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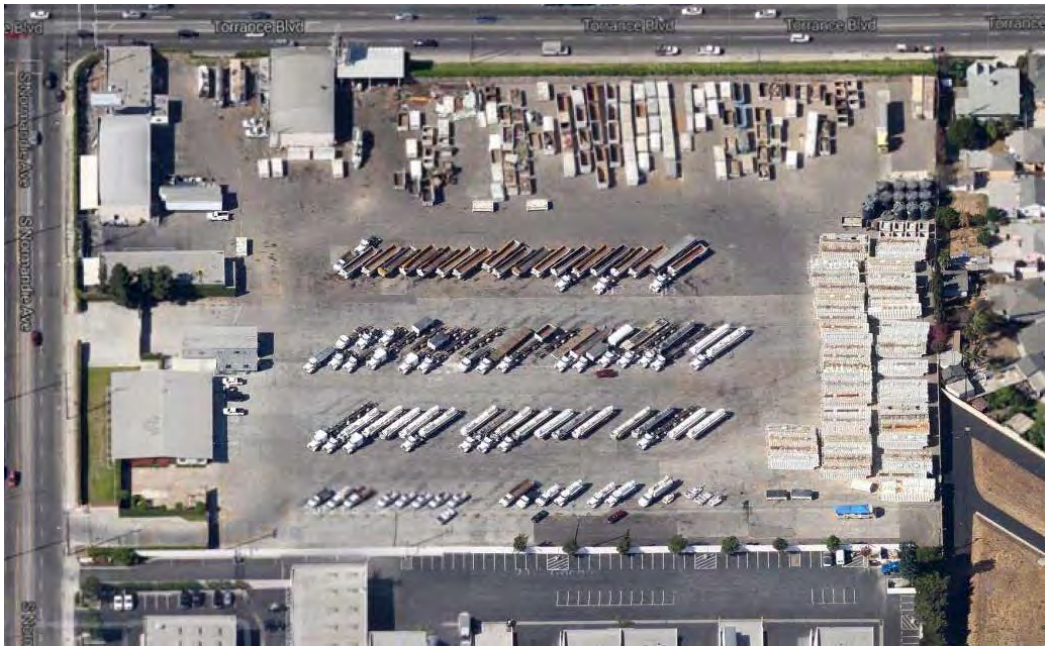
TECHNICAL MEMORANDUM - SUPPLEMENTAL SITE INVESTIGATION

ECOLOGY CONTROL INDUSTRIES

20802, 20846 and 20850 Normandie Avenue
Torrance, California 90502



Submitted to

MR. RON FLURY
ECOLOGY CONTROL INDUSTRIES
20846 Normandie Avenue
Torrance, California 90502

December 9, 2014

Sharp
Environmental
Technologies, Inc.

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December 9, 2014
ECI Supplemental Site Investigation
Via E-mail

Mr. Ron Flury
Ecology Control Industries
20846 Normandie Avenue
Torrance, California 90502

Re: Technical Memorandum - Supplemental Site Investigation, Ecology Control Industries, 20802, 20846 and 20850 Normandie Avenue, Torrance, California 90502

Dear Mr. Flury:

Sharp Environmental Technologies, Inc. (SET), has prepared this *Supplemental Site Investigation Report* to present the results of an environmental site assessment at the referenced site. The purpose of this assessment was to evaluate the soil and soil-gas at the site, which may have been impacted with volatile organic compounds, petroleum hydrocarbons, pesticides, polychlorinated biphenyls and metals originating from the historical operations on-site. The investigation included drilling of 20 soil borings, soil sampling, installation of temporary soil-gas probes and sampling, laboratory analysis of soil and soil-gas, and report preparation.

If you have any questions, please call me at (310) 505-3675.

Sincerely,
Sharp Environmental Technologies, Inc.

Jeffrey E. Sharp, PG #6777, CEG #2160
Senior Geologist

Enclosure

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PROFESSIONAL CERTIFICATION

This *Technical Memorandum - Supplemental Site Investigation* has been prepared and approved by

Jeffrey Sharp, PG #6777, CEG #2160
Senior Geologist

STATEMENT OF LIMITATIONS

The services described in this *Technical Memorandum - Supplemental Site Investigation* was performed in accordance with generally accepted professional environmental consulting principles and practices.

Opinions and recommendations contained in this document apply to conditions existing at certain locations where services were performed and are intended only for the specific purposes, locations, time frames, and project parameters indicated. Sharp Environmental Technologies, Inc., cannot be responsible for the impact of any changes in environmental standards, practices, or regulations after performance of services.

Any use of this document by a third party is expressly prohibited without a written, specific authorization from the client and Sharp Environmental Technologies, Inc. Such authorization will require a signed waiver and release agreement.

This document is issued with the understanding that the client, the property owner, or its representative are responsible for ensuring that the information, conclusions, and/or recommendations contained herein are brought to the attention of the appropriate regulatory agencies, as required.

1. INTRODUCTION

Sharp Environmental Technologies, Inc. (SET), prepared this *Technical Memorandum - Supplemental Site Investigation* (SSI) report presenting the results of an environmental site assessment at *Ecology Control Industries (ECI), 20802, 20846 and 20850 Normandie Avenue, Torrance, California 90502,* and hereinafter referred to as *the site* (Figure 1 – Site Vicinity Map). The purpose of this assessment was to further evaluate the soil and soil gas at the site, which may have been impacted with volatile organic compounds, petroleum hydrocarbons, pesticides, polychlorinated biphenyls and metals originating from the historical operations on-site.

1.1 Purpose

The purpose of conducting this SSI was to:

- Identify data gaps remaining from previous investigations and assess these identified areas by soil and soil-gas sampling and laboratory analysis; and
- Establish the amount, concentrations, and extent of hazardous substances that may be present in soil and soil gas beneath the site as a result of historical or current on-site practices, and chemicals of potential concern (COPCs).

Due to the physical and chemical nature of the chemicals of concern (COCs), the historical on-site releases of the COCs likely persist in shallow site soil. Because the COCs typically have a low migration potential within a soil column, the Department of Toxic Substance Control (DTSC) required the additional site assessment addressing the data gaps prior to removal actions to mitigate the identified potential threat to human health and the environment before any construction of proposed residential developments can commence.

The assessment was designed to allow SET to present an informed decision regarding the potential risks associated with the environmental condition of the site, and proceed with one of the following:

- Further investigation if the areas investigated are found to be impacted by hazardous substances and further delineation is warranted;
- Removal action if localized impacts by hazardous substance releases are found; or
- Request for a "no further action" finding by the regulatory agency if the areas are found not to be significantly impacted, and risks to human health and the environment are within acceptable levels.

1.2 Scope of Work

The scope of work for this SSI included:

- Site meetings and discussions with the DTSC and property owner;
- Implementation of the scope of work as requested by the DTSC and the property owner;
- Recommendations for further actions, if warranted; and
- Preparation of this SSI report.

Based on the proposed scope of work presented in the proposal, the SSI included the following:

- Collection and logging of vadose zone soil samples from 20 on-site boring locations using a direct-push sampling rig to a maximum depth of 30 feet below ground surface (bgs) with sample collection between 0.5 and 30 feet bgs;
- Chemical analysis of 43 vadose zone soil samples for total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs) and CAM 17 metals;
- Temporary installation of 8 soil-gas probes at depths between 5 and 35 feet bgs using a direct-push sampling rig;
- Collection and laboratory analysis of 22 soil-gas samples (plus two duplicate samples) using a mobile laboratory for analysis of VOCs; and
- Evaluation of chemical data to identify chemicals of concern (COCs) and areas of potential concern (AOPCs).

This SSI report is organized in general accordance with the format recommended in the *Preliminary Endangerment Assessment Guidance Manual* (Cal/EPA, 2013).

2. SITE DESCRIPTION

2.1 Site Description

The approximately 9.01-acre site is located on Normandie Avenue South between West 210 Street to the south and Torrance Boulevard to the north in Torrance, California. The site is bounded by commercial/industrial buildings to the south and the northeast and residential in all other directions except for a landfill site to the southeast (Figure 1). The site encompasses parcel numbers 7348-020-003, 7348-020-004, 7348-020-007, 7348-020-008, 7348-020-009, and 7348-020-010. The site is occupied by a one-story building approximately 5,400 square feet in size, five temporary maintenance structures with appurtenant structures, and a paved parking lot. The site has historically been occupied by commercial/industrial businesses since the construction of the first building at the site in 1947 (Figure 2 and Phase I, SET, 2014).

2.2 Historic Storm Water Pathway

Prior to approximately 1969, the historic storm water pathway in the vicinity of the ECI property was an unlined linear topographic depression that acted as a local surface drainage feature. The drainage channel passed under Torrance Boulevard and traversed the eastern portion of the ECI Property before continuing east through what is now the closed Royal Boulevard Landfill (ARMCO Site).

During the late 1960s and early 1970s, the drainage ditch was replaced by the Los Angeles County Flood Control District (LACFCD) with an underground concrete storm water conveyance system. Project No. 685 (also known as the Kenwood Drain), a concrete box culvert, replaced the historic storm water drainage ditch from 204th Street, along Kenwood Avenue, through the ECI property, and eventually emptying into the Torrance Lateral, a large, open, and concrete-lined drainage channel. The LACFCD maintains an easement for Project 685 within the properties it traverses, including the ECI property.

As-built construction drawings for the Project 685 segment along the drainage channel (Los Angeles County Department of Public Works [LACDPW, 1969]) indicate a pre-construction ground elevation of approximately 16 feet above mean sea level (MSL) at the bottom of the drainage channel. This is believed to be the lowest elevation of the historic storm water pathway within the ECI property. The Project 685 box drain (8 feet wide and 12.5 feet high) is shown on the as-built drawings as having an invert elevation (exterior bottom of the drain) at approximately 11 to 12 feet MSL. Thus, installation of Project 685 required excavation of 4 to 5 feet of existing soil from the unlined drainage channel (Earth Tech, Inc. [Earth Tech], 2008).

2.3 ECI Site History

Prior to 1992, Akzo Coatings (Akzo) owned the land now occupied by ECI. In 1992, ECI's owner purchased approximately 4.7 acres of land from Akzo. Several years later, additional acres of adjacent land was purchased by ECI from Akzo, creating ECI's final property size of approximately 9.01 acres (Los Angeles County Tax Assessor's Office, 2006). Currently, ECI owns the parcels beginning at the corner along Torrance Boulevard and Normandie Avenue while the eastern portion of the property is now part of 20846 Normandie Ave, LLC.

During its ownership, Akzo operated numerous underground storage tanks (USTs) containing petroleum-based solvents located along the southern boundary of Lot 2 (southern portion of the current ECI property). A release of toluene from one of the tanks required soil and groundwater investigations and the installation of a soil vapor extraction (SVE) system. The SVE system was installed around the time of property transfer to ECI, and included grading the southern area of the property prior to the installation of the SVE system, and covering the western portion of Lot 2 with concrete following installation. Akzo operated the SVE system for several years after the property was sold to and occupied by ECI. On July 22, 1996, the Los Angeles Regional Water Quality Control Board (LARWQCB) issued a closure letter confirming the completion of the UST remedial action.

In 1998, ECI graded and paved Lot 1, the northern portion of the property (ECI, 2005). Pre-grading construction drawings of Lot 1 indicate surface elevations ranging from approximately 40 feet above MSL along its western boundary, to approximately 36 feet above MSL along its eastern boundary. A low of 31 feet above MSL was evident in the northeast corner along the LACFCD drainage easement and a high of over 50 feet MSL where there was a large mound of soil generated from prior grading of the southern lot.

Soil from the large mound and an earthen embankment along Torrance Boulevard were used to level the property. After grading, the surface of the ECI property transitioned smoothly from approximately 40 feet above MSL at its western edge to a low of approximately 34 feet above MSL along its eastern edge. Residential properties immediately east of the ECI property have lower elevations of approximately 30 to 32 feet above MSL (Earth Tech, 2008).

3. ENVIRONMENTAL BACKGROUND

3.1 Property Ownership and Business Type

The property is in part owned by Mr. Ron Flury and is currently occupied by Ecology Control Industries as a vehicle and equipment dispatch yard and a temporary hazardous and non-hazardous

waste storage facility. The eastern portion is now under new ownership by 20846 Normandie Ave, LLC.

3.2 Contaminant Discovery

In 2005, pesticides and PCBs were detected in soil by ECI as part of due diligence activities prior to sale of the property. The due diligence sampling activities detected several chemicals present in soils at concentrations exceeding residential action levels, including: DDT, DDE, DDD, chlordane, petroleum hydrocarbons, and PCBs. The sum of DDT, DDE, and DDD concentrations (referred to collectively as total DDT) were detected in subsurface soil samples collected from the eastern and southeastern portions of the ECI property in concentrations up to 325 mg/kg. Although contended by Montrose Chemical Corporation of California (Montrose), EPA has attributed the presence of total DDT in these soils to former Montrose chemical manufacturing activities. From 1947 to 1982, Montrose manufactured technical grade DDT at a plant located approximately 0.5 miles north/northwest of the ECI property. EPA believes that DDT-impacted soils at the ECI property may be the result of contaminated storm water runoff from the former Montrose plant. The ECI property is located "downstream" from the former Montrose plant property, by way of the historical storm water drainage pathway.

Montrose agreed to conduct additional soil investigation activities at the ECI property. Accordingly, a draft Field Sampling Plan (FSP; Earth Tech, June 2006a) and draft Quality Assurance Project Plan (QAPP; Earth Tech, June 2006b) for additional soil sampling and analysis at the ECI property were submitted to EPA for review on June 2, 2006. EPA conditionally approved the draft plans in a letter dated June 21, 2006. EPA then issued Unilateral Administrative Order (UAO) 09-2006-022 on June 23, 2006 for additional soil investigation activities at the ECI property. The initial phase of Montrose field soil sampling activities at the ECI property occurred between July 10 and 24, 2006 (Earth Tech, 2008).

The EPA Historic Storm Water Pathway – South Study Area is located south of Torrance Boulevard and east of Normandie Avenue in Torrance, California, and includes portions of eight properties. The eight properties include ECI and seven residential properties located directly east of the ECI property along Torrance Boulevard, Raymond Avenue, and 209th Street. The residential properties are the subject of a separate investigation being performed by CH2M HILL, Inc. under contract to EPA.

3.3 Recent/Relevant Environmental Investigations

Recent assessments at the site were documented in the following reports, which are summarized below:

- *Environmental Site Assessment* (Haley & Aldrich, Inc. (HAI), 2005)
- *Draft Soil Investigation Report* (Earth Tech, 2006)
- *Summary Report - Human Health Risk Evaluation* (HAI, 2006)
- *Revised Soil Investigation Report, Historic Storm Water Pathway* (Earth Tech, 2008)
- *Final Human Health Risk Assessment* (Innovative Technical Solutions, Inc. [ITSI], 2010)
- *Phase II – Environmental Site Assessment* (SET, 2014)

The complete site assessment history from 1984 through 2010 from has been summarized in SET's *Site Assessment History Summary Report* dated May 22, 2014. The report includes summaries of all available

documents to date with exception of the 2014 assessment by SET. A summary of the most recent assessment by SET is included below.

3.3.1 2005 Environmental Site Assessment Report – Haley & Aldrich, Inc.

In 2005, ECI commissioned implementation of an Environmental Site Assessment (ESA) at its property for real estate divestiture purposes. HAI was contracted by ECI to perform the work and collected and analyzed over 200 soil samples from the entire ECI property from February to June 2005. ECI excavated soil in areas where the results of the initial soil sampling indicated chemical concentrations above residential human health standards. HAI performed confirmation soil sampling at ECI from March to June 2005. During investigation of the ECI site, the resulting laboratory analyses reported the detection of a number of pesticides including: DDT, DDE, DDD, benzene hexachloride (BHC: alpha, beta, delta, and gamma isomers), chlordane (alpha and gamma isomers), dieldrin, endrin aldehyde, endrin ketone, heptachlor and heptachlor epoxide, and toxaphene. The laboratory reported the detection of TPH as diesel fuel and motor oil ranges, and the detection of PCBs, specifically Aroclors 1254 and 1260.

Many of the soil samples collected were grab samples taken from the sidewalls of excavations created along the eastern portion of the ECI property. The depth of sample collection ranged from just below ground surface to approximately 15 feet.

The soil analytical results identified elevated concentrations of several chemicals. Chemicals affecting soils at concentrations exceeding federal or state regulatory limits or regional background concentrations for residential soils included:

- Total DDT – Detected at a maximum reported concentration of 325 mg/kg total DDT. Samples containing elevated total DDT concentrations were collected from the eastern portion of the ECI property. Approximately 35 soil samples had total DDT concentrations above the upper end of the regional residential background range of 10 mg/kg.
- Chlordane – Detected at a maximum reported concentration of 3.5 mg/kg from soil collected along the easternmost portion of the property.
- PCBs – Detected along the southeast corner of the ECI property at a maximum concentration of 23.1 mg/kg (sum of Aroclors 1254 and 1260).
- Other chemical constituents detected in soil samples from the ECI property included:
- BHC, up to 0.025 mg/kg (sum of alpha, beta, delta, and gamma isomers);
- Dieldrin; up to 0.18 mg/kg;
- Heptachlor and heptachlor epoxide; up to 0.011 mg/kg;
- Endrin aldehyde and endrin ketone; up to 0.033 mg/kg;
- Toxaphene; up to 0.07 mg/kg;
- TPH-d and TPH-o; up to 21,000 mg/kg

In the summer of 2005, EPA learned of the presence of DDT and other chemicals in the soil at the ECI property. The ECI work was initiated without direction or oversight from the EPA. EPA requested that the owner stop excavation and implement best management practices for erosion control and other protective measures. ECI was requested to minimize erosion of the excavated soil piles, and to minimize the generation and migration of fugitive dust, potentially containing DDT and other chemicals, from the excavated soil piles. In addition, EPA requested that ECI provide all information related to its soil sampling activities including sampling locations and laboratory data reports.

In November 2005, EPA authorized ECI to perform a removal action to address the excavated soil and open excavations. On December 15, 2005, the EPA issued UAO Docket No. 09-2006-02a to ECI and Montrose. The UAO required the transport and disposal of the excavated soil at the ECI property, and the backfilling and covering of the open excavations. Beginning in January 2006, the soil piles were transported to a permitted hazardous waste facility for thermal treatment and landfilling. On behalf of Montrose, Earth Tech provided air monitoring of fugitive dust potentially containing DDT during the loading of soil into trucks by ECI (Earth Tech, 2006).

3.3.2 2006 Draft Soil Investigation Report – Earth Tech

The July 2006 investigation results were documented in the *Draft Soil Investigation Report – Historic Storm Water Pathways, South* (Earth Tech, December 2006) The July 2006 investigation characterized the nature and extent of pesticides and PCBs along a series of east-west transects positioned roughly perpendicular to the direction of the historical stormwater flow. Soil borings were spaced close together along each transect (30-feet) in order to provide a high level of characterization, but the spacing between transects was increased to 60 feet to reduce the number of borings required during the initial phase of historical stormwater pathway characterization. The approach used during the 2006 investigation characterized the nature and extent of pesticides and PCBs along the investigation transects.

A portion of the July 2006 soil samples exhibited pesticide and PCB concentrations exceeding the characterization benchmarks established by EPA for the investigation. In accordance with the UAO, EPA requested that soil samples be collected from selected locations between the July 2006 transects to further characterize the nature and extent of pesticides and PCBs within the ECI portion of the historical storm water pathway (i.e. a higher boring density). Additionally, vertical delineation of pesticides and PCBs was required at a small number of locations where the deepest soil sample was found to contain chemical concentrations exceeding the characterization benchmarks. Based on the July 2006 results, a supplemental soil sampling program was implemented at the ECI property in May 2007 to further characterize the nature and extent of pesticides and PCBs within the ECI portion of the historical storm water pathway. EPA conditionally approved the *Draft Field Sampling Plan Addendum* (Earth Tech, 2007) in an Interim Conditional Approval letter dated April 27, 2007.

Data obtained from the Montrose soil sampling efforts, in combination with existing ECI property data and additional data collected by EPA in the residential portion of the study area, were intended to fully characterize the presence, distribution, and concentrations of pesticide/PCB chemicals in the study area soils and identify those soils, if any, requiring remedial action.

3.3.3 2006 Human Health Risk Evaluation – Haley & Aldrich, Inc.

In 2006, Haley & Aldrich conducted a human health risk evaluation (HHRE) at the site with the purpose of assessing whether estimated human health risks at the site, based on the results of on-site soil and soil-gas samples previously collected by HAI in 2005, are considered acceptable for on-site commercial/ industrial uses. Table 1 summarized the HAI analytical results for OCPs and PCBs.

A subsurface soil investigation and limited remedial excavation activities were performed at the subject site between February and June 2005 to assess current on-site soil conditions. Soil matrix and soil-gas samples were collected to address historical operations (presence of former underground storage tanks and chemical storage areas), possible historical agricultural use at the site, and other chemical uses in

proximity to the site. Soil matrix samples were obtained from soil borings and within the remedial excavations. Soil-gas samples were obtained throughout the site.

No volatile organic compounds (VOCs) were detected in the soil-gas samples. The information from these investigation and remedial excavation activities was used in the HHRE.

The results of the HHRE indicated the total hazard index (HI) and the cumulative incremental lifetime cancer risk (ILCR) for the identified receptors at the site are less than the acceptable thresholds for HI and ILCR of 1.0 and 1 x 10-5, respectively. Therefore HAI concluded that the contaminants of potential concern (COPC) concentrations detected at the site do not pose a significant risk to human health for an on-site commercial/industrial worker or a construction worker. Based on these results, the subject site is suitable for commercial/industrial land uses.

3.3.4 2008 Revised Soil Investigation Report – Earth Tech

On behalf of Montrose and in compliance with Unilateral Administrative Order (UAO) 09-2006-022, Earth Tech submitted a revised investigation report to the EPA. The EPA requested that Montrose conduct further soil investigation for the presence of pesticides and PCBs located along a portion of the historic storm water pathway that traverses the ECI property.

The objective of the ECI investigation was to obtain additional analytical data adequate to characterize the vertical and lateral extent of pesticides and PCBs in soil within the ECI portion of the Historic Storm Water Pathway – South Study Area.

Fifteen pesticides (excluding isomers of the same chemical) and three PCB Aroclors were detected in the soil samples collected at the ECI property and northern embankment. Nine of the pesticides and the PCBs occurred in concentrations exceeding EPA regional screening levels (RSLs), California Human Health Screening Levels (CHHSLs), or characterization benchmarks in at least one sample. Of these chemicals, total chlordanes, dieldrin, total DDT, and total PCBs occurred most frequently and in the highest concentrations. At the ECI plant property, shallow soils in the upper 8 feet (0 to 8 feet below ground surface [bgs]) were impacted most frequently by total chlordanes, dieldrin, and total PCBs, with up to 3.7 percent of the samples containing pesticides/PCBs in excess of the characterization benchmarks. Deeper soils at the ECI plant property (8 to 24 feet bgs) and soils along the northern embankment were most frequently impacted by total DDT, with up to 20.1 percent of the samples containing total DDT in excess of the characterization benchmark. Nine of the samples collected below 24 feet bgs were impacted with pesticides or PCBs above the characterization benchmarks.

The vertical extent of pesticides/PCBs exceeding residential action levels in soils was effectively delineated by the investigation activities conducted in 2006 and 2007, with the exception of PCBs in boring P10 (Figure 4). The deepest sample collected at this boring (20 to 24 feet bgs) exhibited a total PCB concentration of 0.58 mg/kg, exceeding the benchmark of 0.089 mg/kg. However, because PCBs are not a chemical of concern at the Montrose Superfund site and because boring P10 was located within the LACFCD easement (no native soils until at least 26 feet bgs), EPA did not require vertical delineation of PCBs at this location. The vertical extent of total chlordanes and dieldrin impacts to soil at the ECI plant property was found to be 12 and 16 feet bgs, respectively. The vertical impact of total DDT impacts to soil at ECI was found to be 24 feet bgs. In 2007, 12 borings were drilled to a depth of 28 feet bgs, and none of the soil samples collected below 24 feet bgs were found to contain total DDT above the characterization benchmark. The average total DDT concentration measured in soils classified as native by CH2M Hill was 0.158 mg/kg, which is significantly below the characterization

benchmark of 10 mg/kg. It is important to note that none of the native soil was impacted by total DDT above the benchmark. All of the soil impacted by total DDT above the benchmark at the ECI property was classified as either fill or reworked materials.

The lateral extent of pesticides/PCBs exceeding residential action levels in soils throughout the historical storm water pathway was effectively delineated by the investigation activities conducted in 2006 and 2007. Soil borings were drilled in 30-foot intervals from the western boundary of the historical storm water pathway to the eastern boundary of the ECI property. Soil borings were also drilled in 30- to 60-foot intervals along the entire length of the historical storm water pathway from north to south. The soil investigation activities effectively delineated the western extent of total DDT, total chlordanes, and dieldrin impacts to soil in all areas of the historical storm water pathway. The western extent of total PCB impacts to soil was delineated in all areas, except at boring P01, P25, and P31. At these three borings, total PCBs were detected in concentrations between 0.138 and 3.000 mg/kg, exceeding the residential action level of 0.089 mg/kg. However, EPA did not require further delineation of PCBs to the west because PCBs are not a chemical of concern at the Montrose Superfund site and because areas to the west would not be within the historical storm water pathway. Delineation to the east of the ECI property was the subject of a concurrent soil investigation conducted by EPA.

On September 13, 2007, based on the investigation data collected in 2006 and 2007, EPA concluded that Montrose had satisfactorily characterized the nature and extent of pesticides/PCBs within the portion of the historical storm water pathway traversing the ECI property. No additional investigation activities were proposed and submittal of the investigation report fulfilled Montrose's obligations under the UAO.

3.3.5 2010 Final Human Health Risk Assessment Report – ITSCI

As part of UAO 09-2006-022, ITSI prepared a baseline Human Health Risk Assessment (HHRA) for the USEPA, Region 9 to provide a quantitative evaluation of the potential human health risks associated with theoretical exposures to chemicals in soil at the ECI site. The report relied upon data collected during the additional soil investigations conducted at the ECI property by Earth Tech to quantify potential health risks for future on-site populations including adult and child residents, adult industrial workers, and construction workers. Exposure pathways addressed for these populations included soil ingestion, dermal contact, and particulate inhalation for soil from 0 to 2 feet below ground surface (bgs) (residential and industrial worker scenarios), 0 to 5 feet bgs (residential scenario), and 0 to 16 feet bgs (residential and construction worker scenarios). Two exposure point concentrations were used for each of these scenarios, i.e., the maximum detected concentration and the 95 percent UCL.

Results of the baseline HHRA demonstrated that the increased likelihood of cancer risk from soil exposures is due primarily to 4,4'-DDT. Although residential reuse of the site would pose the highest estimated cancer risk, the increased likelihood of cancer risk is within EPA's risk management range of one in 1 million (10^{-6} or 1E-06) to one in 10,000 (10^{-4} or 1E-04) if residents are not exposed to soil deeper than 16 feet bgs. For the future resident, the additional likelihood of cancer risk due to chemical concentrations in soil from surface to 16 feet bgs increases with depth.

If the site remains an industrial facility, increased cancer risk due to potential soil exposures of industrial workers is also within the risk management range. Exposures of construction workers to soils within the 0-to-16-foot bgs range also are associated with increased cancer risk that is within the risk management range. The risk assessment assumes that excavation and/or redevelopment activities

will take place over a period of one year. In the event that these activities were for a shorter duration, the estimated cancer risk would decrease correspondingly.

The risk assessment also acknowledged that TPH contamination still remains at the site, and that TPH is a chemical of concern that needs further characterization prior to site redevelopment. Tetrachloroethene (PCE) was detected in one location with a concentration of 5.5 mg/kg. ITSI concluded that for future reuse other than as a parking lot, the potential vapor intrusion pathway, which was not addressed in their HHRA, may have to be evaluated.

3.3.6 2014 Environmental Site Assessment Report – SET

Between July 26 and November 14, 2013, SET conducted a soil and soil-gas assessment at the northwestern property and the western half of the southern property at the site. The purpose of the assessment was to evaluate the soil and soil gas in these areas, which may have been impacted with volatile organic compounds, petroleum hydrocarbons, pesticides and metals originating from the historical operations on-site. Although soil and soil gas at the site in general has been investigated multiple times since the initial toluene spill report in 1984, the subsurface conditions of the northwestern property has never been addressed. Soil and soil-gas samples in the western half of the southern property were collected to confirm results of previous investigations. The scope of work included:

- 15 on-site soil borings to a maximum depth of 50 feet bgs with soil sample collection between 0.5 and 50 feet bgs for analysis of TPH, VOCs, semi-VOCs (SVOCs), OCPs and metals; and
- 10 soil-gas probes between 5 and 45 feet bgs for analysis of VOCs.

Based on the findings of the site assessment in soil, SET concluded the following:

- TPHd and TPHo detections were well below the LARWQCB soil screening level (SSL). TPH appeared to present no significant risk in the area of the site investigated.

- No VOCs were detected with exception of one sample at 30 feet bgs (B6). 8.9 microgram per kilogram [µg/kg] of PCE was detected, which is well below the EPA RSL for residential soil. Therefore, VOCs in soil appeared to present no significant risk in the area of the site investigated.

- No SVOCs were detected any of the nine soil samples. Based on the absence of concentrations in soil, SVOCs appear to present no significant risk in the area of the site investigated.

- No OCP detections exceeded residential CHHSLs. Therefore, OCPs appeared to present no significant risk in the area of the site investigated.

- Of the metals analyzed, only arsenic exceeded the residential CHHSL in all samples with a maximum concentrations of 3.93 mg/kg. However, the concentrations are below the generally accepted threshold limit of 12 mg/kg established for the Los Angeles Unified School District throughout the Los Angeles area. Based on the absence of elevated concentrations in soil, metals appeared to present no significant risk in the area of the site investigated.

Based on the findings of the site assessment in soil gas, SET concluded the following:

- PCE concentrations exceeding residential CHHSLs in soil gas below buildings constructed without engineered fill below sub-slab gravel (as assumed for this site) were observed in probes B4 (southeastern section of the northwestern parcel) and B1 and B5 (west of the former UST system).

- The residential CHHSL for benzene (0.036 µg/l) was exceeded in one detection in boring B9 (northwestern area of the property).

SET concluded that the elevated concentrations of PCE and benzene may presents some level of risk for the areas investigated during this assessment and recommended a supplemental site investigation of the horizontal and vertical extent of PCE and benzene at the identified locations with the following actions:

- Step-down and step-out sampling in the vicinity of B1, B4 and B5 to evaluate the horizontal and vertical extent of PCE in soil gas;
- Step-down and step-out sampling in the vicinity of B9 to evaluate the horizontal and vertical extent of benzene in soil gas; and
- A health risk evaluation to determine potential risks for future residential occupants at the site.

Upon review of the report, the DTSC issued a letter dated June 27, 2014 requiring the submittal for further investigation. Specifically, the DTSC questioned missing data for shallow soil-gas sampling at B6 and B7 and in the northern and eastern portions of the site. Analytical data from this investigation is included in Tables 1 through 5.

4. ENVIRONMENTAL SETTING

4.1 Site Topography

The topography at the ECI property is generally even and planar, with a surface elevation of approximately 40 feet above mean sea level (MSL) along its western edge. The surface of the site slopes to the east to an elevation of approximately 34 feet above MSL. A localized storm water catch basin located near the Los Angeles County Flood Control District's drain box (eastern boundary area) is the lowest feature within the paved ECI plant property.

The majority of the ECI plant property is paved with asphalt or concrete, with the exception of a narrow strip along the eastern boundary that is uncovered. Along the northern boundary of the property is a sloped and landscaped embankment bounded by Torrance Boulevard to the north. The embankment is approximately 10 vertical feet in height. In 1998, ECI removed soils from along the bank, thereby reducing the grade to its present day condition, for purposes of filling a localized depression in the northeast corner of the property.

4.2 Geology and Hydrogeology

The ECI site is located within the south central portion of the West Coast Groundwater Basin. The Ballona Escarpment bounds the West Coast Groundwater Basin to the north, the Newport-Inglewood Structural Zone to the northeast, Palos Verdes Hills to the southwest, and the Pacific Ocean to the south and west.

The site is also located in the southern portion of the Torrance Plain landform element. There are four major structural features within the Torrance Plain or in the vicinity of the EPA Historic Storm Water Pathway Study Area: the Newport-Inglewood Structural Zone (Barrows, 1974), the Palos Verdes Fault, the Torrance Anticline, and the Gardena Syncline (EPA, 1998; California Department of Water Resources [CDWR], 1961). The stratigraphy of the West Coast Basin includes Quaternary-age continental and marine deposits and Tertiary-age marine sediments overlying a basement complex of igneous and metamorphic rocks. The geologic units of hydrogeologic interest are (in order from oldest to youngest) the Pico Formation; the San Pedro Formation; the Lakewood Formation; and older dune sand, alluvium, and active dune sand (CDWR, 1961).

The specific occurrence, depth, and thickness of surface and near surface sediments at the ECI property have not previously been significantly differentiated but were expected to be comprised of unconsolidated sedimentary deposits and reworked soil from past grading operations. According to CDWR (1961), the ECI property is underlain first by the Lakewood Formation and is approximately 200 feet thick in the vicinity. Generally, the Lakewood Formation comprises terrace deposits, the Palos Verdes Sand, and unnamed Upper Pleistocene deposits. Material types are both marine and non-marine, and include gravel, sand, silt, and clay. Near surface soils from the nearby Montrose Superfund Site were described as follows in the 1998 Remedial Investigation (RI) Report (EPA, 1998):

Upper Layer – Playa Deposits: This layer occurs from near the ground surface to approximately 25 feet below ground surface. Based on grain-size analyses of soil samples collected in this layer, silt and clay comprise more than 65 percent of these soils.

Middle Layer – Palos Verdes Sands: This layer occurs from approximately 25 to 45 feet bgs and consists primarily of fine-grained sands. According to grain-size analysis of soil samples collected in this layer, fine and medium grained sands comprise more than 70 percent of these soils.

Lower Layer – Upper Bellflower Aquitard: This layer is found from approximately 45 to approximately 95 feet bgs and consists of multiple thin sand layers interbedded with layers of silts and clays. Grain-size analysis of soil samples collected in this layer ranged from more than 70 percent fine-grained sand to more than 60 percent silt. This soil layer varied from fine-grained sands to clays and silts with increasing depth.

Hydrogeologic units in the west Coast Basin include aquitards and aquifers of varying compositions and water-yielding properties. These units, in order from shallow to deep, include the Bellflower Aquitard, the Gage Aquifer, an unnamed aquitard, the Lynwood Aquifer, another unnamed aquitard, and the Silverado Aquifer. The first-encountered groundwater beneath the area is at approximately 65 feet bgs, in the Upper Bellflower Aquitard (Earth Tech, 2008).

Groundwater quality data are available from investigations proximal to the Montrose study area; however, these data are not related to the investigations of the historical storm water pathway.

4.3 Site Geology

During the site investigations, gravel with various amounts of silt, clay, and sand was encountered fairly broadly across the area investigated to a depth ranging from surface to 5 feet bgs, followed at depth by lean to sandy clay, with occasional silty sand or sandy silt layers. A variety of debris materials were observed in a number of the soil samples collected at the ECI property including (but not limited to): brick, concrete, asphalt, plastic, wood, glass, ceramic tile, linoleum, and electrical wire. Debris

materials were encountered from near surface to a maximum depth of approximately 23 feet bgs in the various soil borings logged.

Within the ECI plant property, native soils were found to occur between approximately 20 and 26 feet bgs. Fill materials overlayed the native soils. In some cases, there was an intermediate soil type between the fill materials and native soils, identified by Earth Tech as "potentially native" and by CH2M Hill as "reworked". The reworked material is very similar to the native soils but lacking in evidence of plant roots or root channels. Where identified, the reworked material was generally thin, with thicknesses between approximately 0 and 4 feet.

5. SAMPLING ACTIVITIES AND RESULTS

5.1 Summary of Activities

The scope of work included the following elements:

- Soil and soil-gas sampling to provide representative coverage of potential impacts to the site in the northern, central and southern portions of the site;
- Sample collection, handling and documentation using protocols established by the EPA;
- Quality control/quality assurance sampling; and
- Analytical program tailored to the potential impact suspected at specific features within the AOPCs.

Geologic work was performed under the supervision of a California Professional Geologist (PG) in compliance with the requirements of the Geologist and Geophysicists Act, Business and Professions Code sections 7800–7887. The following sections describe the sampling activities in detail.

5.2 Fieldwork Preparation

5.2.1 Health and Safety Plan

SET prepared a site-specific health and safety plan (SHSP), which was implemented according to OSHA requirements (29 Code of Federal Regulations [CFR] 1910.120) to address the proposed scope of work. Requirements and guidelines for worker safety and hazard identification during all phases of the SSI investigation were included in the SHSP. The on-site health and safety officer was responsible for implementation of the SHSP. A health and safety meeting was conducted at the beginning of each day of fieldwork. Field personnel were required to review and sign the SHSP before beginning any fieldwork.

5.3 Soil Sampling and Analysis

5.3.1 Pre-sampling Inspection and Site Access

Prior to field work, a site meeting was conducted with SET personnel in attendance. The proposed drilling and sampling locations (soil borings and soil-gas probe locations) were marked by SET personnel with white paint. The drilling locations were based on the locations identified during the site visit.

5.3.2 Underground Locating

Underground Service Alert (USA) was notified of subsurface investigation at least 48 hours prior to initiation of fieldwork, as required by USA. USA contacted utility owners of record, who clearly marked the position of the utilities on the ground surface at the property boundaries throughout the investigation area.

5.3.3 Soil Sampling Locations

On September 24 and 25, 2014, soil samples were collected from 20 boring locations across the northern, central and southern area of the site. The soil borings with associated various depths were placed in strategic locations around the site where AOPC were identified or suspected to provide further delineation of the AOPCs. Soil sampling locations are illustrated on Figures 3 and 4.

5.3.4 Soil Sample Collection Procedures

Soil samples were collected by use of direct-push drilling equipment.

5.3.4.1 Direct-Push Sampling

The soil borings were drilled, logged, and sampled to a maximum depth of 30 feet bgs using a direct-push sampling rig provided and operated by Kehoe Testing & Engineering of Huntington Beach, California. Prior to boring advancement, to confirm the absence of underground obstructions, the upper 3- to 5-foot section of each boring was augered by hand. Following use of the hand-auger, the direct-push rig was employed to drive the direct-push sampling core barrel into the subsurface to a maximum depth of 30 feet bgs. The direct-push sampling method consisted of an outer drive casing barrel and an inner sample barrel. The direct-push boring was drilled using a hydraulic vibrator that drove both barrels simultaneously. The outer drive casing served as a temporary seal for the boring, and the inner sample barrel was used to obtain and retrieve soil cores. As the core barrel was advanced, soil was driven into a 1.875-inch-diameter, 4-foot-long core barrel. Soil samples were collected in a 1.75-inch-diameter acetate sleeve inside the core barrel. After being driven 4 feet, the core barrel was removed from the borehole with a hydraulic ram. The acetate sleeves were removed and were cut into approximately 6-inch lengths where soil samples for laboratory analysis were desired. These soil samples were sealed with Teflon™ sleeves and plastic end-caps, preserved on ice and delivered to the laboratory. The remaining sleeves were used for headspace analysis and lithologic description. After decontamination, the sample barrel and new acetate inner tube were lowered back into the hole, an additional 4-foot section of core barrel was added, and the process was repeated until the desired depth was reached.

A California PG recovered the soil samples for lithologic identification and cut portions of recovered samples for headspace analysis and laboratory analysis. Soil was described in accordance with the Unified Soil Classification System (USCS). In addition, the samples were observed for color, texture, moisture content, plasticity, visible evidence of soil contamination (i.e., odor, staining), and any other characteristics.

Soil samples collected during drilling were screened for VOCs by headspace analysis, using a photoionization detector (PID, calibrated to 100 ppm isobutylene or 50 ppm hexane). For each sampling interval, approximately 200 grams of soil were placed in a plastic bag and sealed. After the soil and the atmosphere in the sealed plastic bag were allowed to equilibrate, the probe tip of the PID was inserted

into the plastic bag, and VOCs (in ppm) were recorded on the boring logs. The boring number, sample depth, lithologic description, and PID readings were noted on the boring logs which are provided in Appendix A.

Soil samples from all borings were collected for laboratory analysis at depths between 0.5 and a maximum of 30 feet bgs.

5.3.4.2 Soil Description

Soil lithology observed in soil samples collected from the soil borings consisted primarily of silts, clayey silts, silty sand, sandy silt and sand. No groundwater was encountered during the site investigation activities with the deepest boring advanced to a maximum depth of approximately 30 feet bgs. No unusual odors, soil discoloration, or elevated PID readings above 50 ppm were observed in soil samples during drilling. No artificial debris or trash was observed.

5.3.4.3 Decontamination

All reusable sampling equipment in contact with potentially contaminated soil was decontaminated before and after each use to assure the quality of samples collected. Decontamination was performed using the following procedure:

- Washing in non-phosphate detergent and tap water wash, using a brush as necessary;
- Rinsing in clean tap water; and
- Final rinse in deionized/distilled water.

5.3.4.4 Quality Assurance/Quality Control Samples

One sample was analyzed for matrix spike and matrix spike duplicate (MS/MSD) analysis at a rate of 20 percent of the total number of soil samples submitted for laboratory analysis. MS/MSD samples were analyzed for each analytical method. Method blank samples were also analyzed by the laboratory.

5.3.5 Sample Handling Procedures

To identify and manage samples obtained in the field, a sample label was affixed to each sample container. The sample labels included the following information:

- Project number;
- Site name;
- Sample identification (sample location number and depth); and
- Date and time of collection.

Following collection and labeling, samples were delivered to the laboratory for immediate analysis.

5.3.6 Soil Analytical Procedures

All soil and quality assurance/quality control (QA/QC) samples were analyzed by ASSET Laboratories of Las Vegas, Nevada, a state-certified, environmental laboratory, using chain-of-custody documentation. Samples were analyzed for the following parameters:

- TPH carbon chain by EPA Method 8015
- SVOCs by EPA Method 8270C
- OCPs by EPA Method 8081
- PCBs by EPA Method 8082
- Metals by EPA Method 6010/7471A

A summary of the sample analysis program, including sampling depths, is provided in Tables 1 through 4. Laboratory reports for soil samples are provided in Appendix B.

5.3.7 Soil Analytical Results

Soil analytical results are summarized in Tables 1 through 4. Laboratory-certified analytical reports, including QA samples, for soil samples are provided in Appendix B. A summary of the analytical data from the soil sampling conducted during the current assessment is discussed below. The summaries below exclude analytical results from prior investigations.

5.3.7.1 Total Petroleum Hydrocarbons

SET collected 41 soil samples for TPH analysis from borings B16 through B35 at depths of 2 and 5 feet bgs (expect for additional depths of 10 and 15 feet bgs in boring B22 and only at 0.5 feet bgs in boring B26).

Gasoline-range TPH (TPHg) was reported below laboratory detection limits to 5.4 milligrams per kilogram (mg/kg, sample B24-5), with the exception of a detection at 510 mg/kg in sample B24-2. The detection at 510 mg/kg was the only result above the Los Angeles Regional Quality Control Board (LARWQB) Maximum Soil Screening Level (MSSL) of 500 mg/kg (distance to groundwater between 20 and 150 feet); however, was delineated to below the screening level at 5 feet bgs.

Diesel-range TPH (TPHd) was reported below laboratory detection limits to 260 mg/kg (sample B18-2). All results were below the MSSL of 1,000 mg/kg.

Oil-range TPH (TPHo) was reported below laboratory detection limits to 720 mg/kg (sample B32-2). All results were below the MSSL of 10,000 mg/kg.

Although one gasoline-range TPH detection was above the respective MSSL, the impact was vertically delineated at 5 feet bgs. Petroleum hydrocarbons do not appear to present a significant risk to human health or the environment in the current AOPCs. Soil analytical results for TPH are summarized in Table 4, and exceedances are graphically depicted in Figure 3.

5.3.7.2 Semi-Volatile Organic Compounds

SET collected 36 soil samples for SVOC analysis from borings B16 through B33 at depths of 2 and 5 feet bgs (except for an additional depth of 20 feet bgs in boring B20 and only at 0.5 feet bgs in boring B26).

SVOCs were detected only in samples B16-2 and B32-2. In sample B16-2, bis(2-ethylhexyl)phthalate was detected at a concentration of 340 micrograms per kilogram (µg/kg), below the residential Regional Screening Level (RSL, US/EPA May 2014) of 28,000 µg/kg. In sample B32-2, anthracene, benzo(b)fluoranthene, fluoranthene, phenanthrene and pyrene were detected at concentrations of 97 µg/kg, 490 µg/kg, 700 µg/kg, 470 µg/kg, and 630 µg/kg, respectively. Of these detections, only benzo(b)fluoranthene exceeded its respective RSL of 150 µg/kg. In both locations, SVOCs were not detected at 5 feet bgs.

With the exception of benzo(b)fluoranthene in shallow soil within the vicinity of boring B32, SVOCs are not of significant concern to human health or the environment in the current AOPCs. Lateral step-out assessment of benzo(b)fluoranthene in the upper 5 feet of soils within the vicinity of boring B32 is recommended. No further action is recommended for SVOCs in any of the other current APOCs.

Soil analytical results for SVOCs are summarized in Table 4, and exceedances are graphically depicted in Figure 3.

5.3.7.3 Organochlorine Pesticides

SET collected 42 soil samples for OCP analysis from borings B16 through B35 at 2 and 5 feet bgs (except for additional depths of 15 and 20 feet bgs in boring B20, additional depth of 10 feet bgs in boring B22, and only at 0.5 feet bgs in boring B26).

OCP detections included alpha- and beta-BHC, alpha- and gamma-chlordane, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, endrin aldehyde, and heptachlor epoxide; all at trace to low concentrations. No detections exceeded residential RSLs or CHHSLs (OEHHA, 2010) for compounds with established screening criteria.

Based on the low concentrations in soil, OCPs appear to present no significant risk in the current AOPCs. No further action is recommend with regards to OCPs in the AOPCs investigated during the current assessment. Soil analytical results for OCPs are summarized in Tables 1 and 2.

5.3.7.4 Metals

SET collected 36 soil samples for metals analysis from borings B16 through B33 at 2 and 5 feet bgs (except at additional depth of 20 feet bgs in boring B20 and only at depth of 0.5 feet bgs in boring B26).

Arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc and mercury were detected in various samples; however, only detections of arsenic and thallium exceeded residential RSLs or CHHSLs. Arsenic was detected in all samples to a maximum concentration of 5.2 mg/kg in sample B20-20, above the RSL of 0.67 mg/kg and CHHSL of 0.07 mg/kg. However, background arsenic concentrations routinely exceed these screening criteria throughout California soils. The Los Angeles Unified School District (LAUSD) has established a threshold of 12 mg/kg for import material into school sites (*Section 01 4524 Environmental Import/Export Materials Testing*, LAUSD, 2011), considered a screening criteria protective of background arsenic exposure in southern California. No detections of arsenic exceeded 12 mg/kg.

Thallium concentrations were reported from below laboratory detection limits to a maximum concentration of 1.3 mg/kg in sample B33-2. The residential RSL for thallium is 0.78 mg/kg, and the residential CHHSL is 5.0 mg/kg. Seven detections minimally exceeded the RSL; however, no detections

exceeded the CHHSL. Additionally, the data does not appear to present "hot spots" or vertical segregation of thallium concentrations, and thallium concentrations appear to be generally of one population (i.e. no significant outliers). It is likely the thallium detections are within background concentrations, and given the marginal exceedances over the RSL in a limited number of samples, metals appear to present no significant risk in the current AOPCs investigated. No further action is recommend with regards to metals in soil. Soil analytical results for metals are summarized in Table 3.

5.3.7.5 Polychlorinated Biphenyls

SET collected six soil samples for PCB analysis (15-foot bgs sample in location B20, 10-foot bgs sample in location B22, and 2- and 5-foot bgs samples in locations B34 and B35). No PCBs were detected in any samples and are therefore not considered a significant concern in the current AOPCs. Soil analytical results for PCBs are summarized in Table 1.

5.4 Soil-gas Sampling and Analysis

5.4.1 Soil-gas Sampling Locations

On September 24 and 25, 2014, SET directed installation of nested soil-gas probes in borings B16 through B23 at various depths. Soil-gas samples were subsequently collected from all probes at depths up to 35 feet bgs. Soil-gas sampling locations are illustrated on Figure 4.

5.4.2 Soil-gas Sample Collection Procedures

On September 25, 2014, soil-gas samples were collected from all probe locations and analyzed on-site using a mobile laboratory provided by Jones Environmental, Inc., of Fullerton, California, in accordance with the California Environmental Protection Agency (Cal/EPA), *Advisory – Active Soil Gas Investigations* (April 2012), and in accordance with the laboratory's protocol. A description of the sample collection procedures is provided below.

5.4.2.1 Probe Installation

The hydraulic direct-push rig was used to advance the probe rod 6 inches past the desired sampling depth. The probe was then removed from the borehole. Approximately 6 inches of clean, graded, kiln-dried Lonestar Monterey sand was placed at the bottom of the borehole, and then the desired length of Teflon® flexible plastic tubing was inserted into the borehole. The bottom of the tubing was fitted with a vapor inlet filter to allow flow of soil gas from the formation, through the tubing, and to the surface where samples were subsequently obtained. Once the tubing was in place, approximately 6 inches of clean sand was poured around and on top of the filter section of the tubing. The annulus was filled with 1 foot of dry bentonite chips and then filled to 6 inches below the next sampling depth with hydrated bentonite chips. This process was repeated for each soil-gas probe depth and the remaining annulus filled with hydrated bentonite chips and mounded at ground surface to create a seal. The soil-gas probe construction details for all probes are included with the borings logs in Appendix A.

5.4.2.2 Purge Testing

No purge test was conducted during the current sampling event; three purge volumes was used for all samples collected. Purging was accomplished using a vacuum glass syringe.

5.4.2.3 Soil-gas Sample Collection and Analyses

Soil-gas samples were collected in glass gas-tight syringes and analyzed for VOCs by EPA Method 8260B with the on-site mobile laboratory in accordance with Regional Water Quality Control Board (RWQCB) procedures.

Vacuum integrity was tested before and after the soil-gas survey using leak-down testing methods. The compounds n-pentane and n-propanol were used as the tracer by being placed at the tubing-surface interface before sampling. These compounds were then analyzed during the EPA Method 8260B testing to determine if there are surface leaks into the subsurface due to improper installation of the probe. No tracer compounds was detected un any of the soil-gas samples analyzed.

Soil-gas samples were analyzed for VOCs at 10, 20, 30 and 35 feet bgs in location B16; 5, 15 and 25 bgs in locations B17, B18, B19, B20 and B22; and 5 and 15 feet bgs in location B21 and B23.

Two duplicate field samples for VOC analysis were collected and analyzed at a rate of approximately 10 percent. One soil-gas method blank sample was also collected and analyzed by the laboratory during the day of soil-gas sampling. All QA/QC for the soil-gas analysis was performed by the mobile laboratory on the day of the collection.

After the sampling was completed, the sample tubing from all soil-gas probes was withdrawn from the boreholes, and the borehole annulus was backfilled with hydrated bentonite to grade as needed.

5.4.3 Soil-gas Analytical Results

Soil-gas analytical results are summarized in Table 5. Laboratory-certified analytical reports, including QA samples, for soil-gas samples are provided in Appendix B. A summary of the analytical data from the soil-gas sampling conducted during the current assessment is discussed below. The summaries below exclude analytical results from prior investigations. Primary and duplicate samples are considered one sample, and the greatest of either result is summarized below.

PCE was detected above laboratory detection limits in 12 of 22 samples ranging from 0.008 µg/l to a maximum of 1.57 µg/l (25-foot bgs probe in location B17; center of site). TCE was detected above laboratory detection limits in 4 of 22 samples ranging from 0.015 µg/l to a maximum of 0.490 µg/l (15-foot bgs probe in location B17).

Benzene was detected above laboratory detection limits in one of 22 samples at a concentration of 0.33 µg/l in the 10-foot bgs probe from location B16 (southern portion of site). Toluene was detected above laboratory detection limits in 10 of 22 samples ranging from 0.014 µg/l to a maximum of 0.109 µg/l (15-foot bgs probe in location B20; northwest corner of site). Ethylbenzene was detected above laboratory detection limits in the 10- and 20-foot probes in location B16 at concentrations of 1.43 µg/l and 0.282 µg/l, respectively. Xylenes (total) were detected above laboratory detection limits in 8 of 22 samples ranging from 0.081 µg/l to a maximum of 6.98 µg/l in the 10-foot bgs probe from location B16.

Additionally, n-Butylbenzene, 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-DCE, 4-methyl-2-pentanone, 1,2,4-trimethylbenzene (1,2,4-TMB) and 1,3,5-TMB) were detected in a limited number of samples.

Preliminary soil gas screening values were derived utilizing the DTSC preliminary screening evaluation method for sub-slab soil-gas samples (*Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*, DTSC, 2011) with an attenuation factor of 0.05 ($\alpha = 0.05$). Where indoor air screening values were available from DTSC HHRA Note 3 (July 2014), the respective values were used to calculate the screening value. For compounds without such values, residential indoor RSLs (November 2014) were used. Eleven of 12 PCE detections, five of five TCE detections, two of two 1,1-DCA detections, the single detection of cis-1,2-DCE, the single benzene detection, two of two ethylbenzene detections, two of eight xylene detections and the single 1,2,4-TMB detection exceeded the calculated screening level. Calculated sub-slab soil-gas screening levels are presented in Table 5, and exceedances above the screening criteria are depicted in Figure 4.

Cumulative soil-gas data from the 2013 and 2014 investigations (Table 5) provides sufficient lateral coverage throughout the site and representative soil-gas conditions in the shallow subsurface. In all areas of the site, with the exception of boring location B17, soil-gas conditions are also sufficiently vertically delineated.

Based on the elevated concentrations, VOCs in soil gas (particularly PCE, TCE, benzene and ethylbenzene) may present some level of risk at the site. Additionally, vertical delineation of VOCs in soil gas at location B17 is recommended.

A screening-level Johnson and Ettinger Model was run at each sample location from the current investigation which detected one or more compounds above the screening criteria.

5.4.4 Johnson and Ettinger Vapor Intrusion Models and Risk Calculations

For each soil gas sampling location from the current investigation, a screening-level Johnson and Ettinger vapor intrusion model was run to calculate potential carcinogenic risk and hazard index.

The Johnson and Ettinger model (1991) predicts indoor air concentrations resulting from subsurface vapor migration into indoor air. The model produces an attenuation factor "alpha" that represents the ratio of the indoor air concentration to the subsurface concentration. The DTSC Human and Ecological Risk Office (HERO) has modified the USEPA screening models for estimating indoor air concentrations from subsurface soil gas or groundwater data and incorporated human health toxicity criteria developed by the Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) into a "DTSC-modified" Johnson and Ettinger screening model (SG-SCREEN, current version dated March 2014).

For each location with one or more VOCs detected above the preliminary screening values discussed above (B16-10, B16-20, B16-30, B17-5, B17-15, B17-25, B18-15, B18-25, B19-5, B19-15, B19-25, B21-15), a Johnson and Ettinger model was compiled to calculate the cumulative carcinogenic risk and hazard index at that location. Default values for all variables were used, with soil type of sand, using the residential site use exposure scenario. For locations where a duplicate sample was collected, the maximum concentration between the primary and duplicate was used. Total xylenes were modeled using m-Xylene toxicity criteria. Carcinogenic risk and hazard index from each VOC was summed to produce cumulative risk at each location. The Johnson and Ettinger models are provided in Appendix C.

Table 6 provides a summary of each sampling location where a Johnson and Ettinger model was run, including individual compound concentration input, carcinogenic risk, hazard index, and cumulative risk.

Of the soil vapor sampling locations at which the vapor intrusion carcinogenic risk was calculated, only three locations (B16-10, B17-5 and B17-25) produced a cumulative carcinogenic risk above 1x10^-6 for residential scenario. The maximum calculated carcinogenic risk was calculated as 1.66x10-6 in location B16-10. No hazard index calculations exceeded 1 (all were at least one order of magnitude lower).

Further discussion with the DTSC toxicologist is warranted to evaluate if the calculated maximum carcinogenic risk is acceptable for residential use of the property.

5.5 Disposal of Investigation-Derived Wastes

No excess soil was generated during the drilling of the direct-push borings. No waste water was generated during the site activities.

5.6 Quality Assurance/Quality Control Implementation

The QA/QC program was implemented in accordance with USEPA guidance. The primary QC features of the QA/QC program included the collection and analysis of field QC samples.

The field component of the QA/QC program for soil-gas sampling included the collection of two duplicate samples for selected laboratory methods at primary locations (at least 10 percent of all field soil-gas samples were collected as duplicates) and analysis of method blanks. In addition, n-pentane and n-propanol were used as a leak test compound during collection.

The laboratory QA/QC program included calibration against internal standards, surrogate recoveries, laboratory control samples, instruments blanks, method blanks, and matrix spike/matrix spike duplicate samples. Overall, the data quality is generally acceptable.

6. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this SSI, SET has summarized the following findings, conclusions, and recommendations.

6.1 Findings and Conclusions

- The areas investigated are located in the northern, central and southern portions of the approximately 9.01-acre site on Normandie Avenue South between West 210 Street to the south and Torrance Boulevard to the north in Torrance, California. The site is bounded by commercial/ industrial buildings to the south, commercial to the north, and residential in all other directions except for a landfill site to the southeast.

- The site is occupied by four one-story buildings and a paved parking lot. The site has historically been occupied by commercial/industrial businesses since the construction of the first building at the site in 1947.

- On September 24 and 25, 2014, SET directed drilling of 20 soil borings at the site. The soil borings with associated various depths were placed in strategic locations around the site where AOPCs were identified during the previous investigations. SET collected soil samples between 0.5 feet bgs and maximum depths of 30 feet bgs. Soil-gas probes were set in eight of the borings at various depths.

- On September 25, 2014, SET collected soil-gas samples from the eight multi-nested, temporary soil-gas probes between 5 feet bgs and maximum depths of 35 feet bgs.

- Soil samples were analyzed for TPH, SVOCs, OCPs, PCBs and metals.

- Soil-gas samples were analyzed for VOCs.

- Soil lithology observed in soil samples collected from the soil borings consisted primarily of silts, clayey silts, silty sand, sandy silt and sand. No groundwater was encountered during the site investigation activities with the deepest boring advanced to a maximum depth of approximately 35 feet bgs. No unusual odors, soil discoloration, or elevated PID readings above 50 ppm were observed in soil samples during drilling. No artificial debris or trash was observed.

6.1.1 Soil

- Forty-one soil samples were analyzed for petroleum hydrocarbons. Gasoline-range TPH was reported below laboratory detection limits to 5.4 mg/kg (sample B24-5), with the exception of a detection at 510 mg/kg in sample B24-2. The maximum detection minimally exceeded the MSSL of 500 mg/kg, however, was below the screening criteria at 5 feet bgs. Diesel-range and oil-range TPH were detected to maximum concentrations of 260 mg/kg and 720 mg/kg, respectfully; with all detections below the MSSLs of 1,000 mg/kg and 10,000 mg/kg, respectively. Petroleum hydrocarbons do not appear to present a significant risk to human health or the environment in the current AOPCs.

- Thirty-six soil samples were analyzed for SVOCs. SVOCs were detected only in samples B16-2 (bis(2-ethylhexyl)phthalate) and B32-2 (anthracene, benzo(b)fluoranthene, fluoranthene, phenanthrene and pyrene). Of these detections, only benzo(b)fluoranthene (490 µg/kg) exceeded its respective RSL of 150 µg/kg. With the exception of benzo(b)fluoranthene in the vicinity of boring B32, SVOCs do not appear to present a significant concern in the current AOPCs.

- Forty-two soil samples were analyzed for OCPs. OCP detections included alpha- and beta-BHC, alpha- and gamma-chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endrin aldehyde, and heptachlor epoxide; all at trace to low concentrations. No detections exceeded their respective screening criteria. OCPs do not appear to present a significant concern in the current AOPCs.

- Thirty-six soil samples were analyzed for metals. Arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc and mercury were detected in various samples; however only detections of arsenic (maximum concentration of 5.2 mg/kg in sample B20-20) and thallium (maximum concentration of 1.3 mg/kg in sample B33-2) exceeded residential RSLs or CHHSLs. Arsenic and thallium detections both appear to be within background range. Metals do not appear to present a significant concern in the current AOPCs.

- Six soil samples were analyzed for PCBs. No PCBs were detected in any of the samples. PCBs do not appear to present a significant concern in the current AOPCs.

6.1.2 Soil-gas

- Twenty-two soil-gas samples (plus two duplicates) were analyzed from eight locations at various depths. PCE was detected above laboratory detection limits in 12 of 22 samples ranging from 0.008 µg/l to a maximum of 1.57 µg/l (25-foot bgs probe in location B17; center of site). TCE was detected above laboratory detection limits in five of 22 samples ranging from 0.015 µg/l to a maximum of 0.490 µg/l (15-foot bgs probe in location B17). Additionally, benzene, toluene, ethylbenzene, xylenes, n-butylbenzene, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, 4-methyl-2-pentanone, 1,2,4-TMB and 1,3,5-TMB were detected.

- Utilizing the DTSC preliminary screening evaluation method for sub-slab soil-gas, 11 of 12 PCE detections, five of five TCE detections, two of two 1,1-DCA detections, the single detection of cis-1,2-DCE, the single benzene detection, two of two ethylbenzene detections, two of eight xylene detections and the single 1,2,4-TMB detection exceeded the calculated screening level.

- In each location where the preliminary screening evaluation exceeded the screening criteria, a Johnson and Ettinger vapor intrusion model was run to calculate cumulative vapor intrusion carcinogenic and hazard index risk. Of the soil vapor sampling locations at which the vapor intrusion carcinogenic risk was calculated, only three locations (B16-10, B17-5 and B17-25) produced a cumulative carcinogenic risk above 1x10^-6 for residential scenario. The maximum calculated carcinogenic risk was calculated as 1.66x10-6 in location B16-10. No hazard index calculations exceeded 1 (all were at least one order of magnitude lower).

6.2 Recommendations for Further Actions

SET recommends the following assessment activities to eliminate the limited number of data gaps in soil and soil gas at the site:

- Laterally delineate shallow impacts of benzo(b)fluoranthene to soil within the vicinity of boring B32.

- Vertically delineate VOC concentrations in soil gas within the vicinity of borings B17, B18, B19 and B21.

