00	<b>Analyst:</b> HV
Library Search (Attached)	see attached				10	10/26/00 7:02:00 PM
<b>CYANIDE, TOTAL</b>			<b>SW9012</b>			<b>Analyst:</b> STH
Cyanide	ND	0.50	mg/Kg		1	10/26/00
<b>MERCURY, SOIL</b>			<b>SW7471A</b>		<b>Prep Date:</b> 10/17/00	<b>Analyst:</b> ALR
Mercury	ND	100	µg/Kg		1	10/17/00 5:11:25 PM
<b>ICP METALS, TOTAL</b>			<b>SW6020</b>		<b>Prep Date:</b> 10/18/00	<b>Analyst:</b> HC
Aluminum	526	25.8	mg/Kg		5.158	10/26/00 5:49:00 PM
Antimony	NO	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Arsenic	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Barium	121	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Beryllium	NO	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Cadmium	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Calcium	184,000	5,000	mg/Kg		100	10/26/00 3:22:00 PM
Chromium	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Cobalt	ND	5.00	mg/Kg		1	10/26/00 5:12:00 PM
Copper	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Iron	1,710	10.0	mg/Kg		1	10/26/00 5:41:00 PM
Lead	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Magnesium	10,400	50.0	mg/Kg		1	10/26/00 5:41:00 PM
Manganese	21.3	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Nickel	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Potassium	305	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Selenium	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Silver	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Sodium	61.4	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Thallium	ND	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Vanadium	27.3	5.00	mg/Kg		1	10/26/00 5:41:00 PM
Zinc	19.8	5.00	mg/Kg		1	10/26/00 3:31:00 PM
<b>CORROSIVITY</b>			<b>SW9045B</b>			<b>Analyst:</b> JLJ
pH	9.13	0.10	pH Units		1	10/16/00 4:30:00 PM
<b>PHENOLICS</b>			<b>SW9065</b>			<b>Analyst:</b> STH

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**e-Lab, Inc.****Date: 31-Oct-2000**

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-03

**Client Sample ID:** SB 12-30-01 (20 - 23')  
**Collection Date:** 10/11/00 2:03:00 PM

**Matrix:** SOIL

<b>Analyses</b>	<b>Result</b>	<b>Limit</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
Phenolics, Total Recoverable	1.2	0.0050		mg/kg	1	10/25/00
<b>TOTAL DISSOLVED SOLIDS</b>			E160.1			<b>Analyst: MG</b>
Total Dissolved Solids (Residue, Filterable)	290	50		mg/Kg	.1	10/19/00 11:00:00 AM
<b>MISCELLANEOUS SUBCONTRACT CODE</b>			NA			<b>Analyst: ETI</b>
Miscellaneous Analysis	See Attached				1	10/18/00

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
• - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
U - Analyzed for but Not Detected  
E - Value above quantitation range  
H - Analyzed outside of Hold Time

FORM I  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

03A

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-03A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101719

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/18/00

GC Column: DB624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (ul)

Number TICs found: 10

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 589-34-4	HEXANE, 3-METHYL-	6.49	39.01	NJ
2. 108-87-2	CYCLOHEXANE, METHYL-	7.59	6060.79	NJ
3. 592-27-8	HEPTANE, 2-METHYL-	8.26	4060.35	NJ
4. 1072-05-5	HEPTANE, 2,6-DIMETHYL-	9.34	38.98	NJ
5. 3073-66-3	CYCLOHEXANE, 1,1,3-TRIMETHYL	9.62	48.87	NJ
6. 4923-78-8	CYCLOHEXANE, 1-ETHYL-2-METHY	10.67	40.48	NJ
7. 2051-30-1	OCTANE, 2,6-DIMETHYL-	10.90	49.70	NJ
8. 1678-92-8	CYCLOHEXANE, PROPYL-	11.00	33.70	NJ
9. 611-14-3	BENZENE, 1-ETHYL-2-METHYL-	11.63	56.43	NJ
10. 95-36-3	1,2,4-TRIMETHYLBENZENE	12.08	83.74	NJ
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE N  
0010061-03B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-03B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102620

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/26/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 23

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKYL BENZENE	4.96	25545.88	J
2.	UNKNOWN ALKYL BENZENE	5.35	17637.82	J
3.	UNKNOWN ALKYL BENZENE	5.97	19768.15	J
4.	UNKNOWN ALKYL BENZENE	6.07	18540.54	J
5.	UNKNOWN ALKYL BENZENE	6.73	14083.26	J
6. 17301-23-4	UNDECANE, 2,6-DIMETHYL-	7.19	10591.26	NJ
7. 54676-39-0	CYCLOHEXANE, 2-BUTYL-1,1,3-T	7.32	9114.72	NJ
8.	UNKNOWN ALKYL BENZENE	7.41	10274.61	J
9. 21164-95-4	HEXADECANE, 7,9-DIMETHYL-	7.63	13061.68	NJ
10. 54676-39-0	CYCLOHEXANE, 2-BUTYL-1,1,3-T	7.73	7534.44	NJ
11.	UNKNOWN ALKANE	8.13	15606.77	J
12. 582-16-1	NAPHTHALENE, 2,7-DIMETHYL-	8.58	12532.65	NJ
13. 581-42-0	NAPHTHALENE, 2,6-DIMETHYL-	8.67	20658.72	NJ
14. 581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	8.69	12659.57	NJ
15. 629-97-0	DOCOSANE	8.80	23235.97	NJ
16. 829-26-5	NAPHTHALENE, 2,3,6-TRIMETHYL	9.46	9751.74	NJ
17. 112-95-8	EICOSANE	9.50	10182.43	NJ
18.	UNKNOWN HYDROCARBON	9.56	15986.51	J
19. 24251-86-3	DODECANE, 5,8-DIETHYL-	9.74	23130.63	NJ
20. 1921-70-6	PENTADECANE, 2,6,10,14-TETRA	10.01	15950.29	NJ
21.	UNKNOWN ALKANE	10.14	10392.54	J
22. 132-65-0	DIBENZOTHIOPHENE	10.42	8389.56	NJ
23. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM	10.47	15916.85	NJ
24.				
25.				
26.				
27.				
28.				
29.				
30.				

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-04

Client Sample ID: WSB - 01  
 Collection Date: 10/12/00 10:17:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/17/00 10:23:00 PM
Xylenes, Total	ND	15		µg/Kg	1	10/17/00 10:23:00 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%REC	1	10/17/00 10:23:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	10/17/00 10:23:00 PM
Surr: Dibromofluoromethane	127	70-130		%REC	1	10/17/00 10:23:00 PM
Surr: Toluene-d8	124	70-130		%REC	1	10/17/00 10:23:00 PM
<b>VOLATILE LIBRARY SEARCH</b>		<b>SW8260</b>		Analyst: PC		
Library Search (Attached)	See attached				1	10/17/00 10:23:00 PM
<b>TCL SEMIVOLATILE ORGANICS</b>		<b>SW8270</b>		Prep Date: 10/17/00	Analyst: HV	
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,4-Dichlorophenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,4-Dinitrophenol	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2-Chlorophenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2-Methylphenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
2-Nitroaniline	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
2-Nitrophenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
3,3'-Dichlorobenzidine	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
3-Nitroaniline	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
4,6-Dinitro-2-methylphenol	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
4-Bromophenyl phenyl ether	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
4-Chloro-3-methylphenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
4-Chloroaniline	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
4-Chlorophenyl phenyl ether	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
4-Methylphenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
4-Nitroaniline	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
4-Nitrophenol	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
Acenaphthene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Acenaphthylene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Anthracene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Benz(a)anthracene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-04

Client Sample ID: WSB - 01  
 Collection Date: 10/12/00 10:17:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzo(a)pyrene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Butyl benzyl phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Carbazole	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Chrysene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Di-n-butyl phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Di-n-octyl phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Dibenzofuran	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Diethyl phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Dimethyl phthalate	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Fluoranthene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Fluorene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Hexachlorobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Hexachlorobutadiene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Hexachlorocyclopentadiene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Hexachloroethane	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Isophorone	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
N-Nitroscodiphenylamine	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Naphthalene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Nitrobenzene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Pentachlorophenol	ND	1,600		µg/Kg	1	10/23/00 7:28:00 PM
Phenanthrene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Phenol	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Pyrene	ND	330		µg/Kg	1	10/23/00 7:28:00 PM
Sum: 2,4,6-Tribromophenol	60.9	19-122		%REC	1	10/23/00 7:28:00 PM
Sum: 2-Fluorobiphenyl	56.8	30-115		%REC	1	10/23/00 7:28:00 PM
Sum: 2-Fluorophenol	58.0	24-121		%REC	1	10/23/00 7:28:00 PM
Sum: 4-Terphenyl-d14	62.5	18-137		%REC	1	10/23/00 7:28:00 PM
Sum: Nitrobenzene-d5	62.2	23-120		%REC	1	10/23/00 7:28:00 PM
Sum: Phenol-d6	55.5	24-113		%REC	1	10/23/00 7:28:00 PM

## SEMOVOLATILE LIBRARY SEARCH

Library Search (Attached)

see attached

SW8270

Prep Date: 10/17/00 Analyst: HV

1

10/23/00 7:28:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-04

Client Sample ID: WSB - 01  
 Collection Date: 10/12/00 10:17:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CYANIDE, TOTAL				SW9012		Analyst: STH
Cyanide	ND	0.50		mg/Kg	1	10/20/00
MERCURY, SOIL				SW7471A	Prep Date: 10/17/00	Analyst: ALR
Mercury	ND	100		µg/Kg	1	10/17/00 5:12:50 PM
ICP METALS, TOTAL				SW6020	Prep Date: 10/18/00	Analyst: HC
Aluminum	9,830	5,000		mg/Kg	1000	10/26/00 1:41:00 PM
Antimony	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Arsenic	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Barium	147	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Beryllium	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Cadmium	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Chromium	9.55	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Cobalt	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Copper	7.72	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Iron	8,820	10.0		mg/Kg	1	10/26/00 5:53:00 PM
Lead	6.96	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Magnesium	3,500	50.0		mg/Kg	1	10/26/00 5:53:00 PM
Manganese	231	25.5		mg/Kg	5.296	10/28/00 3:40:00 PM
Nickel	9.64	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Potassium	2,540	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Selenium	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Silver	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Sodium	27.2	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Thallium	ND	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Vanadium	11.5	5.00		mg/Kg	1	10/26/00 5:53:00 PM
Zinc	44.4	5.00		mg/Kg	1	10/28/00 3:36:00 PM
CORROSIVITY				SW9045B		Analyst: JLJ
pH	8.78	0.10		pH Units	1	10/16/00 4:30:00 PM
PHENOLICS				SW9065		Analyst: STH
Phenolics, Total Recoverable	0.39	0.0050		mg/kg	1	10/25/00
TOTAL DISSOLVED SOLIDS				E160.1		Analyst: MG
Total Dissolved Solids (Residue, Filterable)	3,100	50		mg/Kg	1	10/19/00 11:00:00 AM
MISCELLANEOUS SUBCONTRACT CODE				NA		Analyst: ETI
Miscellaneous Analysis	See Attached				1	10/18/00

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level!

S - Spike Recovery outside accepted recovery limits  
 U - Analyzed for but Not Detected  
 E - Value above quantitation range  
 H - Analyzed outside of Hold Time

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

04A

Lab Name: E-LAB, INC.

Contract:

Lab Code: Case No.:

SAS No.: SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-04A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101709

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/17/00

GC Column: DB624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SEMICVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

0010061-04B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-04B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102314

Level: (low/med) LCW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/23/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	13.19	297.32	J
2. 629-78-7	HEPTADECANE	15.87	176.52	NJ
3. 112-95-8	EICOSANE	17.00	134.50	NJ
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-05

Client Sample ID: WSB - 02  
 Collection Date: 10/12/00 9:30:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>						
Chloride	74	40		mg/Kg	1	10/27/00
Fluoride	ND	20		mg/Kg	1	10/27/00
Nitrogen, Nitrate (As N)	56	30		mg/Kg	1	10/27/00
Sulfate	210	40		mg/Kg	1	10/27/00
<b>PETROLEUM HYDROCARBONS, T/R</b>						
Petroleum Hydrocarbons, TR	880	50		mg/Kg	1	10/19/00
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		<b>Analyst: PC</b>
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
2-Butanone	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
2-Hexanone	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
Acetone	ND	25		µg/Kg	1	10/18/00 3:59:00 PM
Benzene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Bromoform	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
Bromomethane	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Chloroethane	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
Chloroform	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Chloromethane	ND	10		µg/Kg	1	10/18/00 3:59:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Dichloromethane	ND	25		µg/Kg	1	10/18/00 3:59:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Styrene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Toluene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	10/18/00 3:59:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-05

Client Sample ID: WSB - 02  
 Collection Date: 10/12/00 9:30:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/18/00 3:59:00 PM
Xylenes, Total	ND	15		µg/Kg	1	10/18/00 3:59:00 PM
Sur: 1,2-Dichloroethane-d4	121	70-130		%REC	1	10/18/00 3:59:00 PM
Sur: 4-Bromofluorobenzene	98.9	70-130		%REC	1	10/18/00 3:59:00 PM
Sur: Dibromofluoromethane	138	70-130	S	%REC	1	10/18/00 3:59:00 PM
Sur: Toluene-d8	128	70-130		%REC	1	10/18/00 3:59:00 PM
<b>VOLATILE LIBRARY SEARCH</b>		<b>SW8260</b>			Analyst: PC	
Library Search (Attached)	See attached				1	10/18/00 3:59:00 PM
<b>TCL SEMIVOLATILE ORGANICS</b>		<b>SW8270</b>			Prep Date: 10/17/00	Analyst: HV
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,4-Dichlorophenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,4-Dinitrophenol	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2-Chlorophenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2-Methylphenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
2-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
2-Nitrophenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
3,3'-Dichlorobenzidine	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
3-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
4,6-Dinitro-2-methylphenol	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
4-Bromophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
4-Chloro-3-methylphenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
4-Chloroaniline	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
4-Chlorophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
4-Methylphenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
4-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
4-Nitropnenol	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
Acenaanthrene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Acenapnhylene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Anthracene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Benz(a)anthracene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-05

Client Sample ID: WSB - 02  
 Collection Date: 10/12/00 9:30:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzo(a)pyrene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Butyl benzyl phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Carbazole	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Chrysene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Di-n-butyl phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Di-n-octyl phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Dibenzofuran	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Diethyl phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Dimethyl phthalate	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Fluoranthene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Fluorene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Hexachlorobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Hexachlorobutadiene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Hexachlorocyclopentadiene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Hexachloroethane	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Isophorone	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Naphthalene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Nitrobenzene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Pentachlorophenol	ND	1,600		µg/Kg	1	10/26/00 9:17:00 PM
Phenanthrene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Phenol	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Pyrene	ND	330		µg/Kg	1	10/26/00 9:17:00 PM
Sum: 2,4,6-Tribromophenol	61.2	19-122		%REC	1	10/26/00 9:17:00 PM
Sum: 2-Fluorobiphenyl	58.9	30-115		%REC	1	10/26/00 9:17:00 PM
Sum: 2-Fluorophenol	43.9	24-121		%REC	1	10/26/00 9:17:00 PM
Sum: 4-Terphenyl-d14	65.1	18-137		%REC	1	10/26/00 9:17:00 PM
Sum: Nitrobenzene-d5	46.6	23-120		%REC	1	10/26/00 9:17:00 PM
Sum: Phenol-d6	50.8	24-113		%REC	1	10/26/00 9:17:00 PM

## SEMOVOLATILE LIBRARY SEARCH

Library Search (Attached)

see attached

SW8270

Prep Date: 10/17/00

Analyst: HV

1

10/26/00 9:17:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-05

**Client Sample ID:** WSB - 02  
**Collection Date:** 10/12/00 9:30:00 AM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CYANIDE, TOTAL				SW9012		Analyst: STH
Cyanide	ND	0.50		mg/Kg	1	10/20/00
MERCURY, SOIL				SW7471A		Analyst: ALR
Mercury	ND	100		µg/Kg	1	10/17/00 5:14:16 PM
ICP METALS, TOTAL				SW6020		Analyst: HC
Aluminum	8.010	2.500		mg/Kg	500	10/31/00 2:13:00 PM
Antimony	ND	5.00		mg/Kg	1	10/25/00 6:01:00 PM
Arsenic	ND	5.00		mg/Kg	1	10/25/00 6:01:00 PM
Barium	126	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Beryllium	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Cadmium	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Calcium	48,400	258		mg/Kg	5.158	10/26/00 6:05:00 PM
Chromium	7.54	5.00		mg/Kg	1	10/25/00 6:01:00 PM
Cobalt	ND	5.00		mg/Kg	1	10/20/00 6:21:00 PM
Copper	5.32	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Iron	6.620	10.0		mg/Kg	1	10/26/00 6:01:00 PM
Lead	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Magnesium	2,950	50.0		mg/Kg	1	10/26/00 6:01:00 PM
Manganese	113	5.00		mg/Kg	1	10/20/00 6:21:00 PM
Nickel	7.72	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Potassium	1,780	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Selenium	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Silver	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Sodium	111	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Thallium	ND	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Vanadium	10.6	5.00		mg/Kg	1	10/26/00 6:01:00 PM
Zinc	43.1	5.00		mg/Kg	1	10/28/00 4:01:00 PM
CORROSIVITY				SW9045B		Analyst: JLJ
pH	8.53	0.10		pH Units	1	10/16/00 4:30:00 PM
PHENOLICS				SW9065		Analyst: STH
Phenolics, Total Recoverable	ND	0.0050		mg/kg	1	10/25/00
TOTAL DISSOLVED SOLIDS				E160.1		Analyst: MG
Total Dissolved Solids (Residue, Filterable)	1,900	50		mg/Kg	1	10/19/00 11:00:00 AM
MISCELLANEOUS SUBCONTRACT CODE				NA		Analyst: ETI
Miscellaneous Analysis	See Attached				1	10/18/00

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
U - Analyzed for but Not Detected  
E - Value above quantitation range  
H - Analyzed outside of Hold Time

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

05A

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-05A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101810

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/18/00

GC Column: DB624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

**SEMOVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS**

0010061-05B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-05B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102625

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/26/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 17

**CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg**

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2958-76-1	NAPHTHALENE, DECAHYDRO-2-METHYL-	6.52	5484.79	NJ
2. 17301-23-4	UNDECANE, 2,6-DIMETHYL-	7.19	4284.14	NJ
3.	UNKNOWN ALKANE	7.63	11720.75	J
4. 31295-56-4	DODECANE, 2,6,11-TRIMETHYL-	8.31	8278.08	NJ
5. 629-59-4	TETRADECANE	8.44	8523.49	NJ
6. 3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	8.79	11633.77	NJ
7. 629-62-9	PENTADECANE	9.00	6255.13	NJ
8. 544-76-3	HEXADECANE	9.51	6765.44	NJ
9. 24251-86-3	DODECANE, 5,8-DIETHYL-	9.75	17970.69	NJ
10. 629-78-7	HEPTADECANE	9.98	9204.85	NJ
11. 1921-70-6	PENTADECANE, 2,6,10,14-TETRA-	10.01	22786.02	NJ
12. 593-45-3	OCTADECANE	10.43	8555.59	NJ
13. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM-	10.47	21905.06	NJ
14. 629-92-5	NONADECANE	10.85	7342.09	NJ
15. 629-97-0	DOCOSANE	12.00	4582.05	NJ
16. 3386-33-2	OCTADECANE, 1-CHLORO-	12.35	4489.51	NJ
17. 75758-27-9	7,12A-DIMETHYL-1,2,3,4,4A,11	15.19	9677.25	NJ
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-06

Client Sample ID: SB 1510 - 01 (5-7)  
 Collection Date: 10/12/00 1:28:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>ANIONS BY ION CHROMATOGRAPHY, MODIFIED</b>						
				<b>E300</b>		Analyst: STH
Chloride	400	40		mg/Kg	1	10/27/00
Fluoride	ND	20		mg/Kg	1	10/27/00
Nitrogen, Nitrate (As N)	ND	30		mg/Kg	1	10/27/00
Sulfate	52	40		mg/Kg	1	10/27/00
<b>PETROLEUM HYDROCARBONS, T/R</b>						
Petroleum Hydrocarbons, TR	2,100	100		mg/Kg	1	10/19/00
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		Analyst: PC
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
2-Butanone	21	10		µg/Kg	1	10/18/00 4:26:00 PM
2-Hexanone	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
Acetone	250	50		µg/Kg	2	10/19/00 4:12:00 PM
Benzene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Bromoform	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
Bromomethane	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Chloroethane	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
Chloroform	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Chloromethane	ND	10		µg/Kg	1	10/18/00 4:26:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Dichloromethane	ND	25		µg/Kg	1	10/18/00 4:26:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Styrene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Toluene	5.2	5.0		µg/Kg	1	10/18/00 4:26:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	10/18/00 4:26:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-06

Client Sample ID: SB 1510 - 01 (5-7')  
 Collection Date: 10/12/00 1:28:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Vinyl chloride	ND	2.0		µg/Kg	1	10/18/00 4:26:00 PM
Xylenes, Total	32	15		µg/Kg	1	10/18/00 4:26:00 PM
Sum: 1,2-Dichloroethane-d4	110	70-130		%REC	2	10/19/00 4:12:00 PM
Sum: 1,2-Dichloroethane-d4	104	70-130		%REC	1	10/18/00 4:26:00 PM
Sum: 4-Bromofluorobenzene	100	70-130		%REC	1	10/18/00 4:26:00 PM
Sum: 4-Bromofluorobenzene	93.3	70-130		%REC	2	10/19/00 4:12:00 PM
Sum: Dibromofluoromethane	0	70-130	S	%REC	1	10/18/00 4:26:00 PM
Sum: Dibromofluoromethane	17.8	70-130	S	%REC	2	10/19/00 4:12:00 PM
Sum: Toluene-d8	149	70-130	S	%REC	1	10/18/00 4:26:00 PM
Sum: Toluene-d8	132	70-130	S	%REC	2	10/19/00 4:12:00 PM
<b>VOLATILE LIBRARY SEARCH</b>		<b>SW8260</b>		Analyst: PC		
Library Search (Attached)	See attached				1	10/18/00 4:26:00 PM
<b>TCL SEMIVOLATILE ORGANICS</b>		<b>SW8270</b>		Prep Date:	10/17/00	Analyst: HV
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,4-Dichlorophenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,4-Dinitrophenol	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2-Chlorophenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2-Methylphenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
2-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
2-Nitrophenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
3,3'-Dichlorobenzidine	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
3-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
4,6-Dinitro-2-methylphenol	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
4-Bromophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
4-Chloro-3-methylphenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
4-Chloroaniline	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
4-Chlorophenyl phenyl ether	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
4-Methylphenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
4-Nitroaniline	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
4-Nitrophenol	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0010061  
 Project: Westgate  
 Lab ID: 0010061-06

Client Sample ID: SB 1510 - 01 (5-7')  
 Collection Date: 10/12/00 1:28:00 PM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Acenaphthylene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Anthracene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Benz(a)anthracene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Benzo(a)pyrene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Butyl benzyl phthalate	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Carbazole	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Chrysene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Di-n-butyl phthalate	480	330		µg/Kg	1	10/26/00 9:44:00 PM
Di-n-octyl phthalate	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Dibenzofuran	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Diethyl phthalate	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Dimethyl phthalate	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Fluoranthene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Fluorene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Hexachlorobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Hexachlorobutadiene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Hexachlorocyclopentadiene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Hexachloroethane	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Isophorone	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Naphthalene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Nitrobenzene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Pentachlorophenol	ND	1,600		µg/Kg	1	10/26/00 9:44:00 PM
Phenanthrene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Phenol	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Pyrene	ND	330		µg/Kg	1	10/26/00 9:44:00 PM
Sum: 2,4,6-Tribromophenol	41.2	19-122		%REC	1	10/26/00 9:44:00 PM
Sum: 2-Fluorobiphenyl	71.1	30-115		%REC	1	10/26/00 9:44:00 PM
Sum: 2-Fluorophenol	32.6	24-121		%REC	1	10/26/00 9:44:00 PM
Sum: 4-Terphenyl-d14	86.0	18-137		%REC	1	10/26/00 9:44:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

U - Analyzed but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

• - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-06

**Client Sample ID:** SB 1510 - 01 (5-7')  
**Collection Date:** 10/12/00 1:28:00 PM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Sum: Nitrobenzene-d5	56.2	23-120	%REC		1	10/26/00 9:44:00 PM
Sum: Phenol-d6	40.4	24-113	%REC		1	10/26/00 9:44:00 PM
<b>SEMIVOLATILE LIBRARY SEARCH</b>			SW8270		Prep Date: 10/17/00	Analyst: HV
Library Search (Attached)	see attached				1	10/26/00 9:44:00 PM
<b>CYANIDE, TOTAL</b>			SW9012			Analyst: STH
Cyanide	ND	0.50	mg/Kg		1	10/20/00
<b>MERCURY, SOIL</b>			SW7471A		Prep Date: 10/17/00	Analyst: ALR
Mercury	ND	100	µg/Kg		1	10/17/00 5:15:42 PM
<b>ICP METALS, TOTAL</b>			SW6020		Prep Date: 10/18/00	Analyst: HC
Aluminum	9,760	2,700	mg/Kg		539.49	10/28/00 4:09:00 PM
Antimony	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Arsenic	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Barium	5,150	2,700	mg/Kg		539.49	10/28/00 4:09:00 PM
Beryllium	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Cadmium	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Calcium	146,000	5,000	mg/Kg		100	10/28/00 4:05:00 PM
Chromium	11.4	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Cobalt	ND	5.00	mg/Kg		1	10/20/00 6:25:00 PM
Copper	7.22	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Iron	8,410	10.0	mg/Kg		1	10/26/00 6:18:00 PM
Lead	37.5	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Magnesium	5,410	50.0	mg/Kg		1	10/26/00 6:18:00 PM
Manganese	186	5.00	mg/Kg		1	10/20/00 6:25:00 PM
Nickel	10.6	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Potassium	1,220	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Selenium	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Silver	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Sodium	178	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Thallium	ND	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Vanadium	17.3	5.00	mg/Kg		1	10/26/00 6:18:00 PM
Zinc	642	250	mg/Kg		50	10/28/00 4:13:00 PM
<b>CORROSION</b>			SW9045B			Analyst: JLJ
pH	12.15	0.10	pH Units		1	10/16/00 4:30:00 PM
<b>PHENOLICS</b>			SW9065			Analyst: STH
Phenolics, Total Recoverable	0.97	0.0050	mg/kg		1	10/25/00
<b>TOTAL DISSOLVED SOLIDS</b>			E160.1			Analyst: MG
Total Dissolved Solids (Residue, Filterable)	7,300	50	mg/Kg		1	10/19/00 11:00:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

L - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

**e-Lab, Inc.****Date: 31-Oct-2000**

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0010061  
**Project:** Westgate  
**Lab ID:** 0010061-06

**Client Sample ID:** SB 1510 - 01 (5-7')  
**Collection Date:** 10/12/00 1:28:00 PM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MISCELLANEOUS SUBCONTRACT CODE Miscellaneous Analysis	See Attached	NA			1	Analyst: ETI 10/18/00

Qualifiers:  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
U - Analyzed for but Not Detected  
E - Value above quantitation range  
H - Analyzed outside of Hold Time

FORM I  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

06A

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-06A

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D101811

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 10/18/00

GC Column: DB624 ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (ml)

Soil Aliquot Volume: \_\_\_\_\_ (ml)

Number TICs found: 9

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 124-18-5	DECANE	11.68	201.00	NJ
2. 526-73-8	BENZENE, 1,2,3-TRIMETHYL-	12.03	95.29	NJ
3. 1120-21-4	UNDECANE	12.86	208.49	NJ
4. 4292-75-5	CYCLOHEXANE, HEKYL-	13.47	84.91	NJ
5. 95-93-2	BENZENE, 1,2,4,5-TETRAMETHYL	13.57	80.30	NJ
6. 112-40-3	DODECANE	13.96	175.34	NJ
7. 488-23-3	BENZENE, 1,2,3,4-TETRAMETHYL	13.99	94.85	NJ
8. 938-06-7	2 (1H)-NAPHTHALENONE, OCTAHYD	14.16	78.08	NJ
9. 629-50-5	TRIDECANE	14.97	84.58	NJ
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
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25.				
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27.				
28.				
29.				
30.				

FORM I  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

0010061-06B

Lab Name: E-LAB, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0010061

Matrix: (soil/water) SOIL

Lab Sample ID: 0010061-06B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D102626

Level: (low/med) LOW

Date Received: 10/13/00

% Moisture: \_\_\_\_\_ Decanted: (Y/N) \_\_\_\_\_

Date Extracted: 10/17/00

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/26/00

Injection Volume: \_\_\_\_\_ (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type) OTHER

Number TICs found: 21

CONCENTRATION UNITS:  
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1120-21-4	UNDECANE	6.17	5570.54	NJ
2. 112-40-3	DODECANE	7.08	8533.74	NJ
3. 17301-23-4	UNDECANE, 2,6-DIMETHYL-	7.19	4440.95	NJ
4. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM	7.63	1337.69	NJ
5. 629-50-5	TRIDECANE	7.81	2163.10	NJ
6.	UNKNOWN HYDROCARBON	8.14	954.22	J
7. 629-59-4	TETRADECANE	8.44	2994.35	NJ
8. 629-62-9	PENTADECANE	9.00	2322.98	NJ
9. 544-76-3	HEXADECANE	9.51	2499.19	NJ
10. 7098-22-8	TETRATETRACONTANE	9.74	225.43	NJ
11. 629-78-7	HEPTADECANE	9.98	310.00	NJ
12. 3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	10.01	258.55	NJ
13. 593-45-3	OCTADECANE	10.42	256.96	NJ
14. 638-36-8	HEXADECANE, 2,6,10,14-TETRAM	10.47	213.00	NJ
15. 629-92-5	NONADECANE	10.85	247.89	NJ
16. 3386-33-2	OCTADECANE, 1-CHLORO-	11.25	245.49	NJ
17. 18435-45-5	1-NONADECENE	11.63	234.33	NJ
18.	UNKNOWN ALKANE	11.99	193.04	J
19.	UNKNOWN HYDROCARBON	12.35	244.01	J
20.	UNKNOWN HYDROCARBON	12.71	225.98	J
21.	UNKNOWN HYDROCARBON	13.11	647.63	J
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ENVIRO-TEST CHEMICAL ANALYSIS REPORT

PRELIMINARY RESULTS FOR REVIEW ONLY

Lab ID	Sample ID	Test Description	Result	D.L.	Units	Extracted	Analyzed	By
L2008-1	0010061-01C							
	Sample Date: 11-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.2 +/- 0.3	0.2	pCi/g		18-OCT-00	DMF
		Radium-228	0.8 +/- 0.3	0.4	pCi/g		18-OCT-00	DMF
2008-2	0010061-02C							
	Sample Date: 11-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.5 +/- 0.5	0.3	pCi/g		18-OCT-00	DMF
		Radium-228	1.1 +/- 0.6	0.8	pCi/g		18-OCT-00	DMF
2008-3	0010061-03C							
	Sample Date: 11-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.3 +/- 0.3	0.2	pCi/g		18-OCT-00	DMF
		Radium-228	0.5 +/- 0.4	0.4	pCi/g		18-OCT-00	DMF
2008-4	0010061-04C							
	Sample Date: 12-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.3 +/- 0.4	0.3	pCi/g		18-OCT-00	DMF
		Radium-228	1 +/- 0.5	0.8	pCi/g		18-OCT-00	DMF
2008-5	0010061-05C							
	Sample Date: 12-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.1 +/- 0.2	0.1	pCi/g		18-OCT-00	DMF
		Radium-228	0.6 +/- 0.3	0.4	pCi/g		18-OCT-00	DMF
2008-6	0010061-06C							
	Sample Date: 12-OCT-00							
	Matrix: SOIL SAMPLE							
		Gamma Spectroscopy						
		Radium-226	1.4 +/- 0.4	0.2	pCi/g		18-OCT-00	DMF
		Radium-228	<0.5 +/- 0.4	0.6	pCi/g		18-OCT-00	DMF

C-Lab, Inc.