- Further discussion with the DTSC toxicologist is warranted to evaluate if the calculated maximum carcinogenic risk is acceptable for residential use of the property.

- No further action is recommend with regard to TPH, VOCs, OCPs, PCBs and metals in soil.

Upon elimination of the above data gaps, a Remedial Action Plan may be prepared to propose removal and/or mitigation of COCs at the areas investigated.

7. REFERENCES

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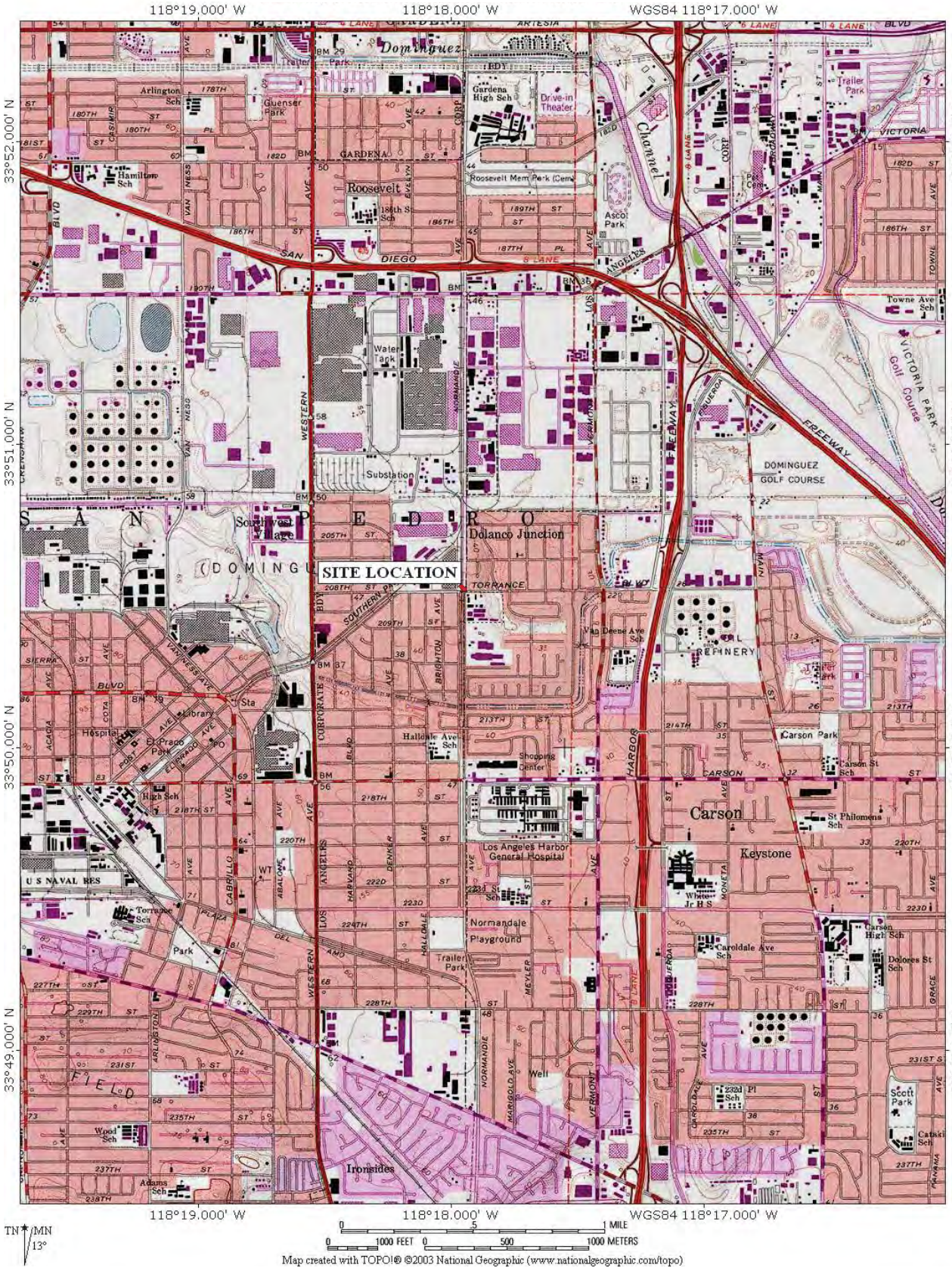
FIGURES

Figure 1 through 4



Reference: National Geographic Topo!
Torrance, California 1981

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SAN PEDRO, CA 90733
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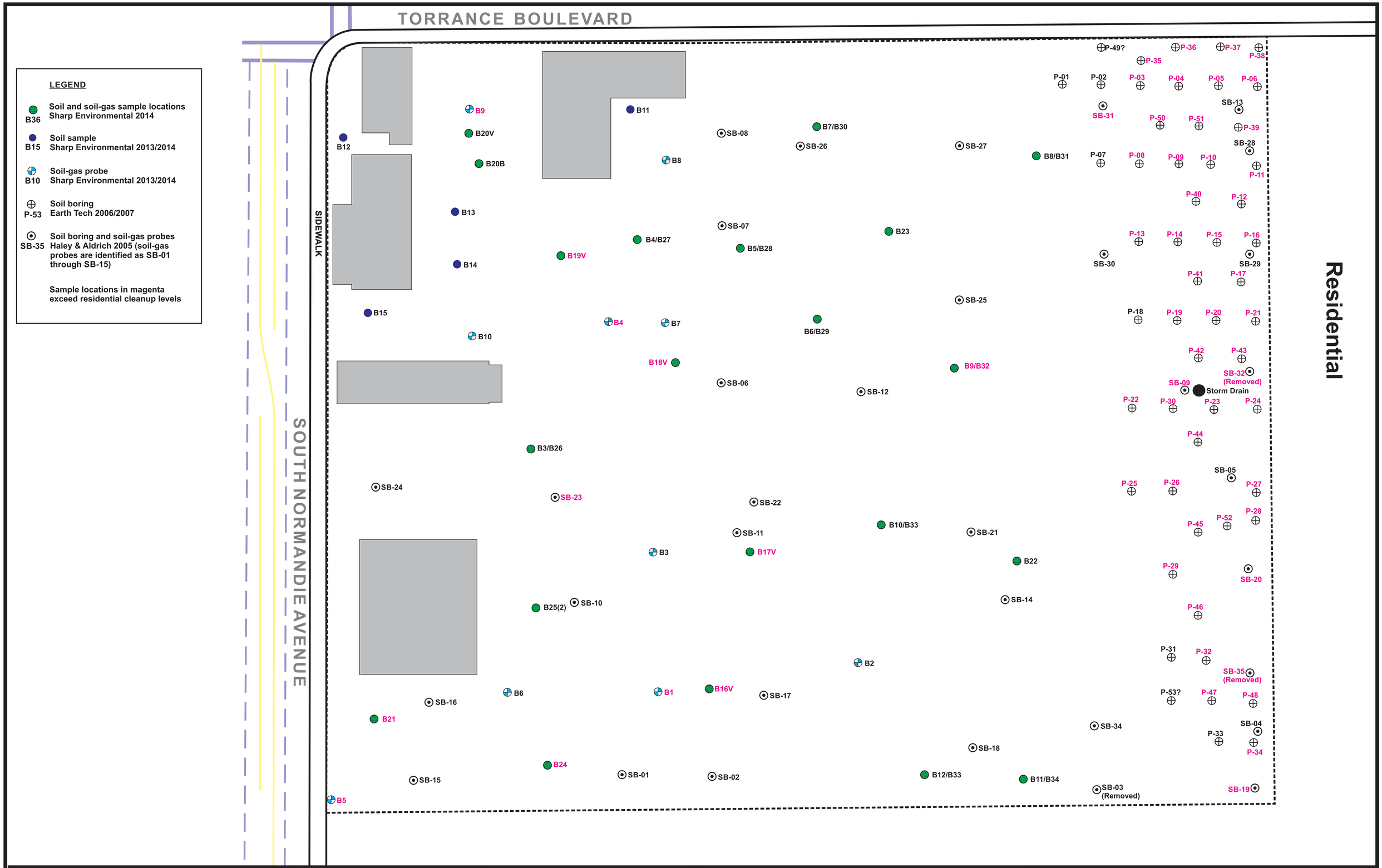
FIGURE 1
SITE VICINITY MAP
Ecology Control Industries
20846 Normandie Avenue
Torrance, California



0 25 50
Approximate Scale in Feet

SET Project Number: 21-366

Date: November 2014

Prepared by: GB
Reviewed by: JES

Reference: Google Earth, 2014

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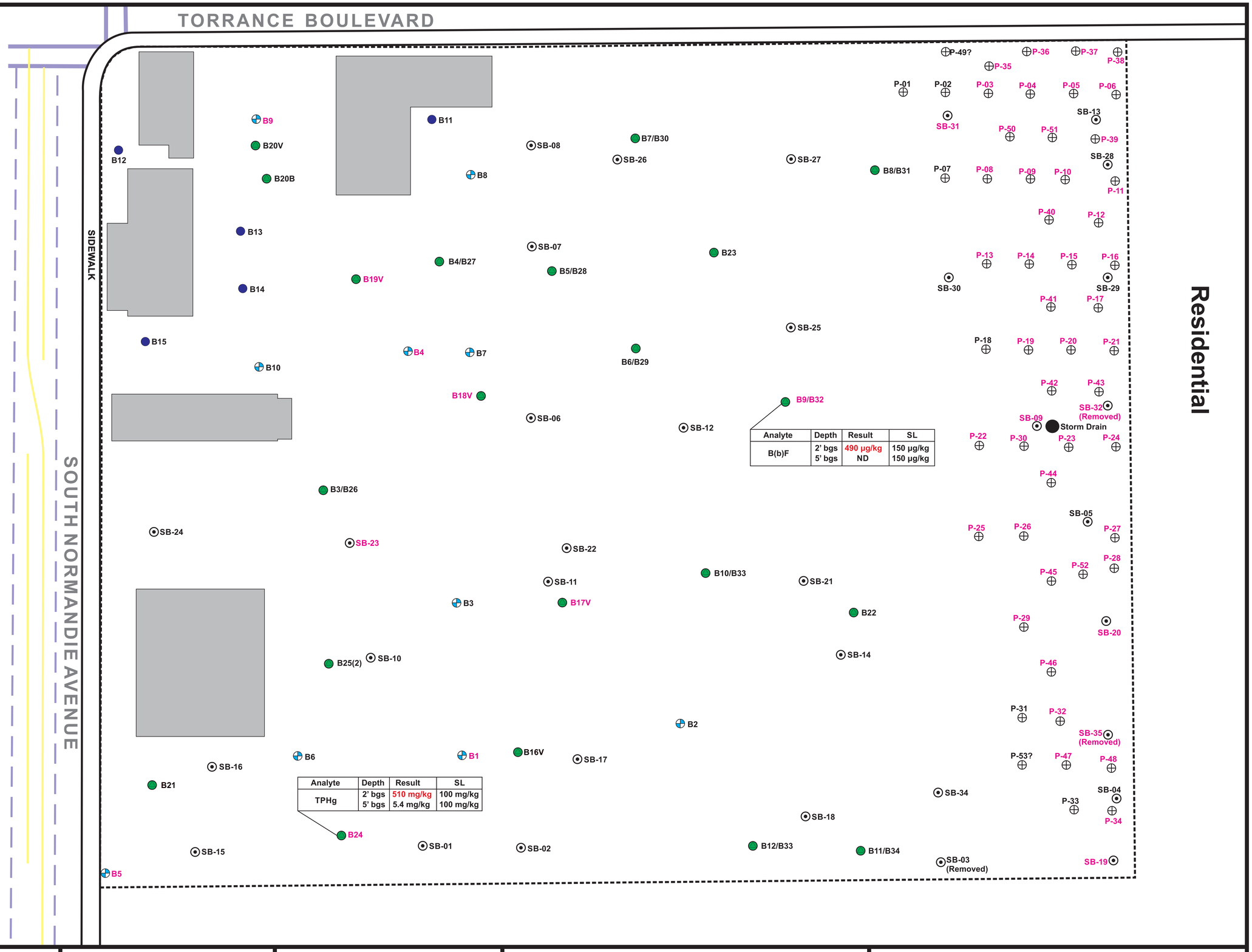
FIGURE 2

Site Plan with Boring Locations
Ecology Control Industries
20846 Normandie Avenue
Torrance, California 90502



Analyte	Depth	Result	SL
B(b)F	2' bgs	490 µg/kg	150 µg/kg
	5' bgs	ND	150 µg/kg

Analyte	Depth	Result	SL
TPHg	2' bgs	510 mg/kg	100 mg/kg
	5' bgs	5.4 mg/kg	100 mg/kg

LEGEND

B36 — Soil and soil-gas sample, Sharp Environmental 2014

B15 — Soil sample, Sharp Environmental 2013/2014

B10 — Soil-gas probe, Sharp Environmental 2013/2014

P-53 — Soil boring, Earth Tech 2006/2007

SB-35 — Soil boring and soil-gas probes, Haley & Aldrich 2005 (soil-gas probes are identified as SB-01 through SB-15)

SL = Screening level
TPHg = Gasoline-range Petroleum Hydrocarbons
B(b)F = Benzo(b)fluoranthene
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram
ND = Not detected

Sample locations in magenta exceed residential cleanup levels

In locations where one or more screening criteria are exceeded, results from deeper samples also presented to depict vertical delineation

Analytical results exceeding screening criteria depicted for results from current investigation only

N

0 25 50

Approximate Scale in Feet

SET Project Number: 21-366

Date: November 2014

Prepared by: GB
Reviewed by: JES

Reference: Google Earth, 2014

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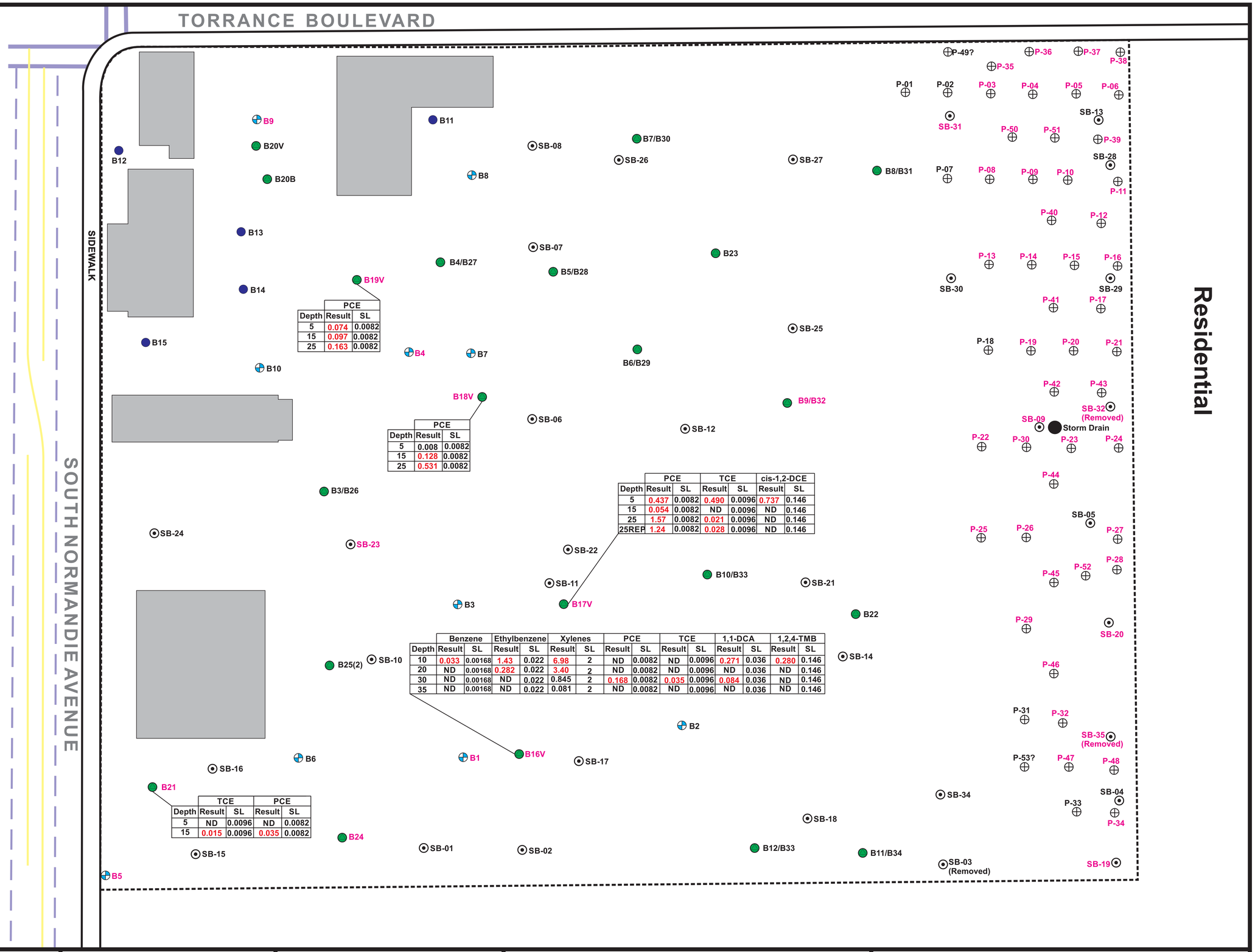
FIGURE 3

Soil Analytical Results Exceeding Screening Criteria from Current Investigation
Ecology Control Industries
20846 Normandie Avenue
Torrance, California 90502



	PCE	
Depth	Result	SL
5	0.074	0.0082
15	0.097	0.0082
25	0.163	0.0082

	PCE	
Depth	Result	SL
5	0.008	0.0082
15	0.128	0.0082
25	0.531	0.0082

	PCE		TCE		cis-1,2-DCE	
Depth	Result	SL	Result	SL	Result	SL
5	0.437	0.0082	0.490	0.0096	0.737	0.146
15	0.054	0.0082	ND	0.0096	ND	0.146
25	1.57	0.0082	0.021	0.0096	ND	0.146
25REP	1.24	0.0082	0.028	0.0096	ND	0.146

	Benzene		Ethylbenzene		Xylenes		PCE		TCE		1,1-DCA		1,2,4-TMB	
Depth	Result	SL	Result	SL	Result	SL	Result	SL	Result	SL	Result	SL	Result	SL
10	0.033	0.00168	1.43	0.022	6.98	2	ND	0.0082	ND	0.0096	0.271	0.036	0.280	0.146
20	ND	0.00168	0.282	0.022	3.40	2	ND	0.0082	ND	0.0096	ND	0.036	ND	0.146
30	ND	0.00168	ND	0.022	0.845	2	0.168	0.0082	0.035	0.0096	0.084	0.036	ND	0.146
35	ND	0.00168	ND	0.022	0.081	2	ND	0.0082	ND	0.0096	ND	0.036	ND	0.146

	TCE		PCE	
Depth	Result	SL	Result	SL
5	ND	0.0096	ND	0.0082
15	0.015	0.0096	0.035	0.0082

LEGEND

B36 — Soil and soil-gas sample, Sharp Environmental 2014

B15 — Soil sample, Sharp Environmental 2013/2014

B10 — Soil-gas probe, Sharp Environmental 2013/2014

P-53 — Soil boring, Earth Tech 2006/2007

SB-35 — Soil boring and soil-gas probes, Haley & Aldrich 2005 (soil-gas probes are identified as SB-01 through SB-15)

SL = Screening level
PCE = Tetrachloroethene
TCE = Trichloroethene
DCA = Dichloroethane
DCE= Dichloroethene
TMB = Trimethylbenzene
ND = Not detected
All results in micrograms per liter (µg/l)

Sample locations in magenta exceed residential cleanup levels

Tabulated soil-gas data exceeding screening levels in red

In locations where one or more screening criteria are exceeded, results from all probe depths tabulated

Analytical results exceeding screening criteria depicted for results from current investigation only

N

0 25 50

Approximate Scale in Feet

SET Project Number: 21-366

Date: November 2014

Prepared by: GB
Reviewed by: JES

Reference: Google Earth, 2014

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FIGURE 4

Soil-gas Analytical Results Exceeding Screening Criteria from Current Investigation
Ecology Control Industries
20846 Normandie Avenue
Torrance, California 90502

TABLES

Tables 1 through 5

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
SB-03	0-1	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-03	2-3	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2J	-	<0.5	-	1J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-03	4-5	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2.2	-	0.7J	-	2.8	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-03A	0-1	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	4	-	19	-	44	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-03A	2-3	04/12/05	<5	<5	<5	<5	<5	<50	-	<5	<5	21	-	22	-	55	-	<5	<5	<5	<5	<5	<5	
SB-03B	0-1	04/12/05	<20	<20	<20	<20	<20	<200	-	<20	<20	<20	-	<20	-	<20	-	<20	<20	<20	<20	<20	<20	
SB-03B	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	2J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09	0-1	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	11	15	<0.5	-	32	-	3.1	-	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	
SB-09	2-3	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	45	-	3.9	3.6	390	-	490	-	420	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09	4-5	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	0.5J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09A	2-3	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	290	-	130	-	84	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-09A	4-5	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	1J	-	7.1	-	3.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09B	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2J	-	6.2	-	3.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09B	4-5	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	26	-	<0.5	<0.5	420	-	320	-	1200	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09C	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2000	-	1100	-	7000	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-09C	4-5	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	180	-	57	-	180	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-10	0-1	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-12	0-1	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	1J	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-12	2-3	02/08/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	4.4	-	39	-	3.4	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-12	4-5	02/08/05	<0.5	<0.5	<0.5	<0.5	0.8J	<5	-	<0.5	<0.5	10	-	5.5	-	2J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-16	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	10	-	<0.5	1.6	2J	-	30	-	14	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	
SB-16	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	27	-	25	-	16	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-17	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	0.8J	1	<0.5	-	<0.5	-	1J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-17	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	13	-	0.7J	1.9	9.5	-	39	-	110	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	1J	-	16	-	7.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18A	0-1	04/12/05	<20	<20	<20	<20	<20	<200	-	<20	<20	<20	-	<20	-	<20	-	<20	<20	<20	<20	<20	<20	
SB-18A	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2J	-	18	-	3.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18B	0-1	04/12/05	<10	<10	<10	<10	<10	<100	-	<10	<10	30J	-	20J	-	10J	-	<10	<10	<10	<10	<10	<10	
SB-18B	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	23	-	4.4	4.6	2J	-	7.3	-	10	-	13	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18C	0-1	04/12/05	<5	<5	<5	<5	<5	<50	-	<5	<5	23	-	10J	-	47	-	<5	<5	<5	<5	<5	<5	
SB-18C	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	0.6J	1J	-	7.4	-	12	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18C	4-5	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-19	0-1	03/23/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	21	-	15	-	92	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-19	2-3	03/23/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	310	-	870	-	4500	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-19	4-5	03/23/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	4J	<2.5	12	-	<2.5	-	3J	-	9J	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-19	6-7	03/23/05	<5	<5	<5	<5	<5	<50	-	<5	<5	7J	-	<5	-	<5	-	<5	<5	<5	<5	<5	<5	
SB-19A	2-3	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	5J	-	29	-	110	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-19A	4-5	04/12/05	<5	<5	<5	<5	<5	<50	-	9J	10J	35	-	59	-	230	-	8J	<5	<5	<5	<5	<5	
SB-19A	6-7	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	18	-	2.6	3.3	2J	-	5.2	-	29	-	9.3	<0.5	<0.5	<0.5	<0.5	0.7J	
SB-19B	2-3	04/12/05	<50	<50	<50	<50	<50	<500	-	<50	<50	100J	-	100J	-	2400	-	<50	<50	<50	<50	<50	<50	
SB-19B	4-5	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	10	-	16	-	180	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-19B	6-7	04/12/05	<10	<10	<10	<10	<10	<100	-	<10	<10	10J	-	<10	-	<10	-	10J	<10	<10	<10	<10	<10	
SB-19C	2-3	04/12/05	<5	<5	<5	<5	<5	<50	-	<5	<5	20J	-	220	-	420	-	<5	<5	<5	<5	<5	<5	
SB-19C	4-5	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	56	-	330	-	520	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-19C	6-7	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	16	-	1.9	2.6	8.8	-	10	-	56	-	1J	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-20	0-1	03/23/05	<5	<5	<5	<5	<5	<50	-	<5	<5	22	-	63	-	160	-	<5	<5	<5	<5	<5	<5	
SB-20	2-3	03/23/05	<0.5	<0.5	2.5	<0.5	<0.5	<5	-	<0.5	<0.5	680	-	640	-	5100	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-20	6-7	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	0.9J	3.1	54	-	55	-	340	-	0.5J	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
SB-20	9-10	03/23/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	3J	3J	19	-	8J	-	9J	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-20A	2-3	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	730	-	1800	-	20000	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-20A	6-7	04/13/05	<2.5	<2.5	3J	<2.5	<2.5	<25	-	<2.5	<2.5	4900	-	1700	-	9100	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-20A	9-10	04/13/05	<5	<5	<5	<5	<5	<50	-	<5	<5	210	-	36	-	140	-	<5	<5	<5	<5	<5	<5	
SB-20B	2-3	04/13/05	<2.5	<2.5	10	<2.5	<2.5	<25	-	<2.5	<2.5	4000	-	8700	-	40000	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-20B	6-7	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	2	24	-	28	-	200	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-20B	9-10	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	2J	-	0.6J	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-20C	2-3	04/13/05	<10	<10	<10	<10	<10	<100	-	<10	<10	30J	-	40J	-	200	-	<10	<10	<10	<10	<10	<10	
SB-20C	6-7	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	0.9J	5.5	-	11	-	49	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-21	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	4	-	1J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-21	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	1J	-	6.5	-	2J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-22	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	15	-	65	-	4.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-22	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	7.4	-	58	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-23	0-1	03/23/05	<100	<100	<100	<100	<100	<1000	-	<100	<100	<100	-	<100	-	<100	-	<100	<100	<100	<100	<100	<100	
SB-23	2-3	03/23/05	<1	<1	<1	<1	<1	<10	-	<1	<1	<1	-	<1	-	<1	-	<1	<1	<1	<1	<1	<1	
SB-24	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	9.2	-	12	-	28	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-24	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-25	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	41	-	3.3	4.4	6.2	-	19	-	20	-	<0.5	<0.5	<0.5	<0.5	<0.5	1	
SB-25	2-3	03/23/05	<5	<5	<5	<5	<5	100	-	17	14	7J	-	21	-	20J	-	<5	<5	<5	<5	<5	<5	
SB-26	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-26	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-27	0-1	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-27	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-28	0-1	03/23/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	5.2	95	-	170	-	250	-	<2.5	<2.5	<2.5	<2.5	<2.5	3J	
SB-28	2-3	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	30	-	1.9	3.1	63	-	230	-	330	-	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	
SB-28	4-5	03/23/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	30	-	96	-	32	-	<0.5	2.4	<0.5	<0.5	<0.5	2.4	
SB-28	6-7	03/23/05	<20	<20	<20	<20	<20	<200	-	<20	<20	<20	-	<20	-	<20	-	<20	<20	<20	<20	<20	<20	
SB-28A	2-3	04/13/05	<5	<5	<5	<5	<5	<50	-	<5	<5	33	-	40	-	80	-	<5	<5	<5	<5	<5	<5	
SB-28A	4-5	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	1.2	0.9J	-	9	-	2J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-28B	2-3	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	12	-	28	-	150	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-28B	4-5	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	40J	-	4J	7.9	67	-	200	-	330	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-28B	6-7	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	100	-	220	-	66	-	4.4	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-28B	9-10	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	51	-	480	-	37	-	11	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-28C	2-3	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	40J	-	4J	5.1	43	-	210	-	430	-	<2.5	<2.5	<2.5	<2.5	<2.5	4J	
SB-28C	4-5	04/13/05	<5	<5	<5	<5	<5	<50	-	<5	<5	840	-	950	-	1100	-	<5	<5	<5	<5	<5	<5	
SB-28C	6-7	04/13/05	<12	<12	<12	<12	<12	<120	-	<12	<12	400	-	340	-	130	-	<12	<12	<12	<12	<12	<12	
SB-29	2-3	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	30J	-	5.8	4J	38	-	57	-	160	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-29	6-7	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	93	-	70	-	110	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-29	9-10	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	5.1	150	-	100	-	63	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-30	2-3	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	0.6J	-	0.8J	-	2J	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-30	4-5	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	3J	35	-	19	-	9J	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-30	9-10	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	130	-	11	-	<2.5	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-31	2-3	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	140	-	710	-	2700	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-31	4-5	04/13/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	59	-	120	-	190	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-31	6-7	04/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	6J	-	1.1	1.3	<0.5	-	4	-	7.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-32	2-3	04/12/05	<10	<10	<10	<10	<10	<100	-	10J	22	270	-	380	-	540	-	<10	<10	<10	<10	<10	<10	
SB-32	6-7	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	<2.5	<2.5	250	-	450 E	-	1400 E	-	10	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-32	9-10	04/12/05	<2.5	<2.5	<2.5	<2.5	<2.5	<25	-	3J	<2.5	1300	-	1200	-	6600	-	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
SB-33	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	4	-	42	-	19	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
SB-33	6-7	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	6.2	-	7.8	-	12	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-34	2-3	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	0.7J	2.5	3.5	-	4.1	-	22	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-34	6-7	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-35	2-3	04/12/05	<120	<120	<120	<120	<120	<1200	-	<120	<120	620	-	2300	-	9700	-	<120	<120	<120	<120	<120	<120	
SB-35	6-7	04/12/05	<25	<25	<25	<25	<25	<250	-	<25	<25	5800	-	710	-	1400	-	<25	<25	<25	<25	<25	<25	
SB-35	9-10	04/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	170	-	37	-	57	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
P01	0.5-2	07/10/06	<2.4	<2.5	<2.5	<1.4	<2.8	-	5.0J	-	12J,PG	110	30J,PG	220	<8.5	680B	150PG	11J	<3.7	<5.0	<4.7	<3.5	3.2J	<8.9-<11
P01	0-0.5	07/10/06	0.31J,PG	<0.12	<0.12	<0.069	<0.14	-	12	-	15	3.5J,PG	4.9PG	22	0.42	15B	7.8	10	<0.18	6.3B	<0.23	1.6J,PG	2	<8.8-<11
P01	12-16	07/10/06	<12	<13	<13	<7.2	<14	-	<23	-	<17	130J	41J	270J	<43	1000	200J	<25	<19	<26	<24	<18	<12	<9.1-<11
P01	16-20	07/10/06	<1.3	<1.4	<1.4	<0.76	<1.5	-	<2.5	-	4.1J	200	42	560	16J	610B	180E	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<9.7-<12
P01	20-24	07/10/06	<0.13	<0.13	<0.13	<0.075	<0.15	-	0.26J	-	0.54J	29	5.3	45	2.0J	90B	18J	<0.26	<0.20	<0.27	<0.25	<0.19	0.18J	<9.5-<12
P01	2-5	07/10/06	<2.5	<2.6	<2.6	<1.5	<2.9	-	8.4J	-	18J	270	59J	600	<8.8	1200B	210	13J	<3.8	<5.2	<4.8	<3.7	<2.3	<9.2-<12
P01	5-8	07/10/06	1.6J	<0.64	<0.64	<0.36	<0.70	-	3.1J	-	13PG	130	33	160	<2.2	260B	45	6.0J,PG	<0.94	3.3J,B	<1.2	<0.90	6.5J	<9.1-<11
P01	8-12	07/10/06	<1.3	<1.3	<1.3	<0.73	5.9J	-	4.4J	-	7.0J	380	54	310	<4.4	690B	89	6.9J	<1.9	5.9J,B	3.1J	<1.8	2.9J	<9.3-<12
P02	0.5-2	07/10/06	<1.3	<1.3	<1.3	<0.75	<1.5	-	6.7J	-	8.9J	160	20J	260	<4.5	460B	85	4.4J	<2.0	<2.7	<2.5	<1.9	6.7J	<9.5-<12
P02	0-0.5	07/10/06	0.76J,PG	<0.12	<0.12	<0.069	<0.14	-	23	-	29	7.3	3.3J	29	<0.42	27B	14	14PG	<0.18	5.5B	<0.23	2.9J	3.4J,PG	<8.7-<11
P02	12-16	07/10/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	<2.3	-	5.0J,PG	32J	13J	94	<4.4	230	49	7.3J	<1.9	<2.6	<2.4	<1.8	3.5J,PG	<9.1-<12
P02	16-20	07/10/06	<0.65	<0.67	<0.67	<0.37	<0.74	-	15PG	-	9.6J	77J	16J	71J	<2.3	110B	21	25J	<0.98	5.8J,B	<1.2	<0.95	<0.61	<9.5-<12
P02	20-24	07/10/06	<0.13	<0.13	<0.14	<0.075	<0.15	-	0.81J	-	1.5J	43	6.9	45	<0.46	74B	11J	0.64J,PG	<0.20	1.8J,B	0.87J	0.28J	0.27J	<9.5-<12
P02	2-5	07/10/06	<6.1	<6.3	<6.3	<3.5	<6.9	-	<11	-	11J	120J	43J	450	24J	1300	150J	<12	<9.2	<13	<12	<8.9	<5.7	<8.9-<11
P02	5-8	07/10/06	<0.63	<0.65	<0.65	<0.36	<0.71	-	9.0J	-	10	150	37	150	<2.2	190	26	13J,PG	<0.95	<1.3	<1.2	5.2J,PG	15PG	<46-<58
P02	8-12	07/10/06	<2.5	<2.5	<2.5	<1.4	<2.8	-	<4.6	-	4.8J	120	38J	250	15J	280	44J	<4.8	<3.7	<5.1	<4.7	<3.6	<2.3	<9.0-<11
P03	0.5-2	07/10/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	9.8J	-	16J	210	48	270	<4.3	600B	150E	15J	<1.9	<2.5	<2.3	<1.8	2.2J	<9.0-<11
P03	0-0.5	07/10/06	0.86J,PG	<0.12	<0.12	<0.069	<0.14	-	18	-	21	4.4	2.5J	20	<0.42	21B	15	13	<0.18	5.1B	<0.23	1.1J	2.3	<8.8-<11
P03	12-16	07/10/06	<6.4	<6.5	<6.6	<3.7	<7.2	-	<12	-	<8.7	8700E	1500E	1400	180J	33000B	2200E	<13	<9.6	<13	<12	<9.2	<5.9	<190-<230
P03	16-20	07/10/06	<13	<13	<13	<7.3	<14	-	<24	-	<17	3000	910J	2200	210J	8300B	2000	<25	360J,PG	<26	<24	<18	<12	<180-<230
P03	20-24	07/10/06	<0.68	<0.70	<0.70	<0.39	<0.77	-	3.0J	-	4.1J,PG	150	26J	99	7.2J,PG	530B	51	1.8J	<1.0	<1.4	<1.3	<0.99	<0.63	<9.9-<13
P03	2-5	07/10/06	<2.4	<2.5	<2.5	<1.4	<2.7	-	8.0J	-	20J	160	29J	380	<8.5	440B	76	16J,PG	<3.6	33J,B,PG	<4.6	<3.5	<2.2	<8.8-<11
P03	5-8	07/10/06	<2.5	<2.5	<2.5	<1.4	<2.8	-	6.9J	-	12J	310	69J	320	<8.6	390B	65J	6.7J,PG	<3.7	<5.1	<4.7	<3.6	3.1J	<9.0-<11
P03	8-12	07/10/06	<2.5	<2.6	<2.6	<1.5	<2.9	-	6.1J	-	34J,PG	430	89	390	30J,PG	210B	42J	15J	<3.8	<5.2	<4.8	<3.7	9.9J	<46-<58
P04	0.5-2	07/11/06	<0.61	<0.63	<0.63	<0.35	<0.69	-	6.4J	-	9.9J	58J	16J,PG	160	<2.1	380E	79	3.6J	36J,PG	<1.3	<1.2	<0.89	2.0J	<8.9-<11
P04	0-0.5	07/11/06	0.96J,PG	<0.25	<0.25	<0.14	<0.27	-	13	-	15	3.3J	1.6J	14	<0.84	26	9.6	11	<0.36	<0.50	<0.46	1.8J	3.0J	<8.8-<11
P04	12-16	07/11/06	<0.64	<0.66	<0.66	<0.37	<0.72	-	13	-	<0.87	1500	270J	1100	65E	5500	1000	5.8J	<0.96	<1.3	2.5J,PG	2.1J,PG	<0.59	<93-<120
P04	16-20	07/11/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	17J	-	<3.7	4900	1200J	3900E	370E	20000	5800E	6.5J,PG	<4.0	<5.5	<5.1	<3.9	<2.5	<200-<250
P04	20-24	07/11/06	<0.27	<0.28	<0.28	<0.16	<0.31	-	<0.51	-	<0.37	8.8J	1.5J	11J	<0.95	46	13	<0.53	<0.41	<0.56	<0.52	<0.39	<0.25	<9.9-<13
P04	2-5	07/11/06	<0.62	<0.63	<0.64	<0.36	<0.70	-	5.2J	-	6.2J	46	7.5J	150	3.9J	240	44	4.5J,PG	<0.93	<1.3	<1.2	<0.90	2.0J	<9.0-<11
P04	5-8	07/11/06	<0.62	<0.63	<0.64	<0.35	<0.69	-	6.6J	-	8.3J	180	37J	350	<2.1	1000E	99E	2.7J,PG	<0.93	<1.3	<1.2	3.8J	9.4	<90-<110
P04	8-12	07/11/06	0.99J,PG	<0.68	9.1J,PG	<0.38	<0.76	-	72	-	95J	1300	340J	970E	<2.3	4000	740E	9.5J	<1.0	<1.4	5.5J,PG	14PG	14	<97-<120
P05	0.5-2	07/11/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	83	-	86	63	14J	150	<4.3	390	53	6.8J	<1.9	<2.5	<2.4	3.5J	4.2J	<45-<57
P05	0-0.5	07/11/06	<1.2	<1.2	<1.2	<0.66	<1.3	-	**570**	-	**630**	13J	7.1J	40PG	20J,PG	37	7.4J	29J	<1.7	<2.4	<2.2	22	31J,PG	<420-<530
P05	12-16	07/11/06	<12	<13	<13	<7.1	<14	-	120J	-	150J	2300	900	710	140J,PG	3500	480	<24	<19	<26	<24	<18	33J	<90-<110
P05	16-20	07/11/06	<13	<13	<13	<7.4	<15	-	100J	-	170J	4200	1800J	780	<45	12000B,E	780J	<25	<19	<27	<25	<19	<12	<190-<240
P05	20-24	07/11/06	<13	<14	<14	<7.7	<15	-	54J	-	88J	1900	800	360J	<47	4600B	300J	<26	<20	<28	<26	<19	<12	<98-<120
P05	2-5	07/11/06	<0.59	<0.61	<0.61	<0.34	<0.67	-	400	-	**450**	44J	21J,PG	160	<2.1	230	43J	17J	<0.83	<1.2	<1.1	15J	18PG	<430-<550
P05	5-8	07/11/06	<1.2	<1.2	<1.2	<0.69	<1.4	-	260	-	250	27J	22J,PG	57J	6.4J	97	17J	16J	<1.8	<2.5	<2.3	9.0J	12J	<180-<220
P05	8-12	07/11/06	<6.4	<6.5	<6.6	<3.7	<7.2	-	140	-	160	830	330	610	79J,PG	1200	260J	<13	<9.6	<13	<12	<9.2	31J	<93-<120
P06	0.5-2	07/11/06	<1.2	<1.3	<1.3	<0.70	<1.4	-	65PG	-	53	40	42J,PG	190	<4.3	360B	69J	6.2J	<1.8	<2.5	<2.3	14J	<1.1	<8.9-<11
P06	0-0.5	07/11/06	<2.3	<2.4	<2.4	<1.3	<2.6	-	320	-	410	<5.4	25J	42J,PG	<8.2	120E	23J	40J	<3.5	<4.8	<4.5	34J	18J	<170-<220
P06	12-16	07/11/06	<6.5	<6.7	<6.7	<3.8	<7.4	-	69J	-	140	11000	3600J	6300	830J	30000B	4900	81J	<9.8	<13	<12	<9.5	<6.1	<480-<600

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P06	16-20	07/11/06	<2.7	20J	310	40J	12J	-	55	-	<3.7	44000	23000	6300J	740E	190000B	24000	<5.4	<4.1	<5.6	<5.2	<4.0	<2.5	<990-<1300
P06	20-24	07/11/06	<6.8	<7.0	20J	<3.9	<7.7	-	30J	-	<9.3	22000	12000J	3100J	420	110000B	9000J	<13	<10	<14	<13	<9.9	<6.3	<990-<1300
P06	2-5	07/11/06	<0.62	<0.63	<0.64	<0.36	<0.70	-	82PG	-	62	42	15J	120	<2.2	420B	46	8.7J	<0.93	<1.3	<1.2	6.8J	2.2J	<9.0-<11
P06	5-8	07/11/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	400PG	-	310	200	63	250	<4.4	360B	56	27J	<1.9	<2.6	<2.4	28	7.7J	<180-<230
P06	8-12	07/11/06	1.2J	<0.66	<0.66	<0.37	<0.72	-	120	-	130	65H	22	76	<2.2	180B	28	43	<0.97	<1.3	<1.2	6.2J	22PG	<93-<120
P06B	24-28	05/21/07	<2.4	<2.5	<3.8	<1.8	<2.0	-	14J	-	13J	11J	12J	5.5J	<7.7	170	20J	<3.7	<3.1	<3.9	<2.5	<2.2	<1.4	
P07	0.5-2	07/11/06	<2.5	<2.5	<2.5	<1.4	<2.8	-	<4.6	-	<3.4	120H	37J	440	13J	800B	140	<4.9	<3.7	<5.1	<4.7	<3.6	<2.3	<9.0-<11
P07	0-0.5	07/11/06	<0.62	<0.63	<0.64	<0.35	<0.70	-	10	-	14	34J,PG	13J	63	<1.4	170B	27	7.8J,PG	<0.93	<1.3	<1.2	<0.89	<0.57	<45-<57
P07	12-16	07/11/06	<0.27	<0.28	<0.28	<0.16	<0.31	-	2.5J	-	<0.37	300H	74H	84	<0.95	210B	21J	<0.53	<0.41	<0.56	<0.52	<0.39	<0.25	<9.9-<12
P07	16-20	07/11/06	<0.27	<0.28	<0.28	<0.16	<0.31	-	<0.51	-	5.2J	74H	24J,H	20J	<0.95	33J,B	9.7J	<0.54	<0.41	<0.56	<0.52	<0.39	<0.25	<9.9-<13
P07	20-24	07/11/06	<0.26	<0.27	<0.27	<0.15	<0.30	-	1.5J	-	<0.36	60H	17H	32	4.2J,PG	110B	18	1.0J,PG	<0.40	<0.54	<0.50	<0.38	<0.24	<9.6-<12
P07	2-5	07/11/06	<0.25	<0.26	<0.26	<0.14	<0.28	-	7.3PG	-	5.1	20H	4.9J	45	<0.88	94B	13	<0.50	<0.38	<0.52	<0.48	<0.37	<0.23	<9.2-<12
P07	5-8	07/11/06	<0.26	<0.27	<0.27	<0.15	<0.30	-	9	-	12	24H	5.3J,H	41	<0.92	58B	8	6.0J,PG	<0.40	<0.54	<0.50	<0.38	<0.24	<9.6-<12
P07	8-12	07/11/06	<2.6	<2.7	<2.7	<1.5	<2.9	-	<4.9	-	15J	350H	130H	140	21J,PG	930B	190	12J	<3.9	<5.4	<5.0	<3.8	<2.4	<9.5-<12
P08	0.5-2	07/12/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	3.9J	-	5.0J	44	17J	94	<2.7	170	26J	2.7J	<1.9	<2.5	<2.3	<1.8	<1.1	<9.0-<11
P08	0-0.5	07/12/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	20	-	25	8.2J	6.7J,PG	66	<4.4	110	27J	9.3J	<1.9	<2.6	<2.4	2.7J	3.3J	<9.1-<12
P08	12-16	07/12/06	<13	<13	<13	<7.5	<15	-	<24	-	<18	170J	68J	200J	<45	560	110J	<26	<20	<27	<25	<19	<12	<9.5-<12
P08	16-20	07/12/06	<13	<14	<14	<7.7	<15	-	<25	-	<18	210J	87J	140J	<47	650	97J	<26	<20	<28	<26	<20	<12	<9.8-<12
P08	20-24	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P08	2-5	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.0-<11
P08	5-8	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.3-<12
P08	8-12	07/12/06	<13	<14	<14	<7.6	<15	-	<25	-	<18	1200	500	990	70J	5700	790	<26	<20	<27	<25	<19	<12	<9.7-<12
P09	0.5-2	07/12/06	<2.4	<2.5	<2.5	<1.4	<2.7	-	<4.5	-	4.9J	18J	<6.6	46J	<8.4	98	19J	<4.7	<3.6	<4.9	<4.6	<3.5	<2.2	<8.7-<11
P09	0-0.5	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.2-<12
P09	12-16	07/12/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	<5.0	-	4.5J	120	39J	62J	<9.4	97	22J	<5.3	<4.0	<5.5	<5.1	<3.9	<2.5	<9.8-<12
P09	16-20	07/12/06	<2.7	<2.8	<2.8	<1.5	<3.0	-	6.7J	-	8.2J	380	110	86	17J	190	27J	<5.3	<4.1	<5.5	<5.1	<3.9	<2.5	<9.8-<12
P09	20-24	07/12/06	<2.7	<2.8	<2.8	<1.6	<3.0	-	<5.0	-	<3.7	130	47J	33J	<9.4	64J	10J	<5.3	<4.1	<5.6	<5.1	<3.9	<2.5	<9.8-<12
P09	2-5	07/12/06	<2.5	<2.6	<2.6	<1.5	<2.9	-	<4.7	-	<3.4	32J	14J,PG	75J	<8.8	120	25J	9.1J,PG	<3.8	<5.2	<4.8	<3.7	5.4J,PG	<9.2-<12
P09	5-8	07/12/06	<2.4	<2.5	<2.5	<1.4	<2.7	-	8.4J	-	10J	28J	6.8J	34J	<8.4	72	12J	<4.8	<3.6	<5.0	<4.6	<3.5	2.2J	<8.8-<11
P09	8-12	07/12/06	<13	<14	<14	<7.6	<15	-	48J	-	41J	600	190J	430	<46	920	200J	<26	<20	<27	<25	<19	<12	<96-<120
P10	0.5-2	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.8-<11
P10	0-0.5	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.7-<11
P10	12-16	07/12/06	<13	<14	<14	<7.7	<15	-	<25	-	<18	3700	1600	1900	310J,PG	12000	2000E	<26	<20	<28	<25	<19	<12	<190-<250
P10	16-20	07/12/06	<2.4	<2.5	<2.5	<1.4	<2.7	-	5.9J	-	<3.3	4600	1500E	2800E	190E	13000	3400E	<4.8	<3.7	<5.0	<4.6	<3.5	3.2J	<180-<220
P10	2-5	07/21/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	5.8J	-	8.8J	29J	6.6J	53	<4.4	38	5.6J,PG	6.7J	<1.9	<2.6	<2.4	<1.8	3.3J	<91-<120
P10	5-8	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P10	8-12	07/12/06	<13	<13	<13	<7.4	<14	-	<24	-	<17	590	280J	610	46J	1800	450	<25	<19	<26	<24	<19	<12	<9.3-<12
P10*[1]	20-24	07/12/06	<2.4	<2.4	<2.4	<1.4	<2.7	-	13J	-	22J	1400E	380E	310	<8.2	1700E	190E	<4.6	<3.6	<4.9	<4.5	<3.4	<2.2	580J[AT]
(Dup) P101	0.5-2	07/10/06	<1.2	<1.2	<1.3	<0.70	<1.4	-	6.1J	-	10J,PG	120	61PG	260	<4.2	760B	130	7.0J	<1.8	<2.5	<2.3	<1.8	3.6J	<8.9-<11
(Dup) P102	5-8	07/10/06	<0.63	<0.64	<0.65	<0.36	<0.71	-	<1.2	-	25PG	200	45	170	<2.2	230	25	15J,PG	<0.95	<1.3	<1.2	<0.91	7.7J,PG	<91-<120
(Dup) P103	12-16	07/10/06	<64	<65	<66	<37	<72	-	<120	-	<87	920J	440J	870J	<220	7800	800J	<130	<96	<130	<120	<92	<59	<9.3-<12
(Dup) P104	20-24	07/11/06	<1.3	<1.4	<1.4	<0.77	<1.5	-	<2.5	-	<1.8	130	32J	130	16J	500	160E	<2.6	<2.0	<2.8	<2.5	<1.9	<1.2	<9.7-<12
(Dup) P106	0-0.5	07/11/06	<2.4	<2.4	<2.4	<1.4	<2.7	-	**780PG**	-	**560**	6.8J	23J	45J,PG	<8.2	120B	20J	45J	<3.5	<4.8	<4.5	47	68PG	<430-<540
(Dup) P107	2-5	07/11/06	<0.25	<0.26	<0.26	<0.14	<0.28	-	4.1	-	5.2	14	3.5J	34	<0.88	74B	9.3	<0.49	<0.38	<0.52	<0.48	<0.36	<0.23	<9.2-<12
(Dup) P108	8-12	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
(Dup) P109	16-20	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
P11	0.5-2	07/12/06	<2.4	<2.5	<2.5	<1.4	<2.7	-	90	-	100	15J	8.8J	42J	<8.5	65J	15J	18J	<3.7	<5.0	<4.6	9.6J	5.2J	<89-<110
P11	0-0.5	07/12/06	<2.4	<2.4	<2.5	<1.4	<2.7	-	120	-	120	13J	7.9J	28J	<8.3	63J	11J	22J	<3.6	<4.9	<4.5	10J	6.6J	<87-<110
P11	12-16	07/12/06	<2.4	3.4J	32J	<1.4	<2.8	-	86	-	<3.3	41000	14000J	4600E	1300E	170000	34000	40J	<3.7	<5.0	18J,PG	14J,PG	<2.3	<890-<1100

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P11	16-20	07/12/06	<2.6	<2.7	24J	<1.5	<3.0	-	<4.9	-	<3.6	41000	12000J	5800E	1800E	140000	20000	<5.2	<4.0	<5.4	<5.0	<3.8	<2.4	<960-<1200
P11	20-24	07/12/06	<13	<14	<14	<7.6	<15	-	<25	-	<18	5600J	2200J	850E	180J	33000PG	2100E	<26	<20	<27	<25	<19	<12	<480-<610
P11	2-5	07/12/06	<2.5	<2.6	<2.6	<1.4	<2.8	-	**510**	-	**580**	65J	39J,PG	270	<8.7	540	91	32J	<3.8	<5.2	<4.8	150	21J	<460-<580
P11	5-8	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.3-<12
P11	8-12	07/12/06	<1.3	<1.4	<1.4	<0.77	<1.5	-	64	-	53	36J	7.9J	74	<4.7	67	6.7J	200	<2.0	<2.8	<2.6	2.1J	4.9J	<9.8-<12
(Dup) P111	0.5-2	07/12/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<89-<110
(Dup) P112	5-8	07/21/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<91-<120
(Dup) P113	12-16	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
(Dup) P114	20-24	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
(Dup) P116	0-0.5	07/14/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.5-<11
(Dup) P117	2-5	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.4-<12
(Dup) P118	8-12	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
(Dup) P119	16-20	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<12-<15
P11B	24-28	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
P12	0.5-2	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.0-<11
P12	0-0.5	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.5-<11
P12	12-16	07/13/06	<2.7	<2.8	<2.8	<1.5	<3.0	-	180	-	190J	1100	350J	1900E	190PG	8100B,E	1200E	33J,PG	<4.1	<5.6	<5.1	18J,PG	120PG	<200-<250
P12	16-20	07/13/06	8.5J	23J	130	21J	19J	-	<13	-	150	11000	6100J	4400J	1300J	82000B	13000	<14	<11	15J	<13	<10	7.8J	<510-<640
P12	20-24	07/13/06	<2.7	7.4J	43	2.9J	18J	-	<5.1	-	<3.7	580J	250J	640	97	6000B,E	920	<5.3	6.4J	<5.6	<5.2	12J,PG	<2.5	<49-<62
P12	2-5	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.3-<12
P12	5-8	07/21/06	<6.5	<6.6	<6.7	<3.7	<7.3	-	<12	-	<8.8	160J	40J	190	<23	110J	<24	<13	<9.8	<13	<12	<9.4	<6.0	<190-<240
P12	8-12	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
(Dup) P121	0.5-2	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.6-<11
(Dup) P122	5-8	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<550-<690
(Dup) P123	12-16	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<190-<240
(Dup) P124	20-24	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
(Dup) P126	0-0.5	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22J[A1]
(Dup) P127	2-5	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
(Dup) P128	8-12	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.2-<12
(Dup) P129	16-20	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P13	0.5-2	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.3-<12
P13	0-0.5	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.7-<11
P13	12-16	07/13/06	<6.8	<6.9	<7.0	<3.9	<7.7	-	<13	-	<9.2	230	61J	72J	<24	54J	<25	<13	<10	<14	<13	<9.8	<6.3	<200-<250
P13	16-20	07/13/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	<5.0	-	<3.7	490	140J	120	<9.4	99B	12J,PG	<5.3	<4.0	<5.5	<5.1	<3.9	<2.5	<200-<250
P13	20-24	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P13	2-5	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67[A1]
P13	5-8	07/21/06	<13	<13	<13	<7.2	<14	-	<23	-	<17	580	250J	170J	<44	26J	<47	<25	<19	<26	<24	<18	<12	<460-<580
P13	8-12	07/13/06	<1.3	<1.3	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	1100E	450E	320	34J,PG	3800B	390	<2.6	<2.0	<2.7	7.3J,PG	<1.9	<1.2	<9.6-<12
(Dup) P131	0.5-2	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
(Dup) P132	5-8	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	750A3
(Dup) P133	12-16	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27J[A1]
(Dup) P134	20-24	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
(Dup) P136	2-5	07/21/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
(Dup) P137	8-12	07/24/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<100-<130
(Dup) P139	20-24	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P14	0.5-2	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.2-<12
P14	0-0.5	07/13/06	<0.61	39PG	13PG	<0.35	0.82J	-	25	-	36	3.9J	<1.7	28	<2.1	20B	5.3J	9.3J	<0.91	<1.3	<1.2	<0.88	5.1J	<44-<56
P14	12-16	07/13/06	<13	<13	<13	<7.3	<14	-	<24	-	<17	540	130J	160J	<44	370J,B	74J	<25	<19	<26	<24	<18	<12	<920-<1200
P14	16-20	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12

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Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P14	20-24	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P14	2-5	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P14	5-8	07/13/06	<1.3	<1.4	6.0J	<0.76	<1.5	-	17J	-	32J	660	270	790E	88PG	1500B	390	<2.6	<2.0	<2.7	<2.5	8.3J,PG	<1.2	<9.6-<12
P14**[1]	8-12	07/13/06	<1.3	<1.3	<1.4	<0.75	<1.5	-	<2.5	-	<1.8	250J,PG	63J	170	20J,PG	3600B,E	260J	8.0J,PG	<2.0	<2.7	<2.5	<1.9	<1.2	<9.6-<12
(Dup) P140	12-16	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(Dup) P141	8-12	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(Dup) P142	16-20	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<190-<240
(Dup) P143	5-8	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(Dup) P144	24-28	05/24/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(Dup) P146	12-16	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.4-<12
(Dup) P148B	20-24	08/10/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
P15	0-0.5	07/13/06	<0.61	<0.63	<0.63	<0.35	<0.69	-	28	-	37	11J	3.7J	28	<2.1	76B	13J	12J	1.4J	<1.3	NA	<0.89	6.4J,PG	<44-<56
P15	05.-2	07/13/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.3-<12
P15	12-16	07/13/06	<6.6	<6.8	7.2J	<3.8	<7.5	-	<12	-	<9.0	13000	5300J	6500J	1000J,PG	53000B	11000	<13	<10	<14	<13	<9.6	<6.1	<190-<240
P15	16-20	07/13/06	<2.7	<2.8	<2.8	<1.6	<3.1	-	<5.1	-	<3.7	3600E	940	520	230J,PG	6100B	740	<5.4	<4.1	<5.6	<5.2	4.7J	<2.5	<50-<63
P15	20-24	07/13/06	<1.4	<1.5	<1.5	<0.82	<1.6	-	<2.7	-	<1.9	1200E	270	140	55PG	1100B	95J	<2.8	<2.1	<2.9	<2.7	<2.1	<1.3	<10-<13
P15	2-5	07/13/06	<0.66	<0.67	<0.68	<0.38	<0.74	-	6.9J,PG	-	7.2J	110	24J	520	21J,PG	260B	54	6.8J	<0.99	<1.4	<1.3	2.6J,PG	<0.61	<48-<61
P15	5-8	07/13/06	<0.64	<0.65	<0.66	<0.37	<0.72	-	34	-	33	40	13J	190	<2.2	34B	7.5J	37	3.0J	<1.3	<1.2	<0.92	6.5J,PG	<9.3-<12
P15	8-12	07/13/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	<5.0	-	140J	4800	1600J	3000	430J,PG	23000B	4000	<5.2	<4.0	<5.5	<5.1	9.5J	<2.5	<97-<120
(Dup) P150	20-24	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(Dup) P151	16-20	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
P16	0.5-2	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.7-<11
P16	0-0.5	07/14/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.5-<11
P16	12-16	07/14/06	<6.8	<6.9	<7.0	<3.9	<7.6	-	<13	-	<9.2	NA	4300E	6200J	770E	130000	20000	<13	<10	<14	<13	<9.8	<6.3	<490-<620
P16	16-20	07/14/06	<7.0	<7.2	37J,PG	<4.0	<7.9	-	<13	-	<9.5	59000E,PG	26000E	5800E	1700E,PG	110000E,PG	12000E	<14	<11	<14	<13	<10	<6.5	<510-<650
P16	20-24	07/14/06	<1.4	<1.4	2.1J	<0.79	<1.5	-	<2.6	-	<1.9	110	120E	34J	8.2J,PG	110	19J	<2.7	<2.1	<2.8	<2.6	<2.0	<1.3	<10-<13
P16	2-5	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P16	5-8	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P16**[2]	8-12	07/14/06	<0.67	<0.69	<0.69	<0.38	<0.76	-	43	-	60	58	7.1J,PG	210	<2.3	150	18J	31	14J,PG	<1.4	<1.3	2.8J	5.3J	590A1
P17	0.5-2	07/14/06	<0.63	<0.65	<0.65	<0.36	<0.71	-	58	-	86	170	38	310	<2.2	1100	140	<1.2	1.0J,PG	<1.3	<1.2	17J	4.0J	<46-<58
P17	0-0.5	07/14/06	<0.60	<0.62	<0.62	<0.35	<0.68	-	8.1J	-	10	110	23J	140	3.7J,PG	490	72	3.6J	<0.91	<1.2	<1.2	<0.88	<0.56	<8.8-<11
P17	12-16	07/14/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	4.1J	-	<1.7	4900E	1100E	940E	89PG	29000	2700	5.5J,PG	<1.9	<2.6	<2.4	<1.8	<1.2	<180-<230
P17	16-20	07/14/06	<2.8	<2.8	4.2J	1.9J,PG	<3.1	-	<5.1	-	<3.8	2300E	1300E	600	210J,PG	5000E	500E	8.3J,PG	<4.1	<5.7	<5.2	<4.0	<2.6	<100-<130
P17	20-24	07/14/06	<7.0	<7.2	<7.2	<4.0	<7.9	-	<13	-	38J,PG	1500	750E	270	100J,PG	2600	450	20J	<11	<14		<10	<6.5	<100-<130
P17	2-5	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P17	5-8	07/14/06	1.4J,PG	<0.67	<0.68	<0.38	<0.74	-	130	-	150	86	22	210	<2.3	160	31	46	3.1J,PG	<1.4	<1.3	<0.95	7.1J,PG	<96-<120
P17	8-12	07/14/06	58J	<2.9	<2.9	<1.6	<3.2	-	390	-	390	930	310	**2400**	<9.8	480	110J	1800	9.5J	<5.8	<5.4	<4.1	8.0J,PG	<510-<650
P18	0.5-2	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10J[A1]
P18	0-0.5	07/14/06	2.1J,PG	<0.60	<0.60	<0.34	<0.66	-	11J	-	20J	76	24J	460	27J	1200	120E	8.1J,PG	3.5J	<1.2	<1.1	3.6J,PG	<0.54	<8.5-<11
P18	12-16	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
P18	16-20	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10-<13
P18	20-24	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10-<13
P18	2-5	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
P18	5-8	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.4-<12
P18	8-12	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
P19	0.5-2	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
P19	0-0.5	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.8-<11
P19	12-16	07/14/06	<1.4	<1.4	<1.4	<0.80	<1.6	-	<2.6	-	<1.9	600	220E	160	44J,PG	1500E	130J	<2.7	<2.1	<2.9	<2.6	<2.0	<1.3	<10-<13
P19	16-20	07/14/06	<1.3	<1.3	<1.3	<0.75	<1.5	-	<2.4	-	<1.8	620	160E	91	<4.5	310	29J,PG	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	100[A2]