CLIENT: Craig Lewis &amp; Associates

Work Order: 0010061

Project: YY Westgate

# QC BATCH REPORT

Date: Nov 08 2000

Batch ID: 564      InstrumentID: ICP4500

MBLK	Sample ID	MBLK\$1-1018	Batch ID:	564	Test Code:	SW6020	Units	mg/Kg	Analysis Date	10/26/00 3:30:00 PM	Prep Date	10/18/00			
Client ID:			Run ID:		ICP4500_001026A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RFD	RPD Limit	Qual
Analyte			Result												
Aluminum		0.004395		5.0											
Antimony			ND	5.0											
Arsenic		0.09682		5.0											
Barium			ND	5.0											
Beryllium			ND	5.0											
Cadmium			ND	5.0											
Calcium			ND	50											
Chromium			ND	5.0											
Copper		0.001086		5.0											
Iron			ND	10											
Lead			ND	5.0											
Magnesium			ND	50											
Nickel			ND	5.0											
Potassium			ND	5.0											
Selenium			ND	5.0											
Silver			ND	5.0											
Sodium			ND	5.0											
Thallium			ND	5.0											
Vanadium			ND	50											

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

U - Analyzed for but not detected

R - RPD outside accepted recovery limits

I

Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

## QC BATCH REPORT

Batch ID: 564 Y  
 InstrumentID: ICP4500

MBLK	Sample ID	MBLKS1-0018	Batch ID:	564	Test Code:	SW6020	Units:	mg/Kg	Analysis Date	10/28/00 2:38:00 PM	Prep Date	10/18/00	
Client ID:			Run ID:	6020_001028A					SeqNo:	38718			
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ret Val	%RPD	RPDLimit	Qual
Aluminum			0.1866	5.0									J
Antimony			ND	5.0									
Arsenic			0.00683	5.0									J
Barium			ND	5.0									
Beryllium			ND	5.0									
Cadmium			ND	5.0									
Calcium			ND	50									
Chromium			ND	5.0									
Cobalt			ND	5.0									
Copper			0.001717	5.0									
Iron			ND	10									
Lead			ND	5.0									
Magnesium			ND	50									
Manganese			ND	5.0									
Nickel			ND	5.0									
Potassium			ND	5.0									
Selenium			ND	5.0									
Silver			ND	5.0									
Sodium			ND	5.0									
Thallium			ND	5.0									
Vanadium			0.03909	5.0									
Zinc			0.1014	5.0									J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limit

B - Analyte detected in the associated Method Blank

U - Analyzed for but not detected

Craig Lewis & Associates  
 Work Order: 00100661  
 Project: Westgate

## QC BATCH REPORT

Batch ID:	564	InstrumentID:	ICP4500	Client ID:	Sample ID: MLCSS1-1018	Batch ID: 564	Test Code: SW6020	Units: mg/Kg	Analysis Date: 10/26/00 3:34:00 PM	Prep Date: 10/18/00		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	Hightlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.226	5.0	10	0.004395	92.3	75	125	0	0	0		
Antimony	10.31	5.0	10	0	103	75	125	0	0	0		
Arsenic	11.05	5.0	10	0.09682	110	75	125	0	0	0		
Banum	10.82	5.0	10	0	108	75	125	0	0	0		
Beryllium	10.28	5.0	10	0	103	75	125	0	0	0		
Cadmium	10.95	5.0	10	0	110	75	125	0	0	0		
Calcium	1088	50	1000	0	109	75	125	0	0	0		
Chromium	10.83	5.0	10	0	108	75	125	0	0	0		
Copper	12.09	5.0	10	0.001086	121	75	125	0	0	0		
Iron	1070	10	1000	0	107	75	125	0	0	0		
Lead	10.72	5.0	10	0	107	75	125	0	0	0		
Magnesium	1127	50	1000	0	113	75	125	0	0	0		
Manganese	12.48	5.0	10	0	125	75	125	0	0	0		
Nickel	11.11	5.0	10	0	111	75	125	0	0	0		
Potassium	1056	5.0	1000	0	106	75	125	0	0	0		
Selenium	10.9	5.0	10	0	109	75	125	0	0	0		
Silver	11.1	5.0	10	0	111	75	125	0	0	0		
Sodium	1070	5.0	1000	0	107	75	125	0	0	0		
Thallium	10.52	5.0	10	0	105	75	125	0	0	0		
Vanadium	10.91	5.0	10	0	109	75	125	0	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analytic detected below quantitation limits

R - RPD outside accepted recovery limits

K - Analytic detected above quantitation limits

3

**Client:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

## QC BATCH REPORT

Batch ID:	564	InstrumentID:	ICP4500	Sample ID:	MLCSS1-1018	Batch ID:	564	Test Code:	SW6020	Units:	mg/Kg	Analysis Date:	10/28/00 2:42:00 PM	Prep Date:	10/18/00
Client ID:				Run ID:		Run ID:	6020_001028A	%REC:		LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL	SPK value	SPK Ref Val										
Aluminum		10.64	5.0	10	0.1866		106	75	125	0	0				
Antimony		11.6	5.0	10	0		116	75	125	0	0				
Asenic		10.03	5.0	10	0.00683		100	75	125	0	0				
Barium		10.32	5.0	10	0		103	75	125	0	0				
Beryllium		9.684	5.0	10	0		96.8	75	125	0	0				
Cadmium		10.11	5.0	10	0		101	75	125	0	0				
Calcium		999.7	50	1000	0		100	75	125	0	0				
Chromium		10	5.0	10	0		100	75	125	0	0				
Cobalt		12.02	5.0	10	0		120	75	125	0	0				
Copper		10.27	5.0	10	0.001717		103	75	125	0	0				
Iron		1004	10	1000	0		100	75	125	0	0				
Lead		9.988	5.0	10	0		99.9	75	125	0	0				
Magnesium		993.3	50	1000	0		99.3	75	125	0	0				
Manganese		11.12	5.0	10	0		111	75	125	0	0				
Nickel		10.13	5.0	10	0		101	75	125	0	0				
Potassium		990.1	5.0	1000	0		99	75	125	0	0				
Selenium		9.895	5.0	10	0		98.9	75	125	0	0				
Silver		7.919	5.0	10	0		79.2	75	125	0	0				
Sodium		985.1	5.0	1000	0		98.5	75	125	0	0				
Thallium		9.697	5.0	10	0		97	75	125	0	0				
Vanadium		9.888	5.0	10	0.03909		98.9	75	125	0	0				
Zinc		10.61	5.0	10	0.1014		106	75	125	0	0				

Qualifiers:

ND - Not Detected at the Reporting Limit

I - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

D - Analyzed for but not detected

**CLIENT:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: 564      InstrumentID: ICP4500

MS	Sample ID	0010053-10BMS	Batch ID:	564	Test Code:	SW6020	Units:	mg/Kg	Analysis Date	10/20/00 5:34:00 PM	Prep Date	10/18/00	
Client ID:			Run ID:		6020_001020C				SeqNo:	37489			
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum		5280	5.0	10	0	52800	80	120	0				SE
Antimony		5.405	5.0	10	0	54	80	120	0				S
Arsenic		12.57	5.0	10	0	126	80	120	0				S
Barium		55.75	5.0	10	0	558	80	120	0				S
Beryllium		10.26	5.0	10	0	103	80	120	0				S
Cadmium		10.57	5.0	10	0	106	80	120	0				S
Calcium		6016	50	100	0	6020	80	120	0				S
Chromium		16.94	5.0	10	0	169	80	120	0				S
Cobalt		12.55	5.0	10	0	126	80	120	0				S
Copper		16.97	5.0	10	0	170	80	120	0				S
Iron		7504	10	100	0	7500	80	120	0				S
Lead		34.26	5.0	10	0	343	80	120	0				S
Magnesium		1658	50	100	0	1660	80	120	0				S
Manganese		236.1	5.0	10	0	2360	80	120	0				SE
Nickel		14.32	5.0	10	0	143	80	120	0				S
Potassium		1373	5.0	100	0	1370	80	120	0				S
Selenium		10.05	5.0	10	0	101	80	120	0				S
Silver		11.1	5.0	10	0	111	80	120	0				S
Sodium		1061	5.0	100	0	1060	80	120	0				SE
Thallium		9.217	5.0	10	0	92.2	80	120	0				S
Vanadium		20.1	5.0	10	0	201	80	120	0				S
Zinc		58.47	5.0	10	0	585	80	120	0				S

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

SE - Analyte detected in the associated Method Blank

U - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

J - Analyte detected below reporting limit

11

**I:**  
**Work Order:** 0010061  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: 564      InstrumentID: ICP4500

DUP	Sample ID:	0010053-00BDUP	Batch ID:	564	Run ID:	6020_001020C	Test Code:	SW6020	Units:	mg/Kg	Analysis Date:	10/20/00 5:25:00 PM	Prep Date:	10/18/00	SeqNo:	37487	%RPD	RPDLimit	Qual
Client ID:																			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val											
Aluminum	3696	5.0	0	0	0	0	0	0	0	0	4.884	27.7	20	RE					
Antimony	ND	5.0	0	0	0	0	0	0	0	0	0	0	20						
Arsenic	1.979	5.0	0	0	0	0	0	0	0	0	1.781	0	20	J					
Banum	29.98	5.0	0	0	0	0	0	0	0	0	38.73	25.5	20	R					
Beryllium	0.2741	5.0	0	0	0	0	0	0	0	0	0.3137	0	20	J					
Cadmium	0.205	5.0	0	0	0	0	0	0	0	0	0.2465	0	20	J					
Calcium	3605	50	0	0	0	0	0	0	0	0	5595	43.3	20	R					
Chromium	8.212	5.0	0	0	0	0	0	0	0	0	8.329	1.41	20						
Cobalt	1.904	5.0	0	0	0	0	0	0	0	0	2.112	0	20	J					
Copper	6.002	5.0	0	0	0	0	0	0	0	0	5.972	0.501	20						
Iron	4811	10	0	0	0	0	0	0	0	0	4886	1.55	20						
Lead	21.07	5.0	0	0	0	0	0	0	0	0	16.52	24.2	20	R					
Magnesium	316.9	50	0	0	0	0	0	0	0	0	570.3	57.1	20	R					
Manganese	178.5	5.0	0	0	0	0	0	0	0	0	205.1	13.9	20						
Nickel	3.217	5.0	0	0	0	0	0	0	0	0	3.359	0	20	J					
Potassium	212.4	5.0	0	0	0	0	0	0	0	0	359	51.3	20	R					
Selenium	ND	5.0	0	0	0	0	0	0	0	0	0	0	20						
Silver	ND	5.0	0	0	0	0	0	0	0	0	0	0	20						
Sodium	20.92	5.0	0	0	0	0	0	0	0	0	42.99	69.1	20	R					
Thallium	ND	5.0	0	0	0	0	0	0	0	0	0	0	20						
Vanadium	8.871	5.0	0	0	0	0	0	0	0	0	9.932	11.3	20						
Zinc	40.08	5.0	0	0	0	0	0	0	0	0	41.38	3.19	20						

Qualifiers:

ND - Not detected at the Reporting Limit

I - Analytic detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted Method Blank

R - RPD outside accepted recovery limits

U - Analyzed but not detected

# QC BATCH REPORT

**Cl.** T;      **Craig Lewis & Associates**  
**Work Order:** 0010061  
**Project:** Westgate

Batch ID: R2234      InstrumentID: Mercury

		Sample ID: MBLKS1-1017		Batch ID: R2234		Test Code: SW7471A		Units: µg/Kg		Analysis Date 10/17/00 4:50:30 PM		Prep Date 10/17/00	
Client ID:				Run ID:		MERCURY_001017B		SeqNo:		35698			
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit HighLimit RPD Ref Val	
Mercury		ND	100							%REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual	
LCs	Sample ID: MLCSS1-1017	Batch ID: R2234	Test Code: SW7471A	Units: µg/Kg						Analysis Date 10/17/00 4:51:56 PM			Prep Date 10/17/00
Client ID:	SB13-30-01 (3'-5')	Run ID:	MERCURY_001017B	SeqNo:	35699								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		755	100	833.3	0	90.6	75	125	0				
MSD	Sample ID: 0010061-01BMSD	Batch ID: R2234	Test Code: SW7471A	Units: µg/Kg						Analysis Date 10/17/00 5:02:26 PM			Prep Date 10/17/00
Client ID:	SB13-30-01 (3'-5')	Run ID:	MERCURY_001017B	SeqNo:	35703								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		750	100	833.3	0	90	75	125	0				
MSD	Sample ID: 0010061-01BMSD	Batch ID: R2234	Test Code: SW7471A	Units: µg/Kg						Analysis Date 10/17/00 5:03:53 PM			Prep Date 10/17/00
Client ID:	SB13-30-01 (3'-5')	Run ID:	MERCURY_001017B	SeqNo:	35704								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		768.3	100	833.3	0	92.2	75	125	750	2.41	20		
DUP	Sample ID: 0010061-01BDUP	Batch ID: R2234	Test Code: SW7471A	Units: µg/Kg						Analysis Date 10/17/00 4:56:15 PM			Prep Date 10/17/00
Client ID:	SB13-30-01 (3'-5')	Run ID:	MERCURY_001017B	SeqNo:	35702								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Mercury		ND	100	0	0	0	0	0	0	0	0	20	

Qualifiers:

ND - Not detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - Ref ID outside acceptable Recovery limits

I - Analyte detected below quantitation limits

8

H

# QC BATCH REPORT

**Client:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

**Batch ID:** 562  **InstrumentID:** SV-2

MBLK	Sample ID	SBLK51-1017	Batch ID:	562	Test Code:	SW8270	Unit:	$\mu\text{g}/\text{kg}$	Analysis Date	10/23/00 5:13:00 PM	Prep Date	10/17/00
Analyte					Run ID:	SV-2_001023A			SeqNo:	38214		
					Result	PQL	SPK value	SPK Ref Val	%REC	Low limit	High limit	RPD Ref Val
1,2,4-Trichlorobenzene				ND	330							
1,2-Dichlorobenzene				ND	330							
1,3-Dichlorobenzene				ND	330							
1,4-Dichlorobenzene				ND	330							
2,4,5-Trichlorophenol				ND	330							
2,4,6-Trichlorophenol				ND	330							
2,4-Dichlorophenol				ND	330							
2,4-Dimethylphenol				ND	330							
2,4-Dinitrophenol				ND	1,600							
2,4-Dinitrotoluene				ND	330							
2,6-Dinitrotoluene				ND	330							
2-Chloronaphthalene				ND	330							
2-Chlorophenol				ND	330							
2-Methylnaphthalene				ND	330							
2-Methylphenol				ND	330							
2-Nitroaniline				ND	330							
2-Nitrophenol				ND	330							
3,3'-Dichlorobenzidine				ND	330							
3-Nitroaniline				ND	330							
4,6-Dinitro-2-methylphenol				ND	1,600							
4-Bromophenyl phenyl ether				ND	330							
4-Chloro-3-methylphenol				ND	330							
4-Chloroaniline				ND	330							
4-Chlorophenyl phenyl ether				ND	330							
4-Methylphenol				ND	330							
4-Nitroaniline				ND	1,600							
4-Nitrophenol				ND	330							
Acenaphthene				ND	330							
Acenaphthylene				ND	330							
Anthracene				ND	330							
Benz(a)anthracene				ND	330							

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed but not detected

# QC BATCH REPORT

CTA #: F  
 Craig Lewis & Associates  
 Work Order #: 0010061  
 Project: Westgate

Batch ID:	InstrumentID:	SV-2
Benzalpyrene	ND	330
Benzofluoranthene	ND	330
Benzog(h,i)perylene	ND	330
Benzot(k)fluoranthene	ND	330
Bis(2-chloroethoxy)methane	ND	330
Bis(2-chloroethyl)ether	ND	330
Bis(2-chloroisopropyl)ether	ND	330
Bis(2-ethylhexyl)phthalate	90.95	330
Buyl benzyl phthalate	ND	330
Cabazole	ND	330
Chrysene	ND	330
D-n-butyl phthalate	65.56	330
Di-n-octyl phthalate	ND	330
Dibenz(a,h)anthracene	ND	330
Dibenzofuran	ND	330
Diethyl phthalate	ND	330
Dimethyl phthalate	ND	330
Fluoranthene	ND	330
Fluorene	ND	330
Hexachlorobenzene	ND	330
Hexachlorobutadiene	ND	330
Hexachlorocyclopentadiene	ND	330
Hexachloroethane	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Isophorone	ND	330
N-Nitrosodi-n-propylamine	ND	330
N-Nitrosodiphenylamine	ND	330
Naphthalene	ND	330
Nitrobenzene	ND	330
Penta(chlorophenol)	ND	1,600
Phenanthrene	ND	330
Phenol	ND	330
Pyrene	ND	330
Sur. 2,4,6-Tribromophenol	2896	0
Sur. 2-Fluorobiphenyl	2927	0
Sur. 2-Fluorophenol	2272	0

Qualifiers:

J - Not Detected at the Reporting Limit

J - Analytic detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

U - Analyzed for but not detected

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# QC BATCH REPORT

Client: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

MS	Sample ID: 0010061-01BMS	Batch ID: 562	Test Code: SW8270	Units: µg/kg	Analysis Date: 10/26/00 7:56:00 PM	Prep Date: 10/17/00					
Analyte		Run ID: SV-2_001023A			SeqNo:						
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1415	330	1667	0	84.9	50	150	0	0	0	
1,4-Dichlorobenzene	1269	330	1667	0	10.1	50	150	0	0	0	
2,4-Dinitrotoluene	897.1	330	1667	0	53.8	28	89	0	0	0	
2-Chlorophenol	2655	330	3333	0	79.7	25	102	0	0	0	
4-Chloro-3-methylphenol	2947	330	3333	0	88.4	26	103	0	0	0	
4-Nitrophenol	2647	1,600	3333	0	79.4	11	114	0	0	0	
Acenaphthene	1383	330	1667	0	83	31	137	0	0	0	
N-Nitrosodi-n-propylamine	1373	330	1667	0	82.4	41	126	0	0	0	
Phenachlorophenol	3417	1,600	3333	0	103	17	109	0	0	0	
Phenol	2370	330	3333	0	71.1	26	90	0	0	0	
Pyrene	1704	330	1667	0	102	35	142	0	0	0	
Surf: 2,4,6-Tribromophenol	3543	0	3333	0	106	19	122	0	0	0	
Surf: 2-Fluorobiphenyl	3015	0	3333	0	90.5	30	115	0	0	0	
Surf: 2-Fluorophenol	2375	0	3333	0	71.3	24	121	0	0	0	
Surf: 4-Terphenyl-d14	3464	0	3333	0	104	18	137	0	0	0	
Surf: Nitrobenzene-d5	2567	0	3333	0	77	23	120	0	0	0	
Surf: Phenol-d6	2709	0	3333	0	81.3	24	113	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - R(%) outside accepted recovery limits

B - Analyte detected in the associated Method Blank

U - Analyzed but not detected

11

11

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12

# QC BATCH REPORT

**Cust. ID:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

Batch ID:	InstrumentID:	MSD	Sample ID:	Batch ID:	Test Code:	Units:	Analysis Date	Prep Date
				562	SW2_001023A	µg/Kg	10/26/00 8:23:00 PM	10/17/00
Client ID:	Run ID:							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
1,2,4-Trichlorobenzene	1393	330	1667	0	83.6	50	150	1415
1,4-Dichlorobenzene	1205	330	1667	0	72.3	50	150	1269
2,4-Dinitrotoluene	785.9	330	1667	0	47.2	28	89	897.1
2-Chlorophenol	2493	330	3333	0	74.8	25	102	2655
4-Chloro-3-methylphenol	2921	330	3333	0	87.6	26	103	2947
4-Nitrophenol	2266	1,600	3333	0	68	11	114	2647
Acenaphthene	1318	330	1667	0	79.1	31	137	1383
N-Nitrosodi-n-propylamine	1288	330	1667	0	77.3	41	126	1373
Pentachlorophenol	3115	1,600	3333	0	93.5	17	109	3417
Phenol	2246	330	3333	0	67.4	26	90	2370
Pyrene	1587	330	1667	0	95.2	35	142	1704
Surf. 2,4,6-Tribromophenol	3289	0	3333	0	98.7	19	122	3543
Surf. 2-Fluorobiphenyl	2965	0	3333	0	89	30	115	3015
Surf. 2-Fluorophenol	2202	0	3333	0	66.1	24	121	2375
Surf. 4-Terphephenyl-d14	3340	0	3333	0	100	18	137	3464
Surf. Nitrobenzene-d5	2434	0	3333	0	73	23	120	2567
Surf. Phenol-d6	2529	0	3333	0	75.9	24	113	2709

Qualifiers:

ND - Not Detected at the Reporting Limit

\*) Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

U - Analyzed but not detected

1.3

# QC BATCH REPORT

C.L.H., t: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

Batch ID: R2242 InstrumentID: VOA\_II

MBLK	Sample ID	VALKS	Batch ID:	R2242	Test Code:	SW8260	Units:	µg/Kg	Analysis Date	10/17/00 8:12:00 PM	Prep Date
					Run ID:	VOA_II_001017D			SeqNo:	35842	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
1,1,1-Trichloroethane			ND	5.0							
1,1,2,2-Tetrachloroethane			ND	5.0							
1,1,2-Trichloroethane			ND	5.0							
1,1-Dichloroethene			ND	5.0							
1,2-Dichloroethane			ND	5.0							
1,2-Dichloropropane			ND	5.0							
2-Butanone			ND	10							
2-Hexanone			ND	10							
4-Methyl-2-pentanone			ND	10							
Acetone			ND	25							
Benzene			ND	5.0							
Bromodichloromethane			ND	5.0							
Bromoform			ND	10							
Bromomethane			ND	10							
Carbon disulfide			ND	5.0							
Carbon tetrachloride			ND	5.0							
Chlorobenzene			ND	5.0							
Chloroethane			ND	10							
Chloroform			ND	5.0							
Chloromethane			ND	10							
cis-1,2-Dichloroethene			ND	5.0							
cis-1,3-Dichloropropene			ND	5.0							
Dibromochloromethane			ND	5.0							
Dichloromethane			ND	25							
Ethylbenzene			ND	5.0							
Syrene			ND	5.0							
Tetrachloroethylene			ND	5.0							
Toluene			ND	5.0							
trans-1,2-Dichloroethene			ND	5.0							
trans-1,3-Dichloropropene			ND	5.0							

Qualifiers: ND - Not Detected at the Reporting Limit

b - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits,  
 R - RPD outside acceptable RPD limit,

t - Analyte detected in the associated QC/Blank

l/t

Q.C. #: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

# QC BATCH REPORT

Batch ID: R2242

InstrumentID: VOA\_II

Trichloroethene	ND	5.0
Vinyl chloride	ND	2.0
Xylenes, Total	ND	15
Surr: 1,2-Dichloroethane-d4	51.58	0
Surr: 4-Bromofluorobenzene	53.36	0
Surr: Dibromofluoromethane	60.23	0
Surr: Toluene-d8	56.03	0

LC/S Sample ID: VLCSS

Batch ID: R2242

Test Code: SW8260

Run ID:

VOA\_II\_001017D

SeqNo: 35841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	35.11	5.0	50	0	70.2	59	172	0	0	0	
Benzene	45.59	5.0	50	0	91.2	66	142	0	0	0	
Chlorobenzene	49.95	5.0	50	0	99.9	60	133	0	0	0	
Toluene	51.94	5.0	50	0	104	59	139	0	0	0	
Trichloroethene	39.94	5.0	50	0	79.9	62	137	0	0	0	
Surr: 1,2-Dichloroethane-d4	49.04	0	50	0	98.1	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	53.11	0	50	0	106	70	130	0	0	0	
Surr: Dibromofluoromethane	60.02	0	50	0	120	70	130	0	0	0	
Surr: Toluene-d8	57.24	0	50	0	114	70	130	0	0	0	

MS Sample ID: 0010061-01AMS

Batch ID: R2242

Test Code: SW8260

Run ID:

VOA\_II\_001017D

SeqNo: 35844

Client ID: SB13-30-01 (3-5)

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	33.89	5.0	50	0	67.8	59	172	0	0	0	
Benzene	44.18	5.0	50	0	88.4	66	142	0	0	0	
Chlorobenzene	47.05	5.0	50	0	94.1	60	133	0	0	0	
Toluene	56.28	5.0	50	0	113	59	139	0	0	0	
Trichloroethene	36.03	5.0	50	0	72.1	62	137	0	0	0	
Surr: 1,2-Dichloroethane-d4	52.65	0	50	0	105	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	43.66	0	50	0	87.3	70	130	0	0	0	
Surr: Dibromofluoromethane	61.53	0	50	0	123	70	130	0	0	0	
Surr: Toluene-d8	64.3	0	50	0	129	70	130	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

CH<sub>3</sub>F: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

## QC BATCH REPORT

Batch ID:	R2242	InstrumentID:	VOA_11	MSD	Sample ID:	0010061-01AMS0	Batch ID:	R2242	Test Code:	SW8260	Units:	µg/Kg	Analysis Date:	10/17/00 9:30:00 PM	Prep Date		
Client ID:	S B13-30-01 (3'-5')						Run ID:	VOA_II_001017D	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPD Limit	Qual
Analyte		Result	POI.														
1,1-Dichloroethene		37.91	5.0						75.8	59	172	33.89	11.2	22			
Benzene		45.59	5.0						91.2	66	142	44.18	3.14	21			
Chlorobenzene		48.03	5.0						96.1	60	133	47.05	2.08	21			
Toluene		59.28	5.0						119	59	139	56.28	5.19	21			
Trichloroethene		35.63	5.0						71.3	62	137	36.03	1.13	24			
Sur. 1,2-Dichloroethane-d4		57.79	0						116	70	130	52.65	9.32	0			
Sur. 4-Bromofluorobenzene		42.56	0						85.1	70	130	43.66	2.56	0			
Surf. Dibromoformmethane		64.91	0						130	70	130	61.53	5.34	0			
Surf. Toluene-d8		66.39	0						133	70	130	64.3	3.19	0	S		

Qualifiers:  
 ND : Not Detected at the Reporting Limit  
 J : Analyte detected below quantitation limits

S : Spike Recovery outside accepted recovery limits  
 R : RPD outside accepted recovery limits

H : Analyte detected in the associated Method Blank  
 U : Analyzed but not detected

Person: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

## QC BATCH REPORT

Batch ID: R22222 InstrumentID: VOA\_II

MLBK	Sample ID	VBLK/M	Batch ID:	R22252	Test Code:	SW0260	Units:	µg/Kg	Analysis Date	10/18/00 7:06:00 PM	Prep Date		
Client ID:			Run ID:	VOA_II_001010B	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte			Result	PQL									
1,1,1-Trichloroethane			ND	620									
1,1,2,2-Tetrachloroethane			ND	620									
1,1,2-Trichloroethane			ND	620									
1,1-Dichloroethane			ND	620									
1,1-Dichloroethene			ND	620									
1,2-Dichloroethane			ND	620									
1,2-Dichloropropane			ND	620									
2-Butanone			ND	1,200									
2-Hexanone			ND	1,200									
4-Methyl-2-pentanone			ND	1,200									
Acetone			ND	3,100									
Benzene			ND	620									
Bromodichloromethane			ND	620									
Bromoform			ND	1,200									
Bromomethane			ND	1,200									
Carbon disulfide			ND	620									
Carbon tetrachloride			ND	620									
Chlorobenzene			ND	620									
Chloroethane			ND	1,200									
Chloroform			ND	620									
Chlormethane			ND	1,200									
cis-1,2-Dichloroethene			ND	620									
cis-1,3-Dichloropropene			ND	620									
Dibromoethane			ND	620									
Dichloromethane			ND	3,100									
Ethylbenzene			ND	620									
Styrene			ND	620									
Tetrachloroethylene			ND	620									
Toluene			ND	620									
trans-1,2-Dichloropropene			ND	620									
trans-1,3-Dichloropropene			ND	620									

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

S - Analyte detected in the associated Method Blank

J - Analyzed for but not detected

T: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

# QC BATCH REPORT

Batch ID: R2252		InstrumentID:	VOA_HI											
LCS	Sample ID	VOCSM	Batch ID: R2252	Test Code: SWB260		Units: $\mu\text{g/Kg}$	Analysis Date 10/18/00 6:14:00 PM		Prep Date					
Client ID:			Run ID:	VOA_HI_001018B			SeqNo:	36010						
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual	
1,1-Dichloroethene			6202	620	6250	0	99.2	59	172	0	0	0		
Benzene			6649	620	6250	0	106	66	142	0	0	0		
Chlorobenzene			6623	620	6250	0	106	60	133	0	0	0		
Toluene			6574	620	6250	0	105	59	139	0	0	0		
Trichloroethene			6956	620	6250	0	111	62	137	0	0	0		
Surf: 1,2-Dichloroethane-d4			6600	0	6250	0	106	70	130	0	0	0		
Surf: 4-Bromofluorobenzene			6511	0	6250	0	104	70	130	0	0	0		
Surf: Dibromofluoromethane			6644	0	6250	0	106	70	130	0	0	0		
Surf: Toluene-d8			6433	0	6250	0	103	70	130	0	0	0		
MS	Sample ID	0010061-03AMS	Batch ID: R2252	Test Code: SWB260		Units: $\mu\text{g/Kg}$	Analysis Date 10/19/00 12:41:00 AM		Prep Date					
Client ID:			Run ID:	VOA_HI_001018B			SeqNo:	36013						
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual	
1,1-Dichloroethene			5265	620	6250	0	84.2	59	172	0	0	0		
Benzene			6598	620	6250	0	106	66	142	0	0	0		
Chlorobenzene			6478	620	6250	0	104	60	133	0	0	0		
Toluene			6079	620	6250	0	97.3	59	139	0	0	0		
Trichloroethene			6472	620	6250	0	104	62	137	0	0	0		
Surf: 1,2-Dichloroethane-d4			7597	0	6250	0	122	70	130	0	0	0		
Surf: 4-Bromofluorobenzene			6449	0	6250	0	103	70	130	0	0	0		
Surf: Dibromofluoromethane			7373	0	6250	0	118	70	130	0	0	0		
Surf: Toluene-d8			6569	0	6250	0	105	70	130	0	0	0		