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P19	20-24	07/14/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P19	2-5	07/14/06	<6.7	<6.8	<6.9	<3.8	<7.6	-	<13	-	26J,PG	690	190J	1300	63J,PG	2000	490	<13	<10	<14	<13	<9.7	<6.2	<97-<120
P19	5-8	07/14/06	<2.6	<1.4	<1.4	<1.4	<1.5	-	3.4J	-	20J	450	200E	160	26J,PG	1600B,E	150J	<2.7	<2.1	<2.8	<2.6	4.7J	<1.3	<10-<13
P19	8-12	07/14/06	<1.4	<1.4	<1.4	<0.78	<1.5	-	3.0J	-	16J	600	190E	130	34J,PG	1400E	110J	4.8J	<2.0	<2.8	<2.6	3.8J,PG	<1.3	<9.8-<12
P20	0.5-2	07/17/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	14J,PG	-	13J	340PG	54	290PG	11J,PG	170B,PG	17J	15J,PG	<1.8	<2.5	<2.3	3.4J	<1.1	<180-<230
P20	0-0.5	07/17/06	<0.62	<0.63	<0.64	<0.35	<0.69	-	19PG	-	14	<1.4	5.2J	59PG	<2.1	35B,PG	12J	19PG	<0.93	<1.3	<1.2	3.4J	<0.57	<90-<110
P20	12-16	07/17/06	<6.8	<6.9	<7.0	<3.9	<7.7	-	<13	-	<9.2	7000PG,E	1600E	2400PG	210PG	20000B	2700J	<13	<10	<14	<13	<9.8	<6.3	<99-<130
P20	16-20	07/17/06	<2.8	<2.8	<2.9	<1.6	<3.1	-	<5.2	-	<3.8	1200PG	200	830PG	100J,PG	6600B	930	<5.5	<4.2	<5.7	<5.3	<4.0	<2.6	<10-<13
P20	20-24	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10-<13
P20	2-5	07/17/06	<1.3	<1.4	<1.4	<0.77	<1.5	-	36PG	-	32	230PG	52	560PG	22J,PG	190B,PG	28J	24J,PG	<2.0	<2.8	<2.5	3.1J,PG	<1.2	<97-<120
P20	5-8	07/17/06	<1.4	<1.4	<1.4	<0.79	<1.6	-	12J	-	<1.9	690PG	190J	1200	79J,PG	2100B,PG,E	380J	8.4J,PG	<2.1	<2.8	<2.6	<2.0	<1.3	<10-<13
P20	8-12	07/17/06	<6.7	<6.9	<6.9	<3.8	<7.6	-	<13	-	97J,PG	6700PG,E	1700J	1700PG	290J,PG	16000B	1900J	<13	<10	<14	<13	<9.7	<6.2	<98-<120
P21	0.5-2	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.6-<11
P21	0-0.5	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.5-<11
P21	12-16	07/17/06	<1.3	<1.3	<1.3	<0.72	<1.4	-	<2.3	-	<1.7	140PG	25J	27J,PG	<4.4	300B,PG	18J	<2.5	<1.9	<2.6	<2.4	<1.8	<1.2	<9.1-<12
P21	16-20	07/17/06	<27	<27	<28	<15	<30	-	72J,PG	-	<36	6500	2700E	1300	440J,PG	5300	820	<53	<40	<55	<51	<39	<25	<190-<250
P21	20-24	07/17/06	<27	<28	<28	<16	<30	-	65J,PG	-	<37	1300	600J	540J	120J,PG	3600	620J	<53	<41	<56	<51	<39	<25	<98-<120
P21	2-5	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.7-<11
P21	5-8	07/17/06	<6.1	<6.3	<6.3	<3.5	<6.9	-	200	-	**1800**	22J	<17	100J	<21	180	30J	36J	<9.2	<13	<12	<8.9	29J,PG	<89-<110
P21	8-12	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.8-<11
P22	0.5-2	07/17/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	<2.3	-	<1.7	64	23J	52	<4.3	34J	4.8J	<2.4	<1.9	<2.6	<2.4	<1.8	<1.1	<9.0-<11
P22	0-0.5	07/17/06	<1.3	<1.3	<1.3	<0.73	<1.4	-	4.8J,PG	-	12J	300	93J	200	33J,PG	540	200	<2.5	<1.9	<2.6	<2.4	<1.8	<1.2	<9.2-<12
P22	12-16	07/17/06	<0.13	<0.14	<0.14	<0.076	<0.15	-	0.73J	-	<0.18	130	23	50	<0.46	38	1.8J,PG	1.7J,PG	<0.20	<0.27	<0.25	<0.19	<0.12	<97-<120
P22	16-20	07/17/06	<1.3	<1.4	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	190	46	67	<4.6	16J,PG	<5.0	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<9.6-<12
P22	20-24	07/17/06	<6.6	<6.7	<6.8	<3.8	<7.4	-	<12	-	<9.0	210	50J	64J	<23	100J	<25	<13	<9.9	<14	<13	<9.5	<6.1	<48-<61
P22	2-5	07/17/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P22	5-8	07/17/06	<0.13	<0.13	<0.13	<0.075	<0.15	-	<0.24	-	<0.18	270	44	60	<0.45	42	<0.49	<0.26	<0.20	<0.27	<0.25	<0.19	<0.12	<470-<600
P22	8-12	07/17/06	<6.9	<7.1	<7.1	<4.0	<7.8	-	<13	-	<9.4	170J	34J	41J	<24	300	35J	<14	<10	<14	<13	<10	<6.4	<10-<13
P23	0.5-2	07/17/06	<6.0	<6.1	<6.2	<3.4	<6.8	-	<11	-	<8.2	590	180	210	<21	860	110J	<12	<9.0	<12	<11	<8.7	<5.6	<44-<55
P23	0-0.5	07/17/06	<6.3	<6.4	<6.5	<3.6	<7.1	-	14J,PG	-	24J	280	64J	120J	<22	190	<23	15J,PG	<9.4	<13	<12	<9.1	<5.8	<45-<58
P23	12-16	07/17/06	<27	<27	<27	<15	<30	-	<50	-	<36	13000	3500E	1200J	170J,PG	14000	1100J	<52	<40	<55	<50	<38	<25	<190-<240
P23	16-20	07/17/06	<28	<28	48J	<16	<31	-	<52	-	<38	42000E	12000E	1900	520J,PG	16000E	1200J,PG	<54	<42	<57	<53	<40	<26	<500-<640
P23	20-24	07/17/06	<27	<28	<28	<16	<31	-	<51	-	<37	NA	5800E	1200	460J,PG	4800PG	860	<53	<41	<56	<52	<39	<25	1000A1
P23	2-5	07/17/06	<2.6	<2.6	<2.7	<1.5	<2.9	-	<4.8	-	<3.5	630	210J	480	49J,PG	1800	410	<5.1	<3.9	<5.3	<4.9	<3.7	<2.4	<47-<59
P23	5-8	07/17/06	<6.4	<6.5	<6.6	<3.7	<7.2	-	<12	-	<8.7	560	150J	190	<22	700	100J	<13	<9.6	<13	<12	<9.2	<5.9	<9.3-<12
P23	8-12	07/17/06	<25	<25	<26	<14	<28	-	<46	-	<34	15000E	5200E	1100	210J,PG	17000E	1500	<49	<37	<51	<47	<36	<23	<180-<230
P23B	24-26	05/24/07	<19	<20	<30	<14	<15	-	<18	-	<30	2400	710	240J	<80	1200	130J	<29	<32	<41	<26	<17	<11	<200-<250
P23B	26-28	05/24/07	<0.49	<0.51	<0.77	<0.37	<0.40	-	<0.47	-	<0.77	67	19	5.6J	19	30	3.2J	<0.75	<0.63	<0.79	<0.51	<0.44	<0.28	<9.6-<12
P24	0.5-2	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.6-<11
P24	0-0.5	07/18/06	<1.2	<1.3	<1.3	<0.70	<1.4	-	250	-	180	3.6J	5.0J,PG	26J	<4.3	41PG	<4.6	18J	<1.8	<2.5	<2.3	13J	23PG	<89-<110
P24	12-16	07/18/06	<2.6	<2.6	5.3J	<1.5	<2.9	-	7.9J	-	140PG	4600E	1600E	880	380PG,E	4300	440	<5.1	<3.9	<5.3	<4.9	<3.7	<2.4	<94-<120
P24	16-20	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P24	20-24	07/18/06	<2.7	<2.8	7.0J	<1.6	<3.1	-	11J,PG	-	53PG	2700	770	210	130PG	1800	99PG	<5.4	<4.1	<5.6	<5.2	5.4J,PG	<2.5	<9.9-<13
P24	2-5	07/18/06	<2.5	<2.6	<2.6	<1.5	<2.9	-	13J	-	25J	550	140	650	40J,PG	4500	1000	9.5J	<3.8	<5.2	<4.8	11J,PG	<2.4	<9.2-<12
P24	5-8	07/18/06	<2.5	<2.6	<2.6	<1.5	<2.9	-	61PG	-	58	290	83	310	<8.8	2100	470	20J	5.3J	<5.2	<4.8	8.6J,PG	<2.3	<9.2-<12
P24*[2]	8-12	07/18/06	<6.7	<6.9	<6.9	<3.9	<7.6	-	<13	-	92J	4600	790J	1000	280J	34000	3400	<13	<10	<14	<13	<9.7	<6.2	<200-<250
P25	0.5-2	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60[A1]
P25	0-0.5	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.8-<11
P25	12-16	07/18/06	<1.3	<1.4	<1.4	19J	<1.5	-	6.0J	-	36PG	300	56	110	<4.6	110PG	<5.0	29J,PG	<2.0	<2.7	<2.5	28J	<1.2	<480-<610

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P25	16-20	07/18/06	<1.4	<1.4	<1.4	12J,PG	<1.5	-	<2.6	-	19J,PG	240	44	110	<4.8	310PG	<4.1	<2.7	7.7J,PG	<2.8	<2.6	<2.0	48PG	3000A3
P25	20-24	07/18/06	<0.14	<0.14	<0.14	<0.079	<0.15	-	<0.26	-	3.8PG	26J	5.9J	8.4J	<0.48	20	6.5J	<0.27	<0.21	<0.28	<0.26	<0.20	<0.13	<50-<63
P25	2-5	07/18/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	<5.0	-	<3.6	2200	300	410	170PG	2600	<10	<5.2	<4.0	<5.5	<5.1	<3.9	<2.5	<9.7-<12
P25	5-8	07/18/06	<2.8	<2.8	<2.8	<1.6	<3.1	-	<5.2	-	<3.8	2300E	180	230	89PG	3900	<10	<5.4	<4.2	<5.7	<5.3	<4.0	<2.6	<200-<250
P25	8-12	07/18/06	<0.70	<0.71	7.9J,PG	13J,PG	<0.79	-	5.5J	-	37PG	150	34J	72	14J,PG	72PG	<2.6	<1.4	<1.0	<1.4	<1.3	<1.0	<0.65	1300A3
P26	0.5-2	07/18/06	<1.3	<1.3	<1.3	<0.75	<1.5	-	<2.4	-	<1.8	5.7J	4.6J	54	<4.5	14J	<4.9	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	79[A3]
P26	0-0.5	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24J[A1]
P26	12-16	07/18/06	<0.27	<0.28	<0.28	<0.16	<0.31	-	<0.51	-	5.9PG	79J	10	34	<0.95	22	<51	17	<0.41	<0.56	<0.52	<0.40	<0.25	<200-<250
P26	16-20	07/18/06	<1.3	<1.3	290J	<0.74	<1.5	-	<2.4	-	17J,PG	700J	250J	290J,PG	<4.5	160J	<4.8	<2.5	<1.9	<2.7	<2.5	<1.9	<1.2	<190-<240
P26	20-24	07/18/06	<1.3	<1.4	<1.4	<0.77	<1.5	-	<2.5	-	7.9J,PG	95	34J	78	<4.7	25J,PG	<5.1	<2.6	<2.0	<2.8	<2.6	<2.0	<1.2	<98-<120
P26	2-5	07/18/06	<2.8	<2.9	<2.9	<1.6	<3.2	-	<5.3	-	<3.9	150	36J	100	<9.9	13J	<11	<5.6	<4.3	<5.9	<5.4	<4.1	<2.6	<10-<13
P26	5-8	07/18/06	<0.27	<0.27	<0.27	<0.15	<0.30	-	<0.50	-	<0.36	NA	28PG	73	<0.93	52J,PG	3.2J	15PG	13PG	<0.55	24	<0.39	<0.25	<190-<250
P26	8-12	07/18/06	<0.27	<0.27	<0.28	<0.15	<0.30	-	2.9J	-	48PG	160J	20	86PG	<0.93	110	<100	<0.53	<0.40	3.4J,PG	<0.51	<0.39	120J	2900A3
P27	0.5-2	07/18/06	<6.1	<6.2	<6.3	<3.5	<6.8	-	<11	-	<8.3	73J	17J	74J	<21	530	84J	<12	<9.1	<12	<12	<8.8	<5.6	<8.8-<11
P27	0-0.5	07/18/06	<1.2	<1.2	<1.2	<0.67	<1.3	-	9.0J	-	12J	19J	5.7J	17J	<4.1	110	13J	<2.3	<1.8	<2.4	<2.2	<1.7	<1.1	<8.5-<11
P27	12-16	07/18/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
P27	16-20	07/18/06	<14	<14	<14	<7.8	<15	-	<25	-	<18	6700	2300E	640J,PG	170J,PG	960	52J,PG	<27	<20	<28	<26	<20	<13	<200-<250
P27	20-24	07/18/06	<14	<14	<14	<7.8	<15	-	<25	-	<18	1100	360J	140J	<47	210J	<51	<27	<20	<28	<26	<20	<13	<49-<63
P27	2-5	07/18/06	<13	<13	<14	<7.5	<15	-	<25	-	<18	210J	40J	220J	<46	1400	250J	<26	<20	<27	<25	<19	<12	<9.5-<12
P27	5-8	07/18/06	<2.6	<2.6	<2.6	<1.5	<2.9	-	9.8J	-	11J	150J	42J	290	16J	1600	290	<5.0	<3.9	<5.3	<4.9	<3.7	<2.4	<9.3-<12
P27	8-12	07/18/06	<13	<13	<14	<7.5	<15	-	32J	-	30J	210J	66J	320J	<46	1200	270J	<26	<20	<27	<25	<19	<12	<9.5-<12
P28	0.5-2	07/19/06	<1.2	<1.2	<1.2	<0.68	<1.3	-	<2.2	-	8.8J	190	26J	100	<4.1	910B	100	<2.3	<1.8	<2.5	<2.3	<1.7	<1.1	<8.7-<11
P28	0-0.5	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.3-<11
P28	12-16	07/19/06	<2.7	<2.8	7.6J	<1.6	<3.1	-	<5.1	-	<3.7	1700	540	630	110J	2100B	280	<5.4	<4.1	<5.6	<5.2	<4.0	<2.5	2500A3
P28	16-20	07/19/06	<2.7	<2.8	30J	<1.6	<3.1	-	<5.1	-	<3.7	NA	5600E	1800J	1500J,PG	16000B	440J,PG	<5.4	<4.1	<5.7	<5.2	<4.0	<2.5	<100-<130
P28	20-24	07/19/06	<2.7	<2.8	<2.8	<1.6	<3.1	-	<5.1	-	<3.7	3200	770J	330J	250J,PG	660J,B	10J,PG	<5.3	<4.1	<5.6	<5.2	<3.9	<2.5	<9.9-<12
P28	2-5	07/19/06	<2.5	<2.6	<2.6	<1.4	<2.8	-	<4.7	-	18J,PG	270J	49J	400	11J	1700B	280	<4.9	<3.8	<5.2	<4.8	<3.6	<2.3	<9.1-<12
P28	5-8	07/19/06	<2.5	<2.5	<2.5	<1.4	<2.8	-	4.6J	-	5.6J,PG	530J	100J	350J	17J	2300B	430	<4.8	<3.7	<5.1	<4.7	<3.6	<2.3	<8.9-<11
P28	8-12	07/19/06	<1.3	<1.3	<1.3	<0.73	<1.4	-	<2.4	-	3.5J	380J	81J	250J	13J	1200B	270	<2.5	<1.9	<2.6	<2.4	<1.8	<1.2	<9.2-<12
P29	0.5-2	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22J[A1]
P29	0-0.5	07/19/06	<1.2	<1.3	<1.3	<0.71	<1.4	-	<2.3	-	<1.7	210	47J,PG	190	6.8J	520B	71	<2.4	<1.9	<2.5	<2.3	<1.8	<1.1	<9.0-<11
P29	12-16	07/19/06	<1.3	<1.3	<1.3	<0.74	<1.5	-	<2.4	-	<1.8	45	9.8J	11J	<4.5	3.7J	<4.8	<2.5	<1.9	<2.7	<2.5	<1.9	<1.2	<94-<120
P29	16-20	07/19/06	<1.3	<1.4	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	45	24J	110	<46	9.4J	<5.0	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<9.7-<12
P29	20-24	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P29	2-5	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18J[A1]
P29	5-8	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.9-<11
P29	8-12	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P30	0.5-2	07/19/06	<2.5	<2.5	<2.6	<1.4	<2.8	-	<4.7	-	<3.4	700	180	270	29J,PG	1000	130	<4.9	<3.7	<5.1	<4.7	<3.6	<2.3	<180-<230
P30	0-0.5	07/19/06	<1.3	<1.3	<1.3	<0.73	<1.4	-	<2.4	-	<1.7	280	60	100	10J,PG	130	11J,PG	<2.5	<1.9	<2.6	<2.4	<1.8	<1.2	<180-<230
P30	12-16	07/19/06	<1.3	<1.3	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	77	20J	54	11J,PG	29J	<4.9	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<9.6-<12
P30	16-20	07/19/06	<1.4	<1.4	<1.4	1.4J	<1.5	-	<2.5	-	<1.9	250	60	91	<4.7	28J	<5.1	<2.7	<2.0	<2.8	<2.6	<2.0	<1.3	<9.9-<13
P30	20-24	07/19/06	<2.8	<2.8	<2.9	<1.6	<3.1	-	<5.2	-	<3.8	310	75J	76J	<9.6	36J	<10	<5.4	<4.2	<5.7	<5.3	<4.0	<2.6	<10-<13
P30	2-5	07/19/06	<1.3	<1.4	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	82	26J	40	<4.6	76	17J	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<9.7-<12
P30	5-8	07/19/06	<1.4	<1.4	<1.4	<0.79	<1.6	-	<2.6	-	<1.9	190	34J	80	<4.8	120	<5.2	<2.7	<2.1	<2.8	<2.6	<2.0	<1.3	<10-<13
P30	8-12	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10-<13
P31	0.5-2	07/19/06	<1.3	<1.3	<1.3	<0.74	<1.5	-	<2.4	-	6.3J,PG	23J	11J	99	<4.5	200	33J	<2.5	<1.9	<2.6	<2.4	<1.9	<1.2	<9.4-<12
P31	0-0.5	07/19/06	<2.4	<2.4	<2.5	<1.4	<2.7	-	<4.5	-	10J,PG	53J	24J	140	<8.3	400	70J	<4.7	<3.6	<4.9	<4.5	<3.5	<2.2	<8.7-<11
P31	12-16	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17J[A1]
P31	16-20	07/19/06	<6.8	<6.9	<7.0	<3.9	<7.7	-	<13	-	<9.2	84J	25J	160J	<24	210	44J	<13	<10	<14	<13	<9.8	<6.3	63[A2]/75[A1]

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P31	20-24	07/19/06	<2.7	<2.7	<2.8	<1.5	<3.0	-	<5.0	-	<3.7	<6.2	<7.3	<5.9	<9.4	<3.1	<10	<5.3	<4.0	<5.5	<5.1	<3.9	<2.5	<49-<62
P31	2-5	07/19/06	<6.5	<6.7	<6.7	<3.7	<7.3	-	<12	-	<8.9	47J	<18	150J	<23	270	58J	<13	<9.8	<13	<12	<9.4	<6.0	<9.5-<12
P31	5-8	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.1-<12
P31	8-12	07/19/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P32	0.5-2	07/20/06	<5.9	<6.1	<6.1	<3.4	<6.7	-	<11	-	25J,PG	89J,B	33J	210	<21	450	100J,PG	<12	<8.9	<12	<11	<8.6	<5.5	<8.6-<11
P32	0-0.5	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.5-<11
P32	12-16	07/20/06	<6.7	<6.8	<6.9	<3.8	<7.5	-	<12	-	25J,PG	200B	58J	110J	<23	290	48J,PG	<13	<10	<14	<13	<9.7	<6.2	740JA3
P32	16-20	07/20/06	<3.3	<3.4	<3.4	<1.9	<3.8	-	<6.2	-	<4.5	370B	150	490	<12	150J	33J,PG	<6.6	<5.0	<6.9	<6.4	<4.8	<3.1	<190-<250
P32	20-24	07/20/06	<0.69	<0.71	<0.71	<0.40	<0.78	-	<1.3	-	1.8J	110J,B	41	140J	<2.4	60	4.4J	<1.4	<1.0	<1.4	<1.3	<1.0	<0.64	<200-<250
P32	2-5	07/20/06	<26	<27	<27	<15	<29	-	<49	-	160J	5600B	4000E	3700	500J,PG	18000E	11000E	<51	<39	<54	<50	<38	<24	<95-<120
P32	5-8	07/20/06	<25	<26	<26	<14	<28	-	<47	-	120J,PG	2300B	690J	770	180J,PG	4000	410J,PG	<50	<38	<52	<48	<37	<23	<9.2-<12
P32	8-12	07/20/06	<1.3	<1.3	<1.3	<0.74	<1.5	-	<2.4	-	<1.8	35J,B	<3.5	150	<4.5	450PG	<4.8	<2.5	34J	<2.7	<2.5	<1.9	46PG	5200A3
P33	0.5-2	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.9-<11
P33	0-0.5	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28J[A1]
P33	12-16	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<49-<63
P33	16-20	07/20/06	<0.14	<0.14	<0.14	<0.079	<0.16	-	0.50J,PG	-	2.3J,PG	20J	5.4J	15J	<0.48	59PG	5.6J	1.8J,PG	<0.21	<1.4	<0.26	<0.20	<0.13	<50-<63
P33	20-24	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P33	2-5	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15J[A1]
P33	5-8	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
P33	8-12	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.9-<11
P34	0.5-2	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<8.7-<11
P34	0-0.5	07/20/06	<0.57	<0.59	<0.59	<0.33	<0.65	-	25PG	-	33	8.0J,B	<1.6	6.1J	<2.0	26J	4.6J	4.2J,PG	<0.86	<1.2	<1.1	2.3J,PG	1.8J,PG	<42-<53
P34	12-16	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.0-<11
P34	16-20	07/20/06	<1.4	<1.4	<1.4	<0.79	<1.6	-	<2.6	-	4.5J	47J,B	22J,PG	25J	<4.8	100	28J,PG	15J	<2.1	<2.8	<2.6	<2.0	1.9J,PG	<100-<130
P34	20-24	07/20/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.7-<12
P34	2-5	07/20/06	<6.3	<6.4	<6.5	<3.6	<7.1	-	<12	-	13J	380B	55J	270J	<22	1100	210J	<12	<9.4	<13	<12	<9.1	<5.8	<9.1-<12
P34	5-8	07/20/06	<24	<25	<25	<14	<28	-	<46	-	90J,PG	3100B	710J	1700	150J,PG	8900	2600E	<48	<37	<50	<46	<35	<23	<8.9-<11
P34	8-12	07/20/06	<1.3	<1.3	<1.3	<0.74	<1.5	-	3.4J	-	11J,PG	56B	9.1J	67J	<4.5	230	36J	5.7J	<1.9	<2.7	<2.5	<1.9	<1.2	<9.4-<12
P35	0.5-2	07/21/06	<6.1	<6.3	<6.3	<3.5	<6.9	-	<11	-	26J,PG	55J	28J	280J	<21	640	98J	<12	<9.2	<13	<12	<8.9	<5.7	510A3
P35	0-0.5	07/21/06	<6.6	<6.7	<6.8	<3.8	<7.4	-	<12	-	<9.0	58J	26J	270	<23	610	100J	<13	<9.9	<14	<13	<9.5	<6.1	<9.6-<12
P35	12-16	07/21/06	<66	<67	<68	<38	<74	-	<120	-	<89	1700J	860J	1500J	<230	15000	2000	<130	<99	<140	<120	<95	<61	<190-<240
P35	2-5	07/21/06	<13	<13	<13	<7.2	<14	-	<23	-	<17	83J	<34	370	<44	690	120J	<25	<19	<26	<24	<18	<12	<9.1-<12
P35	5-8	07/21/06	<1.3	<1.4	<1.4	<0.76	<1.5	-	<2.5	-	<1.8	320	69J	320J	17J,PG	370J	61J,PG	<2.6	<2.0	<2.7	<2.5	<1.9	<1.2	<190-<240
P35	8-12	07/21/06	<27	<27	<28	<15	<30	-	<50	-	<36	530J	150J	890	<93	2300	220J	<53	<40	<55	<51	<39	<25	<9.7-<12
P36	0.5-2	07/21/06	<12	<13	<13	<7.5	<15	-	<24	-	<18	120J	51J	620	<45	1300	210J,PG	<26	<20	<27	<25	<19	<12	<9.5-<12
P36	0-0.5	07/21/06	<6.6	<6.8	<6.8	<3.8	<7.4	-	<12	-	<9.0	45J	<18	220	<23	440	73J,PG	<13	<9.9	<14	<13	<9.6	<6.1	<9.6-<12
P36	2-5	07/21/06	<27	<28	<28	<16	<31	-	<51	-	<37	680J	330J	2400	200J,PG	7700	1600	<53	<41	<56	<52	<39	<25	<9.9-<13
P36	5-8	07/21/06	<68	<70	<70	<39	<77	-	<130	-	<93	560J	<190	1000J	<240	6000	1200J	<130	<100	<140	<130	<99	<63	<9.9-<13
P36	8-12	07/21/06	<6.6	<6.7	<6.8	<3.8	<7.4	-	<12	-	<8.9	20J	<18	110J	<23	200	33J,PG	<13	<9.9	<13	<12	<9.5	<6.1	<9.5-<12
P37	0.5-2	07/24/06	<26	<27	<27	<15	<30	-	<49	-	130J	9100	1900	1500	390J,PG	18000E	1600	<52	<39	<54	<50	<38	<24	<95-<120
P37	0-0.5	07/24/06	<27	<28	<28	<15	<30	-	<50	-	<37	190J	<74	870	<94	1800	380J	<53	<41	<56	<51	<39	<25	<9.8-<12
P37	12-16	07/24/06	<27	<28	<28	<15	<30	-	<50	-	110J,PG	960	340J	200J	<94	1700	210J,PG	<53	<40	<55	<51	<39	<25	<9.8-<12
P37	2-5	07/24/06	<65	<66	<67	<37	<73	-	<120	-	250J,PG	16000	4400	3800	820J,PG	60000E	8000E	<130	<97	<130	<120	<94	<60	<190-<240
P37	5-8	07/24/06	<27	<27	<28	<15	<30	-	<50	-	100J,PG	530J	310J	650J	<93	4500	830	<53	<40	<55	<51	<39	<25	<9.7-<12
P37	8-12	07/24/06	<70	<72	<72	<40	<79	-	<130	-	210J,PG	4000	1700J	3000	590J,PG	27000	3400	<140	<110	<140	<130	<100	<65	<200-<260
P38	0.5-2	07/24/06	<0.60	<0.62	<0.62	<0.35	<0.68	-	33	-	58J,PG	30	3.6J	100PG	<2.1	120J,PG	35J,PG	6.8J	4.2J,PG	<1.2	<1.1	<0.88	11J,PG	<44-<56
P38	0-0.5	07/24/06	<12	<13	<13	<7.2	<14	-	<23	-	68J,PG	59J	<34	250J	<43	560PG	150J,PG	<25	<19	<26	NA	<18	<12	<9.1-<11
P38	12-16	07/24/06	<27	<28	<28	<16	<31	-	<51	-	100J,PG	650J	350J	700J	120J,PG	1300	130J,PG	<54	<41	<57	<52	<40	<25	<10-<13
P38	2-5	07/24/06	<24	<25	<25	<14	<28	-	<46	-	140J,PG	120J	<67	840	<85	1600	330J,PG	<48	<37	<50	<46	<35	<23	<89-<110

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P38	5-8	07/24/06	<13	<14	<14	<7.7	<15	-	<25	-	64J,PG	61J	<37	240J	<47	600	130J,PG	<25	<20	<28	<25	<19	<12	<9.7-<12
P38	8-12	07/24/06	<28	<28	<29	<16	<31	-	<52	-	120J,PG	1600	960	1400	280J,PG	4700	410J,PG	<55	<42	<57	<53	<40	<26	<100-<130
P39	0.5-2	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P39	0-0.5	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P39	12-16	05/22/07	<29	<31	<46	<22	<24	-	<28	-	<46	1500J	570J	2800	<470	27000	4100	<45	<190	<240	<150	<26	<17	-
P39	16-20	05/22/07	<130	<140	<210	<100	<110	-	<130	-	<210	11000	8600J	6700J	<2000	140000	18000	<200	<820	<1000	<670	<120	<75	-
P39	20-24	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P39	24-28	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P39	2-5	05/22/07	<2.3	<2.4	<3.6	<1.7	<1.9	-	4.1J	-	4.3J,PG	26J	12J	280	8.8J,PG	460	120	<3.5	<2.9	<3.7	<2.4	<2.1	<1.3	-
P39	5-8	05/22/07	<11	<12	<18	<8.6	<9.1	-	64J,PG	-	56J	35J	<36	260	<36	480	74J	<17	<14	<18	<12	<10	6.7J	-
P39	8-12	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P40	12-16	05/22/07	<18	<19	<28	<14	<15	-	<17	-	<28	1300	530J	430J	<150	2500	410J	<27	<62	<78	<50	<16	<10	-
P40	16-20	05/22/07	<12	<13	<19	<9.3	<9.9	-	<12	-	<19	980	250	150J	<39	200	<39	<19	<16	<20	<13	<11	<7.0	<47-<59
P40	20-24	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
P40	2-5	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.5-<12
P40	5-8	05/22/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P40	8-12	05/22/07	<18	<19	<29	<14	<15	-	<18	-	<29	4500	830	710J	<160	2900	550J	<28	<63	<79	<51	<17	<11	-
P41	12-16	05/23/07	<12	<13	<20	<9.5	<10	-	<12	-	<20	710	200	140J	<40	360	<40	<19	<16	<20	<13	<11	<7.1	-
P41	16-20	05/23/07	<12	<13	<19	<9.3	<9.9	-	<12	-	<19	460	150J	58J	<39	140J	<39	<19	<16	<20	<13	<11	<7.0	<48-<61
P41	20-24	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.8-<12
P41	24-26	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P41	26-28	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P41	5-8	05/23/07	<12	<13	<19	<9.1	<9.7	-	<11	-	<19	230	76J	1200	<38	2100	310	<18	<15	<19	<13	<11	<6.8	-
P41	8-12	05/23/07	<19	<20	<29	<14	<15	-	<18	-	<29	1100	530J	1500	<160	10000	1600	<29	<64	<81	<52	<17	<11	-
P42	12-16	05/23/07	<19	<20	<30	<14	<15	-	<18	-	<30	890	370J	330J	<81	2300	260J	<29	<33	<41	<27	<17	<11	-
P42	16-20	05/23/07	<13	<13	<20	<9.7	<10	-	<12	-	<20	420	130J	54J	55J	230	<41	<19	<16	<21	<13	<12	<7.3	<200-<250
P42	20-24	05/23/07	<12	<13	<19	<9.2	<9.8	-	<12	-	<19	610	290	180J	<39	2100	150J	<18	<16	<20	<13	<11	<6.9	<9.5-<12
P42	24-28	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P42	5-8	05/23/07	<2.5	<2.6	<4.0	<1.9	<2.0	-	<2.4	-	8.3J,PG	180	81	120	8.9J	630	67	<3.8	<3.2	<4.1	<2.6	<2.3	<1.4	-
P42	8-12	05/23/07	<19	<20	<30	<15	<16	-	<18	-	<30	910	430	400J	<82	3500	320J	<29	<33	<42	<27	<17	<11	-
P43	12-16	05/23/07	<19	<20	<30	<15	<16	-	<18	-	<30	1200	580J	540J	<160	3500	470J	<29	<66	<83	<54	<17	<29	-
P43	16-20	05/23/07	<51	<54	<80	<39	<41	-	<49	-	220J,PG	27000	9000	2200J	<820	21000	<820	<78	<330	<410	<270	<46	<29	-
P43	20-24	05/23/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.2-<12
P43	24-28	05/23/07	<12	<13	<19	<9.2	<9.7	-	<11	-	<19	300	130J	75J	<38	560	50J	<18	<15	<19	<13	<11	<6.9	-
P43	5-8	05/23/07	<4.7	<5.0	<7.4	<3.6	<3.8	-	13J	-	16J	<5.9	<15	360	<15	230	29J	<7.2	<6.1	<7.7	<5.0	<4.3	<2.7	-
P43	8-12	05/23/07	<19	<20	<29	<14	<15	-	<18	-	34J,PG	2200	1200	1200	300J,PG	14000	1400	<28	<64	<80	<52	<17	<11	-
P44	12-16	05/24/07	<4.6	<4.8	<7.2	<3.5	<3.7	-	<4.4	-	<7.2	190	38J	57J	<15	76	<15	<7.0	<5.9	<7.4	<4.8	<4.1	<2.6	-
P44	20-24	05/24/07	<0.25	<0.26	<0.39	<0.19	<0.20	-	<0.23	-	<0.39	39	12	18	<0.79	8.5	<0.79	<0.37	<0.32	<0.40	<0.26	<0.22	<0.14	<9.6-<12
P44	24-28	05/24/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P44	5-8	05/24/07	<2.4	<2.5	<3.8	<1.8	<1.9	-	<2.3	-	<3.8	69	22J	83	<7.7	130	24J	<3.7	<3.1	<3.9	<2.5	<2.2	<1.4	-
P44	8-12	05/24/07	<1.2	<1.3	<1.9	<0.93	<0.99	-	2.6J,PG	-	<1.9	55	14J	72	15J	11J	<3.9	<1.9	<1.6	<2.0	<1.3	<1.1	<0.70	<960-<1200
P44**[3]	16-20	05/24/07	<5.2	<5.4	<8.1	<4.0	<4.2	-	<4.9	-	<8.1	970	410	700	160PG	150	26J,PG	<7.9	130PG	<8.4	17J,PG	<4.7	<3.0	-
P45	12-16	05/25/07	<4.5	<4.7	<7.1	<3.4	<3.7	-	<4.3	-	<7.1	84	26J	21J	<14	94	<14	<6.9	<5.8	<7.3	<4.7	<4.1	<2.6	-
P45	16-20	05/25/07	<18	<19	58J,PG	<14	<15	-	<17	-	40J,PG	2300	570	800	<77	230J	<77	<28	<31	<39	<25	<16	<10	-
P45	20-24	05/25/07	<0.50	<0.52	<0.79	<0.38	<0.40	-	<0.48	-	<0.79	1.5J	<1.6	1.2J	<1.6	2.4J	3.5J	<0.76	<0.64	<0.81	<0.52	<0.45	<0.29	-
P45	24-28	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P45	5-8	05/25/07	<17	<18	<27	<13	<14	-	<17	-	<27	1300	570J	270J	<140	2100	280J	<27	<58	<73	<47	<16	<10	-
P45	8-12	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P46	0.5-2	05/25/07	<2.3	<2.4	<3.6	<1.7	<1.9	-	3.0J,PG	-	5.9J	42	18J	74	<7.3	120	19J	<3.5	<2.9	<3.7	<2.4	<2.1	<1.3	-

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(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
P46	12-16	05/25/07	<2.5	<2.6	<3.9	<1.9	<2.0	-	<2.4	-	5.7J,PG	68	14J	22J	<7.9	26J,PG	<7.9	<3.8	<3.2	<4.0	<2.6	<2.2	<1.4	<49-<62
P46	16-20	05/25/07	<12	<13	<19	<9.2	<9.7	-	<11	-	<19	520	140J	260	<38	<23	<19	<18	<15	<19	<13	<11	<6.9	<480-<610
P46	20-24	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.6-<12
P46	2-5	05/25/07	<4.4	<4.6	<7.0	<3.4	<3.6	-	<4.2	-	11J	180	100	300	23J,PG	1600	260	<6.8	<5.7	<7.2	<4.6	<4.0	<2.5	-
P46	5-8	05/25/07	<2.3	<2.4	<3.6	<1.7	<1.8	-	16J	-	19	24J	8.9J	58	<7.3	45PG	8.8J	30J	<2.9	<3.7	<2.4	<2.1	6.8J	48[A1]
P46	8-12	05/25/07	<2.4	<2.5	<3.7	<1.8	<1.9	-	<2.3	-	<3.7	12J	<7.6	11J	<7.6	49	<7.6	<3.6	<3.1	<3.9	<2.5	<2.2	<1.4	<47-<60
P47	0.5-2	05/25/07	<18	<19	<28	<14	<15	-	<17	-	<28	1000	480	1500	150J	8200	1300	<27	<31	<39	<25	<16	<10	-
P47	12-16	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31J[A1]
P47	16-20	05/25/07	<12	<12	<19	<9.0	<9.6	-	<11	-	89J,PG	310	200PG	280	210PG	<23	<38	<18	<15	<19	<12	<11	<6.8	<94-<120
P47	20-24	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P47	2-5	05/25/07	<12	<12	<19	<9.0	<9.6	-	<11	-	<19	440	240	500	<38	3300	530	<18	<15	<19	<12	<11	<6.8	-
P47	5-8	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16J[A1]
P47	8-12	05/25/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19J[A1]
P48	0.5-2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48	12-16		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48	16-20		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48	2-5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48	5-8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48	8-12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48B	20-24	08/10/07	<24	<25	<37	<18	<19	-	<23	-	<37	15000E	3800	770	320J	1200	100J,PG	<36	<31	<38	<25	<22	42J,PG	-
P48B	24-26	08/10/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P48B	26-28	08/10/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P49	0.5-2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P49	0-0.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P50	12-16	05/21/07	<18	<19	<28	<14	<14	-	<17	-	<28	1400	690J	650J	<150	5600	880	<27	<61	<77	<50	<16	<10	-
P50	16-20	05/21/07	<4.9	<5.1	<7.7	<3.7	<3.9	-	<4.6	-	<7.7	1900	370	140	<16	250	36J	<7.4	<6.3	<7.9	<5.1	<4.4	<2.8	-
P50	20-24	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P50	2-5	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.0-<11
P50	8-12	05/21/07	<18	<19	<28	<14	<15	-	<17	-	33J,PG	2600	1400	1700	130J	11000	1900	<28	<31	<39	<25	<16	<10	<9.4-<12
P51	0.5-2	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P51	0-0.5	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P51	12-16	05/21/07	<18	<19	<29	<14	<15	-	<18	-	39J,PG	7500	2000	1200	130J,PG	5200	490	<28	<32	<40	<26	<17	<11	-
P51	16-20	05/21/07	<19	<20	<29	<14	<15	-	<18	-	87J,PG	15000	4600	1300	290J,PG	17000	1100J	<29	<96	<120	<78	<17	<11	-
P51	20-24	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<9.9-<13
P51	24-28	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P51	2-5	05/21/07	<2.2	<2.3	<3.4	<1.7	<1.8	-	<2.1	-	<3.4	18J	<7.0	27J	<7.0	20J	<7.0	<3.3	<3.8	<3.5	<2.3	<2.0	<1.2	<170-<220
P51	5-8	05/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P51	8-12	05/21/07	<4.7	<4.9	<7.4	<3.6	<3.8	-	68	-	73PG	810	270	710	64J,PG	1600	280	<7.2	<6.1	<7.6	<4.9	<4.3	<2.7	-
P52	12-16	05/24/07	<18	<19	<28	<14	<15	-	<17	-	<28	5400	1400	510	<76	2100	170J	<37	<31	<39	<25	<16	<10	<190-<240
P52	16-20	05/24/07	<19	<20	<29	17J	<15	-	<18	-	<29	25000	9300	1300	1100J,PG	21000	850J,PG	<28	<96	<120	<78	<17	<11	<490-<620
P52	20-24	05/24/07	<2.4	<2.6	<3.8	<1.9	<2.0	-	<2.3	-	<3.8	66	50	35J	<7.8	6.5J	<7.8	<3.7	<3.1	<4.0	<2.6	<2.2	<1.4	<48-<61
P52	24-26	05/24/07	<12	<13	<19	<9.4	<10	-	<12	-	<19	1600	520	180J	110J,PG	1100	110J	<19	<16	<20	<13	<11	<7.0	<97-<120
P52	26-28	05/24/07	<0.25	<0.26	<0.39	<0.19	<0.20	-	<0.23	-	<0.39	1.1J	<0.79	0.30J	<0.79	0.93J	<0.79	<0.38	<0.32	<0.40	<0.26	<0.22	<0.14	<9.6-<12
P52	5-8	05/24/07	<12	<12	<19	<9.0	<9.6	-	<11	-	<19	230	73J	210	<38	3700	170J	<18	<15	<19	<12	<11	<6.8	<47-<59
P52	8-12	05/24/07	<4.6	<4.8	<7.2	<3.5	<3.7	-	8.9J,PG	-	7.7J,PG	350	110	130	25J	240	43J	<7.0	<5.9	<7.5	<4.8	<4.2	<2.6	<45-<58
P53	0.5-2	08/10/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	2	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	5	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	15	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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B2	2	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B2	5	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B2	15	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B3	2	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B3	5	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B3	15	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B4	2	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B4	5	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B4	15	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B5	2	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B5	5	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B5	15	07/26/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	2	08/06/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B6	5	08/06/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B6	25	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	30	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	35	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	40	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	45	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6	50	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	5	08/06/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B7	20	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	25	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	30	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	35	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	40	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B7	45	08/06/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B8	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	26	-	5.7	-	<5	-	<3	<4	<5	<4	<4	<3	-
B8	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B9	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B9	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B10	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B10	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B11	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	7.0	-	21	-	<3	<4	<5	<4	<4	<3	-
B11	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B12	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	20	-	17	-	<3	<4	<5	<4	<4	<3	-
B12	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	75	-	86	-	<3	<4	<5	<4	<4	<3	-
B13	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B13	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B14	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	16	-	26	-	<3	<4	<5	<4	<4	<3	-
B14	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	7.1	-	<3	<4	<5	<4	<4	<3	-
B15	0.5	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B15	2	11/14/13	<2	<4	<3	<5	<3	<25	-	-	-	<5	-	<4	-	<5	-	<3	<4	<5	<4	<4	<3	-
B16	2	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	14	-	11	-	41	-	ND	ND	ND	ND	ND	ND	-
B16	5	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	2	-	2.1	-	ND	ND	ND	ND	ND	ND	-
B17	2	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B17	5	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	2.7	11	-	30	-	190	-	ND	3.8	ND	ND	ND	ND	-
B18	2	09/24/14	ND	1.6	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B18	5	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	5.9	-	ND	ND	ND	ND	ND	ND	-

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs
B19	2	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B19	5	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	2.9	-	ND	ND	ND	ND	ND	ND	-
B20	2	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	6.9	-	20	-	110	-	ND	ND	ND	ND	ND	ND	-
B20	5	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	2.4	-	ND	ND	ND	ND	ND	ND	-
B20	10	09/24/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B20	15	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	ND
B20	20	09/24/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	0.59J	-	ND	ND	ND	ND	ND	ND	-
B20	25	09/24/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B20	30	09/24/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B21	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	1.1J	-	ND	-	4.0	-	ND	ND	ND	ND	ND	0.15J	-
B21	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	0.52J	-	ND	ND	ND	ND	ND	ND	-
B22	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	14	-	19	-	3.6J	-	ND	ND	ND	ND	ND	ND	-
B22	5	09/25/14	ND	ND	ND	ND	ND	ND	0.23J	-	ND	10	-	9.6	-	1.2J	-	ND	ND	ND	ND	ND	ND	-
B22	10	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.89J	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	ND
B22	15	09/25/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B23	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	1.1	1.4J	-	110	-	50	-	ND	ND	ND	ND	ND	ND	-
B23	5	09/25/14	ND	ND	0.16J	ND	ND	ND	0.24J	-	ND	350	-	230	-	820	-	ND	ND	ND	ND	ND	ND	-
B24	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.46J	-	0.45J	-	0.42J	-	ND	ND	ND	ND	ND	ND	-
B24	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	1.0J	-	ND	ND	ND	ND	ND	ND	-
B25	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.23J	-	0.70J	-	2.0J	-	ND	ND	ND	ND	ND	ND	-
B25	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	0.26J	-	ND	ND	ND	ND	ND	ND	-
B26	0.5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.5J	-	1.2J	-	6.8	-	ND	ND	ND	ND	ND	ND	-
B26	2	09/25/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B27	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	0.44J	-	3.2	-	ND	ND	ND	ND	ND	ND	-
B27	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	0.84J	-	ND	ND	ND	ND	ND	ND	-
B28	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	0.44J	-	ND	ND	ND	ND	ND	ND	-
B28	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B29	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.85J	-	ND	-	15	-	ND	ND	ND	ND	ND	ND	-
B29	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B30	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B30	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B31*[3]	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	6.5	-	21	-	37	-	ND	ND	ND	ND	ND	ND	-
B31	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B32	2	09/25/14	ND	ND	ND	ND	ND	ND	1.3	-	ND	18	-	11	-	8.1	-	ND	ND	ND	ND	ND	ND	-
B32	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	-
B33	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.41J	-	1.5J	-	3.1	-	ND	ND	ND	ND	ND	ND	-
B33	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	2.9	-	1.7J	-	43	-	ND	ND	ND	ND	ND	ND	-
B34	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	ND
B34	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	8.1	-	16	-	72	-	ND	ND	ND	ND	ND	ND	ND
B35	2	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	0.55J	-	1.2J	-	0.91J	-	ND	0.22J	ND	ND	ND	ND	ND
B35	5	09/25/14	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	ND	ND	ND	ND	ND	ND
CHHSL			33	NA	NA	NA	500	430	NA	NA	NA	2,300	NA	1,600	NA	1,600	NA	35	NA	NA	NA	130	NA	89
RSL			31	85	300	NA	560	1,800	NA	NA	NA	2,200	NA	1,600	NA	1,900	NA	33	NA	NA	NA	120	59	110–17,000

Notes:
All results reported above method detection limit
µg/kg = Microgram per kilogram
BHC = Hexachlorocyclohexane

Table 1
Soil Laboratory Analytical Results - OCPs and PCBs
(µg/kg)
20846 Normandie Avenue
Torrance, California 90502

Sample ID	Sample Interval (feet)	Sample Date	Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	alpha-Chlordane	CIS-Chlordane	gamma-Chlordane	4,4'-DDD	2,4'-DDD	4,4'-DDE	2,4'-DDE	4,4'-DDT	2,4'-DDT	Dieldrin	Endrin Aldehyde	Endrin Ketone	Endosulfan Sulfate	Heptachlor	Heptachlor Epoxide	Total PCBs

DDD = Dichloro-diphenyl-dichloroethane
DDE = Dichloro-diphenyl-dichloroethylene
DDT = Dichloro-diphenyl-trichloroethane
PCBs = Polychlorinated biphenyls
140000 Concentration above CHHSL or RSLs, whichever is lower
<0.37 Concentration below method detection limit, but above CHHSL or RSL, whichever is lower
J = Trace concentration between method detection limit and reporting limit
E = Estimated result, concentration exceeds its calibration range
PG = The percent difference between the original and confirmation analysis is greater than 40%
B = Method blank contamination, the associated method blank contains the target analyte at a reportable level
H = Bracketing CCV standard was out high for this analyte
*[1] = Endrin 6.2J
*[2] = Endrin 73J,PG
*[3] = Endrin 0.43J
**[1] = Endosulfan I 4.8J
**[2] = Endosulfan I 1.1J
**[3] = Endosulfan I 28J,PG
[A1] = PCB Aroclor 1260
[A2] = PCB Aroclor 1242
[A3] = PCB Aroclor 1254
NA = Not analyzed (not reported)
ND = Not detected above laboratory method detection limits
CHHSL = California Human Health Screening Level for residential land use (California Office of Environmental Health Hazard Assessment, 2010), http://www.oehha.org/risk/chhsltable.html
RSL = USEPA Region IX Regional Screening Levels (EPA 2014), http://www.epa.gov/region09/superfund/prg

Table 2

Soil Laboratory Analytical Results - DDD, DDE and DDT

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (feet bgs)	Date	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)
B6	2	08/06/13	<5	<4	<5
B6	5	08/06/13	<5	<4	<5
B7	5	08/06/13	<5	<4	<5
B8	0.5	11/14/13	26	5.7	<5
B8	2	11/14/13	<5	<4	<5
B9	0.5	11/14/13	<5	<4	<5
B9	2	11/14/13	<5	<4	<5
B10	0.5	11/14/13	<5	<4	<5
B10	2	11/14/13	<5	<4	<5
B11	0.5	11/14/13	<5	7.0	21
B11	2	11/14/13	<5	<4	<5
B12	0.5	11/14/13	<5	20	17
B12	2	11/14/13	<5	75	86
B13	0.5	11/14/13	<5	<4	<5
B13	2	11/14/13	<5	<4	<5
B14	0.5	11/14/13	<5	16	26
B14	2	11/14/13	<5	<4	7.1
B15	0.5	11/14/13	<5	<4	<5
B15	2	11/14/13	<5	<4	<5
B16	2	09/24/14	14	11	41
B16	5	09/24/14	ND	2	2.1
B17	2	09/24/14	ND	ND	ND
B17	5	09/24/14	11	30	190
B18	2	09/24/14	ND	ND	ND
B18	5	09/24/14	ND	ND	5.9
B19	2	09/24/14	ND	ND	ND
B19	5	09/24/14	ND	ND	2.9
B20	2	09/24/14	6.9	20	110
B20	5	09/24/14	ND	ND	2.4
B20	15	09/24/14	ND	ND	ND
B20	20	09/24/14	ND	ND	0.59J
B21	2	09/25/14	1.1J	ND	4.0
B21	5	09/25/14	ND	ND	0.52J
B22	2	09/25/14	14	19	3.6J
B22	5	09/25/14	10	9.6	1.2J
B22	10	09/25/14	0.89J	ND	ND
B23	2	09/25/14	1.4J	110	50
B23	5	09/25/14	350	230	820
B24	2	09/25/14	0.46J	0.45J	0.42J
B24	5	09/25/14	ND	ND	1.0J
B25	2	09/25/14	0.23J	0.70J	2.0J
B25	5	09/25/14	ND	ND	0.26J
B26	0.5	09/25/14	0.5J	1.2J	6.8

Table 2

Soil Laboratory Analytical Results - DDD, DDE and DDT

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (feet bgs)	Date	4,4'-DDD (µg/kg)	4,4'-DDE (µg/kg)	4,4'-DDT (µg/kg)
B27	2	09/25/14	ND	0.44J	3.2
B27	5	09/25/14	ND	ND	0.84J
B28	2	09/25/14	ND	ND	0.44J
B28	5	09/25/14	ND	ND	ND
B29	2	09/25/14	0.85J	ND	15
B29	5	09/25/14	ND	ND	ND
B30	2	09/25/14	ND	ND	ND
B30	5	09/25/14	ND	ND	ND
B31	2	09/25/14	6.5	21	37
B31	5	09/25/14	ND	ND	ND
B32	2	09/25/14	18	11	8.1
B32	5	09/25/14	ND	ND	ND
B33	2	09/25/14	0.41J	1.5J	3.1
B33	5	09/25/14	2.9	1.7J	43
B34	2	09/25/14	ND	ND	ND
B34	5	09/25/14	8.1	16	72
B35	2	09/25/14	0.55J	1.2J	0.91J
B35	5	09/25/14	ND	ND	ND
CHHSL			2,300	1,600	1,600
RSL			2,200	1,600	1,900

Notes:

All results reported above method detection limit

Feet bgs = Feet below ground surface

µg/kg = Microgram per kilogram

DDD = Dichloro-diphenyl-dichloroethane

DDE = Dichloro-diphenyl-dichloroethylene

DDT = Dichloro-diphenyl-trichloroethane

J = Trace concentration between method detection limit and reporting limit

ND = Not detected above laboratory method detection limits

CHHSL = California Human Health Screening Level for residential land use (California Office of Environmental Health Hazard Assessment, 2010), http://www.oehha.org/risk/chhsltable.html

RSL = USEPA Region IX Regional Screening Levels (EPA 2014), http://www.epa.gov/region09/superfund/prg

Table 3

Soil Laboratory Analytical Results - CAM 17 Metals

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Date	Depth (feet bgs)	Dilution Factor	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Mercury (mg/kg)
B8,0.5	11/14/2013	0.5	-	<3	1.54	126	0.5	0.8	19.0	8.33	18.1	28.5	<1	14.8	<1	<0.5	<1	37.0	126	<0.14
B8,2	11/14/2013	2	-	<3	3.54	204	0.9	0.9	28.1	13.9	19.0	8.98	<1	19.3	<1	<0.5	<1	50.8	52.5	<0.14
B9,0.5	11/14/2013	0.5	-	<3	3.43	332	1.0	1.01	31.1	15.1	24.4	8.10	<1	20.3	<1	<0.5	<1	61.6	52.6	<0.14
B9,2	11/14/2013	2	-	<3	3.22	201	1.05	1.0	33.2	14.5	23.7	7.88	<1	20.3	<1	<0.5	<1	63.5	58.2	<0.14
B10,0.5	11/14/2013	0.5	-	<3	2.93	188	1.0	1.05	31.0	13.8	20.9	10.9	<1	22.9	<1	<0.5	<1	56.9	55.2	<0.14
B10,2	11/14/2013	2	-	<3	3.46	140	1.09	1.0	31.8	14.1	20.9	7.64	<1	20.3	<1	<0.5	<1	62.3	51.1	<0.14
B11,0.5	11/14/2013	0.5	-	<3	2.3	114	<0.5	1.09	13.1	7.41	15.1	6.55	<1	21.2	<1	<0.5	<1	45.00	68.8	<0.14
B11,2	11/14/2013	2	-	<3	2.01	73.8	<0.5	0.5	14.1	7.27	11.1	5.78	<1	13.2	<1	<0.5	<1	30.2	77.9	<0.14
B12,0.5	11/14/2013	0.5	-	<3	3.09	322	1.1	1.05	34.9	14.2	26.0	11.3	<1	21.7	<1	<0.5	<1	67.4	64.7	<0.14
B12,2	11/14/2013	2	-	<3	3.67	432	1.0	0.9	30.2	13.4	23.3	10.9	<1	20.5	<1	<0.5	<1	59.8	62.2	<0.14
B13,0.5	11/14/2013	0.5	-	<3	3.65	157	0.9	0.8	28.0	12.6	19.4	6.55	<1	19.3	<1	<0.5	<1	55.2	49.9	<0.14
B13,2	11/14/2013	2	-	<3	3.58	258	1.1	1.03	35.5	13.1	28.7	6.72	<1	20.3	<1	<0.5	<1	71.2	63.6	<0.14
B14,0.5	11/14/2013	0.5	-	<3	1.88	208	0.8	0.8	25.0	12.1	18.6	8.10	<1	17.8	<1	<0.5	<1	50.0	47.5	<0.14
B14,2	11/14/2013	2	-	<3	3.93	285	1.08	1.07	33.0	14.4	24.7	7.58	<1	21.1	<1	<0.5	<1	67.5	60.2	<0.14
B15,0.5	11/14/2013	0.5	-	<3	1.85	139	1.0	0.9	29.9	13.5	19.2	6.71	<1	19.4	<1	<0.5	<1	57.3	47.6	<0.14
B15,2	11/14/2013	2	-	<3	3.06	158	1.01	0.9	32.1	13.6	20.4	7.79	<1	18.8	<1	<0.5	<1	57.4	50.4	<0.14
B16-2	9/24/2014	2	1	ND	3.1	91	ND	ND	17	6.9	15	11	ND	13	ND	ND	ND	32	42	ND
B16-5	9/24/2014	5	1	ND	3.2	140	ND	ND	17	7.2	15	5.6	ND	13	ND	ND	ND	31	37	ND
B17-2	9/24/2014	2	1	ND	2.8	80	ND	ND	10	3.4	11	11	ND	8.3	ND	ND	ND	18	38	ND
B17-5	9/24/2014	5	1	ND	3	170	ND	ND	19	7.9	15	6.2	ND	14	ND	ND	ND	37	38	ND
B18-2	9/24/2014	2	1	ND	4.1	80	ND	ND	11	4.0	15	14	ND	8.5	ND	ND	ND	22	45	ND
B18-5	9/24/2014	5	1	ND	3.2	190	ND	ND	19	8.2	16	5.0	ND	15	ND	ND	ND	32	39	ND
B19-2	9/24/2014	2	1	ND	2.9	220	ND	ND	18	7.8	14	4.8	ND	14	ND	ND	ND	35	36	ND
B19-5	9/24/2014	5	1	ND	4.4	96	ND	ND	20	8.4	19	4.9	ND	15	ND	ND	ND	41	45	ND
B20-2	9/24/2014	2	1	ND	3	220	ND	ND	18	8.6	17	5.3	ND	15	ND	ND	ND	35	40	ND
B20-5	9/24/2014	5	1	ND	4.4	130	ND	ND	18	7.0	18	4.3	ND	14	ND	ND	ND	40	46	ND
B20-15	9/24/2014	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B20-20	9/24/2014	20	1	ND	5.2	57	0.18J	ND	15	7.2	8.1	3.1	ND	12	0.32J	ND	0.90J	31	29	0.032J
B21-2	9/25/2014	2	1	ND	2	72	0.20J	ND	17	6.9	10	6.9	ND	11	0.54J	ND	0.16J	23	36	0.039J
B21-5	9/25/2014	5	1	ND	3.4	120	0.20J	ND	15	4.5	11	5.1	0.45J	12	0.30J	ND	ND	24	26	0.027J
B22-2	9/25/2014	2	1	ND	2.2	210	ND	ND	13	4.7	19	13	0.23J	12	ND	ND	0.47J	24	33	0.017J
B22-5	9/25/2014	5	1	ND	2.2	85	ND	ND	16	0.29J	1.0J	ND	ND	3.2	ND	2.6	ND	5.5	4.6	0.014J
B22-10	9/25/2014	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B22-15	9/25/2014	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B23-2	9/25/2014	2	1	ND	2.6	90	0.31J	ND	14	6.5	16	40	ND	12	0.55J	ND	ND	23	92	0.023J
B23-5	9/25/2014	5	1	ND	3	110	0.38J	ND	16	7.2	15	9.6	ND	13	0.62J	ND	ND	28	89	0.013J
B24-2	9/25/2014	2	1	ND	1.6	73	0.22J	ND	12	5.2	9.0	4.2	ND	7.6	0.34J	ND	ND	20	23	0.011J
B24-5	9/25/2014	5	1	ND	2.3	120	0.41J	ND	18	7.3	11	5.1	ND	14	0.42J	ND	0.48J	33	35	0.012J
B25-2	9/25/2014	2	1	ND	3.1	110	0.26J	ND	14	5.9	13	32	ND	13	0.24J	ND	0.55J	24	61	0.097J
B25-5	9/25/2014	5	1	ND	2.4	93	0.47J	ND	18	7.6	15	4.9	ND	14	0.50J	ND	0.56J	29	45	0.026J
B26-0.5	9/25/2014	0.5	1	ND	2.4	180	0.42J	ND	18	7.9	16	23	ND	15	0.47J	ND	0.22J	35	62	0.019J
B27-2	9/25/2014	2	1	ND	3.8	140	0.34J	ND	18	9.3	18	4.9	ND	15	0.58J	ND	0.95J	37	42	0.020J
B27-5	9/25/2014	5	1	ND	3.3	180	0.34J	ND	17	7.3	15	4.1	ND	14	0.28J	ND	0.91J	37	34	0.016J

Table 3

Soil Laboratory Analytical Results - CAM 17 Metals

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Date	Depth (feet bgs)	Dilution Factor	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Mercury (mg/kg)
B28-2	9/25/2014	2	1	ND	1.7	62	ND	ND	5.6	3.5	11	8.9	0.55J	4.1	0.22J	ND	0.69J	14	26	0.022J
B28-5	9/25/2014	5	1	ND	2.1	160	0.44J	ND	16	7.6	12	4.7	ND	13	0.44J	ND	ND	29	32	0.028J
B29-2	9/25/2014	2	1	ND	3.3	42	ND	ND	7.4	2.9	6.4	1.9	1.6	6.2	ND	ND	0.83J	17	20	0.042J
B29-5	9/25/2014	5	1	ND	3.5	120	0.38J	ND	18	8.3	18	4.8	ND	15	0.44J	ND	0.97J	38	40	0.035J
B30-2	9/25/2014	2	1	ND	3.4	69	ND	ND	5.8	4.2	14	3.0	ND	5.9	0.24J	ND	1.0	17	29	0.029J
B30-5	9/25/2014	5	1	ND	3.4	37	ND	ND	7.3	2.4	3.8	2.1	ND	6.4	ND	ND	0.59J	15	16	0.013J
B31-2	9/25/2014	2	1	ND	2.5	85	0.17J	ND	15	4.3	13	21	ND	11	ND	ND	0.64J	23	58	0.039J
B31-5	9/25/2014	5	1	ND	2.2	84	0.39J	ND	17	9.4	14	5.3	ND	13	0.75J	ND	ND	32	40	0.038J
B32-2	9/25/2014	2	1	ND	2.8	94	0.13J	ND	14	3.6	12	16	0.37J	9.9	ND	ND	0.62J	20	49	0.041J
B32-5	9/25/2014	5	1	ND	2.9	38	0.19J	ND	13	3.6	3.6	4.0	0.41J	8.5	ND	ND	0.50J	18	18	0.033J
B33-2	9/25/2014	2	1	ND	3.3	130	0.25J	ND	15	6.4	13	6.7	ND	12	0.21J	ND	1.3	29	40	0.027J
B33-5	9/25/2014	5	1	ND	1.4	78	0.36J	ND	14	5.7	13	22	ND	10	0.34J	ND	ND	22	58	0.018J
B34-2	9/25/2014	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B34-5	9/25/2014	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B35-2	9/25/2014	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B35-5	9/25/2014	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHHSL				30	0.07	5,200	16	1.7	100,000*	660	3,000	80	380	1,600	380	380	5	530	23,000	18
RSL				31	0.67	15,000	160	70	NE	23	3,100	80	390	1,500	390	390	0.78	390	23,000	9.4

Notes:

bgs = Below ground surface

mg/kg = Milligrams per kilogram

NA = Not analyzed or not applicable

ND = Not detected above laboratory method detection limits

CHHSL = California Human Health Screening Level for residential land use (OEHHA, 2010)

RSL = US EPA Regional Screening Level for residential land use (May 2014)