Qualifiers:  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limit

B - Analyte detected in the associated Method Blank  
 O - Analyte not detected

# QC BATCH REPORT

**Client:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

Batch ID:	InstrumentID:	VOA_II	Run ID:	VOA_H_001018B	Test Code:	SW8260	Units: µg/Kg	Analysis Date	10/19/00 1:07:00 AM	Prep Date
MSD	Sample ID:	0010061-03AMSD	Batch ID:	R2252			SeqNo:	36014		
Client ID:	SB 12-30-01 (20 -		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
1,1-Dichloroethene	5506	620	6250	0	88.1	59	172	5265	447	22
Benzene	6815	620	6250	0	109	66	142	6598	324	21
Chlorobenzene	6785	620	6250	0	109	60	133	6478	464	21
Toluene	6400	620	6250	0	102	59	139	6079	515	21
Dichloroethene	6819	620	6250	0	109	62	137	6472	523	24
Surf: 1,2-Dichloroethane-d4	7398	0	6250	0	118	70	130	7597	265	0
Surf: 4-Bromofluorobenzene	6588	0	6250	0	105	70	130	6449	214	0
Surf: DibromoFluoromethane	7116	0	6250	0	114	70	130	7373	355	0
Surf: Toluene-d8	6547	0	6250	0	105	70	130	6569	0345	0

**Qualifiers:**  
*N* - Not Detected at the Reporting Limit  
*J* - Analyte detected below quantitation limits

*S* - Spike Recovery outside accepted recovery limits  
*R* - RPD outside accepted quantitation limits

*W* - Analyte detected in the associated Method Blank  
*O* - Analyzed for but not detected

Cust. #: Craig Lewis & Associates  
 Work Order #: 0010061  
 Project: Westgate

# QC BATCH REPORT

Batch ID: R229	InstrumentID: VOA_H	Sample ID: VBLKS	Batch ID: R2253	Test Code: SW8260	Units: µg/Kg	Analysis Date: 10/18/00 12:55:00 PM	Prep Date:					
MBLK	Client ID:	Run ID:	VOA_H_001018C	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	R'D Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL									
1,1,1-Trichloroethane		ND	5.0									
1,1,2,2-Tetrachloroethane		ND	5.0									
1,1,2-Trichloroethane		ND	5.0									
1,1-Dichloroethane		ND	5.0									
1,1-Dichloroethene		ND	5.0									
1,2-Dichloroethane		ND	5.0									
1,2-Dichloropropane		ND	5.0									
2-Butanone		ND	10									
2-Hexanone		ND	10									
4-Methyl-2-pentanone		ND	10									
Acetone		ND	25									
Benzene		ND	5.0									
Bromodichloromethane		ND	5.0									
Bromoform		ND	10									
Bromomethane		ND	10									
Carbon disulfide		ND	5.0									
Carbon tetrachloride		ND	5.0									
Chlorobenzene		ND	5.0									
Chloroethane		ND	10									
Chlorotoluene		ND	5.0									
Chloroform		ND	10									
Chlormethane		ND	5.0									
cis-1,2-Dichloroethene		ND	5.0									
cis-1,3-Dichloropropene		ND	5.0									
Dibromoethane		ND	5.0									
Dichloromethane		ND	25									
Ethylbenzene		ND	5.0									
Styrene		ND	5.0									
Tetrachloroethene		ND	5.0									
Toluene		ND	5.0									
trans-1,2-Dichloropropene		ND	5.0									
trans-1,3-Dichloropropene		ND	5.0									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

U - Analyzed but not detected

**CLIENT:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

## QC BATCH REPORT

LCS	Sample ID	VLCSS	Batch ID:	R2253	Test Code:	SW8260	Units:	µg/Kg	Analysis Date	10/18/00 12:29:00 PM	Prep Date
Client ID:			Run ID:	VOA_H_001018C					SeqNo:	36024	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.61	5.0	50	0	101	59	172	0	0		
Benzene	52.26	5.0	50	0	105	66	142	0	0		
Chlorobenzene	53	5.0	50	0	106	60	133	0	0		
Toluene	56.02	5.0	50	0	112	59	139	0	0		
Trichloroethene	44.62	5.0	50	0	89.2	62	137	0	0		
Surf. 1,2-Dichloroethane-d4	49.9	0	50	0	99.8	70	130	0	0		
Surf. 4-Bromofluorobenzene	56.91	0	50	0	114	70	130	0	0		
Surf. Dibromofluoromethane	59.52	0	50	0	119	70	130	0	0		
Surf. Toluene-d8	59.21	0	50	0	118	70	130	0	0		
MS	Sample ID	0010070-01AMS	Batch ID:	R2253	Test Code:	SW8260	Units:	µg/Kg	Analysis Date	10/18/00 1:43:00 PM	Prep Date
Client ID:			Run ID:	VOA_H_001018C					SeqNo:	36017	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	31.68	5.0	50	0	63.4	59	172	0	0		
Benzene	41.85	5.0	50	0	83.7	66	142	0	0		
Chlorobenzene	46.03	5.0	50	0	92.1	60	133	0	0		
Toluene	48.84	5.0	50	0	97.7	59	139	0	0		
Trichloroethene	36.77	5.0	50	0	73.5	62	137	0	0		
Surf. 1,2-Dichloroethane-d4	54.25	0	50	0	109	70	130	0	0		
Surf. 4-Bromofluorobenzene	52.55	0	50	0	105	70	130	0	0		
Surf. Dibromofluoromethane	62.69	0	50	0	125	70	130	0	0		
Surf. Toluene-d8	60.58	0	50	0	121	70	130	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

U - Analyte not detected

Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

## QC BATCH REPORT

Batch ID: R22B3  
 InstrumentID: VOA\_II

MSD	Sample ID: 0010070-01AMS0	Batch ID: R2253	Test Code: SWB260	Units: ug/Kg	Analysis Date: 10/19/00 2:14:00 PM	Prep Date:				
Cheat (L)		Run ID: VOA_II_001018C		SeqNo: 36018						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	34.31	5.0	50	68.6	59	172	31.68	7.99	22	
Benzene	44.99	5.0	50	90	66	142	41.85	7.22	21	
Chlorobenzene	48.84	5.0	50	97.7	60	133	46.03	5.94	21	
Toluene	51.6	5.0	50	103	59	139	48.84	5.49	21	
Trichloroethene	39.55	5.0	50	79.1	62	137	36.77	7.28	24	
Surf: 1,2-Dichloroethane-d4	53.61	0	50	0	107	70	130	54.25	1.18	0
Surf: 4-Bromofluorobenzene	54.08	0	50	0	108	70	130	52.55	2.87	0
Surf: Dibromofluoromethane	62.42	0	50	0	125	70	130	62.69	0.425	0
Surf: Toluene-d8	60.44	0	50	0	121	70	130	60.58	0.228	0

Qualifiers:  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed but not detected

# QC BATCH REPORT

Customer: Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

Batch ID: R2245	InstrumentID: VOA_H	Test Code: SW8260	Units: ug/Kg	Analysis Date: 10/19/00 2:01:00 PM	Prep Date:
MLRK	Sample ID: VBLKS	Batch ID: R2255	Run ID: VOA_H_001019A	SeqNo: 36110	
Client ID:			PQL	%REC	LowLimit
Analyte	Result	SPK value	SPK Ref Val	%REC	HighLimit
1,1,1-Trichloroethane	ND	5.0			
1,1,2,2-Tetrachloroethane	ND	5.0			
1,1,2-Trichloroethane	ND	5.0			
1,1-Dichloroethane	ND	5.0			
1,1-Dichloroethene	ND	5.0			
1,2-Dichloroethane	ND	5.0			
1,2-Dichloropropane	ND	5.0			
2-Butanone	ND	10			
2-Hexanone	ND	10			
4-Methyl-2-pentanone	ND	10			
Acetone	ND	25			
Benzene	ND	5.0			
Bromodichloromethane	ND	5.0			
Bromotform	ND	10			
Bromoformethane	ND	10			
Carbon disulfide	ND	5.0			
Carbon tetrachloride	ND	5.0			
Chlorobenzene	ND	5.0			
Chloroethane	ND	10			
Chloroform	ND	5.0			
Chlormethane	ND	10			
cis-1,2-Dichloroethene	ND	5.0			
cis-1,3-Dichloropropene	ND	5.0			
Dibromochloromethane	ND	25			
Dichloromethane	ND	5.0			
Ethylbenzene	ND	5.0			
Styrene	ND	5.0			
Tetrachloroethene	ND	5.0			
Toluene	ND	5.0			
trans-1,2-Dichloropropene	ND	5.0			
wans-1,3-Dichloropropene	ND				

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

Craig Lewis & Associates  
 Work Order: 0010061  
 Project: Westgate

# QC BATCH REPORT

Batch ID:	InstrumentID:	VOA_II
Trichloroethene	ND	5.0
Vinyl chloride	ND	2.0
Xylenes, Total	ND	15
Surr: 1,2-Dichloroethane-d4	54	0
Surr: 4-Bromofluorobenzene	56.73	0
Surr: Dibromofluoromethane	62.68	0
Surr: Toluene-d8	58.28	0

LCS	Sample ID	VI.CSS	Batch ID:	R2255	Test Code:	SW8260	Units:	µg/Kg	Analysis Date	10/19/00 1:34:00 PM	Prep Date		
Client ID:			Run ID:	VOA_II_001019A					SeqNo:	36109			
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD limit	Qual
1,1-Dichloroethene			52.18	5.0	50	0	104	59	172	0			
Benzene			53.03	5.0	50	0	106	66	142	0			
Chlorobenzene			53.72	5.0	50	0	107	60	133	0			
Toluene			57.05	5.0	50	0	114	59	139	0			
Trichloroethene			45.54	5.0	50	0	91.1	62	137	0			
Surr: 1,2-Dichloroethane-d4			51.96	0	50	0	104	70	130	0			
Surr: 4-Bromofluorobenzene			56.67	0	50	0	113	70	130	0			
Surr: Dibromofluoromethane			62.05	0	50	0	124	70	130	0			
Surr: Toluene-d8			58.79	0	50	0	118	70	130	0			

MS	Sample ID	0010061-06AMS	Batch ID:	R2255	Test Code:	SW8260	Units:	µg/Kg	Analysis Date	10/19/00 3:20:00 PM	Prep Date		
Client ID:			Run ID:	VOA_II_001019A					SeqNo:	36113			
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD limit	Qual
1,1-Dichloroethene			243.8	25	250	0	97.5	59	172	0			
Benzene			262.2	25	250	0	105	66	142	0			
Chlorobenzene			262.9	25	250	0	105	60	133	0			
Toluene			289.9	25	250	0	116	59	139	0			
Trichloroethene			217.9	25	250	0	87.2	62	137	0			
Surr: 1,2-Dichloroethane-d4			271.8	0	250	0	109	70	130	0			
Surr: 4-Bromofluorobenzene			260	0	250	0	104	70	130	0			
Surr: Dibromofluoromethane			83.51	0	250	0	33.4	70	130	0			
Surr: Toluene-d8			1305.9	0	250	0	122	70	130	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analytic detected in the associated Method Blank

Q1...4: Craig Lewis & Associates  
Work Order: 0010061  
Project: Westgate

## QC BATCH REPORT

Batch ID: R22451

InstrumentID:

VOA\_HI

MSD	Sample ID	0010061-06AMSD	Batch ID	R2255	Test Code:	SW8260	Units	µg/Kg	Analysis Date	10/19/00 3:46:00 PM	Prep Date		
Client ID:	SB 1510 - 01 (5-7)				Run ID:	VOA_HI_001019A			SeqNo:	36114			
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC		LowLimit	RPT Ret Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene		304.9	25	250	0	122	59		172	243.8	22.3	22	R
Benzene		315.4	25	250	0	126	66		142	262.2	18.4	21	
Chlorobenzene		309.3	25	250	0	124	60		133	262.9	16.2	21	
Toluene		345.0	25	250	0	138	59		139	289.9	17.6	21	
Trichloroethene		259.8	25	250	0	104	62		137	217.9	17.5	24	
Surr: 1,2-Dichloroethane-d4		275.1	0	250	0	110	70		130	271.8	1.2	0	
Surr: 4-Bromofluorobenzene		250.8	0	250	0	100	70		130	260	3.58	0	
Surr: Dibromofluoromethane		49.53	0	250	0	19.8	70		130	83.51	51.1	0	S
Surr: Toluene-d8		308.8	0	250	0	124	70		130	305.9	0.945	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analytic detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analytic detected in the associated Method Blank

U - Analyzed but not detected

# QC BATCH REPORT

**Cust ID:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

Batch ID: R2193 InstrumentID: Wet Chemistry

DUP	Sample ID	0010061-063DUP	Batch ID:	R2193	Test Code:	SW9045B	Units:	pH Units	Analysis Date	10/16/00 4:30:00 PM	Prep Date
Client ID:	SB 1510 - 01 (5-7)		Run ID:	WET CHEMISTRY_0010			SeqNo:	35258			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDlimit	Qual
pH	12.17	0.10	0	0	0	75	125	12.15	0.164	20	
DUP	Sample ID	0010065-01CDUP	Batch ID:	R2193	Test Code:	SW9045B	Units:	pH Units	Analysis Date	10/16/00 4:30:00 PM	Prep Date
Client ID:	WET CHEMISTRY_0010		Run ID:	WET CHEMISTRY_0010			SeqNo:	35260			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDlimit	Qual
pH	9.55	0.10	0	0	0	75	125	9.57	0.209	20	

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 L - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 O - Analyzed for but not detected

B - Analyte detected in the associated Method Blank  
 O - Analyte detected in the associated Method Blank

**Cust. I:** Craig Lewis & Associates  
**Work Order:** 0010061  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: R2243		InstrumentID: Wet Chemistry										
MBLK	Sample ID: WB1 KW1-1019	Batch ID: R2263	Test Code: E160.1	Units: mg/Kg	Analysis Date: 10/19/00 11:00:00 AM	Prep Date:						
Client ID:		Run ID: WET CHEMISTRY_0010			SeqNo: 36494							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual:	
Total Dissolved Solids (Residue, Filtera)	ND	10										
LCS	Sample ID: WLCSW1-1019	Batch ID: R2263	Test Code: E160.1	Units: mg/Kg	Analysis Date: 10/19/00 11:00:00 AM	Prep Date:						
Client ID:		Run ID: WET CHEMISTRY_0010			SeqNo: 36495							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual:	
Total Dissolved Solids (Residue, Filtera)	972	10	1000	0	97.2	75	125	0				
DUP	Sample ID: 0010061-01BDUP	Batch ID: R2263	Test Code: E160.1	Units: mg/Kg	Analysis Date: 10/19/00 11:00:00 AM	Prep Date:						
Client ID:	SB13-30-01 (3-5)	Run ID: WET CHEMISTRY_0010			SeqNo: 36497							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual:	
Total Dissolved Solids (Residue, Filtera)	740	50	0	0	0	0	0	0	760	2.67	20	

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed but not detected

# Chain of Custody Form

QUALITY - INTEGRITY - SERVICE



E-lab Work Order # 3010061

## Parameter/Method Request for Analysis

3010061

Project Name: Westgate

Project Number: 8260B

BILL TO COMPANY: Dean Consulting

Invoice Attn: Joe Dean

Address: 301 E. Alabama

CITY/STATE/ZIP: Hobbs, NM 88242

Phone: (505) 392-2628

Fax: (505) 396-5306

City/State/Zip: Hobbs, NM 88242

Phone: (505) 392-2628

Fax: (505) 396-5306

A TCL Volatiles (8260B)

B TCL Semivolatiles (8270C)

C TAL Metals (80207000)

D Total Cyanide

E Phenolics

F pH & TDS

G TPH (418.1)

H NO<sub>3</sub>, Fluoride, Chloride, & Sulfate (300)

I Radium E901.1

## Customer Information

3010061

## Project Information

3010061

## Sample Description

3010061

## Date

3010061

## Time

3010061

## Matrix

3010061

## No. of Bottles

3010061

## A

3010061

## B

3010061

## C

3010061

## D

3010061

## E

3010061

## F

3010061

## G

3010061

## H

3010061

## I

3010061

## Hold

3010061

## Required TAT:

3010061

## Results Due Date:

3010061

## Shipment Method:

3010061

## Airbill No.:

3010061

## Sampler(s): Please Print & Sign

3010061

## QC Package: (Check Box Below)

3010061

## Notes:

3010061

## Time: 3:45

3010061

## Date: 10/12/00

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 9:30

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

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3010061

## Received by: Joe Dean

3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061

## Received by: Joe Dean

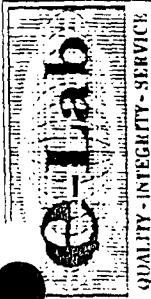
3010061

## Date: 10/12/00

3010061

## Time: 1:28

3010061



GAMM-INTERVIEW

## Chain of Custody Form

Note: Any changes must be made in writing once samples and COC Form have been submitted to Efab, Inc.

## Sample Receipt Checklist

Client Name CRAIG LEWIS &amp; ASSOC.

Date/Time Received:

10/13/00 9:15:00 AM

Work Order Number 0010061

Received by: JLE

Checklist completed by JL

Signature

10/16/00  
DateReviewed by WW

Initials

Date

Matrix: Sed

Carrier name: FedEx

	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Present <input checked="" type="checkbox"/> <u>Non 10/16/00</u>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Temperature(s): <u>41C</u>
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <u>Non 10/16/00</u>

Adjusted? \_\_\_\_\_

Checked by \_\_\_\_\_

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted Joe Dean / Dean Consulting Date contacted: 10/13/00 Person contacted Joe Dean

Contacted by: Linenley Regarding: \_\_\_\_\_

Comments: add TICs to samples. Run all analyses on COE  
add 5-7' to sample w/ SB 1510-01

Corrective Action \_\_\_\_\_



**QUESTIONS? CALL 800-238-5355 TOLL FREE.**

AIRBILL  
PACKAG  
HACKING NUMBER  
321887625

1248

DOC

RECIPIENT'S COPY

From (Your Name) Please Print

Company

Singer Address

Exact	Comm.	Departmental No.	( )	To ( )	Your Firm's Number: (Very important)
-------	-------	------------------	-----	--------	--------------------------------------

To (Buyer's name) Finance Corp  
Company \_\_\_\_\_  
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Box Codes)  
(Department/Floor No ) \_\_\_\_\_

**YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (first 24 characters will appear on invoice)**

Zip Required

**IF YOU DO NOT FIND THE ADDRESS INFORMATION, PRINT INDEX ADDRESS HERE**

**BBC INTERNATIONAL'S  
RESULTS FROM SAMPLING AT  
1506 N. COBB  
JANUARY 12, 2001**

# TRACEANALYSIS, INC.

6011 Ahrendsen Avenue, Suite A      Lubbock, Texas 79434      806•791•1296  
 4735 Ripley Avenue, Suite A      Lubbock, Texas 79422      806•794•3443  
 Mail: lab@traceanalysis.com

February 5, 2001  
 Receiving Date: 01/13/2001  
 Sample Type: Soil  
 Project No: NA  
 Project Location: Hobbs, NM

T162446 - 1506-02-3-6\*

## ANALYTICAL RESULTS FOR BBC INTERNATIONAL

Attention: Cliff P. Brunson  
 1324 W. Marland  
 Hobbs, NM 88241

Lab Receiving #: A01011503

Extraction Date: 01/26/2001

Analysis Date: 01/26/2001

Sampling Date: 01/13/2001

Sample Condition: Intact and Cool

Sample Received by: MS

Project Name: Shell Westgate

Sample ID	(mg/L) Unfractionated C6-C35	(mg/L)				(mg/L)				Aliphatic + Aromatic (mg/L)		% Recovery
		Aliphatic	>C6-8	>C8-10	>C10-12	>C12-16	>C16-21	>C21-35	>C6-C7	>C7-8	>C8-10	
162446	1074	<1	<1	<1	<1	<1	10	25	<1	<1	<1	<1

Avg. CV	485
% Extraction Accuracy	126.0
% Instrument Accuracy	97
RPD	0
CV T.V.	500
SPIKE T.V.	500

2-5-01

METHOD: TX1006  
 CHEMIST, BP

BSZ

Date

Director, Dr. Blair Leftwich

# TRACEANALYSIS, INC.

6011 Alandren Avenue, Suite 9 Lubbock, Texas /9474 806 • 348 • 1296  
4775 Lipsey Avenue, Suite A 1175, Texas /9222 915 • 383 • 3443 1AX 806 • 341 • 1298  
E-Mail: lab@traceanalysis.com

February 5, 2001  
Receiving Date: 01/13/2001  
Sample Type: Soil  
Project No: NA  
Project Location: Hobbs, NM

T162450 - 1506-03-6-8'

## ANALYTICAL RESULTS FOR

BBC INTERNATIONAL

Attention: Cliff P. Brunson  
1324 W. Marland  
Hobbs, NM 88241

Lab Receiving #: A01011503  
Extraction Date: 01/26/2001  
Analysis Date: 01/26/2001  
Sampling Date: 01/13/2001  
Sample Condition: Intact and Cool  
Sample Received by: MS  
Project Name: Shell Westgate

Sample ID	(mg/L) Unfractionated C6-C35	(mg/L) Aliphatic				(mg/L) Aromatic				Aliphatic + Aromatic (mg/L)		% Recovery			
		>C6-8	>C8-10	>C10-12	>C12-16	>C16-21	>C21-35	>C6-C7	>C7-8	>C8-10	>C10-12	>C12-16	>C16-21	>C21-35	
162450	243	<1	<1	<1	<1	3	51	<1	<1	<1	1	56	15	126	52

Avg. CV	485
% Extraction Accuracy	126.0
% Instrument Accuracy	97
RPD	0
CV T.V.	500
SPIKE T.V.	500

2-5-01

Date

Director, Dr. Blair Leftwich

PB  
METHOD: TX1006  
CHEMIST: BP

Software Version	:	6.1.2.0.1:D19	Date	:	2/5/01 2:44:10 PM
Operator	:	TurboChrom	Sample Name	:	162450
Sample Number	:	015	Study	:	
AutoSampler	:	BUILT-IN	Rack/Vial	:	0/15
Instrument Name	:	GC6	Channel	:	A
Instrument Serial #	:	None	A/D mV Range	:	1000
Delay Time	:	0.00 min	End Time	:	4.03 min
Sampling Rate	:	25.0000 pts/s			
Volume Injected	:	1.000000 $\mu$ l	Area Reject	:	0.000000
Sample Amount	:	1.0000	Dilution Factor	:	1.00
Data Acquisition Time	:	2/1/01 4:47:01 AM	Cycle	:	15

Raw Data File : D:\Data\GC6\BE6B015-20010205-144334.raw <Modified>

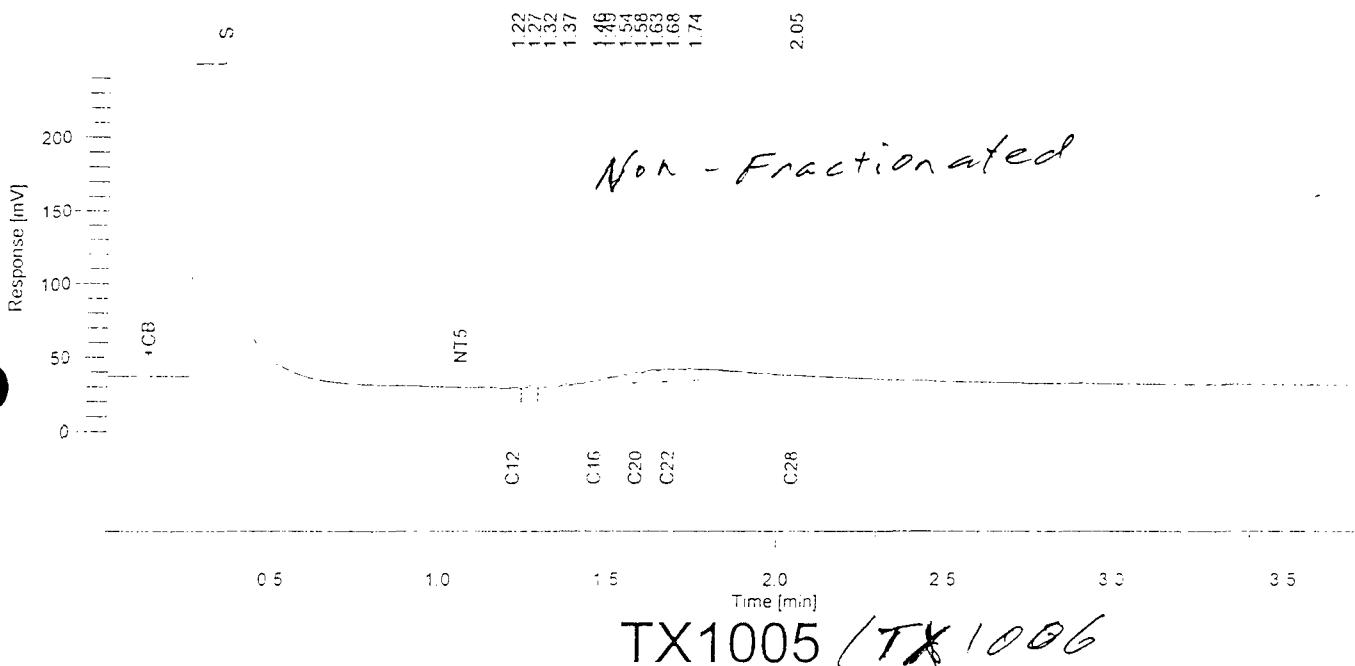
Result File : U:\Data\GC6\BE6B015-20010205-144337.rst

Inst Method : D:\Method\TX1006 from U:\Data\GC6\BE6B015-20010205-144337.rst

Proc Method : D:\Method\TX1006.mth from U:\Data\GC6\BE6B015-20010205-144337.rst

Calib Method : D:\Method\TX1006.mth from U:\Data\GC6\BE6B015-20010205-144337.rst

Sequence File : D:\Sequence\BE6B.seq



Analytical Method: TX1005

Reporting Units: mg/Kg

Matrix: soil

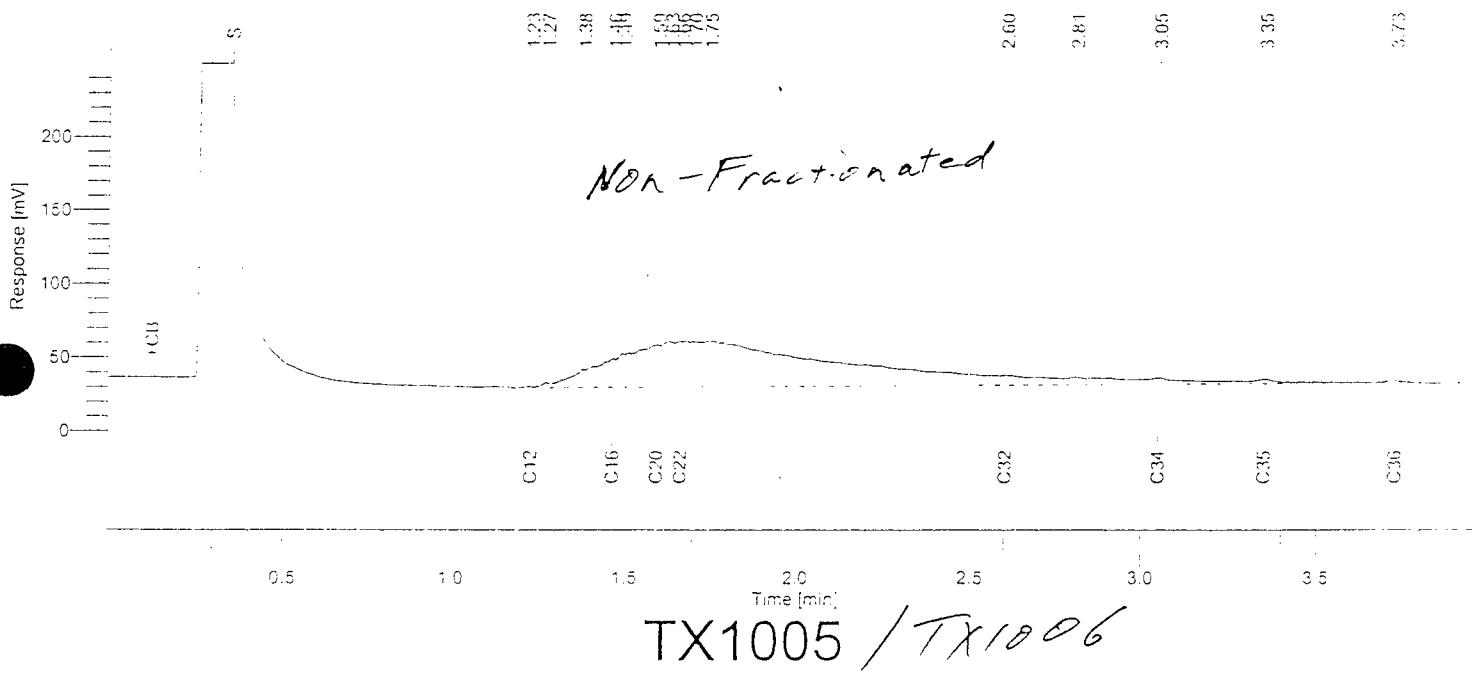
Component Name	Adjusted Amount	Raw Amount	Area [ $\mu$ V·s]
C6-C35	243.1	243.1	125646.42
			125646.42

Report stored in ASCII file: U:\Data\GC6\BE6B015-20010205-144337.TX0

Software Version : 6.1.2.0.1:D19  
 Operator : TurboChrom  
 Sample Number : 012  
 AutoSampler : BUILT-IN  
 Instrument Name : GC6  
 Instrument Serial # : None  
 Delay Time : 0.00 min  
 Sampling Rate : 25.0000 pts/s  
 Volume Injected : 1.000000 ul  
 Sample Amount : 1.0000  
 Data Acquisition Time : 2/1/01 4:08:54 AM

Date : 2/1/01 4:06:28 PM  
 Sample Name : 162446  
 Study :  
 Rack/Vial : 0/12  
 Channel : A  
 A/D mV Range : 1000  
 End Time : 4.07 min  
 Area Reject : 0.000000  
 Dilution Factor : 1.00  
 Cycle : 12

Raw Data File : D:\Data\GC6\BE6B012.raw <Modified>  
 Result File : D:\Data\GC6\BE6B012.rst  
 Inst Method : D:\Method\TX1006 from D:\Data\GC6\BE6B012.rst  
 Proc Method : D:\Method\TX1006.mth  
 Calib Method : D:\Method\TX1006.mth  
 Sequence File : D:\Sequence\BE6B.seq



Analytical Method: TX1005  
 Reporting Units: mg/Kg  
 Matrix: soil

Component Name	Adjusted Amount	Raw Amount	Area [µV s]
C6-C35	1074.4	1074.4	751694.81
			751694.81

Report stored in ASCII file: D:\Data\GC6\BE6B012.TX0

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cliff Brunson  
BBC International Inc.  
P.O. Box 805  
Hobbs, NM 88241

Report Date: February 5, 2001

Order ID Number: A01011503

Project Number: N/A  
Project Name: Shell Westgate  
Project Location: Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
162416	1506-02-3'-6'	Soil	1/12/01	8:45	1/15/01
162450	1506-03-6'-8'	Soil	1/12/01	9:35	1/15/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

**Analytical Report****Sample: 162446 - 1506-02-3'-6'**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC08776      Date Analyzed: 1/30/01  
 Analyst: MA      Preparation Method: E 3510C      Prep Batch: PB07579      Date Prepared: 1/26/01

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<12.50	mg/Kg	50	0.25
Acenaphthylene		<12.50	mg/Kg	50	0.25
Acenaphthene		<12.50	mg/Kg	50	0.25
Fluorene		<12.50	mg/Kg	50	0.25
Phenanthrene		<12.50	mg/Kg	50	0.25
Anthracene		<12.50	mg/Kg	50	0.25
Fluoranthene		<12.50	mg/Kg	50	0.25
Pyrene		<12.50	mg/Kg	50	0.25
Benzo(a)anthracene		<12.50	mg/Kg	50	0.25
Chrysene		<12.50	mg/Kg	50	0.25
Benzo(b)fluoranthene		<12.50	mg/Kg	50	0.25
Benzo(k)fluoranthene		<12.50	mg/Kg	50	0.25
Benzo(a)pyrene		<12.50	mg/Kg	50	0.25
Indeno(1,2,3-cd)pyrene		<12.50	mg/Kg	50	0.25
Dibenzo(a,h)anthracene		<12.50	mg/Kg	50	0.25
Benzo(g,h,i)perylene		<12.50	mg/Kg	50	0.25
Test Comments	<sup>1</sup>	*	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		38.67	mg/Kg	1	80	48	27 - 115
2-Fluorobiphenyl		56.74	mg/Kg	1	80	70	31 - 132
Terphenyl-d14		29.13	mg/Kg	1	80	36	12 - 167

**Sample: 162450 - 1506-03-6'-8'**

Analysis: PAH      Analytical Method: S 8270C      QC Batch: QC08776      Date Analyzed: 1/30/01  
 Analyst: MA      Preparation Method: E 3510C      Prep Batch: PB07579      Date Prepared: 1/26/01

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<1.25	mg/Kg	5	0.25
Acenaphthylene		<1.25	mg/Kg	5	0.25
Acenaphthene		<1.25	mg/Kg	5	0.25
Fluorene		<1.25	mg/Kg	5	0.25
Phenanthrene		<1.25	mg/Kg	5	0.25
Anthracene		<1.25	mg/Kg	5	0.25
Fluoranthene		<1.25	mg/Kg	5	0.25
Pyrene		<1.25	mg/Kg	5	0.25
Benzo(a)anthracene		<1.25	mg/Kg	5	0.25
Chrysene		<1.25	mg/Kg	5	0.25
Benzo(b)fluoranthene		<1.25	mg/Kg	5	0.25
Benzo(k)fluoranthene		<1.25	mg/Kg	5	0.25
Benzo(a)pyrene		<1.25	mg/Kg	5	0.25
Indeno(1,2,3-cd)pyrene		<1.25	mg/Kg	5	0.25

*Continued ...*<sup>1</sup> Elevated reporting limit due to dilution necessitated by unknown analytes in matrix.

...Continued Sample: 162450 Analysis: PAH

Param	Flag	Result	Units	Dilution	RDL
Dibenzo(a,h)anthracene		<1.25	mg/Kg	5	0.25
Benzo(g,h,i)perylene		<1.25	mg/Kg	5	0.25
Test Comments	<sup>2</sup>	*	mg/Kg	1	0.25

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		47.00	mg/Kg	1	80	58	27 - 115
2-Fluorobiphenyl		59.97	mg/Kg	1	80	74	31 - 132
Terphenyl-d14		41.64	mg/Kg	1	80	52	12 - 167

<sup>2</sup>Elavated reporting limit due to dilution necessitated by unknown analytes in matrix.

# Quality Control Report

## Method Blank

Method Blank

QCBatch: QC08776

Param	Flag	Results	Units	Reporting Limit
Naphthalene		<0.25	mg/Kg	0.25
Acenaphthylene		<0.25	mg/Kg	0.25
Acenaphthene		<0.25	mg/Kg	0.25
Fluorene		<0.25	mg/Kg	0.25
Phenanthrene		<0.25	mg/Kg	0.25
Anthracene		<0.25	mg/Kg	0.25
Fluoranthene		<0.25	mg/Kg	0.25
Pyrene		<0.25	mg/Kg	0.25
Benzo(a)anthracene		<0.25	mg/Kg	0.25
Chrysene		<0.25	mg/Kg	0.25
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25
Benzo(a)pyrene		<0.25	mg/Kg	0.25
Indeno(1,2,3-cd)pyrene		<0.25	mg/Kg	0.25
Dibenz(a,h)anthracene		<0.25	mg/Kg	0.25
Benzo(g,h,i)perylene		<0.25	mg/Kg	0.25

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		62.49	mg/Kg	80	78	27 - 115
2-Fluorobiphenyl		68.74	mg/Kg	80	85	31 - 132
Terphenyl-d14		49.20	mg/Kg	80	61	12 - 167

# Quality Control Report

## Lab Control Spikes and Duplicate Spikes

LCS

QC Batch: QC08776

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Naphthalene		61.37	mg/Kg	1	80	<0.25	76		23 - 124	20
Acenaphthylene		67.81	mg/Kg	1	80	<0.25	84		34 - 135	20
Acenaphthene		66.68	mg/Kg	1	80	<0.25	83		31 - 131	20
Fluorene		68.40	mg/Kg	1	80	<0.25	85		36 - 132	20
Phenanthrene		59.72	mg/Kg	1	80	<0.25	74		31 - 138	20
Anthracene		63.37	mg/Kg	1	80	<0.25	79		24 - 141	20
Fluoranthene		78.05	mg/Kg	1	80	<0.25	97		22 - 153	20
Pyrene		54.21	mg/Kg	1	80	<0.25	67		22 - 147	20
Benzo(a)anthracene		68.24	mg/Kg	1	80	<0.25	85		41 - 127	20
Chrysene		114.15	mg/Kg	1	80	<0.25	142		0 - 182	20
Benzo(b)fluoranthene		80.86	mg/Kg	1	80	<0.25	101		40 - 131	20
Benzo(k)fluoranthene		67.98	mg/Kg	1	80	<0.25	84		35 - 133	20

*Continued ...*

... Continued

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Benzo(a)pyrene		69.49	mg/Kg	1	80	<0.25	86	53 - 117	20
Indeno(1,2,3-cd)pyrene		53.76	mg/Kg	1	80	<0.25	67	30 - 130	20
Dibenzo(a,h)anthracene		68.72	mg/Kg	1	80	<0.25	85	0 - 184	20
Benzo(g,h,i)perylene		46.27	mg/Kg	1	80	<0.25	57	41 - 123	20

Surrogate	Flag	Result	Units	Spike		% Rec.	% Rec. Limit
				Dil.	Amount		
Nitrobenzene-d5		56.91	mg/Kg	1	80	71	27 - 115
2-Fluorobiphenyl		61.73	mg/Kg	1	80	77	31 - 132
Terphenyl-d14		51.24	mg/Kg	1	80	64	12 - 167

LCSD QC Batch: QC08776

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Naphthalene		62.02	mg/Kg	1	80	<0.25	77	1	23 - 124
Acenaphthylene		68.29	mg/Kg	1	80	<0.25	85	1	34 - 135
Acenaphthene		66.62	mg/Kg	1	80	<0.25	83	0	31 - 131
Fluorene		66.24	mg/Kg	1	80	<0.25	82	3	36 - 132
Phenanthrene		60.75	mg/Kg	1	80	<0.25	75	2	31 - 138
Anthracene		64.13	mg/Kg	1	80	<0.25	80	1	24 - 141
Fluoranthene		79.68	mg/Kg	1	80	<0.25	99	2	22 - 153
Pyrene		53.78	mg/Kg	1	80	<0.25	67	1	22 - 147
Benzo(a)anthracene		67.74	mg/Kg	1	80	<0.25	84	1	41 - 127
Chrysene		115.74	mg/Kg	1	80	<0.25	144	1	0 - 182
Benzo(b)fluoranthene		78.71	mg/Kg	1	80	<0.25	98	3	40 - 131
Benzo(k)fluoranthene		69.16	mg/Kg	1	80	<0.25	86	2	35 - 133
Benzo(a)pyrene		70.05	mg/Kg	1	80	<0.25	87	1	53 - 117
Indeno(1,2,3-cd)pyrene		56.89	mg/Kg	1	80	<0.25	71	6	30 - 130
Dibenzo(a,h)anthracene		72.03	mg/Kg	1	80	<0.25	90	5	0 - 184
Benzo(g,h,i)perylene		49.81	mg/Kg	1	80	<0.25	62	7	41 - 123

Surrogate	Flag	Result	Units	Spike		% Rec.	% Rec. Limit
				Dil.	Amount		
Nitrobenzene-d5		59.45	mg/Kg	1	80	74	27 - 115
2-Fluorobiphenyl		64.67	mg/Kg	1	80	80	31 - 132
Terphenyl-d14		50.61	mg/Kg	1	80	63	12 - 167

## Quality Control Report

### Continuing Calibration Verification Standards

CCV (1)

QC Batch: QC08776

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/Kg	60	60.32	100	80 - 120	1/30/01
Acenaphthylene		mg/Kg	60	60.54	100	80 - 120	1/30/01
Acenaphthene		mg/Kg	60	59.83	99	80 - 120	1/30/01
Fluorene		mg/Kg	60	54.63	91	80 - 120	1/30/01
Phenanthrene		mg/Kg	60	61.20	102	80 - 120	1/30/01
Anthracene		mg/Kg	60	60.83	101	80 - 120	1/30/01
Fluoranthene		mg/Kg	60	71.00	118	80 - 120	1/30/01
Pyrene		mg/Kg	60	48.39	80	80 - 120	1/30/01
Benzo(a)anthracene		mg/Kg	60	64.21	107	80 - 120	1/30/01
Chrysene		mg/Kg	60	66.09	110	80 - 120	1/30/01
Benzo(b)fluoranthene		mg/Kg	60	65.80	109	80 - 120	1/30/01
Benzo(k)fluoranthene		mg/Kg	60	60.60	101	80 - 120	1/30/01
Benzo(a)pyrene		mg/Kg	60	63.61	106	80 - 120	1/30/01
Indeno(1,2,3-cd)pyrene		mg/Kg	60	57.90	96	80 - 120	1/30/01
Dibenzo(a,h)anthracene		mg/Kg	60	59.31	98	80 - 120	1/30/01
Benzo(g,h,i)perylene		mg/Kg	60	52.48	87	80 - 120	1/30/01
Nitrobenzene-d5		mg/Kg	60	64.85	108	80 - 120	1/30/01
2-Fluorobiphenyl		mg/Kg	60	66.79	111	80 - 120	1/30/01
Terphenyl-d14		mg/Kg	60	48.56	80	80 - 120	1/30/01

# TRACEANALYSIS, INC.

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## Analytical and Quality Control Report

Cliff Brunson  
BBC International Inc.  
P.O. Box 805  
Hobbs, NM 88241

Report Date: January 31, 2001

Order ID Number: A01011503

Project Number: N/A  
Project Name: Shell Westgate  
Project Location: Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
162445	1506-02-0'-3'	Soil	1/12/01	8:35	1/15/01
162446	1506-02-3'-6'	Soil	1/12/01	8:45	1/15/01
162447	1506-02-6'-75'	Soil	1/12/01	9:00	1/15/01
162448	1506-03-0'-3'	Soil	1/12/01	9:12	1/15/01
162449	1506-03-3'-6'	Soil	1/12/01	9:24	1/15/01
162450	1506-03-6'-8'	Soil	1/12/01	9:35	1/15/01
162451	1506-04-0'-3'	Soil	1/12/01	9:44	1/15/01
162452	1506-04-3'-4'	Soil	1/12/01	10:00	1/15/01
162453	1506-05-0'-3'	Soil	1/12/01	10:50	1/15/01
162454	1506-05-3'-4.5'	Soil	1/12/01	10:55	1/15/01
162455	1506-05-3'-6'	Soil	1/12/01	11:10	1/15/01
162456	1506-06-6'-9'	Soil	1/12/01	11:30	1/15/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 42 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 162445 - 1506-02-0'-3'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.69	µg/Kg	1	50	103	69 - 116
Toluene-d8		50.86	µg/Kg	1	50	101	88 - 114
4-Bromofluorobenzene		50.87	µg/Kg	1	50	101	74 - 110

**Sample: 162445 - 1506-02-0'-3'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08205      Date Analyzed: 1/17/01  
Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162445 - 1506-02-0'-3'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08199      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07151      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TPH		153	mg/Kg	1	10

**Sample: 162445 - 1506-02-0'-3'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

**Sample: 162445 - 1506-02-0'-3'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162445 - 1506-02-0'-3'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
 Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		10200	mg/Kg	1000	0.50
Total Arsenic		6.96	mg/Kg	100	0.05
Total Barium		6670	mg/Kg	1000	0.05
Total Boron		20.8	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		31050	mg/Kg	100	0.50
Total Chromium		5.02	mg/Kg	100	0.05
Total Cobalt		7.61	mg/Kg	100	0.04
Total Copper		26.7	mg/Kg	100	0.10
Total Iron		9190	mg/Kg	1000	0.05
Total Lead		65.9	mg/Kg	100	0.10
Total Magnesium		4734	mg/Kg	100	0.50
Total Manganese		186	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		19.6	mg/Kg	100	0.10
Total Potassium		2653	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		209	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1185	mg/Kg	100	0.50
Total Zinc		59.5	mg/Kg	100	0.10

**Sample: 162446 - 1506-02-3'-6'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.12	µg/Kg	1	50	104	69 - 116
Toluene-d8		50.86	µg/Kg	1	50	101	88 - 114
4-Bromofluorobenzene		50.71	µg/Kg	1	50	101	74 - 110

**Sample: 162446 - 1506-02-3'-6'**

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC08205      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162446 - 1506-02-3'-6'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08199      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07151      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12100	mg/Kg	1	10

**Sample: 162446 - 1506-02-3'-6'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		538	mg/Kg	1	50

**Sample: 162446 - 1506-02-3'-6'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162446 - 1506-02-3'-6'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		8880	mg/Kg	1000	0.50
Total Arsenic		7.59	mg/Kg	100	0.05
Total Barium		6300	mg/Kg	1000	0.05
Total Boron		26.6	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		26920	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		7.45	mg/Kg	100	0.04
Total Copper		26.4	mg/Kg	100	0.10
Total Iron		11100	mg/Kg	1000	0.05
Total Lead		144	mg/Kg	100	0.10
Total Magnesium		3461	mg/Kg	100	0.50
Total Manganese		198	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		20.3	mg/Kg	100	0.10
Total Potassium		2519	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		260	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1076	mg/Kg	100	0.50
Total Zinc		179	mg/Kg	100	0.10

**Sample: 162447 - 1506-02-6'-75'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.70	µg/Kg	1	50	103	69 - 116
Toluene-d8		50.34	µg/Kg	1	50	100	88 - 114
4-Bromofluorobenzene		50.47	µg/Kg	1	50	100	74 - 110

**Sample: 162447 - 1506-02-6'-75'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162447 - 1506-02-6'-75'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08199      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07151      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		734	mg/Kg	1	10

**Sample: 162447 - 1506-02-6'-75'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		142	mg/Kg	1	50

**Sample: 162447 - 1506-02-6'-75'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
 Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162447 - 1506-02-6'-75'**

Analysis: Total Metals    Analytical Method: S 6010B    QC Batch: QC08190    Date Analyzed: 1/16/01  
 Analyst: RR               Preparation Method: E 3050B    Prep Batch: PB07107    Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		8500	mg/Kg	1000	0.50
Total Arsenic		6.57	mg/Kg	100	0.05
Total Barium		1090	mg/Kg	1000	0.05
Total Boron		21.8	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		107200	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		5.75	mg/Kg	100	0.04
Total Copper		22.5	mg/Kg	100	0.10
Total Iron		6780	mg/Kg	1000	0.05
Total Lead		36.3	mg/Kg	100	0.10
Total Magnesium		6840	mg/Kg	100	0.50
Total Manganese		116	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		15.2	mg/Kg	100	0.10
Total Potassium		2700	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		200	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1383	mg/Kg	100	0.50
Total Zinc		41.7	mg/Kg	100	0.10

**Sample: 162448 - 1506-03-0'-3'**

Analysis: 8260    Analytical Method: S 8260B    QC Batch: QC08204    Date Analyzed: 1/17/01  
 Analyst: JG               Preparation Method: S 5035    Prep Batch: PB07155    Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.71	µg/Kg	1	50	103	69 - 116
Toluene-d8		50.21	µg/Kg	1	50	100	88 - 114
4-Bromofluorobenzene		50.46	µg/Kg	1	50	100	74 - 110

**Sample: 162448 - 1506-03-0'-3'**

Analysis: Hg. Total    Analytical Method: S 7471A    QC Batch: QC08206    Date Analyzed: 1/17/01  
 Analyst: SSC               Preparation Method: N/A    Prep Batch: PB07156    Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162448 - 1506-03-0'-3'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08487      Date Analyzed: 1/25/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07368      Date Prepared: 1/25/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

**Sample: 162448 - 1506-03-0'-3'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08547      Date Analyzed: 1/26/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07414      Date Prepared: 1/26/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

**Sample: 162448 - 1506-03-0'-3'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162448 - 1506-03-0'-3'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		9120	mg/Kg	1000	0.50
Total Arsenic		<5	mg/Kg	100	0.05
Total Barium		272	mg/Kg	1000	0.05
Total Boron		17.4	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		71110	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		5.02	mg/Kg	100	0.01
Total Copper		23	mg/Kg	100	0.10
Total Iron		7240	mg/Kg	1000	0.05
Total Lead		11.9	mg/Kg	100	0.10
Total Magnesium		3270	mg/Kg	100	0.50
Total Manganese		139	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		14.9	mg/Kg	100	0.10
Total Potassium		3094	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		190	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		884	mg/Kg	100	0.50
Total Zinc		41.6	mg/Kg	100	0.10

**Sample: 162449 - 1506-03-3'-6'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.68	µg/Kg	1	50	103	69 - 116
Toluene-d8		50.83	µg/Kg	1	50	101	88 - 114
4-Bromofluorobenzene		50.08	µg/Kg	1	50	100	74 - 110

**Sample: 162449 - 1506-03-3'-6'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162449 - 1506-03-3'-6'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		2460	mg/Kg	1	10

**Sample: 162449 - 1506-03-3'-6'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		55	mg/Kg	1	50

**Sample: 162449 - 1506-03-3'-6'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
 Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162449 - 1506-03-3'-6'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
 Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		4220	mg/Kg	1000	0.50
Total Arsenic		<5	mg/Kg	100	0.05
Total Barium		864	mg/Kg	1000	0.05
Total Boron		11.6	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		234000	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		4.74	mg/Kg	100	0.04
Total Copper		19.2	mg/Kg	100	0.10
Total Iron		2860	mg/Kg	1000	0.05
Total Lead		12.9	mg/Kg	100	0.10
Total Magnesium		6140	mg/Kg	100	0.50
Total Manganese		33.4	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		12.7	mg/Kg	100	0.10
Total Potassium		1390	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		161	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1310	mg/Kg	100	0.50
Total Zinc		10.5	mg/Kg	100	0.10

**Sample: 162450 - 1506-03-6'-8'**

Analysis: S260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.38	µg/Kg	1	50	104	69 - 116
Toluene-d8		51.06	µg/Kg	1	50	102	88 - 114
4-Bromofluorobenzene		50.56	µg/Kg	1	50	101	74 - 110

**Sample: 162450 - 1506-03-6'-8'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162450 - 1506-03-6'-8'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		4940	mg/Kg	1	10

**Sample: 162450 - 1506-03-6'-8'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		808	mg/Kg	1	50

**Sample: 162450 - 1506-03-6'-8'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162450 - 1506-03-6'-8'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		8740	mg/Kg	1000	0.50
Total Arsenic		7.00	mg/Kg	100	0.05
Total Barium		204	mg/Kg	1000	0.05
Total Boron		18.5	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		122000	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		4.34	mg/Kg	100	0.04
Total Copper		15.9	mg/Kg	100	0.10
Total Iron		5290	mg/Kg	1000	0.05
Total Lead		< 10	mg/Kg	100	0.10
Total Magnesium		9070	mg/Kg	100	0.50
Total Manganese		38.7	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		14.6	mg/Kg	100	0.10
Total Potassium		2830	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		191	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1084	mg/Kg	100	0.50
Total Zinc		17.2	mg/Kg	100	0.10

## Sample: 162451 - 1506-04-0'-3'

Analysis: 8260	Analytical Method: S 8260B	QC Batch: QC08204	Date Analyzed: 1/17/01
Analyst: JG	Preparation Method: S 5035	Prep Batch: PB07155	Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.74	µg/Kg	1	50	103	69 - 116
Toluene-d8		51.05	µg/Kg	1	50	102	88 - 114
4-Bromofluorobenzene		50.99	µg/Kg	1	50	101	74 - 110

## Sample: 162451 - 1506-04-0'-3'

Analysis: Hg. Total	Analytical Method: S 7471A	QC Batch: QC08206	Date Analyzed: 1/17/01
Analyst: SSC	Preparation Method: N/A	Prep Batch: PB07156	Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

## Sample: 162451 - 1506-04-0'-3'

Analysis: TPH	Analytical Method: E 418.1	QC Batch: QC08487	Date Analyzed: 1/25/01
Analyst: BP	Preparation Method: E 3550B	Prep Batch: PB07368	Date Prepared: 1/25/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

## Sample: 162451 - 1506-04-0'-3'

Analysis: TPH DRO	Analytical Method: Mod. 8015B	QC Batch: QC08547	Date Analyzed: 1/26/01
Analyst: BP	Preparation Method: 3550 B	Prep Batch: PB07414	Date Prepared: 1/26/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

## Sample: 162451 - 1506-04-0'-3'

Analysis: TPH GRO	Analytical Method: 8015B	QC Batch: QC08317	Date Analyzed: 1/19/01
Analyst: JW	Preparation Method: N/A	Prep Batch: PB07246	Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

## Sample: 162451 - 1506-04-0'-3'

Analysis: Total Metals    Analytical Method: S 6010B    QC Batch: QC08190    Date Analyzed: 1/16/01  
 Analyst: RR               Preparation Method: E 3050B    Prep Batch: PB07107    Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		9540	mg/Kg	1000	0.50
Total Arsenic		5.53	mg/Kg	100	0.05
Total Barium		5100	mg/Kg	1000	0.05
Total Boron		20.7	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		43110	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		7.08	mg/Kg	100	0.04
Total Copper		22.4	mg/Kg	100	0.10
Total Iron		10200	mg/Kg	1000	0.05
Total Lead		40.9	mg/Kg	100	0.10
Total Magnesium		4390	mg/Kg	100	0.50
Total Manganese		200	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		19.7	mg/Kg	100	0.10
Total Potassium		3240	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		192	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		990	mg/Kg	100	0.50
Total Zinc		63.2	mg/Kg	100	0.10

## Sample: 162452 - 1506-04-3'-4'

Analysis: 8260    Analytical Method: S 8260B    QC Batch: QC08204    Date Analyzed: 1/17/01  
 Analyst: JG               Preparation Method: S 5035    Prep Batch: PB07155    Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.56	µg/Kg	1	50	105	69 - 116
Toluene-d8		50.73	µg/Kg	1	50	101	88 - 114
4-Bromofluorobenzene		50.97	µg/Kg	1	50	101	74 - 110

## Sample: 162452 - 1506-04-3'-4'

Analysis: Hg. Total    Analytical Method: S 7471A    QC Batch: QC08206    Date Analyzed: 1/17/01  
 Analyst: SSC               Preparation Method: N/A    Prep Batch: PB07156    Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162452 - 1506-04-3'-4'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		2720	mg/Kg	1	10

**Sample: 162452 - 1506-04-3'-4'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		103	mg/Kg	1	50

**Sample: 162452 - 1506-04-3'-4'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162452 - 1506-04-3'-4'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		12500	mg/Kg	1000	0.50
Total Arsenic		9.32	mg/Kg	100	0.05
Total Barium		7200	mg/Kg	1000	0.05
Total Boron		28.8	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		36800	mg/Kg	100	0.50
Total Chromium		7.41	mg/Kg	100	0.05
Total Cobalt		9.23	mg/Kg	100	0.01
Total Copper		22.5	mg/Kg	100	0.10
Total Iron		12000	mg/Kg	1000	0.05
Total Lead		122	mg/Kg	100	0.10
Total Magnesium		5450	mg/Kg	100	0.50
Total Manganese		242	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		24.8	mg/Kg	100	0.10
Total Potassium		3660	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		220	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1290	mg/Kg	100	0.50
Total Zinc		142	mg/Kg	100	0.10

**Sample: 162453 - 1506-05-0'-3'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.49	µg/Kg	1	50	102	69 - 116
Toluene-d8		51.21	µg/Kg	1	50	102	88 - 114
4-Bromofluorobenzene		50.24	µg/Kg	1	50	100	74 - 110

**Sample: 162453 - 1506-05-0'-3'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162453 - 1506-05-0'-3'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		322	mg/Kg	1	10

**Sample: 162453 - 1506-05-0'-3'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		88	mg/Kg	1	50

**Sample: 162453 - 1506-05-0'-3'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
 Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162453 - 1506-05-0'-3'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
 Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		13600	mg/Kg	1000	0.50
Total Arsenic		5.36	mg/Kg	100	0.05
Total Barium		8760	mg/Kg	1000	0.05
Total Boron		24.2	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		35500	mg/Kg	100	0.50
Total Chromium		6.66	mg/Kg	100	0.05
Total Cobalt		8.76	mg/Kg	100	0.04
Total Copper		23.9	mg/Kg	100	0.10
Total Iron		12600	mg/Kg	1000	0.05
Total Lead		121	mg/Kg	100	0.10
Total Magnesium		5180	mg/Kg	100	0.50
Total Manganese		210	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		22.2	mg/Kg	100	0.10
Total Potassium		3530	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		233	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1218	mg/Kg	100	0.50
Total Zinc		112	mg/Kg	100	0.10

**Sample: 162454 - 1506-05-3'-4.5'**

Analysis: S260      Analytical Method: S S260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.15	µg/Kg	1	50	104	69 - 116
Toluene-d8		51.34	µg/Kg	1	50	102	88 - 114
4-Bromofluorobenzene		51.52	µg/Kg	1	50	103	74 - 110

**Sample: 162454 - 1506-05-3'-4.5'**

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162454 - 1506-05-3'-4.5'**Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		432	mg/Kg	1	10

**Sample: 162454 - 1506-05-3'-4.5'**Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08182      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07137      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

**Sample: 162454 - 1506-05-3'-4.5'**Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162454 - 1506-05-3'-4.5'**Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08190      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		11800	mg/Kg	1000	0.50
Total Arsenic		5.04	mg/Kg	100	0.05
Total Barium		6170	mg/Kg	1000	0.05
Total Boron		23.7	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		43000	mg/Kg	100	0.50
Total Chromium		6.69	mg/Kg	100	0.05
Total Cobalt		8.44	mg/Kg	100	0.04
Total Copper		21.7	mg/Kg	100	0.10
Total Iron		10900	mg/Kg	1000	0.05
Total Lead		80.3	mg/Kg	100	0.10
Total Magnesium		5360	mg/Kg	100	0.50
Total Manganese		232	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		22.4	mg/Kg	100	0.10
Total Potassium		3767	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		173	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1225	mg/Kg	100	0.50
Total Zinc		167	mg/Kg	100	0.10

**Sample: 162455 - 1506-05-3'-6'**

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08204      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07155      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.84	µg/Kg	1	50	103	69 - 116
Toluene-d8		49.60	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		52.27	µg/Kg	1	50	104	74 - 110

**Sample: 162455 - 1506-05-3'-6'**

Analysis: Hg. Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162455 - 1506-05-3'-6'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		2690	mg/Kg	1	100

**Sample: 162455 - 1506-05-3'-6'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08183      Date Analyzed: 1/16/01  
 Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07138      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		101	mg/Kg	1	50

**Sample: 162455 - 1506-05-3'-6'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
 Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

## Sample: 162455 - 1506-05-3'-6'

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08191      Date Analyzed: 1/16/01  
 Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		13000	mg/Kg	1000	0.50
Total Arsenic		5.67	mg/Kg	100	0.05
Total Barium		6290	mg/Kg	1000	0.05
Total Boron		25.9	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		35050	mg/Kg	100	0.50
Total Chromium		6.51	mg/Kg	100	0.05
Total Cobalt		9	mg/Kg	100	0.04
Total Copper		20.5	mg/Kg	100	0.10
Total Iron		12500	mg/Kg	1000	0.05
Total Lead		87.4	mg/Kg	100	0.10
Total Magnesium		6020	mg/Kg	100	0.50
Total Manganese		296	mg/Kg	100	0.10
Total Molybdenum		< 10	mg/Kg	100	0.10
Total Nickel		25.9	mg/Kg	100	0.10
Total Potassium		3688	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		203	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1200	mg/Kg	100	0.50
Total Zinc		112	mg/Kg	100	0.10

## Sample: 162456 - 1506-06-6'-9'

Analysis: 8260      Analytical Method: S 8260B      QC Batch: QC08265      Date Analyzed: 1/17/01  
 Analyst: JG      Preparation Method: S 5035      Prep Batch: PB07210      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
o-Xylene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.74	µg/Kg	1	50	105	69 - 116
Toluene- <sup>18</sup>		50.84	µg/Kg	1	50	101	88 - 114
4-Bromofluorobenzene		50.54	µg/Kg	1	50	101	74 - 110