* = Total chromium screening level tabulated

NE = Not Established

5.2 Concentration above CHHSL or RSLs, whichever is lower

Table 4

Soil Laboratory Analytical Results - TPH, VOCs and SVOCs

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (ft bgs)	Date	TPHg (C6-C10) (mg/kg)	TPHd (C10-C22) (mg/kg)	TPHo (C22-C36) (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)
B1	2	7/26/2013	<3	<3	<5	-	-
B1	5	7/26/2013	-	-	-	ND	-
B1	15	7/26/2013	-	-	-	ND	-
B2	2	7/26/2013	<3	<3	<5	-	-
B2	5	7/26/2013	-	-	-	ND	-
B2	15	7/26/2013	-	-	-	ND	-
B3	2	7/26/2013	<3	<3	11	-	-
B3	5	7/26/2013	-	-	-	ND	-
B3	15	7/26/2013	-	-	-	ND	-
B4	2	7/26/2013	<3	<3	<5	-	-
B4	5	7/26/2013	-	-	-	ND	-
B4	15	7/26/2013	-	-	-	ND	-
B5	2	7/26/2013	<3	<3	<5	-	-
B5	5	7/26/2013	-	-	-	ND	-
B5	15	7/26/2013	-	-	-	ND	-
B6	25	6/8/2013	-	-	-	ND	-
B6	30	6/8/2013	-	-	-	PCE = 8.9	-
B6	35	6/8/2013	-	-	-	ND	-
B6	40	6/8/2013	-	-	-	ND	-
B6	45	6/8/2013	-	-	-	ND	-
B6	50	6/8/2013	-	-	-	ND	-
B7	20	6/8/2013	-	-	-	ND	-
B7	25	6/8/2013	-	-	-	ND	-
B7	30	6/8/2013	-	-	-	ND	-
B7	35	6/8/2013	-	-	-	ND	-
B7	40	6/8/2013	-	-	-	ND	-
B7	45	6/8/2013	-	-	-	ND	-
B8	0.5	11/14/2013	<60	<60	870	ND	ND
B8	2	11/14/2013	<3	5.53	21.7	ND	-
B9	0.5	11/14/2013	<3	7.3	15.4	ND	-
B9	2	11/14/2013	<3	4.35	12.2	ND	ND
B10	0.5	11/14/2013	<3	<3	<5	ND	ND
B10	2	11/14/2013	<3	5.46	9.03	ND	ND
B11	0.5	11/14/2013	<60	<60	1250	ND	-
B11	2	11/14/2013	<30	<30	623	ND	ND
B12	0.5	11/14/2013	<3	<3	5.28	ND	ND
B12	2	11/14/2013	<3	<3	17.8	ND	-
B13	0.5	11/14/2013	<3	6.05	21.3	ND	ND
B13	2	11/14/2013	<3	6.49	32.3	ND	-
B14	0.5	11/14/2013	<30	<30	446	ND	ND
B14	2	11/14/2013	<15	<15	52.6	ND	-

Table 4

Soil Laboratory Analytical Results - TPH, VOCs and SVOCs

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (ft bgs)	Date	TPHg (C6-C10) (mg/kg)	TPHd (C10-C22) (mg/kg)	TPHo (C22-C36) (mg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)
B15	0.5	11/14/2013	<15	<15	61.1	ND	ND
B15	2	11/14/2013	<15	<15	42.6	ND	-
B16	2	9/24/2014	<1.0	25	63	-	Bis(2-ethylhexyl)phthalate = 340
B16	5	9/24/2014	<1.0	11	22	-	ND
B17	2	9/24/2014	<1.0	240	610	-	ND
B17	5	9/24/2014	<1.0	10	15	-	ND
B18	2	9/24/2014	<1.0	260	650	-	ND
B18	5	9/24/2014	<1.0	<10	<10	-	ND
B19	2	9/24/2014	<1.0	<10	<10	-	ND
B19	5	9/24/2014	<1.0	<9.9	<9.9	-	ND
B20	2	9/24/2014	<1.0	<9.9	<9.9	-	ND
B20	5	9/24/2014	<1.0	<10	<10	-	ND
B20	10	9/24/2014	-	-	-	-	-
B20	15	9/24/2014	-	-	-	-	-
B20	20	9/24/2014	-	-	-	-	ND
B20	25	9/24/2014	-	-	-	-	-
B20	30	9/24/2014	-	-	-	-	-
B21	2	9/25/2014	0.034J	20	52	-	ND
B21	5	9/25/2014	0.025J	6.8J	5J	-	ND
B22	2	9/25/2014	0.034J	43	130	-	ND
B22	5	9/25/2014	0.028J	41	78	-	ND
B22	10	9/25/2014	0.040J	49	110	-	-
B22	15	9/25/2014	0.027J	6.2J	3J	-	-
B23	2	9/25/2014	0.027J	50	130	-	ND
B23	5	9/25/2014	0.026J	8.8J	11	-	ND
B24	2	9/25/2014	510	12	13	-	ND
B24	5	9/25/2014	5.4J	5.7J	3.0J	-	ND
B25	2	9/25/2014	0.061J	5.6J	10	-	ND
B25	5	9/25/2014	0.028J	4.6J	7.3J	-	ND
B26	0.5	9/25/2014	0.029J	6.7J	12	-	ND
B26	2	9/25/2014	-	-	-	-	-
B27	2	9/25/2014	0.029J	16	13	-	ND
B27	5	9/25/2014	0.026J	4.8J	6.3J	-	ND
B28	2	9/25/2014	0.026J	26	35	-	ND
B28	5	9/25/2014	0.078J	4.9J	7.4J	-	ND
B29	2	9/25/2014	0.034J	6.8J	13	-	ND
B29	5	9/25/2014	0.028J	4.7J	6.9J	-	ND
B30	2	9/25/2014	0.026J	6.2J	12	-	ND
B30	5	9/25/2014	0.075J	4.7J	6.8J	-	ND
B31	2	9/25/2014	0.035J	92	330	-	ND
B31	5	9/25/2014	0.029J	8.3J	17	-	ND

Table 5

Soil-gas Laboratory Analytical Results - VOCs

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (ft bgs)	Date	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	2-Butanone (µg/L)	n-Butylbenzene (µg/L)	Carbon Disulfide (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethane (1,1-DCA) (µg/L)	1,1-Dichloroethene (1,1-DCE) (µg/L)	cis-1,2-Dichloroethene (µg/L)	Ethylbenzene (µg/L)	4-Methyl-2-Pentanone (µg/L)	Tetrachloroethene (PCE) (µg/L)	Toluene (µg/L)	Trichloroethene (TCE) (µg/L)	1,1,1-Trichloroethane (µg/L)	Trichlorofluoromethane (µg/L)	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Xylenes (Total) (µg/L)
B1,5	5	7/31/2013	--	--	--	--	--	--	--	--	--	0.078	--	--	--	--	0.193	--	--	--	--	--	--	--	--	--	--
B1,15	15	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.21	--	--	--	--	--	--	--	--	--
B2,5	5	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.81	--	--	--	--	--	--	--	--	--
B2,15	15	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.04	--	--	--	--	--	--	1.43	0.57	2.0
B3,5	5	7/31/2013	--	0.033	--	--	--	--	--	--	--	--	--	--	--	--	--	0.053	--	--	--	--	0.041	--	0.037	--	0.037
B3,15	15	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.035	--	--	--	--	--	--	--	--	--
B4,5	5	7/31/2013	--	--	--	--	--	--	--	--	--	--	0.072	--	--	--	0.60	--	--	--	--	0.17	--	--	--	--	--
B4,15	15	7/31/2013	--	--	--	--	--	--	--	--	--	--	0.094	--	--	--	0.30	0.054	--	--	--	0.18	--	--	0.036	--	0.036
B5,5	5	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	--	--	--
B5,15	15	7/31/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.052	--	--	--	--	--	--	--	--	--
B5-15*	15	9/8/2013	--	0.0080	--	--	--	0.093	0.018	--	0.023	0.015	0.19	--	--	--	0.32	0.039	--	--	0.022	0.23	--	--	0.030	0.012	0.042
B6-20*	20	9/8/2013	0.056	0.0074	--	0.013	--	0.046	0.012	--	--	--	--	--	--	--	0.07	0.0097	0.065	--	--	0.017	--	--	0.0090	0.0094	0.018
B6-20D*	20	9/8/2013	0.050	0.0073	--	0.016	--	0.051	0.010	--	--	--	--	--	--	--	0.076	0.0094	0.065	--	--	0.014	--	--	0.011	0.014	0.025
B6-30*	30	9/8/2013	0.056	--	--	0.012	--	--	0.017	--	--	--	--	--	--	--	0.065	0.0073	0.048	--	--	0.016	--	--	--	--	--
B6-39*	39	9/8/2013	0.039	--	--	--	--	--	0.018	--	--	--	--	--	--	--	0.027	0.0084	0.014	--	--	0.016	--	--	--	--	--
B6-45*	45	9/8/2013	0.034	--	--	--	--	--	--	--	--	--	--	--	--	--	0.034	--	--	--	--	0.015	--	--	--	--	--
B7-25*	25	9/8/2013	0.048	0.0059	--	0.011	--	--	0.015	--	--	0.010	0.14	--	--	--	0.066	--	--	--	--	0.080	--	--	--	--	--
B7-35*	35	9/8/2013	0.025	--	--	--	--	--	--	--	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B7-35S*	35	9/8/2013	0.023	--	--	--	--	--	--	--	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B7-45*	45	9/8/2013	0.083	0.0061	0.019	0.020	--	0.14	0.086	0.0075	--	0.066	0.38	--	--	0.012	0.016	0.011	--	--	--	0.015	--	--	--	--	--
B8,5**	5	5/12/2013	--	0.0227	--	--	--	--	0.015	--	0.00865	--	--	--	--	--	0.0398	0.0123	--	0.00502	0.00543	0.0386	--	--	0.0026	--	0.0026
B8,15**	15	5/12/2013	--	0.00437	--	--	--	--	0.011	--	0.00478	--	--	--	--	--	0.00732	0.0028	--	--	--	0.0133	--	--	--	--	--
B9,5**	5	6/12/2013	--	0.0037	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0033	--	--	--	--	--	--	--	--	--
B9,15**	15	6/12/2013	--	0.0961	--	--	--	--	0.0144	--	0.0136	--	--	--	--	--	0.0127	0.0173	--	--	0.00803	--	--	--	--	--	--
B10,5**	5	5/12/2013	--	0.00345	--	--	--	--	--	--	--	--	--	--	--	--	0.00936	0.00339	--	--	--	--	--	--	0.00304	--	0.0030
B10,15**	15	6/12/2013	--	0.00894	--	--	--	--	0.00595	--	0.00386	--	0.00388	--	--	--	0.067	0.00656	--	--	0.00404	0.0161	--	--	0.00252	--	0.0025
B16-10	10	9/25/2014	--	0.033	--	--	0.045	--	--	--	--	0.271	--	--	1.43	--	--	0.282	--	--	--	--	0.280	0.076	--	--	6.98
B16-20	20	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	0.282	--	--	0.062	--	--	--	--	--	--	--	--	3.40
B16-30	30	9/25/2014	--	--	--	--	--	--	--	--	--	0.084	--	--	--	--	0.168	0.022	0.035	--	--	--	--	--	--	--	0.845
B16-35	35	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.014	--	--	--	--	--	--	--	--	0.081
B17-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	0.737	--	--	0.437	0.049	0.490	--	--	--	--	--	--	--	0.765
B17-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.054	--	--	--	--	--	--	--	--	--	--
B17-25	25	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.57	--	0.021	--	--	--	--	--	--	--	--
B17-25REP	25	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.24	--	0.028	--	--	--	--	--	--	--	--
B18-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--	--	--
B18-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.128	0.032	--	--	--	--	--	--	--	--	0.750
B18-25	25	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.531	--	--	--	--	--	--	--	--	--	--
B19-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.074	--	--	--	--	--	--	--	--	--	--
B19-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.097	0.019	--	--	--	--	--	--	--	--	0.722

Table 5

Soil-gas Laboratory Analytical Results - VOCs

20846 Normandie Avenue

Torrance, California 90502

Sample ID	Depth (ft bgs)	Date	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	2-Butanone (µg/L)	n-Butylbenzene (µg/L)	Carbon Disulfide (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethane (1,1-DCA) (µg/L)	1,1-Dichloroethene (1,1-DCE) (µg/L)	cis-1,2-Dichloroethene (µg/L)	Ethylbenzene (µg/L)	4-Methyl-2-Pentanone (µg/L)	Tetrachloroethene (PCE) (µg/L)	Toluene (µg/L)	Trichloroethene (TCE) (µg/L)	1,1,1-Trichloroethane (µg/L)	Trichlorofluoromethane (µg/L)	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Xylenes (Total) (µg/L)
B19-25	25	9/25/2014	--	--	--	--	--	--	--	--	--	--	0.208	--	--	--	0.163	0.030	--	--	--	--	--	--	--	--	--	0.753
B20-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B20-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.109	--	--	--	--	--	--	--	--	--
B20-25	25	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B21-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B21-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.035	--	0.015	--	--	--	--	--	--	--	--
B22-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B22-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.088	--	--	--	--	--	--	--	--	--
B22-15REP	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.069	--	--	--	--	--	--	--	--	--
B23-5	5	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B23-15	15	9/25/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DTSC Preliminary Screening Level			640	0.00168	0.00152	104	3.6	14.6	0.0024	1.88	2	0.036	1.46	0.146	0.022	62	0.0082	6.2	0.0096	20.8	14.6	62	0.146	0.74	2	2	2

Notes:

VOCs = Volatile organic compounds

Feet bgs = Feet below ground surface

µg/L = Microgram per liter

-- = analyte not detected at or above the laboratory reporting limit, or analyte not analyzed

Samples analyzed by EPA Method 8260B, samples with * analyzed by EPA Method TO-15, samples with ** analyzed by EPA Method TO-14. In some cases, laboratory analytical results were converted to µg/L.

DTSC Preliminary Screening Level = Calculated Screening Level based on US EPA Residential Regional Screening Levels (RSLs, THQ=1, November 2014) with sub-slab attenuation factor of 0.05. Where indoor air screening level from DTSC HHRA Note 3 (July 2014) is available, the alternate DTSC-recommended v

NE = Not Established

1.57 Concentration above calculated screening level

Table 6

Johnson and Ettinger Vapor Intrusion Residential Scenario Model Summary

20846 Normandie Avenue

Torrance, California 90502

Sampling Location	Depth (ft bgs)	Sampling Date	Lithology	Compound	Concentration (µg/L)	Carcinogenic Risk	Hazard Index
B16-10	10	9/25/2014	Sand	Benzene	0.033	3.62E-07	9.72E-03
				n-Butylbenzene	0.045	NA	1.58E-04
				1,1-Dichloroethane	0.271	1.57E-07	3.28E-04
				Ethylbenzene	1.43	1.14E-06	1.06E-03
				Toluene	0.282	NA	7.59E-04
				1,2,4-Trimethylbenzene	0.280	NA	2.72E-02
				1,3,5-Trimethylbenzene	0.076	NA	1.47E-03
				Xylenes	6.98	NA	5.17E-02
				B16-10 Cummulative		**1.66E-06**	**9.24E-02**
B16-20	20	9/25/2014	Sand	Ethylbenzene	0.282	1.30E-07	1.21E-04
				Toluene	0.062	NA	9.87E-05
				Xylenes	3.40	NA	1.46E-02
				B16-20 Cummulative		**1.30E-07**	**1.48E-02**
B16-30	30	9/25/2014	Sand	1,1-Dichloroethane	0.084	2.08E-08	4.32E-05
				Tetrachloroethene	0.168	9.83E-08	1.11E-03
				Toluene	0.022	NA	2.48E-05
				Trichloroethene	0.035	1.87E-08	5.32E-03
				Xylenes	0.845	NA	2.56E-03
				B16-30 Cummulative		**1.38E-07**	**9.06E-03**
B17-5	5	9/25/2014	Sand	cis-1,2-Dichloroethene	0.737	NA	1.38E-01
				Tetrachloroethene	0.437	1.08E-06	1.22E-02
				Toluene	0.049	NA	2.02E-04
				Trichloroethene	0.490	9.99E-10	2.84E-04
				Xylenes	0.765	NA	8.86E-03
				B17-5 Cummulative		**1.09E-06**	**1.59E-01**
B17-15	15	9/25/2014	Sand	Tetrachloroethene	0.054	5.84E-08	6.59E-04
				B17-15 Cummulative		**5.84E-08**	**6.59E-04**
B17-25	25	9/25/2014	Sand	Tetrachloroethene	1.57	1.08E-06	1.23E-02
				Trichloroethene	0.028	1.76E-08	5.00E-03
				B17-25 Cummulative		**1.10E-06**	**1.73E-02**
B18-15	15	9/25/2014	Sand	Tetrachloroethene	0.128	1.38E-07	1.56E-03
				Toluene	0.032	NA	6.40E-05
				Xylenes	0.750	NA	4.08E-03
				B18-15 Cummulative		**1.38E-07**	**5.71E-03**
B18-25	25	9/25/2014	Sand	Tetrachloroethene	0.531	3.67E-07	4.15E-03
				B18-25 Cummulative		**3.67E-07**	**4.15E-03**
B19-5	5	9/25/2014	Sand	Tetrachloroethene	0.074	1.84E-07	2.07E-03
				B19-5 Cummulative		**1.84E-07**	**2.07E-03**
B19-15	15	9/25/2014	Sand	Tetrachloroethene	0.097	1.05E-07	1.18E-03
				Toluene	0.019	NA	3.80E-05
				Xylenes	0.722	NA	3.93E-03
				B19-15 Cummulative		**1.05E-07**	**5.15E-03**
B19-25	25	9/25/2014	Sand	1,1-Dichloroethene	0.208	NA	1.28E-03
				Tetrachloroethene	0.163	1.13E-07	1.27E-03
				Toluene	0.030	NA	3.96E-05
				Xylenes	0.753	NA	2.68E-03
				B19-25 Cummulative		**1.13E-07**	**5.27E-03**
B21-15	15	9/25/2014	Sand	Tetrachloroethene	0.035	3.78E-08	4.27E-04
				Trichloroethene	0.015	1.44E-08	4.09E-03
				B21-15 Cummulative		**5.22E-08**	**4.52E-03**

Notes:

Ft bgs = Feet below ground surface

µg/L = Microgram per liter

NA = Not applicable

1.66E-06 Carcinogenic Risk above 1x10^-6 or Hazard Index above 1

Vapor Intrusion risk calculated from DTSC-modified SG-SCREEN Johnson Ettinger model worksheet (March 2014)

APPENDIX A

Boring Logs and Soil-gas Probe Construction Details

APPENDIX B

Laboratory Reports

APPENDIX B

Laboratory Reports

October 07, 2014

Jeff Sharp
Sharp Environmental Technologies
8393 Beacon
San Pedro, CA 90733

TEL: (310) 505-3675
FAX:

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013460

RE: ECI

Attention: Jeff Sharp

Enclosed are the results for sample(s) received on September 26, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 or Molky Brar at (562)-881-3622 if we can be of further assistance to your company.

Sincerely,

Jose Tenorio Jr.
Laboratory Director

ASSET Laboratories **Date:** *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Project: ECI
Lab Order: N013460

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8015B_DRO/ORO:

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) on QC samples N013460-016A-MS and N013460-016A-MSD is outside criteria ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8081A:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) is outside criteria for some analytes ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Dilution was necessary on sample N013460-008 due to failed Internal Standard when sample was analyzed at no dilution possibly due to matrix interference. Sample was analyzed with dilution and internal standard met method criteria.

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CASE NARRATIVE

Analytical Comments for EPA 8082:

Surrogate Decachlorobiphenyl was outside recovery limit on sample N013460-010 possibly due to matrix interference. The other surrogate was recovered within control limits.

Surrogates and target analytes for the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) is outside criteria for Aroclor 1260 ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8270C:

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) on QC samples N013460-007A-MS and N013460-007A-MSD is outside criteria for Bis(2-chloroethyl)ether ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Surrogate 2,4,6-Tribromophenol was outside recovery limit on sample N013460-014 possibly due to matrix interference. The other surrogates were recovered within control limits.

Dilution on samples N013460-006, N013460-008, N013460-012, N013460-014, N013460-022 , N013460-026, N013460-028, N013460-029, N013460-030, N013460-031, N013460-032, N013460-033, N013457-008C-MS and N013457-008C-MSD was necessary due to failed Internal Standard when samples were analyzed at lower dilution possibly due to matrix interference. Samples were analyzed with further dilution and internal standard met method criteria. Affected analytes for this failed internal standards were reported at a dilution that meet internal standard recovery limit.

Laboratory Control Sample (LCS-46613) recovery biased high for Di-n-octylphthalate. Sample results were non-detect (ND) for this analyte therefore reanalysis was not necessary.

Laboratory Control Sample (LCS-46613) recovery biased low for Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene, 2,4-Dinitrophenol, and 4,6-Dinitro-2-methylphenol. NELAC standard allows for four analytes in marginal exceedence based on 71-90 analytes on Laboratory Conrol Sample (LCS).

Sample N013460-028 and QC samples N013457-008C-MS and N013457-008C-MSD were flagged A6L to indicate that concentrations reported are estimated due to internal standard Perylene-d12 not meeting method recovery criteria. Sample and QC samples were analyzed at 10x dilution but internal standard still failed recovery criteria.

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ASSET Laboratories

Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Project: ECI
Lab Order: N013460
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013460-001A	B20-10	Soil	9/24/2014	9/26/2014	10/7/2014
N013460-002A	B20-15	Soil	9/24/2014	9/26/2014	10/7/2014
N013460-003A	B20-20	Soil	9/24/2014	9/26/2014	10/7/2014
N013460-004A	B20-25	Soil	9/24/2014	9/26/2014	10/7/2014
N013460-005A	B20-30	Soil	9/24/2014	9/26/2014	10/7/2014
N013460-006A	B21-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-007A	B21-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-008A	B22-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-009A	B22-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-010A	B22-10	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-011A	B22-15	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-012A	B23-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-013A	B23-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-014A	B24-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-015A	B24-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-016A	B25-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-017A	B25-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-018A	B26-0.5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-019A	B26-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-020A	B27-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-021A	B27-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-022A	B28-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-023A	B28-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-024A	B29-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-025A	B29-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-026A	B30-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-027A	B30-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-028A	B31-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-029A	B31-5	Soil	9/25/2014	9/26/2014	10/7/2014

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CLIENT: Sharp Environmental Technologies
Project: ECI
Lab Order: N013460
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013460-030A	B32-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-031A	B32-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-032A	B33-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-033A	B33-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-034A	B34-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-035A	B34-5	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-036A	B35-2	Soil	9/25/2014	9/26/2014	10/7/2014
N013460-037A	B35-5	Soil	9/25/2014	9/26/2014	10/7/2014

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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-15
Lab Order:	N013460	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:09 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/2/2014 06:09 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/2/2014 06:09 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:09 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 06:09 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/2/2014 06:09 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:09 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 06:09 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 06:09 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:09 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 06:09 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:09 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 06:09 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 06:09 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:09 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:09 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:09 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 06:09 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 06:09 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:09 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 06:09 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 06:09 AM
Surr: Tetrachloro-m-xylene	42.0	0	19-120		%REC	1	10/2/2014 06:09 AM
Surr: Decachlorobiphenyl	55.4	0	22-141		%REC	1	10/2/2014 06:09 AM
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
Aroclor 1016	ND	5.0	16		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1232	ND	11	16		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1242	ND	8.1	16		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1248	ND	2.8	16		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1254	ND	4.9	16		µg/Kg	1	10/2/2014 06:09 AM
Aroclor 1260	ND	3.2	16		µg/Kg	1	10/2/2014 06:09 AM
Surr: Decachlorobiphenyl	55.2	0	41-150		%REC	1	10/2/2014 06:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-15
Lab Order:	N013460	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
Surr: Tetrachloro-m-xylene	42.1	0	27-120		%REC	1	10/2/2014 06:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-20
Lab Order:	N013460	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 07:02 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 07:02 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 07:02 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 07:02 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 07:02 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 07:02 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 07:02 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 07:02 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 07:02 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 07:02 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 07:02 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 07:02 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 07:02 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/30/2014 07:02 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 07:02 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 07:02 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 07:02 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 07:02 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 07:02 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 07:02 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 07:02 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/30/2014 07:02 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 07:02 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 07:02 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 07:02 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 07:02 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 07:02 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 07:02 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 07:02 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 07:02 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 07:02 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 07:02 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 07:02 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 07:02 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 07:02 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 07:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-20
Lab Order:	N013460	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1600		µg/Kg	1	9/30/2014 07:02 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 07:02 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 07:02 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 07:02 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 07:02 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 07:02 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 07:02 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 07:02 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 07:02 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 07:02 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 07:02 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 07:02 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 07:02 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 07:02 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/30/2014 07:02 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 07:02 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 07:02 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/30/2014 07:02 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 07:02 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 07:02 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 07:02 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 07:02 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 07:02 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 07:02 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 07:02 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 07:02 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 07:02 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 07:02 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 07:02 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 07:02 PM
Surr: 1,2-Dichlorobenzene-d4	48.3	0	20-120		%REC	1	9/30/2014 07:02 PM
Surr: 2,4,6-Tribromophenol	56.7	0	31-125		%REC	1	9/30/2014 07:02 PM
Surr: 2-Chlorophenol-d4	56.8	0	29-120		%REC	1	9/30/2014 07:02 PM
Surr: 2-Fluorobiphenyl	53.2	0	35-120		%REC	1	9/30/2014 07:02 PM
Surr: 2-Fluorophenol	56.2	0	27-120		%REC	1	9/30/2014 07:02 PM
Surr: 4-Terphenyl-d14	75.9	0	26-142		%REC	1	9/30/2014 07:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-003

Client Sample ID: B20-20
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	54.4	0	25-120		%REC	1	9/30/2014 07:02 PM
Surr: Phenol-d5	54.4	0	20-120		%REC	1	9/30/2014 07:02 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:02 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 04:02 AM
4,4´-DDT	0.59	0.22	2.0	J	µg/Kg	1	10/1/2014 04:02 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:02 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:02 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 04:02 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:02 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:02 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:02 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:02 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:02 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:02 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:02 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:02 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:02 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:02 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:02 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:02 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:02 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:02 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:02 AM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 04:02 AM
Surr: Tetrachloro-m-xylene	54.9	0	19-120		%REC	1	10/1/2014 04:02 AM
Surr: Decachlorobiphenyl	58.4	0	22-141		%REC	1	10/1/2014 04:02 AM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.032	0.0042	0.10	J	mg/Kg	1	10/1/2014 09:50 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-003

Client Sample ID: B20-20
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 07:49 PM
Arsenic	5.2	0.10	1.0		mg/Kg	1	9/30/2014 07:49 PM
Barium	57	0.14	1.0		mg/Kg	1	9/30/2014 07:49 PM
Beryllium	0.18	0.13	1.0	J	mg/Kg	1	9/30/2014 07:49 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 07:49 PM
Chromium	15	0.14	1.0		mg/Kg	1	9/30/2014 07:49 PM
Cobalt	7.2	0.14	1.0		mg/Kg	1	9/30/2014 07:49 PM
Copper	8.1	0.11	2.0		mg/Kg	1	9/30/2014 07:49 PM
Lead	3.1	0.12	1.0		mg/Kg	1	9/30/2014 07:49 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 07:49 PM
Nickel	12	0.13	1.0		mg/Kg	1	9/30/2014 07:49 PM
Selenium	0.32	0.17	1.0	J	mg/Kg	1	9/30/2014 07:49 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 07:49 PM
Thallium	0.90	0.16	1.0	J	mg/Kg	1	9/30/2014 07:49 PM
Vanadium	31	0.14	1.0		mg/Kg	1	9/30/2014 07:49 PM
Zinc	29	0.13	1.0		mg/Kg	1	9/30/2014 07:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B21-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-006		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140930A** QC Batch: **46603** PrepDate **9/30/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 01:40 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 01:40 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 01:40 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 01:40 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 01:40 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 01:40 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 01:40 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 01:40 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 01:40 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 01:40 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 01:40 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 01:40 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 01:40 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 01:40 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 01:40 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 01:40 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 01:40 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 01:40 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 01:40 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 01:40 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 01:40 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 01:40 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 01:40 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 01:40 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 01:40 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 01:40 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 01:40 AM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 01:40 AM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 01:40 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 01:40 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 01:40 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 01:40 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/1/2014 11:34 AM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	10/1/2014 11:34 AM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/1/2014 11:34 AM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/1/2014 11:34 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-006

Client Sample ID: B21-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 01:40 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 01:40 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 01:40 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 01:40 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 01:40 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 01:40 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 01:40 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 01:40 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 01:40 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/1/2014 11:34 AM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/1/2014 11:34 AM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 01:40 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 01:40 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 01:40 AM
Fluoranthene	ND	61	330		µg/Kg	1	10/1/2014 01:40 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 01:40 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 01:40 AM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 01:40 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 01:40 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 01:40 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/1/2014 11:34 AM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 01:40 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 01:40 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 01:40 AM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 01:40 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 01:40 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 01:40 AM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 01:40 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 01:40 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 01:40 AM
Surr: 1,2-Dichlorobenzene-d4	21.1	0	20-120		%REC	10	10/1/2014 11:34 AM
Surr: 2,4,6-Tribromophenol	59.2	0	31-125		%REC	1	10/1/2014 01:40 AM
Surr: 2-Chlorophenol-d4	43.7	0	29-120		%REC	1	10/1/2014 01:40 AM
Surr: 2-Fluorobiphenyl	42.0	0	35-120		%REC	1	10/1/2014 01:40 AM
Surr: 2-Fluorophenol	41.0	0	27-120		%REC	1	10/1/2014 01:40 AM
Surr: 4-Terphenyl-d14	81.0	0	26-142		%REC	1	10/1/2014 01:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-006

Client Sample ID: B21-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	34.8	0	25-120		%REC	1	10/1/2014 01:40 AM
Surr: Phenol-d5	47.2	0	20-120		%REC	1	10/1/2014 01:40 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	20	2.9	10		mg/Kg	1	9/29/2014 11:06 PM
ORO	52	1.8	10		mg/Kg	1	9/29/2014 11:06 PM
Surr: p-Terphenyl	106	0	49-173		%REC	1	9/29/2014 11:06 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	1.1	0.19	2.0	J	µg/Kg	1	10/1/2014 07:02 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 07:02 AM
4,4´-DDT	4.0	0.22	2.0		µg/Kg	1	10/1/2014 07:02 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:02 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:02 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 07:02 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:02 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:02 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:02 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:02 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:02 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:02 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:02 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:02 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:02 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:02 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:02 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:02 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:02 AM
Heptachlor epoxide	0.15	0.12	1.0	J	µg/Kg	1	10/1/2014 07:02 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:02 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:02 AM
Surr: Tetrachloro-m-xylene	39.8	0	19-120		%REC	1	10/1/2014 07:02 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-006

Client Sample ID: B21-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	36.2	0	22-141		%REC	1	10/1/2014 07:02 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.034	0.011	1.0	J	mg/Kg	1	9/29/2014 11:15 AM
Surr: Chlorobenzene - d5	115	0	57-134		%REC	1	9/29/2014 11:15 AM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.039	0.0042	0.10	J	mg/Kg	1	10/1/2014 09:53 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 05:53 PM
Arsenic	2.0	0.10	1.0		mg/Kg	1	10/2/2014 05:53 PM
Barium	72	0.14	1.0		mg/Kg	1	10/2/2014 05:53 PM
Beryllium	0.20	0.13	1.0	J	mg/Kg	1	10/2/2014 05:53 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 05:53 PM
Chromium	17	0.14	1.0		mg/Kg	1	10/2/2014 05:53 PM
Cobalt	6.9	0.14	1.0		mg/Kg	1	10/2/2014 05:53 PM
Copper	10	0.11	2.0		mg/Kg	1	10/2/2014 05:53 PM
Lead	6.9	0.12	1.0		mg/Kg	1	10/2/2014 05:53 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 05:53 PM
Nickel	11	0.13	1.0		mg/Kg	1	10/2/2014 05:53 PM
Selenium	0.54	0.17	1.0	J	mg/Kg	1	10/2/2014 05:53 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 05:53 PM
Thallium	0.16	0.16	1.0	J	mg/Kg	1	10/2/2014 05:53 PM
Vanadium	23	0.14	1.0		mg/Kg	1	10/2/2014 05:53 PM
Zinc	36	0.13	1.0		mg/Kg	1	10/2/2014 05:53 PM

Qualifiers:

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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B21-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	48	370		µg/Kg	1	10/1/2014 03:07 PM
1,2-Dichlorobenzene	ND	47	370		µg/Kg	1	10/1/2014 03:07 PM
1,3-Dichlorobenzene	ND	56	370		µg/Kg	1	10/1/2014 03:07 PM
1,4-Dichlorobenzene	ND	47	370		µg/Kg	1	10/1/2014 03:07 PM
2,4,5-Trichlorophenol	ND	46	370		µg/Kg	1	10/1/2014 03:07 PM
2,4,6-Trichlorophenol	ND	44	370		µg/Kg	1	10/1/2014 03:07 PM
2,4-Dichlorophenol	ND	46	1900		µg/Kg	1	10/1/2014 03:07 PM
2,4-Dimethylphenol	ND	100	370		µg/Kg	1	10/1/2014 03:07 PM
2,4-Dinitrophenol	ND	30	1900		µg/Kg	1	10/1/2014 03:07 PM
2,4-Dinitrotoluene	ND	50	370		µg/Kg	1	10/1/2014 03:07 PM
2,6-Dinitrotoluene	ND	49	370		µg/Kg	1	10/1/2014 03:07 PM
2-Chloronaphthalene	ND	51	370		µg/Kg	1	10/1/2014 03:07 PM
2-Chlorophenol	ND	49	370		µg/Kg	1	10/1/2014 03:07 PM
2-Methylnaphthalene	ND	190	370		µg/Kg	1	10/1/2014 03:07 PM
2-Methylphenol	ND	54	370		µg/Kg	1	10/1/2014 03:07 PM
2-Nitroaniline	ND	61	1900		µg/Kg	1	10/1/2014 03:07 PM
2-Nitrophenol	ND	51	370		µg/Kg	1	10/1/2014 03:07 PM
3,3´-Dichlorobenzidine	ND	28	750		µg/Kg	1	10/1/2014 03:07 PM
3-Nitroaniline	ND	55	1900		µg/Kg	1	10/1/2014 03:07 PM
4,6-Dinitro-2-methylphenol	ND	59	1900		µg/Kg	1	10/1/2014 03:07 PM
4-Bromophenyl-phenylether	ND	51	370		µg/Kg	1	10/1/2014 03:07 PM
4-Chloro-3-methylphenol	ND	46	750		µg/Kg	1	10/1/2014 03:07 PM
4-Chloroaniline	ND	50	750		µg/Kg	1	10/1/2014 03:07 PM
4-Chlorophenyl-phenylether	ND	51	370		µg/Kg	1	10/1/2014 03:07 PM
4-Methylphenol	ND	41	370		µg/Kg	1	10/1/2014 03:07 PM
4-Nitroaniline	ND	52	1900		µg/Kg	1	10/1/2014 03:07 PM
4-Nitrophenol	ND	40	1900		µg/Kg	1	10/1/2014 03:07 PM
Acenaphthene	ND	46	370		µg/Kg	1	10/1/2014 03:07 PM
Acenaphthylene	ND	42	370		µg/Kg	1	10/1/2014 03:07 PM
Anthracene	ND	73	370		µg/Kg	1	10/1/2014 03:07 PM
Benzidine (M)	ND	510	1900		µg/Kg	1	10/1/2014 03:07 PM
Benzo(a)anthracene	ND	85	370		µg/Kg	1	10/1/2014 03:07 PM
Benzo(a)pyrene	ND	73	230		µg/Kg	1	10/1/2014 03:07 PM
Benzo(b)fluoranthene	ND	46	370		µg/Kg	1	10/1/2014 03:07 PM
Benzo(g,h,i)perylene	ND	54	370		µg/Kg	1	10/1/2014 03:07 PM
Benzo(k)fluoranthene	ND	64	370		µg/Kg	1	10/1/2014 03:07 PM

Qualifiers:

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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B21-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	130	1900		µg/Kg	1	10/1/2014 03:07 PM
Benzyl alcohol	ND	77	750		µg/Kg	1	10/1/2014 03:07 PM
Bis(2-chloroethoxy)methane	ND	73	370		µg/Kg	1	10/1/2014 03:07 PM
Bis(2-chloroethyl)ether	ND	70	370		µg/Kg	1	10/1/2014 03:07 PM
Bis(2-chloroisopropyl)ether	ND	64	370		µg/Kg	1	10/1/2014 03:07 PM
Bis(2-ethylhexyl)phthalate	ND	91	370		µg/Kg	1	10/1/2014 03:07 PM
Butylbenzylphthalate	ND	76	370		µg/Kg	1	10/1/2014 03:07 PM
Chrysene	ND	91	370		µg/Kg	1	10/1/2014 03:07 PM
Di-n-butylphthalate	ND	46	370		µg/Kg	1	10/1/2014 03:07 PM
Di-n-octylphthalate	ND	58	370		µg/Kg	1	10/1/2014 03:07 PM
Dibenz(a,h)anthracene	ND	110	230		µg/Kg	1	10/1/2014 03:07 PM
Dibenzofuran	ND	45	370		µg/Kg	1	10/1/2014 03:07 PM
Diethylphthalate	ND	50	370		µg/Kg	1	10/1/2014 03:07 PM
Dimethylphthalate	ND	48	370		µg/Kg	1	10/1/2014 03:07 PM
Fluoranthene	ND	70	370		µg/Kg	1	10/1/2014 03:07 PM
Fluorene	ND	51	370		µg/Kg	1	10/1/2014 03:07 PM
Hexachlorobenzene	ND	53	370		µg/Kg	1	10/1/2014 03:07 PM
Hexachlorobutadiene	ND	69	750		µg/Kg	1	10/1/2014 03:07 PM
Hexachlorocyclopentadiene	ND	43	750		µg/Kg	1	10/1/2014 03:07 PM
Hexachloroethane	ND	48	370		µg/Kg	1	10/1/2014 03:07 PM
Indeno(1,2,3-cd)pyrene	ND	44	370		µg/Kg	1	10/1/2014 03:07 PM
Isophorone	ND	67	370		µg/Kg	1	10/1/2014 03:07 PM
N-Nitrosodi-n-propylamine	ND	52	370		µg/Kg	1	10/1/2014 03:07 PM
N-Nitrosodiphenylamine	ND	54	370		µg/Kg	1	10/1/2014 03:07 PM
Naphthalene	ND	55	370		µg/Kg	1	10/1/2014 03:07 PM
Nitrobenzene	ND	64	370		µg/Kg	1	10/1/2014 03:07 PM
Pentachlorophenol	ND	39	1900		µg/Kg	1	10/1/2014 03:07 PM
Phenanthrene	ND	95	370		µg/Kg	1	10/1/2014 03:07 PM
Phenol	ND	43	370		µg/Kg	1	10/1/2014 03:07 PM
Pyrene	ND	53	370		µg/Kg	1	10/1/2014 03:07 PM
Surr: 1,2-Dichlorobenzene-d4	54.0	0	20-120		%REC	1	10/1/2014 03:07 PM
Surr: 2,4,6-Tribromophenol	71.5	0	31-125		%REC	1	10/1/2014 03:07 PM
Surr: 2-Chlorophenol-d4	65.8	0	29-120		%REC	1	10/1/2014 03:07 PM
Surr: 2-Fluorobiphenyl	64.8	0	35-120		%REC	1	10/1/2014 03:07 PM
Surr: 2-Fluorophenol	64.8	0	27-120		%REC	1	10/1/2014 03:07 PM
Surr: 4-Terphenyl-d14	83.7	0	26-142		%REC	1	10/1/2014 03:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-007

Client Sample ID: B21-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	64.0	0	25-120		%REC	1	10/1/2014 03:07 PM
Surr: Phenol-d5	62.9	0	20-120		%REC	1	10/1/2014 03:07 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	6.8	2.9	9.9	J	mg/Kg	1	9/29/2014 11:32 PM
ORO	5.0	1.8	9.9	J	mg/Kg	1	9/29/2014 11:32 PM
Surr: p-Terphenyl	83.0	0	49-173		%REC	1	9/29/2014 11:32 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:25 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 04:25 AM
4,4´-DDT	0.52	0.22	2.0	J	µg/Kg	1	10/1/2014 04:25 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:25 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:25 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 04:25 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:25 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:25 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:25 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:25 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:25 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:25 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:25 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:25 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:25 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:25 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:25 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:25 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:25 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:25 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:25 AM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 04:25 AM
Surr: Tetrachloro-m-xylene	57.2	0	19-120		%REC	1	10/1/2014 04:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-007

Client Sample ID: B21-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	57.8	0	22-141		%REC	1	10/1/2014 04:25 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.025	0.011	1.0	J	mg/Kg	1	9/29/2014 11:48 AM
Surr: Chlorobenzene - d5	104	0	57-134		%REC	1	9/29/2014 11:48 AM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.027	0.0041	0.099	J	mg/Kg	1	10/1/2014 09:56 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 08:31 PM
Arsenic	3.4	0.10	1.0		mg/Kg	1	10/2/2014 08:31 PM
Barium	120	0.14	1.0		mg/Kg	1	10/2/2014 08:31 PM
Beryllium	0.20	0.13	1.0	J	mg/Kg	1	10/2/2014 08:31 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:31 PM
Chromium	15	0.14	1.0		mg/Kg	1	10/2/2014 08:31 PM
Cobalt	4.5	0.14	1.0		mg/Kg	1	10/2/2014 08:31 PM
Copper	11	0.11	2.0		mg/Kg	1	10/2/2014 08:31 PM
Lead	5.1	0.12	1.0		mg/Kg	1	10/2/2014 08:31 PM
Molybdenum	0.45	0.13	1.0	J	mg/Kg	1	10/2/2014 08:31 PM
Nickel	12	0.13	1.0		mg/Kg	1	10/2/2014 08:31 PM
Selenium	0.30	0.17	1.0	J	mg/Kg	1	10/2/2014 08:31 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:31 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 08:31 PM
Vanadium	24	0.14	1.0		mg/Kg	1	10/2/2014 08:31 PM
Zinc	26	0.13	1.0		mg/Kg	1	10/2/2014 08:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B22-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 02:33 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 02:33 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 02:33 AM
1,4-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 02:33 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 02:33 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 02:33 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 02:33 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 02:33 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 02:33 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 02:33 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 02:33 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 02:33 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 02:33 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 02:33 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 02:33 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 02:33 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 02:33 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 02:33 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 02:33 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 02:33 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 02:33 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 02:33 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 02:33 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 02:33 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 02:33 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 02:33 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 02:33 AM
Acenaphthene	ND	40	330		µg/Kg	1	10/1/2014 02:33 AM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 02:33 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 02:33 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 02:33 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 02:33 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/1/2014 12:27 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	10/1/2014 12:27 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/1/2014 12:27 PM
Benzo(k)fluoranthene	ND	560	3300		µg/Kg	10	10/1/2014 12:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-008

Client Sample ID: B22-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 02:33 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 02:33 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 02:33 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 02:33 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 02:33 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 02:33 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 02:33 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 02:33 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 02:33 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/1/2014 12:27 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/1/2014 12:27 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 02:33 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 02:33 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 02:33 AM
Fluoranthene	ND	61	330		µg/Kg	1	10/1/2014 02:33 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 02:33 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 02:33 AM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	10/1/2014 02:33 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 02:33 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 02:33 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/1/2014 12:27 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 02:33 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 02:33 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 02:33 AM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 02:33 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 02:33 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 02:33 AM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 02:33 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 02:33 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 02:33 AM
Surr: 1,2-Dichlorobenzene-d4	42.2	0	20-120		%REC	1	10/1/2014 02:33 AM
Surr: 2,4,6-Tribromophenol	54.1	0	31-125		%REC	1	10/1/2014 02:33 AM
Surr: 2-Chlorophenol-d4	50.7	0	29-120		%REC	1	10/1/2014 02:33 AM
Surr: 2-Fluorobiphenyl	49.9	0	35-120		%REC	1	10/1/2014 02:33 AM
Surr: 2-Fluorophenol	48.8	0	27-120		%REC	1	10/1/2014 02:33 AM
Surr: 4-Terphenyl-d14	86.0	0	26-142		%REC	1	10/1/2014 02:33 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-008

Client Sample ID: B22-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	49.7	0	25-120		%REC	1	10/1/2014 02:33 AM
Surr: Phenol-d5	47.4	0	20-120		%REC	1	10/1/2014 02:33 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	43	2.9	10		mg/Kg	1	9/29/2014 11:58 PM
ORO	130	1.8	10		mg/Kg	1	9/29/2014 11:58 PM
Surr: p-Terphenyl	101	0	49-173		%REC	1	9/29/2014 11:58 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141003A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	14	0.39	4.0		µg/Kg	2	10/3/2014 01:38 PM
4,4´-DDE	19	0.84	4.0		µg/Kg	2	10/3/2014 01:38 PM
4,4´-DDT	3.6	0.43	4.0	J	µg/Kg	2	10/3/2014 01:38 PM
Aldrin	ND	0.26	2.0		µg/Kg	2	10/3/2014 01:38 PM
alpha-BHC	ND	0.51	2.0		µg/Kg	2	10/3/2014 01:38 PM
alpha-Chlordane	ND	0.21	2.0		µg/Kg	2	10/3/2014 01:38 PM
beta-BHC	ND	0.23	2.0		µg/Kg	2	10/3/2014 01:38 PM
Chlordane	ND	2.7	17		µg/Kg	2	10/3/2014 01:38 PM
delta-BHC	ND	0.71	2.0		µg/Kg	2	10/3/2014 01:38 PM
Dieldrin	ND	0.39	4.0		µg/Kg	2	10/3/2014 01:38 PM
Endosulfan I	ND	0.33	2.0		µg/Kg	2	10/3/2014 01:38 PM
Endosulfan II	ND	0.39	4.0		µg/Kg	2	10/3/2014 01:38 PM
Endosulfan sulfate	ND	0.86	4.0		µg/Kg	2	10/3/2014 01:38 PM
Endrin	ND	0.62	4.0		µg/Kg	2	10/3/2014 01:38 PM
Endrin aldehyde	ND	0.41	4.0		µg/Kg	2	10/3/2014 01:38 PM
Endrin ketone	ND	0.38	4.0		µg/Kg	2	10/3/2014 01:38 PM
gamma-BHC	ND	0.26	2.0		µg/Kg	2	10/3/2014 01:38 PM
gamma-Chlordane	ND	0.38	2.0		µg/Kg	2	10/3/2014 01:38 PM
Heptachlor	ND	0.28	2.0		µg/Kg	2	10/3/2014 01:38 PM
Heptachlor epoxide	ND	0.23	2.0		µg/Kg	2	10/3/2014 01:38 PM
Methoxychlor	ND	2.3	17		µg/Kg	2	10/3/2014 01:38 PM
Toxaphene	ND	11	170		µg/Kg	2	10/3/2014 01:38 PM
Surr: Tetrachloro-m-xylene	32.2	0	19-120		%REC	2	10/3/2014 01:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-008

Client Sample ID: B22-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141003A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	31.0	0	22-141		%REC	2	10/3/2014 01:38 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.034	0.011	1.0	J	mg/Kg	1	9/29/2014 12:21 PM
Surr: Chlorobenzene - d5	70.1	0	57-134		%REC	1	9/29/2014 12:21 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.017	0.0043	0.10	J	mg/Kg	1	10/1/2014 09:59 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 08:07 PM
Arsenic	2.2	0.10	1.0		mg/Kg	1	9/30/2014 08:07 PM
Barium	210	0.14	1.0		mg/Kg	1	9/30/2014 08:07 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:07 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:07 PM
Chromium	13	0.14	1.0		mg/Kg	1	9/30/2014 08:07 PM
Cobalt	4.7	0.14	1.0		mg/Kg	1	9/30/2014 08:07 PM
Copper	19	0.11	2.0		mg/Kg	1	9/30/2014 08:07 PM
Lead	13	0.12	1.0		mg/Kg	1	9/30/2014 08:07 PM
Molybdenum	0.23	0.13	1.0	J	mg/Kg	1	9/30/2014 08:07 PM
Nickel	12	0.13	1.0		mg/Kg	1	9/30/2014 08:07 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 08:07 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:07 PM
Thallium	0.47	0.16	1.0	J	mg/Kg	1	9/30/2014 08:07 PM
Vanadium	24	0.14	1.0		mg/Kg	1	9/30/2014 08:07 PM
Zinc	33	0.13	1.0		mg/Kg	1	9/30/2014 08:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B22-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-009		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140930A** QC Batch: **46603** PrepDate **9/30/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 11:28 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 11:28 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 11:28 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 11:28 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 11:28 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 11:28 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 11:28 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 11:28 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 11:28 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 11:28 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 11:28 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 11:28 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 11:28 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/30/2014 11:28 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 11:28 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 11:28 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 11:28 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 11:28 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 11:28 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 11:28 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 11:28 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/30/2014 11:28 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 11:28 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 11:28 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 11:28 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 11:28 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 11:28 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 11:28 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 11:28 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 11:28 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 11:28 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 11:28 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 11:28 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 11:28 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 11:28 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 11:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B22-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1600		µg/Kg	1	9/30/2014 11:28 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 11:28 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 11:28 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 11:28 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 11:28 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 11:28 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 11:28 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 11:28 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 11:28 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 11:28 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 11:28 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 11:28 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 11:28 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 11:28 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/30/2014 11:28 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 11:28 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 11:28 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/30/2014 11:28 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 11:28 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 11:28 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 11:28 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 11:28 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 11:28 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 11:28 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 11:28 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 11:28 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 11:28 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 11:28 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 11:28 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 11:28 PM
Surr: 1,2-Dichlorobenzene-d4	39.2	0	20-120		%REC	1	9/30/2014 11:28 PM
Surr: 2,4,6-Tribromophenol	52.7	0	31-125		%REC	1	9/30/2014 11:28 PM
Surr: 2-Chlorophenol-d4	46.6	0	29-120		%REC	1	9/30/2014 11:28 PM
Surr: 2-Fluorobiphenyl	44.1	0	35-120		%REC	1	9/30/2014 11:28 PM
Surr: 2-Fluorophenol	46.2	0	27-120		%REC	1	9/30/2014 11:28 PM
Surr: 4-Terphenyl-d14	62.0	0	26-142		%REC	1	9/30/2014 11:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-009

Client Sample ID: B22-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	44.9	0	25-120		%REC	1	9/30/2014 11:28 PM
Surr: Phenol-d5	43.7	0	20-120		%REC	1	9/30/2014 11:28 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	41	2.9	10		mg/Kg	1	9/30/2014 12:23 AM
ORO	78	1.8	10		mg/Kg	1	9/30/2014 12:23 AM
Surr: p-Terphenyl	85.7	0	49-173		%REC	1	9/30/2014 12:23 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	10	0.20	2.0		µg/Kg	1	10/1/2014 07:47 AM
4,4´-DDE	9.6	0.42	2.0		µg/Kg	1	10/1/2014 07:47 AM
4,4´-DDT	1.2	0.22	2.0	J	µg/Kg	1	10/1/2014 07:47 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:47 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:47 AM
alpha-Chlordane	0.23	0.10	1.0	J	µg/Kg	1	10/1/2014 07:47 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:47 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:47 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:47 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:47 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:47 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:47 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:47 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:47 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:47 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:47 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:47 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:47 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:47 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:47 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:47 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:47 AM
Surr: Tetrachloro-m-xylene	48.8	0	19-120		%REC	1	10/1/2014 07:47 AM

Qualifiers:

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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-009

Client Sample ID: B22-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	46.2	0	22-141		%REC	1	10/1/2014 07:47 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.028	0.011	1.0	J	mg/Kg	1	9/29/2014 12:54 PM
Surr: Chlorobenzene - d5	103	0	57-134		%REC	1	9/29/2014 12:54 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.014	0.0043	0.10	J	mg/Kg	1	10/1/2014 10:02 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 08:36 PM
Arsenic	2.2	0.10	1.0		mg/Kg	1	10/2/2014 08:36 PM
Barium	85	0.14	1.0		mg/Kg	1	10/2/2014 08:36 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM
Chromium	16	0.14	1.0		mg/Kg	1	10/2/2014 08:36 PM
Cobalt	0.29	0.14	1.0	J	mg/Kg	1	10/2/2014 08:36 PM
Copper	1.0	0.11	2.0	J	mg/Kg	1	10/2/2014 08:36 PM
Lead	ND	0.12	1.0		mg/Kg	1	10/2/2014 08:36 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM
Nickel	3.2	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM
Selenium	ND	0.17	1.0		mg/Kg	1	10/2/2014 08:36 PM
Silver	2.6	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 08:36 PM
Vanadium	5.5	0.14	1.0		mg/Kg	1	10/2/2014 08:36 PM
Zinc	4.6	0.13	1.0		mg/Kg	1	10/2/2014 08:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-010

Client Sample ID: B22-10
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	49	2.9	10		mg/Kg	1	9/30/2014 12:49 AM
ORO	110	1.8	10		mg/Kg	1	9/30/2014 12:49 AM
Surr: p-Terphenyl	84.8	0	49-173		%REC	1	9/30/2014 12:49 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
4,4´-DDD	0.89	0.19	2.0	J	µg/Kg	1	10/2/2014 07:18 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/2/2014 07:18 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/2/2014 07:18 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 07:18 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 07:18 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/2/2014 07:18 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 07:18 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 07:18 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 07:18 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 07:18 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 07:18 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 07:18 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 07:18 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 07:18 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/2/2014 07:18 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 07:18 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 07:18 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 07:18 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 07:18 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 07:18 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 07:18 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 07:18 AM
Surr: Tetrachloro-m-xylene	47.2	0	19-120		%REC	1	10/2/2014 07:18 AM
Surr: Decachlorobiphenyl	40.6	0	22-141		%REC	1	10/2/2014 07:18 AM
PCBS BY GC/ECD							
EPA 3550B			**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
Aroclor 1016	ND	5.0	16		µg/Kg	1	10/2/2014 07:18 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-010

Client Sample ID: B22-10
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate		**10/1/2014**	Analyst: **MDM**
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 07:18 AM
Aroclor 1232	ND	11	16		µg/Kg	1	10/2/2014 07:18 AM
Aroclor 1242	ND	8.1	16		µg/Kg	1	10/2/2014 07:18 AM
Aroclor 1248	ND	2.8	16		µg/Kg	1	10/2/2014 07:18 AM
Aroclor 1254	ND	4.9	16		µg/Kg	1	10/2/2014 07:18 AM
Aroclor 1260	ND	3.2	16		µg/Kg	1	10/2/2014 07:18 AM
Surr: Decachlorobiphenyl	38.0	0	41-150	S	%REC	1	10/2/2014 07:18 AM
Surr: Tetrachloro-m-xylene	44.7	0	27-120		%REC	1	10/2/2014 07:18 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.040	0.011	1.0	J	mg/Kg	1	9/29/2014 04:11 PM
Surr: Chlorobenzene - d5	99.2	0	57-134		%REC	1	9/29/2014 04:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B22-15
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	6.2	2.9	9.9	J	mg/Kg	1	9/30/2014 01:15 AM
ORO	3.0	1.8	9.9	J	mg/Kg	1	9/30/2014 01:15 AM
Surr: p-Terphenyl	89.4	0	49-173		%REC	1	9/30/2014 01:15 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.027	0.011	1.0	J	mg/Kg	1	9/29/2014 02:33 PM
Surr: Chlorobenzene - d5	104	0	57-134		%REC	1	9/29/2014 02:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B23-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
1,2-Dichlorobenzene	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
1,3-Dichlorobenzene	ND	250	1600		µg/Kg	5	10/1/2014 03:25 AM
1,4-Dichlorobenzene	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
2,4,5-Trichlorophenol	ND	200	1600		µg/Kg	5	10/1/2014 03:25 AM
2,4,6-Trichlorophenol	ND	200	1600		µg/Kg	5	10/1/2014 03:25 AM
2,4-Dichlorophenol	ND	200	8200		µg/Kg	5	10/1/2014 03:25 AM
2,4-Dimethylphenol	ND	450	1600		µg/Kg	5	10/1/2014 03:25 AM
2,4-Dinitrophenol	ND	130	8200		µg/Kg	5	10/1/2014 03:25 AM
2,4-Dinitrotoluene	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
2,6-Dinitrotoluene	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
2-Chloronaphthalene	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
2-Chlorophenol	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
2-Methylnaphthalene	ND	820	1600		µg/Kg	5	10/1/2014 03:25 AM
2-Methylphenol	ND	240	1600		µg/Kg	5	10/1/2014 03:25 AM
2-Nitroaniline	ND	270	8200		µg/Kg	5	10/1/2014 03:25 AM
2-Nitrophenol	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
3,3´-Dichlorobenzidine	ND	1200	33000		µg/Kg	50	10/1/2014 01:20 PM
3-Nitroaniline	ND	240	8200		µg/Kg	5	10/1/2014 03:25 AM
4,6-Dinitro-2-methylphenol	ND	260	8200		µg/Kg	5	10/1/2014 03:25 AM
4-Bromophenyl-phenylether	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
4-Chloro-3-methylphenol	ND	200	3300		µg/Kg	5	10/1/2014 03:25 AM
4-Chloroaniline	ND	220	3300		µg/Kg	5	10/1/2014 03:25 AM
4-Chlorophenyl-phenylether	ND	230	1600		µg/Kg	5	10/1/2014 03:25 AM
4-Methylphenol	ND	180	1600		µg/Kg	5	10/1/2014 03:25 AM
4-Nitroaniline	ND	230	8200		µg/Kg	5	10/1/2014 03:25 AM
4-Nitrophenol	ND	180	8200		µg/Kg	5	10/1/2014 03:25 AM
Acenaphthene	ND	200	1600		µg/Kg	5	10/1/2014 03:25 AM
Acenaphthylene	ND	190	1600		µg/Kg	5	10/1/2014 03:25 AM
Anthracene	ND	320	1600		µg/Kg	5	10/1/2014 03:25 AM
Benzidine (M)	ND	22000	82000		µg/Kg	50	10/1/2014 01:20 PM
Benzo(a)anthracene	ND	3800	16000		µg/Kg	50	10/1/2014 01:20 PM
Benzo(a)pyrene	ND	3200	10000		µg/Kg	50	10/1/2014 01:20 PM
Benzo(b)fluoranthene	ND	2000	16000		µg/Kg	50	10/1/2014 01:20 PM
Benzo(g,h,i)perylene	ND	2400	16000		µg/Kg	50	10/1/2014 01:20 PM
Benzo(k)fluoranthene	ND	2800	16000		µg/Kg	50	10/1/2014 01:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B23-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	570	8200		µg/Kg	5	10/1/2014 03:25 AM
Benzyl alcohol	ND	340	3300		µg/Kg	5	10/1/2014 03:25 AM
Bis(2-chloroethoxy)methane	ND	320	1600		µg/Kg	5	10/1/2014 03:25 AM
Bis(2-chloroethyl)ether	ND	310	1600		µg/Kg	5	10/1/2014 03:25 AM
Bis(2-chloroisopropyl)ether	ND	280	1600		µg/Kg	5	10/1/2014 03:25 AM
Bis(2-ethylhexyl)phthalate	ND	4000	16000		µg/Kg	50	10/1/2014 01:20 PM
Butylbenzylphthalate	ND	3400	16000		µg/Kg	50	10/1/2014 01:20 PM
Chrysene	ND	4000	16000		µg/Kg	50	10/1/2014 01:20 PM
Di-n-butylphthalate	ND	200	1600		µg/Kg	5	10/1/2014 03:25 AM
Di-n-octylphthalate	ND	2500	16000		µg/Kg	50	10/1/2014 01:20 PM
Dibenz(a,h)anthracene	ND	4600	10000		µg/Kg	50	10/1/2014 01:20 PM
Dibenzofuran	ND	200	1600		µg/Kg	5	10/1/2014 03:25 AM
Diethylphthalate	ND	220	1600		µg/Kg	5	10/1/2014 03:25 AM
Dimethylphthalate	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
Fluoranthene	ND	310	1600		µg/Kg	5	10/1/2014 03:25 AM
Fluorene	ND	230	1600		µg/Kg	5	10/1/2014 03:25 AM
Hexachlorobenzene	ND	240	1600		µg/Kg	5	10/1/2014 03:25 AM
Hexachlorobutadiene	ND	300	3300		µg/Kg	5	10/1/2014 03:25 AM
Hexachlorocyclopentadiene	ND	190	3300		µg/Kg	5	10/1/2014 03:25 AM
Hexachloroethane	ND	210	1600		µg/Kg	5	10/1/2014 03:25 AM
Indeno(1,2,3-cd)pyrene	ND	2000	16000		µg/Kg	50	10/1/2014 01:20 PM
Isophorone	ND	290	1600		µg/Kg	5	10/1/2014 03:25 AM
N-Nitrosodi-n-propylamine	ND	230	1600		µg/Kg	5	10/1/2014 03:25 AM
N-Nitrosodiphenylamine	ND	240	1600		µg/Kg	5	10/1/2014 03:25 AM
Naphthalene	ND	240	1600		µg/Kg	5	10/1/2014 03:25 AM
Nitrobenzene	ND	280	1600		µg/Kg	5	10/1/2014 03:25 AM
Pentachlorophenol	ND	170	8200		µg/Kg	5	10/1/2014 03:25 AM
Phenanthrene	ND	420	1600		µg/Kg	5	10/1/2014 03:25 AM
Phenol	ND	190	1600		µg/Kg	5	10/1/2014 03:25 AM
Pyrene	ND	230	1600		µg/Kg	5	10/1/2014 03:25 AM
Surr: 1,2-Dichlorobenzene-d4	60.5	0	20-120		%REC	5	10/1/2014 03:25 AM
Surr: 2,4,6-Tribromophenol	67.0	0	31-125		%REC	5	10/1/2014 03:25 AM
Surr: 2-Chlorophenol-d4	70.9	0	29-120		%REC	5	10/1/2014 03:25 AM
Surr: 2-Fluorobiphenyl	68.3	0	35-120		%REC	5	10/1/2014 03:25 AM
Surr: 2-Fluorophenol	69.8	0	27-120		%REC	5	10/1/2014 03:25 AM
Surr: 4-Terphenyl-d14	69.1	0	26-142		%REC	50	10/1/2014 01:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-012

Client Sample ID: B23-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	67.4	0	25-120		%REC	5	10/1/2014 03:25 AM
Surr: Phenol-d5	65.0	0	20-120		%REC	5	10/1/2014 03:25 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	50	2.9	10		mg/Kg	1	9/30/2014 01:40 AM
ORO	130	1.8	10		mg/Kg	1	9/30/2014 01:40 AM
Surr: p-Terphenyl	127	0	49-173		%REC	1	9/30/2014 01:40 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	1.4	0.19	2.0	J	µg/Kg	1	10/1/2014 05:32 AM
4,4´-DDE	110	4.2	20		µg/Kg	10	10/3/2014 02:00 PM
4,4´-DDT	50	0.22	2.0		µg/Kg	1	10/1/2014 05:32 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:32 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:32 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 05:32 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:32 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:32 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:32 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:32 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:32 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:32 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:32 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:32 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:32 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:32 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:32 AM
gamma-Chlordane	1.1	0.19	1.0		µg/Kg	1	10/1/2014 05:32 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:32 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:32 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:32 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 05:32 AM
Surr: Tetrachloro-m-xylene	45.9	0	19-120		%REC	1	10/1/2014 05:32 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-012