## Sample: 162456 - 1506-06-6'-9'

Analysis: Hg, Total      Analytical Method: S 7471A      QC Batch: QC08206      Date Analyzed: 1/17/01  
 Analyst: SSC      Preparation Method: N/A      Prep Batch: PB07156      Date Prepared: 1/17/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

**Sample: 162456 - 1506-06-6'-9'**

Analysis: TPH      Analytical Method: E 418.1      QC Batch: QC08198      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: E 3550B      Prep Batch: PB07152      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		788	mg/Kg	1	10

**Sample: 162456 - 1506-06-6'-9'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      QC Batch: QC08183      Date Analyzed: 1/16/01  
Analyst: BP      Preparation Method: 3550 B      Prep Batch: PB07138      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
DRO		324	mg/Kg	1	50

**Sample: 162456 - 1506-06-6'-9'**

Analysis: TPH GRO      Analytical Method: 8015B      QC Batch: QC08317      Date Analyzed: 1/19/01  
Analyst: JW      Preparation Method: N/A      Prep Batch: PB07246      Date Prepared: 1/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<5.00	mg/Kg	50	0.10

**Sample: 162456 - 1506-06-6'-9'**

Analysis: Total Metals      Analytical Method: S 6010B      QC Batch: QC08191      Date Analyzed: 1/16/01  
Analyst: RR      Preparation Method: E 3050B      Prep Batch: PB07107      Date Prepared: 1/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		8100	mg/Kg	1000	0.50
Total Arsenic		6.32	mg/Kg	100	0.05
Total Barium		314	mg/Kg	1000	0.05
Total Boron		18.8	mg/Kg	100	0.10
Total Cadmium		<2	mg/Kg	100	0.02
Total Calcium		71650	mg/Kg	100	0.50
Total Chromium		<5	mg/Kg	100	0.05
Total Cobalt		4.44	mg/Kg	100	0.04
Total Copper		13.7	mg/Kg	100	0.10
Total Iron		5520	mg/Kg	1000	0.05
Total Lead		<10	mg/Kg	100	0.10
Total Magnesium		8440	mg/Kg	100	0.50
Total Manganese		56.8	mg/Kg	100	0.10
Total Molybdenum		<10	mg/Kg	100	0.10
Total Nickel		13.8	mg/Kg	100	0.10
Total Potassium		2490	mg/Kg	100	0.50
Total Selenium		<5	mg/Kg	100	0.05
Total Silica		170	mg/Kg	1000	0.05
Total Silver		<1	mg/Kg	100	0.01
Total Sodium		1170	mg/Kg	100	0.50
Total Zinc		40.3	mg/Kg	100	0.10

## Quality Control Report Method Blank

Method Blank      QCBatch: QC08182

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Method Blank      QCBatch: QC08183

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Method Blank      QCBatch: QC08190

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.50	mg/Kg	0.50
Total Arsenic		<0.05	mg/Kg	0.05
Total Barium		<0.05	mg/Kg	0.05
Total Boron		<0.1	mg/Kg	0.10
Total Cadmium		<0.02	mg/Kg	0.02
Total Chromium		<0.05	mg/Kg	0.05
Total Cobalt		<0.04	mg/Kg	0.04
Total Copper		<0.10	mg/Kg	0.10
Total Iron		<0.05	mg/Kg	0.05
Total Lead		<0.10	mg/Kg	0.10
Total Manganese		<0.10	mg/Kg	0.10
Total Molybdenum		<0.10	mg/Kg	0.10
Total Nickel		<0.10	mg/Kg	0.10
Total Selenium		<0.05	mg/Kg	0.05
Total Silica		<0.05	mg/Kg	0.05
Total Silver		<0.01	mg/Kg	0.01
Total Zinc		<0.10	mg/Kg	0.10

Method Blank      QCBatch: QC08191

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.50	mg/Kg	0.50
Total Arsenic		<0.05	mg/Kg	0.05
Total Barium		<0.05	mg/Kg	0.05
Total Boron		<0.1	mg/Kg	0.10
Total Cadmium		<0.02	mg/Kg	0.02
Total Calcium		<0.50	mg/Kg	0.50
Total Chromium		<0.05	mg/Kg	0.05
Total Cobalt		<0.04	mg/Kg	0.04

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Param	Flag	Results	Units	Reporting Limit
Total Copper		<0.10	mg/Kg	0.10
Total Iron		<0.05	mg/Kg	0.05
Total Lead		<0.10	mg/Kg	0.10
Total Magnesium		<0.50	mg/Kg	0.50
Total Manganese		<0.10	mg/Kg	0.10
Total Molybdenum		<0.10	mg/Kg	0.10
Total Nickel		<0.10	mg/Kg	0.10
Total Potassium		<0.50	mg/Kg	0.50
Total Selenium		<0.05	mg/Kg	0.05
Total Silica		<0.05	mg/Kg	0.05
Total Silver		<0.01	mg/Kg	0.01
Total Sodium		<0.50	mg/Kg	0.50
Total Zinc		<0.10	mg/Kg	0.10

Method Blank      QCBatch: QC08198

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank      QCBatch: QC08199

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank      QCBatch: QC08204

Param	Flag	Results	Units	Reporting Limit
Benzene		<25.0	µg/Kg	1
Toluene		<25.0	µg/Kg	1
Ethylbenzene		<25.0	µg/Kg	1
m,p-Xylene		<25.0	µg/Kg	1
o-Xylene		<25.0	µg/Kg	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		50.80	µg/Kg	50	101	69 - 116
Toluene-d8		50.82	µg/Kg	50	101	88 - 114
4-Bromo fluorobenzene		49.89	µg/Kg	50	99	74 - 110

Method Blank      QCBatch: QC08205

Report Date: January 31, 2001  
N/A

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Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Method Blank      QCBatch: QC08206

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Method Blank      QCBatch: QC08265

Param	Flag	Results	Units	Reporting Limit
Benzene		<25.0	µg/Kg	1
Toluene		<25.0	µg/Kg	1
Ethylbenzene		<25.0	µg/Kg	1
m,p-Xylene		<25.0	µg/Kg	1
o-Xylene		<25.0	µg/Kg	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		52.36	µg/Kg	50	104	69 - 116
Toluene-d8		51.51	µg/Kg	50	103	88 - 114
4-Bromofluorobenzene		49.33	µg/Kg	50	98	74 - 110

Method Blank      QCBatch: QC08317

Param	Flag	Results	Units	Reporting Limit
GRO		<5	mg/Kg	0.10

Method Blank      QCBatch: QC08487

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank      QCBatch: QC08547

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

## Quality Control Report Lab Control Spikes and Duplicate Spikes

LCS QC Batch: QC08182

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		314	mg/Kg	1	250	<50	125		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		253	mg/Kg	1	250	101	70 - 130

LCSD QC Batch: QC08182

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		287	mg/Kg	1	250	<50	114	9	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		212	mg/Kg	1	250	84	70 - 130

LCS QC Batch: QC08183

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		276	mg/Kg	1	250	<50	110		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		222	mg/Kg	1	250	88	70 - 130

LCSD QC Batch: QC08183

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		272	mg/Kg	1	250	<50	108	1	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec.
n-Octane		211	mg/Kg	1	250	84	70 - 130

## LCS QC Batch: QC08190

Param	Flag	Sample Result	Units	Dil.	Spike Amount	Matrix Result	% Rec.	% Rec.	RPD
					Added				Limit
Total Aluminum		525	mg/Kg	100	500	<0.50	105	75 - 125	20
Total Arsenic		192	mg/Kg	100	200	<0.05	96	75 - 125	20
Total Barium		402	mg/Kg	100	400	<0.05	100	75 - 125	20
Total Boron		21.9	mg/Kg	100	20	<0.1	109	75 - 125	20
Total Cadmium		104	mg/Kg	100	100	<0.02	104	75 - 125	20
Total Calcium		11160	mg/Kg	1	10000		111	75 - 125	20
Total Chromium		42	mg/Kg	100	40	<0.05	105	75 - 125	20
Total Cobalt		103	mg/Kg	100	100	<0.04	103	75 - 125	20
Total Copper		77.1	mg/Kg	100	80	<0.10	96	75 - 125	20
Total Iron		150	mg/Kg	100	200	<0.05	75	75 - 125	20
Total Lead		215	mg/Kg	100	200	<0.10	107	75 - 125	20
Total Magnesium		11150	mg/Kg	1	10000		111	75 - 125	20
Total Manganese		109	mg/Kg	100	100	<0.10	109	75 - 125	20
Total Molybdenum		207	mg/Kg	100	200	<0.10	103	75 - 125	20
Total Nickel		107	mg/Kg	100	100	<0.10	106	75 - 125	20
Total Potassium		10920	mg/Kg	1	10000		109	75 - 125	20
Total Selenium		175	mg/Kg	100	200	<0.05	87	75 - 125	20
Total Silica		375	mg/Kg	100	400	<0.05	93	75 - 125	20
Total Silver		43.3	mg/Kg	100	40	<0.01	108	75 - 125	20
Total Sodium		11240	mg/Kg	1	10000		112	75 - 125	20
Total Zinc		111	mg/Kg	100	100	<0.10	111	75 - 125	20

## LCSD QC Batch: QC08190

Param	Flag	Sample Result	Units	Dil.	Spike Amount	Matrix Result	% Rec.	% Rec.	RPD
					Added				Limit
Total Aluminum		516	mg/Kg	100	500	<0.50	103	2	75 - 125
Total Arsenic		193	mg/Kg	100	200	<0.05	96	0	75 - 125
Total Barium		399	mg/Kg	100	400	<0.05	99	1	75 - 125
Total Boron		22.2	mg/Kg	100	20	<0.1	111	1	75 - 125
Total Cadmium		104	mg/Kg	100	100	<0.02	104	0	75 - 125
Total Calcium		10670	mg/Kg	1	100		106	4	75 - 125
Total Chromium		42.5	mg/Kg	100	40	<0.05	106	1	75 - 125
Total Cobalt		103	mg/Kg	100	100	<0.04	103	0	75 - 125
Total Copper		76.3	mg/Kg	100	80	<0.10	95	1	75 - 125
Total Iron		158	mg/Kg	100	200	<0.05	79	5	75 - 125
Total Lead		213	mg/Kg	100	200	<0.10	106	1	75 - 125
Total Magnesium		11430	mg/Kg	1	100		114	2	75 - 125
Total Manganese		110	mg/Kg	100	100	<0.10	110	1	75 - 125
Total Molybdenum		205	mg/Kg	100	200	<0.10	102	1	75 - 125
Total Nickel		107	mg/Kg	100	100	<0.10	106	0	75 - 125
Total Potassium		11143	mg/Kg	1	100		111	2	75 - 125

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Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Selenium		174	mg/Kg	100	200	<0.05	87	0	75 - 125	20
Total Silica		370	mg/Kg	100	400	<0.05	92	1	75 - 125	20
Total Silver		35	mg/Kg	100	40	<0.01	87	21	75 - 125	20
Total Sodium		11410	mg/Kg	1	200		114	2	75 - 125	20
Total Zinc		110	mg/Kg	100	100	<0.10	110	1	75 - 125	20

## LCS QC Batch: QC08191

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Aluminum		525	mg/Kg	100	500	<0.50	105		75 - 125	20
Total Arsenic		192	mg/Kg	100	200	<0.05	96		75 - 125	20
Total Barium		402	mg/Kg	100	400	<0.05	100		75 - 125	20
Total Boron		21.9	mg/Kg	100	20	<0.1	109		75 - 125	20
Total Cadmium		104	mg/Kg	100	100	<0.02	104		75 - 125	20
Total Calcium		11160	mg/Kg	1	10000	<0.50	111		75 - 125	20
Total Chromium		42	mg/Kg	100	40	<0.05	105		75 - 125	20
Total Cobalt		103	mg/Kg	100	100	<0.04	103		75 - 125	20
Total Copper		77.1	mg/Kg	100	80	<0.10	96		75 - 125	20
Total Iron		150	mg/Kg	100	200	<0.05	75		75 - 125	20
Total Lead		215	mg/Kg	100	200	<0.10	107		75 - 125	20
Total Magnesium		11430	mg/Kg	1	10000	<0.50	114		75 - 125	20
Total Manganese		109	mg/Kg	100	100	<0.10	109		75 - 125	20
Total Molybdenum		207	mg/Kg	100	200	<0.10	103		75 - 125	20
Total Nickel		107	mg/Kg	100	100	<0.10	106		75 - 125	20
Total Potassium		10960	mg/Kg	1	10000	<0.50	109		75 - 125	20
Total Selenium		175	mg/Kg	100	200	<0.05	87		75 - 125	20
Total Silica		375	mg/Kg	100	400	<0.05	93		75 - 125	20
Total Silver		43.3	mg/Kg	100	40	<0.01	108		75 - 125	20
Total Sodium		11700	mg/Kg	1	10000	<0.50	117		75 - 125	20
Total Zinc		111	mg/Kg	100	100	<0.10	111		75 - 125	20

## LCSD QC Batch: QC08191

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Aluminum		516	mg/Kg	100	50	<0.50	103	2	75 - 125	20
Total Arsenic		193	mg/Kg	100	200	<0.05	96	0	75 - 125	20
Total Barium		399	mg/Kg	100	400	<0.05	99	1	75 - 125	20
Total Boron		22.2	mg/Kg	100	20	<0.1	111	1	75 - 125	20
Total Cadmium		104	mg/Kg	100	100	<0.02	104	0	75 - 125	20
Total Calcium		10670	mg/Kg	1	100	<0.50	106	4	75 - 125	20
Total Chromium		42.5	mg/Kg	100	40	<0.05	106	1	75 - 125	20
Total Cobalt		103	mg/Kg	100	100	<0.04	103	0	75 - 125	20
Total Copper		76.3	mg/Kg	100	80	<0.10	95	1	75 - 125	20
Total Iron		158	mg/Kg	100	200	<0.05	79	5	75 - 125	20

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Param	Flag	Sample Result	Spike			% Rec.	% Rec. Limit	RPD	RPD Limit
			Units	Dil.	Amount Added				
Total Lead		213	mg/Kg	100	200	<0.10	106	1	75 - 125
Total Magnesium		11150	mg/Kg	1	10000	<0.50	111	2	75 - 125
Total Manganese		110	mg/Kg	100	100	<0.10	110	1	75 - 125
Total Molybdenum		205	mg/Kg	100	200	<0.10	102	1	75 - 125
Total Nickel		107	mg/Kg	100	100	<0.10	106	0	75 - 125
Total Potassium		11180	mg/Kg	1	10000	<0.50	111	2	75 - 125
Total Selenium		174	mg/Kg	100	200	<0.05	87	0	75 - 125
Total Silica		370	mg/Kg	100	400	<0.05	92	1	75 - 125
Total Silver		35	mg/Kg	100	40	<0.01	87	21	75 - 125
Total Sodium		11870	mg/Kg	1	10000	<0.50	118	1	75 - 125
Total Zinc		110	mg/Kg	100	100	<0.10	110	1	75 - 125

LCS QC Batch: QC08198

Param	Flag	Sample Result	Spike			% Rec.	% Rec. Limit	RPD	RPD Limit
			Units	Dil.	Amount Added				
TRPHC		222	mg/Kg	1	250	<10.0	88	70 - 130	20

LCSD QC Batch: QC08198

Param	Flag	Sample Result	Spike			% Rec.	% Rec. Limit	RPD	RPD Limit
			Units	Dil.	Amount Added				
TRPHC		229	mg/Kg	1	250	<10.0	91	3	70 - 130

LCS QC Batch: QC08199

Param	Flag	Sample Result	Spike			% Rec.	% Rec. Limit	RPD	RPD Limit
			Units	Dil.	Amount Added				
TRPHC		229	mg/Kg	1	250	<10.0	91	70 - 130	20

LCSD QC Batch: QC08199

Param	Flag	Sample Result	Spike			% Rec.	% Rec. Limit	RPD	RPD Limit
			Units	Dil.	Amount Added				
TRPHC		239	mg/Kg	1	250	<10.0	95	4	70 - 130

LCS QC Batch: QC08204

Param	Flag	Sample Result	Spike			Matrix Result	% Rec.	% Rec. Limit	RPD
			Units	Dil.	Amount Added				
1,1-Dichloroethene		91	µg/Kg	1	100	<25.0	91	80 - 120	20
Benzene		88	µg/Kg	1	100	<25.0	88	80 - 120	20
Trichloroethene (TCE)		87	µg/Kg	1	100	<25.0	87	80 - 120	20
Toluene		88	µg/Kg	1	100	<25.0	88	80 - 120	20
Chlorobenzene		98	µg/Kg	1	100	<25.0	98	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	Result		
Dibromofluoromethane		50.94	µg/Kg	1	50	101	69 - 116	
Toluene-d8		49.78	µg/Kg	1	50	99	88 - 114	
4-Bromofluorobenzene		52.51	µg/Kg	1	50	105	74 - 110	

LCSD QC Batch: QC08204

Param	Flag	Sample Result	Spike			Matrix Result	% Rec.	% Rec. Limit	RPD
			Units	Dil.	Amount Added				
1,1-Dichloroethene		95	µg/Kg	1	100	<25.0	95	80 - 120	20
Benzene		90	µg/Kg	1	100	<25.0	90	80 - 120	20
Trichloroethene (TCE)		90	µg/Kg	1	100	<25.0	90	80 - 120	20
Toluene		90	µg/Kg	1	100	<25.0	90	80 - 120	20
Chlorobenzene		101	µg/Kg	1	100	<25.0	101	80 - 120	20

Surrogate	Flag	Result	Spike			% Rec.	% Rec. Limit
			Units	Dil.	Amount		
Dibromofluoromethane		51.52	µg/Kg	1	50	103	69 - 116
Toluene-d8		49.72	µg/Kg	1	50	99	88 - 114
4-Bromofluorobenzene		51.76	µg/Kg	1	50	103	74 - 110

LCS QC Batch: QC08205

Param	Flag	Sample Result	Spike			Matrix Result	% Rec.	% Rec. Limit	RPD
			Units	Dil.	Amount Added				
Total Mercury		2.52	mg/Kg	1	2.50	<0.19	100	80 - 120	20

LCSD QC Batch: QC08205

Param	Flag	Sample Result	Spike			Matrix Result	% Rec.	% Rec. Limit	RPD
			Units	Dil.	Amount Added				
Total Mercury		2.57	mg/Kg	1	2.50	<0.19	102	80 - 120	20

LCS QC Batch: QC08206

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD
					Amount Added	Matrix Result			
Total Mercury		2.52	mg/Kg	1	2.50	<0.19	100	80 - 120	20

LCSD QC Batch: QC08206

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD	
					Amount Added	Matrix Result				
Total Mercury		2.57	mg/Kg	1	2.50	<0.19	102	2	80 - 120	20

LCS QC Batch: QC08265

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD
					Amount Added	Matrix Result			
1,1-Dichloroethene		94	µg/Kg	1	100	<25.0	94	80 - 120	20
Benzene		88	µg/Kg	1	100	<25.0	88	80 - 120	20
Trichloroethene (TCE)		89	µg/Kg	1	100	<25.0	89	80 - 120	20
Toluene		88	µg/Kg	1	100	<25.0	88	80 - 120	20
Chlorobenzene		98	µg/Kg	1	100	<25.0	98	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	Rec.		
Dibromofluoromethane		51.25	µg/Kg	1	50	102	69 - 116	
Toluene-d8		50.31	µg/Kg	1	50	100	88 - 114	
4-Bromofluorobenzene		50.45	µg/Kg	1	50	100	74 - 110	

LCSD QC Batch: QC08265

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD
					Amount Added	Matrix Result			
1,1-Dichloroethene		94	µg/Kg	1	100	<25.0	94	80 - 120	20
Benzene		89	µg/Kg	1	100	<25.0	89	80 - 120	20
Trichloroethene (TCE)		90	µg/Kg	1	100	<25.0	90	80 - 120	20
Toluene		90	µg/Kg	1	100	<25.0	90	80 - 120	20
Chlorobenzene		99	µg/Kg	1	100	<25.0	99	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	Rec.		
Dibromofluoromethane		51.69	µg/Kg	1	50	103	69 - 116	
Toluene-d8		50.30	µg/Kg	1	50	100	88 - 114	
4-Bromofluorobenzene		50.01	µg/Kg	1	50	100	74 - 110	

LCS QC Batch: QC08317

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N/A

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Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
GRO		1.14	mg/Kg	1	1	<5	114	8	70 - 130	20

LCSD QC Batch: QC08317

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
GRO		1.1	mg/Kg	1	1	<5	110	4	70 - 130	20

LCS QC Batch: QC08487

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
TRPHC		220	mg/Kg	1	250	<10.0	88	70 - 130	20	

LCSD QC Batch: QC08487

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
TRPHC		211	mg/Kg	1	250	<10.0	84	4	70 - 130	20

LCS QC Batch: QC08547

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
DRO		295	mg/Kg	1	250	<50	118	8	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount	Matrix Result				
n-Octane		240	mg/Kg	1	250	<50	96	8	70 - 130	20

LCSD QC Batch: QC08547

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
DRO		271	mg/Kg	1	250	<50	108	8	70 - 130	20

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Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec.
n-Octane		237	mg/Kg	1	250	94	70 - 130

## Quality Control Report Matrix Spikes and Duplicate Spikes

MS QC Batch: QC08182

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec.	RPD
DRO		325	mg/Kg	1	250	55	108		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec.
n-Octane		224	mg/Kg	1	250	89	70 - 130

MSD QC Batch: QC08182

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec.	RPD
DRO		345	mg/Kg	1	250	55	116	7	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec.
n-Octane		228	mg/Kg	1	250	91	70 - 130

MS QC Batch: QC08183

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec.	RPD
DRO		316	mg/Kg	1	250	101	86		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec.
n-Octane		217	mg/Kg	1	250	86	70 - 130

MSD QC Batch: QC08183

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
PRO		304	mg/Kg	1	250	101	81	6	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike		% Rec.	% Rec. Limit
					Amount	Result		
n-Octane		221	mg/Kg	1	250	88	70 - 130	

MS QC Batch: QC08190

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Aluminum		15900	mg/Kg	1000	5000	10200	114		75 - 125	20
Total Arsenic		188	mg/Kg	100	200	6.96	90		75 - 125	20
Total Barium	<sup>1</sup>	8980	mg/Kg	1000	4000	6670	57		75 - 125	20
Total Boron		47	mg/Kg	100	20	20.8	131		75 - 125	20
Total Cadmium		98.2	mg/Kg	100	100	<2	98		75 - 125	20
Total Calcium		40340	mg/Kg	1	10000	31050	92		75 - 125	20
Total Chromium		46.2	mg/Kg	100	40	5.02	102		75 - 125	20
Total Cobalt		104	mg/Kg	100	100	7.61	96		75 - 125	20
Total Copper	<sup>2</sup>	81.5	mg/Kg	100	80	26.7	68		75 - 125	20
Total Iron		10700	mg/Kg	1000	2000	9190	75		75 - 125	20
Total Lead		264	mg/Kg	100	200	65.9	99		75 - 125	20
Total Magnesium		15420	mg/Kg	1	10000	4734	106		75 - 125	20
Total Manganese		274	mg/Kg	100	100	186	88		75 - 125	20
Total Molybdenum		183	mg/Kg	100	200	4.4	89		75 - 125	20
Total Nickel		121	mg/Kg	100	100	19.6	101		75 - 125	20
Total Potassium		14060	mg/Kg	1	10000	2653	114		75 - 125	20
Total Selenium		162	mg/Kg	100	200	<5	81		75 - 125	20
Total Silica		693	mg/Kg	1000	400	209	121		75 - 125	20
Total Silver		31.2	mg/Kg	100	40	<1	78		75 - 125	20
Total Sodium		13040	mg/Kg	1	10000	1185	118		75 - 125	20
Total Zinc		175	mg/Kg	100	100	59.5	115		75 - 125	20

MISD QC Batch: QC08190

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result				
Total Aluminum		17600	mg/Kg	1000	5000	10200	148	26	75 - 125	20
Total Arsenic		195	mg/Kg	100	200	6.96	94	4	75 - 125	20
Total Barium		9230	mg/Kg	1000	4000	6670	64	10	75 - 125	20
Total Boron		50	mg/Kg	100	20	20.8	146	11	75 - 125	20
Total Cadmium		103	mg/Kg	100	100	<2	103	5	75 - 125	20
Total Chromium		46.1	mg/Kg	100	40	5.02	102	0	75 - 125	20
Total Cobalt		108	mg/Kg	100	100	7.61	100	4	75 - 125	20
Total Copper		82.2	mg/Kg	100	80	26.7	69	1	75 - 125	20

*Continued ...*<sup>1</sup>Poor MS recovery due to high concentration in sample LCS demonstrates process under control<sup>2</sup>Poor MIS recovery due to matrix difficulties LCS demonstrates process under control

...Continued

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result			
Total Iron		11900	mg/Kg	1000	2000	9190	135	57	75 - 125
Total Lead		275	mg/Kg	100	200	65.9	104	5	75 - 125
Total Magnesium		15920	mg/Kg	1	100	4734	111	4	75 - 125
Total Manganese		286	mg/Kg	100	100	186	100	13	75 - 125
Total Molybdenum		191	mg/Kg	100	200	4.4	93	4	75 - 125
Total Nickel		124	mg/Kg	100	100	19.6	104	3	75 - 125
Total Selenium		170	mg/Kg	100	200	<5	85	5	75 - 125
Total Silica		657	mg/Kg	1000	400	209	112	8	75 - 125
Total Silver		23.1	mg/Kg	100	40	<1	57	30	75 - 125
Total Sodium		13210	mg/Kg	1	10000	1185	120	1	75 - 125
Total Zinc		165	mg/Kg	100	20	59.5	105	9	75 - 125

MS QC Batch: QC08191

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result			
Total Aluminum	<sup>3</sup>	21300	mg/Kg	1000	5000	13000	166	75 - 125	20
Total Arsenic		197	mg/Kg	100	200	8.67	94	75 - 125	20
Total Barium		10100	mg/Kg	1000	4000	6290	95	75 - 125	20
Total Boron		61.8	mg/Kg	100	40	25.9	89	75 - 125	20
Total Cadmium		103	mg/Kg	100	100	<2	103	75 - 125	20
Total Calcium		45740	mg/Kg	1	10000	35050	106	75 - 125	20
Total Chromium		50.6	mg/Kg	100	40	6.51	110	75 - 125	20
Total Cobalt		112	mg/Kg	100	100	9	103	75 - 125	20
Total Copper		79.2	mg/Kg	100	80	20.5	73	75 - 125	20
Total Iron	<sup>4</sup>	19100	mg/Kg	1000	10000	12800	63	75 - 125	20
Total Lead		319	mg/Kg	100	200	87.4	115	75 - 125	20
Total Magnesium		18990	mg/Kg	1	10000	6020	129	75 - 125	20
Total Manganese		430	mg/Kg	100	100	296	134	75 - 125	20
Total Molybdenum		194	mg/Kg	100	200	3.43	95	75 - 125	20
Total Nickel		137	mg/Kg	100	100	25.9	111	75 - 125	20
Total Potassium		15930	mg/Kg	1	10000	3688	122	75 - 125	20
Total Selenium		167	mg/Kg	100	200	<5	83	75 - 125	20
Total Silica		655	mg/Kg	1000	400	203	113	75 - 125	20
Total Silver		23.8	mg/Kg	100	40	<1	59	75 - 125	20
Total Sodium		13150	mg/Kg	1	10000	1200	119	75 - 125	20
Total Zinc		225	mg/Kg	100	100	112	113	75 - 125	20

MISD QC Batch: QC08191

Param	Flag	Sample Result	Units	Dil.	Spike		% Rec.	% Rec. Limit	RPD Limit
					Amount Added	Matrix Result			
Total Aluminum		20500	mg/Kg	1000	5000	13000	150	10	75 - 125
Total Arsenic		198	mg/Kg	100	200	8.67	94	0	75 - 125

Continued ...