Client Sample ID: B23-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	47.3	0	22-141		%REC	1	10/1/2014 05:32 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.027	0.011	1.0	J	mg/Kg	1	9/29/2014 01:27 PM
Surr: Chlorobenzene - d5	114	0	57-134		%REC	1	9/29/2014 01:27 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.023	0.0041	0.098	J	mg/Kg	1	10/1/2014 10:05 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 08:41 PM
Arsenic	2.6	0.10	1.0		mg/Kg	1	10/2/2014 08:41 PM
Barium	90	0.14	1.0		mg/Kg	1	10/2/2014 08:41 PM
Beryllium	0.31	0.13	1.0	J	mg/Kg	1	10/2/2014 08:41 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:41 PM
Chromium	14	0.14	1.0		mg/Kg	1	10/2/2014 08:41 PM
Cobalt	6.5	0.14	1.0		mg/Kg	1	10/2/2014 08:41 PM
Copper	16	0.11	2.0		mg/Kg	1	10/2/2014 08:41 PM
Lead	40	0.12	1.0		mg/Kg	1	10/2/2014 08:41 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:41 PM
Nickel	12	0.13	1.0		mg/Kg	1	10/2/2014 08:41 PM
Selenium	0.55	0.17	1.0	J	mg/Kg	1	10/2/2014 08:41 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:41 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 08:41 PM
Vanadium	23	0.14	1.0		mg/Kg	1	10/2/2014 08:41 PM
Zinc	92	0.13	1.0		mg/Kg	1	10/2/2014 08:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B23-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-013		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140930A** QC Batch: **46603** PrepDate **9/30/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 12:21 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 12:21 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 12:21 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 12:21 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 12:21 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 12:21 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 12:21 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 12:21 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 12:21 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 12:21 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 12:21 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 12:21 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 12:21 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 12:21 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 12:21 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 12:21 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 12:21 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 12:21 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 12:21 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 12:21 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 12:21 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 12:21 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 12:21 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 12:21 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 12:21 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 12:21 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 12:21 AM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 12:21 AM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 12:21 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 12:21 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 12:21 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 12:21 AM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	10/1/2014 12:21 AM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	10/1/2014 12:21 AM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	10/1/2014 12:21 AM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	10/1/2014 12:21 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-013

Client Sample ID: B23-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 12:21 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 12:21 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 12:21 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 12:21 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 12:21 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 12:21 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 12:21 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 12:21 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 12:21 AM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	10/1/2014 12:21 AM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	10/1/2014 12:21 AM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 12:21 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 12:21 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 12:21 AM
Fluoranthene	ND	61	330		µg/Kg	1	10/1/2014 12:21 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 12:21 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 12:21 AM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 12:21 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 12:21 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 12:21 AM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	10/1/2014 12:21 AM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 12:21 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 12:21 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 12:21 AM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 12:21 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 12:21 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 12:21 AM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 12:21 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 12:21 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 12:21 AM
Surr: 1,2-Dichlorobenzene-d4	51.3	0	20-120		%REC	1	10/1/2014 12:21 AM
Surr: 2,4,6-Tribromophenol	64.6	0	31-125		%REC	1	10/1/2014 12:21 AM
Surr: 2-Chlorophenol-d4	58.4	0	29-120		%REC	1	10/1/2014 12:21 AM
Surr: 2-Fluorobiphenyl	56.6	0	35-120		%REC	1	10/1/2014 12:21 AM
Surr: 2-Fluorophenol	57.1	0	27-120		%REC	1	10/1/2014 12:21 AM
Surr: 4-Terphenyl-d14	73.3	0	26-142		%REC	1	10/1/2014 12:21 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-013

Client Sample ID: B23-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	57.3	0	25-120		%REC	1	10/1/2014 12:21 AM
Surr: Phenol-d5	54.7	0	20-120		%REC	1	10/1/2014 12:21 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	8.8	2.9	10	J	mg/Kg	1	9/30/2014 02:06 AM
ORO	11	1.8	10		mg/Kg	1	9/30/2014 02:06 AM
Surr: p-Terphenyl	92.7	0	49-173		%REC	1	9/30/2014 02:06 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	350	9.7	100		µg/Kg	50	10/1/2014 10:01 PM
4,4´-DDE	230	21	100		µg/Kg	50	10/1/2014 10:01 PM
4,4´-DDT	820	11	100		µg/Kg	50	10/1/2014 10:01 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:25 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:25 AM
alpha-Chlordane	0.24	0.10	1.0	J	µg/Kg	1	10/1/2014 07:25 AM
beta-BHC	0.16	0.12	1.0	J	µg/Kg	1	10/1/2014 07:25 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:25 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:25 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:25 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:25 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:25 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:25 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:25 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:25 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:25 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:25 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:25 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:25 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:25 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:25 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:25 AM
Surr: Tetrachloro-m-xylene	43.4	0	19-120		%REC	1	10/1/2014 07:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-013

Client Sample ID: B23-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	38.1	0	22-141		%REC	1	10/1/2014 07:25 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.026	0.011	1.0	J	mg/Kg	1	9/29/2014 02:00 PM
Surr: Chlorobenzene - d5	99.4	0	57-134		%REC	1	9/29/2014 02:00 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.013	0.0042	0.099	J	mg/Kg	1	10/1/2014 10:13 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 08:48 PM
Arsenic	3.0	0.10	1.0		mg/Kg	1	10/2/2014 08:48 PM
Barium	110	0.14	1.0		mg/Kg	1	10/2/2014 08:48 PM
Beryllium	0.38	0.13	1.0	J	mg/Kg	1	10/2/2014 08:48 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:48 PM
Chromium	16	0.14	1.0		mg/Kg	1	10/2/2014 08:48 PM
Cobalt	7.2	0.14	1.0		mg/Kg	1	10/2/2014 08:48 PM
Copper	15	0.11	2.0		mg/Kg	1	10/2/2014 08:48 PM
Lead	9.6	0.12	1.0		mg/Kg	1	10/2/2014 08:48 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:48 PM
Nickel	13	0.13	1.0		mg/Kg	1	10/2/2014 08:48 PM
Selenium	0.62	0.17	1.0	J	mg/Kg	1	10/2/2014 08:48 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:48 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 08:48 PM
Vanadium	28	0.14	1.0		mg/Kg	1	10/2/2014 08:48 PM
Zinc	89	0.13	1.0		mg/Kg	1	10/2/2014 08:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B24-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	64	500		µg/Kg	1.5	10/1/2014 02:59 AM
1,2-Dichlorobenzene	ND	62	500		µg/Kg	1.5	10/1/2014 02:59 AM
1,3-Dichlorobenzene	ND	74	500		µg/Kg	1.5	10/1/2014 02:59 AM
1,4-Dichlorobenzene	ND	63	500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4,5-Trichlorophenol	ND	61	500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4,6-Trichlorophenol	ND	59	500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4-Dichlorophenol	ND	61	2500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4-Dimethylphenol	ND	130	500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4-Dinitrophenol	ND	40	2500		µg/Kg	1.5	10/1/2014 02:59 AM
2,4-Dinitrotoluene	ND	66	500		µg/Kg	1.5	10/1/2014 02:59 AM
2,6-Dinitrotoluene	ND	65	500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Chloronaphthalene	ND	67	500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Chlorophenol	ND	64	500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Methylnaphthalene	ND	250	500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Methylphenol	ND	72	500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Nitroaniline	ND	80	2500		µg/Kg	1.5	10/1/2014 02:59 AM
2-Nitrophenol	ND	67	500		µg/Kg	1.5	10/1/2014 02:59 AM
3,3´-Dichlorobenzidine	ND	37	990		µg/Kg	1.5	10/1/2014 02:59 AM
3-Nitroaniline	ND	73	2500		µg/Kg	1.5	10/1/2014 02:59 AM
4,6-Dinitro-2-methylphenol	ND	78	2500		µg/Kg	1.5	10/1/2014 02:59 AM
4-Bromophenyl-phenylether	ND	67	500		µg/Kg	1.5	10/1/2014 02:59 AM
4-Chloro-3-methylphenol	ND	61	990		µg/Kg	1.5	10/1/2014 02:59 AM
4-Chloroaniline	ND	66	990		µg/Kg	1.5	10/1/2014 02:59 AM
4-Chlorophenyl-phenylether	ND	68	500		µg/Kg	1.5	10/1/2014 02:59 AM
4-Methylphenol	ND	54	500		µg/Kg	1.5	10/1/2014 02:59 AM
4-Nitroaniline	ND	69	2500		µg/Kg	1.5	10/1/2014 02:59 AM
4-Nitrophenol	ND	53	2500		µg/Kg	1.5	10/1/2014 02:59 AM
Acenaphthene	ND	61	500		µg/Kg	1.5	10/1/2014 02:59 AM
Acenaphthylene	ND	56	500		µg/Kg	1.5	10/1/2014 02:59 AM
Anthracene	ND	97	500		µg/Kg	1.5	10/1/2014 02:59 AM
Benzidine (M)	ND	670	2500		µg/Kg	1.5	10/1/2014 02:59 AM
Benzo(a)anthracene	ND	110	500		µg/Kg	1.5	10/1/2014 02:59 AM
Benzo(a)pyrene	ND	970	3000		µg/Kg	15	10/1/2014 12:53 PM
Benzo(b)fluoranthene	ND	610	5000		µg/Kg	15	10/1/2014 12:53 PM
Benzo(g,h,i)perylene	ND	720	5000		µg/Kg	15	10/1/2014 12:53 PM
Benzo(k)fluoranthene	ND	850	5000		µg/Kg	15	10/1/2014 12:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-014

Client Sample ID: B24-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate	**9/30/2014**		Analyst: **MDM**
Benzoic acid	ND	170	2500		µg/Kg	1.5	10/1/2014 02:59 AM
Benzyl alcohol	ND	100	990		µg/Kg	1.5	10/1/2014 02:59 AM
Bis(2-chloroethoxy)methane	ND	96	500		µg/Kg	1.5	10/1/2014 02:59 AM
Bis(2-chloroethyl)ether	ND	93	500		µg/Kg	1.5	10/1/2014 02:59 AM
Bis(2-chloroisopropyl)ether	ND	85	500		µg/Kg	1.5	10/1/2014 02:59 AM
Bis(2-ethylhexyl)phthalate	ND	120	500		µg/Kg	1.5	10/1/2014 02:59 AM
Butylbenzylphthalate	ND	100	500		µg/Kg	1.5	10/1/2014 02:59 AM
Chrysene	ND	120	500		µg/Kg	1.5	10/1/2014 02:59 AM
Di-n-butylphthalate	ND	61	500		µg/Kg	1.5	10/1/2014 02:59 AM
Di-n-octylphthalate	ND	770	5000		µg/Kg	15	10/1/2014 12:53 PM
Dibenz(a,h)anthracene	ND	1400	3000		µg/Kg	15	10/1/2014 12:53 PM
Dibenzofuran	ND	60	500		µg/Kg	1.5	10/1/2014 02:59 AM
Diethylphthalate	ND	66	500		µg/Kg	1.5	10/1/2014 02:59 AM
Dimethylphthalate	ND	64	500		µg/Kg	1.5	10/1/2014 02:59 AM
Fluoranthene	ND	92	500		µg/Kg	1.5	10/1/2014 02:59 AM
Fluorene	ND	68	500		µg/Kg	1.5	10/1/2014 02:59 AM
Hexachlorobenzene	ND	71	500		µg/Kg	1.5	10/1/2014 02:59 AM
Hexachlorobutadiene	ND	91	990		µg/Kg	1.5	10/1/2014 02:59 AM
Hexachlorocyclopentadiene	ND	57	990		µg/Kg	1.5	10/1/2014 02:59 AM
Hexachloroethane	ND	63	500		µg/Kg	1.5	10/1/2014 02:59 AM
Indeno(1,2,3-cd)pyrene	ND	590	5000		µg/Kg	15	10/1/2014 12:53 PM
Isophorone	ND	88	500		µg/Kg	1.5	10/1/2014 02:59 AM
N-Nitrosodi-n-propylamine	ND	69	500		µg/Kg	1.5	10/1/2014 02:59 AM
N-Nitrosodiphenylamine	ND	72	500		µg/Kg	1.5	10/1/2014 02:59 AM
Naphthalene	ND	73	500		µg/Kg	1.5	10/1/2014 02:59 AM
Nitrobenzene	ND	85	500		µg/Kg	1.5	10/1/2014 02:59 AM
Pentachlorophenol	ND	52	2500		µg/Kg	1.5	10/1/2014 02:59 AM
Phenanthrene	ND	130	500		µg/Kg	1.5	10/1/2014 02:59 AM
Phenol	ND	57	500		µg/Kg	1.5	10/1/2014 02:59 AM
Pyrene	ND	70	500		µg/Kg	1.5	10/1/2014 02:59 AM
Surr: 1,2-Dichlorobenzene-d4	32.9	0	20-120		%REC	1.5	10/1/2014 02:59 AM
Surr: 2,4,6-Tribromophenol	14.2	0	31-125	S	%REC	1.5	10/1/2014 02:59 AM
Surr: 2-Chlorophenol-d4	38.5	0	29-120		%REC	1.5	10/1/2014 02:59 AM
Surr: 2-Fluorobiphenyl	43.0	0	35-120		%REC	1.5	10/1/2014 02:59 AM
Surr: 2-Fluorophenol	36.1	0	27-120		%REC	1.5	10/1/2014 02:59 AM
Surr: 4-Terphenyl-d14	98.9	0	26-142		%REC	1.5	10/1/2014 02:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-014

Client Sample ID: B24-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	41.1	0	25-120		%REC	1.5	10/1/2014 02:59 AM
Surr: Phenol-d5	41.0	0	20-120		%REC	1.5	10/1/2014 02:59 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	12	2.9	10		mg/Kg	1	9/30/2014 02:31 AM
ORO	13	1.8	10		mg/Kg	1	9/30/2014 02:31 AM
Surr: p-Terphenyl	87.9	0	49-173		%REC	1	9/30/2014 02:31 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	0.46	0.19	2.0	J	µg/Kg	1	10/1/2014 05:55 AM
4,4´-DDE	0.45	0.42	2.0	J	µg/Kg	1	10/1/2014 05:55 AM
4,4´-DDT	0.42	0.22	2.0	J	µg/Kg	1	10/1/2014 05:55 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:55 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:55 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 05:55 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:55 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:55 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:55 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:55 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:55 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:55 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:55 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:55 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:55 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:55 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:55 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 05:55 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:55 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:55 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:55 AM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 05:55 AM
Surr: Tetrachloro-m-xylene	75.9	0	19-120		%REC	1	10/1/2014 05:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-014

Client Sample ID: B24-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	40.3	0	22-141		%REC	1	10/1/2014 05:55 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	510	0.55	50		mg/Kg	50	9/30/2014 02:36 PM
Surr: Chlorobenzene - d5	91.0	0	57-134		%REC	50	9/30/2014 02:36 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.011	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:16 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 08:54 PM
Arsenic	1.6	0.10	1.0		mg/Kg	1	10/2/2014 08:54 PM
Barium	73	0.14	1.0		mg/Kg	1	10/2/2014 08:54 PM
Beryllium	0.22	0.13	1.0	J	mg/Kg	1	10/2/2014 08:54 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:54 PM
Chromium	12	0.14	1.0		mg/Kg	1	10/2/2014 08:54 PM
Cobalt	5.2	0.14	1.0		mg/Kg	1	10/2/2014 08:54 PM
Copper	9.0	0.11	2.0		mg/Kg	1	10/2/2014 08:54 PM
Lead	4.2	0.12	1.0		mg/Kg	1	10/2/2014 08:54 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:54 PM
Nickel	7.6	0.13	1.0		mg/Kg	1	10/2/2014 08:54 PM
Selenium	0.34	0.17	1.0	J	mg/Kg	1	10/2/2014 08:54 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 08:54 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 08:54 PM
Vanadium	20	0.14	1.0		mg/Kg	1	10/2/2014 08:54 PM
Zinc	23	0.13	1.0		mg/Kg	1	10/2/2014 08:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B24-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 07:55 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 07:55 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 07:55 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 07:55 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 07:55 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 07:55 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 07:55 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 07:55 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 07:55 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 07:55 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 07:55 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 07:55 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 07:55 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/30/2014 07:55 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 07:55 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 07:55 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 07:55 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 07:55 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 07:55 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 07:55 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 07:55 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/30/2014 07:55 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 07:55 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 07:55 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 07:55 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 07:55 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 07:55 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 07:55 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 07:55 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 07:55 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 07:55 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 07:55 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 07:55 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 07:55 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 07:55 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 07:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B24-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/30/2014 07:55 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 07:55 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 07:55 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 07:55 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 07:55 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 07:55 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 07:55 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 07:55 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 07:55 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 07:55 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 07:55 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 07:55 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 07:55 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 07:55 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/30/2014 07:55 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 07:55 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 07:55 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/30/2014 07:55 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 07:55 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 07:55 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 07:55 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 07:55 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 07:55 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 07:55 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 07:55 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 07:55 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 07:55 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 07:55 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 07:55 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 07:55 PM
Surr: 1,2-Dichlorobenzene-d4	54.7	0	20-120		%REC	1	9/30/2014 07:55 PM
Surr: 2,4,6-Tribromophenol	62.0	0	31-125		%REC	1	9/30/2014 07:55 PM
Surr: 2-Chlorophenol-d4	64.4	0	29-120		%REC	1	9/30/2014 07:55 PM
Surr: 2-Fluorobiphenyl	61.5	0	35-120		%REC	1	9/30/2014 07:55 PM
Surr: 2-Fluorophenol	63.3	0	27-120		%REC	1	9/30/2014 07:55 PM
Surr: 4-Terphenyl-d14	75.3	0	26-142		%REC	1	9/30/2014 07:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-015

Client Sample ID: B24-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	62.4	0	25-120		%REC	1	9/30/2014 07:55 PM
Surr: Phenol-d5	60.9	0	20-120		%REC	1	9/30/2014 07:55 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**			PrepDate		**9/29/2014**	Analyst: **MDM**
DRO	5.7	2.9	10	J	mg/Kg	1	9/30/2014 02:57 AM
ORO	3.0	1.8	10	J	mg/Kg	1	9/30/2014 02:57 AM
Surr: p-Terphenyl	85.9	0	49-173		%REC	1	9/30/2014 02:57 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:47 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 04:47 AM
4,4´-DDT	1.0	0.22	2.0	J	µg/Kg	1	10/1/2014 04:47 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:47 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:47 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 04:47 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:47 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:47 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:47 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:47 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:47 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:47 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:47 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:47 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:47 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:47 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:47 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:47 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:47 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:47 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:47 AM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 04:47 AM
Surr: Tetrachloro-m-xylene	55.5	0	19-120		%REC	1	10/1/2014 04:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B24-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	57.1	0	22-141		%REC	1	10/1/2014 04:47 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	5.4	0.011	1.0		mg/Kg	1	9/29/2014 03:06 PM
Surr: Chlorobenzene - d5	64.4	0	57-134		%REC	1	9/29/2014 03:06 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.012	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:19 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 08:47 PM
Arsenic	2.3	0.10	1.0		mg/Kg	1	9/30/2014 08:47 PM
Barium	120	0.14	1.0		mg/Kg	1	9/30/2014 08:47 PM
Beryllium	0.41	0.13	1.0	J	mg/Kg	1	9/30/2014 08:47 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:47 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/30/2014 08:47 PM
Cobalt	7.3	0.14	1.0		mg/Kg	1	9/30/2014 08:47 PM
Copper	11	0.11	2.0		mg/Kg	1	9/30/2014 08:47 PM
Lead	5.1	0.12	1.0		mg/Kg	1	9/30/2014 08:47 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:47 PM
Nickel	14	0.13	1.0		mg/Kg	1	9/30/2014 08:47 PM
Selenium	0.42	0.17	1.0	J	mg/Kg	1	9/30/2014 08:47 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:47 PM
Thallium	0.48	0.16	1.0	J	mg/Kg	1	9/30/2014 08:47 PM
Vanadium	33	0.14	1.0		mg/Kg	1	9/30/2014 08:47 PM
Zinc	35	0.13	1.0		mg/Kg	1	9/30/2014 08:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B25-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 03:33 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 03:33 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 03:33 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 03:33 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 03:33 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 03:33 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 03:33 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 03:33 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 03:33 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 03:33 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 03:33 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 03:33 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 03:33 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 03:33 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 03:33 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 03:33 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 03:33 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 03:33 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 03:33 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 03:33 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 03:33 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 03:33 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 03:33 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 03:33 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 03:33 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 03:33 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 03:33 PM
Acenaphthene	ND	40	330		µg/Kg	1	10/1/2014 03:33 PM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 03:33 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 03:33 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 03:33 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 03:33 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	10/1/2014 03:33 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	10/1/2014 03:33 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	10/1/2014 03:33 PM
Benzo(k)fluoranthene	ND	56	330		µg/Kg	1	10/1/2014 03:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B25-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 03:33 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 03:33 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 03:33 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 03:33 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 03:33 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 03:33 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 03:33 PM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 03:33 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 03:33 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	10/1/2014 03:33 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	10/1/2014 03:33 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 03:33 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 03:33 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 03:33 PM
Fluoranthene	ND	61	330		µg/Kg	1	10/1/2014 03:33 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 03:33 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 03:33 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	10/1/2014 03:33 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 03:33 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 03:33 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	10/1/2014 03:33 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 03:33 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 03:33 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 03:33 PM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 03:33 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 03:33 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 03:33 PM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 03:33 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 03:33 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 03:33 PM
Surr: 1,2-Dichlorobenzene-d4	60.4	0	20-120		%REC	1	10/1/2014 03:33 PM
Surr: 2,4,6-Tribromophenol	74.3	0	31-125		%REC	1	10/1/2014 03:33 PM
Surr: 2-Chlorophenol-d4	70.2	0	29-120		%REC	1	10/1/2014 03:33 PM
Surr: 2-Fluorobiphenyl	66.8	0	35-120		%REC	1	10/1/2014 03:33 PM
Surr: 2-Fluorophenol	68.8	0	27-120		%REC	1	10/1/2014 03:33 PM
Surr: 4-Terphenyl-d14	86.6	0	26-142		%REC	1	10/1/2014 03:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-016

Client Sample ID: B25-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	67.2	0	25-120		%REC	1	10/1/2014 03:33 PM
Surr: Phenol-d5	66.4	0	20-120		%REC	1	10/1/2014 03:33 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	5.6	2.9	10	J	mg/Kg	1	9/30/2014 09:24 PM
ORO	10	1.8	10		mg/Kg	1	9/30/2014 09:24 PM
Surr: p-Terphenyl	124	0	49-173		%REC	1	9/30/2014 09:24 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
4,4´-DDD	0.23	0.19	2.0	J	µg/Kg	1	10/1/2014 05:10 AM
4,4´-DDE	0.70	0.42	2.0	J	µg/Kg	1	10/1/2014 05:10 AM
4,4´-DDT	2.0	0.22	2.0	J	µg/Kg	1	10/1/2014 05:10 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:10 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:10 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 05:10 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:10 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:10 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:10 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:10 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:10 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:10 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:10 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:10 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:10 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:10 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:10 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 05:10 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:10 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:10 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:10 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 05:10 AM
Surr: Tetrachloro-m-xylene	36.8	0	19-120		%REC	1	10/1/2014 05:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-016

Client Sample ID: B25-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	43.5	0	22-141		%REC	1	10/1/2014 05:10 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140929A**	QC Batch: **E14VS094**			PrepDate			Analyst: **QBM**
GRO	0.061	0.011	1.0	J	mg/Kg	1	9/29/2014 03:39 PM
Surr: Chlorobenzene - d5	118	0	57-134		%REC	1	9/29/2014 03:39 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46587**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.097	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:22 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46583**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 08:53 PM
Arsenic	3.1	0.10	1.0		mg/Kg	1	9/30/2014 08:53 PM
Barium	110	0.14	1.0		mg/Kg	1	9/30/2014 08:53 PM
Beryllium	0.26	0.13	1.0	J	mg/Kg	1	9/30/2014 08:53 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:53 PM
Chromium	14	0.14	1.0		mg/Kg	1	9/30/2014 08:53 PM
Cobalt	5.9	0.14	1.0		mg/Kg	1	9/30/2014 08:53 PM
Copper	13	0.11	2.0		mg/Kg	1	9/30/2014 08:53 PM
Lead	32	0.12	1.0		mg/Kg	1	9/30/2014 08:53 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:53 PM
Nickel	13	0.13	1.0		mg/Kg	1	9/30/2014 08:53 PM
Selenium	0.24	0.17	1.0	J	mg/Kg	1	9/30/2014 08:53 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 08:53 PM
Thallium	0.55	0.16	1.0	J	mg/Kg	1	9/30/2014 08:53 PM
Vanadium	24	0.14	1.0		mg/Kg	1	9/30/2014 08:53 PM
Zinc	61	0.13	1.0		mg/Kg	1	9/30/2014 08:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B25-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate	**9/30/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 08:22 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 08:22 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 08:22 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 08:22 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 08:22 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 08:22 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 08:22 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 08:22 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 08:22 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 08:22 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 08:22 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 08:22 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 08:22 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/30/2014 08:22 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 08:22 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 08:22 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 08:22 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 08:22 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 08:22 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 08:22 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 08:22 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/30/2014 08:22 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 08:22 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 08:22 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 08:22 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 08:22 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 08:22 PM
Acenaphthene	ND	40	330		µg/Kg	1	9/30/2014 08:22 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 08:22 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 08:22 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 08:22 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 08:22 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 08:22 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 08:22 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 08:22 PM
Benzo(k)fluoranthene	ND	56	330		µg/Kg	1	9/30/2014 08:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B25-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/30/2014 08:22 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 08:22 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 08:22 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 08:22 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 08:22 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 08:22 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 08:22 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 08:22 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 08:22 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 08:22 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 08:22 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 08:22 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 08:22 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 08:22 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/30/2014 08:22 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 08:22 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 08:22 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/30/2014 08:22 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 08:22 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 08:22 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 08:22 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 08:22 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 08:22 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 08:22 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 08:22 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 08:22 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 08:22 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 08:22 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 08:22 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 08:22 PM
Surr: 1,2-Dichlorobenzene-d4	47.3	0	20-120		%REC	1	9/30/2014 08:22 PM
Surr: 2,4,6-Tribromophenol	66.5	0	31-125		%REC	1	9/30/2014 08:22 PM
Surr: 2-Chlorophenol-d4	51.3	0	29-120		%REC	1	9/30/2014 08:22 PM
Surr: 2-Fluorobiphenyl	53.7	0	35-120		%REC	1	9/30/2014 08:22 PM
Surr: 2-Fluorophenol	51.2	0	27-120		%REC	1	9/30/2014 08:22 PM
Surr: 4-Terphenyl-d14	92.4	0	26-142		%REC	1	9/30/2014 08:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-017

Client Sample ID: B25-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	52.5	0	25-120		%REC	1	9/30/2014 08:22 PM
Surr: Phenol-d5	48.8	0	20-120		%REC	1	9/30/2014 08:22 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	4.6	2.9	10	J	mg/Kg	1	9/30/2014 09:51 PM
ORO	7.3	1.8	10	J	mg/Kg	1	9/30/2014 09:51 PM
Surr: p-Terphenyl	88.9	0	49-173		%REC	1	9/30/2014 09:51 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:16 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 03:16 PM
4,4´-DDT	0.26	0.22	2.0	J	µg/Kg	1	10/1/2014 03:16 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:16 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 03:16 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 03:16 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:16 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 03:16 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 03:16 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:16 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 03:16 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:16 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 03:16 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 03:16 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:16 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:16 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:16 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 03:16 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 03:16 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:16 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 03:16 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 03:16 PM
Surr: Tetrachloro-m-xylene	55.2	0	19-120		%REC	1	10/1/2014 03:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-017

Client Sample ID: B25-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	69.6	0	22-141		%REC	1	10/1/2014 03:16 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.028	0.011	1.0	J	mg/Kg	1	9/30/2014 11:17 AM
Surr: Chlorobenzene - d5	103	0	57-134		%REC	1	9/30/2014 11:17 AM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.026	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:36 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_141003A**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/3/2014 08:36 AM
Arsenic	2.4	0.10	1.0		mg/Kg	1	10/3/2014 08:36 AM
Barium	93	0.14	1.0		mg/Kg	1	10/3/2014 08:36 AM
Beryllium	0.47	0.13	1.0	J	mg/Kg	1	10/3/2014 08:36 AM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/3/2014 08:36 AM
Chromium	18	0.14	1.0		mg/Kg	1	10/3/2014 08:36 AM
Cobalt	7.6	0.14	1.0		mg/Kg	1	10/3/2014 08:36 AM
Copper	15	0.11	2.0		mg/Kg	1	10/3/2014 08:36 AM
Lead	4.9	0.12	1.0		mg/Kg	1	10/3/2014 08:36 AM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/3/2014 08:36 AM
Nickel	14	0.13	1.0		mg/Kg	1	10/3/2014 08:36 AM
Selenium	0.50	0.17	1.0	J	mg/Kg	1	10/3/2014 08:36 AM
Silver	ND	0.13	1.0		mg/Kg	1	10/3/2014 08:36 AM
Thallium	0.56	0.16	1.0	J	mg/Kg	1	10/3/2014 08:36 AM
Vanadium	29	0.14	1.0		mg/Kg	1	10/3/2014 08:36 AM
Zinc	45	0.13	1.0		mg/Kg	1	10/3/2014 08:36 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B26-0.5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-018		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 08:49 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 08:49 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 08:49 PM
1,4-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 08:49 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 08:49 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 08:49 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 08:49 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 08:49 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 08:49 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 08:49 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 08:49 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 08:49 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 08:49 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/30/2014 08:49 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 08:49 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 08:49 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 08:49 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 08:49 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 08:49 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 08:49 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 08:49 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/30/2014 08:49 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 08:49 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 08:49 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 08:49 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 08:49 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 08:49 PM
Acenaphthene	ND	40	330		µg/Kg	1	9/30/2014 08:49 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 08:49 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 08:49 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 08:49 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 08:49 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 08:49 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 08:49 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 08:49 PM
Benzo(k)fluoranthene	ND	56	330		µg/Kg	1	9/30/2014 08:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-018

Client Sample ID: B26-0.5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/30/2014 08:49 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 08:49 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 08:49 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 08:49 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 08:49 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 08:49 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 08:49 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 08:49 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 08:49 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 08:49 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 08:49 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 08:49 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 08:49 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 08:49 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/30/2014 08:49 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 08:49 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 08:49 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/30/2014 08:49 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 08:49 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 08:49 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 08:49 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 08:49 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 08:49 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 08:49 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 08:49 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 08:49 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 08:49 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 08:49 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 08:49 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 08:49 PM
Surr: 1,2-Dichlorobenzene-d4	38.7	0	20-120		%REC	1	9/30/2014 08:49 PM
Surr: 2,4,6-Tribromophenol	52.6	0	31-125		%REC	1	9/30/2014 08:49 PM
Surr: 2-Chlorophenol-d4	43.8	0	29-120		%REC	1	9/30/2014 08:49 PM
Surr: 2-Fluorobiphenyl	42.4	0	35-120		%REC	1	9/30/2014 08:49 PM
Surr: 2-Fluorophenol	43.0	0	27-120		%REC	1	9/30/2014 08:49 PM
Surr: 4-Terphenyl-d14	61.6	0	26-142		%REC	1	9/30/2014 08:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-018

Client Sample ID: B26-0.5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	42.7	0	25-120		%REC	1	9/30/2014 08:49 PM
Surr: Phenol-d5	41.5	0	20-120		%REC	1	9/30/2014 08:49 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	6.7	2.9	10	J	mg/Kg	1	9/30/2014 10:17 PM
ORO	12	1.8	10		mg/Kg	1	9/30/2014 10:17 PM
Surr: p-Terphenyl	94.5	0	49-173		%REC	1	9/30/2014 10:17 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	0.50	0.19	2.0	J	µg/Kg	1	10/1/2014 03:38 PM
4,4´-DDE	1.2	0.42	2.0	J	µg/Kg	1	10/1/2014 03:38 PM
4,4´-DDT	6.8	0.22	2.0		µg/Kg	1	10/1/2014 03:38 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:38 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 03:38 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 03:38 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:38 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 03:38 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 03:38 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:38 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 03:38 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:38 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 03:38 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 03:38 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:38 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:38 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:38 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 03:38 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 03:38 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:38 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 03:38 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 03:38 PM
Surr: Tetrachloro-m-xylene	37.2	0	19-120		%REC	1	10/1/2014 03:38 PM

Qualifiers:

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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-018

Client Sample ID: B26-0.5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	52.2	0	22-141		%REC	1	10/1/2014 03:38 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.029	0.011	1.0	J	mg/Kg	1	9/30/2014 11:50 AM
Surr: Chlorobenzene - d5	101	0	57-134		%REC	1	9/30/2014 11:50 AM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.019	0.0041	0.098	J	mg/Kg	1	10/1/2014 10:39 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 09:06 PM
Arsenic	2.4	0.10	1.0		mg/Kg	1	10/2/2014 09:06 PM
Barium	180	0.14	1.0		mg/Kg	1	10/2/2014 09:06 PM
Beryllium	0.42	0.13	1.0	J	mg/Kg	1	10/2/2014 09:06 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:06 PM
Chromium	18	0.14	1.0		mg/Kg	1	10/2/2014 09:06 PM
Cobalt	7.9	0.14	1.0		mg/Kg	1	10/2/2014 09:06 PM
Copper	16	0.11	2.0		mg/Kg	1	10/2/2014 09:06 PM
Lead	23	0.12	1.0		mg/Kg	1	10/2/2014 09:06 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:06 PM
Nickel	15	0.13	1.0		mg/Kg	1	10/2/2014 09:06 PM
Selenium	0.47	0.17	1.0	J	mg/Kg	1	10/2/2014 09:06 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:06 PM
Thallium	0.22	0.16	1.0	J	mg/Kg	1	10/2/2014 09:06 PM
Vanadium	35	0.14	1.0		mg/Kg	1	10/2/2014 09:06 PM
Zinc	62	0.13	1.0		mg/Kg	1	10/2/2014 09:06 PM

Qualifiers:

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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B27-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-020		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	62	480		µg/Kg	1	10/1/2014 04:00 PM
1,2-Dichlorobenzene	ND	60	480		µg/Kg	1	10/1/2014 04:00 PM
1,3-Dichlorobenzene	ND	72	480		µg/Kg	1	10/1/2014 04:00 PM
1,4-Dichlorobenzene	ND	60	480		µg/Kg	1	10/1/2014 04:00 PM
2,4,5-Trichlorophenol	ND	59	480		µg/Kg	1	10/1/2014 04:00 PM
2,4,6-Trichlorophenol	ND	57	480		µg/Kg	1	10/1/2014 04:00 PM
2,4-Dichlorophenol	ND	59	2400		µg/Kg	1	10/1/2014 04:00 PM
2,4-Dimethylphenol	ND	130	480		µg/Kg	1	10/1/2014 04:00 PM
2,4-Dinitrophenol	ND	39	2400		µg/Kg	1	10/1/2014 04:00 PM
2,4-Dinitrotoluene	ND	64	480		µg/Kg	1	10/1/2014 04:00 PM
2,6-Dinitrotoluene	ND	63	480		µg/Kg	1	10/1/2014 04:00 PM
2-Chloronaphthalene	ND	65	480		µg/Kg	1	10/1/2014 04:00 PM
2-Chlorophenol	ND	62	480		µg/Kg	1	10/1/2014 04:00 PM
2-Methylnaphthalene	ND	240	480		µg/Kg	1	10/1/2014 04:00 PM
2-Methylphenol	ND	70	480		µg/Kg	1	10/1/2014 04:00 PM
2-Nitroaniline	ND	78	2400		µg/Kg	1	10/1/2014 04:00 PM
2-Nitrophenol	ND	65	480		µg/Kg	1	10/1/2014 04:00 PM
3,3´-Dichlorobenzidine	ND	35	960		µg/Kg	1	10/1/2014 04:00 PM
3-Nitroaniline	ND	70	2400		µg/Kg	1	10/1/2014 04:00 PM
4,6-Dinitro-2-methylphenol	ND	76	2400		µg/Kg	1	10/1/2014 04:00 PM
4-Bromophenyl-phenylether	ND	65	480		µg/Kg	1	10/1/2014 04:00 PM
4-Chloro-3-methylphenol	ND	59	960		µg/Kg	1	10/1/2014 04:00 PM
4-Chloroaniline	ND	63	960		µg/Kg	1	10/1/2014 04:00 PM
4-Chlorophenyl-phenylether	ND	66	480		µg/Kg	1	10/1/2014 04:00 PM
4-Methylphenol	ND	52	480		µg/Kg	1	10/1/2014 04:00 PM
4-Nitroaniline	ND	67	2400		µg/Kg	1	10/1/2014 04:00 PM
4-Nitrophenol	ND	51	2400		µg/Kg	1	10/1/2014 04:00 PM
Acenaphthene	ND	59	480		µg/Kg	1	10/1/2014 04:00 PM
Acenaphthylene	ND	54	480		µg/Kg	1	10/1/2014 04:00 PM
Anthracene	ND	93	480		µg/Kg	1	10/1/2014 04:00 PM
Benzidine (M)	ND	650	2400		µg/Kg	1	10/1/2014 04:00 PM
Benzo(a)anthracene	ND	110	480		µg/Kg	1	10/1/2014 04:00 PM
Benzo(a)pyrene	ND	93	290		µg/Kg	1	10/1/2014 04:00 PM
Benzo(b)fluoranthene	ND	59	480		µg/Kg	1	10/1/2014 04:00 PM
Benzo(g,h,i)perylene	ND	69	480		µg/Kg	1	10/1/2014 04:00 PM
Benzo(k)fluoranthene	ND	82	480		µg/Kg	1	10/1/2014 04:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B27-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-020		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	170	2400		µg/Kg	1	10/1/2014 04:00 PM
Benzyl alcohol	ND	99	960		µg/Kg	1	10/1/2014 04:00 PM
Bis(2-chloroethoxy)methane	ND	93	480		µg/Kg	1	10/1/2014 04:00 PM
Bis(2-chloroethyl)ether	ND	90	480		µg/Kg	1	10/1/2014 04:00 PM
Bis(2-chloroisopropyl)ether	ND	82	480		µg/Kg	1	10/1/2014 04:00 PM
Bis(2-ethylhexyl)phthalate	ND	120	480		µg/Kg	1	10/1/2014 04:00 PM
Butylbenzylphthalate	ND	98	480		µg/Kg	1	10/1/2014 04:00 PM
Chrysene	ND	120	480		µg/Kg	1	10/1/2014 04:00 PM
Di-n-butylphthalate	ND	59	480		µg/Kg	1	10/1/2014 04:00 PM
Di-n-octylphthalate	ND	74	480		µg/Kg	1	10/1/2014 04:00 PM
Dibenz(a,h)anthracene	ND	140	290		µg/Kg	1	10/1/2014 04:00 PM
Dibenzofuran	ND	58	480		µg/Kg	1	10/1/2014 04:00 PM
Diethylphthalate	ND	64	480		µg/Kg	1	10/1/2014 04:00 PM
Dimethylphthalate	ND	62	480		µg/Kg	1	10/1/2014 04:00 PM
Fluoranthene	ND	89	480		µg/Kg	1	10/1/2014 04:00 PM
Fluorene	ND	66	480		µg/Kg	1	10/1/2014 04:00 PM
Hexachlorobenzene	ND	68	480		µg/Kg	1	10/1/2014 04:00 PM
Hexachlorobutadiene	ND	88	960		µg/Kg	1	10/1/2014 04:00 PM
Hexachlorocyclopentadiene	ND	55	960		µg/Kg	1	10/1/2014 04:00 PM
Hexachloroethane	ND	61	480		µg/Kg	1	10/1/2014 04:00 PM
Indeno(1,2,3-cd)pyrene	ND	57	480		µg/Kg	1	10/1/2014 04:00 PM
Isophorone	ND	85	480		µg/Kg	1	10/1/2014 04:00 PM
N-Nitrosodi-n-propylamine	ND	67	480		µg/Kg	1	10/1/2014 04:00 PM
N-Nitrosodiphenylamine	ND	70	480		µg/Kg	1	10/1/2014 04:00 PM
Naphthalene	ND	70	480		µg/Kg	1	10/1/2014 04:00 PM
Nitrobenzene	ND	83	480		µg/Kg	1	10/1/2014 04:00 PM
Pentachlorophenol	ND	50	2400		µg/Kg	1	10/1/2014 04:00 PM
Phenanthrene	ND	120	480		µg/Kg	1	10/1/2014 04:00 PM
Phenol	ND	55	480		µg/Kg	1	10/1/2014 04:00 PM
Pyrene	ND	68	480		µg/Kg	1	10/1/2014 04:00 PM
Surr: 1,2-Dichlorobenzene-d4	49.5	0	20-120		%REC	1	10/1/2014 04:00 PM
Surr: 2,4,6-Tribromophenol	59.5	0	31-125		%REC	1	10/1/2014 04:00 PM
Surr: 2-Chlorophenol-d4	57.6	0	29-120		%REC	1	10/1/2014 04:00 PM
Surr: 2-Fluorobiphenyl	58.2	0	35-120		%REC	1	10/1/2014 04:00 PM
Surr: 2-Fluorophenol	57.5	0	27-120		%REC	1	10/1/2014 04:00 PM
Surr: 4-Terphenyl-d14	76.7	0	26-142		%REC	1	10/1/2014 04:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-020

Client Sample ID: B27-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	56.1	0	25-120		%REC	1	10/1/2014 04:00 PM
Surr: Phenol-d5	55.3	0	20-120		%REC	1	10/1/2014 04:00 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	16	2.9	10		mg/Kg	1	9/30/2014 10:44 PM
ORO	13	1.8	10		mg/Kg	1	9/30/2014 10:44 PM
Surr: p-Terphenyl	102	0	49-173		%REC	1	9/30/2014 10:44 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:01 PM
4,4´-DDE	0.44	0.42	2.0	J	µg/Kg	1	10/1/2014 04:01 PM
4,4´-DDT	3.2	0.22	2.0		µg/Kg	1	10/1/2014 04:01 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:01 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:01 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 04:01 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:01 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:01 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:01 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:01 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:01 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:01 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:01 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:01 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:01 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:01 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:01 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:01 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:01 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:01 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:01 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 04:01 PM
Surr: Tetrachloro-m-xylene	44.6	0	19-120		%REC	1	10/1/2014 04:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-020

Client Sample ID: B27-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	59.2	0	22-141		%REC	1	10/1/2014 04:01 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.029	0.011	1.0	J	mg/Kg	1	9/30/2014 12:56 PM
Surr: Chlorobenzene - d5	103	0	57-134		%REC	1	9/30/2014 12:56 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.020	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:48 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:06 PM
Arsenic	3.8	0.10	1.0		mg/Kg	1	9/30/2014 10:06 PM
Barium	140	0.14	1.0		mg/Kg	1	9/30/2014 10:06 PM
Beryllium	0.34	0.13	1.0	J	mg/Kg	1	9/30/2014 10:06 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:06 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/30/2014 10:06 PM
Cobalt	9.3	0.14	1.0		mg/Kg	1	9/30/2014 10:06 PM
Copper	18	0.11	2.0		mg/Kg	1	9/30/2014 10:06 PM
Lead	4.9	0.12	1.0		mg/Kg	1	9/30/2014 10:06 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:06 PM
Nickel	15	0.13	1.0		mg/Kg	1	9/30/2014 10:06 PM
Selenium	0.58	0.17	1.0	J	mg/Kg	1	9/30/2014 10:06 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:06 PM
Thallium	0.95	0.16	1.0	J	mg/Kg	1	9/30/2014 10:06 PM
Vanadium	37	0.14	1.0		mg/Kg	1	9/30/2014 10:06 PM
Zinc	42	0.13	1.0		mg/Kg	1	9/30/2014 10:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B27-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-021		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate	**9/30/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	9/30/2014 09:42 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 09:42 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 09:42 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 09:42 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 09:42 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 09:42 PM
2,4-Dichlorophenol	ND	40	1700		µg/Kg	1	9/30/2014 09:42 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 09:42 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	9/30/2014 09:42 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 09:42 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 09:42 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 09:42 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 09:42 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/30/2014 09:42 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 09:42 PM
2-Nitroaniline	ND	53	1700		µg/Kg	1	9/30/2014 09:42 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 09:42 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 09:42 PM
3-Nitroaniline	ND	49	1700		µg/Kg	1	9/30/2014 09:42 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	9/30/2014 09:42 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 09:42 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/30/2014 09:42 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 09:42 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 09:42 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 09:42 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	9/30/2014 09:42 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	9/30/2014 09:42 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 09:42 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 09:42 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 09:42 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	9/30/2014 09:42 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 09:42 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 09:42 PM
Benzo(b)fluoranthene	ND	41	330		µg/Kg	1	9/30/2014 09:42 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 09:42 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 09:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B27-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-021		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140930A** QC Batch: **46603** PrepDate **9/30/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Benzoic acid	ND	120	1700		µg/Kg	1	9/30/2014 09:42 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 09:42 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 09:42 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 09:42 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 09:42 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 09:42 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 09:42 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 09:42 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 09:42 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 09:42 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 09:42 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 09:42 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 09:42 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 09:42 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/30/2014 09:42 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 09:42 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 09:42 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/30/2014 09:42 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 09:42 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 09:42 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 09:42 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 09:42 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 09:42 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 09:42 PM
Naphthalene	ND	49	330		µg/Kg	1	9/30/2014 09:42 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 09:42 PM
Pentachlorophenol	ND	34	1700		µg/Kg	1	9/30/2014 09:42 PM
Phenanthrene	ND	84	330		µg/Kg	1	9/30/2014 09:42 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 09:42 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 09:42 PM
Surr: 1,2-Dichlorobenzene-d4	44.7	0	20-120		%REC	1	9/30/2014 09:42 PM
Surr: 2,4,6-Tribromophenol	49.5	0	31-125		%REC	1	9/30/2014 09:42 PM
Surr: 2-Chlorophenol-d4	51.5	0	29-120		%REC	1	9/30/2014 09:42 PM
Surr: 2-Fluorobiphenyl	48.6	0	35-120		%REC	1	9/30/2014 09:42 PM
Surr: 2-Fluorophenol	51.3	0	27-120		%REC	1	9/30/2014 09:42 PM
Surr: 4-Terphenyl-d14	66.8	0	26-142		%REC	1	9/30/2014 09:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-021

Client Sample ID: B27-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	50.2	0	25-120		%REC	1	9/30/2014 09:42 PM
Surr: Phenol-d5	48.2	0	20-120		%REC	1	9/30/2014 09:42 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	4.8	2.9	10	J	mg/Kg	1	9/30/2014 11:10 PM
ORO	6.3	1.8	10	J	mg/Kg	1	9/30/2014 11:10 PM
Surr: p-Terphenyl	104	0	49-173		%REC	1	9/30/2014 11:10 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:24 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 04:24 PM
4,4´-DDT	0.84	0.22	2.0	J	µg/Kg	1	10/1/2014 04:24 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:24 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:24 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 04:24 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:24 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:24 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:24 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:24 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:24 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:24 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:24 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:24 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:24 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:24 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:24 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:24 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:24 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:24 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:24 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 04:24 PM
Surr: Tetrachloro-m-xylene	35.0	0	19-120		%REC	1	10/1/2014 04:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-021

Client Sample ID: B27-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	49.3	0	22-141		%REC	1	10/1/2014 04:24 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.026	0.011	1.0	J	mg/Kg	1	9/30/2014 01:29 PM
Surr: Chlorobenzene - d5	101	0	57-134		%REC	1	9/30/2014 01:29 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.016	0.0041	0.099	J	mg/Kg	1	10/1/2014 10:50 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:12 PM
Arsenic	3.3	0.10	1.0		mg/Kg	1	9/30/2014 10:12 PM
Barium	180	0.14	1.0		mg/Kg	1	9/30/2014 10:12 PM
Beryllium	0.34	0.13	1.0	J	mg/Kg	1	9/30/2014 10:12 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:12 PM
Chromium	17	0.14	1.0		mg/Kg	1	9/30/2014 10:12 PM
Cobalt	7.3	0.14	1.0		mg/Kg	1	9/30/2014 10:12 PM
Copper	15	0.11	2.0		mg/Kg	1	9/30/2014 10:12 PM
Lead	4.1	0.12	1.0		mg/Kg	1	9/30/2014 10:12 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:12 PM
Nickel	14	0.13	1.0		mg/Kg	1	9/30/2014 10:12 PM
Selenium	0.28	0.17	1.0	J	mg/Kg	1	9/30/2014 10:12 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:12 PM
Thallium	0.91	0.16	1.0	J	mg/Kg	1	9/30/2014 10:12 PM
Vanadium	37	0.14	1.0		mg/Kg	1	9/30/2014 10:12 PM
Zinc	34	0.13	1.0		mg/Kg	1	9/30/2014 10:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B28-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-022		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 01:13 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 01:13 AM
1,3-Dichlorobenzene	ND	50	330		µg/Kg	1	10/1/2014 01:13 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 01:13 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 01:13 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 01:13 AM
2,4-Dichlorophenol	ND	41	1700		µg/Kg	1	10/1/2014 01:13 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 01:13 AM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 01:13 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 01:13 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 01:13 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 01:13 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 01:13 AM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 01:13 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 01:13 AM
2-Nitroaniline	ND	54	1700		µg/Kg	1	10/1/2014 01:13 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 01:13 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 01:13 AM
3-Nitroaniline	ND	49	1700		µg/Kg	1	10/1/2014 01:13 AM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 01:13 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 01:13 AM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 01:13 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 01:13 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 01:13 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 01:13 AM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 01:13 AM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 01:13 AM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 01:13 AM
Acenaphthylene	ND	38	330		µg/Kg	1	10/1/2014 01:13 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 01:13 AM
Benzidine (M)	ND	450	1700		µg/Kg	1	10/1/2014 01:13 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 01:13 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/1/2014 11:07 AM
Benzo(b)fluoranthene	ND	410	3300		µg/Kg	10	10/1/2014 11:07 AM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/1/2014 11:07 AM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/1/2014 11:07 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-022

Client Sample ID: B28-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 01:13 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 01:13 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 01:13 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 01:13 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 01:13 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 01:13 AM
Butylbenzylphthalate	ND	68	330		µg/Kg	1	10/1/2014 01:13 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 01:13 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 01:13 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/1/2014 11:07 AM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/1/2014 11:07 AM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 01:13 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 01:13 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 01:13 AM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 01:13 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 01:13 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 01:13 AM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 01:13 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 01:13 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 01:13 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/1/2014 11:07 AM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 01:13 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 01:13 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 01:13 AM
Naphthalene	ND	49	330		µg/Kg	1	10/1/2014 01:13 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 01:13 AM
Pentachlorophenol	ND	35	1700		µg/Kg	1	10/1/2014 01:13 AM
Phenanthrene	ND	84	330		µg/Kg	1	10/1/2014 01:13 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 01:13 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 01:13 AM
Surr: 1,2-Dichlorobenzene-d4	50.9	0	20-120		%REC	1	10/1/2014 01:13 AM
Surr: 2,4,6-Tribromophenol	73.9	0	31-125		%REC	1	10/1/2014 01:13 AM
Surr: 2-Chlorophenol-d4	59.2	0	29-120		%REC	1	10/1/2014 01:13 AM
Surr: 2-Fluorobiphenyl	59.9	0	35-120		%REC	1	10/1/2014 01:13 AM
Surr: 2-Fluorophenol	56.8	0	27-120		%REC	1	10/1/2014 01:13 AM
Surr: 4-Terphenyl-d14	87.8	0	26-142		%REC	1	10/1/2014 01:13 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-022

Client Sample ID: B28-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	57.0	0	25-120		%REC	1	10/1/2014 01:13 AM
Surr: Phenol-d5	57.0	0	20-120		%REC	1	10/1/2014 01:13 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	26	2.9	10		mg/Kg	1	9/30/2014 11:37 PM
ORO	35	1.8	10		mg/Kg	1	9/30/2014 11:37 PM
Surr: p-Terphenyl	121	0	49-173		%REC	1	9/30/2014 11:37 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:46 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 04:46 PM
4,4´-DDT	0.44	0.22	2.0	J	µg/Kg	1	10/1/2014 04:46 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:46 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 04:46 PM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 04:46 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:46 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 04:46 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 04:46 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:46 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 04:46 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:46 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 04:46 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 04:46 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 04:46 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 04:46 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 04:46 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 04:46 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 04:46 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 04:46 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 04:46 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 04:46 PM
Surr: Tetrachloro-m-xylene	34.5	0	19-120		%REC	1	10/1/2014 04:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-022

Client Sample ID: B28-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	42.7	0	22-141		%REC	1	10/1/2014 04:46 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.026	0.011	1.0	J	mg/Kg	1	9/30/2014 02:02 PM
Surr: Chlorobenzene - d5	91.6	0	57-134		%REC	1	9/30/2014 02:02 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.022	0.0043	0.10	J	mg/Kg	1	10/1/2014 10:53 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:18 PM
Arsenic	1.7	0.10	1.0		mg/Kg	1	9/30/2014 10:18 PM
Barium	62	0.14	1.0		mg/Kg	1	9/30/2014 10:18 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:18 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:18 PM
Chromium	5.6	0.14	1.0		mg/Kg	1	9/30/2014 10:18 PM
Cobalt	3.5	0.14	1.0		mg/Kg	1	9/30/2014 10:18 PM
Copper	11	0.11	2.0		mg/Kg	1	9/30/2014 10:18 PM
Lead	8.9	0.12	1.0		mg/Kg	1	9/30/2014 10:18 PM
Molybdenum	0.55	0.13	1.0	J	mg/Kg	1	9/30/2014 10:18 PM
Nickel	4.1	0.13	1.0		mg/Kg	1	9/30/2014 10:18 PM
Selenium	0.22	0.17	1.0	J	mg/Kg	1	9/30/2014 10:18 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:18 PM
Thallium	0.69	0.16	1.0	J	mg/Kg	1	9/30/2014 10:18 PM
Vanadium	14	0.14	1.0		mg/Kg	1	9/30/2014 10:18 PM
Zinc	26	0.13	1.0		mg/Kg	1	9/30/2014 10:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B28-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-023		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 10:08 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 10:08 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 10:08 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 10:08 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 10:08 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 10:08 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 10:08 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 10:08 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 10:08 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 10:08 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 10:08 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 10:08 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 10:08 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/30/2014 10:08 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 10:08 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 10:08 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 10:08 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 10:08 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 10:08 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 10:08 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 10:08 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/30/2014 10:08 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 10:08 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 10:08 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 10:08 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 10:08 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 10:08 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 10:08 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 10:08 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 10:08 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 10:08 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 10:08 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 10:08 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 10:08 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 10:08 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 10:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B28-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-023		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/30/2014 10:08 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 10:08 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 10:08 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 10:08 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 10:08 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 10:08 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 10:08 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 10:08 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 10:08 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 10:08 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 10:08 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 10:08 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 10:08 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 10:08 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/30/2014 10:08 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 10:08 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 10:08 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/30/2014 10:08 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 10:08 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 10:08 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 10:08 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 10:08 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 10:08 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 10:08 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 10:08 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 10:08 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 10:08 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 10:08 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 10:08 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 10:08 PM
Surr: 1,2-Dichlorobenzene-d4	40.2	0	20-120		%REC	1	9/30/2014 10:08 PM
Surr: 2,4,6-Tribromophenol	59.4	0	31-125		%REC	1	9/30/2014 10:08 PM
Surr: 2-Chlorophenol-d4	46.2	0	29-120		%REC	1	9/30/2014 10:08 PM
Surr: 2-Fluorobiphenyl	45.5	0	35-120		%REC	1	9/30/2014 10:08 PM
Surr: 2-Fluorophenol	45.9	0	27-120		%REC	1	9/30/2014 10:08 PM
Surr: 4-Terphenyl-d14	82.8	0	26-142		%REC	1	9/30/2014 10:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-023

Client Sample ID: B28-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	46.7	0	25-120		%REC	1	9/30/2014 10:08 PM
Surr: Phenol-d5	44.9	0	20-120		%REC	1	9/30/2014 10:08 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	4.9	2.9	10	J	mg/Kg	1	10/1/2014 12:03 AM
ORO	7.4	1.8	10	J	mg/Kg	1	10/1/2014 12:03 AM
Surr: p-Terphenyl	101	0	49-173		%REC	1	10/1/2014 12:03 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:09 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 05:09 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 05:09 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:09 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:09 PM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 05:09 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:09 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:09 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:09 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:09 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:09 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:09 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:09 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:09 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:09 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:09 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:09 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 05:09 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:09 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:09 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:09 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 05:09 PM
Surr: Tetrachloro-m-xylene	40.6	0	19-120		%REC	1	10/1/2014 05:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-023

Client Sample ID: B28-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	58.0	0	22-141		%REC	1	10/1/2014 05:09 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.078	0.011	1.0	J	mg/Kg	1	9/30/2014 03:09 PM
Surr: Chlorobenzene - d5	97.3	0	57-134		%REC	1	9/30/2014 03:09 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.028	0.0042	0.10	J	mg/Kg	1	10/1/2014 10:56 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:24 PM
Arsenic	2.1	0.10	1.0		mg/Kg	1	9/30/2014 10:24 PM
Barium	160	0.14	1.0		mg/Kg	1	9/30/2014 10:24 PM
Beryllium	0.44	0.13	1.0	J	mg/Kg	1	9/30/2014 10:24 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:24 PM
Chromium	16	0.14	1.0		mg/Kg	1	9/30/2014 10:24 PM
Cobalt	7.6	0.14	1.0		mg/Kg	1	9/30/2014 10:24 PM
Copper	12	0.11	2.0		mg/Kg	1	9/30/2014 10:24 PM
Lead	4.7	0.12	1.0		mg/Kg	1	9/30/2014 10:24 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:24 PM
Nickel	13	0.13	1.0		mg/Kg	1	9/30/2014 10:24 PM
Selenium	0.44	0.17	1.0	J	mg/Kg	1	9/30/2014 10:24 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:24 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/30/2014 10:24 PM
Vanadium	29	0.14	1.0		mg/Kg	1	9/30/2014 10:24 PM
Zinc	32	0.13	1.0		mg/Kg	1	9/30/2014 10:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B29-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-024		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140930A** QC Batch: **46603** PrepDate **9/30/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 12:47 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 12:47 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 12:47 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 12:47 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 12:47 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 12:47 AM
2,4-Dichlorophenol	ND	40	1700		µg/Kg	1	10/1/2014 12:47 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 12:47 AM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 12:47 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 12:47 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 12:47 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 12:47 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 12:47 AM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 12:47 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 12:47 AM
2-Nitroaniline	ND	53	1700		µg/Kg	1	10/1/2014 12:47 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 12:47 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 12:47 AM
3-Nitroaniline	ND	49	1700		µg/Kg	1	10/1/2014 12:47 AM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 12:47 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 12:47 AM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 12:47 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 12:47 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 12:47 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 12:47 AM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 12:47 AM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 12:47 AM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 12:47 AM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 12:47 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 12:47 AM
Benzidine (M)	ND	450	1700		µg/Kg	1	10/1/2014 12:47 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 12:47 AM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	10/1/2014 12:47 AM
Benzo(b)fluoranthene	ND	41	330		µg/Kg	1	10/1/2014 12:47 AM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	10/1/2014 12:47 AM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	10/1/2014 12:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B29-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-024		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 12:47 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 12:47 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 12:47 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 12:47 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 12:47 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 12:47 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 12:47 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 12:47 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 12:47 AM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	10/1/2014 12:47 AM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	10/1/2014 12:47 AM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 12:47 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 12:47 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 12:47 AM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 12:47 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 12:47 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 12:47 AM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 12:47 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 12:47 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 12:47 AM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	10/1/2014 12:47 AM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 12:47 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 12:47 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 12:47 AM
Naphthalene	ND	49	330		µg/Kg	1	10/1/2014 12:47 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 12:47 AM
Pentachlorophenol	ND	34	1700		µg/Kg	1	10/1/2014 12:47 AM
Phenanthrene	ND	84	330		µg/Kg	1	10/1/2014 12:47 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 12:47 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 12:47 AM
Surr: 1,2-Dichlorobenzene-d4	51.7	0	20-120		%REC	1	10/1/2014 12:47 AM
Surr: 2,4,6-Tribromophenol	60.6	0	31-125		%REC	1	10/1/2014 12:47 AM
Surr: 2-Chlorophenol-d4	57.0	0	29-120		%REC	1	10/1/2014 12:47 AM
Surr: 2-Fluorobiphenyl	56.8	0	35-120		%REC	1	10/1/2014 12:47 AM
Surr: 2-Fluorophenol	56.5	0	27-120		%REC	1	10/1/2014 12:47 AM
Surr: 4-Terphenyl-d14	68.6	0	26-142		%REC	1	10/1/2014 12:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-024

Client Sample ID: B29-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	57.8	0	25-120		%REC	1	10/1/2014 12:47 AM
Surr: Phenol-d5	53.9	0	20-120		%REC	1	10/1/2014 12:47 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	6.8	2.9	10	J	mg/Kg	1	10/1/2014 12:29 AM
ORO	13	1.8	10		mg/Kg	1	10/1/2014 12:29 AM
Surr: p-Terphenyl	133	0	49-173		%REC	1	10/1/2014 12:29 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	0.85	0.19	2.0	J	µg/Kg	1	10/1/2014 05:31 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 05:31 PM
4,4´-DDT	15	0.22	2.0		µg/Kg	1	10/1/2014 05:31 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:31 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:31 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 05:31 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:31 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:31 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:31 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:31 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:31 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:31 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:31 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:31 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:31 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:31 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:31 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 05:31 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:31 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:31 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:31 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 05:31 PM
Surr: Tetrachloro-m-xylene	52.1	0	19-120		%REC	1	10/1/2014 05:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-024