<sup>3</sup>MS invalid due to high concentration in sample LCS demonstrates process under control

<sup>4</sup>MS invalid due to high concentration in sample LCS demonstrates process under control

...Continued

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
Total Barium		9360	mg/Kg	1000	4000	6290	76	22	75 - 125
Total Boron		61.3	mg/Kg	100	40	25.9	88	1	75 - 125
Total Cadmium		105	mg/Kg	100	100	<2	105	2	75 - 125
Total Calcium		43130	mg/Kg	1	10000	35050	80	28	75 - 125
Total Chromium		51.4	mg/Kg	100	40	6.51	112	2	75 - 125
Total Cobalt		114	mg/Kg	100	100	9	105	2	75 - 125
Total Copper		76.7	mg/Kg	100	80	20.5	70	4	75 - 125
Total Iron		17600	mg/Kg	1000	10000	12800	48	27	75 - 125
Total Lead		313	mg/Kg	100	200	87.4	112	3	75 - 125
Total Magnesium		17250	mg/Kg	1	10000	6020	112	14	75 - 125
Total Manganese		393	mg/Kg	100	100	296	97	32	75 - 125
Total Molybdenum		198	mg/Kg	100	200	3.43	97	2	75 - 125
Total Nickel		137	mg/Kg	100	100	25.9	111	0	75 - 125
Total Selenium		169	mg/Kg	100	200	<5	84	1	75 - 125
Total Silica		597	mg/Kg	1000	400	203	98	14	75 - 125
Total Silver		28.4	mg/Kg	100	40	<1	71	18	75 - 125
Total Sodium		13070	mg/Kg	1	200	1200	118	1	75 - 125
Total Zinc		244	mg/Kg	100	100	112	132	16	75 - 125

MS QC Batch: QC08198

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
TRPHC		1040	mg/Kg	1	250	788	100	70 - 130	20

MSD QC Batch: QC08198

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
TRPHC		1030	mg/Kg	1	250	788	96	4	70 - 130

MS QC Batch: QC08199

Param	Flag	Sample Result	Units	Spike		% Rec.	RPD	% Rec. Limit	RPD Limit
				Dil.	Amount Added				
TRPHC		228	mg/Kg	1	250	<10.0	91	70 - 130	20

MSD QC Batch: QC08199

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		270	mg/Kg	1	250	<10.0	108	17	70 - 130	20

MS QC Batch: QC08205

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		206	mg/Kg	1	2.50	168	1520		80 - 120	20

MSD QC Batch: QC08205

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		139	mg/Kg	1	2.50	168	-1160	1489	80 - 120	20

MS QC Batch: QC08206

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		2.52	mg/Kg	1	2.50	<0.19	100		80 - 120	20

MSD QC Batch: QC08206

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		2.1	mg/Kg	1	2.50	<0.19	84	18	80 - 120	20

MS QC Batch: QC08487

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		455	mg/Kg	1	250	179	110		70 - 130	20

MSD QC Batch: QC08487

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
TRPHC		488	mg/Kg	1	250	179	123	11	70 - 130	20

MS QC Batch: QC08547

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
DRO		321	mg/Kg	1	250	<50	128	70 - 130		20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		237	mg/Kg	1	250	94	70 - 130

MSD QC Batch: QC08547

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	% Rec. Limit	RPD	RPD Limit
DRO		308	mg/Kg	1	250	<50	123	70 - 130		20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		237	mg/Kg	1	250	94	70 - 130

## Quality Control Report Continuing Calibration Verification Standards

CCV (1) QC Batch: QC08182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	284	113	75 - 125	1/16/01
n-Octane		mg/Kg	250	228	91	75 - 125	1/16/01

CCV (2) QC Batch: QC08182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	306	122	75 - 125	1/16/01

*Continued ...*

*... Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
n-Octane		mg/Kg	250	222	88	75 - 125	1/16/01

ICV (1) QC Batch: QC08182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	273	109	75 - 125	1/16/01
n-Octane		mg/Kg	250	224	89	75 - 125	1/16/01

CCV (1) QC Batch: QC08183

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	312	124	75 - 125	1/16/01
n-Octane		mg/Kg	250	266	106	75 - 125	1/16/01

ICV (1) QC Batch: QC08183

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	266	106	75 - 125	1/16/01
n-Octane		mg/Kg	250	214	85	75 - 125	1/16/01

CCV (1) QC Batch: QC08190

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/Kg	10	9.89	97	75 - 125	1/16/01
Total Arsenic		mg/Kg	5	5.02	100	75 - 125	1/16/01
Total Barium		mg/Kg	10	9.79	97	75 - 125	1/16/01
Total Boron		mg/Kg	0.50	0.483	96	75 - 125	1/16/01
Total Cadmium		mg/Kg	2.50	2.57	102	75 - 125	1/16/01
Total Chromium		mg/Kg	1	1.02	102	75 - 125	1/16/01
Total Cobalt		mg/Kg	2.50	2.52	100	75 - 125	1/16/01
Total Copper		mg/Kg	1.25	1.25	93	75 - 125	1/16/01
Total Iron		mg/Kg	5	4.96	99	75 - 125	1/16/01
Total Lead		mg/Kg	5	5.01	98	75 - 125	1/16/01
Total Manganese		mg/Kg	2.50	2.56	102	75 - 125	1/16/01
Total Molybdenum		mg/Kg	5	5.08	100	75 - 125	1/16/01
Total Nickel		mg/Kg	2.50	2.47	97	75 - 125	1/16/01

*Continued ...*

*...Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Selenium		mg/Kg	5	4.97	99	75 - 125	1/16/01
Total Silica		mg/Kg	5	5.01	100	75 - 125	1/16/01
Total Silver		mg/Kg	1.25	1.26	100	75 - 125	1/16/01
Total Zinc		mg/Kg	2.50	2.61	100	75 - 125	1/16/01

ICV (1) QC Batch: QC08190

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/Kg	10	9.99	99	75 - 125	1/16/01
Total Arsenic		mg/Kg	5	4.94	98	75 - 125	1/16/01
Total Barium		mg/Kg	10	10.1	101	75 - 125	1/16/01
Total Boron		mg/Kg	0.50	0.509	101	75 - 125	1/16/01
Total Cadmium		mg/Kg	2.50	2.51	100	75 - 125	1/16/01
Total Chromium		mg/Kg	1	0.99	99	75 - 125	1/16/01
Total Cobalt		mg/Kg	2.50	2.46	98	75 - 125	1/16/01
Total Copper		mg/Kg	1.25	1.23	98	75 - 125	1/16/01
Total Iron		mg/Kg	5	5.06	101	75 - 125	1/16/01
Total Lead		mg/Kg	5	4.83	96	75 - 125	1/16/01
Total Manganese		mg/Kg	2.50	2.52	100	75 - 125	1/16/01
Total Molybdenum		mg/Kg	5	4.98	99	75 - 125	1/16/01
Total Nickel		mg/Kg	2.50	2.43	97	75 - 125	1/16/01
Total Selenium		mg/Kg	5	4.95	99	75 - 125	1/16/01
Total Silica		mg/Kg	5	5.07	101	75 - 125	1/16/01
Total Silver		mg/Kg	1.25	1.24	99	75 - 125	1/16/01
Total Zinc		mg/Kg	2.50	2.49	99	75 - 125	1/16/01

CCV (1) QC Batch: QC08191

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/Kg	10	9.76	96	75 - 125	1/16/01
Total Arsenic		mg/Kg	5	5.12	102	75 - 125	1/16/01
Total Barium		mg/Kg	10	9.7	97	75 - 125	1/16/01
Total Boron		mg/Kg	0.50	0.487	97	75 - 125	1/16/01
Total Cadmium		mg/Kg	2.50	2.56	102	75 - 125	1/16/01
Total Chromium		mg/Kg	1	1.02	102	75 - 125	1/16/01
Total Cobalt		mg/Kg	2.50	2.53	101	75 - 125	1/16/01
Total Copper		mg/Kg	1.25	1.21	92	75 - 125	1/16/01
Total Iron		mg/Kg	5	4.92	98	75 - 125	1/16/01
Total Lead		mg/Kg	5	5.01	98	75 - 125	1/16/01
Total Manganese		mg/Kg	2.50	2.54	101	75 - 125	1/16/01
Total Molybdenum		mg/Kg	5	5.1	101	75 - 125	1/16/01
Total Nickel		mg/Kg	2.50	2.5	98	75 - 125	1/16/01
Total Selenium		mg/Kg	5	5.04	100	75 - 125	1/16/01
Total Silica		mg/Kg	5	4.95	99	75 - 125	1/16/01

*Continued ...*

...Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/Kg	1.25	1.25	100	75 - 125	1/16/01
Total Zinc		mg/Kg	2.50	2.61	100	75 - 125	1/16/01

ICV (1) QC Batch: QC08191

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/Kg	10	10.1	101	75 - 125	1/16/01
Total Arsenic		mg/Kg	5	5.05	101	75 - 125	1/16/01
Total Barium		mg/Kg	10	9.92	99	75 - 125	1/16/01
Total Boron		mg/Kg	0.50	0.485	97	75 - 125	1/16/01
Total Cadmium		mg/Kg	2.50	2.53	101	75 - 125	1/16/01
Total Chromium		mg/Kg	1	1.01	101	75 - 125	1/16/01
Total Cobalt		mg/Kg	2.50	2.5	100	75 - 125	1/16/01
Total Copper		mg/Kg	1.25	1.23	98	75 - 125	1/16/01
Total Iron		mg/Kg	5	5.05	101	75 - 125	1/16/01
Total Lead		mg/Kg	5	4.98	99	75 - 125	1/16/01
Total Manganese		mg/Kg	2.50	2.52	100	75 - 125	1/16/01
Total Molybdenum		mg/Kg	5	5.04	100	75 - 125	1/16/01
Total Nickel		mg/Kg	2.50	2.46	98	75 - 125	1/16/01
Total Selenium		mg/Kg	5	5	100	75 - 125	1/16/01
Total Silica		mg/Kg	5	5.14	102	75 - 125	1/16/01
Total Silver		mg/Kg	1.25	1.24	99	75 - 125	1/16/01
Total Zinc		mg/Kg	2.50	2.61	104	75 - 125	1/16/01

CCV (1) QC Batch: QC08198

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	101	101	75 - 125	1/16/01

CCV (2) QC Batch: QC08198

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	105	105	75 - 125	1/16/01

ICV (1) QC Batch: QC08198

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	101	101	75 - 125	1/16/01

CCV (1) QC Batch: QC08199

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	102	102	75 - 125	1/16/01

CCV (2) QC Batch: QC08199

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	101	101	75 - 125	1/16/01

ICV (1) QC Batch: QC08199

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	103	103	75 - 125	1/16/01

CCV (1) QC Batch: QC08204

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/Kg	100	88	88	80 - 120	1/17/01
1,1-Dichloroethene		µg/Kg	100	92	92	80 - 120	1/17/01
Chloroform		µg/Kg	100	103	103	80 - 120	1/17/01
1,2-Dichloropropane		µg/Kg	100	91	91	80 - 120	1/17/01
Toluene		µg/Kg	100	95	95	80 - 120	1/17/01
Chlorobenzene		µg/Kg	100	98	98	80 - 120	1/17/01
Ethylbenzene		µg/Kg	100	99	99	80 - 120	1/17/01
Dibromofluoromethane		µg/Kg	50	52.36	104	80 - 120	1/17/01
Toluene-d8		µg/Kg	50	49.35	98	80 - 120	1/17/01
4-Bromofluorobenzene		µg/Kg	50	54.67	109	80 - 120	1/17/01

CCV (1) QC Batch: QC08205

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.0044	88	80 - 120	1/17/01

ICV (1) QC Batch: QC08205

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00512	102	80 - 120	1/17/01

CCV (1) QC Batch: QC08206

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00525	105	80 - 120	1/17/01

ICV (1) QC Batch: QC08206

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00512	102	80 - 120	1/17/01

CCV (1) QC Batch: QC08265

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/Kg	100	89	89	80 - 120	1/17/01
1,1-Dichloroethene		µg/Kg	100	92	92	80 - 120	1/17/01
Chloroform		µg/Kg	100	105	105	80 - 120	1/17/01
1,2-Dichloropropane		µg/Kg	100	89	89	80 - 120	1/17/01
Toluene		µg/Kg	100	95	95	80 - 120	1/17/01
Chlorobenzene		µg/Kg	100	97	97	80 - 120	1/17/01
Ethylbenzene		µg/Kg	100	99	99	80 - 120	1/17/01
Dibromofluoromethane		µg/Kg	50	52.99	105	80 - 120	1/17/01
Toluene-d8		µg/Kg	50	49.14	98	80 - 120	1/17/01
4-Bromofluorobenzene		µg/Kg	50	54.09	108	80 - 120	1/17/01

CCV (1) QC Batch: QC08317

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	1.07	107	75 - 125	1/19/01

ICV (1) QC Batch: QC08317

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.843	84	75 - 125	1/19/01

CCV (1) QC Batch: QC08487

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	93.3	93	75 - 125	1/25/01

CCV (2) QC Batch: QC08487

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	94.8	94	75 - 125	1/25/01

ICV (1) QC Batch: QC08487

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	95.7	95	75 - 125	1/25/01

CCV (1) QC Batch: QC08547

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	98	75 - 125	1/26/01
n-Octane		mg/Kg	250	213	85	75 - 125	1/26/01

ICV (1) QC Batch: QC08547

Report Date: January 31, 2001  
N/A

Order Number: A01011503  
Shell Westgate

Page Number: 42 of 42  
Hobbs,NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	311	124	75 - 125	1/26/01
n-Octane		mg/Kg	250	248	99	75 - 125	1/26/01

# TraceAnalysis, Inc.

6701 Aberdeen Ave., Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1298

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

A0107503

LAB Order ID #

Company Name: BBC International Take

Phone #: 1-512-517-6558

Fax #: 1-512-517-6558

Address: 1324 W. Market and 4th Street, Austin, TX 78701

Contact Person: Client

Invoice to:

(If different from above) Shell Technologies (C) Attn: Carl Volland  
Project #: Project Name: Shell Technologies  
Sampler Signature: *Carl Volland*

Project Location: Hobbs NM

Received by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

## ANALYSIS REQUEST

(Circle or Specify Method No.)

802 only

802 only&lt;/

6701 Aberdeen Avenue, Site: 9  
 Lubbock, Texas 79424  
 Tel (806) 794-1296  
 Fax (806) 794-1298  
 1 (800) 378-1296

# TraceAnalysis, Inc.

1725 Builey Dr., Ste A  
 El Paso, Texas 79922-1028  
 Tel (915) 585-3413  
 Fax (915) 585-4944  
 1 (800) 588-3413

Company Name:

BRC Environmental

Address:

1324 Nacogdoches Street  
P.O. Box 2000

Contact Person:

Chris Brown

Invoice to:

(If different from above) *West Tech Technologies*

Project #:

*Project Name:**Project Signature:*

Project Location:

*Site 5*

Phone #:

*743-3887*

Fax #:

*743-3887*

Date:

1-12-00

Time:

4:00 P.M.

Received by:

*Melanie Sosa*

Date:

1-13-00

Time:

10:10 A.M.

Relinquished by:

*Mark Hough*

Date:

1-12-00

Time:

*4:00 P.M.*

Received by:

*Melanie Sosa*

Date:

1-13-00

Time:

10:10 A.M.

REMARKS:

*CCD methods*

Date:

1-12-00

Time:

7:35 A.M.

Date:

1-12-00

Time:

9:44 A.M.

Date:

1-12-00

Time:

9:44 A.M.

Date:

1-12-00

Time:

10:30 A.M.

Date:

1-12-00

# TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:  
**BBC Technological Lab**  
(Street, City, Zip)

Address:  
**P.O. Box 805 Hobebs, NM 88241**

Contact Person:  
**Jeff P. Brinson**

Invoice to:  
(If different from above) **Shell Technology Co. Attn: H. Hall Jr.**

Project #:  
**TPH 418.11X1005**

Project Location:  
**Hobebs, NM**

Project Name:  
**Westside**

Sample Signature:  
*Jeff P. Brinson*

Phone #: **1-505-317-6354**

Fax #: **1-505-317-0357**

LAB # **163456**

FIELD CODE **1506-06-6'9'**

# CONTAINERS **1**

VOLUME/AMOUNT **402**

MATRIX **AIR**

PRESERVATIVE **HCl**

METHOD **HNO3**

SAMPLING **SLUDGE**

TIME **1/12/04 11:30 AM**

DATE **1/12/04**

ICP **None**

GC/MS **None**

PCB's **None**

TCLP **None**

RCI **None**

TCOP **None**

TCLP **None**

PCBs **None**

Pesticides **None**

GCMs **None**

GC/MS **None**

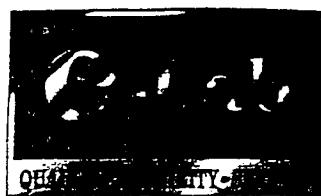
PCBs **None**

Pesticides **None**

GC/MS **None**

PCBs **None**

**PLAINTIFF'S RESULTS FROM  
SAMPLING AT 1506 N. COBB  
JANUARY 12, 2001**



**E-Lab, Inc.**

10450 Stanciff Road • Suite 210 • Houston, Texas 77099 • 281.530.5656 • Fax 281.530.5887

January 26, 2001

Craig Lewis  
Craig Lewis & Associates  
Bank of America Center  
40th Floor  
Houston, TX 77002  
TEL: (713) 222-8080  
FAX (713) 238-7888

RE: Westgate

Order No.: 0101050

Dear Craig Lewis,

e-Lab, Inc. received 9 samples on 1/13/01 2:00:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. and for only the analyses requested.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from e-Lab, Inc. The total number of pages in this report is 26.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Dunlap

CC:

**COPY**

**INVOICE**

Remit To: e-Lab, Inc.  
 PO Box 842540  
 Houston, Texas 00007-7284  
 Attn: Accounts Receivable  
 TEL: (281) 530-5656 FAX: (281) 530-5887

Invoice TO: Craig Lewis & Associates  
 Bank of America Center

40th Floor  
 Houston, TX 77002

Attn: Craig Lewis  
 Phone: (713) 222-8080

Work Order: 0101050

PO Number: Westgate

Delivery Order:

Project Name: Westgate

Date Received: 1/13/01

**Invoice No: 0101050**

Invoice Date: Jan 26 2001

Payment Due: Feb 25 2001

Payment Terms: Net 30 days

Item	Remarks	Matrix	Qty	Unit Price	Mult	Quoted	Test Total
Solids		Solid	4	\$55.00	1.8	\$99.00	\$396.00
Corrosivity		Solid	4	\$12.00	1	\$12.00	\$48.00
TCL Volatile Organics		Solid	4	\$130.00	1	\$130.00	\$520.00
Total Petroleum Hydrocarbons		Solid	4	\$62.50	1.8	\$112.50	\$450.00

**Order TOTAL:** \$1,414.00

Discount: 0.00%

Surcharge: 0.00%

Misc Charges: \$0.00

Subtotal: \$1,414.00

Payment Received: \$0.00

**INVOICE Total** \$1,414.00

Invoice is due and payable within the above referenced terms from date of receipt. A finance charge of 1.5% will be added to past due accounts over 15 days.

Thank you for choosing e-Lab, Inc.

---

**CLIENT:** Craig Lewis & Associates  
**Project:** Westgate  
**Lab Order:** 0101050  
**Date Received:** 1/13/01

---

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Tag Number	Collection Date
0101050-01	1510-02 - 0-3 ft.		1/12/01 8:35:00 AM
0101050-02	1510-02 3-6 ft.		1/12/01 8:45:00 AM
0101050-03	1510-03 0-3 ft.		1/12/01 9:07:00 AM
0101050-04	1510-03 3-6 ft.		1/12/01 9:20:00 AM
0101050-05	1510-04 3-4 ft.		1/12/01 9:35:00 AM
0101050-06	1510-05 0-3 ft.		1/12/01 10:40:00 AM
0101050-07	1510-05 3-5.5 ft.		1/12/01 10:56:00 AM
0101050-08	1510-06 3-6 ft.		1/12/01 11:00:00 AM
0101050-09	1510-06 6-9 ft.		1/12/01 11:15:00 AM

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-06

Client Sample ID: 1510-05 0-3 ft.  
 Collection Date: 1/12/01 10:40:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		Analyst: PC
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
2-Butanone	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
2-Hexanone	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
Acetone	ND	25		µg/Kg	1	1/19/01 8:17:00 PM
Benzene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Bromodichromethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Bromoform	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
Bromomethane	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Chloroethane	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
Chloroform	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Chloromethane	ND	10		µg/Kg	1	1/19/01 8:17:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Dibromochromethane	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Dichloromethane	80	25		µg/Kg	1	1/19/01 8:17:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Styrene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Toluene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:17:00 PM
Vinyl chloride	ND	2.0		µg/Kg	1	1/19/01 8:17:00 PM
Xylenes, Total	ND	15		µg/Kg	1	1/19/01 8:17:00 PM
Surrogate: 1,2-Dichloroethane-d4	111	70-130		%REC	1	1/19/01 8:17:00 PM
Surrogate: 4-Bromo-1-fluorobenzene	78.8	70-130		%REC	1	1/19/01 8:17:00 PM
Surrogate: Dicromo-1-fluoromethane	110	70-130		%REC	1	1/19/01 8:17:00 PM
Surrogate: Toluene-d8	108	70-130		%REC	1	1/19/01 8:17:00 PM

**BTEX, SOIL****SW8021B**

Analyst: TCC

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	U - Analyzed for but Not Detected
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-06

Client Sample ID: 1510-05 0-3 ft.  
 Collection Date: 1/24/01 10:40:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzene	ND	1.0		µg/Kg	1	1/24/01 10:30:00 AM
Toluene	1.2	1.0		µg/Kg	1	1/24/01 10:30:00 AM
Ethylbenzene	ND	1.0		µg/Kg	1	1/24/01 10:30:00 AM
Xylenes Total	ND	3.0		µg/Kg	1	1/24/01 10:30:00 AM
Surr: 4-Bromofluorobenzene	42.0	70-130	S	%REC	1	1/23/01 5:17:00 PM
Surr: 4-Bromofluorobenzene	46.3	70-130	S	%REC	1	1/24/01 10:30:00 AM
Surr: Trifluorotoluene	73.5	70-130		%REC	1	1/23/01 5:17:00 PM
Surr: Trifluorotoluene	70.3	70-130		%REC	1	1/24/01 10:30:00 AM
CORROSIVITY				SW9045B		Analyst: JLJ
pH	8.55	0.10	H	pH Units	1	1/23/01 4:00:00 PM
TOTAL PETROLEUM HYDROCARBONS				TX1005		Analyst: RMN
C6-C10	ND	50		mg/Kg	1	1/23/01 10:20:00 PM
>C10-C28	ND	50		mg/Kg	1	1/23/01 10:20:00 PM
Total Petroleum Hydrocarbon	ND	100		mg/Kg	1	1/23/01 10:20:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	U - Analyzed for but Not Detected
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-07

Client Sample ID: 1510-05 3-5.5 ft.  
 Collection Date: 1/12/01 10:56:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		Analyst: PC
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
2-Butanone	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
2-Hexanone	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
Acetone	ND	25		µg/Kg	1	1/19/01 8:43:00 PM
Benzene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Bromodichromethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Bromoform	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
Bromomethane	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Chloroethane	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
Chloroform	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Chloromethane	ND	10		µg/Kg	1	1/19/01 8:43:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Dibromochromethane	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Dichloromethane	92	25		µg/Kg	1	1/19/01 8:43:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Styrene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Tetrachloroethylene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Toluene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Trichloroethylene	ND	5.0		µg/Kg	1	1/19/01 8:43:00 PM
Vinyl chloride	ND	2.0		µg/Kg	1	1/19/01 8:43:00 PM
Xylenes, Total	ND	15		µg/Kg	1	1/19/01 8:43:00 PM
Surr: 1,2-Dichloroethane-d4	111	70-130		%REC	1	1/19/01 8:43:00 PM
Surr: 4-Bromofluorobenzene	76.8	70-130		%REC	1	1/19/01 8:43:00 PM
Surr: Dibromofluoromethane	98.3	70-130		%REC	1	1/19/01 8:43:00 PM
Surr: Toluene-d8	111	70-130		%REC	1	1/19/01 8:43:00 PM

**BTEX, SOIL****SW8021B**

Analyst: TCC

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	U - Analyzed for but Not Detected
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	H - Analyzed outside of Hold Time

**e-Lab, Inc.****Date: January 25, 2001**

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0101050  
**Project:** Westgate  
**Lab ID:** 0101050-07

**Client Sample ID:** 1510-05 3-5.5 ft.  
**Collection Date:** 1/12/01 10:56:00 AM

**Matrix: SOIL**

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzene	ND	1.0		µg/Kg	1	1/24/01 10:54:00 AM
Toluene	1.6	1.0		µg/Kg	1	1/24/01 10:54:00 AM
Ethylbenzene	ND	1.0		µg/Kg	1	1/24/01 10:54:00 AM
Xylenes, Total	ND	3.0		µg/Kg	1	1/24/01 10:54:00 AM
Surr: 4-BromoFluorobenzene	70.2	70-130		%REC	1	1/24/01 10:54:00 AM
Surr: Trifluorotoluene	89.7	70-130		%REC	1	1/24/01 10:54:00 AM
<b>CORROSIVITY</b>				<b>SW9045B</b>		<b>Analyst: JLJ</b>
pH	8.43	0.10	H	pH Units	1	1/23/01 4:00:00 PM
<b>TOTAL PETROLEUM HYDROCARBONS</b>				<b>TX1005</b>		<b>Analyst: RMN</b>
C6-C10	ND	50		mg/Kg	1	1/23/01 11:06:00 PM
>C10-C28	ND	50		mg/Kg	1	1/23/01 11:06:00 PM
Total Petroleum Hydrocarbon	ND	100		mg/Kg	1	1/23/01 11:06:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
U - Analyzed for but Not Detected  
E - Value above quantitation range  
H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-08

Client Sample ID: 1510-06 3-6 ft.  
 Collection Date: 1/12/01 11:00:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
2-Butanone	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
2-Hexanone	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
Acetone	ND	25		µg/Kg	1	1/19/01 9:10:00 PM
Benzene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Bromoform	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
Bromomethane	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Chloroethane	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
Chloroform	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Chloromethane	ND	10		µg/Kg	1	1/19/01 9:10:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Dichloromethane	320	120		µg/Kg	5	1/20/01 7:56:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Styrene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Toluene	8.5	5.0		µg/Kg	1	1/19/01 9:10:00 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/19/01 9:10:00 PM
Vinyl chloride	ND	2.0		µg/Kg	1	1/19/01 9:10:00 PM
Xylenes, Total	ND	15		µg/Kg	1	1/19/01 9:10:00 PM
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%REC	1	1/19/01 9:10:00 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%REC	5	1/20/01 7:56:00 PM
Surr: 4-Bromofluorobenzene	59.6	70-130	S	%REC	1	1/19/01 9:10:00 PM
Surr: 4-Bromofluorobenzene	74.3	70-130		%REC	5	1/20/01 7:56:00 PM
Surr: Dibromofluoromethane	97.7	70-130		%REC	1	1/19/01 9:10:00 PM
Surr: Dibromofluoromethane	99.5	70-130		%REC	5	1/20/01 7:56:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

L - Analyte detected below quantitation limits

U - Analyzed for but Not Detected

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

H - Value exceeds Maximum Contaminant Level

H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-08

Client Sample ID: 1510-06 3-6 ft.  
 Collection Date: 1/12/01 11:00:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Surr: Toluene-d8	148	70-130	S	%REC	1	1/19/01 9:10:00 PM
Surr: Toluene-d8	115	70-130		%REC	5	1/20/01 7:56:00 PM
<b>BTEX, SOIL</b>						
				SW8021B		Analyst: TCC
Benzene	ND	1.0		µg/Kg	1	1/23/01 6:55:00 PM
Benzene	ND	1.0		µg/Kg	1	1/24/01 11:19:00 AM
Toluene	1.6	1.0		µg/Kg	1	1/23/01 6:55:00 PM
Toluene	1.6	1.0		µg/Kg	1	1/24/01 11:19:00 AM
Ethylbenzene	ND	1.0		µg/Kg	1	1/24/01 11:19:00 AM
Ethylbenzene	ND	1.0		µg/Kg	1	1/23/01 6:55:00 PM
Xylenes, Total	7.5	3.0		µg/Kg	1	1/23/01 6:55:00 PM
Xylenes, Total	ND	3.0		µg/Kg	1	1/24/01 11:19:00 AM
Surr: 4-Bromofluorobenzene	16.5	70-130	S	%REC	1	1/23/01 6:55:00 PM
Surr: 4-Bromofluorobenzene	41.2	70-130	S	%REC	1	1/24/01 11:19:00 AM
Surr: Trifluorotoluene	47.2	70-130	S	%REC	1	1/23/01 6:55:00 PM
Surr: Trifluorotoluene	74.8	70-130		%REC	1	1/24/01 11:19:00 AM
<b>CORROSIVITY</b>						
pH	7.97	0.10	H	pH Units	1	Analyst: JLJ 1/23/01 4:00:00 PM
<b>TOTAL PETROLEUM HYDROCARBONS</b>						
C6-C10	ND	50		mg/Kg	1	1/23/01 11:51:00 PM
>C10-C28	120	50		mg/Kg	1	1/23/01 11:51:00 PM
Total Petroleum Hydrocarbon	120	100		mg/Kg	1	1/23/01 11:51:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 U - Analyzed for but Not Detected  
 E - Value above quantitation range  
 H - Analyzed outside of Hold Time

CLIENT: Craig Lewis & Associates  
 Lab Order: 0101050  
 Project: Westgate  
 Lab ID: 0101050-09

Client Sample ID: 1510-06 6-9 ft.  
 Collection Date: 1/12/01 11:15:00 AM

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>						
				<b>SW8260</b>		
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
2-Butanone	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
2-Hexanone	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
4-Methyl-2-pentanone	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
Acetone	ND	25		µg/Kg	1	1/19/01 6:57:00 PM
Benzene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Bromoform	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
Bromomethane	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
Carbon disulfide	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Chloroethane	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
Chloroform	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Chloromethane	ND	10		µg/Kg	1	1/19/01 6:57:00 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Dichlormethane	55	25		µg/Kg	1	1/19/01 6:57:00 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Styrene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Toluene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
trans-1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/19/01 6:57:00 PM
Vinyl chloride	ND	2.0		µg/Kg	1	1/19/01 6:57:00 PM
Xylenes, Total	ND	15		µg/Kg	1	1/19/01 6:57:00 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%REC	1	1/19/01 6:57:00 PM
Surr: 4-Bromofluorobenzene	81.2	70-130		%REC	1	1/19/01 6:57:00 PM
Surr: Dibromofluoromethane	97.5	70-130		%REC	1	1/19/01 6:57:00 PM
Surr: Toluene-d8	107	70-130		%REC	1	1/19/01 6:57:00 PM

**BTEX, SOIL****SW8021B**

Analyst: TCC

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	U - Analyzed for but Not Detected
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	H - Analyzed outside of Hold Time

**CLIENT:** Craig Lewis & Associates  
**Lab Order:** 0101050  
**Project:** Westgate  
**Lab ID:** 0101050-09

**Client Sample ID:** 1510-06 6-9 ft.  
**Collection Date:** 1/12/01 11:15:00 AM

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Benzene	ND	1.0		µg/Kg	1	1/24/01 11:43:00 AM
Toluene	ND	1.0		µg/Kg	1	1/24/01 11:43:00 AM
Ethyibenzene	ND	1.0		µg/Kg	1	1/24/01 11:43:00 AM
Xylenes, Total	ND	3.0		µg/Kg	1	1/24/01 11:43:00 AM
Surr: 4-Bromofluorobenzene	69.1	70-130	S	%REC	1	1/24/01 11:43:00 AM
Surr: Trifluorotoluene	98.5	70-130		%REC	1	1/24/01 11:43:00 AM
<b>CORROSIVITY</b>				<b>SW9045B</b>		<b>Analyst: JLJ</b>
pH	8.50	0.10	H	pH Units	1	1/23/01 4:00:00 PM
<b>TOTAL PETROLEUM HYDROCARBONS</b>				<b>TX1005</b>		<b>Analyst: RMN</b>
C6-C10	ND	50		mg/Kg	1	1/24/01 12:38:00 AM
>C10-C28	80	50		mg/Kg	1	1/24/01 12:38:00 AM
Total Petroleum Hydrocarbon	ND	100		mg/Kg	1	1/24/01 12:38:00 AM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	U - Analyzed for but Not Detected
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	H - Analyzed outside of Hold Time

e-Lau, Inc.  
CLIENT: Craig Lewis & Associates  
Work Order: 0101050  
Project: Westgate

Batch ID: R3360      Instrument ID: FID-2

Date: Jan 25 2001  
**QC BATCH REPORT**

MLK	Sample ID: fhlks1-0123	Batch ID: R3360	Test Code: TX1005	Units: mg/Kg	Analysis Date: 1/23/01 6:31:00 PM	Prep Date:					
Client ID:		Run ID: FID-2_010123A			SeqNo: 53888						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C6-C10		ND	50								
>C10-C28		ND	50								
Total Petroleum Hydrocarbon		ND	100								
LCS	Sample ID: flcss1-0123	Batch ID: R3360	Test Code: TX1005	Units: mg/Kg	Analysis Date: 1/23/01 7:16:00 PM	Prep Date:					
Client ID:		Run ID: FID-2_010123A			SeqNo: 53889						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C6-C10		301.7	50	250	0	121	70	130	0		
>C10-C28		215.3	50	250	0	86.1	70	130	0		
MS	Sample ID: 0101050-09bmsd	Batch ID: R3360	Test Code: TX1005	Units: mg/Kg	Analysis Date: 1/24/01 1:23:00 AM	Prep Date:					
Client ID:	1510-06 6-9 ft.	Run ID: FID-2_010123A			SeqNo: 53897						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C6-C10		255.2	50	250	0	102	70	130	0		
>C10-C28		190.5	50	250	40.32	43.1	70	130	0		
MSD	Sample ID: 0101050-09bmsd	Batch ID: R3360	Test Code: TX1005	Units: mg/Kg	Analysis Date: 1/24/01 3:41:00 AM	Prep Date:					
Client ID:	1510-06 6-9 ft.	Run ID: FID-2_010123A			SeqNo: 53898						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C6-C10		233.1	50	250	0	93.3	70	130	255.2	30	
>C10-C28		205.7	50	250	80.32	50.2	70	130	190.5	7.69	30 S