Client Sample ID: B29-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	67.8	0	22-141		%REC	1	10/1/2014 05:31 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.034	0.011	1.0	J	mg/Kg	1	9/30/2014 03:42 PM
Surr: Chlorobenzene - d5	113	0	57-134		%REC	1	9/30/2014 03:42 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.042	0.0042	0.099	J	mg/Kg	1	10/1/2014 10:59 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:30 PM
Arsenic	3.3	0.10	1.0		mg/Kg	1	9/30/2014 10:30 PM
Barium	42	0.14	1.0		mg/Kg	1	9/30/2014 10:30 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM
Chromium	7.4	0.14	1.0		mg/Kg	1	9/30/2014 10:30 PM
Cobalt	2.9	0.14	1.0		mg/Kg	1	9/30/2014 10:30 PM
Copper	6.4	0.11	2.0		mg/Kg	1	9/30/2014 10:30 PM
Lead	1.9	0.12	1.0		mg/Kg	1	9/30/2014 10:30 PM
Molybdenum	1.6	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM
Nickel	6.2	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 10:30 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM
Thallium	0.83	0.16	1.0	J	mg/Kg	1	9/30/2014 10:30 PM
Vanadium	17	0.14	1.0		mg/Kg	1	9/30/2014 10:30 PM
Zinc	20	0.13	1.0		mg/Kg	1	9/30/2014 10:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B29-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-025		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 10:35 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 10:35 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 10:35 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 10:35 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 10:35 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 10:35 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/30/2014 10:35 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 10:35 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/30/2014 10:35 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 10:35 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 10:35 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 10:35 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 10:35 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/30/2014 10:35 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 10:35 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/30/2014 10:35 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 10:35 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 10:35 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/30/2014 10:35 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/30/2014 10:35 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 10:35 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/30/2014 10:35 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 10:35 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 10:35 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 10:35 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/30/2014 10:35 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/30/2014 10:35 PM
Acenaphthene	ND	40	330		µg/Kg	1	9/30/2014 10:35 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 10:35 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 10:35 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/30/2014 10:35 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 10:35 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 10:35 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/30/2014 10:35 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 10:35 PM
Benzo(k)fluoranthene	ND	56	330		µg/Kg	1	9/30/2014 10:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B29-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-025		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/30/2014 10:35 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 10:35 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 10:35 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 10:35 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 10:35 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 10:35 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/30/2014 10:35 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 10:35 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 10:35 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 10:35 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 10:35 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 10:35 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 10:35 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 10:35 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/30/2014 10:35 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 10:35 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 10:35 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/30/2014 10:35 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 10:35 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 10:35 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 10:35 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 10:35 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 10:35 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 10:35 PM
Naphthalene	ND	48	330		µg/Kg	1	9/30/2014 10:35 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 10:35 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/30/2014 10:35 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/30/2014 10:35 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 10:35 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 10:35 PM
Surr: 1,2-Dichlorobenzene-d4	57.0	0	20-120		%REC	1	9/30/2014 10:35 PM
Surr: 2,4,6-Tribromophenol	63.5	0	31-125		%REC	1	9/30/2014 10:35 PM
Surr: 2-Chlorophenol-d4	63.8	0	29-120		%REC	1	9/30/2014 10:35 PM
Surr: 2-Fluorobiphenyl	61.2	0	35-120		%REC	1	9/30/2014 10:35 PM
Surr: 2-Fluorophenol	62.8	0	27-120		%REC	1	9/30/2014 10:35 PM
Surr: 4-Terphenyl-d14	78.0	0	26-142		%REC	1	9/30/2014 10:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-025

Client Sample ID: B29-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	62.5	0	25-120		%REC	1	9/30/2014 10:35 PM
Surr: Phenol-d5	59.6	0	20-120		%REC	1	9/30/2014 10:35 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	4.7	2.9	9.9	J	mg/Kg	1	10/1/2014 12:56 AM
ORO	6.9	1.8	9.9	J	mg/Kg	1	10/1/2014 12:56 AM
Surr: p-Terphenyl	89.9	0	49-173		%REC	1	10/1/2014 12:56 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:54 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 05:54 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 05:54 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:54 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 05:54 PM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 05:54 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:54 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 05:54 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 05:54 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:54 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 05:54 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:54 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 05:54 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 05:54 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 05:54 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 05:54 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 05:54 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 05:54 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 05:54 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 05:54 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 05:54 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 05:54 PM
Surr: Tetrachloro-m-xylene	37.9	0	19-120		%REC	1	10/1/2014 05:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-025

Client Sample ID: B29-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	44.1	0	22-141		%REC	1	10/1/2014 05:54 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.028	0.011	1.0	J	mg/Kg	1	9/30/2014 04:15 PM
Surr: Chlorobenzene - d5	114	0	57-134		%REC	1	9/30/2014 04:15 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.035	0.0041	0.098	J	mg/Kg	1	10/1/2014 11:02 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:36 PM
Arsenic	3.5	0.10	1.0		mg/Kg	1	9/30/2014 10:36 PM
Barium	120	0.14	1.0		mg/Kg	1	9/30/2014 10:36 PM
Beryllium	0.38	0.13	1.0	J	mg/Kg	1	9/30/2014 10:36 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:36 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/30/2014 10:36 PM
Cobalt	8.3	0.14	1.0		mg/Kg	1	9/30/2014 10:36 PM
Copper	18	0.11	2.0		mg/Kg	1	9/30/2014 10:36 PM
Lead	4.8	0.12	1.0		mg/Kg	1	9/30/2014 10:36 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:36 PM
Nickel	15	0.13	1.0		mg/Kg	1	9/30/2014 10:36 PM
Selenium	0.44	0.17	1.0	J	mg/Kg	1	9/30/2014 10:36 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:36 PM
Thallium	0.97	0.16	1.0	J	mg/Kg	1	9/30/2014 10:36 PM
Vanadium	38	0.14	1.0		mg/Kg	1	9/30/2014 10:36 PM
Zinc	40	0.13	1.0		mg/Kg	1	9/30/2014 10:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-026

Client Sample ID: B30-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate	**9/30/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 02:06 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 02:06 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 02:06 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 02:06 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 02:06 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 02:06 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 02:06 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 02:06 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 02:06 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 02:06 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 02:06 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 02:06 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 02:06 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 02:06 AM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 02:06 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 02:06 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 02:06 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 02:06 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 02:06 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 02:06 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 02:06 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 02:06 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 02:06 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 02:06 AM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 02:06 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 02:06 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 02:06 AM
Acenaphthene	ND	40	330		µg/Kg	1	10/1/2014 02:06 AM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 02:06 AM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 02:06 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 02:06 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 02:06 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/1/2014 12:00 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	10/1/2014 12:00 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/1/2014 12:00 PM
Benzo(k)fluoranthene	ND	560	3300		µg/Kg	10	10/1/2014 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B30-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-026		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 02:06 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 02:06 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 02:06 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 02:06 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 02:06 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 02:06 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 02:06 AM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 02:06 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 02:06 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/1/2014 12:00 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/1/2014 12:00 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 02:06 AM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 02:06 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 02:06 AM
Fluoranthene	ND	61	330		µg/Kg	1	10/1/2014 02:06 AM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 02:06 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 02:06 AM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	10/1/2014 02:06 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 02:06 AM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 02:06 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/1/2014 12:00 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 02:06 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 02:06 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 02:06 AM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 02:06 AM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 02:06 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 02:06 AM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 02:06 AM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 02:06 AM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 02:06 AM
Surr: 1,2-Dichlorobenzene-d4	46.0	0	20-120		%REC	1	10/1/2014 02:06 AM
Surr: 2,4,6-Tribromophenol	56.3	0	31-125		%REC	1	10/1/2014 02:06 AM
Surr: 2-Chlorophenol-d4	51.9	0	29-120		%REC	1	10/1/2014 02:06 AM
Surr: 2-Fluorobiphenyl	51.3	0	35-120		%REC	1	10/1/2014 02:06 AM
Surr: 2-Fluorophenol	50.0	0	27-120		%REC	1	10/1/2014 02:06 AM
Surr: 4-Terphenyl-d14	70.7	0	26-142		%REC	1	10/1/2014 02:06 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-026

Client Sample ID: B30-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	49.9	0	25-120		%REC	1	10/1/2014 02:06 AM
Surr: Phenol-d5	48.4	0	20-120		%REC	1	10/1/2014 02:06 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	6.2	2.9	9.9	J	mg/Kg	1	10/1/2014 01:22 AM
ORO	12	1.8	9.9		mg/Kg	1	10/1/2014 01:22 AM
Surr: p-Terphenyl	93.6	0	49-173		%REC	1	10/1/2014 01:22 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:16 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 06:16 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 06:16 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:16 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 06:16 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 06:16 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:16 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 06:16 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 06:16 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:16 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 06:16 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:16 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 06:16 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 06:16 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:16 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:16 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:16 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 06:16 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 06:16 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:16 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 06:16 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 06:16 PM
Surr: Tetrachloro-m-xylene	38.3	0	19-120		%REC	1	10/1/2014 06:16 PM

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Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-026

Client Sample ID: B30-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	50.6	0	22-141		%REC	1	10/1/2014 06:16 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.026	0.011	1.0	J	mg/Kg	1	9/30/2014 04:48 PM
Surr: Chlorobenzene - d5	102	0	57-134		%REC	1	9/30/2014 04:48 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.029	0.0041	0.099	J	mg/Kg	1	10/1/2014 11:05 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:43 PM
Arsenic	3.4	0.10	1.0		mg/Kg	1	9/30/2014 10:43 PM
Barium	69	0.14	1.0		mg/Kg	1	9/30/2014 10:43 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM
Chromium	5.8	0.14	1.0		mg/Kg	1	9/30/2014 10:43 PM
Cobalt	4.2	0.14	1.0		mg/Kg	1	9/30/2014 10:43 PM
Copper	14	0.11	2.0		mg/Kg	1	9/30/2014 10:43 PM
Lead	3.0	0.12	1.0		mg/Kg	1	9/30/2014 10:43 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM
Nickel	5.9	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM
Selenium	0.24	0.17	1.0	J	mg/Kg	1	9/30/2014 10:43 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM
Thallium	1.0	0.16	1.0		mg/Kg	1	9/30/2014 10:43 PM
Vanadium	17	0.14	1.0		mg/Kg	1	9/30/2014 10:43 PM
Zinc	29	0.13	1.0		mg/Kg	1	9/30/2014 10:43 PM

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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B30-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-027		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	9/30/2014 11:01 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/30/2014 11:01 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/30/2014 11:01 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/30/2014 11:01 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/30/2014 11:01 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/30/2014 11:01 PM
2,4-Dichlorophenol	ND	41	1700		µg/Kg	1	9/30/2014 11:01 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/30/2014 11:01 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	9/30/2014 11:01 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/30/2014 11:01 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/30/2014 11:01 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/30/2014 11:01 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/30/2014 11:01 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/30/2014 11:01 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/30/2014 11:01 PM
2-Nitroaniline	ND	54	1700		µg/Kg	1	9/30/2014 11:01 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/30/2014 11:01 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/30/2014 11:01 PM
3-Nitroaniline	ND	49	1700		µg/Kg	1	9/30/2014 11:01 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	9/30/2014 11:01 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 11:01 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/30/2014 11:01 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/30/2014 11:01 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/30/2014 11:01 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/30/2014 11:01 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	9/30/2014 11:01 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	9/30/2014 11:01 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/30/2014 11:01 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/30/2014 11:01 PM
Anthracene	ND	64	330		µg/Kg	1	9/30/2014 11:01 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	9/30/2014 11:01 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/30/2014 11:01 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/30/2014 11:01 PM
Benzo(b)fluoranthene	ND	41	330		µg/Kg	1	9/30/2014 11:01 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/30/2014 11:01 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/30/2014 11:01 PM

Qualifiers:

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B30-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-027		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**				PrepDate	**9/30/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	9/30/2014 11:01 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/30/2014 11:01 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/30/2014 11:01 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/30/2014 11:01 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/30/2014 11:01 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/30/2014 11:01 PM
Butylbenzylphthalate	ND	68	330		µg/Kg	1	9/30/2014 11:01 PM
Chrysene	ND	80	330		µg/Kg	1	9/30/2014 11:01 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/30/2014 11:01 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/30/2014 11:01 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/30/2014 11:01 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/30/2014 11:01 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/30/2014 11:01 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/30/2014 11:01 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/30/2014 11:01 PM
Fluorene	ND	45	330		µg/Kg	1	9/30/2014 11:01 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/30/2014 11:01 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/30/2014 11:01 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/30/2014 11:01 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/30/2014 11:01 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/30/2014 11:01 PM
Isophorone	ND	59	330		µg/Kg	1	9/30/2014 11:01 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/30/2014 11:01 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/30/2014 11:01 PM
Naphthalene	ND	49	330		µg/Kg	1	9/30/2014 11:01 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/30/2014 11:01 PM
Pentachlorophenol	ND	34	1700		µg/Kg	1	9/30/2014 11:01 PM
Phenanthrene	ND	84	330		µg/Kg	1	9/30/2014 11:01 PM
Phenol	ND	38	330		µg/Kg	1	9/30/2014 11:01 PM
Pyrene	ND	47	330		µg/Kg	1	9/30/2014 11:01 PM
Surr: 1,2-Dichlorobenzene-d4	35.8	0	20-120		%REC	1	9/30/2014 11:01 PM
Surr: 2,4,6-Tribromophenol	57.6	0	31-125		%REC	1	9/30/2014 11:01 PM
Surr: 2-Chlorophenol-d4	42.3	0	29-120		%REC	1	9/30/2014 11:01 PM
Surr: 2-Fluorobiphenyl	44.4	0	35-120		%REC	1	9/30/2014 11:01 PM
Surr: 2-Fluorophenol	41.6	0	27-120		%REC	1	9/30/2014 11:01 PM
Surr: 4-Terphenyl-d14	72.2	0	26-142		%REC	1	9/30/2014 11:01 PM

Qualifiers:

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Lab Order: N013460
Project: ECI
Lab ID: N013460-027

Client Sample ID: B30-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140930A**	QC Batch: **46603**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	41.1	0	25-120		%REC	1	9/30/2014 11:01 PM
Surr: Phenol-d5	39.9	0	20-120		%REC	1	9/30/2014 11:01 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	4.7	2.9	9.9	J	mg/Kg	1	10/1/2014 01:49 AM
ORO	6.8	1.8	9.9	J	mg/Kg	1	10/1/2014 01:49 AM
Surr: p-Terphenyl	92.9	0	49-173		%REC	1	10/1/2014 01:49 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:39 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 06:39 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 06:39 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:39 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 06:39 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 06:39 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:39 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 06:39 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 06:39 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:39 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 06:39 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:39 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 06:39 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 06:39 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:39 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:39 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:39 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 06:39 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 06:39 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:39 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 06:39 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 06:39 PM
Surr: Tetrachloro-m-xylene	30.4	0	19-120		%REC	1	10/1/2014 06:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-027

Client Sample ID: B30-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	51.6	0	22-141		%REC	1	10/1/2014 06:39 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.075	0.011	1.0	J	mg/Kg	1	9/30/2014 07:01 PM
Surr: Chlorobenzene - d5	123	0	57-134		%REC	1	9/30/2014 07:01 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.013	0.0042	0.10	J	mg/Kg	1	10/1/2014 11:08 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:49 PM
Arsenic	3.4	0.10	1.0		mg/Kg	1	9/30/2014 10:49 PM
Barium	37	0.14	1.0		mg/Kg	1	9/30/2014 10:49 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM
Chromium	7.3	0.14	1.0		mg/Kg	1	9/30/2014 10:49 PM
Cobalt	2.4	0.14	1.0		mg/Kg	1	9/30/2014 10:49 PM
Copper	3.8	0.11	2.0		mg/Kg	1	9/30/2014 10:49 PM
Lead	2.1	0.12	1.0		mg/Kg	1	9/30/2014 10:49 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM
Nickel	6.4	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 10:49 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM
Thallium	0.59	0.16	1.0	J	mg/Kg	1	9/30/2014 10:49 PM
Vanadium	15	0.14	1.0		mg/Kg	1	9/30/2014 10:49 PM
Zinc	16	0.13	1.0		mg/Kg	1	9/30/2014 10:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B31-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-028		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate	**10/1/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 07:06 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 07:06 PM
1,3-Dichlorobenzene	ND	50	330		µg/Kg	1	10/1/2014 07:06 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 07:06 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 07:06 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 07:06 PM
2,4-Dichlorophenol	ND	41	1700		µg/Kg	1	10/1/2014 07:06 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 07:06 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 07:06 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 07:06 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 07:06 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 07:06 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 07:06 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 07:06 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 07:06 PM
2-Nitroaniline	ND	54	1700		µg/Kg	1	10/1/2014 07:06 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 07:06 PM
3,3´-Dichlorobenzidine	ND	240	6600		µg/Kg	10	10/2/2014 04:48 PM
3-Nitroaniline	ND	49	1700		µg/Kg	1	10/1/2014 07:06 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 07:06 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 07:06 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 07:06 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 07:06 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 07:06 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 07:06 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 07:06 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 07:06 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 07:06 PM
Acenaphthylene	ND	38	330		µg/Kg	1	10/1/2014 07:06 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 07:06 PM
Benzidine (M)	ND	4500	17000		µg/Kg	10	10/2/2014 04:48 PM
Benzo(a)anthracene	ND	750	3300		µg/Kg	10	10/2/2014 04:48 PM
Benzo(a)pyrene	ND	640	2000	A6L	µg/Kg	10	10/2/2014 04:48 PM
Benzo(b)fluoranthene	ND	410	3300	A6L	µg/Kg	10	10/2/2014 04:48 PM
Benzo(g,h,i)perylene	ND	480	3300	A6L	µg/Kg	10	10/2/2014 04:48 PM
Benzo(k)fluoranthene	ND	570	3300	A6L	µg/Kg	10	10/2/2014 04:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-028

Client Sample ID: B31-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 07:06 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 07:06 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 07:06 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 07:06 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 07:06 PM
Bis(2-ethylhexyl)phthalate	ND	800	3300		µg/Kg	10	10/2/2014 04:48 PM
Butylbenzylphthalate	ND	680	3300		µg/Kg	10	10/2/2014 04:48 PM
Chrysene	ND	800	3300		µg/Kg	10	10/2/2014 04:48 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 07:06 PM
Di-n-octylphthalate	ND	510	3300	A6L	µg/Kg	10	10/2/2014 04:48 PM
Dibenz(a,h)anthracene	ND	930	2000	A6L	µg/Kg	10	10/2/2014 04:48 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 07:06 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 07:06 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 07:06 PM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 07:06 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 07:06 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 07:06 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 07:06 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 07:06 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 07:06 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300	A6L	µg/Kg	10	10/2/2014 04:48 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 07:06 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 07:06 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 07:06 PM
Naphthalene	ND	49	330		µg/Kg	1	10/1/2014 07:06 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 07:06 PM
Pentachlorophenol	ND	35	1700		µg/Kg	1	10/1/2014 07:06 PM
Phenanthrene	ND	84	330		µg/Kg	1	10/1/2014 07:06 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 07:06 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 07:06 PM
Surr: 1,2-Dichlorobenzene-d4	50.2	0	20-120		%REC	1	10/1/2014 07:06 PM
Surr: 2,4,6-Tribromophenol	54.2	0	31-125		%REC	1	10/1/2014 07:06 PM
Surr: 2-Chlorophenol-d4	56.1	0	29-120		%REC	1	10/1/2014 07:06 PM
Surr: 2-Fluorobiphenyl	55.5	0	35-120		%REC	1	10/1/2014 07:06 PM
Surr: 2-Fluorophenol	56.0	0	27-120		%REC	1	10/1/2014 07:06 PM
Surr: 4-Terphenyl-d14	62.4	0	26-142		%REC	10	10/2/2014 04:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-028

Client Sample ID: B31-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	55.9	0	25-120		%REC	1	10/1/2014 07:06 PM
Surr: Phenol-d5	52.7	0	20-120		%REC	1	10/1/2014 07:06 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**				PrepDate	**9/30/2014**	Analyst: **MDM**
DRO	92	2.9	10		mg/Kg	1	10/1/2014 02:15 AM
ORO	330	1.8	10		mg/Kg	1	10/1/2014 02:15 AM
Surr: p-Terphenyl	96.7	0	49-173		%REC	1	10/1/2014 02:15 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**				PrepDate	**9/30/2014**	Analyst: **MDM**
4,4´-DDD	6.5	0.19	2.0		µg/Kg	1	10/1/2014 08:31 PM
4,4´-DDE	21	0.42	2.0		µg/Kg	1	10/1/2014 08:31 PM
4,4´-DDT	37	0.22	2.0		µg/Kg	1	10/1/2014 08:31 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:31 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 08:31 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 08:31 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:31 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 08:31 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 08:31 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:31 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 08:31 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:31 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 08:31 PM
Endrin	0.43	0.31	2.0	J	µg/Kg	1	10/1/2014 08:31 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:31 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:31 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:31 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 08:31 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 08:31 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:31 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 08:31 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 08:31 PM
Surr: Tetrachloro-m-xylene	33.9	0	19-120		%REC	1	10/1/2014 08:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-028

Client Sample ID: B31-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	34.5	0	22-141		%REC	1	10/1/2014 08:31 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.035	0.011	1.0	J	mg/Kg	1	9/30/2014 07:34 PM
Surr: Chlorobenzene - d5	98.2	0	57-134		%REC	1	9/30/2014 07:34 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.039	0.0041	0.098	J	mg/Kg	1	10/1/2014 11:11 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 10:55 PM
Arsenic	2.5	0.10	1.0		mg/Kg	1	9/30/2014 10:55 PM
Barium	85	0.14	1.0		mg/Kg	1	9/30/2014 10:55 PM
Beryllium	0.17	0.13	1.0	J	mg/Kg	1	9/30/2014 10:55 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:55 PM
Chromium	15	0.14	1.0		mg/Kg	1	9/30/2014 10:55 PM
Cobalt	4.3	0.14	1.0		mg/Kg	1	9/30/2014 10:55 PM
Copper	13	0.11	2.0		mg/Kg	1	9/30/2014 10:55 PM
Lead	21	0.12	1.0		mg/Kg	1	9/30/2014 10:55 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:55 PM
Nickel	11	0.13	1.0		mg/Kg	1	9/30/2014 10:55 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 10:55 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 10:55 PM
Thallium	0.64	0.16	1.0	J	mg/Kg	1	9/30/2014 10:55 PM
Vanadium	23	0.14	1.0		mg/Kg	1	9/30/2014 10:55 PM
Zinc	58	0.13	1.0		mg/Kg	1	9/30/2014 10:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B31-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-029		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 05:47 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 05:47 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 05:47 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 05:47 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 05:47 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 05:47 PM
2,4-Dichlorophenol	ND	40	1700		µg/Kg	1	10/1/2014 05:47 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 05:47 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 05:47 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 05:47 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 05:47 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 05:47 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 05:47 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 05:47 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 05:47 PM
2-Nitroaniline	ND	53	1700		µg/Kg	1	10/1/2014 05:47 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 05:47 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 05:47 PM
3-Nitroaniline	ND	48	1700		µg/Kg	1	10/1/2014 05:47 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 05:47 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 05:47 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 05:47 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 05:47 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 05:47 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 05:47 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 05:47 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 05:47 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 05:47 PM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 05:47 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 05:47 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	10/1/2014 05:47 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 05:47 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/2/2014 03:29 PM
Benzo(b)fluoranthene	ND	410	3300		µg/Kg	10	10/2/2014 03:29 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/2/2014 03:29 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/2/2014 03:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B31-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-029		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_141001B** QC Batch: **46613** PrepDate **10/1/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 05:47 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 05:47 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 05:47 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 05:47 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 05:47 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 05:47 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 05:47 PM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 05:47 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 05:47 PM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/2/2014 03:29 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/2/2014 03:29 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 05:47 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 05:47 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 05:47 PM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 05:47 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 05:47 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 05:47 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 05:47 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 05:47 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 05:47 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/2/2014 03:29 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 05:47 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 05:47 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 05:47 PM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 05:47 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 05:47 PM
Pentachlorophenol	ND	34	1700		µg/Kg	1	10/1/2014 05:47 PM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 05:47 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 05:47 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 05:47 PM
Surr: 1,2-Dichlorobenzene-d4	55.3	0	20-120		%REC	1	10/1/2014 05:47 PM
Surr: 2,4,6-Tribromophenol	72.7	0	31-125		%REC	1	10/1/2014 05:47 PM
Surr: 2-Chlorophenol-d4	67.4	0	29-120		%REC	1	10/1/2014 05:47 PM
Surr: 2-Fluorobiphenyl	66.7	0	35-120		%REC	1	10/1/2014 05:47 PM
Surr: 2-Fluorophenol	65.2	0	27-120		%REC	1	10/1/2014 05:47 PM
Surr: 4-Terphenyl-d14	116	0	26-142		%REC	1	10/1/2014 05:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-029

Client Sample ID: B31-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	63.6	0	25-120		%REC	1	10/1/2014 05:47 PM
Surr: Phenol-d5	64.6	0	20-120		%REC	1	10/1/2014 05:47 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	8.3	2.9	10	J	mg/Kg	1	10/1/2014 02:42 AM
ORO	17	1.8	10		mg/Kg	1	10/1/2014 02:42 AM
Surr: p-Terphenyl	93.4	0	49-173		%REC	1	10/1/2014 02:42 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:01 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 07:01 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 07:01 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:01 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:01 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 07:01 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:01 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:01 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:01 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:01 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:01 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:01 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:01 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:01 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:01 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:01 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:01 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:01 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:01 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:01 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:01 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:01 PM
Surr: Tetrachloro-m-xylene	45.0	0	19-120		%REC	1	10/1/2014 07:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B31-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-029		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	71.0	0	22-141		%REC	1	10/1/2014 07:01 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.029	0.011	1.0	J	mg/Kg	1	9/30/2014 08:07 PM
Surr: Chlorobenzene - d5	109	0	57-134		%REC	1	9/30/2014 08:07 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.038	0.0042	0.10	J	mg/Kg	1	10/1/2014 11:13 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 09:12 PM
Arsenic	2.2	0.10	1.0		mg/Kg	1	10/2/2014 09:12 PM
Barium	84	0.14	1.0		mg/Kg	1	10/2/2014 09:12 PM
Beryllium	0.39	0.13	1.0	J	mg/Kg	1	10/2/2014 09:12 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:12 PM
Chromium	17	0.14	1.0		mg/Kg	1	10/2/2014 09:12 PM
Cobalt	9.4	0.14	1.0		mg/Kg	1	10/2/2014 09:12 PM
Copper	14	0.11	2.0		mg/Kg	1	10/2/2014 09:12 PM
Lead	5.3	0.12	1.0		mg/Kg	1	10/2/2014 09:12 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:12 PM
Nickel	13	0.13	1.0		mg/Kg	1	10/2/2014 09:12 PM
Selenium	0.75	0.17	1.0	J	mg/Kg	1	10/2/2014 09:12 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:12 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 09:12 PM
Vanadium	32	0.14	1.0		mg/Kg	1	10/2/2014 09:12 PM
Zinc	40	0.13	1.0		mg/Kg	1	10/2/2014 09:12 PM

Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-030

Client Sample ID: B32-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate	**10/1/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 07:33 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 07:33 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 07:33 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 07:33 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 07:33 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 07:33 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 07:33 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 07:33 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 07:33 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 07:33 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 07:33 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 07:33 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 07:33 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 07:33 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 07:33 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 07:33 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 07:33 PM
3,3´-Dichlorobenzidine	ND	240	6600		µg/Kg	10	10/2/2014 05:15 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 07:33 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 07:33 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 07:33 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 07:33 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 07:33 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 07:33 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 07:33 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 07:33 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 07:33 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 07:33 PM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 07:33 PM
Anthracene	97	64	330	J	µg/Kg	1	10/1/2014 07:33 PM
Benzidine (M)	ND	4500	16000		µg/Kg	10	10/2/2014 05:15 PM
Benzo(a)anthracene	ND	750	3300		µg/Kg	10	10/2/2014 05:15 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/2/2014 05:15 PM
Benzo(b)fluoranthene	490	400	3300	J	µg/Kg	10	10/2/2014 05:15 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/2/2014 05:15 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/2/2014 05:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
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www.assetlaboratories.com

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B32-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-030		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 07:33 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 07:33 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 07:33 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 07:33 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 07:33 PM
Bis(2-ethylhexyl)phthalate	ND	800	3300		µg/Kg	10	10/2/2014 05:15 PM
Butylbenzylphthalate	ND	670	3300		µg/Kg	10	10/2/2014 05:15 PM
Chrysene	ND	800	3300		µg/Kg	10	10/2/2014 05:15 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 07:33 PM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/2/2014 05:15 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/2/2014 05:15 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 07:33 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 07:33 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 07:33 PM
Fluoranthene	700	61	330		µg/Kg	1	10/1/2014 07:33 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 07:33 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 07:33 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	10/1/2014 07:33 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 07:33 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 07:33 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/2/2014 05:15 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 07:33 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 07:33 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 07:33 PM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 07:33 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 07:33 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 07:33 PM
Phenanthrene	470	83	330		µg/Kg	1	10/1/2014 07:33 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 07:33 PM
Pyrene	630	47	330		µg/Kg	1	10/1/2014 07:33 PM
Surr: 1,2-Dichlorobenzene-d4	41.1	0	20-120		%REC	1	10/1/2014 07:33 PM
Surr: 2,4,6-Tribromophenol	54.0	0	31-125		%REC	1	10/1/2014 07:33 PM
Surr: 2-Chlorophenol-d4	50.8	0	29-120		%REC	1	10/1/2014 07:33 PM
Surr: 2-Fluorobiphenyl	50.3	0	35-120		%REC	1	10/1/2014 07:33 PM
Surr: 2-Fluorophenol	49.1	0	27-120		%REC	1	10/1/2014 07:33 PM
Surr: 4-Terphenyl-d14	57.4	0	26-142		%REC	10	10/2/2014 05:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-030

Client Sample ID: B32-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	48.3	0	25-120		%REC	1	10/1/2014 07:33 PM
Surr: Phenol-d5	48.4	0	20-120		%REC	1	10/1/2014 07:33 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**				PrepDate	**9/30/2014**	Analyst: **MDM**
DRO	170	2.9	10		mg/Kg	1	10/1/2014 03:08 AM
ORO	720	1.8	10		mg/Kg	1	10/1/2014 03:08 AM
Surr: p-Terphenyl	94.2	0	49-173		%REC	1	10/1/2014 03:08 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**				PrepDate	**9/30/2014**	Analyst: **MDM**
4,4´-DDD	18	0.20	2.0		µg/Kg	1	10/1/2014 08:54 PM
4,4´-DDE	11	0.42	2.0		µg/Kg	1	10/1/2014 08:54 PM
4,4´-DDT	8.1	0.22	2.0		µg/Kg	1	10/1/2014 08:54 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:54 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 08:54 PM
alpha-Chlordane	1.3	0.11	1.0		µg/Kg	1	10/1/2014 08:54 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:54 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 08:54 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 08:54 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:54 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 08:54 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:54 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 08:54 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 08:54 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:54 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:54 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:54 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 08:54 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 08:54 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:54 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 08:54 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 08:54 PM
Surr: Tetrachloro-m-xylene	53.9	0	19-120		%REC	1	10/1/2014 08:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-030

Client Sample ID: B32-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	79.9	0	22-141		%REC	1	10/1/2014 08:54 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.038	0.011	1.0	J	mg/Kg	1	9/30/2014 08:40 PM
Surr: Chlorobenzene - d5	84.3	0	57-134		%REC	1	9/30/2014 08:40 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.041	0.0042	0.10	J	mg/Kg	1	10/1/2014 11:22 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 11:17 PM
Arsenic	2.8	0.10	1.0		mg/Kg	1	9/30/2014 11:17 PM
Barium	94	0.14	1.0		mg/Kg	1	9/30/2014 11:17 PM
Beryllium	0.13	0.13	1.0	J	mg/Kg	1	9/30/2014 11:17 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:17 PM
Chromium	14	0.14	1.0		mg/Kg	1	9/30/2014 11:17 PM
Cobalt	3.6	0.14	1.0		mg/Kg	1	9/30/2014 11:17 PM
Copper	12	0.11	2.0		mg/Kg	1	9/30/2014 11:17 PM
Lead	16	0.12	1.0		mg/Kg	1	9/30/2014 11:17 PM
Molybdenum	0.37	0.13	1.0	J	mg/Kg	1	9/30/2014 11:17 PM
Nickel	9.9	0.13	1.0		mg/Kg	1	9/30/2014 11:17 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 11:17 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:17 PM
Thallium	0.62	0.16	1.0	J	mg/Kg	1	9/30/2014 11:17 PM
Vanadium	20	0.14	1.0		mg/Kg	1	9/30/2014 11:17 PM
Zinc	49	0.13	1.0		mg/Kg	1	9/30/2014 11:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B32-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-031		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 05:20 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 05:20 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 05:20 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 05:20 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 05:20 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 05:20 PM
2,4-Dichlorophenol	ND	40	1700		µg/Kg	1	10/1/2014 05:20 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 05:20 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 05:20 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 05:20 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 05:20 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 05:20 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 05:20 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 05:20 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 05:20 PM
2-Nitroaniline	ND	53	1700		µg/Kg	1	10/1/2014 05:20 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 05:20 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 05:20 PM
3-Nitroaniline	ND	48	1700		µg/Kg	1	10/1/2014 05:20 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 05:20 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 05:20 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 05:20 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 05:20 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 05:20 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 05:20 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 05:20 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 05:20 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 05:20 PM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 05:20 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 05:20 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	10/1/2014 05:20 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 05:20 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/2/2014 03:03 PM
Benzo(b)fluoranthene	ND	410	3300		µg/Kg	10	10/2/2014 03:03 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/2/2014 03:03 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/2/2014 03:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-031

Client Sample ID: B32-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 05:20 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 05:20 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 05:20 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 05:20 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 05:20 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 05:20 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 05:20 PM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 05:20 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 05:20 PM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/2/2014 03:03 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/2/2014 03:03 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 05:20 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 05:20 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 05:20 PM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 05:20 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 05:20 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 05:20 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 05:20 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 05:20 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 05:20 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/2/2014 03:03 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 05:20 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 05:20 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 05:20 PM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 05:20 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 05:20 PM
Pentachlorophenol	ND	34	1700		µg/Kg	1	10/1/2014 05:20 PM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 05:20 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 05:20 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 05:20 PM
Surr: 1,2-Dichlorobenzene-d4	54.8	0	20-120		%REC	1	10/1/2014 05:20 PM
Surr: 2,4,6-Tribromophenol	78.7	0	31-125		%REC	1	10/1/2014 05:20 PM
Surr: 2-Chlorophenol-d4	70.5	0	29-120		%REC	1	10/1/2014 05:20 PM
Surr: 2-Fluorobiphenyl	68.7	0	35-120		%REC	1	10/1/2014 05:20 PM
Surr: 2-Fluorophenol	69.3	0	27-120		%REC	1	10/1/2014 05:20 PM
Surr: 4-Terphenyl-d14	111	0	26-142		%REC	1	10/1/2014 05:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-031

Client Sample ID: B32-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	66.6	0	25-120		%REC	1	10/1/2014 05:20 PM
Surr: Phenol-d5	67.7	0	20-120		%REC	1	10/1/2014 05:20 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	9.6	2.9	10	J	mg/Kg	1	10/1/2014 03:34 AM
ORO	19	1.8	10		mg/Kg	1	10/1/2014 03:34 AM
Surr: p-Terphenyl	92.8	0	49-173		%REC	1	10/1/2014 03:34 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:24 PM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 07:24 PM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 07:24 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:24 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:24 PM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 07:24 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:24 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:24 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:24 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:24 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:24 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:24 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:24 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:24 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:24 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:24 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:24 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:24 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:24 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:24 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:24 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:24 PM
Surr: Tetrachloro-m-xylene	52.0	0	19-120		%REC	1	10/1/2014 07:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET LABORATORIES
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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-031

Client Sample ID: B32-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	69.6	0	22-141		%REC	1	10/1/2014 07:24 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.028	0.011	1.0	J	mg/Kg	1	10/1/2014 11:20 AM
Surr: Chlorobenzene - d5	112	0	57-134		%REC	1	10/1/2014 11:20 AM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.033	0.0042	0.10	J	mg/Kg	1	10/1/2014 11:25 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 11:23 PM
Arsenic	2.9	0.10	1.0		mg/Kg	1	9/30/2014 11:23 PM
Barium	38	0.14	1.0		mg/Kg	1	9/30/2014 11:23 PM
Beryllium	0.19	0.13	1.0	J	mg/Kg	1	9/30/2014 11:23 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:23 PM
Chromium	13	0.14	1.0		mg/Kg	1	9/30/2014 11:23 PM
Cobalt	3.6	0.14	1.0		mg/Kg	1	9/30/2014 11:23 PM
Copper	3.6	0.11	2.0		mg/Kg	1	9/30/2014 11:23 PM
Lead	4.0	0.12	1.0		mg/Kg	1	9/30/2014 11:23 PM
Molybdenum	0.41	0.13	1.0	J	mg/Kg	1	9/30/2014 11:23 PM
Nickel	8.5	0.13	1.0		mg/Kg	1	9/30/2014 11:23 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/30/2014 11:23 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:23 PM
Thallium	0.50	0.16	1.0	J	mg/Kg	1	9/30/2014 11:23 PM
Vanadium	18	0.14	1.0		mg/Kg	1	9/30/2014 11:23 PM
Zinc	18	0.13	1.0		mg/Kg	1	9/30/2014 11:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B33-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-032		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 06:40 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 06:40 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	10/1/2014 06:40 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 06:40 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 06:40 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 06:40 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	10/1/2014 06:40 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 06:40 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	10/1/2014 06:40 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 06:40 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 06:40 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 06:40 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 06:40 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	10/1/2014 06:40 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 06:40 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	10/1/2014 06:40 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 06:40 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 06:40 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	10/1/2014 06:40 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	10/1/2014 06:40 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 06:40 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	10/1/2014 06:40 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 06:40 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 06:40 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 06:40 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	10/1/2014 06:40 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	10/1/2014 06:40 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 06:40 PM
Acenaphthylene	ND	37	330		µg/Kg	1	10/1/2014 06:40 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 06:40 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	10/1/2014 06:40 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 06:40 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/2/2014 04:22 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	10/2/2014 04:22 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/2/2014 04:22 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/2/2014 04:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-032

Client Sample ID: B33-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	10/1/2014 06:40 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 06:40 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 06:40 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 06:40 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 06:40 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 06:40 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	10/1/2014 06:40 PM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 06:40 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 06:40 PM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/2/2014 04:22 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/2/2014 04:22 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 06:40 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 06:40 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 06:40 PM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 06:40 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 06:40 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 06:40 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 06:40 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 06:40 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 06:40 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/2/2014 04:22 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 06:40 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 06:40 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 06:40 PM
Naphthalene	ND	48	330		µg/Kg	1	10/1/2014 06:40 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 06:40 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	10/1/2014 06:40 PM
Phenanthrene	ND	83	330		µg/Kg	1	10/1/2014 06:40 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 06:40 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 06:40 PM
Surr: 1,2-Dichlorobenzene-d4	47.3	0	20-120		%REC	1	10/1/2014 06:40 PM
Surr: 2,4,6-Tribromophenol	71.3	0	31-125		%REC	1	10/1/2014 06:40 PM
Surr: 2-Chlorophenol-d4	66.6	0	29-120		%REC	1	10/1/2014 06:40 PM
Surr: 2-Fluorobiphenyl	66.1	0	35-120		%REC	1	10/1/2014 06:40 PM
Surr: 2-Fluorophenol	63.2	0	27-120		%REC	1	10/1/2014 06:40 PM
Surr: 4-Terphenyl-d14	74.0	0	26-142		%REC	10	10/2/2014 04:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-032

Client Sample ID: B33-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**			PrepDate		**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	60.5	0	25-120		%REC	1	10/1/2014 06:40 PM
Surr: Phenol-d5	63.8	0	20-120		%REC	1	10/1/2014 06:40 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	56	2.9	10		mg/Kg	1	10/1/2014 04:01 AM
ORO	170	1.8	10		mg/Kg	1	10/1/2014 04:01 AM
Surr: p-Terphenyl	94.0	0	49-173		%REC	1	10/1/2014 04:01 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
4,4´-DDD	0.41	0.19	2.0	J	µg/Kg	1	10/1/2014 08:09 PM
4,4´-DDE	1.5	0.42	2.0	J	µg/Kg	1	10/1/2014 08:09 PM
4,4´-DDT	3.1	0.22	2.0		µg/Kg	1	10/1/2014 08:09 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:09 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 08:09 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 08:09 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:09 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 08:09 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 08:09 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:09 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 08:09 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:09 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 08:09 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 08:09 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:09 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:09 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:09 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 08:09 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 08:09 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:09 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 08:09 PM
Toxaphene	ND	5.2	85		µg/Kg	1	10/1/2014 08:09 PM
Surr: Tetrachloro-m-xylene	45.6	0	19-120		%REC	1	10/1/2014 08:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-032

Client Sample ID: B33-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	44.3	0	22-141		%REC	1	10/1/2014 08:09 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140930A**	QC Batch: **E14VS095**			PrepDate			Analyst: **QBM**
GRO	0.034	0.011	1.0	J	mg/Kg	1	9/30/2014 09:13 PM
Surr: Chlorobenzene - d5	97.5	0	57-134		%REC	1	9/30/2014 09:13 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.027	0.0041	0.098	J	mg/Kg	1	10/1/2014 11:28 AM
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140930B**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/30/2014 11:28 PM
Arsenic	3.3	0.10	1.0		mg/Kg	1	9/30/2014 11:28 PM
Barium	130	0.14	1.0		mg/Kg	1	9/30/2014 11:28 PM
Beryllium	0.25	0.13	1.0	J	mg/Kg	1	9/30/2014 11:28 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:28 PM
Chromium	15	0.14	1.0		mg/Kg	1	9/30/2014 11:28 PM
Cobalt	6.4	0.14	1.0		mg/Kg	1	9/30/2014 11:28 PM
Copper	13	0.11	2.0		mg/Kg	1	9/30/2014 11:28 PM
Lead	6.7	0.12	1.0		mg/Kg	1	9/30/2014 11:28 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:28 PM
Nickel	12	0.13	1.0		mg/Kg	1	9/30/2014 11:28 PM
Selenium	0.21	0.17	1.0	J	mg/Kg	1	9/30/2014 11:28 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/30/2014 11:28 PM
Thallium	1.3	0.16	1.0		mg/Kg	1	9/30/2014 11:28 PM
Vanadium	29	0.14	1.0		mg/Kg	1	9/30/2014 11:28 PM
Zinc	40	0.13	1.0		mg/Kg	1	9/30/2014 11:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B33-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-033		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	10/1/2014 06:13 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	10/1/2014 06:13 PM
1,3-Dichlorobenzene	ND	50	330		µg/Kg	1	10/1/2014 06:13 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	10/1/2014 06:13 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	10/1/2014 06:13 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	10/1/2014 06:13 PM
2,4-Dichlorophenol	ND	41	1700		µg/Kg	1	10/1/2014 06:13 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	10/1/2014 06:13 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	10/1/2014 06:13 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	10/1/2014 06:13 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	10/1/2014 06:13 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	10/1/2014 06:13 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	10/1/2014 06:13 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	10/1/2014 06:13 PM
2-Methylphenol	ND	48	330		µg/Kg	1	10/1/2014 06:13 PM
2-Nitroaniline	ND	54	1700		µg/Kg	1	10/1/2014 06:13 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	10/1/2014 06:13 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	10/1/2014 06:13 PM
3-Nitroaniline	ND	49	1700		µg/Kg	1	10/1/2014 06:13 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	10/1/2014 06:13 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 06:13 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	10/1/2014 06:13 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	10/1/2014 06:13 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	10/1/2014 06:13 PM
4-Methylphenol	ND	36	330		µg/Kg	1	10/1/2014 06:13 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	10/1/2014 06:13 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	10/1/2014 06:13 PM
Acenaphthene	ND	41	330		µg/Kg	1	10/1/2014 06:13 PM
Acenaphthylene	ND	38	330		µg/Kg	1	10/1/2014 06:13 PM
Anthracene	ND	64	330		µg/Kg	1	10/1/2014 06:13 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	10/1/2014 06:13 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	10/1/2014 06:13 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	10/2/2014 03:55 PM
Benzo(b)fluoranthene	ND	410	3300		µg/Kg	10	10/2/2014 03:55 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	10/2/2014 03:55 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	10/2/2014 03:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B33-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-033		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	10/1/2014 06:13 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	10/1/2014 06:13 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	10/1/2014 06:13 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	10/1/2014 06:13 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	10/1/2014 06:13 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	10/1/2014 06:13 PM
Butylbenzylphthalate	ND	68	330		µg/Kg	1	10/1/2014 06:13 PM
Chrysene	ND	80	330		µg/Kg	1	10/1/2014 06:13 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	10/1/2014 06:13 PM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	10/2/2014 03:55 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	10/2/2014 03:55 PM
Dibenzofuran	ND	40	330		µg/Kg	1	10/1/2014 06:13 PM
Diethylphthalate	ND	44	330		µg/Kg	1	10/1/2014 06:13 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	10/1/2014 06:13 PM
Fluoranthene	ND	62	330		µg/Kg	1	10/1/2014 06:13 PM
Fluorene	ND	45	330		µg/Kg	1	10/1/2014 06:13 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	10/1/2014 06:13 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	10/1/2014 06:13 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	10/1/2014 06:13 PM
Hexachloroethane	ND	42	330		µg/Kg	1	10/1/2014 06:13 PM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	10/2/2014 03:55 PM
Isophorone	ND	59	330		µg/Kg	1	10/1/2014 06:13 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	10/1/2014 06:13 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	10/1/2014 06:13 PM
Naphthalene	ND	49	330		µg/Kg	1	10/1/2014 06:13 PM
Nitrobenzene	ND	57	330		µg/Kg	1	10/1/2014 06:13 PM
Pentachlorophenol	ND	35	1700		µg/Kg	1	10/1/2014 06:13 PM
Phenanthrene	ND	84	330		µg/Kg	1	10/1/2014 06:13 PM
Phenol	ND	38	330		µg/Kg	1	10/1/2014 06:13 PM
Pyrene	ND	47	330		µg/Kg	1	10/1/2014 06:13 PM
Surr: 1,2-Dichlorobenzene-d4	48.0	0	20-120		%REC	1	10/1/2014 06:13 PM
Surr: 2,4,6-Tribromophenol	68.0	0	31-125		%REC	1	10/1/2014 06:13 PM
Surr: 2-Chlorophenol-d4	63.1	0	29-120		%REC	1	10/1/2014 06:13 PM
Surr: 2-Fluorobiphenyl	62.1	0	35-120		%REC	1	10/1/2014 06:13 PM
Surr: 2-Fluorophenol	60.4	0	27-120		%REC	1	10/1/2014 06:13 PM
Surr: 4-Terphenyl-d14	126	0	26-142		%REC	1	10/1/2014 06:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-033

Client Sample ID: B33-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_141001B**	QC Batch: **46613**				PrepDate	**10/1/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	59.1	0	25-120		%REC	1	10/1/2014 06:13 PM
Surr: Phenol-d5	60.5	0	20-120		%REC	1	10/1/2014 06:13 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**				PrepDate	**9/30/2014**	Analyst: **MDM**
DRO	55	2.9	10		mg/Kg	1	10/1/2014 04:27 AM
ORO	190	1.8	10		mg/Kg	1	10/1/2014 04:27 AM
Surr: p-Terphenyl	91.9	0	49-173		%REC	1	10/1/2014 04:27 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**				PrepDate	**9/30/2014**	Analyst: **MDM**
4,4´-DDD	2.9	0.19	2.0		µg/Kg	1	10/1/2014 07:46 PM
4,4´-DDE	1.7	0.42	2.0	J	µg/Kg	1	10/1/2014 07:46 PM
4,4´-DDT	43	0.22	2.0		µg/Kg	1	10/1/2014 07:46 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:46 PM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 07:46 PM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 07:46 PM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:46 PM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 07:46 PM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 07:46 PM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:46 PM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 07:46 PM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:46 PM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 07:46 PM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 07:46 PM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 07:46 PM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 07:46 PM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 07:46 PM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 07:46 PM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 07:46 PM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 07:46 PM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 07:46 PM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 07:46 PM
Surr: Tetrachloro-m-xylene	56.5	0	19-120		%REC	1	10/1/2014 07:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-033

Client Sample ID: B33-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_141001A**	QC Batch: **46609**			PrepDate		**9/30/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	64.0	0	22-141		%REC	1	10/1/2014 07:46 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.026	0.011	1.0	J	mg/Kg	1	10/1/2014 11:52 AM
Surr: Chlorobenzene - d5	107	0	57-134		%REC	1	10/1/2014 11:52 AM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_141001A**	QC Batch: **46588**			PrepDate		**9/30/2014**	Analyst: **CEI**
Mercury	0.018	0.0042	0.10	J	mg/Kg	1	10/1/2014 11:31 AM
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_141002C**	QC Batch: **46584**			PrepDate		**9/29/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	10/2/2014 09:18 PM
Arsenic	1.4	0.10	1.0		mg/Kg	1	10/2/2014 09:18 PM
Barium	78	0.14	1.0		mg/Kg	1	10/2/2014 09:18 PM
Beryllium	0.36	0.13	1.0	J	mg/Kg	1	10/2/2014 09:18 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:18 PM
Chromium	14	0.14	1.0		mg/Kg	1	10/2/2014 09:18 PM
Cobalt	5.7	0.14	1.0		mg/Kg	1	10/2/2014 09:18 PM
Copper	13	0.11	2.0		mg/Kg	1	10/2/2014 09:18 PM
Lead	22	0.12	1.0		mg/Kg	1	10/2/2014 09:18 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:18 PM
Nickel	10	0.13	1.0		mg/Kg	1	10/2/2014 09:18 PM
Selenium	0.34	0.17	1.0	J	mg/Kg	1	10/2/2014 09:18 PM
Silver	ND	0.13	1.0		mg/Kg	1	10/2/2014 09:18 PM
Thallium	ND	0.16	1.0		mg/Kg	1	10/2/2014 09:18 PM
Vanadium	22	0.14	1.0		mg/Kg	1	10/2/2014 09:18 PM
Zinc	58	0.13	1.0		mg/Kg	1	10/2/2014 09:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-034

Client Sample ID: B34-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**			PrepDate		**9/30/2014**	Analyst: **MDM**
DRO	7.2	2.9	9.9	J	mg/Kg	1	10/1/2014 04:53 AM
ORO	12	1.8	9.9		mg/Kg	1	10/1/2014 04:53 AM
Surr: p-Terphenyl	91.4	0	49-173		%REC	1	10/1/2014 04:53 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**			PrepDate		**10/1/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:32 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/2/2014 06:32 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/2/2014 06:32 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:32 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 06:32 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/2/2014 06:32 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:32 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 06:32 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 06:32 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:32 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 06:32 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:32 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 06:32 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 06:32 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:32 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:32 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:32 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 06:32 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 06:32 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:32 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 06:32 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 06:32 AM
Surr: Tetrachloro-m-xylene	45.1	0	19-120		%REC	1	10/2/2014 06:32 AM
Surr: Decachlorobiphenyl	61.2	0	22-141		%REC	1	10/2/2014 06:32 AM
PCBS BY GC/ECD							
EPA 3550B			**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate		**10/1/2014**	Analyst: **MDM**
Aroclor 1016	ND	5.0	16		µg/Kg	1	10/2/2014 06:32 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B34-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-034		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 06:32 AM
Aroclor 1232	ND	11	16		µg/Kg	1	10/2/2014 06:32 AM
Aroclor 1242	ND	8.1	16		µg/Kg	1	10/2/2014 06:32 AM
Aroclor 1248	ND	2.8	16		µg/Kg	1	10/2/2014 06:32 AM
Aroclor 1254	ND	4.9	16		µg/Kg	1	10/2/2014 06:32 AM
Aroclor 1260	ND	3.2	16		µg/Kg	1	10/2/2014 06:32 AM
Surr: Decachlorobiphenyl	61.6	0	41-150		%REC	1	10/2/2014 06:32 AM
Surr: Tetrachloro-m-xylene	45.7	0	27-120		%REC	1	10/2/2014 06:32 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.028	0.011	1.0	J	mg/Kg	1	10/1/2014 12:25 PM
Surr: Chlorobenzene - d5	119	0	57-134		%REC	1	10/1/2014 12:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-035

Client Sample ID: B34-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**				PrepDate	**9/30/2014**	Analyst: **MDM**
DRO	12	2.9	9.9		mg/Kg	1	10/1/2014 05:20 AM
ORO	33	1.8	9.9		mg/Kg	1	10/1/2014 05:20 AM
Surr: p-Terphenyl	104	0	49-173		%REC	1	10/1/2014 05:20 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
4,4´-DDD	8.1	0.19	2.0		µg/Kg	1	10/2/2014 08:05 AM
4,4´-DDE	16	0.42	2.0		µg/Kg	1	10/2/2014 08:05 AM
4,4´-DDT	72	2.2	20		µg/Kg	10	10/2/2014 09:38 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 08:05 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 08:05 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/2/2014 08:05 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 08:05 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 08:05 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 08:05 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 08:05 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 08:05 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 08:05 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 08:05 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 08:05 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/2/2014 08:05 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 08:05 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 08:05 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 08:05 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 08:05 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 08:05 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 08:05 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 08:05 AM
Surr: Tetrachloro-m-xylene	55.4	0	19-120		%REC	1	10/2/2014 08:05 AM
Surr: Decachlorobiphenyl	43.6	0	22-141		%REC	1	10/2/2014 08:05 AM
PCBS BY GC/ECD							
EPA 3550B			**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
Aroclor 1016	ND	5.0	16		µg/Kg	1	10/2/2014 08:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

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ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B34-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-035		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 08:05 AM
Aroclor 1232	ND	11	16		µg/Kg	1	10/2/2014 08:05 AM
Aroclor 1242	ND	8.1	16		µg/Kg	1	10/2/2014 08:05 AM
Aroclor 1248	ND	2.8	16		µg/Kg	1	10/2/2014 08:05 AM
Aroclor 1254	ND	4.9	16		µg/Kg	1	10/2/2014 08:05 AM
Aroclor 1260	ND	3.2	16		µg/Kg	1	10/2/2014 08:05 AM
Surr: Decachlorobiphenyl	43.4	0	41-150		%REC	10	10/2/2014 09:38 AM
Surr: Tetrachloro-m-xylene	53.4	0	27-120		%REC	1	10/2/2014 08:05 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.027	0.011	1.0	J	mg/Kg	1	10/1/2014 12:58 PM
Surr: Chlorobenzene - d5	111	0	57-134		%REC	1	10/1/2014 12:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-036

Client Sample ID: B35-2
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930A**	QC Batch: **46604**				PrepDate	**9/30/2014**	Analyst: **MDM**
DRO	80	2.9	10		mg/Kg	1	10/1/2014 05:46 AM
ORO	280	1.8	10		mg/Kg	1	10/1/2014 05:46 AM
Surr: p-Terphenyl	87.8	0	49-173		%REC	1	10/1/2014 05:46 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
4,4´-DDD	0.55	0.19	2.0	J	µg/Kg	1	10/2/2014 08:28 AM
4,4´-DDE	1.2	0.42	2.0	J	µg/Kg	1	10/2/2014 08:28 AM
4,4´-DDT	0.91	0.22	2.0	J	µg/Kg	1	10/2/2014 08:28 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 08:28 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 08:28 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/2/2014 08:28 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 08:28 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 08:28 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 08:28 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 08:28 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 08:28 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 08:28 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 08:28 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 08:28 AM
Endrin aldehyde	0.22	0.20	2.0	J	µg/Kg	1	10/2/2014 08:28 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 08:28 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 08:28 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 08:28 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 08:28 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 08:28 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 08:28 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 08:28 AM
Surr: Tetrachloro-m-xylene	60.8	0	19-120		%REC	1	10/2/2014 08:28 AM
Surr: Decachlorobiphenyl	46.5	0	22-141		%REC	1	10/2/2014 08:28 AM
PCBS BY GC/ECD							
EPA 3550B			**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**				PrepDate	**10/1/2014**	Analyst: **MDM**
Aroclor 1016	ND	5.0	16		µg/Kg	1	10/2/2014 08:28 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B35-2
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-036		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 08:28 AM
Aroclor 1232	ND	11	16		µg/Kg	1	10/2/2014 08:28 AM
Aroclor 1242	ND	8.1	16		µg/Kg	1	10/2/2014 08:28 AM
Aroclor 1248	ND	2.8	16		µg/Kg	1	10/2/2014 08:28 AM
Aroclor 1254	ND	4.9	16		µg/Kg	1	10/2/2014 08:28 AM
Aroclor 1260	ND	3.2	16		µg/Kg	1	10/2/2014 08:28 AM
Surr: Decachlorobiphenyl	48.5	0	41-150		%REC	1	10/2/2014 08:28 AM
Surr: Tetrachloro-m-xylene	59.0	0	27-120		%REC	1	10/2/2014 08:28 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.025	0.011	1.0	J	mg/Kg	1	10/1/2014 01:31 PM
Surr: Chlorobenzene - d5	97.7	0	57-134		%REC	1	10/1/2014 01:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013460
Project: ECI
Lab ID: N013460-037

Client Sample ID: B35-5
Collection Date: 9/25/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC3_140930B**	QC Batch: **46614**			PrepDate	**10/1/2014**		Analyst: **MDM**
DRO	4.8	2.9	10	J	mg/Kg	1	10/1/2014 09:43 AM
ORO	6.1	1.8	10	J	mg/Kg	1	10/1/2014 09:43 AM
Surr: p-Terphenyl	79.2	0	49-173		%REC	1	10/1/2014 09:43 AM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC8_141001B**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:55 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/2/2014 06:55 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/2/2014 06:55 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:55 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/2/2014 06:55 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/2/2014 06:55 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:55 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/2/2014 06:55 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/2/2014 06:55 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:55 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/2/2014 06:55 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:55 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/2/2014 06:55 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/2/2014 06:55 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/2/2014 06:55 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/2/2014 06:55 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/2/2014 06:55 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/2/2014 06:55 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/2/2014 06:55 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/2/2014 06:55 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/2/2014 06:55 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/2/2014 06:55 AM
Surr: Tetrachloro-m-xylene	67.8	0	19-120		%REC	1	10/2/2014 06:55 AM
Surr: Decachlorobiphenyl	70.6	0	22-141		%REC	1	10/2/2014 06:55 AM
PCBS BY GC/ECD							
EPA 3550B			**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
Aroclor 1016	ND	5.0	17		µg/Kg	1	10/2/2014 06:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B35-5
Lab Order:	N013460	**Collection Date:**	9/25/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013460-037		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B		**EPA 8082**				
RunID: **GC8_141001C**	QC Batch: **46612**			PrepDate	**10/1/2014**		Analyst: **MDM**
Aroclor 1221	ND	5.4	33		µg/Kg	1	10/2/2014 06:55 AM
Aroclor 1232	ND	11	17		µg/Kg	1	10/2/2014 06:55 AM
Aroclor 1242	ND	8.1	17		µg/Kg	1	10/2/2014 06:55 AM
Aroclor 1248	ND	2.8	17		µg/Kg	1	10/2/2014 06:55 AM
Aroclor 1254	ND	4.9	17		µg/Kg	1	10/2/2014 06:55 AM
Aroclor 1260	ND	3.2	17		µg/Kg	1	10/2/2014 06:55 AM
Surr: Decachlorobiphenyl	71.4	0	41-150		%REC	1	10/2/2014 06:55 AM
Surr: Tetrachloro-m-xylene	69.5	0	27-120		%REC	1	10/2/2014 06:55 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_141001A**	QC Batch: **E14VS096**			PrepDate			Analyst: **QBM**
GRO	0.024	0.011	1.0	J	mg/Kg	1	10/1/2014 02:03 PM
Surr: Chlorobenzene - d5	101	0	57-134		%REC	1	10/1/2014 02:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **MB-46583** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **PBS** Batch ID: **46583** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.319	1.0									J

Sample ID **LCS-46583** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **LCSS** Batch ID: **46583** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	23.461	2.0	25.00	0	93.8	80	120				
Arsenic	23.154	1.0	25.00	0	92.6	80	120				
Barium	23.914	1.0	25.00	0	95.7	80	120				
Beryllium	23.302	1.0	25.00	0	93.2	80	120				
Cadmium	23.251	1.0	25.00	0	93.0	80	120				
Chromium	23.594	1.0	25.00	0	94.4	80	120				
Cobalt	22.540	1.0	25.00	0	90.2	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **LCS-46583** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **LCSS** Batch ID: **46583** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	24.563	2.0	25.00	0	98.3	80	120				
Lead	23.783	1.0	25.00	0	95.1	80	120				
Molybdenum	24.241	1.0	25.00	0	97.0	80	120				
Nickel	23.500	1.0	25.00	0	94.0	80	120				
Selenium	21.571	1.0	25.00	0	86.3	80	120				
Silver	24.067	1.0	25.00	0	96.3	80	120				
Thallium	23.745	1.0	25.00	0	95.0	80	120				
Vanadium	23.741	1.0	25.00	0	95.0	80	120				
Zinc	22.942	1.0	25.00	0	91.8	80	120				

Sample ID **N013457-001A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **ZZZZZZ** Batch ID: **46583** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	15.890	2.0	25.10	0	63.3	75	125				S
Arsenic	23.146	1.0	25.10	3.204	79.5	75	125				
Barium	158.974	1.0	25.10	129.0	120	75	125				
Beryllium	19.772	1.0	25.10	0.1732	78.1	75	125				
Cadmium	18.263	1.0	25.10	0	72.8	75	125				S
Chromium	37.583	1.0	25.10	18.68	75.3	75	125				
Cobalt	23.070	1.0	25.10	4.412	74.3	75	125				S
Copper	29.526	2.0	25.10	8.647	83.2	75	125				
Lead	25.421	1.0	25.10	12.20	52.7	75	125				S
Molybdenum	19.971	1.0	25.10	0.1842	78.8	75	125				
Nickel	31.278	1.0	25.10	11.05	80.6	75	125				
Selenium	18.528	1.0	25.10	0	73.8	75	125				S
Silver	18.610	1.0	25.10	0	74.1	75	125				S
Thallium	18.454	1.0	25.10	0.2934	72.4	75	125				S
Vanadium	44.183	1.0	25.10	23.68	81.7	75	125				
Zinc	53.753	1.0	25.10	35.56	72.5	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **N013457-001A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **ZZZZZZ** Batch ID: **46583** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	15.592	2.0	24.91	0	62.6	75	125	15.89	1.89	20	S
Arsenic	22.761	1.0	24.91	3.204	78.5	75	125	23.15	1.68	20	
Barium	157.037	1.0	24.91	129.0	113	75	125	159.0	1.23	20	
Beryllium	18.886	1.0	24.91	0.1732	75.1	75	125	19.77	4.58	20	
Cadmium	17.958	1.0	24.91	0	72.1	75	125	18.26	1.69	20	S
Chromium	37.190	1.0	24.91	18.68	74.3	75	125	37.58	1.05	20	S
Cobalt	22.829	1.0	24.91	4.412	73.9	75	125	23.07	1.05	20	S
Copper	29.247	2.0	24.91	8.647	82.7	75	125	29.53	0.949	20	
Lead	24.883	1.0	24.91	12.20	50.9	75	125	25.42	2.14	20	S
Molybdenum	19.850	1.0	24.91	0.1842	78.9	75	125	19.97	0.608	20	
Nickel	30.986	1.0	24.91	11.05	80.0	75	125	31.28	0.940	20	
Selenium	18.206	1.0	24.91	0	73.1	75	125	18.53	1.75	20	S
Silver	18.489	1.0	24.91	0	74.2	75	125	18.61	0.657	20	S
Thallium	18.296	1.0	24.91	0.2934	72.3	75	125	18.45	0.861	20	S
Vanadium	43.807	1.0	24.91	23.68	80.8	75	125	44.18	0.857	20	
Zinc	52.761	1.0	24.91	35.56	69.0	75	125	53.75	1.86	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID	MB-46584	SampType:	MBLK	TestCode:	6010_S	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95076
Client ID:	PBS	Batch ID:	46584	TestNo:	EPA 6010B	EPA 3050B		Analysis Date:	9/30/2014	SeqNo:	1842286

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.231	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.843	1.0									J

Sample ID	LCS-46584	SampType:	LCS	TestCode:	6010_S	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95076
Client ID:	LCSS	Batch ID:	46584	TestNo:	EPA 6010B	EPA 3050B		Analysis Date:	9/30/2014	SeqNo:	1842287

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	23.305	2.0	25.00	0	93.2	80	120				
Arsenic	22.780	1.0	25.00	0	91.1	80	120				
Barium	23.753	1.0	25.00	0	95.0	80	120				
Beryllium	23.016	1.0	25.00	0	92.1	80	120				
Cadmium	22.832	1.0	25.00	0	91.3	80	120				
Chromium	23.430	1.0	25.00	0	93.7	80	120				
Cobalt	22.267	1.0	25.00	0	89.1	80	120				
Copper	24.413	2.0	25.00	0	97.7	80	120				
Lead	23.286	1.0	25.00	0	93.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **LCS-46584** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **LCSS** Batch ID: **46584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842287**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	23.981	1.0	25.00	0	95.9	80	120				
Nickel	23.242	1.0	25.00	0	93.0	80	120				
Selenium	20.990	1.0	25.00	0	84.0	80	120				
Silver	23.894	1.0	25.00	0	95.6	80	120				
Thallium	23.381	1.0	25.00	0	93.5	80	120				
Vanadium	23.630	1.0	25.00	0	94.5	80	120				
Zinc	22.472	1.0	25.00	0	89.9	80	120				

Sample ID **N013460-017A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **ZZZZZZ** Batch ID: **46584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/30/2014** SeqNo: **1842312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	12.230	2.0	24.88	0	49.2	75	125				S
Arsenic	20.418	1.0	24.88	2.359	72.6	75	125				S
Barium	116.342	1.0	24.88	93.31	92.6	75	125				
Beryllium	18.369	1.0	24.88	0.4659	72.0	75	125				S
Cadmium	17.002	1.0	24.88	0	68.3	75	125				S
Chromium	34.333	1.0	24.88	17.84	66.3	75	125				S
Cobalt	25.828	1.0	24.88	7.621	73.2	75	125				S
Copper	33.506	2.0	24.88	14.51	76.4	75	125				
Lead	21.803	1.0	24.88	4.917	67.9	75	125				S
Molybdenum	18.023	1.0	24.88	0	72.5	75	125				S
Nickel	32.628	1.0	24.88	13.86	75.4	75	125				
Selenium	17.573	1.0	24.88	0.5011	68.6	75	125				S
Silver	16.009	1.0	24.88	0	64.4	75	125				S
Thallium	17.615	1.0	24.88	0.5601	68.6	75	125				S
Vanadium	49.875	1.0	24.88	28.80	84.7	75	125				
Zinc	56.423	1.0	24.88	44.81	46.7	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **N013460-017A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95076**
Client ID: **ZZZZZZ** Batch ID: **46584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **10/1/2014** SeqNo: **1842336**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	11.879	2.0	24.99	0	47.5	75	125	12.23	2.91	20	S
Arsenic	20.519	1.0	24.99	2.359	72.7	75	125	20.42	0.492	20	S
Barium	116.918	1.0	24.99	93.31	94.5	75	125	116.3	0.493	20	
Beryllium	18.464	1.0	24.99	0.4659	72.0	75	125	18.37	0.514	20	S
Cadmium	17.097	1.0	24.99	0	68.4	75	125	17.00	0.555	20	S
Chromium	34.511	1.0	24.99	17.84	66.7	75	125	34.33	0.515	20	S
Cobalt	25.916	1.0	24.99	7.621	73.2	75	125	25.83	0.341	20	S
Copper	33.718	2.0	24.99	14.51	76.9	75	125	33.51	0.632	20	
Lead	21.916	1.0	24.99	4.917	68.0	75	125	21.80	0.516	20	S
Molybdenum	18.154	1.0	24.99	0	72.7	75	125	18.02	0.728	20	S
Nickel	32.681	1.0	24.99	13.86	75.3	75	125	32.63	0.163	20	
Selenium	17.673	1.0	24.99	0.5011	68.7	75	125	17.57	0.570	20	S
Silver	16.091	1.0	24.99	0	64.4	75	125	16.01	0.510	20	S
Thallium	17.575	1.0	24.99	0.5601	68.1	75	125	17.62	0.225	20	S
Vanadium	50.149	1.0	24.99	28.80	85.5	75	125	49.87	0.549	20	
Zinc	56.726	1.0	24.99	44.81	47.7	75	125	56.42	0.536	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID	MB-46587	SampType:	MBLK	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	PBS	Batch ID:	46587	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843027

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID	LCS-46587	SampType:	LCS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	LCSS	Batch ID:	46587	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843028

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.457	0.10	0.4167	0	110	80	120				

Sample ID	N013457-001A-MS	SampType:	MS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	ZZZZZZ	Batch ID:	46587	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843029

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.489	0.10	0.4223	0.03009	109	75	125				

Sample ID	N013457-001A-MSD	SampType:	MSD	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	ZZZZZZ	Batch ID:	46587	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843030

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.487	0.10	0.4146	0.03009	110	75	125	0.4890	0.457	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID	MB-46588	SampType:	MBLK	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	PBS	Batch ID:	46588	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843055

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID	LCS-46588	SampType:	LCS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	LCSS	Batch ID:	46588	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843056

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.445	0.10	0.4167	0	107	80	120				

Sample ID	N013460-017A-MS	SampType:	MS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	ZZZZZZ	Batch ID:	46588	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843057

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.466	0.10	0.4202	0.02569	105	75	125				

Sample ID	N013460-017A-MSD	SampType:	MSD	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/30/2014	RunNo:	95095
Client ID:	ZZZZZZ	Batch ID:	46588	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	10/1/2014	SeqNo:	1843058

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.449	0.099	0.4119	0.02569	103	75	125	0.4657	3.70	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID	LCS-46596	SampType:	LCS	TestCode:	8015_S_DM	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95060
Client ID:	LCSS	Batch ID:	46596	TestNo:	EPA 8015B	EPA 3550B		Analysis Date:	9/29/2014	SeqNo:	1841846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	861.999	10	1000	0	86.2	67	120				
Surr: p-Terphenyl	72.255		80.00		90.3	49	173				

Sample ID	MB-46596	SampType:	MBLK	TestCode:	8015_S_DM	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95060
Client ID:	PBS	Batch ID:	46596	TestNo:	EPA 8015B	EPA 3550B		Analysis Date:	9/29/2014	SeqNo:	1841847

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	4.840	10									J
ORO	2.712	10									J
Surr: p-Terphenyl	68.089		80.00		85.1	49	173				

Sample ID	N013460-006A-MS	SampType:	MS	TestCode:	8015_S_DM	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95060
Client ID:	ZZZZZZ	Batch ID:	46596	TestNo:	EPA 8015B	EPA 3550B		Analysis Date:	9/30/2014	SeqNo:	1841900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	944.437	10	995.0	19.92	92.9	47	187				
Surr: p-Terphenyl	79.834		79.60		100	49	173				

Sample ID	N013460-006A-MSD	SampType:	MSD	TestCode:	8015_S_DM	Units:	mg/Kg	Prep Date:	9/29/2014	RunNo:	95060
Client ID:	ZZZZZZ	Batch ID:	46596	TestNo:	EPA 8015B	EPA 3550B		Analysis Date:	9/30/2014	SeqNo:	1841901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	858.634	10	1002	19.92	83.7	47	187	944.4	9.52	20	
Surr: p-Terphenyl	88.000		80.16		110	49	173		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID **LCS-46604** SampType: **LCS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/30/2014** RunNo: **95075**
Client ID: **LCSS** Batch ID: **46604** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	833.117	10	1000	0	83.3	67	120				
Surr: p-Terphenyl	74.662		80.00		93.3	49	173				

Sample ID **MB-46604** SampType: **MBLK** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/30/2014** RunNo: **95075**
Client ID: **PBS** Batch ID: **46604** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	4.579	10									J
ORO	5.928	10									J
Surr: p-Terphenyl	71.104		80.00		88.9	49	173				

Sample ID **N013460-016A-MS** SampType: **MS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/30/2014** RunNo: **95075**
Client ID: **ZZZZZZ** Batch ID: **46604** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	809.648	10	1004	5.638	80.1	47	187				
Surr: p-Terphenyl	93.572		80.32		116	49	173				

Sample ID **N013460-016A-MSD** SampType: **MSD** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/30/2014** RunNo: **95075**
Client ID: **ZZZZZZ** Batch ID: **46604** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842404**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	1009.671	10	1010	5.638	99.4	47	187	809.6	22.0	20	R
Surr: p-Terphenyl	94.142		80.81		117	49	173		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID **LCS-46614** SampType: **LCS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **10/1/2014** RunNo: **95083**
Client ID: **LCSS** Batch ID: **46614** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	754.716	10	1000	0	75.5	67	120				
Surr: p-Terphenyl	74.029		80.00		92.5	49	173				

Sample ID **MB-46614** SampType: **MBLK** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **10/1/2014** RunNo: **95083**
Client ID: **PBS** Batch ID: **46614** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842406**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	4.435	10									J
ORO	6.032	10									J
Surr: p-Terphenyl	72.003		80.00		90.0	49	173				

Sample ID **N013460-037A-MS** SampType: **MS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **10/1/2014** RunNo: **95083**
Client ID: **ZZZZZZ** Batch ID: **46614** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842408**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	784.241	9.9	994.0	4.779	78.4	47	187				
Surr: p-Terphenyl	76.437		79.52		96.1	49	173				

Sample ID **N013460-037A-MSD** SampType: **MSD** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **10/1/2014** RunNo: **95083**
Client ID: **ZZZZZZ** Batch ID: **46614** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842409**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	678.151	10	1000	4.779	67.3	47	187	784.2	14.5	20	
Surr: p-Terphenyl	73.807		80.00		92.3	49	173		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID **E140929LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95058**
Client ID: **LCSS** Batch ID: **E14VS094** TestNo: **EPA 8015B** Analysis Date: **9/29/2014** SeqNo: **1841813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.610	1.0	5.000	0	92.2	76	130				
Surr: Chlorobenzene - d5	94.932		100.0		94.9	57	134				

Sample ID **E140929MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95058**
Client ID: **PBS** Batch ID: **E14VS094** TestNo: **EPA 8015B** Analysis Date: **9/29/2014** SeqNo: **1841814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.045	1.0									J
Surr: Chlorobenzene - d5	109.722		100.0		110	57	134				

Sample ID **N013460-007AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95058**
Client ID: **ZZZZZZ** Batch ID: **E14VS094** TestNo: **EPA 8015B** Analysis Date: **9/29/2014** SeqNo: **1841825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.461	1.0	5.000	0.02500	88.7	53	136				
Surr: Chlorobenzene - d5	100.162		100.0		100	57	134				

Sample ID **N013460-007AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95058**
Client ID: **ZZZZZZ** Batch ID: **E14VS094** TestNo: **EPA 8015B** Analysis Date: **9/29/2014** SeqNo: **1841826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.409	1.0	5.000	0.02500	87.7	53	136	4.461	1.17	20	
Surr: Chlorobenzene - d5	91.344		100.0		91.3	57	134		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID **E140930LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95074**
Client ID: **LCSS** Batch ID: **E14VS095** TestNo: **EPA 8015B** Analysis Date: **9/30/2014** SeqNo: **1842115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.845	1.0	5.000	0	96.9	76	130				
Surr: Chlorobenzene - d5	110.425		100.0		110	57	134				

Sample ID **E140930MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95074**
Client ID: **PBS** Batch ID: **E14VS095** TestNo: **EPA 8015B** Analysis Date: **9/30/2014** SeqNo: **1842116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.042	1.0									J
Surr: Chlorobenzene - d5	120.297		100.0		120	57	134				

Sample ID **N013460-021AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95074**
Client ID: **ZZZZZZ** Batch ID: **E14VS095** TestNo: **EPA 8015B** Analysis Date: **9/30/2014** SeqNo: **1842128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.491	1.0	5.000	0.02600	89.3	53	136				
Surr: Chlorobenzene - d5	95.732		100.0		95.7	57	134				

Sample ID **N013460-021AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95074**
Client ID: **ZZZZZZ** Batch ID: **E14VS095** TestNo: **EPA 8015B** Analysis Date: **9/30/2014** SeqNo: **1842129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.685	1.0	5.000	0.02600	93.2	53	136	4.491	4.23	20	
Surr: Chlorobenzene - d5	91.706		100.0		91.7	57	134		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID **E141001LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95086**
Client ID: **LCSS** Batch ID: **E14VS096** TestNo: **EPA 8015B** Analysis Date: **10/1/2014** SeqNo: **1842475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.895	1.0	5.000	0	97.9	76	130				
Surr: Chlorobenzene - d5	101.948		100.0		102	57	134				

Sample ID **E141001MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95086**
Client ID: **PBS** Batch ID: **E14VS096** TestNo: **EPA 8015B** Analysis Date: **10/1/2014** SeqNo: **1842476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.043	1.0									J
Surr: Chlorobenzene - d5	121.159		100.0		121	57	134				

Sample ID **N013460-031AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95086**
Client ID: **ZZZZZZ** Batch ID: **E14VS096** TestNo: **EPA 8015B** Analysis Date: **10/1/2014** SeqNo: **1842483**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.833	1.0	5.000	0.02800	96.1	53	136				
Surr: Chlorobenzene - d5	102.512		100.0		103	57	134				

Sample ID **N013460-031AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95086**
Client ID: **ZZZZZZ** Batch ID: **E14VS096** TestNo: **EPA 8015B** Analysis Date: **10/1/2014** SeqNo: **1842484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.823	1.0	5.000	0.02800	95.9	53	136	4.833	0.207	20	
Surr: Chlorobenzene - d5	101.455		100.0		101	57	134		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **LCS-46595** SampType: **LCS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **LCSS** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	17.233	2.0	16.67	0	103	57	139				
4,4´-DDE	16.750	2.0	16.67	0	100	54	130				
4,4´-DDT	19.083	2.0	16.67	0	114	64	134				
Aldrin	14.483	1.0	16.67	0	86.9	40	120				
alpha-BHC	15.533	1.0	16.67	0	93.2	40	120				
alpha-Chlordane	15.317	1.0	16.67	0	91.9	52	120				
beta-BHC	14.422	1.0	16.67	0	86.5	48	120				
delta-BHC	16.783	1.0	16.67	0	101	23	120				
Dieldrin	16.767	2.0	16.67	0	101	53	130				
Endosulfan I	14.900	1.0	16.67	0	89.4	48	121				
Endosulfan II	16.617	2.0	16.67	0	99.7	59	127				
Endosulfan sulfate	17.258	2.0	16.67	0	104	54	127				
Endrin	18.783	2.0	16.67	0	113	53	171				
Endrin aldehyde	14.945	2.0	16.67	0	89.7	42	120				
Endrin ketone	15.633	2.0	16.67	0	93.8	33	144				
gamma-BHC	15.100	1.0	16.67	0	90.6	42	120				
gamma-Chlordane	15.767	1.0	16.67	0	94.6	52	125				
Heptachlor	14.717	1.0	16.67	0	88.3	25	139				
Heptachlor epoxide	14.983	1.0	16.67	0	89.9	50	121				
Methoxychlor	19.227	8.5	16.67	0	115	55	152				
Surr: Tetrachloro-m-xylene	12.597		16.67		75.6	19	120				
Surr: Decachlorobiphenyl	12.895		16.67		77.4	22	141				

Sample ID **N013460-003A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.522	2.0	16.64	0	87.3	57	139				
4,4´-DDE	14.677	2.0	16.64	0	88.2	54	130				
4,4´-DDT	20.549	2.0	16.64	0.5921	120	64	134				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-003A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aldrin	12.797	1.0	16.64	0	76.9	40	120				
alpha-BHC	13.444	1.0	16.64	0	80.8	40	120				
alpha-Chlordane	13.356	1.0	16.64	0	80.3	52	120				
beta-BHC	13.000	1.0	16.64	0	78.1	48	120				
delta-BHC	14.792	1.0	16.64	0	88.9	23	120				
Dieldrin	14.742	2.0	16.64	0	88.6	53	130				
Endosulfan I	13.065	1.0	16.64	0	78.5	48	121				
Endosulfan II	14.301	2.0	16.64	0	85.9	59	127				
Endosulfan sulfate	14.977	2.0	16.64	0	90.0	54	127				
Endrin	16.622	2.0	16.64	0	99.9	53	171				
Endrin aldehyde	13.419	2.0	16.64	0	80.6	42	120				
Endrin ketone	13.426	2.0	16.64	0	80.7	33	144				
gamma-BHC	13.045	1.0	16.64	0	78.4	42	120				
gamma-Chlordane	13.612	1.0	16.64	0	81.8	52	125				
Heptachlor	12.895	1.0	16.64	0	77.5	25	139				
Heptachlor epoxide	13.131	1.0	16.64	0	78.9	50	121				
Methoxychlor	16.531	8.5	16.64	0	99.3	55	152				
Surr: Tetrachloro-m-xylene	10.326		16.64		62.0	19	120				
Surr: Decachlorobiphenyl	10.729		16.64		64.5	22	141				

Sample ID **N013460-003A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.512	2.0	16.65	0	87.2	57	139	14.52	0.0699	20	
4,4´-DDE	14.249	2.0	16.65	0	85.6	54	130	14.68	2.96	20	
4,4´-DDT	16.348	2.0	16.65	0.5921	94.6	64	134	20.55	22.8	20	R
Aldrin	12.510	1.0	16.65	0	75.1	40	120	12.80	2.27	20	
alpha-BHC	13.149	1.0	16.65	0	79.0	40	120	13.44	2.22	20	
alpha-Chlordane	13.098	1.0	16.65	0	78.7	52	120	13.36	1.95	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-003A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
beta-BHC	12.610	1.0	16.65	0	75.7	48	120	13.00	3.05	20	
delta-BHC	14.547	1.0	16.65	0	87.4	23	120	14.79	1.67	20	
Dieldrin	14.437	2.0	16.65	0	86.7	53	130	14.74	2.09	20	
Endosulfan I	12.893	1.0	16.65	0	77.4	48	121	13.06	1.33	20	
Endosulfan II	14.412	2.0	16.65	0	86.6	59	127	14.30	0.775	20	
Endosulfan sulfate	14.897	2.0	16.65	0	89.5	54	127	14.98	0.535	20	
Endrin	16.450	2.0	16.65	0	98.8	53	171	16.62	1.04	20	
Endrin aldehyde	13.544	2.0	16.65	0	81.4	42	120	13.42	0.922	20	
Endrin ketone	13.580	2.0	16.65	0	81.6	33	144	13.43	1.14	20	
gamma-BHC	12.766	1.0	16.65	0	76.7	42	120	13.04	2.16	20	
gamma-Chlordane	13.346	1.0	16.65	0	80.2	52	125	13.61	1.98	20	
Heptachlor	12.583	1.0	16.65	0	75.6	25	139	12.90	2.45	20	
Heptachlor epoxide	12.830	1.0	16.65	0	77.1	50	121	13.13	2.33	20	
Methoxychlor	16.338	8.5	16.65	0	98.1	55	152	16.53	1.17	20	
Surr: Tetrachloro-m-xylene	10.371		16.65		62.3	19	120		0		
Surr: Decachlorobiphenyl	11.192		16.65		67.2	22	141		0		

Sample ID **MB-46595** SampType: **MBLK** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **PBS** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	ND	2.0									
4,4´-DDE	ND	2.0									
4,4´-DDT	0.542	2.0									J
Aldrin	ND	1.0									
alpha-BHC	ND	1.0									
alpha-Chlordane	ND	1.0									
beta-BHC	ND	1.0									
Chlordane	ND	8.5									
delta-BHC	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID	MB-46595	SampType:	MBLK	TestCode:	8081SOIL	Units:	µg/Kg	Prep Date:	9/29/2014	RunNo:	95093
Client ID:	PBS	Batch ID:	46595	TestNo:	EPA 8081A	EPA 3550B		Analysis Date:	10/1/2014	SeqNo:	1843188

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dieldrin	ND	2.0									
Endosulfan I	ND	1.0									
Endosulfan II	ND	2.0									
Endosulfan sulfate	ND	2.0									
Endrin	ND	2.0									
Endrin aldehyde	ND	2.0									
Endrin ketone	ND	2.0									
gamma-BHC	ND	1.0									
gamma-Chlordane	ND	1.0									
Heptachlor	ND	1.0									
Heptachlor epoxide	ND	1.0									
Methoxychlor	ND	8.5									
Toxaphene	ND	85									
Surr: Tetrachloro-m-xylene	12.722		16.67		76.3	19	120				
Surr: Decachlorobiphenyl	13.207		16.67		79.2	22	141				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **LCS-46609** SampType: **LCS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **LCSS** Batch ID: **46609** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	16.144	2.0	16.67	0	96.8	57	139				
4,4´-DDE	15.258	2.0	16.67	0	91.5	54	130				
4,4´-DDT	17.614	2.0	16.67	0	106	64	134				
Aldrin	13.033	1.0	16.67	0	78.2	40	120				
alpha-BHC	13.460	1.0	16.67	0	80.7	40	120				
alpha-Chlordane	14.012	1.0	16.67	0	84.1	52	120				
beta-BHC	12.746	1.0	16.67	0	76.5	48	120				
delta-BHC	15.160	1.0	16.67	0	90.9	23	120				
Dieldrin	15.371	2.0	16.67	0	92.2	53	130				
Endosulfan I	13.002	1.0	16.67	0	78.0	48	121				
Endosulfan II	16.285	2.0	16.67	0	97.7	59	127				
Endosulfan sulfate	16.778	2.0	16.67	0	101	54	127				
Endrin	17.641	2.0	16.67	0	106	53	171				
Endrin aldehyde	14.177	2.0	16.67	0	85.0	42	120				
Endrin ketone	15.840	2.0	16.67	0	95.0	33	144				
gamma-BHC	13.112	1.0	16.67	0	78.7	42	120				
gamma-Chlordane	14.163	1.0	16.67	0	85.0	52	125				
Heptachlor	13.317	1.0	16.67	0	79.9	25	139				
Heptachlor epoxide	13.723	1.0	16.67	0	82.3	50	121				
Methoxychlor	19.905	8.5	16.67	0	119	55	152				
Surr: Tetrachloro-m-xylene	11.025		16.67		66.1	19	120				
Surr: Decachlorobiphenyl	14.693		16.67		88.1	22	141				

Sample ID **N013460-020A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **ZZZZZZ** Batch ID: **46609** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	12.507	2.0	16.65	0	75.1	57	139				
4,4´-DDE	12.402	2.0	16.65	0.4379	71.9	54	130				
4,4´-DDT	13.400	2.0	16.65	3.215	61.2	64	134				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-020A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **ZZZZZZ** Batch ID: **46609** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aldrin	10.942	1.0	16.65	0	65.7	40	120				
alpha-BHC	11.280	1.0	16.65	0	67.8	40	120				
alpha-Chlordane	11.328	1.0	16.65	0	68.0	52	120				
beta-BHC	10.851	1.0	16.65	0	65.2	48	120				
delta-BHC	12.355	1.0	16.65	0	74.2	23	120				
Dieldrin	12.361	2.0	16.65	0	74.2	53	130				
Endosulfan I	10.763	1.0	16.65	0	64.7	48	121				
Endosulfan II	12.436	2.0	16.65	0	74.7	59	127				
Endosulfan sulfate	12.757	2.0	16.65	0	76.6	54	127				
Endrin	14.418	2.0	16.65	0	86.6	53	171				
Endrin aldehyde	11.180	2.0	16.65	0	67.2	42	120				
Endrin ketone	12.043	2.0	16.65	0	72.3	33	144				
gamma-BHC	10.941	1.0	16.65	0	65.7	42	120				
gamma-Chlordane	11.274	1.0	16.65	0	67.7	52	125				
Heptachlor	11.578	1.0	16.65	0	69.5	25	139				
Heptachlor epoxide	11.581	1.0	16.65	0	69.6	50	121				
Methoxychlor	14.892	8.5	16.65	0	89.5	55	152				
Surr: Tetrachloro-m-xylene	9.804		16.65		58.9	19	120				
Surr: Decachlorobiphenyl	13.203		16.65		79.3	22	141				

Sample ID **N013460-020A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **ZZZZZZ** Batch ID: **46609** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	12.729	2.0	16.68	0	76.3	57	139	12.51	1.76	20	
4,4´-DDE	12.657	2.0	16.68	0.4379	73.3	54	130	12.40	2.04	20	
4,4´-DDT	15.102	2.0	16.68	3.215	71.3	64	134	13.40	11.9	20	
Aldrin	10.781	1.0	16.68	0	64.6	40	120	10.94	1.49	20	
alpha-BHC	10.941	1.0	16.68	0	65.6	40	120	11.28	3.05	20	
alpha-Chlordane	11.284	1.0	16.68	0	67.7	52	120	11.33	0.390	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-020A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **ZZZZZZ** Batch ID: **46609** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
beta-BHC	11.096	1.0	16.68	0	66.5	48	120	10.85	2.23	20	
delta-BHC	12.646	1.0	16.68	0	75.8	23	120	12.35	2.33	20	
Dieldrin	12.244	2.0	16.68	0	73.4	53	130	12.36	0.949	20	
Endosulfan I	10.572	1.0	16.68	0	63.4	48	121	10.76	1.80	20	
Endosulfan II	12.517	2.0	16.68	0	75.1	59	127	12.44	0.649	20	
Endosulfan sulfate	12.862	2.0	16.68	0	77.1	54	127	12.76	0.822	20	
Endrin	14.273	2.0	16.68	0	85.6	53	171	14.42	1.01	20	
Endrin aldehyde	11.599	2.0	16.68	0	69.6	42	120	11.18	3.68	20	
Endrin ketone	12.230	2.0	16.68	0	73.3	33	144	12.04	1.54	20	
gamma-BHC	10.919	1.0	16.68	0	65.5	42	120	10.94	0.199	20	
gamma-Chlordane	11.291	1.0	16.68	0	67.7	52	125	11.27	0.153	20	
Heptachlor	11.172	1.0	16.68	0	67.0	25	139	11.58	3.57	20	
Heptachlor epoxide	11.387	1.0	16.68	0	68.3	50	121	11.58	1.69	20	
Methoxychlor	15.112	8.5	16.68	0	90.6	55	152	14.89	1.47	20	
Surr: Tetrachloro-m-xylene	9.480		16.68		56.8	19	120		0		
Surr: Decachlorobiphenyl	12.336		16.68		74.0	22	141		0		

Sample ID **MB-46609** SampType: **MBLK** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95097**
Client ID: **PBS** Batch ID: **46609** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	ND	2.0									
4,4´-DDE	ND	2.0									
4,4´-DDT	0.852	2.0									J
Aldrin	ND	1.0									
alpha-BHC	ND	1.0									
alpha-Chlordane	ND	1.0									
beta-BHC	ND	1.0									
Chlordane	ND	8.5									
delta-BHC	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID	MB-46609	SampType:	MBLK	TestCode:	8081SOIL	Units:	µg/Kg	Prep Date:	9/30/2014	RunNo:	95097
Client ID:	PBS	Batch ID:	46609	TestNo:	EPA 8081A	EPA 3550B		Analysis Date:	10/1/2014	SeqNo:	1843148

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dieldrin	ND	2.0									
Endosulfan I	ND	1.0									
Endosulfan II	ND	2.0									
Endosulfan sulfate	ND	2.0									
Endrin	ND	2.0									
Endrin aldehyde	ND	2.0									
Endrin ketone	ND	2.0									
gamma-BHC	ND	1.0									
gamma-Chlordane	ND	1.0									
Heptachlor	ND	1.0									
Heptachlor epoxide	ND	1.0									
Methoxychlor	ND	8.5									
Toxaphene	ND	85									
Surr: Tetrachloro-m-xylene	11.416		16.67		68.5	19	120				
Surr: Decachlorobiphenyl	14.679		16.67		88.1	22	141				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **LCS-46612_OCP** SampType: **LCS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **LCSS** Batch ID: **46612** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.737	2.0	16.67	0	88.4	57	139				
4,4´-DDE	14.858	2.0	16.67	0	89.1	54	130				
4,4´-DDT	15.259	2.0	16.67	0	91.5	64	134				
Aldrin	14.253	1.0	16.67	0	85.5	40	120				
alpha-BHC	15.065	1.0	16.67	0	90.4	40	120				
alpha-Chlordane	14.724	1.0	16.67	0	88.3	52	120				
beta-BHC	12.602	1.0	16.67	0	75.6	48	120				
delta-BHC	15.270	1.0	16.67	0	91.6	23	120				
Dieldrin	15.013	2.0	16.67	0	90.1	53	130				
Endosulfan I	13.543	1.0	16.67	0	81.2	48	121				
Endosulfan II	14.502	2.0	16.67	0	87.0	59	127				
Endosulfan sulfate	14.734	2.0	16.67	0	88.4	54	127				
Endrin	15.312	2.0	16.67	0	91.9	53	171				
Endrin aldehyde	13.661	2.0	16.67	0	81.9	42	120				
Endrin ketone	14.168	2.0	16.67	0	85.0	33	144				
gamma-BHC	14.516	1.0	16.67	0	87.1	42	120				
gamma-Chlordane	14.421	1.0	16.67	0	86.5	52	125				
Heptachlor	14.155	1.0	16.67	0	84.9	25	139				
Heptachlor epoxide	14.314	1.0	16.67	0	85.9	50	121				
Methoxychlor	16.421	8.5	16.67	0	98.5	55	152				
Surr: Tetrachloro-m-xylene	12.249		16.67		73.5	19	120				
Surr: Decachlorobiphenyl	11.307		16.67		67.8	22	141				

Sample ID **N013460-034A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **ZZZZZZ** Batch ID: **46612** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	12.624	2.0	16.63	0	75.9	57	139				
4,4´-DDE	12.489	2.0	16.63	0	75.1	54	130				
4,4´-DDT	12.406	2.0	16.63	0	74.6	64	134				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-034A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **ZZZZZZ** Batch ID: **46612** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aldrin	11.792	1.0	16.63	0	70.9	40	120				
alpha-BHC	12.362	1.0	16.63	0	74.3	40	120				
alpha-Chlordane	12.315	1.0	16.63	0	74.0	52	120				
beta-BHC	10.966	1.0	16.63	0	65.9	48	120				
delta-BHC	10.039	1.0	16.63	0	60.4	23	120				
Dieldrin	12.920	2.0	16.63	0	77.7	53	130				
Endosulfan I	8.336	1.0	16.63	0	50.1	48	121				
Endosulfan II	9.276	2.0	16.63	0	55.8	59	127				S
Endosulfan sulfate	12.299	2.0	16.63	0	74.0	54	127				
Endrin	13.199	2.0	16.63	0	79.4	53	171				
Endrin aldehyde	11.344	2.0	16.63	0	68.2	42	120				
Endrin ketone	12.171	2.0	16.63	0	73.2	33	144				
gamma-BHC	12.173	1.0	16.63	0	73.2	42	120				
gamma-Chlordane	12.291	1.0	16.63	0	73.9	52	125				
Heptachlor	11.828	1.0	16.63	0	71.1	25	139				
Heptachlor epoxide	12.697	1.0	16.63	0	76.3	50	121				
Methoxychlor	13.519	8.5	16.63	0	81.3	55	152				
Surr: Tetrachloro-m-xylene	10.202		16.63		61.3	19	120				
Surr: Decachlorobiphenyl	9.777		16.63		58.8	22	141				

Sample ID **N013460-034A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **ZZZZZZ** Batch ID: **46612** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	9.412	2.0	16.69	0	56.4	57	139	12.62	29.2	20	SR
4,4´-DDE	9.054	2.0	16.69	0	54.2	54	130	12.49	31.9	20	R
4,4´-DDT	9.611	2.0	16.69	0	57.6	64	134	12.41	25.4	20	SR
Aldrin	7.227	1.0	16.69	0	43.3	40	120	11.79	48.0	20	R
alpha-BHC	6.896	1.0	16.69	0	41.3	40	120	12.36	56.8	20	R
alpha-Chlordane	8.992	1.0	16.69	0	53.9	52	120	12.32	31.2	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-034A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **ZZZZZZ** Batch ID: **46612** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
beta-BHC	8.205	1.0	16.69	0	49.2	48	120	10.97	28.8	20	R
delta-BHC	7.083	1.0	16.69	0	42.4	23	120	10.04	34.5	20	R
Dieldrin	9.355	2.0	16.69	0	56.0	53	130	12.92	32.0	20	R
Endosulfan I	5.636	1.0	16.69	0	33.8	48	121	8.336	38.6	20	SR
Endosulfan II	6.710	2.0	16.69	0	40.2	59	127	9.276	32.1	20	SR
Endosulfan sulfate	9.492	2.0	16.69	0	56.9	54	127	12.30	25.8	20	R
Endrin	9.824	2.0	16.69	0	58.9	53	171	13.20	29.3	20	R
Endrin aldehyde	7.756	2.0	16.69	0	46.5	42	120	11.34	37.6	20	R
Endrin ketone	9.193	2.0	16.69	0	55.1	33	144	12.17	27.9	20	R
gamma-BHC	7.409	1.0	16.69	0	44.4	42	120	12.17	48.7	20	R
gamma-Chlordane	8.881	1.0	16.69	0	53.2	52	125	12.29	32.2	20	R
Heptachlor	7.098	1.0	16.69	0	42.5	25	139	11.83	50.0	20	R
Heptachlor epoxide	8.625	1.0	16.69	0	51.7	50	121	12.70	38.2	20	R
Methoxychlor	10.630	8.5	16.69	0	63.7	55	152	13.52	23.9	20	R
Surr: Tetrachloro-m-xylene	6.893		16.69		41.3	19	120		0		
Surr: Decachlorobiphenyl	8.605		16.69		51.6	22	141		0		

Sample ID **MB-46612** SampType: **MBLK** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95113**
Client ID: **PBS** Batch ID: **46612** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843472**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	ND	2.0									
4,4´-DDE	ND	2.0									
4,4´-DDT	0.421	2.0									J
Aldrin	ND	1.0									
alpha-BHC	ND	1.0									
alpha-Chlordane	ND	1.0									
beta-BHC	ND	1.0									
Chlordane	ND	8.5									
delta-BHC	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID	MB-46612	SampType:	MBLK	TestCode:	8081SOIL	Units:	µg/Kg	Prep Date:	10/1/2014	RunNo:	95113
Client ID:	PBS	Batch ID:	46612	TestNo:	EPA 8081A	EPA 3550B		Analysis Date:	10/2/2014	SeqNo:	1843472

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dieldrin	ND	2.0									
Endosulfan I	ND	1.0									
Endosulfan II	ND	2.0									
Endosulfan sulfate	ND	2.0									
Endrin	ND	2.0									
Endrin aldehyde	ND	2.0									
Endrin ketone	ND	2.0									
gamma-BHC	ND	1.0									
gamma-Chlordane	ND	1.0									
Heptachlor	ND	1.0									
Heptachlor epoxide	ND	1.0									
Methoxychlor	ND	8.5									
Toxaphene	ND	85									
Surr: Tetrachloro-m-xylene	11.926		16.67		71.5	19	120				
Surr: Decachlorobiphenyl	12.630		16.67		75.8	22	141				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_S

Sample ID **LCS-46612_PCB** SampType: **LCS** TestCode: **8082_S** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95115**
Client ID: **LCSS** Batch ID: **46612** TestNo: **EPA 8082** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843566**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	146.080	16	166.7	0	87.6	60	124				
Aroclor 1260	146.881	16	166.7	0	88.1	60	130				
Surr: Decachlorobiphenyl	12.078		16.67		72.5	60	150				
Surr: Tetrachloro-m-xylene	12.883		16.67		77.3	60	120				

Sample ID **MB-46612** SampType: **MBLK** TestCode: **8082_S** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95115**
Client ID: **PBS** Batch ID: **46612** TestNo: **EPA 8082** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843569**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	16									
Aroclor 1221	ND	33									
Aroclor 1232	ND	16									
Aroclor 1242	ND	16									
Aroclor 1248	ND	16									
Aroclor 1254	ND	16									
Aroclor 1260	ND	16									
Surr: Decachlorobiphenyl	12.622		16.67		75.7	60	150				
Surr: Tetrachloro-m-xylene	12.248		16.67		73.5	60	120				

Sample ID **N013427-115A-MS** SampType: **MS** TestCode: **8082_S** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95115**
Client ID: **ZZZZZZ** Batch ID: **46612** TestNo: **EPA 8082** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	131.229	16	166.2	0	78.9	60	169				
Aroclor 1260	153.623	16	166.2	37.15	70.1	60	154				
Surr: Decachlorobiphenyl	11.140		16.63		67.0	60	150				
Surr: Tetrachloro-m-xylene	8.424		16.63		50.7	60	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_S

Sample ID	**N013427-115A-MSD**	SampType:	**MSD**	TestCode:	**8082_S**	Units:	**µg/Kg**	Prep Date:	**10/1/2014**	RunNo:	**95115**		
Client ID:	**ZZZZZZ**	Batch ID:	**46612**	TestNo:	**EPA 8082**	**EPA 3550B**		Analysis Date:	**10/2/2014**	SeqNo:	**1843580**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	116.452	17	166.8	0	69.8	60	169	131.2	11.9	20	
Aroclor 1260	113.028	17	166.8	37.15	45.5	60	154	153.6	30.4	20	SR
Surr: Decachlorobiphenyl	6.798		16.68		40.8	60	150		0		S
Surr: Tetrachloro-m-xylene	9.487		16.68		56.9	60	120		0		S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	LCS-46603	SampType:	LCS	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/30/2014	RunNo:	95077
Client ID:	LCSS	Batch ID:	46603	TestNo:	EPA 8270C		EPA 3550B	Analysis Date:	9/30/2014	SeqNo:	1842339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2700.000	330	3330	0	81.1	35	120				
1,2-Dichlorobenzene	2423.000	330	3330	0	72.8	32	120				
1,3-Dichlorobenzene	2304.333	330	3330	0	69.2	29	120				
1,4-Dichlorobenzene	2396.000	330	3330	0	72.0	31	120				
2,4,5-Trichlorophenol	2721.000	330	3330	0	81.7	53	120				
2,4,6-Trichlorophenol	2783.000	330	3330	0	83.6	51	120				
2,4-Dichlorophenol	2610.667	1600	3330	0	78.4	45	120				
2,4-Dimethylphenol	2741.667	330	3330	0	82.3	44	120				
2,4-Dinitrophenol	1271.333	1600	3330	0	38.2	30	127				J
2,4-Dinitrotoluene	2996.333	330	3330	0	90.0	53	120				
2,6-Dinitrotoluene	3083.667	330	3330	0	92.6	58	120				
2-Chloronaphthalene	2893.000	330	3330	0	86.9	46	120				
2-Chlorophenol	2547.333	330	3330	0	76.5	41	120				
2-Methylnaphthalene	2688.000	330	3330	0	80.7	45	120				
2-Methylphenol	2574.667	330	3330	0	77.3	44	120				
2-Nitroaniline	3222.667	1600	3330	0	96.8	43	132				
2-Nitrophenol	2570.667	330	3330	0	77.2	40	120				
3,3´-Dichlorobenzidine	6005.667	660	6660	0	90.2	37	120				
3-Nitroaniline	3045.667	1600	3330	0	91.5	54	120				
4,6-Dinitro-2-methylphenol	1882.000	1600	3330	0	56.5	45	126				
4-Bromophenyl-phenylether	3012.000	330	3330	0	90.5	58	120				
4-Chloro-3-methylphenol	2695.000	660	3330	0	80.9	53	120				
4-Chloroaniline	2778.333	660	3330	0	83.4	39	120				
4-Chlorophenyl-phenylether	3202.000	330	3330	0	96.2	56	120				
4-Methylphenol	2602.667	330	3330	0	78.2	47	120				
4-Nitroaniline	3121.333	1600	3330	0	93.7	49	120				
4-Nitrophenol	2847.667	1600	3330	0	85.5	40	127				
Acenaphthene	3047.667	330	3330	0	91.5	51	120				
Acenaphthylene	3028.667	330	3330	0	91.0	55	120				
Anthracene	3003.333	330	3330	0	90.2	57	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	LCS-46603	SampType:	LCS	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/30/2014	RunNo:	95077
Client ID:	LCSS	Batch ID:	46603	TestNo:	EPA 8270C		EPA 3550B	Analysis Date:	9/30/2014	SeqNo:	1842339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzidine (M)	5165.000	1600	6660	0	77.6	0	120				
Benzo(a)anthracene	3059.667	330	3330	0	91.9	64	120				
Benzo(a)pyrene	2967.333	200	3330	0	89.1	59	120				
Benzo(b)fluoranthene	3599.667	330	3330	0	108	62	120				
Benzo(g,h,i)perylene	2265.667	330	3330	0	68.0	51	126				
Benzo(k)fluoranthene	2784.000	330	3330	0	83.6	59	120				
Benzoic acid	1095.333	1600	3330	0	32.9	23	120				J
Benzyl alcohol	2906.000	660	3330	0	87.3	46	120				
Bis(2-chloroethoxy)methane	2679.333	330	3330	0	80.5	50	120				
Bis(2-chloroethyl)ether	2237.667	330	3330	0	67.2	38	120				
Bis(2-chloroisopropyl)ether	2960.333	330	3330	0	88.9	25	127				
Bis(2-ethylhexyl)phthalate	3576.333	330	3330	0	107	63	129				
Butylbenzylphthalate	3458.667	330	3330	0	104	64	128				
Chrysene	3178.333	330	3330	0	95.4	33	150				
Di-n-butylphthalate	3215.667	330	3330	0	96.6	62	121				
Di-n-octylphthalate	3721.667	330	3330	0	112	62	143				
Dibenz(a,h)anthracene	2908.000	200	3330	0	87.3	46	149				
Dibenzofuran	2935.333	330	3330	0	88.1	55	120				
Diethylphthalate	3451.667	330	3330	0	104	61	120				
Dimethylphthalate	3258.667	330	3330	0	97.9	59	120				
Fluoranthene	3073.333	330	3330	0	92.3	57	120				
Fluorene	3155.000	330	3330	0	94.7	56	120				
Hexachlorobenzene	2801.000	330	3330	0	84.1	60	120				
Hexachlorobutadiene	2922.667	660	3330	0	87.8	34	120				
Hexachlorocyclopentadiene	2604.333	660	3330	0	78.2	20	120				
Hexachloroethane	2391.333	330	3330	0	71.8	33	120				
Indeno(1,2,3-cd)pyrene	2503.333	330	3330	0	75.2	51	129				
Isophorone	2536.333	330	3330	0	76.2	47	120				
N-Nitrosodi-n-propylamine	2551.333	330	3330	0	76.6	51	120				
N-Nitrosodiphenylamine	3024.667	330	3330	0	90.8	63	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **LCS-46603** SampType: **LCS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **LCSS** Batch ID: **46603** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2779.000	330	3330	0	83.5	40	120				
Nitrobenzene	2614.667	330	3330	0	78.5	43	120				
Pentachlorophenol	2220.333	1600	3330	0	66.7	46	120				
Phenanthrene	3071.667	330	3330	0	92.2	56	120				
Phenol	2434.667	330	3330	0	73.1	44	120				
Pyrene	3020.667	330	3330	0	90.7	57	120				
Surr: 1,2-Dichlorobenzene-d4	2428.000		3330		72.9	20	120				
Surr: 2,4,6-Tribromophenol	2983.667		3330		89.6	31	125				
Surr: 2-Chlorophenol-d4	2713.667		3330		81.5	29	120				
Surr: 2-Fluorobiphenyl	2842.667		3330		85.4	35	120				
Surr: 2-Fluorophenol	2579.000		3330		77.4	27	120				
Surr: 4-Terphenyl-d14	3201.333		3330		96.1	26	142				
Surr: Nitrobenzene-d5	2657.333		3330		79.8	25	120				
Surr: Phenol-d5	2649.000		3330		79.5	20	120				

Sample ID **N013460-007A-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2200.401	330	3337	0	65.9	35	120				
1,2-Dichlorobenzene	1975.618	330	3337	0	59.2	32	120				
1,3-Dichlorobenzene	1906.814	330	3337	0	57.1	29	120				
1,4-Dichlorobenzene	2005.678	330	3337	0	60.1	31	120				
2,4,5-Trichlorophenol	2414.496	330	3337	0	72.4	53	120				
2,4,6-Trichlorophenol	2427.522	330	3337	0	72.8	51	120				
2,4-Dichlorophenol	2240.481	1700	3337	0	67.1	45	120				
2,4-Dimethylphenol	1985.972	330	3337	0	59.5	44	120				
2,4-Dinitrophenol	1571.810	1700	3337	0	47.1	30	127				J
2,4-Dinitrotoluene	2582.164	330	3337	0	77.4	53	120				
2,6-Dinitrotoluene	2610.220	330	3337	0	78.2	58	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	**N013460-007A-MS**	SampType:	**MS**	TestCode:	**8270SOIL**	Units:	**µg/Kg**	Prep Date:	**9/30/2014**	RunNo:	**95077**		
Client ID:	**ZZZZZZ**	Batch ID:	**46603**	TestNo:	**EPA 8270C**		**EPA 3550B**	Analysis Date:	**9/30/2014**	SeqNo:	**1842340**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chloronaphthalene	2416.834	330	3337	0	72.4	46	120				
2-Chlorophenol	2119.906	330	3337	0	63.5	41	120				
2-Methylnaphthalene	2187.375	330	3337	0	65.6	45	120				
2-Methylphenol	1990.982	330	3337	0	59.7	44	120				
2-Nitroaniline	2739.813	1700	3337	0	82.1	43	132				
2-Nitrophenol	2192.051	330	3337	0	65.7	40	120				
3,3´-Dichlorobenzidine	5177.355	660	6673	0	77.6	37	120				
3-Nitroaniline	2634.269	1700	3337	0	78.9	54	120				
4,6-Dinitro-2-methylphenol	2038.076	1700	3337	0	61.1	45	126				
4-Bromophenyl-phenylether	2553.774	330	3337	0	76.5	58	120				
4-Chloro-3-methylphenol	2253.173	660	3337	0	67.5	53	120				
4-Chloroaniline	2289.579	660	3337	0	68.6	39	120				
4-Chlorophenyl-phenylether	2686.039	330	3337	0	80.5	56	120				
4-Methylphenol	2093.520	330	3337	0	62.7	47	120				
4-Nitroaniline	2917.836	1700	3337	0	87.4	49	120				
4-Nitrophenol	2663.995	1700	3337	0	79.8	40	127				
Acenaphthene	2619.572	330	3337	0	78.5	51	120				
Acenaphthylene	2547.762	330	3337	0	76.4	55	120				
Anthracene	2629.593	330	3337	0	78.8	57	120				
Benzidine (M)	758.851	1700	6673	0	11.4	0	120				J
Benzo(a)anthracene	2721.777	330	3337	0	81.6	64	120				
Benzo(a)pyrene	2675.017	200	3337	0	80.2	59	120				
Benzo(b)fluoranthene	2898.130	330	3337	0	86.9	62	120				
Benzo(g,h,i)perylene	2059.452	330	3337	0	61.7	51	126				
Benzo(k)fluoranthene	2670.341	330	3337	0	80.0	59	120				
Benzoic acid	1249.499	1700	3337	0	37.4	23	120				J
Benzyl alcohol	2412.492	660	3337	0	72.3	46	120				
Bis(2-chloroethoxy)methane	2216.767	330	3337	0	66.4	50	120				
Bis(2-chloroethyl)ether	2277.555	330	3337	0	68.3	38	120				
Bis(2-chloroisopropyl)ether	2494.322	330	3337	0	74.8	25	127				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013460-007A-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-ethylhexyl)phthalate	3175.017	330	3337	0	95.2	63	129				
Butylbenzylphthalate	3100.868	330	3337	0	92.9	64	128				
Chrysene	2879.092	330	3337	0	86.3	33	150				
Di-n-butylphthalate	2818.971	330	3337	0	84.5	62	121				
Di-n-octylphthalate	3268.537	330	3337	0	98.0	62	143				
Dibenz(a,h)anthracene	2596.192	200	3337	0	77.8	46	149				
Dibenzofuran	2425.852	330	3337	0	72.7	55	120				
Diethylphthalate	2947.896	330	3337	0	88.3	61	120				
Dimethylphthalate	2758.851	330	3337	0	82.7	59	120				
Fluoranthene	2775.551	330	3337	0	83.2	57	120				
Fluorene	2674.015	330	3337	0	80.1	56	120				
Hexachlorobenzene	2460.254	330	3337	0	73.7	60	120				
Hexachlorobutadiene	2384.102	660	3337	0	71.5	34	120				
Hexachlorocyclopentadiene	2013.360	660	3337	0	60.3	20	120				
Hexachloroethane	1950.568	330	3337	0	58.5	33	120				
Indeno(1,2,3-cd)pyrene	2273.547	330	3337	0	68.1	51	129				
Isophorone	2112.558	330	3337	0	63.3	47	120				
N-Nitrosodi-n-propylamine	2125.251	330	3337	0	63.7	51	120				
N-Nitrosodiphenylamine	2632.265	330	3337	0	78.9	63	120				
Naphthalene	2282.231	330	3337	0	68.4	40	120				
Nitrobenzene	2146.961	330	3337	0	64.3	43	120				
Pentachlorophenol	2174.015	1700	3337	0	65.2	46	120				
Phenanthrene	2725.785	330	3337	0	81.7	56	120				
Phenol	1981.296	330	3337	0	59.4	44	120				
Pyrene	2703.741	330	3337	0	81.0	57	120				
Surr: 1,2-Dichlorobenzene-d4	1823.313		3337		54.6	20	120				
Surr: 2,4,6-Tribromophenol	2408.150		3337		72.2	31	125				
Surr: 2-Chlorophenol-d4	2084.168		3337		62.5	29	120				
Surr: 2-Fluorobiphenyl	2139.947		3337		64.1	35	120				
Surr: 2-Fluorophenol	1970.608		3337		59.1	27	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013460-007A-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	2532.398		3337		75.9	26	142				
Surr: Nitrobenzene-d5	2022.378		3337		60.6	25	120				
Surr: Phenol-d5	2009.352		3337		60.2	20	120				

Sample ID **N013460-007A-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2041.320	330	3329	0	61.3	35	120	2200	7.50	20	
1,2-Dichlorobenzene	1790.070	330	3329	0	53.8	32	120	1976	9.85	20	
1,3-Dichlorobenzene	1737.421	330	3329	0	52.2	29	120	1907	9.30	20	
1,4-Dichlorobenzene	1829.723	330	3329	0	55.0	31	120	2006	9.18	20	
2,4,5-Trichlorophenol	2201.933	330	3329	0	66.1	53	120	2414	9.21	20	
2,4,6-Trichlorophenol	2233.256	330	3329	0	67.1	51	120	2428	8.34	20	
2,4-Dichlorophenol	2090.636	1600	3329	0	62.8	45	120	2240	6.92	20	
2,4-Dimethylphenol	1927.691	330	3329	0	57.9	44	120	1986	2.98	20	
2,4-Dinitrophenol	1306.231	1600	3329	0	39.2	30	127	1572	0	20	J
2,4-Dinitrotoluene	2306.564	330	3329	0	69.3	53	120	2582	11.3	20	
2,6-Dinitrotoluene	2333.555	330	3329	0	70.1	58	120	2610	11.2	20	
2-Chloronaphthalene	2175.941	330	3329	0	65.4	46	120	2417	10.5	20	
2-Chlorophenol	1921.360	330	3329	0	57.7	41	120	2120	9.83	20	
2-Methylnaphthalene	1984.005	330	3329	0	59.6	45	120	2187	9.75	20	
2-Methylphenol	1855.382	330	3329	0	55.7	44	120	1991	7.05	20	
2-Nitroaniline	2468.510	1600	3329	0	74.2	43	132	2740	10.4	20	
2-Nitrophenol	2021.659	330	3329	0	60.7	40	120	2192	8.09	20	
3,3´-Dichlorobenzidine	4586.804	660	6658	0	68.9	37	120	5177	12.1	20	
3-Nitroaniline	2382.206	1600	3329	0	71.6	54	120	2634	10.0	20	
4,6-Dinitro-2-methylphenol	1767.411	1600	3329	0	53.1	45	126	2038	14.2	20	
4-Bromophenyl-phenylether	2289.237	330	3329	0	68.8	58	120	2554	10.9	20	
4-Chloro-3-methylphenol	2069.977	660	3329	0	62.2	53	120	2253	8.48	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013460-007A-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chloroaniline	2172.609	660	3329	0	65.3	39	120	2290	5.24	20	
4-Chlorophenyl-phenylether	2372.209	330	3329	0	71.3	56	120	2686	12.4	20	
4-Methylphenol	1929.357	330	3329	0	58.0	47	120	2094	8.16	20	
4-Nitroaniline	2624.459	1600	3329	0	78.8	49	120	2918	10.6	20	
4-Nitrophenol	2380.207	1600	3329	0	71.5	40	127	2664	11.3	20	
Acenaphthene	2308.564	330	3329	0	69.3	51	120	2620	12.6	20	
Acenaphthylene	2278.574	330	3329	0	68.4	55	120	2548	11.2	20	
Anthracene	2331.556	330	3329	0	70.0	57	120	2630	12.0	20	
Benzidine (M)	691.436	1600	6658	0	10.4	0	120	758.9	0	20	J
Benzo(a)anthracene	2441.853	330	3329	0	73.4	64	120	2722	10.8	20	
Benzo(a)pyrene	2376.208	200	3329	0	71.4	59	120	2675	11.8	20	
Benzo(b)fluoranthene	2617.794	330	3329	0	78.6	62	120	2898	10.2	20	
Benzo(g,h,i)perylene	2020.327	330	3329	0	60.7	51	126	2059	1.92	20	
Benzo(k)fluoranthene	2477.507	330	3329	0	74.4	59	120	2670	7.49	20	
Benzoic acid	980.673	1600	3329	0	29.5	23	120	1249	0	20	J
Benzyl alcohol	2195.601	660	3329	0	66.0	46	120	2412	9.41	20	
Bis(2-chloroethoxy)methane	2050.317	330	3329	0	61.6	50	120	2217	7.80	20	
Bis(2-chloroethyl)ether	1860.713	330	3329	0	55.9	38	120	2278	20.1	20	R
Bis(2-chloroisopropyl)ether	2297.901	330	3329	0	69.0	25	127	2494	8.20	20	
Bis(2-ethylhexyl)phthalate	2792.069	330	3329	0	83.9	63	129	3175	12.8	20	
Butylbenzylphthalate	2735.088	330	3329	0	82.2	64	128	3101	12.5	20	
Chrysene	2526.158	330	3329	0	75.9	33	150	2879	13.1	20	
Di-n-butylphthalate	2477.841	330	3329	0	74.4	62	121	2819	12.9	20	
Di-n-octylphthalate	2838.720	330	3329	0	85.3	62	143	3269	14.1	20	
Dibenz(a,h)anthracene	2403.199	200	3329	0	72.2	46	149	2596	7.72	20	
Dibenzofuran	2146.951	330	3329	0	64.5	55	120	2426	12.2	20	
Diethylphthalate	2657.781	330	3329	0	79.8	61	120	2948	10.4	20	
Dimethylphthalate	2482.173	330	3329	0	74.6	59	120	2759	10.6	20	
Fluoranthene	2369.877	330	3329	0	71.2	57	120	2776	15.8	20	
Fluorene	2359.880	330	3329	0	70.9	56	120	2674	12.5	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013460-007A-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **ZZZZZZ** Batch ID: **46603** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorobenzene	2153.615	330	3329	0	64.7	60	120	2460	13.3	20	
Hexachlorobutadiene	2174.275	660	3329	0	65.3	34	120	2384	9.21	20	
Hexachlorocyclopentadiene	1829.723	660	3329	0	55.0	20	120	2013	9.56	20	
Hexachloroethane	1759.414	330	3329	0	52.9	33	120	1951	10.3	20	
Indeno(1,2,3-cd)pyrene	2124.958	330	3329	0	63.8	51	129	2274	6.76	20	
Isophorone	1933.356	330	3329	0	58.1	47	120	2113	8.86	20	
N-Nitrosodi-n-propylamine	1931.689	330	3329	0	58.0	51	120	2125	9.54	20	
N-Nitrosodiphenylamine	2358.214	330	3329	0	70.8	63	120	2632	11.0	20	
Naphthalene	2104.299	330	3329	0	63.2	40	120	2282	8.11	20	
Nitrobenzene	1997.334	330	3329	0	60.0	43	120	2147	7.22	20	
Pentachlorophenol	1863.046	1600	3329	0	56.0	46	120	2174	15.4	20	
Phenanthrene	2334.222	330	3329	0	70.1	56	120	2726	15.5	20	
Phenol	1837.054	330	3329	0	55.2	44	120	1981	7.56	20	
Pyrene	2361.879	330	3329	0	71.0	57	120	2704	13.5	20	
Surr: 1,2-Dichlorobenzene-d4	1756.415		3329		52.8	20	120		0		
Surr: 2,4,6-Tribromophenol	2349.883		3329		70.6	31	125		0		
Surr: 2-Chlorophenol-d4	2006.664		3329		60.3	29	120		0		
Surr: 2-Fluorobiphenyl	2112.629		3329		63.5	35	120		0		
Surr: 2-Fluorophenol	1944.352		3329		58.4	27	120		0		
Surr: 4-Terphenyl-d14	2488.504		3329		74.8	26	142		0		
Surr: Nitrobenzene-d5	2023.326		3329		60.8	25	120		0		
Surr: Phenol-d5	1965.012		3329		59.0	20	120		0		

Sample ID **MB-46603** SampType: **MBLK** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/30/2014** RunNo: **95077**
Client ID: **PBS** Batch ID: **46603** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1842342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330									
1,2-Dichlorobenzene	ND	330									
1,3-Dichlorobenzene	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	**MB-46603**	SampType:	**MBLK**	TestCode:	**8270SOIL**	Units:	**µg/Kg**		Prep Date:	**9/30/2014**		RunNo:	**95077**		
Client ID:	**PBS**	Batch ID:	**46603**	TestNo:	**EPA 8270C**		**EPA 3550B**		Analysis Date:	**9/30/2014**		SeqNo:	**1842342**		
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
1,4-Dichlorobenzene		ND		330											
2,4,5-Trichlorophenol		ND		330											
2,4,6-Trichlorophenol		ND		330											
2,4-Dichlorophenol		ND		1600											
2,4-Dimethylphenol		ND		330											
2,4-Dinitrophenol		ND		1600											
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		1600											
2-Nitrophenol		ND		330											
3,3´-Dichlorobenzidine		ND		660											
3-Nitroaniline		ND		1600											
4,6-Dinitro-2-methylphenol		ND		1600											
4-Bromophenyl-phenylether		ND		330											
4-Chloro-3-methylphenol		ND		660											
4-Chloroaniline		ND		660											
4-Chlorophenyl-phenylether		ND		330											
4-Methylphenol		ND		330											
4-Nitroaniline		ND		1600											
4-Nitrophenol		ND		1600											
Acenaphthene		ND		330											
Acenaphthylene		ND		330											
Anthracene		ND		330											
Benzidine (M)		ND		1600											
Benzo(a)anthracene		ND		330											
Benzo(a)pyrene		ND		200											

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	**MB-46603**	SampType:	**MBLK**	TestCode:	**8270SOIL**	Units:	**µg/Kg**		Prep Date:	**9/30/2014**		RunNo:	**95077**		
Client ID:	**PBS**	Batch ID:	**46603**	TestNo:	**EPA 8270C**		**EPA 3550B**		Analysis Date:	**9/30/2014**		SeqNo:	**1842342**		
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Benzo(b)fluoranthene		ND		330											
Benzo(g,h,i)perylene		ND		330											
Benzo(k)fluoranthene		ND		330											
Benzoic acid		ND		1600											
Benzyl alcohol		ND		660											
Bis(2-chloroethoxy)methane		ND		330											
Bis(2-chloroethyl)ether		ND		330											
Bis(2-chloroisopropyl)ether		ND		330											
Bis(2-ethylhexyl)phthalate		ND		330											
Butylbenzylphthalate		ND		330											
Chrysene		ND		330											
Di-n-butylphthalate		ND		330											
Di-n-octylphthalate		ND		330											
Dibenz(a,h)anthracene		ND		200											
Dibenzofuran		ND		330											
Diethylphthalate		ND		330											
Dimethylphthalate		ND		330											
Fluoranthene		ND		330											
Fluorene		ND		330											
Hexachlorobenzene		ND		330											
Hexachlorobutadiene		ND		660											
Hexachlorocyclopentadiene		ND		660											
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											
Pentachlorophenol		ND		1600											

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

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CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	MB-46603	SampType:	MBLK	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/30/2014	RunNo:	95077
Client ID:	PBS	Batch ID:	46603	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	9/30/2014	SeqNo:	1842342