Qualifiers:  
J - Analyte detected below quantitation limits  
ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
H - Analyzed for but not detected

Client: Craig Lewis & Associates  
 Work Order: 0101050  
 Project: Westgate

## QC BATCH REPORT

Batch ID: R3370 InstrumentID: btex1									
MBLK	Sample ID: BMLKSA-0123	Batch ID: R3370	Test Code: SW8021B	Units: µg/Kg	Analysis Date 1/23/01 8:32:00 PM	Prep Date:			
Client ID:		Run ID: BTEX1_010123A			SeqNo: 54037				
Analyte	Result	PQL	SPK value	%REC	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	ND	1.0							
Toluene	ND	1.0							
Ethylbenzene	ND	1.0							
Xylenes, Total	ND	3.0		30	0	86.8	70	130	0
Surr: 4-Bromofluorobenzene	26.05	1.0		30	0	101	70	130	0
Surr: Trifluorotoluene	30.32	1.0		30	0				

LCS Sample ID: BLCSS1-0123 Client ID: R3370									
Client ID:	Run ID: BTEX1_010123A	Test Code: SW8021B	Units: µg/Kg	Analysis Date 1/23/01 4:53:00 PM	Prep Date:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%REC
Benzene	20.39	1.0		20	0	102	70	130	0
Toluene	20.16	1.0		20	0	101	70	130	0
Ethylbenzene	20.8	1.0		20	0	104	70	130	0
Methyl tert-butyl ether	111.7	5.0		100	0	112	70	130	0
Xylenes, Total	73.26	3.0		60	0	122	70	130	0
Surr: 4-Bromofluorobenzene	27.86	1.0		30	0	92.9	70	130	0
Surr: Trifluorotoluene	27.52	1.0		30	0	91.7	70	130	0

MS Sample ID: 0101050-06A MS Client ID: 1510-05 0-3 ft.									
Client ID:	Run ID: BTEX1_010123A	Test Code: SW8021B	Units: µg/Kg	Analysis Date 1/23/01 5:42:00 PM	Prep Date:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%REC
Benzene	14.32	1.0		20	0	71.6	70	130	0
Toluene	14.17	1.0		20	1.156	65.1	70	130	0
Ethylbenzene	11.67	1.0		20	0	58.3	70	130	0
Methyl tert-butyl ether	89.3	5.0		100	0	89.3	70	130	0
Xylenes, Total	40.19	3.0		60	12.66	45.9	70	130	0
Surr: 4-Bromofluorobenzene	14.28	1.0		30	0	47.6	70	130	0
Surr: Trifluorotoluene	19.83	1.0		30	0	66.1	70	130	0

Qualifiers:  
 ND - Not Detected at the Reporting Limit  
 S - Analyte detected below quantitation limits  
 R - Analyte detected outside accepted recovery limits  
 J - Analyte detected outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

**CLT<sub>LIN</sub> #:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

Batch ID:	R3370	InstrumentID:	btx1	Sample ID:	0101050-06A MSD	Batch ID:	R3370	Test Code:	SW0021B	Units:	µg/Kg	Analysis Date:	1/23/01 6:06:00 PM	Prep Date:	
Client ID:	1510-05 0-3 ft.	Run ID:	BTEX1_010123A	SeqNo:	54035										
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Benzene	14.19	1.0	20	0	70.9	70	130	14.32	0.886	20	S				
Toluene	13.6	1.0	20	1.156	62.2	70	130	14.17	4.1	20	S				
Ethylbenzene	10.89	1.0	20	0	54.5	70	130	11.67	6.87	20	S				
Methyl tert-butyl ether	90.45	5.0	100	0	90.5	70	130	89.3	1.28	20	S				
Xylenes, Total	37.99	3.0	60	12.66	42.2	70	130	40.19	5.62	20	S				
Surr: 4-Bromofluorobenzene	12.7	1.0	30	0	42.3	70	130	14.28	11.7	20	S				
Surr: 1,1,1-trifluorotoluene	20.99	1.0	30	0	70	70	130	19.83	5.68	20	S				

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted quantitation limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

Client: Craig Lewis & Associates  
 Work Order: 0101050  
 Project: Westgate

## QC BATCH REPORT

Batch ID: R3371      InstrumentID: btex1

MBLK	Sample ID:	BBLKS1-0124	Batch ID:	R3371	Test Code:	SW8021B	Units:	µg/Kg	Analysis Date	1/24/01 10:06:00 AM	Prep Date:
Client ID:			Run ID:		BTEx1_010124A				SeqNo:	54051	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene			ND	1.0							
Toluene			ND	1.0							
Ethylbenzene			ND	1.0							
Xylenes, Total			ND	3.0			0	80.1	70	130	0
Surr: 4-Bromofluorobenzene			24.02	1.0	30	0	93.2	70	130	0	
Surr: Trifluorotoluene			27.96	1.0	30	0					

MBLK	Sample ID:	BBLKW2-0124	Batch ID:	R3371	Test Code:	SW8021B	Units:	µg/l.	Analysis Date	1/24/01 8:54:00 PM	Prep Date:
Client ID:			Run ID:		BTEx1_010124A				SeqNo:	54068	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene			ND	1.0							
Toluene			ND	1.0							
Ethylbenzene			ND	1.0							
Xylenes, Total			ND	3.0			0	83.5	70	130	0
Surr: 4-Bromofluorobenzene			25.04	1.0	30	0	76	70	130	0	
Surr: Trifluorotoluene			22.79	1.0	30	0					

LCS	Sample ID:	BLCSS1-0124	Batch ID:	R3371	Test Code:	SW8021B	Units:	µg/Kg	Analysis Date	1/24/01 9:37:00 AM	Prep Date:
Client ID:			Run ID:		BTEx1_010124A				SeqNo:	54050	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene			21.01	1.0	20	0	105	70	130	0	0
Toluene			20.66	1.0	20	0	103	70	130	0	0
Ethylbenzene			21.68	1.0	20	0	103	70	130	0	0
Methyl tert-butyl ether			113.7	5.0	100	0	114	70	130	0	0
Xylenes, Total			68.44	3.0	60	0	114	70	130	0	0
Surr: 4-Bromofluorobenzene			29.41	1.0	30	0	98	70	130	0	
Surr: Trifluorotoluene			30.8	1.0	30	0	103	70	130	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

**Client:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

**Batch ID:** R3371      **InstrumentID:** btex1

LCS	Sample ID:	Batch ID: BLCSW1-0124	Batch ID: R3371	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/24/01 8:06:00 PM	Prep Date:				
Client ID:			Run ID: BTEX1_010124A			SeqNo: 54067					
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		19.34	1.0	20	0	96.7	70	130	0		
Toluene		19.9	1.0	20	0	99.5	70	130	0		
Ethylbenzene		20.47	1.0	20	0	102	70	130	0		
Methyl tert-butyl ether		80.64	5.0	100	0	80.6	70	130	0		
Xylenes, Total		60.95	3.0	60	0	102	70	130	0		
Surr: 4-Bromofluorobenzene		25.07	1.0	30	0	83.6	70	130	0		
Surr: Trifluorotoluene		23.69	1.0	30	0	79	70	130	0		

MS	Sample ID: 0101078-01A MS	Batch ID: R3371	Test Code: SW8021B	Units: µg/Kg	Analysis Date: 1/24/01 2:58:00 PM	Prep Date:					
Client ID:		Run ID: BTEX1_010124A			SeqNo: 54060						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		17.17	1.0	20	0	85.9	70	130	0		
Toluene		18.37	1.0	20	0	91.9	70	130	0		
Ethylbenzene		19.65	1.0	20	0	98.2	70	130	0		
Methyl tert-butyl ether		97.99	5.0	100	0	98	70	130	0		
Xylenes, Total		55.19	3.0	60	0	92	70	130	0		
Surr: 4-Bromofluorobenzene		25.81	1.0	30	0	86	70	130	0		
Surr: Trifluorotoluene		28.77	1.0	30	0	95.9	70	130	0		

MS	Sample ID: 0101078-01A MS	Batch ID: R3371	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/24/01 9:42:00 PM	Prep Date:					
Client ID:		Run ID: BTEX1_010124A			SeqNo: 54070						
Analyte		Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		131.8	1.0	20	100.8	155	70	130	0		SE
Toluene		67.12	1.0	20	51.22	79.5	70	130	0		
Ethylbenzene		19.16	1.0	20	4.436	73.6	70	130	0		
Methyl tert-butyl ether		264.4	5.0	100	210.8	53.6	70	130	0		S
Xylenes, Total		108.5	3.0	60	68.8	66.1	70	130	0		S
Surr: 4-Bromofluorobenzene		23.89	1.0	30	0	79.6	70	130	0		
Surr: Trifluorotoluene		26.36	1.0	30	0	87.9	70	130	0		

**Qualifiers:** ND - Not Detected at the Reporting Limit  
                   J - Analyte detected below quantitation limits  
                   S - Spike Recovery outside accepted recovery limits  
                   R - RPD outside accepted recovery limits

R - Analyte detected in the associated Method Blank

U - Analyzed for but not detected

**CLIENT:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: R3371

InstrumentID:

bTEX1

Client ID:	Sample ID:	0101085-01A MSD	Batch ID:	R3371	Test Code:	SW8021B	Units:	µg/Kg	Analysis Date	1/24/01 3:22:00 PM	Prep Date:
Analyte			Run ID:	RTEX1_010124A					SeqNo:	54061	
			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene		17.24	1.0	20	0	86.2	70	130	17.17	0.409	20
Toluene		18.62	1.0	20	0	93.1	70	130	18.37	1.33	20
Ethylbenzene		20.44	1.0	20	0	102	70	130	19.65	3.95	20
Methyl tert-butyl ether		98.86	5.0	100	0	98.9	70	130	97.99	0.886	20
Xylenes, Total		52.26	3.0	60	0	87.1	70	130	55.19	5.45	20
Surr: 4-Bromofluorobenzene		27.07	1.0	30	0	90.2	70	130	25.81	4.75	20
Surr: Trifluorotoluene		29.61	1.0	30	0	98.7	70	130	28.77	2.91	20
Client ID:	Sample ID:	0101078-01A MSD	Batch ID:	R3371	Test Code:	SW8021B	Units:	µg/L	Analysis Date	1/24/01 10:06:00 PM	Prep Date:
Analyte			Run ID:	RTEX1_010124A					SeqNo:	54071	
			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD
Benzene		124.3	1.0	20	100.8	118	70	130	131.8	5.88	20
Toluene		65.4	1.0	20	51.22	70.9	70	130	67.12	2.59	20
Ethylbenzene		20.15	1.0	20	4.436	78.6	70	130	19.16	5.07	20
Methyl tert-butyl ether		252.2	5.0	100	210.8	41.4	70	130	264.4	4.72	20
Xylenes, Total		116.1	3.0	60	68.8	78.9	70	130	108.5	6.83	20
Surr: 4-Bromofluorobenzene		22.03	1.0	30	0	73.4	70	130	23.89	8.12	20
Surr: Trifluorotoluene		26.85	1.0	30	0	89.5	70	130	26.36	1.82	20

Qualifiers:  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted reporting limits

B - Analyte detected in the associated Method Blank  
U - Analyzed for but not detected

**Certified:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: R3347      Instrument ID: VOA\_II

MBLK	Sample ID: VBLKS_R3347	Batch ID: R3347	Test Code: SW8260	Units: µg/Kg	Analysis Date 1/19/01 6:31:00 PM			Prep Date:				
Client ID:		Run ID: VOA_II_010119A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte												
1,1,1-Trichloroethane		ND	5.0									
1,1,2,2-Tetrachloroethane		ND	5.0									
1,1,2-Trichloroethane		ND	5.0									
1,1-Dichloroethane		ND	5.0									
1,1-Dichloroethene		ND	5.0									
1,2-Dichloroethane		ND	5.0									
1,2-Dichloropropane		ND	5.0									
2-fluorane		ND	10									
2-Hexanone		ND	5.0									
4-Methyl-2-pentanone		ND	10									
Acetone		ND	25									
Benzene		ND	5.0									
Bromodichloromethane		ND	5.0									
Bromoform		ND	10									
Bromomethane		ND	5.0									
Carbon disulfide		ND	5.0									
Carbon tetrachloride		ND	5.0									
Chlorobenzene		ND	5.0									
Chloroethane		ND	10									
Chloroform		ND	5.0									
Chloromethane		ND	10									
cis-1,2-Dichloroethene		ND	5.0									
cis-1,3-Dichloropropene		ND	5.0									
Dibromochloromethane		ND	10									
Ethylbenzene		ND	5.0									
m,p-Xylene		ND	5.0									
o-Xylene		ND	5.0									
Styrene		ND	10									
Tetrachloroethene		ND	5.0									
Toluene		ND	5.0									
trans-1,2-Dichloroethene		ND	5.0									

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

Client: Craig Lewis & Associates  
 Work Order: 0101050  
 Project: Westgate

## QC BATCH REPORT

Batch ID:	R3347	InstrumentID:	VOA_II
trans-1,3-Dichloropropene		ND	5.0
Trichloroethylene		ND	5.0
Vinyl chloride		ND	2.0
Xylenes, Total		ND	15
Surr: 1,2-Dichloroethane-d4	48.56	0	50
Surr: 4-Bromofluorobenzene	46.53	0	50
Surr: Dibromofluoromethane	46.22	0	50
Surr: Toluene-d8	48.56	0	50

LCS	Sample ID: VLCSS-R3347	Batch ID: R3347	Test Code: SW8260	Units: ug/Kg	Analysis Date: 1/19/01 6:04:00 PM	Prep Date:					
Client ID:		Run ID: VOA_II_010119A		SeqNo: 53643							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.7	5.0	50	0	97.4	70	130	0	0		
Benzene	52.7	5.0	50	0	105	70	130	0	0		
Chlorobenzene	53.56	5.0	50	0	107	70	130	0	0		
Toluene	55.37	5.0	50	0	111	70	130	0	0		
Trichloroethene	46.36	5.0	50	0	92.7	70	130	0	0		
Surr: 1,2-Dichloroethane-d4	46.21	0	50	0	92.4	70	130	0	0		
Surr: 4-Bromofluorobenzene	45.98	0	50	0	97	70	130	0	0		
Surr: Dibromo fluoromethane	49.86	0	50	0	99.7	70	130	0	0		
Surr: Toluene-d8	47.97	0	50	0	95.9	70	130	0	0		

MS	Sample ID: 0101050-09AMS	Batch ID: R3347	Test Code: SW8260	Units: ug/Kg	Analysis Date: 1/19/01 7:24:00 PM	Prep Date:					
Client ID:		Run ID: VOA_II_010119A		SeqNo: 53646							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.12	5.0	50	0	96.2	59	172	0	0		
Benzene	50.8	5.0	50	0	102	66	142	0	0		
Chlorobenzene	48.92	5.0	50	0	97.8	60	133	0	0		
Toluene	56.79	5.0	50	1.698	110	59	139	0	0		
Trichloroethene	43.03	5.0	50	0	86.1	62	137	0	0		
Surr: 1,2-Dichloroethane-d4	53.11	0	50	0	106	70	130	0	0		
Surr: 4-Bromofluorobenzene	40.62	0	50	0	81.2	70	130	0	0		
Surr: Dibromo fluoromethane	49.38	0	50	0	98.8	70	130	0	0		
Surr: Toluene-d8	52.32	0	50	0	105	70	130	0	0		

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted quantitation limits

J - Analyte detected below the Reporting Limit

B - Analyte detected in the associated Method Blank

U - Analyzed for but not detected

CLINIC: Craig Lewis & Associates  
 Work Order: 0101050  
 Project: Westgate

## QC BATCH REPORT

Batch ID: R3347	InstrumentID: VOA_H	Run ID: VOA_H_010119A	Test Code: SW0260	Units: µg/Kg	Analysis Date: 1/19/01 7:50:00 PM	Prep Date:						
MSD	Sample ID: 0101050-09AMSD	Batch ID: R3347			SeqNo: 53647							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	Hightlimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene		46.21	5.0	50	0	92.4	59	172	48.12	4.05	22	
Benzene		48.55	5.0	50	0	97.1	66	142	50.8	4.54	21	
Chlorobenzene		47.6	5.0	50	0	95.2	60	133	48.92	2.74	21	
Toluene		54.68	5.0	50	1.698	106	59	139	56.79	3.78	21	
Trichloroethene		39.76	5.0	50	0	79.5	62	137	43.03	7.9	24	
Surr: 1,2-Dichloroethane-d4		53.01	0	50	0	106	70	130	53.11	0.175	0	
Surr: 4-Bromoanisole		40.93	0	50	0	81.9	70	130	40.62	0.757	0	
Surr: Dibromofluoromethane		50.19	0	50	0	100	70	130	49.38	1.62	0	
Surr: Toluene-d8		52.19	0	50	0	104	70	130	52.32	0.253	0	

Qualifiers:

ND - Not Detected at the Reporting Limit  
 L - Analytic detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted reporting limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

**CERT:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

Batch ID:	R3348	InstrumentID:	VOA_II	Client ID:	Sample ID: VBLKS-R3348	Batch ID: R3348	Test Code: SW8260	Units: µg/Kg	Analysis Date: 1/20/01 3:03:00 PM	Prep Date:
MBLK				Analyte		Run ID: VOA_II_010120A	PQL	SPK value	SPK Ref Val	SeqNo: 53661
				1,1,1-Trichloroethane		ND	5.0			
				1,1,2,2-Tetrachloroethane		ND	5.0			
				1,1,2-Trichloroethane		ND	5.0			
				1,1-Dichloroethane		ND	5.0			
				1,1-Dichloroethene		ND	5.0			
				1,2-Dichloroethane		ND	5.0			
				1,2-Dichloropropane		ND	5.0			
				2-Butanone		ND	10			
				2-Hexanone		ND	5.0			
				4-Methyl-2-pentanone		ND	10			
				Acetone		ND	25			
				Benzene		ND	5.0			
				Bromodichloromethane		ND	5.0			
				Bromoform		ND	10			
				Bromomethane		ND	5.0			
				Carbon disulfide		ND	5.0			
				Carbon tetrachloride		ND	5.0			
				Chlorobenzene		ND	5.0			
				Chloroethane		ND	10			
				Chloroform		ND	5.0			
				Chloromethane		ND	10			
				cis-1,2-Dichloroethene		ND	5.0			
				cis-1,3-Dichloropropene		ND	5.0			
				Dibromochloromethane		ND	10			
				Ethylbenzene		ND	5.0			
				m,p-Xylene		ND	5.0			
				o-Xylene		ND	5.0			
				Styrene		ND	10			
				Tetrachloroethene		ND	5.0			
				Toluene		ND	5.0			
				trans-1,2-Dichloroethene		ND	5.0			

**Qualifier:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank  
 U - Analyzed for but not detected

**CLIENT:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

# QC BATCH REPORT

Batch ID:	R3348	InstrumentID:	VOA_II
trans-1,3-Dichloropropene		ND	5.0
Trichloroethene		ND	5.0
Vinyl chloride		ND	2.0
Xylenes, Total		ND	15
Surr: 1,2-Dichloroethane-d4	50.46	0	50
Surr: 4-Bromofluorobenzene	45.81	0	50
Surr: Dibromofluoromethane	46.78	0	50
Surr: Toluene-d8	47.75	0	50

LCS	Sample ID:	VLCSS-R3348	Batch ID:	R3348	Test Code:	SW8260	Units:	µg/Kg	Analysis Date:	1/20/01 2:16:00 PM	Prep Date:
Client ID:			Run ID:	VOA_II_010120A				SeqNo:	53660		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	39.17	5.0	50	0	78.3	70	130	0	0		
Benzene	48.75	5.0	50	0	97.5	70	130	0	0		
Chlorobenzene	45.09	5.0	50	0	90.2	70	130	0	0		
Toluene	47.21	5.0	50	0	94.4	70	130	0	0		
Trichloroethene	43.69	5.0	50	0	87.4	70	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.68	0	50	0	97.4	70	130	0	0		
Surr: 4-Bromofluorobenzene	46.52	0	50	0	93	70	130	0	0		
Surr: Dibromoformmethane	41.5	0	50	0	83	70	130	0	0		
Surr: Toluene-d8	47.89	0	50	0	95.8	70	130	0	0		

MS	Sample ID:	0101062-01AMS	Batch ID:	R3348	Test Code:	SW8260	Units:	µg/Kg	Analysis Date:	1/20/01 3:56:00 PM	Prep Date:
Client ID:			Run ID:	VOA_II_010120A				SeqNo:	53673		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	40.69	5.0	50	0	81.4	59	172	0	0		
Benzene	47.82	5.0	50	0	95.6	66	142	0	0		
Chlorobenzene	46.86	5.0	50	0	93.7	60	133	0	0		
Toluene	49.04	5.0	50	0	98.1	59	139	0	0		
Trichloroethene	41.55	5.0	50	0	83.1	62	137	0	0		
Surr: 1,2-Dichloroethane-d4	50.74	0	50	0	101	70	130	0	0		
Surr: 4-Bromofluorobenzene	46.95	0	50	0	93.9	70	130	0	0		
Surr: Dibromoformmethane	41.27	0	50	0	82.5	70	130	0	0		
Surr: Toluene-d8	49.55	0	50	0	99.1	70	130	0	0		

B - Analytic detected in the associated Method Blank

U - Analyzed for but not detected

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted quantitation limits

J - Analyte detected below quantitation limits

ND - Not Detected at the Reporting Limit

Qualifiers:

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## QC BATCH REPORT

**CLIENT:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

Batch ID: R3348		InstrumentID: VOA_H		Batch ID: R3348		Test Code: SW0260		Analysis Date: 1/20/01 4:22:00 PM		Prep Date:				
MSD	Sample ID: 0101062-01AMSD	Run ID:	VOA_H_010120A	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Client ID:	Analyte	SeqNo:												
	1,1-Dichloroethene	41.49	5.0	50	0	83	59	172	40.69	1.94	22			
	Benzene	48.76	5.0	50	0	97.5	66	142	47.82	1.95	21			
	Chlorobenzene	47.2	5.0	50	0	94.4	60	133	46.86	0.722	21			
	Toluene	48.88	5.0	50	0	97.8	59	139	49.04	0.326	21			
	Trichloroethene	41	5.0	50	0	82	62	137	41.55	1.32	24			
	Surr: 1,2-Dichloroethane-d4	54.58	0	50	0	109	70	130	50.74	7.3	0			
	Surr: 4-Bromofluorobenzene	46	0	50	0	92	70	130	46.95	2.04	0			
	Surr: Dibromofluoromethane	38.84	0	50	0	77.7	70	130	41.27	6.07	0			
	Surr: Toluene-d8	48.06	0	50	0	96.1	70	130	49.55	3.05	0			

**Qualifiers:** ND - Not Detected at the Reporting Limit  
A - Absorbance detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
B - RPD outside accepted recovery limits

B3 - Analyte detected in the associated Method Blank

2

## 1 Analysis of nested below-ground quantitation limits

**Client:** Craig Lewis & Associates  
**Work Order:** 0101050  
**Project:** Westgate

## QC BATCH REPORT

Batch ID: R3357		InstrumentID:	Wet Chemistry
DUP	Sample ID: 0101074-01ADUP	Batch ID: R3357	Test Code: SW9015B
Client ID:		Run ID: WET CHEMISTRY_0110	Units: pH Units
Analyte		SeqNo: 53857	Analysis Date: 1/23/01 4:00:00 PM
pH	Result: 5.93	PQL: 0.10	Prep Date:
	SPK value: 0	SPK Ref Val: 0	%REC: 0
	Low Limit: 75	High Limit: 125	RPD Ref Val: 5.97
	RPD: 0.672	RPD Limit: 20	%RPD: 0.672
			Qual: H

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

H - Analyte detected in the associated Method Blank  
U - Analyzed for but not detected



e-Lab, Inc.

10450 Standiford Rd. Suite 210  
Houston, Texas 77099  
Tel. 281.530.6856  
Fax 281.530.5007

## Chain of Custody Form

Houston, Texas 77099  
Tel. 281.530.6856  
Fax. 281.530.5887

Fax: 281-530-5887  
Toll Free: 888-530-5886

QUALITY • INTEGRITY • SERVICE

1

CUSTOMER INFORMATION

11

1

CUSTOMER INFORMATION		PROJECT INFORMATION		PARAMETER/METHOD REQUEST FOR ANALYSIS											
Purchase Order	Project Name:	Westgate	Run Name As	1510-065								Analysis			
Work Order	Project Number:		A	B	C	D	E	F	G	H	I	J	K	L	
Company Name: Send Report To: Address:	Lewis Law Firm Candy Lewis & Joe Dean 700 Louisiana St. fl 4D	Bill To Company: Individual Name: Address:	The Lewis Law Firm Candy Lewis 100 Louisiana St. fl. 4D												
City, State, Zip: Phone: Fax: E-mail:	Houston TX 77002 713-222-8080 713-238-7888	City, State, Zip: Phone: Fax: E-mail:	Houston TX 77002 713-222-8080 713-238-7888	G	H	I									
No.	Sample Description	Date	Time	Mat:	No. of Bottles	A	B	C	D	E	F	G	H	I	J
1	1510-02 - 0-3 ft	1-12-01	8:35 AM	Soil	3	✓									
2	1510-02 - 3-6 ft	1-12-01	8:45 AM	Soil	3	✓									
3	1510-03 - 0-3 ft	1-12-01	9:07 AM	Soil	3	✓									
4	1510-03 - 0-3 ft	1-12-01	9:07 AM	Soil	3	✓									
5	1510-03 - 3-6 ft	1-12-01	9:12 AM	Soil	3	✓									
6	1510-04 - 3-4 ft	1-12-01	9:13 AM	Soil	3	✓									
7	1510-05 - 0-3 ft	1-12-01	10:40 AM	Soil	3	✓									
8	1510-05 - 3-5.5 ft	1-12-01	10:56 AM	Soil	3	✓									
9	1510-06 - 3-6 ft	1-12-01	11:00 AM	Soil	3	✓									
10	1510-06 - 6-9 ft	1-12-01	11:15 AM	Soil	3	✓									
Samples(s): Please Print & Sign		Joe Frank Dean		Airbill No.: FedEx		Required TAT:		Results Due Date							
Received By:	Date: 1-12-01	Time: 3:50 PM	Received By:	Date: 1-13-01	Time: 11:30 AM	Notes:									
Reinstituted By:	Date: 1-12-01	Time: Received By:	Received By:	Date: 1-13-01	Time: 11:30 AM	Notes:									
QC Package: [Check Box Below]				QC Standard QC + Raw Data		Level IV - SW846 Method									
<input type="checkbox"/>				<input type="checkbox"/>		<input type="checkbox"/>									

## Sample Receipt Checklist

Client Name CRAIG LEWIS &amp; ASSOC.

Date/Time Received:

1/13/01 2:00:00 PM

Work Order Number 0101050

Received by: JLE

Checklist completed by Frank

Signature

1-18-01

Date

Reviewed by Lee

Initials

Date

Matrix: Sed

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers labeled?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Temperature(s): <u>4.2°C</u>
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Login Notes: QC and Sx labels do not match for 1510-03 3-6 ft (label says 0936) & 1510-04 3-4 ft (label says 0953)

Client contacted Joe Frank Dean Date contacted: 1/18/01 Person contacted Dean Consulting  
Documented Contacted by: L.Dunlap Regarding: Sx analysis  
Comments: Sx 05, 0-3, 3-55, Sx 06, 3-5, 6-9 run full suite  
WC in 10060: Normal TAT.  
1/22/01 17:00 Per J.F. Dean cancel previous test assignments and  
Corrective Action Add BTEX & TPH.

**DUPLICATE**

NEW MEXICO OIL CONSERVATION COMMISSION OCT 6 1953

Santa Fe, New Mexico

OIL CONSERVATION COMMISSION

## MISCELLANEOUS REPORTS ON WELLS HOBBS-OFFICE

Submit this report in TRIPPLICATE to the District Office, Oil Conservation Commission, within 10 days after the work specified is completed. It should be signed and filed as a report on Beginning Drilling Operations, Results of test of casing shut-off, result of plugging of well, result of well repair, and other important operations, even though the work was witnessed by an agent of the Commission. See additional instructions in the Rules and Regulations of the Commission.

## Indicate Nature of Report by Checking Below

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON RESULT OF TEST OF CASING SHUT-OFF		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF PLUGGING WELL	X	REPORT ON RECOMPLETION OPERATION		REPORT ON (Other)	

October 5, 1953..... Hobbs, New Mexico.....  
(Date) (Place)

Following is a report on the work done and the results obtained under the heading noted above at the

Shell Oil Company..... Grimes.....  
(Company or Operator) (Lease)

Hobbs Pipe & Supply....., Well No. 8..... in the NW 1/4 SW 1/4 of Sec. 28.....  
(Contractor)

T 18-S, R. 38-E, NMPM, Bowers..... Pool, Lea..... County.

The Dates of this work were as follows: September 30 thru October 3, 1953.

Notice of intention to do the work (was) (X) submitted on Form C-102 on September 28, 1953, (Cross out incorrect words)  
and approval of the proposed plan (was) (X) obtained.

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Plugged and abandoned Grimes No. 8 as following:

- (1) Loaded hole with mud
- (2) Spotted 6 sacks cement plug in 4-1/2" casing at 3180'. Fill up to 3120'.
- (3) Shot and pulled 1060' of 4-1/2" casing
- (4) Spotted 60' cement plug from 1260' to 1320' in 4-1/2" casing
- (5) Spotted 5 sack cement plug at 430'
- (6) Spotted 3 sack cement plug at surface in top of 8-5/8" casing and erected 4" marker as required by Rule 202. Well PLUGGED & ABANDONED 10-3-53.

Witnessed by..... H. E. Brooks..... Shell Oil Company..... Production Foreman.....  
(Name) (Company) (Title)

Approved:

OIL CONSERVATION COMMISSION  
*F. D. Leigh*  
(Name)

Oil & Gas Inspector JAN 29 1954  
(Title) (Date)

I hereby certify that the information given above is true and complete to the best of my knowledge.

Original signed by  
F. D. Leigh  
Name..... Position..... Representing..... Address.....  
Division Mechanical Engineer  
Shell Oil Company  
Box 1957, Hobbs, New Mexico



DUPPLICATE

OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO

Form 6-10 SEP 30 1943  
RECEIVED  
OIL & GAS INSPECTOR'S OFFICE

CERTIFICATE of COMPLIANCE and AUTHORIZATION to TRANSPORT OIL

Company or Operator Shell Oil Company Lease W. D. Grimes

Address Box 1452 Hobbs, New Mexico Box 1509 Midland, Texas  
(Local or Field Office) (Principal Place of Business)

Unit K Wells No. 8 Sec. 28 T<sub>18</sub>S R<sub>38</sub>E Field Bowers County Lea

Kind of Lease Patented Location of Tanks center of lease

Transporter Shell Pipe Line Corp. Address of Transporter Box 486 Hobbs, New Mexico  
(Local or Field Office)

Houston, Texas Percent of oil to be transported 100. Other transporters authorized to transport oil from this unit are None 0 %

REMARKS:

Operating ownership change effective close of business September 30, 1949.

Previous owner: Shell Oil Company, Incorporated

The undersigned certifies that the rules and regulations of the Oil Conservation Commission have been complied with except as noted above and that gathering agent is authorized to transport the percentages of oil produced from the above described property and that this authorization will be valid until further notice to the transporter named herein or until cancelled by the Oil Conservation Commission of New Mexico.

Executed this the 30th day of September, 1949

Shell Oil Company

(Company or Operator)

By Frank R. Lovering

Title District Superintendent

State of New Mexico

} ss.

County of Lea

Before me, the undersigned authority, on this day personally appeared Frank R. Lovering known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me, this the 30th day of September, 1949

Notary Public in and for Lea County, New Mexico My Commission Expires Sept. 16, 1950

Approved: Sept - 30 - 1949

OIL CONSERVATION COMMISSION

By Nellie A. Yuley

(See Instructions on Reverse Side)

OIL & GAS INSPECTOR

Place Hobbs, New Mexico  
Date September 3, 1947

Glenn Staley  
Proration Office  
Hobbs, New Mexico.

Designate UNIT well is located in  
"K"

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

NOTICE OF COMPLETION OF: (Lease) W. D. Grimes Well No. 8  
1980 feet from South line: 1980 feet from West line; S.P. & R  
28, 18-S, 38-E.

DATE STARTED August 23, 1947  
DATE COMPLETED September 3, 1947  
ELEVATION 3658 D.P.  
TOTAL DEPTH S.L.M. 3230  
CABLE TOOLS ROTARY TOOLS X

CASING RECORD

SIZE	<u>8 5/8"</u>	DEPTH	<u>4150'</u>	SAX CEMENT	<u>200</u>
SIZE	<u>4 1/2"</u>	DEPTH	<u>3180'</u>	SAX CEMENT	<u>850</u>
SIZE		DEPTH		SAX CEMENT	

TUBING RECORD

SIZE 2 3/8" DEPTH 3227

ACID RECORD

NO. GALS	NO. TTS.
NO. GALS	NO. TTS.
NO. GALS	NO. TTS.

FORMATION TOPS

Anhydrite	<u>1585</u>
Top Salt	<u>1785</u>
Base Salt	<u>2678</u>
Red Sand	
Brown Lime	<u>2800</u>
White Lime	
Oil or Gas Pay	<u>3225</u>
Water	

Initial Production Test 149 BO/22.5 hrs Pumping \_\_\_\_\_ Flowing X  
Test After Acid or Shot \_\_\_\_\_

Initial GAS VOLUME 44 MCF (G.O.E. 295)

SCHEDULE NO. \_\_\_\_\_ DATE \_\_\_\_\_

PIPE LINE TAKING OIL Shell Pipe Line Corporation

REMARKS \_\_\_\_\_ COMPANY Shell Oil Company, Incorporated

SIGNED BY: M. C. Brunner  
District Superintendent

Place Hobbs, New Mexico  
Date September 3, 1947

Glenn Staley  
Proration Office  
Hobbs, New Mexico.

Designate UNIT well is located in  
X

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

NOTICE OF COMPLETION OF: (Lease) W. D. Grimes Well No. 8  
1980 feet from South line: 1980 feet from West line; S.T. & R  
28, 18, S. 3E.

DATE STARTED August 23, 1947  
DATE COMPLETED September 3, 1947  
ELEVATION 3658 B.P.  
TOTAL DEPTH S.L.M. 3230  
CABLE TOOLS ROTARY TOOLS X

CASING RECORD

SIZE <u>8 5/8"</u>	DEPTH <u>4150</u>	SAX CRIMENT <u>200</u>
SIZE <u>4 1/2"</u>	DEPTH <u>3180'</u>	SAX CRIMENT <u>850</u>
SIZE	DEPTH	SAX CRIMENT

TUBING RECORD

SIZE 2 3/8" DEPTH 3227

ACID RECORD

NO. GALS	NO. JTS.
NO. GALS	NO. JTS.
NO. GALS	NO. JTS.

FORMATION TOPS

Anhydrite	<u>1585</u>
Top Salt	<u>1785</u>
Base Salt	<u>2678</u>
Red Sand	
Brown Lime	<u>2800</u>
White Lime	
Oil or Gas Pay	<u>3215</u>
Water	

Initial Production Test 149 BO/22.5 hrs Pumping \_\_\_\_\_ Flowing X  
Test After Acid or Shot \_\_\_\_\_

Initial GAS VOLUME 44 MCF (G.O.B. 295)

SCHEDULE NO. \_\_\_\_\_ DATE \_\_\_\_\_

PIPE LINE TAKING OIL Shell Pipe Line Corporation

REMARKS \_\_\_\_\_ COMPANY Shell Oil Company, Incorporated

SIGNED BY: M. C. Bronner  
District Superintendent

## **SCOUT REPORT**

## **NEW MEXICO OIL CONSERVATION COMMISSION**

**AMOUNT**  
**CASING & CEMENTING RECORD**

Size	Feet	Inches	Sax Cement
8 9/16	4 1/4		200
4 1/2	3 1/8 0		850

## TUBING RECORD

—  
—  
—

PACKER

Date	Location
8-6	
8-27	\$1945 a
9-3	103230a July
9-10	103230a & P. T.
	149 \$30 in 22.5 h
	9/2 "check on 2
	3227. 60P 295

Company	Shell Oil Company						
Pat.							
Farm Name	Grimes			Well No.		8	
Sec.	28	Twp.	18	Range	38	County	Lea
Feet from Line:			N. 1980 S.		E. 1980 W.		
Elevation				Method			
Contractor							
Spudded	8-23-47			Completed		9-3-47	
ACID RECORD Gals.	TA			TG			
	TX			TSA			
	TCA			TGI			
	BX			TYo			
	TY			TABo			
	TSR			TPenn			
Top Pay	32 1/2			TQ		TOrd	

**SHOOTING RECORD**

No. of Quarts	From	To
No. of Quarts	From	To
S/	S/	S/
S/	S/	S/
S/	S/	S/

**DUPLICATE**

OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO

Form 5-11 SEP 11 1947  
HOBBS OFFICE

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL

Company or Operator Shell Oil Company, Inc. Lease W. D. Grimes

Address Box 1457 Hobbs, New Mexico Box 2099 Houston, Texas  
(Local or Field Office) (Principal Place of Business)

Unit X Wells No. 8 Sec 28 T 18-8 R38-E Field Bowers County Lea

Kind of Lease Patented Location of Tanks Center of lease

Transporter Shell Pipe Line Corp. Address of Transporter Box 486 Hobbs, New Mexico.  
(Local or Field Office)

Houston, Texas Percent of oil to be transported 100. Other transporters authorized  
(Principal Place of Business) to transport oil from this unit are None %

REMARKS: None

The undersigned certifies that the rules and regulations of the Oil Conservation Commission have been complied with except as noted above and that gathering agent is authorized to transport the percentage of oil produced from the above described property and that this authorization will be valid until further notice to the transporter named herein or until cancelled by the Oil Conservation Commission of New Mexico.

Executed this the 3rd day of September, 1947.

Shell Oil Company, Incorporated

(Company or Operator)

Subscribed and By M. C. Brunner M. C. Brunner

State of New Mexico County of Lea Subscribed and sworn to before me on this the 3rd day of September, 1947  
Title District Superintendent

Before me, the undersigned authority, on this day personally appeared M. C. Brunner known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me, this the 3rd day of September, 1947.

Notary Public in and for Lea County, New Mexico

Approved: 105-11-1947  
OIL CONSERVATION COMMISSION

By John W. McDaniel

OIL & GAS INSPECTOR

(See Instruction on Reverse Side)



## MUDGING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
11"	8 5/8"	415	200	Pump and Plug	8.8	
7 7/8"	4 1/2"	3180	850	Pump and Plug	10.2	

## PLUGS AND ADAPTERS

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth Set \_\_\_\_\_

Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

## RECORD OF SHOOTING OR CHEMICAL TREATMENT

SIZE	SHELL USED	EXPLOSIVE OR CHEMICAL USED	QUANTITY	DATE	DEPTH SHOT OR TREATED	DEPTH CLEANED OUT

Results of shooting or chemical treatment \_\_\_\_\_

## RECORD OF DRILL-STEM AND SPECIAL TESTS

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto.

## TOOLS USED

Rotary tools were used from 0 feet to 3230 feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

Cable tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

## PRODUCTION

Put to producing Sept. 3, 1947

The production of the first 24 hours was 163 barrels of fluid of which 99 6/10 % was oil; 0 % emulsion; 2/10 % water; and 0 % sediment. Gravity, Be 41.5° A.P.T., corrected

If gas well, cu. ft. per 24 hours \_\_\_\_\_ Gallons gasoline per 1,000 cu. ft. of gas \_\_\_\_\_

Rock pressure, lbs. per sq. in. \_\_\_\_\_ G.O.R. = 275

## EMPLOYEES

H. T. Green Driller G. B. Young DrillerJ. A. Arnold Driller A. C. Cleninger Driller

## FORMATION RECORD ON OTHER SIDE

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

Subscribed and sworn to before me this 3rd

day of September 1947

Dene R. Davis  
Notary Public  
My Commission Expires Sept. 16, 1950Hebbs, New Mexico Sept. 3, 1947  
Place DateName M. C. Brunner M. C. BrunnerPosition District SuperintendentRepresenting Shell Oil Company, Incorporated  
Company or OperatorAddress Box 1457 Hobbs, New Mexico.

## FORMATION RECORD

TAD 1960

FROM	TO	THICKNESS IN FEET	FORMATION
			No samples taken above 3180 feet. Sample examination taken from Grimes No. (twin well located in same 40 acre unit indicates following tops.)
Top of Red Beds		246	
Top of Anhydrite		1585	
Top of Salt		1785	
Base of Salt		2678	
Top of Brown Lime		2800	
Sample examination from Grimes No. 8: 0000			
3180	3215	35	Anhydrite.
3215	3221	6	Bowers Sand (Show oil).
3221	3230	9	Anhydrite.

## OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

~~DUPLICATE~~ MISCELLANEOUS REPORTS ON WELLS

SEP 8 1947

Submit this report in triplicate to the Oil Conservation Commission or its proper agent within ten days after the work specified is completed. It should be signed and sworn to before a notary public for reports on beginning drilling operations, results of shooting well, results of test of casing shut off, result of plugging of well, and other important operations, even though the work was witnessed by an agent of the Commission. Reports on minor operations need not be signed and sworn to before a notary public. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of report by checking below.

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON REPAIRING WELL
REPORT ON RESULT OF SHOOTING OR CHEMICAL TREATMENT OF WELL		REPORT ON PULLING OR OTHERWISE ALTERING CASING
REPORT ON RESULT OF TEST OF CASING SHUT-OFF	X	REPORT ON DEEPENING WELL
REPORT ON RESULT OF PLUGGING OF WELL		

August 30, 1947

Hobbs, New Mexico

Date

Place

OIL CONSERVATION COMMISSION,  
SANTA FE, NEW MEXICO.

Gentlemen:

Following is a report on the work done and the results obtained under the heading noted above at the  
Shell Oil Company, Incorporated W. D. Grimes Well No. 8 in the  
 Company or Operator Lease

SW/4 of Sec. 28, T. 18-S, R. 38-E, N. M. P. M.,  
Bowers Field, Lea County.

The dates of this work were as follows: August 30, 1947

Notice of intention to do the work was (~~REMOVED~~) submitted on Form C-102 on August 29, 1947  
 and approval of the proposed plan was (was not) obtained. (Cross out incorrect words.)

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Tested 4 1/2-inch O.D. casing with 1000 p.s.i. water pressure for 30 minutes.  
 Held OK. Drilled cement plug and tested cement job with 1000 p.s.i. water pressure  
 for 30 minutes. Held OK.

Witnessed by George Goodpasture Shell Oil Company, Inc. Prod. Foreman  
 Name Company Title

Subscribed and sworn before me this 30th I hereby swear or affirm that the information given above  
 is true and correct.

day of August, 1947 Name M. C. Brunner M. C. Brunner  
 Notary Public Position District Superintendent

Representing Shell Oil Company, Incorporated  
 Company or Operator

My commission expires MY COMMISSION EXPIRES MAY 22 Address Box 1457 Hobbs, New Mexico.

Remarks:

APPROVED

Date SEP 8 1947

Roy Parker  
 Name  
 BLM Gas Inspector  
 Title

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

## DUPLICATE MISCELLANEOUS NOTICES

SEP 8 1947

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice by checking below:

NOTICE OF INTENTION TO TEST CASING SHUT-OFF	<input checked="" type="checkbox"/>	NOTICE OF INTENTION TO SHOOT OR CHEMICALLY TREAT WELL
NOTICE OF INTENTION TO CHANGE PLANS	<input type="checkbox"/>	NOTICE OF INTENTION TO PULL OR OTHERWISE ALTER CASING
NOTICE OF INTENTION TO REPAIR WELL	<input type="checkbox"/>	NOTICE OF INTENTION TO PLUG WELL
NOTICE OF INTENTION TO DEEPEN WELL	<input type="checkbox"/>	

Hobbs, New Mexico

August 29, 1947

Place

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intention to do certain work as described below at the

Shell Oil Company, Incorporated W. D. Grimes Well No. 8 in SW/4  
 Company or Operator Lease  
 of Sec. 28, T. 18 S, R. 38 E, N. M. P. M., Bowers Field  
Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK  
FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

Ran 4 1/2-inch casing to 3180 feet and cemented with 850 sacks common cement.

Plug down at 5:20 P.M. 8-29-47. Will test casing shut-off at 5:20 P.M. 8-30-47.

Approved SEP 8 1947, 19  
except as follows:

OIL CONSERVATION COMMISSION,  
 By Roy Yarbrough  
 Title Gas Inspector

Shell Oil Company, Incorporated

Company or Operator

By M. C. Brunner M. C. BrunnerPosition District Superintendent  
Send communications regarding well toName Shell Oil Company, IncorporatedAddress Box 1457Hobbs, New Mexico

## OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

RECEIVED  
SEP 2 1947DUPLICATE  
HOBBS OFFICE

## MISCELLANEOUS REPORTS ON WELLS

Submit this report in triplicate to the Oil Conservation Commission or its proper agent within ten days after the work specified is completed. It should be signed and sworn to before a notary public for reports on beginning drilling operations, results of shooting well, results of test of casing shut off, result of plugging of well, and other important operations, even though the work was witnessed by an agent of the Commission. Reports on minor operations need not be signed and sworn to before a notary public. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of report by checking below.

REPORT ON BEGINNING DRILLING OPERATIONS	<input checked="" type="checkbox"/>	REPORT ON REPAIRING WELL
REPORT ON RESULT OF SHOOTING OR CHEMICAL TREATMENT OF WELL	<input type="checkbox"/>	REPORT ON PULLING OR OTHERWISE ALTERING CASING
REPORT ON RESULT OF TEST OF CASING SHUT-OFF	<input type="checkbox"/>	REPORT ON DEEPENING WELL
REPORT ON RESULT OF PLUGGING OF WELL	<input type="checkbox"/>	

August 25, 1947

Hobbs, New Mexico

Date

Place

OIL CONSERVATION COMMISSION,  
SANTA FE, NEW MEXICO.

Gentlemen:

Following is a report on the work done and the results obtained under the heading noted above at the \_\_\_\_\_

Shell Oil Company, Incorporated W. D. Grimes Well No. 8 in the  
Company or Operator Lease

SW/4 of Sec. 28, T. 18-S, R. 38-E, N. M. P. M.,

Bowers Field, Lea County.

The dates of this work were as follows: 8-23-47

Notice of intention to do the work was (was not) submitted on Form C-102 on 8-18 1947  
and approval of the proposed plan was (was not) obtained. (Cross out incorrect words.)

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Spudded 1:30 A.M. 8-23-47.

Witnessed by George Goodpasture Shell Oil Company, Incorporated Prod. Foreman  
Name Company TitleSubscribed and sworn before me this 25th I hereby swear or affirm that the information given above  
is true and correct.day of August, 1947 Name M. C. Brunner *M. C. Brunner*

Position District Superintendent

Notary Public Representing Shell Oil Company, Incorporated  
Company or Operator

My commission expires Address Box 1457 Hobbs, New Mexico

Remarks:

*Roy Markleff*  
Name  
OIL & GAS INSPECTOR  
TitleAPPROVED  
SEP 2 1947  
Date.....

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

~~MISCELLANEOUS NOTICES~~

AUG 29 1947

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent by ~~the 1st day of the month specified~~ work begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved shall now follow, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice by checking below:

NOTICE OF INTENTION TO TEST CASING SHUT-OFF	<input checked="" type="checkbox"/>	NOTICE OF INTENTION TO SHOOT OR CHEMICALLY TREAT WELL
NOTICE OF INTENTION TO CHANGE PLANS	<input type="checkbox"/>	NOTICE OF INTENTION TO PULL OR OTHERWISE ALTER CASING
NOTICE OF INTENTION TO REPAIR WELL	<input type="checkbox"/>	NOTICE OF INTENTION TO PLUG WELL
NOTICE OF INTENTION TO DEEPEN WELL	<input type="checkbox"/>	

Hobbs, New Mexico

August 25, 1947

Place

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intention to do certain work as described below at the

Shell Oil Company, Incorporated      W. D. Grimes      Well No. 8      in SW 1/4  
 Company or Operator      Lease  
 of Sec. 28, T. 18-S, R. 38-E, N. M. P. M., Bowers Field.  
Lea County.

## FULL DETAILS OF PROPOSED PLAN OF WORK

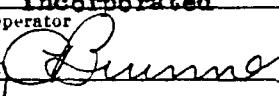
FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

Ran 8 5/8-inch casing to 415 feet and circulated with 200 sacks cement.

Job complete 1:15 P.M. 8-23-47. Will test casing shut-off at 1:15 P.M. 8-24-47.

Approved \_\_\_\_\_, 19\_\_\_\_\_  
 except as follows: AUG 29 1947

Shell Oil Company, Incorporated  
 Company or Operator

By H. G. Brunner 

Position District Superintendent  
 Send communications regarding well to

Name Shell Oil Company, Incorporated

Address Box 1457 Hobbs, New Mexico

OIL CONSERVATION COMMISSION,  
 By Roy Yarbrough  
 Title SAC & Gas Inspector



## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

AUG 22 1947

## NOTICE OF INTENTION TO DRILL

Notice must be given to the Oil Conservation Commission or its proper agent and approval obtained before drilling begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in triplicate. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

ROBBS OFFICE

Hobbs, New Mexico

Place

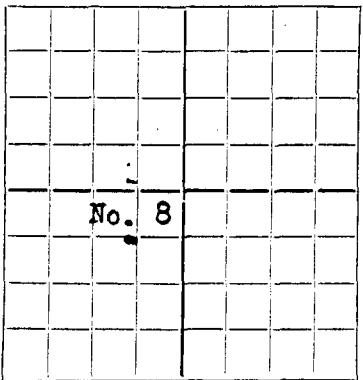
August 18, 1947

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.  
Gentlemen:

You are hereby notified that it is our intention to commence the drilling of a well to be known as \_\_\_\_\_

Shell Oil Company, Incorporated W. D. Grimes Well No. 8 in SW/4  
Company or Operator Lease  
of Sec. 28, T. 18-S, R. 38-E, N. M. P.M., Bowars Field, Lea County.



AREA 640 ACRES  
LOCATE WELL CORRECTLY

The well is 1980 feet (N.) E of the south line and 1980 feet (E.) (W.) of the west line of Sec. 28, T 18-S, R 38-E, Lea County, New Mexico.

(Give location from section or other legal subdivision lines. Cross out wrong directions.)

If state land the oil and gas lease is No. - - -, Assignment No. - - -

If patented land the owner is W. D. Grimes

Address - - -

If government land the permittee is - - -

Address - - -

The lessee is Shell Oil Company, Incorporated

Address Box 1509 Midland, Texas

We propose to drill well with drilling equipment as follows:

## Conventional Rotary Drilling Rig.

The status of a bond for this well in conformance with Rule 39 of the General Rules and Regulations of the Commission is as follows: - - -

We propose to use the following strings of casing and to land or cement them as indicated:

Size of Hole	Size of Casing	Weight Per Foot	New or Second Hand	Depth	Landed or Cemented	Sacks Cement
11"	8 5/8"	34#	New	400	cemented	to surface
7 7/8"	4 1/2"	9.5#	New	Approx. 3150'	cemented	850 sacks

If changes in the above plan become advisable we will notify you before cementing or landing casing. We estimate that the first productive oil or gas sand should occur at a depth of about 3170 feet.

Additional information:

AUG 22 1947

Approved AUG 22 1947, 19\_\_\_\_\_  
except as follows:

Sincerely yours,

Shell Oil Company, Incorporated  
Company or Operator

By M. C. Brunner M. C. Brunner

Position District Superintendent

Send communication regarding well to

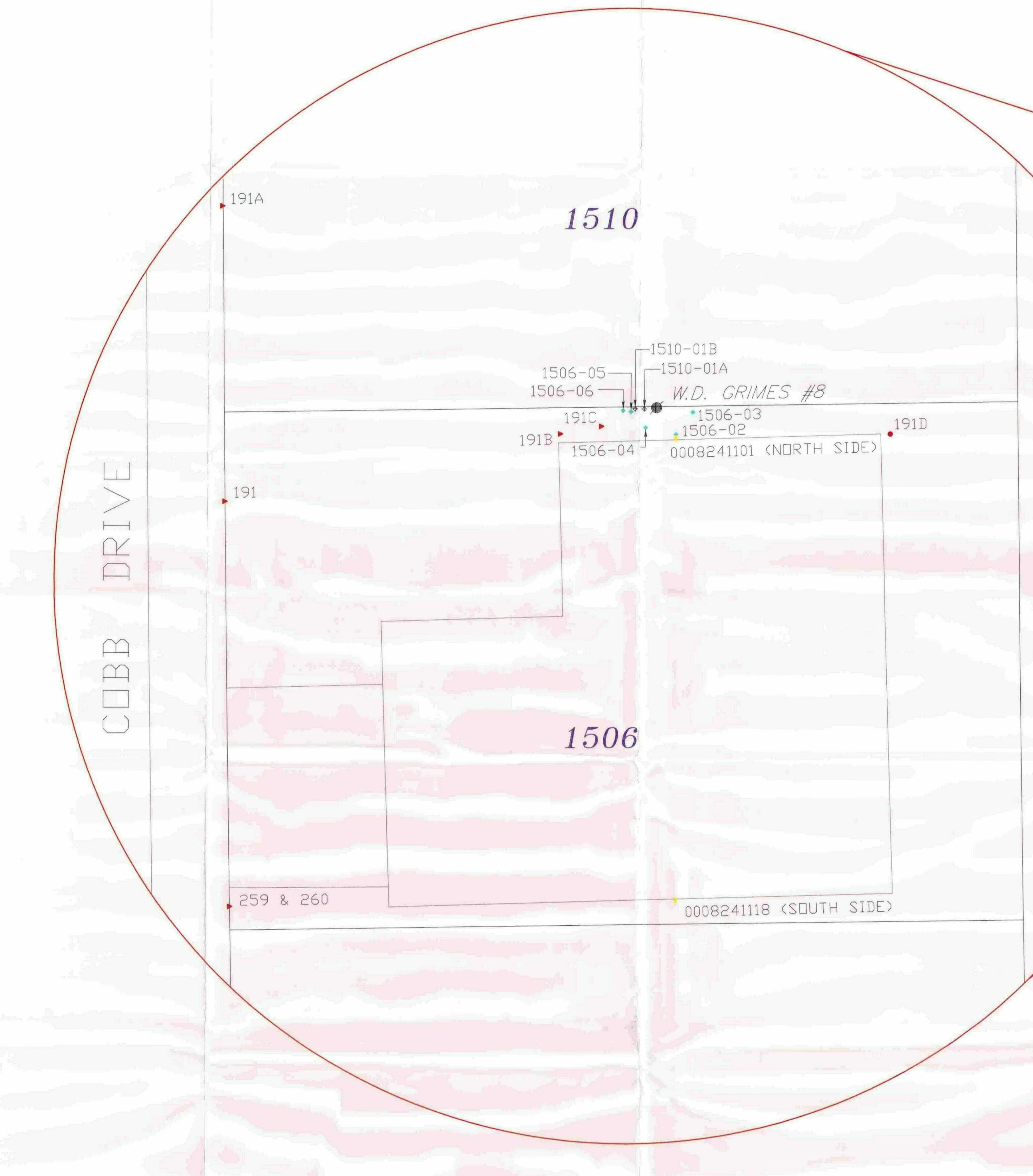
Name Shell Oil Company, Incorporated

Address Box 1457 Hobbs, New Mexico

OIL CONSERVATION COMMISSION,

By W. D. Grimes

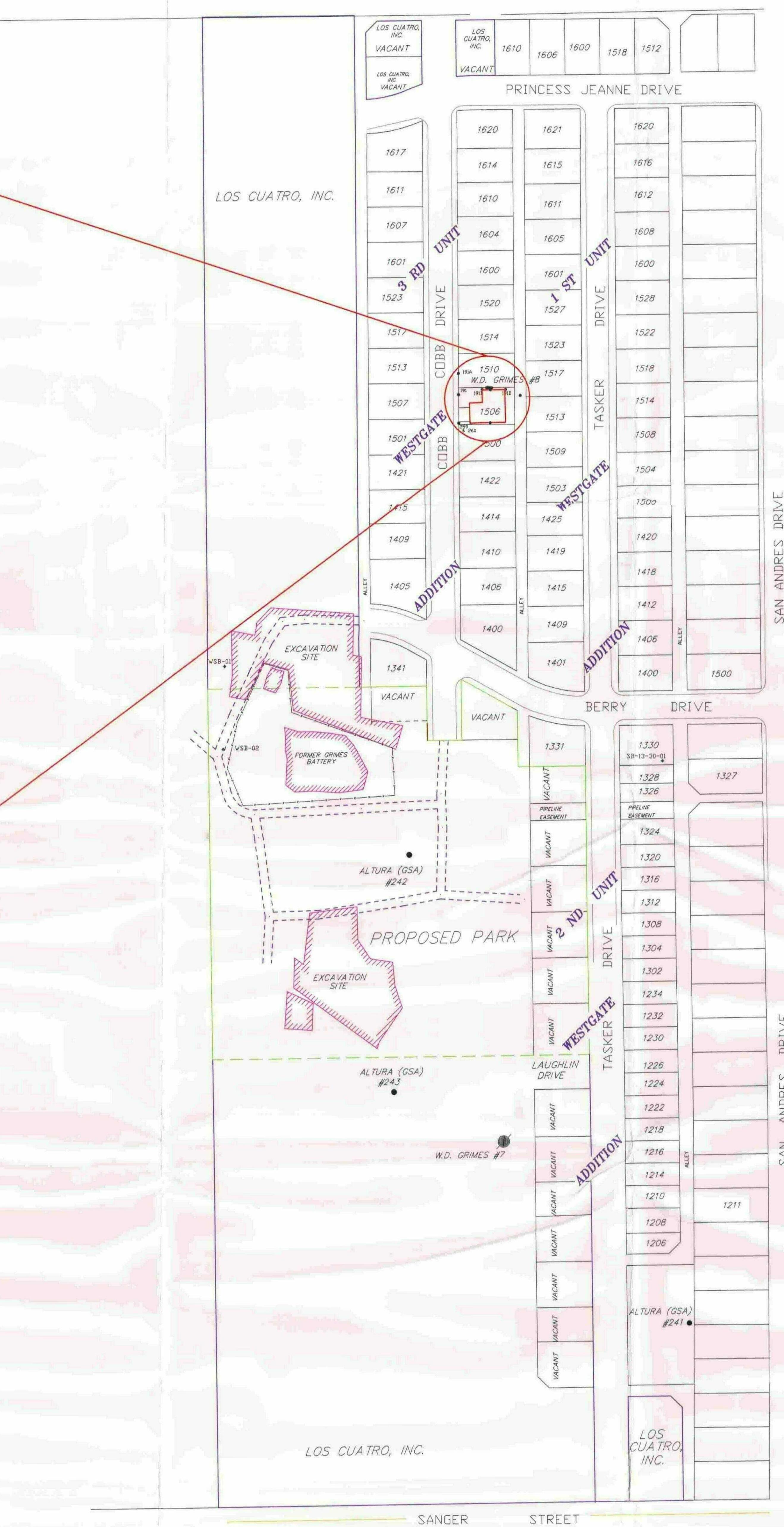
Title Oil & Gas Inspector



LEGEND

- DENOTES LOS CUATRO, INC.
- DENOTES PROPOSED PARK
- DENOTES EXCAVATED AREA
- - - DENOTES DIRT LEASE ROAD
- ◆ DENOTES PLAINTIFF SOIL BORING
- DENOTES SOIL BORING
- DENOTES SOIL VAPOR SAMPLE POINT
- DENOTES OGD SOIL SAMPLE POINT
- DENOTES ACTIVE WELL
- DENOTES ABANDONED WELL

RECEIVED  
MAR 09 2001  
ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION



SANGER STREET

RECEIVED	MAR 09 2001	ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION
BBC INTERNATIONAL INC. WESTGATE SUBDIVISION		
W.D. GRIMES WELL NO.8 INVESTIGATION ADDITIONAL STAGE 1 ABATEMENT PLAN ACTIVITIES		
SOIL BORINGS AND SOIL VAPOR POINTS		
SEARCHED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 02/29/01
DATE SEARCH: 5/11/008	DATE DRAWN: 5/12/008	FILE NAME: F1-1506
DATE END:	CHECKED BY:	SHEET 1 OF 1
PROJECT #: 98110738		DISK #: CD #3
		Scale: 1" = 100'
DRAWING # <b>F1-1506</b>		