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2043.667		3330		61.4	20	120				
Surr: 2,4,6-Tribromophenol	1991.667		3330		59.8	31	125				
Surr: 2-Chlorophenol-d4	2163.667		3330		65.0	29	120				
Surr: 2-Fluorobiphenyl	2195.667		3330		65.9	35	120				
Surr: 2-Fluorophenol	2179.333		3330		65.4	27	120				
Surr: 4-Terphenyl-d14	3124.000		3330		93.8	26	142				
Surr: Nitrobenzene-d5	2108.667		3330		63.3	25	120				
Surr: Phenol-d5	2061.333		3330		61.9	20	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **LCS-46613** SampType: **LCS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **LCSS** Batch ID: **46613** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2506.333	330	3330	0	75.3	35	120				
1,2-Dichlorobenzene	2261.333	330	3330	0	67.9	32	120				
1,3-Dichlorobenzene	2156.667	330	3330	0	64.8	29	120				
1,4-Dichlorobenzene	2256.667	330	3330	0	67.8	31	120				
2,4,5-Trichlorophenol	2393.000	330	3330	0	71.9	53	120				
2,4,6-Trichlorophenol	2480.000	330	3330	0	74.5	51	120				
2,4-Dichlorophenol	2350.333	1600	3330	0	70.6	45	120				
2,4-Dimethylphenol	2491.333	330	3330	0	74.8	44	120				
2,4-Dinitrophenol	779.000	1600	3330	0	23.4	30	127				JS
2,4-Dinitrotoluene	2720.333	330	3330	0	81.7	53	120				
2,6-Dinitrotoluene	2756.000	330	3330	0	82.8	58	120				
2-Chloronaphthalene	2628.333	330	3330	0	78.9	46	120				
2-Chlorophenol	2266.333	330	3330	0	68.1	41	120				
2-Methylnaphthalene	2420.667	330	3330	0	72.7	45	120				
2-Methylphenol	2326.667	330	3330	0	69.9	44	120				
2-Nitroaniline	2907.667	1600	3330	0	87.3	43	132				
2-Nitrophenol	2275.333	330	3330	0	68.3	40	120				
3,3´-Dichlorobenzidine	6441.667	660	6660	0	96.7	37	120				
3-Nitroaniline	2726.667	1600	3330	0	81.9	54	120				
4,6-Dinitro-2-methylphenol	1157.667	1600	3330	0	34.8	45	126				JS
4-Bromophenyl-phenylether	2685.667	330	3330	0	80.7	58	120				
4-Chloro-3-methylphenol	2397.667	660	3330	0	72.0	53	120				
4-Chloroaniline	2537.000	660	3330	0	76.2	39	120				
4-Chlorophenyl-phenylether	2726.333	330	3330	0	81.9	56	120				
4-Methylphenol	2282.333	330	3330	0	68.5	47	120				
4-Nitroaniline	2869.333	1600	3330	0	86.2	49	120				
4-Nitrophenol	2559.333	1600	3330	0	76.9	40	127				
Acenaphthene	2673.333	330	3330	0	80.3	51	120				
Acenaphthylene	2700.333	330	3330	0	81.1	55	120				
Anthracene	2849.333	330	3330	0	85.6	57	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	LCS-46613	SampType:	LCS	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	10/1/2014	RunNo:	95090
Client ID:	LCSS	Batch ID:	46613	TestNo:	EPA 8270C		EPA 3550B	Analysis Date:	10/1/2014	SeqNo:	1842829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzidine (M)	6261.333	1600	6660	0	94.0	0	120				
Benzo(a)anthracene	2943.333	330	3330	0	88.4	64	120				
Benzo(a)pyrene	2848.000	200	3330	0	85.5	59	120				
Benzo(b)fluoranthene	3563.333	330	3330	0	107	62	120				
Benzo(g,h,i)perylene	1403.667	330	3330	0	42.2	51	126				S
Benzo(k)fluoranthene	3478.667	330	3330	0	104	59	120				
Benzoic acid	1169.333	1600	3330	0	35.1	23	120				J
Benzyl alcohol	2568.000	660	3330	0	77.1	46	120				
Bis(2-chloroethoxy)methane	2240.333	330	3330	0	67.3	50	120				
Bis(2-chloroethyl)ether	1787.000	330	3330	0	53.7	38	120				
Bis(2-chloroisopropyl)ether	2627.000	330	3330	0	78.9	25	127				
Bis(2-ethylhexyl)phthalate	3263.667	330	3330	0	98.0	63	129				
Butylbenzylphthalate	3076.667	330	3330	0	92.4	64	128				
Chrysene	3032.000	330	3330	0	91.1	33	150				
Di-n-butylphthalate	2836.667	330	3330	0	85.2	62	121				
Di-n-octylphthalate	4919.333	330	3330	0	148	62	143				S
Dibenz(a,h)anthracene	1852.667	200	3330	0	55.6	46	149				
Dibenzofuran	2605.333	330	3330	0	78.2	55	120				
Diethylphthalate	2965.333	330	3330	0	89.0	61	120				
Dimethylphthalate	2784.000	330	3330	0	83.6	59	120				
Fluoranthene	2946.667	330	3330	0	88.5	57	120				
Fluorene	2837.667	330	3330	0	85.2	56	120				
Hexachlorobenzene	2665.667	330	3330	0	80.1	60	120				
Hexachlorobutadiene	2693.000	660	3330	0	80.9	34	120				
Hexachlorocyclopentadiene	1717.667	660	3330	0	51.6	20	120				
Hexachloroethane	2165.667	330	3330	0	65.0	33	120				
Indeno(1,2,3-cd)pyrene	1602.333	330	3330	0	48.1	51	129				S
Isophorone	2231.333	330	3330	0	67.0	47	120				
N-Nitrosodi-n-propylamine	2110.333	330	3330	0	63.4	51	120				
N-Nitrosodiphenylamine	2790.000	330	3330	0	83.8	63	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **LCS-46613** SampType: **LCS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **LCSS** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2516.667	330	3330	0	75.6	40	120				
Nitrobenzene	2407.000	330	3330	0	72.3	43	120				
Pentachlorophenol	2127.000	1600	3330	0	63.9	46	120				
Phenanthrene	2855.333	330	3330	0	85.7	56	120				
Phenol	2180.333	330	3330	0	65.5	44	120				
Pyrene	2901.333	330	3330	0	87.1	57	120				
Surr: 1,2-Dichlorobenzene-d4	2282.333		3330		68.5	20	120				
Surr: 2,4,6-Tribromophenol	2771.333		3330		83.2	31	125				
Surr: 2-Chlorophenol-d4	2398.667		3330		72.0	29	120				
Surr: 2-Fluorobiphenyl	2572.667		3330		77.3	35	120				
Surr: 2-Fluorophenol	2309.667		3330		69.4	27	120				
Surr: 4-Terphenyl-d14	3020.333		3330		90.7	26	142				
Surr: Nitrobenzene-d5	2456.667		3330		73.8	25	120				
Surr: Phenol-d5	2340.667		3330		70.3	20	120				

Sample ID **MB-46613** SampType: **MBLK** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **PBS** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842830**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	1600									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	**MB-46613**	SampType:	**MBLK**	TestCode:	**8270SOIL**	Units:	**µg/Kg**	Prep Date:	**10/1/2014**	RunNo:	**95090**			
Client ID:	**PBS**	Batch ID:	**46613**	TestNo:	**EPA 8270C**	**EPA 3550B**		Analysis Date:	**10/1/2014**	SeqNo:	**1842830**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3´-Dichlorobenzidine	ND	660									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	660									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									
Acenaphthylene	ND	330									
Anthracene	ND	330									
Benzidine (M)	ND	1600									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	200									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	**MB-46613**	SampType:	**MBLK**	TestCode:	**8270SOIL**	Units:	**µg/Kg**	Prep Date:	**10/1/2014**	RunNo:	**95090**		
Client ID:	**PBS**	Batch ID:	**46613**	TestNo:	**EPA 8270C**		**EPA 3550B**	Analysis Date:	**10/1/2014**	SeqNo:	**1842830**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	200									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	660									
Hexachlorocyclopentadiene	ND	660									
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									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2559.000		3330		76.8	20	120				
Surr: 2,4,6-Tribromophenol	2188.000		3330		65.7	31	125				
Surr: 2-Chlorophenol-d4	2683.333		3330		80.6	29	120				
Surr: 2-Fluorobiphenyl	2806.000		3330		84.3	35	120				
Surr: 2-Fluorophenol	2610.667		3330		78.4	27	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	MB-46613	SampType:	MBLK	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	10/1/2014	RunNo:	95090
Client ID:	PBS	Batch ID:	46613	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	10/1/2014	SeqNo:	1842830

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	3372.667		3330		101	26	142				
Surr: Nitrobenzene-d5	2743.667		3330		82.4	25	120				
Surr: Phenol-d5	2602.667		3330		78.2	20	120				

Sample ID	N013457-008C-MS	SampType:	MS	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	10/1/2014	RunNo:	95090
Client ID:	ZZZZZZ	Batch ID:	46613	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	10/1/2014	SeqNo:	1842841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1770.618	330	3336	0	53.1	35	120				
1,2-Dichlorobenzene	1551.586	330	3336	0	46.5	32	120				
1,3-Dichlorobenzene	1507.179	330	3336	0	45.2	29	120				
1,4-Dichlorobenzene	1590.985	330	3336	0	47.7	31	120				
2,4,5-Trichlorophenol	2179.299	330	3336	0	65.3	53	120				
2,4,6-Trichlorophenol	2183.306	330	3336	0	65.5	51	120				
2,4-Dichlorophenol	1848.414	1700	3336	0	55.4	45	120				
2,4-Dimethylphenol	1889.816	330	3336	0	56.7	44	120				
2,4-Dinitrophenol	112.855	1700	3336	0	3.38	30	127				JS
2,4-Dinitrotoluene	1839.399	330	3336	0	55.1	53	120				
2,6-Dinitrotoluene	1941.235	330	3336	0	58.2	58	120				
2-Chloronaphthalene	1951.252	330	3336	0	58.5	46	120				
2-Chlorophenol	1655.760	330	3336	0	49.6	41	120				
2-Methylnaphthalene	1737.229	330	3336	0	52.1	45	120				
2-Methylphenol	1731.219	330	3336	0	51.9	44	120				
2-Nitroaniline	2257.429	1700	3336	0	67.7	43	132				
2-Nitrophenol	1445.409	330	3336	0	43.3	40	120				
3-Nitroaniline	2167.279	1700	3336	0	65.0	54	120				
4,6-Dinitro-2-methylphenol	235.058	1700	3336	0	7.05	45	126				JS
4-Bromophenyl-phenylether	2157.262	330	3336	0	64.7	58	120				
4-Chloro-3-methylphenol	2017.028	660	3336	0	60.5	53	120				
4-Chloroaniline	1736.895	660	3336	0	52.1	39	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-008C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorophenyl-phenylether	2131.886	330	3336	0	63.9	56	120				
4-Methylphenol	1716.528	330	3336	0	51.5	47	120				
4-Nitroaniline	2156.928	1700	3336	0	64.7	49	120				
4-Nitrophenol	2150.584	1700	3336	0	64.5	40	127				
Acenaphthene	2007.346	330	3336	0	60.2	51	120				
Acenaphthylene	2071.119	330	3336	0	62.1	55	120				
Anthracene	2320.200	330	3336	0	69.6	57	120				
Benzoic acid	1030.384	1700	3336	0	30.9	23	120				J
Benzyl alcohol	1821.703	660	3336	0	54.6	46	120				
Bis(2-chloroethoxy)methane	1573.957	330	3336	0	47.2	50	120				S
Bis(2-chloroethyl)ether	1473.790	330	3336	0	44.2	38	120				
Bis(2-chloroisopropyl)ether	1918.865	330	3336	0	57.5	25	127				
Di-n-butylphthalate	2207.012	330	3336	0	66.2	62	121				
Dibenzofuran	2028.047	330	3336	0	60.8	55	120				
Diethylphthalate	2302.170	330	3336	0	69.0	61	120				
Dimethylphthalate	2095.826	330	3336	0	62.8	59	120				
Fluoranthene	1800.334	330	3336	0	54.0	57	120				S
Fluorene	2269.115	330	3336	0	68.0	56	120				
Hexachlorobenzene	2184.641	330	3336	0	65.5	60	120				
Hexachlorobutadiene	1865.776	660	3336	0	55.9	34	120				
Hexachlorocyclopentadiene	324.207	660	3336	0	9.72	20	120				JS
Hexachloroethane	1172.955	330	3336	0	35.2	33	120				
Isophorone	1610.351	330	3336	0	48.3	47	120				
N-Nitrosodi-n-propylamine	1507.179	330	3336	0	45.2	51	120				S
N-Nitrosodiphenylamine	2226.377	330	3336	0	66.7	63	120				
Naphthalene	1782.638	330	3336	0	53.4	40	120				
Nitrobenzene	1667.446	330	3336	0	50.0	43	120				
Pentachlorophenol	1883.472	1700	3336	0	56.5	46	120				
Phenanthrene	2320.534	330	3336	0	69.6	56	120				
Phenol	1589.316	330	3336	0	47.6	44	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-008C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pyrene	1613.022	330	3336	0	48.4	57	120				S
Surr: 1,2-Dichlorobenzene-d4	1525.543		3336		45.7	20	120				
Surr: 2,4,6-Tribromophenol	2291.820		3336		68.7	31	125				
Surr: 2-Chlorophenol-d4	1676.127		3336		50.3	29	120				
Surr: 2-Fluorobiphenyl	1773.623		3336		53.2	35	120				
Surr: 2-Fluorophenol	1599.332		3336		47.9	27	120				
Surr: Nitrobenzene-d5	1640.735		3336		49.2	25	120				
Surr: Phenol-d5	1616.694		3336		48.5	20	120				

Sample ID **N013457-008C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1893.929	330	3332	0	56.8	35	120	1771	6.73	20	
1,2-Dichlorobenzene	1692.128	330	3332	0	50.8	32	120	1552	8.67	20	
1,3-Dichlorobenzene	1646.097	330	3332	0	49.4	29	120	1507	8.81	20	
1,4-Dichlorobenzene	1732.488	330	3332	0	52.0	31	120	1591	8.52	20	
2,4,5-Trichlorophenol	2159.773	330	3332	0	64.8	53	120	2179	0.900	20	
2,4,6-Trichlorophenol	2180.454	330	3332	0	65.4	51	120	2183	0.131	20	
2,4-Dichlorophenol	1964.310	1700	3332	0	58.9	45	120	1848	6.08	20	
2,4-Dimethylphenol	2023.015	330	3332	0	60.7	44	120	1890	6.81	20	
2,4-Dinitrophenol	61.708	1700	3332	0	1.85	30	127	112.9	0	20	JS
2,4-Dinitrotoluene	1811.875	330	3332	0	54.4	53	120	1839	1.51	20	
2,6-Dinitrotoluene	1927.285	330	3332	0	57.8	58	120	1941	0.721	20	S
2-Chloronaphthalene	2056.704	330	3332	0	61.7	46	120	1951	5.26	20	
2-Chlorophenol	1820.213	330	3332	0	54.6	41	120	1656	9.46	20	
2-Methylnaphthalene	1864.243	330	3332	0	55.9	45	120	1737	7.05	20	
2-Methylphenol	1860.240	330	3332	0	55.8	44	120	1731	7.18	20	
2-Nitroaniline	2245.831	1700	3332	0	67.4	43	132	2257	0.515	20	
2-Nitrophenol	1599.400	330	3332	0	48.0	40	120	1445	10.1	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-008C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3-Nitroaniline	2147.765	1700	3332	0	64.5	54	120	2167	0.904	20	
4,6-Dinitro-2-methylphenol	153.436	1700	3332	0	4.60	45	126	235.1	0	20	JS
4-Bromophenyl-phenylether	2067.378	330	3332	0	62.0	58	120	2157	4.26	20	
4-Chloro-3-methylphenol	2013.009	660	3332	0	60.4	53	120	2017	0.199	20	
4-Chloroaniline	1844.897	660	3332	0	55.4	39	120	1737	6.03	20	
4-Chlorophenyl-phenylether	2133.089	330	3332	0	64.0	56	120	2132	0.0564	20	
4-Methylphenol	1867.912	330	3332	0	56.1	47	120	1717	8.45	20	
4-Nitroaniline	2058.706	1700	3332	0	61.8	49	120	2157	4.66	20	
4-Nitrophenol	2135.424	1700	3332	0	64.1	40	127	2151	0.707	20	
Acenaphthene	2039.693	330	3332	0	61.2	51	120	2007	1.60	20	
Acenaphthylene	2114.076	330	3332	0	63.4	55	120	2071	2.05	20	
Anthracene	2198.466	330	3332	0	66.0	57	120	2320	5.39	20	
Benzoic acid	1048.032	1700	3332	0	31.5	23	120	1030	0	20	J
Benzyl alcohol	1986.991	660	3332	0	59.6	46	120	1822	8.68	20	
Bis(2-chloroethoxy)methane	1722.815	330	3332	0	51.7	50	120	1574	9.03	20	
Bis(2-chloroethyl)ether	1388.259	330	3332	0	41.7	38	120	1474	5.98	20	
Bis(2-chloroisopropyl)ether	2058.039	330	3332	0	61.8	25	127	1919	7.00	20	
Di-n-butylphthalate	2125.083	330	3332	0	63.8	62	121	2207	3.78	20	
Dibenzofuran	2038.692	330	3332	0	61.2	55	120	2028	0.524	20	
Diethylphthalate	2249.500	330	3332	0	67.5	61	120	2302	2.31	20	
Dimethylphthalate	2118.079	330	3332	0	63.6	59	120	2096	1.06	20	
Fluoranthene	1549.033	330	3332	0	46.5	57	120	1800	15.0	20	S
Fluorene	2232.488	330	3332	0	67.0	56	120	2269	1.63	20	
Hexachlorobenzene	2087.392	330	3332	0	62.6	60	120	2185	4.55	20	
Hexachlorobutadiene	2035.690	660	3332	0	61.1	34	120	1866	8.71	20	
Hexachlorocyclopentadiene	248.833	660	3332	0	7.47	20	120	324.2	0	20	JS
Hexachloroethane	1254.503	330	3332	0	37.6	33	120	1173	6.72	20	
Isophorone	1734.490	330	3332	0	52.1	47	120	1610	7.42	20	
N-Nitrosodi-n-propylamine	1665.777	330	3332	0	50.0	51	120	1507	10.0	20	S
N-Nitrosodiphenylamine	2165.110	330	3332	0	65.0	63	120	2226	2.79	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-008C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95090**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1842842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1916.278	330	3332	0	57.5	40	120	1783	7.23	20	
Nitrobenzene	1808.539	330	3332	0	54.3	43	120	1667	8.12	20	
Pentachlorophenol	1767.512	1700	3332	0	53.0	46	120	1883	6.35	20	
Phenanthrene	2199.466	330	3332	0	66.0	56	120	2321	5.36	20	
Phenol	1749.166	330	3332	0	52.5	44	120	1589	9.58	20	
Pyrene	1335.557	330	3332	0	40.1	57	120	1613	18.8	20	S
Surr: 1,2-Dichlorobenzene-d4	1579.720		3332		47.4	20	120		0		
Surr: 2,4,6-Tribromophenol	2120.747		3332		63.6	31	125		0		
Surr: 2-Chlorophenol-d4	1748.165		3332		52.5	29	120		0		
Surr: 2-Fluorobiphenyl	1810.540		3332		54.3	35	120		0		
Surr: 2-Fluorophenol	1668.779		3332		50.1	27	120		0		
Surr: Nitrobenzene-d5	1713.142		3332		51.4	25	120		0		
Surr: Phenol-d5	1699.466		3332		51.0	20	120		0		

Sample ID **N013457-008C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95108**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	4360.601	6600	6671	0	65.4	37	120				J
Benzidine (M)	ND	17000	6671	0	0	0	120				
Benzo(a)anthracene	2434.057	3300	3336	0	73.0	64	120				J
Benzo(a)pyrene	2340.568	2000	3336	0	70.2	59	120				A6L
Benzo(b)fluoranthene	2928.214	3300	3336	0	87.8	62	120				JA6L
Benzo(g,h,i)perylene	794.658	3300	3336	0	23.8	51	126				JSA6L
Benzo(k)fluoranthene	3619.366	3300	3336	0	109	59	120				A6L
Bis(2-ethylhexyl)phthalate	2233.723	3300	3336	0	67.0	63	129				J
Butylbenzylphthalate	2307.179	3300	3336	0	69.2	64	128				J
Chrysene	2387.312	3300	3336	0	71.6	33	150				J
Di-n-octylphthalate	4704.508	3300	3336	0	141	62	143				A6L
Dibenz(a,h)anthracene	1061.770	2000	3336	0	31.8	46	149				JSA6L

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Sharp Environmental Technologies
Work Order: N013460
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-008C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95108**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	938.230	3300	3336	0	28.1	51	129				JSA6L
Surr: 4-Terphenyl-d14	2220.367		3336		66.6	26	142				

Sample ID **N013457-008C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **10/1/2014** RunNo: **95108**
Client ID: **ZZZZZZ** Batch ID: **46613** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **10/2/2014** SeqNo: **1843360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	4209.473	6600	6664	0	63.2	37	120	4361	0	20	J
Benzidine (M)	ND	17000	6664	0	0	0	120	0	0	20	
Benzo(a)anthracene	2281.521	3300	3332	0	68.5	64	120	2434	0	20	J
Benzo(a)pyrene	2238.159	2000	3332	0	67.2	59	120	2341	4.47	20	A6L
Benzo(b)fluoranthene	2685.123	3300	3332	0	80.6	62	120	2928	0	20	JA6L
Benzo(g,h,i)perylene	657.105	3300	3332	0	19.7	51	126	794.7	0	20	JSA6L
Benzo(k)fluoranthene	3292.195	3300	3332	0	98.8	59	120	3619	0	20	JA6L
Bis(2-ethylhexyl)phthalate	2094.730	3300	3332	0	62.9	63	129	2234	0	20	JS
Butylbenzylphthalate	2191.461	3300	3332	0	65.8	64	128	2307	0	20	J
Chrysene	2201.468	3300	3332	0	66.1	33	150	2387	0	20	J
Di-n-octylphthalate	4386.258	3300	3332	0	132	62	143	4705	7.00	20	A6L
Dibenz(a,h)anthracene	ND	2000	3332	0	0	46	149	1062	0	20	SA6L
Indeno(1,2,3-cd)pyrene	767.178	3300	3332	0	23.0	51	129	938.2	0	20	JSA6L
Surr: 4-Terphenyl-d14	2021.348		3332		60.7	26	142		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

Chain of Custody

Client: SHARP ENV. TECHNOLOGIES
Address: 8393 Beacon, San Pedro CA 90733
Phone: 310-505-3675 Fax:
Project Name: ECI
Project Number: PO #
Submitted By: G. Baade
Title: Sr. Geologist
Signature: Date: 9/25
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES

Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp 5.3 IR# 2
Method of Cooling ice
Headspace NA
Intact Yes
Seal NONE
Comments

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	8260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471)	SVOCs by EPA 8270C	TPHcc 8015	OCPs 8081	PCBs							Turn Around Time	No. of container	Container Type	PRESERVATION	QA/QC: RTNE / RWQCB / CT / LEVEL IV	Remarks
N013459-01 (60x)	B20-10	9/24				X																			E	1	T			Hold
N013460-02	B20-15	9/24															X	X												
-03	B20-20	9/24												X	X		X													
-04	B20-25	9/24																												Hold
-05	B20-30	9/24																												Hold
-06	B21-2	9/25												X	X	X	X										G			
-07	B21-5	"												X	X	X	X										G			
-08	B22-2	"												X	X	X	X										T			
-09	B22-5	"												X	X	X	X										T			
-10	B22-10	"														X											T			

Send report to:
Name JEFF SHARP
Address
Email

Bill to:
Name SHARP ENV. TECH
Address
Email

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Name G. Baade Signature

Special Instruction/Comments:
cc Gabi Baade

Relinquished by (Signature):	Date	Time	Received by (Signature):	Date	Time
	9/25	16:45		9/25	16:45
	9/25	18:30		9/26	10:10

TAT Starts at 8 AM the following day if samples received after 3 pm.
A [ ] ≤ 24 Hours
B [ ] = Next Workday
C [ ] = 2 Workdays
D [ ] = 3 Workdays
E [X] = Routine 5-7 Workdays

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Carrier: Airbill/Tracking #:

Container Type: T = Tube V = VOA L = Liter P = Pint J = Jar B = Tedlar G = Glass M = Metal P = Plastic

EDD Requirement Excel EDD [ ] Geotracker [ ] LabSpec [ ] Global ID

Sample/Records Storage
All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
Fees will be applied for extended storage.

White = Laboratory Copy Yellow = Customer's Copy

Chain of Custody

Client: SHARP ENV. TECHNOLOGIES
Address: 8393 Beacon, San Pedro CA 90733
Phone: 310-505-3675 Fax:
Project Name: ECI
Project Number: PO #
Submitted By: G. Beacle
Title: Sr. Geologist
Signature: [signature] Date: 9/25
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES

Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp 5.3 IR# 2
Method of Cooling ice
Headspace NA
Intact Yes
Seal NONE
Comments

QA/QC: RTNE / RWQCB / CT / LEVEL IV

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	6260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471	SVOCs by EPA 8270C	TPHcc 8015	OCPs 8081	PCBs							Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
N013460	B20-10	9/24				X																			E	1	T		HOLD
	B20-15	9/24															X	X											
	B20-20	9/24												X	X		X												
	B20-25	9/24																											HOLD
	B20-30	9/24																											HOLD
	B21-2	9/25												X	X	X	X										G		
	B21-5	"												X	X	X	X										G		
	B22-2	"												X	X	X	X										T		
	B22-5	"												X	X	X	X										T		
	B22-10	"														X	X	X									T		

Send report to: Name JEFF SHARP
Address
Email

Bill to: Name SHARP ENV. TECH
Address
Email

Sampled by: *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*
Name G. Beacle Signature [signature]

Special Instructions/Comments:
cc Gabi Beacle

Relinquished by (Signature):	Date	Time	Received by (Signature):	Date	Time
[signature]	9/25	16:45	[signature]	9/25	16:45
[signature]	9/25	18:30	[signature]	9/26	10:10

TAT Starts at 8 AM the following day if samples received after 3 pm.
A ☐ ≤ 24 Hours D ☐ = 3 Workdays
B ☐ = Next Workday E ☒ = Routine 5-7 Workdays
C ☐ = 2 Workdays

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Carrier: Airbill/Tracking #:

Container Type: T = Tube V = VOA L = Liter P = Pint J = Jar B = Tedlar G = Glass M = Metal P = Plastic

EDD Requirement Excel EDD ☐ Geotracker ☐ LabSpec ☐ Global ID

Sample/Records Storage All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
Fees will be applied for extended storage.

White = Laboratory Copy Yellow = Customer's Copy

Chain of Custody

Client: SHARP ENV TECHNOLOGIES
Address:
Phone: Fax:
Project Name: ECI
Project Number: PO #
Submitted By: G. Brooks
Title: Sr. Geo
Signature: Date: 9/25
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES
Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp IR#
Method of Cooling
Headspace
Intact
Seal
Comments

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	8260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471)	SVOCs by EPA 8270C	TPH-GC 8015	OC Pes 8081	Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
N0134590 11	B22-15	9/25				X										X		E	1	T		
N0134605 12	B23-2													X	X	X	X					
-13	B23-5													X	X	X	X					
-14	B24-2													X	X	X	X					
-15	B24-5													X	X	X	X					
-16	B25-2													X	X	X	X					
-17	B25-5													X	X	X	X					
-18	B26-0.5													X	X	X	X					
-19	B26-2																					HOLD
-20	B27-2													X	X	X	X					

Send report to: Name JEFF SHARP
Address
Email

Bill to: Name SHARP ENV. TECH
Address
Email

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Name G. Brooks Signature

Special Instruction/Comments:

Relinquished by (Signature):	Date	Time	Received by (Signature):	Date	Time
	9/25	4:45		9/25	11:45
	9/25	18:30		9/26	10:10

TAT Starts at 8 AM the following day if samples received after 3 pm.
A [ ] ≤ 24 Hours D [ ] = 3 Workdays
B [ ] = Next Workday E [X] = Routine 5-7 Workdays
C [ ] = 2 Workdays

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Carrier:
Airbill/Tracking #:

Container Type:
T = Tube V = VOA L = Liter P = Pint
J = Jar B = Tedlar G = Glass
M = Metal P = Plastic

EDD Requirement
Excel EDD [ ]
Geotracker [ ] Global ID
LabSpec [ ]

Sample/Records Storage
All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
Fees will be applied for extended storage.

White = Laboratory Copy Yellow = Customer's Copy

Chain of Custody

Client: SHARP ENV. TECHNOLOGIES
Address:
Phone: Fax:
Project Name: EC
Project Number: PO #
Submitted By: G. Baade
Title: Sr. Geo
Signature: Date: 9/25
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES

Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp IR#
Method of Cooling
Headspace
Intact
Seal
Comments

QA/QC: RTNE, RWQCB, CT, LEVEL IV

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	8260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471)	SVOCs by EPA 8270C	TPH-C 8015	COCOPs 8081	Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
N0134594-21	B27-5	9/25				X								X	X	X	X	E	1	T		
N0134620-22	B28-2													X	X	X	X					
-23	B28-5													X	X	X	X					
-24	B29-2													X	X	X	X					
-25	B29-5													X	X	X	X					
-26	B30-2													X	X	X	X					
-27	B30-5													X	X	X	X					
-28	B31-2													X	X	X	X					
-29	B31-5													X	X	X	X					
-30	B32-2													X	X	X	X					

Send report to: JEFF SHARP
Name
Address
Email

Bill to: SHARP ENV. TECH
Name
Address
Email

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Name G. Baade Signature

Special Instruction/Comments:

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	9/25	16:45		9/25	16:45
	9/25	18:30		9/26	10:10

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C ☐ = 2 Workdays
D ☐ = 3 Workdays
E ☒ = Routine 5-7 Workdays

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Carrier:
Airbill/Tracking #:

Container Type:
T = Tube V = VOA L = Liter P = Pint
J = Jar B = Tedlar G = Glass
M = Metal P = Plastic

EDD Requirement
Excel EDD ☐
Geotracker ☐ Global ID
LabSpec ☐

Sample/Records Storage
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White = Laboratory Copy Yellow = Customer's Copy

Chain of Custody

Client: SHARP ENV. TECHNOLOGIES
Address:
Phone: Fax:
Project Name: ECI
Project Number: PO #
Submitted By: G. Baader
Title: Sr. GEOLOGIST
Signature: Date: 9/25
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES
Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp IR#
Method of Cooling
Headspace
Intact
Seal
Comments

QA/QC: RTNE, RWQCB, CT, LEVEL IV

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	8260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471)	SVOCs by EPA 8270C	TPH-CC 8015	8081	PCBs								Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
N0134960-31	B32-5	9/25				X								X	X	X	X									G	1	1		
N0134960-32	B33-2	↓				↓								X	X	X	X									↓	↓	↓		
-33	B33-5													X	X	X	X													
-34	B34-2															X	X	X												
-35	B34-5															X	X	X												
-36	B35-2															X	X	X												
-37	B35-5	↓				↓										X	X	X												

Send report to: Name JEFF SHARP
Address
Email

Bill to: Name SHARP ENV. TECH.
Address
Email

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Name G. Baader Signature

Special Instruction/Comments:

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	9/25	16:45			
	9/25	18:30		9/26	10:10

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Carrier: Airbill/Tracking #:

Container Type: T = Tube V = VOA L = Liter P = Pint J = Jar B = Tedlar G = Glass M = Metal P = Plastic

EDD Requirement Excel EDD [ ] Geotracker [ ] LabSpec [ ] Global ID

Sample/Records Storage
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	9/26/2014	Workorder:	N013460
Rep sample Temp (Deg C):	5.3	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	Golden State Overnight		
Last 4 digits of Tracking No.:	0791	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑
15. Did the bottle labels indicate correct preservatives used?	Yes ☐	No ☐	NA ☑
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments

Checklist Completed B AC ACortes 09/26/14

Reviewed By: Nancy 10/7/2014

GSO GOLDEN STATE OVERNIGHT

< WebShip > > > > >

800-322-5555 www.gso.com

Ship From:
MEYNARD LARIN
ASSET LABORATORIES
11060 ARTESIA BLVD., SUITE C
CERRITOS, CA 90703

Ship To:
MARLON CARTIN
ATL INC
3151 W. POST RD
LAS VEGAS, NV 89118

COD:
$0.00

Reference:

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 525730791

CPS

LVS

LAS VEGAS

D89103B

29119867

Print Date : 09/25/14 19:47 PM

Package 1 of 2

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.
Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Sample Control

From: Molky Brar [molky@assetlaboratories.com]
Sent: Friday, September 26, 2014 9:27 AM
To: 'Sample Control '; 'Marlon B. Cartin'
Subject: FW: ECI Analysis Addition

Importance: High

Hi,

Please see additional request from Gabi for Sharp Environmental. Please send COCs and SRC to client as soon as they are logged in so client can mark additional on COC.

Thanks,

Molky

From: Gabriele Baader [mailto:BaaderEnv@charter.net]
Sent: Thursday, September 25, 2014 9:25 PM
To: 'Molky Brar'
Subject: ECI Analysis Addition

Hi Molky,

As soon as I receive the COCs from today's drop off, I need to add PCB and OCP analysis to sample B22-10.

Thank you!

Kind regards,

Gabriele Baader
Professional Geologist
Baader Environmental Consulting
1489 Stonebrook Street
Azusa, California 91702
Mobile 626-712-0589
BaaderEnv@charter.net

October 02, 2014

Jeff Sharp
Sharp Environmental Technologies
8393 Beacon
San Pedro, CA 90733
TEL: (310) 505-3675
FAX:

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013451

RE: ECI

Attention: Jeff Sharp

Enclosed are the results for sample(s) received on September 25, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 or Molky Brar at (562)-881-3622 if we can be of further assistance to your company.

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: Sharp Environmental Technologies
Project: ECI
Lab Order: N013451

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8270C:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) is outside criteria for some analytes ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Dilution was necessary on samples N013451-001, N013451-002, N013451-003, N013451-004 and N013451-005 due to failed Internal Standards when samples were analyzed at no dilution possibly due to matrix interference. Samples were analyzed with dilution and internal standard met method criteria. Affected analytes for this failed internal standard were reported at a dilution that meet internal standard recovery limit.

Surrogate 2-Fluorobiphenyl recovery bias low on sample N013451-003 possibly due to matrix interference. The other surrogates were recovered within control limits.

Surrogate 2,4,6-Tribromophenol recovery bias low on sample N013451-005 possibly due to matrix interference. The other surrogates were recovered within control limits.

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

ASSET Laboratories

Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Project: ECI
Lab Order: N013451
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013451-001A	B16-2	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-002A	B16-5	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-003A	B17-2	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-004A	B17-5	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-005A	B18-2	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-006A	B18-5	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-007A	B19-2	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-008A	B19-5	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-009A	B20-2	Soil	9/24/2014	9/25/2014	10/2/2014
N013451-010A	B20-5	Soil	9/24/2014	9/25/2014	10/2/2014

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
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www.assetlaboratories.com

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-001

Client Sample ID: B16-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 01:07 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/27/2014 01:07 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/27/2014 01:07 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 01:07 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/27/2014 01:07 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/27/2014 01:07 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/27/2014 01:07 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/27/2014 01:07 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/27/2014 01:07 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/27/2014 01:07 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/27/2014 01:07 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/27/2014 01:07 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/27/2014 01:07 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/27/2014 01:07 AM
2-Methylphenol	ND	48	330		µg/Kg	1	9/27/2014 01:07 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/27/2014 01:07 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/27/2014 01:07 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/27/2014 01:07 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/27/2014 01:07 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/27/2014 01:07 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 01:07 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/27/2014 01:07 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/27/2014 01:07 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 01:07 AM
4-Methylphenol	ND	36	330		µg/Kg	1	9/27/2014 01:07 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/27/2014 01:07 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/27/2014 01:07 AM
Acenaphthene	ND	41	330		µg/Kg	1	9/27/2014 01:07 AM
Acenaphthylene	ND	37	330		µg/Kg	1	9/27/2014 01:07 AM
Anthracene	ND	64	330		µg/Kg	1	9/27/2014 01:07 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/27/2014 01:07 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/27/2014 01:07 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	9/27/2014 01:52 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	9/27/2014 01:52 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	9/27/2014 01:52 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	9/27/2014 01:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-001

Client Sample ID: B16-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/27/2014 01:07 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/27/2014 01:07 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/27/2014 01:07 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/27/2014 01:07 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/27/2014 01:07 AM
Bis(2-ethylhexyl)phthalate	340	80	330		µg/Kg	1	9/27/2014 01:07 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/27/2014 01:07 AM
Chrysene	ND	80	330		µg/Kg	1	9/27/2014 01:07 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/27/2014 01:07 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	9/27/2014 01:52 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	9/27/2014 01:52 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/27/2014 01:07 AM
Diethylphthalate	ND	44	330		µg/Kg	1	9/27/2014 01:07 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/27/2014 01:07 AM
Fluoranthene	ND	61	330		µg/Kg	1	9/27/2014 01:07 AM
Fluorene	ND	45	330		µg/Kg	1	9/27/2014 01:07 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/27/2014 01:07 AM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/27/2014 01:07 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/27/2014 01:07 AM
Hexachloroethane	ND	42	330		µg/Kg	1	9/27/2014 01:07 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	9/27/2014 01:52 PM
Isophorone	ND	59	330		µg/Kg	1	9/27/2014 01:07 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/27/2014 01:07 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/27/2014 01:07 AM
Naphthalene	ND	48	330		µg/Kg	1	9/27/2014 01:07 AM
Nitrobenzene	ND	57	330		µg/Kg	1	9/27/2014 01:07 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/27/2014 01:07 AM
Phenanthrene	ND	83	330		µg/Kg	1	9/27/2014 01:07 AM
Phenol	ND	38	330		µg/Kg	1	9/27/2014 01:07 AM
Pyrene	ND	47	330		µg/Kg	1	9/27/2014 01:07 AM
Surr: 1,2-Dichlorobenzene-d4	27.4	0	20-120		%REC	1	9/27/2014 01:07 AM
Surr: 2,4,6-Tribromophenol	52.8	0	31-125		%REC	1	9/27/2014 01:07 AM
Surr: 2-Chlorophenol-d4	45.4	0	29-120		%REC	1	9/27/2014 01:07 AM
Surr: 2-Fluorobiphenyl	43.4	0	35-120		%REC	1	9/27/2014 01:07 AM
Surr: 2-Fluorophenol	43.3	0	27-120		%REC	1	9/27/2014 01:07 AM
Surr: 4-Terphenyl-d14	91.1	0	26-142		%REC	1	9/27/2014 01:07 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-001

Client Sample ID: B16-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	38.2	0	25-120		%REC	1	9/27/2014 01:07 AM
Surr: Phenol-d5	45.8	0	20-120		%REC	1	9/27/2014 01:07 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	25	2.9	10		mg/Kg	1	9/29/2014 06:50 PM
ORO	63	1.8	10		mg/Kg	1	9/29/2014 06:50 PM
Surr: p-Terphenyl	92.1	0	49-173		%REC	1	9/29/2014 06:50 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	14	0.20	2.0		µg/Kg	1	10/1/2014 08:10 AM
4,4´-DDE	11	0.42	2.0		µg/Kg	1	10/1/2014 08:10 AM
4,4´-DDT	41	0.22	2.0		µg/Kg	1	10/1/2014 08:10 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:10 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 08:10 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 08:10 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:10 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 08:10 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 08:10 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:10 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 08:10 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:10 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 08:10 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 08:10 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:10 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:10 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:10 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 08:10 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 08:10 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:10 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 08:10 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 08:10 AM
Surr: Tetrachloro-m-xylene	56.0	0	19-120		%REC	1	10/1/2014 08:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
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S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-001

Client Sample ID: B16-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	61.5	0	22-141		%REC	1	10/1/2014 08:10 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140925A**	QC Batch: **E14VS092**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/25/2014 01:52 PM
Surr: Chlorobenzene - d5	116	0	57-134		%REC	1	9/25/2014 01:52 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 05:38 PM
Arsenic	3.1	0.10	1.0		mg/Kg	1	9/25/2014 05:38 PM
Barium	91	0.14	1.0		mg/Kg	1	9/25/2014 05:38 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM
Chromium	17	0.14	1.0		mg/Kg	1	9/25/2014 05:38 PM
Cobalt	6.9	0.14	1.0		mg/Kg	1	9/25/2014 05:38 PM
Copper	15	0.11	2.0		mg/Kg	1	9/25/2014 05:38 PM
Lead	11	0.12	1.0		mg/Kg	1	9/25/2014 05:38 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM
Nickel	13	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 05:38 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 05:38 PM
Vanadium	32	0.14	1.0		mg/Kg	1	9/25/2014 05:38 PM
Zinc	42	0.13	1.0		mg/Kg	1	9/25/2014 05:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-002

Client Sample ID: B16-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 12:41 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/27/2014 12:41 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/27/2014 12:41 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 12:41 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/27/2014 12:41 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/27/2014 12:41 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/27/2014 12:41 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/27/2014 12:41 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/27/2014 12:41 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/27/2014 12:41 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/27/2014 12:41 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/27/2014 12:41 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/27/2014 12:41 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/27/2014 12:41 AM
2-Methylphenol	ND	48	330		µg/Kg	1	9/27/2014 12:41 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/27/2014 12:41 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/27/2014 12:41 AM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/27/2014 12:41 AM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/27/2014 12:41 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/27/2014 12:41 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 12:41 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/27/2014 12:41 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/27/2014 12:41 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 12:41 AM
4-Methylphenol	ND	36	330		µg/Kg	1	9/27/2014 12:41 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/27/2014 12:41 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/27/2014 12:41 AM
Acenaphthene	ND	40	330		µg/Kg	1	9/27/2014 12:41 AM
Acenaphthylene	ND	37	330		µg/Kg	1	9/27/2014 12:41 AM
Anthracene	ND	64	330		µg/Kg	1	9/27/2014 12:41 AM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/27/2014 12:41 AM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/27/2014 12:41 AM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	9/27/2014 01:25 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	9/27/2014 01:25 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	9/27/2014 01:25 PM
Benzo(k)fluoranthene	ND	570	3300		µg/Kg	10	9/27/2014 01:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-002

Client Sample ID: B16-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/27/2014 12:41 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/27/2014 12:41 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/27/2014 12:41 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/27/2014 12:41 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/27/2014 12:41 AM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/27/2014 12:41 AM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/27/2014 12:41 AM
Chrysene	ND	80	330		µg/Kg	1	9/27/2014 12:41 AM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/27/2014 12:41 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	9/27/2014 01:25 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	9/27/2014 01:25 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/27/2014 12:41 AM
Diethylphthalate	ND	44	330		µg/Kg	1	9/27/2014 12:41 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/27/2014 12:41 AM
Fluoranthene	ND	61	330		µg/Kg	1	9/27/2014 12:41 AM
Fluorene	ND	45	330		µg/Kg	1	9/27/2014 12:41 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/27/2014 12:41 AM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/27/2014 12:41 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/27/2014 12:41 AM
Hexachloroethane	ND	42	330		µg/Kg	1	9/27/2014 12:41 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	9/27/2014 01:25 PM
Isophorone	ND	59	330		µg/Kg	1	9/27/2014 12:41 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/27/2014 12:41 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/27/2014 12:41 AM
Naphthalene	ND	48	330		µg/Kg	1	9/27/2014 12:41 AM
Nitrobenzene	ND	57	330		µg/Kg	1	9/27/2014 12:41 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/27/2014 12:41 AM
Phenanthrene	ND	83	330		µg/Kg	1	9/27/2014 12:41 AM
Phenol	ND	38	330		µg/Kg	1	9/27/2014 12:41 AM
Pyrene	ND	47	330		µg/Kg	1	9/27/2014 12:41 AM
Surr: 1,2-Dichlorobenzene-d4	32.5	0	20-120		%REC	1	9/27/2014 12:41 AM
Surr: 2,4,6-Tribromophenol	62.4	0	31-125		%REC	1	9/27/2014 12:41 AM
Surr: 2-Chlorophenol-d4	45.5	0	29-120		%REC	1	9/27/2014 12:41 AM
Surr: 2-Fluorobiphenyl	42.2	0	35-120		%REC	1	9/27/2014 12:41 AM
Surr: 2-Fluorophenol	45.2	0	27-120		%REC	1	9/27/2014 12:41 AM
Surr: 4-Terphenyl-d14	90.7	0	26-142		%REC	1	9/27/2014 12:41 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-002

Client Sample ID: B16-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	40.8	0	25-120		%REC	1	9/27/2014 12:41 AM
Surr: Phenol-d5	45.2	0	20-120		%REC	1	9/27/2014 12:41 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	11	2.9	10		mg/Kg	1	9/29/2014 07:15 PM
ORO	22	1.8	10		mg/Kg	1	9/29/2014 07:15 PM
Surr: p-Terphenyl	87.8	0	49-173		%REC	1	9/29/2014 07:15 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:17 AM
4,4´-DDE	2.0	0.42	2.0		µg/Kg	1	10/1/2014 06:17 AM
4,4´-DDT	2.1	0.22	2.0		µg/Kg	1	10/1/2014 06:17 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:17 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 06:17 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 06:17 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:17 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 06:17 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 06:17 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:17 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 06:17 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:17 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 06:17 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 06:17 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:17 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:17 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:17 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 06:17 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 06:17 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:17 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 06:17 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 06:17 AM
Surr: Tetrachloro-m-xylene	54.7	0	19-120		%REC	1	10/1/2014 06:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-002

Client Sample ID: B16-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	52.2	0	22-141		%REC	1	10/1/2014 06:17 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140925A**	QC Batch: **E14VS092**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/25/2014 02:25 PM
Surr: Chlorobenzene - d5	116	0	57-134		%REC	1	9/25/2014 02:25 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.099		mg/Kg	1	9/25/2014
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 05:43 PM
Arsenic	3.2	0.10	1.0		mg/Kg	1	9/25/2014 05:43 PM
Barium	140	0.14	1.0		mg/Kg	1	9/25/2014 05:43 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM
Chromium	17	0.14	1.0		mg/Kg	1	9/25/2014 05:43 PM
Cobalt	7.2	0.14	1.0		mg/Kg	1	9/25/2014 05:43 PM
Copper	15	0.11	2.0		mg/Kg	1	9/25/2014 05:43 PM
Lead	5.6	0.12	1.0		mg/Kg	1	9/25/2014 05:43 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM
Nickel	13	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 05:43 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 05:43 PM
Vanadium	31	0.14	1.0		mg/Kg	1	9/25/2014 05:43 PM
Zinc	37	0.13	1.0		mg/Kg	1	9/25/2014 05:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-003

Client Sample ID: B17-2
Collection Date: 9/24/2014
Matrix: SOIL

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140926B** QC Batch: **46579** PrepDate **9/26/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 01:34 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/27/2014 01:34 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/27/2014 01:34 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 01:34 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/27/2014 01:34 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/27/2014 01:34 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/27/2014 01:34 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/27/2014 01:34 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/27/2014 01:34 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/27/2014 01:34 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/27/2014 01:34 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/27/2014 01:34 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/27/2014 01:34 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/27/2014 01:34 AM
2-Methylphenol	ND	48	330		µg/Kg	1	9/27/2014 01:34 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/27/2014 01:34 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/27/2014 01:34 AM
3,3´-Dichlorobenzidine	ND	240	6600		µg/Kg	10	9/27/2014 02:18 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/27/2014 01:34 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/27/2014 01:34 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 01:34 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/27/2014 01:34 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/27/2014 01:34 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 01:34 AM
4-Methylphenol	ND	36	330		µg/Kg	1	9/27/2014 01:34 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/27/2014 01:34 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/27/2014 01:34 AM
Acenaphthene	ND	40	330		µg/Kg	1	9/27/2014 01:34 AM
Acenaphthylene	ND	37	330		µg/Kg	1	9/27/2014 01:34 AM
Anthracene	ND	64	330		µg/Kg	1	9/27/2014 01:34 AM
Benzidine (M)	ND	4500	16000		µg/Kg	10	9/27/2014 02:18 PM
Benzo(a)anthracene	ND	750	3300		µg/Kg	10	9/27/2014 02:18 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	9/27/2014 02:18 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	9/27/2014 02:18 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	9/27/2014 02:18 PM
Benzo(k)fluoranthene	ND	560	3300		µg/Kg	10	9/27/2014 02:18 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-003

Client Sample ID: B17-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/27/2014 01:34 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/27/2014 01:34 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/27/2014 01:34 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/27/2014 01:34 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/27/2014 01:34 AM
Bis(2-ethylhexyl)phthalate	ND	800	3300		µg/Kg	10	9/27/2014 02:18 PM
Butylbenzylphthalate	ND	670	3300		µg/Kg	10	9/27/2014 02:18 PM
Chrysene	ND	800	3300		µg/Kg	10	9/27/2014 02:18 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/27/2014 01:34 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	9/27/2014 02:18 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	9/27/2014 02:18 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/27/2014 01:34 AM
Diethylphthalate	ND	44	330		µg/Kg	1	9/27/2014 01:34 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/27/2014 01:34 AM
Fluoranthene	ND	61	330		µg/Kg	1	9/27/2014 01:34 AM
Fluorene	ND	45	330		µg/Kg	1	9/27/2014 01:34 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/27/2014 01:34 AM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/27/2014 01:34 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/27/2014 01:34 AM
Hexachloroethane	ND	42	330		µg/Kg	1	9/27/2014 01:34 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	9/27/2014 02:18 PM
Isophorone	ND	59	330		µg/Kg	1	9/27/2014 01:34 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/27/2014 01:34 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/27/2014 01:34 AM
Naphthalene	ND	48	330		µg/Kg	1	9/27/2014 01:34 AM
Nitrobenzene	ND	57	330		µg/Kg	1	9/27/2014 01:34 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/27/2014 01:34 AM
Phenanthrene	ND	83	330		µg/Kg	1	9/27/2014 01:34 AM
Phenol	ND	38	330		µg/Kg	1	9/27/2014 01:34 AM
Pyrene	ND	47	330		µg/Kg	1	9/27/2014 01:34 AM
Surr: 1,2-Dichlorobenzene-d4	28.3	0	20-120		%REC	1	9/27/2014 01:34 AM
Surr: 2,4,6-Tribromophenol	33.7	0	31-125		%REC	1	9/27/2014 01:34 AM
Surr: 2-Chlorophenol-d4	34.9	0	29-120		%REC	1	9/27/2014 01:34 AM
Surr: 2-Fluorobiphenyl	31.9	0	35-120	S	%REC	1	9/27/2014 01:34 AM
Surr: 2-Fluorophenol	34.9	0	27-120		%REC	1	9/27/2014 01:34 AM
Surr: 4-Terphenyl-d14	34.4	0	26-142		%REC	10	9/27/2014 02:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-003

Client Sample ID: B17-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	32.7	0	25-120		%REC	1	9/27/2014 01:34 AM
Surr: Phenol-d5	33.5	0	20-120		%REC	1	9/27/2014 01:34 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	240	2.9	10		mg/Kg	1	9/29/2014 07:41 PM
ORO	610	1.8	10		mg/Kg	1	9/29/2014 07:41 PM
Surr: p-Terphenyl	86.0	0	49-173		%REC	1	9/29/2014 07:41 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.19	2.0		µg/Kg	1	10/1/2014 09:17 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 09:17 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 09:17 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 09:17 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 09:17 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 09:17 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 09:17 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 09:17 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 09:17 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 09:17 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 09:17 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 09:17 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 09:17 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 09:17 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 09:17 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 09:17 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 09:17 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 09:17 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 09:17 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 09:17 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 09:17 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 09:17 AM
Surr: Tetrachloro-m-xylene	41.6	0	19-120		%REC	1	10/1/2014 09:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-003

Client Sample ID: B17-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	52.7	0	22-141		%REC	1	10/1/2014 09:17 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**			PrepDate			Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 03:32 PM
Surr: Chlorobenzene - d5	101	0	57-134		%REC	1	9/26/2014 03:32 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**			PrepDate		**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.099		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**			PrepDate		**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 05:49 PM
Arsenic	2.8	0.10	1.0		mg/Kg	1	9/25/2014 05:49 PM
Barium	80	0.14	1.0		mg/Kg	1	9/25/2014 05:49 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM
Chromium	10	0.14	1.0		mg/Kg	1	9/25/2014 05:49 PM
Cobalt	3.4	0.14	1.0		mg/Kg	1	9/25/2014 05:49 PM
Copper	11	0.11	2.0		mg/Kg	1	9/25/2014 05:49 PM
Lead	11	0.12	1.0		mg/Kg	1	9/25/2014 05:49 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM
Nickel	8.3	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 05:49 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 05:49 PM
Vanadium	18	0.14	1.0		mg/Kg	1	9/25/2014 05:49 PM
Zinc	38	0.13	1.0		mg/Kg	1	9/25/2014 05:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-004

Client Sample ID: B17-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 02:00 AM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/27/2014 02:00 AM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/27/2014 02:00 AM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/27/2014 02:00 AM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/27/2014 02:00 AM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/27/2014 02:00 AM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/27/2014 02:00 AM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/27/2014 02:00 AM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/27/2014 02:00 AM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/27/2014 02:00 AM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/27/2014 02:00 AM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/27/2014 02:00 AM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/27/2014 02:00 AM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/27/2014 02:00 AM
2-Methylphenol	ND	48	330		µg/Kg	1	9/27/2014 02:00 AM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/27/2014 02:00 AM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/27/2014 02:00 AM
3,3´-Dichlorobenzidine	ND	240	6600		µg/Kg	10	9/27/2014 02:45 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/27/2014 02:00 AM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/27/2014 02:00 AM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 02:00 AM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/27/2014 02:00 AM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/27/2014 02:00 AM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/27/2014 02:00 AM
4-Methylphenol	ND	36	330		µg/Kg	1	9/27/2014 02:00 AM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/27/2014 02:00 AM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/27/2014 02:00 AM
Acenaphthene	ND	40	330		µg/Kg	1	9/27/2014 02:00 AM
Acenaphthylene	ND	37	330		µg/Kg	1	9/27/2014 02:00 AM
Anthracene	ND	64	330		µg/Kg	1	9/27/2014 02:00 AM
Benzidine (M)	ND	4500	16000		µg/Kg	10	9/27/2014 02:45 PM
Benzo(a)anthracene	ND	750	3300		µg/Kg	10	9/27/2014 02:45 PM
Benzo(a)pyrene	ND	640	2000		µg/Kg	10	9/27/2014 02:45 PM
Benzo(b)fluoranthene	ND	400	3300		µg/Kg	10	9/27/2014 02:45 PM
Benzo(g,h,i)perylene	ND	480	3300		µg/Kg	10	9/27/2014 02:45 PM
Benzo(k)fluoranthene	ND	560	3300		µg/Kg	10	9/27/2014 02:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-004

Client Sample ID: B17-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/27/2014 02:00 AM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/27/2014 02:00 AM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/27/2014 02:00 AM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/27/2014 02:00 AM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/27/2014 02:00 AM
Bis(2-ethylhexyl)phthalate	ND	800	3300		µg/Kg	10	9/27/2014 02:45 PM
Butylbenzylphthalate	ND	670	3300		µg/Kg	10	9/27/2014 02:45 PM
Chrysene	ND	800	3300		µg/Kg	10	9/27/2014 02:45 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/27/2014 02:00 AM
Di-n-octylphthalate	ND	510	3300		µg/Kg	10	9/27/2014 02:45 PM
Dibenz(a,h)anthracene	ND	930	2000		µg/Kg	10	9/27/2014 02:45 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/27/2014 02:00 AM
Diethylphthalate	ND	44	330		µg/Kg	1	9/27/2014 02:00 AM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/27/2014 02:00 AM
Fluoranthene	ND	61	330		µg/Kg	1	9/27/2014 02:00 AM
Fluorene	ND	45	330		µg/Kg	1	9/27/2014 02:00 AM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/27/2014 02:00 AM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/27/2014 02:00 AM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/27/2014 02:00 AM
Hexachloroethane	ND	42	330		µg/Kg	1	9/27/2014 02:00 AM
Indeno(1,2,3-cd)pyrene	ND	390	3300		µg/Kg	10	9/27/2014 02:45 PM
Isophorone	ND	59	330		µg/Kg	1	9/27/2014 02:00 AM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/27/2014 02:00 AM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/27/2014 02:00 AM
Naphthalene	ND	48	330		µg/Kg	1	9/27/2014 02:00 AM
Nitrobenzene	ND	57	330		µg/Kg	1	9/27/2014 02:00 AM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/27/2014 02:00 AM
Phenanthrene	ND	83	330		µg/Kg	1	9/27/2014 02:00 AM
Phenol	ND	38	330		µg/Kg	1	9/27/2014 02:00 AM
Pyrene	ND	47	330		µg/Kg	1	9/27/2014 02:00 AM
Surr: 1,2-Dichlorobenzene-d4	37.7	0	20-120		%REC	1	9/27/2014 02:00 AM
Surr: 2,4,6-Tribromophenol	55.2	0	31-125		%REC	1	9/27/2014 02:00 AM
Surr: 2-Chlorophenol-d4	51.6	0	29-120		%REC	1	9/27/2014 02:00 AM
Surr: 2-Fluorobiphenyl	48.9	0	35-120		%REC	1	9/27/2014 02:00 AM
Surr: 2-Fluorophenol	50.3	0	27-120		%REC	1	9/27/2014 02:00 AM
Surr: 4-Terphenyl-d14	56.9	0	26-142		%REC	10	9/27/2014 02:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-004

Client Sample ID: B17-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	46.3	0	25-120		%REC	1	9/27/2014 02:00 AM
Surr: Phenol-d5	51.4	0	20-120		%REC	1	9/27/2014 02:00 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	10	2.9	10		mg/Kg	1	9/29/2014 08:07 PM
ORO	15	1.8	10		mg/Kg	1	9/29/2014 08:07 PM
Surr: p-Terphenyl	89.8	0	49-173		%REC	1	9/29/2014 08:07 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	11	0.19	2.0		µg/Kg	1	10/1/2014 06:40 AM
4,4´-DDE	30	0.42	2.0		µg/Kg	1	10/1/2014 06:40 AM
4,4´-DDT	190	2.2	20		µg/Kg	10	10/1/2014 09:39 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:40 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 06:40 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 06:40 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:40 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 06:40 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 06:40 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 06:40 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 06:40 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:40 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 06:40 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 06:40 AM
Endrin aldehyde	3.8	0.20	2.0		µg/Kg	1	10/1/2014 06:40 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 06:40 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 06:40 AM
gamma-Chlordane	2.7	0.19	1.0		µg/Kg	1	10/1/2014 06:40 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 06:40 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 06:40 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 06:40 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 06:40 AM
Surr: Tetrachloro-m-xylene	44.5	0	19-120		%REC	1	10/1/2014 06:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-004

Client Sample ID: B17-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**			PrepDate		**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	45.6	0	22-141		%REC	1	10/1/2014 06:40 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**			PrepDate			Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 04:05 PM
Surr: Chlorobenzene - d5	98.2	0	57-134		%REC	1	9/26/2014 04:05 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**			PrepDate		**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**			PrepDate		**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 05:55 PM
Arsenic	3.0	0.10	1.0		mg/Kg	1	9/25/2014 05:55 PM
Barium	170	0.14	1.0		mg/Kg	1	9/25/2014 05:55 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM
Chromium	19	0.14	1.0		mg/Kg	1	9/25/2014 05:55 PM
Cobalt	7.9	0.14	1.0		mg/Kg	1	9/25/2014 05:55 PM
Copper	15	0.11	2.0		mg/Kg	1	9/25/2014 05:55 PM
Lead	6.2	0.12	1.0		mg/Kg	1	9/25/2014 05:55 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM
Nickel	14	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 05:55 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 05:55 PM
Vanadium	37	0.14	1.0		mg/Kg	1	9/25/2014 05:55 PM
Zinc	38	0.13	1.0		mg/Kg	1	9/25/2014 05:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-005

Client Sample ID: B18-2
Collection Date: 9/24/2014
Matrix: SOIL

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140926B** QC Batch: **46579** PrepDate **9/26/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	64	500		µg/Kg	1.5	9/27/2014 02:27 AM
1,2-Dichlorobenzene	ND	62	500		µg/Kg	1.5	9/27/2014 02:27 AM
1,3-Dichlorobenzene	ND	74	500		µg/Kg	1.5	9/27/2014 02:27 AM
1,4-Dichlorobenzene	ND	63	500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4,5-Trichlorophenol	ND	61	500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4,6-Trichlorophenol	ND	59	500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4-Dichlorophenol	ND	61	2500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4-Dimethylphenol	ND	130	500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4-Dinitrophenol	ND	40	2500		µg/Kg	1.5	9/27/2014 02:27 AM
2,4-Dinitrotoluene	ND	66	500		µg/Kg	1.5	9/27/2014 02:27 AM
2,6-Dinitrotoluene	ND	65	500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Chloronaphthalene	ND	67	500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Chlorophenol	ND	64	500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Methylnaphthalene	ND	250	500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Methylphenol	ND	72	500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Nitroaniline	ND	80	2500		µg/Kg	1.5	9/27/2014 02:27 AM
2-Nitrophenol	ND	67	500		µg/Kg	1.5	9/27/2014 02:27 AM
3,3´-Dichlorobenzidine	ND	370	9900		µg/Kg	15	9/27/2014 03:11 PM
3-Nitroaniline	ND	73	2500		µg/Kg	1.5	9/27/2014 02:27 AM
4,6-Dinitro-2-methylphenol	ND	78	2500		µg/Kg	1.5	9/27/2014 02:27 AM
4-Bromophenyl-phenylether	ND	67	500		µg/Kg	1.5	9/27/2014 02:27 AM
4-Chloro-3-methylphenol	ND	61	990		µg/Kg	1.5	9/27/2014 02:27 AM
4-Chloroaniline	ND	66	990		µg/Kg	1.5	9/27/2014 02:27 AM
4-Chlorophenyl-phenylether	ND	68	500		µg/Kg	1.5	9/27/2014 02:27 AM
4-Methylphenol	ND	54	500		µg/Kg	1.5	9/27/2014 02:27 AM
4-Nitroaniline	ND	69	2500		µg/Kg	1.5	9/27/2014 02:27 AM
4-Nitrophenol	ND	53	2500		µg/Kg	1.5	9/27/2014 02:27 AM
Acenaphthene	ND	61	500		µg/Kg	1.5	9/27/2014 02:27 AM
Acenaphthylene	ND	56	500		µg/Kg	1.5	9/27/2014 02:27 AM
Anthracene	ND	97	500		µg/Kg	1.5	9/27/2014 02:27 AM
Benzidine (M)	ND	6700	25000		µg/Kg	15	9/27/2014 03:11 PM
Benzo(a)anthracene	ND	1100	5000		µg/Kg	15	9/27/2014 03:11 PM
Benzo(a)pyrene	ND	970	3000		µg/Kg	15	9/27/2014 03:11 PM
Benzo(b)fluoranthene	ND	610	5000		µg/Kg	15	9/27/2014 03:11 PM
Benzo(g,h,i)perylene	ND	720	5000		µg/Kg	15	9/27/2014 03:11 PM
Benzo(k)fluoranthene	ND	850	5000		µg/Kg	15	9/27/2014 03:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-005

Client Sample ID: B18-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	170	2500		µg/Kg	1.5	9/27/2014 02:27 AM
Benzyl alcohol	ND	100	990		µg/Kg	1.5	9/27/2014 02:27 AM
Bis(2-chloroethoxy)methane	ND	96	500		µg/Kg	1.5	9/27/2014 02:27 AM
Bis(2-chloroethyl)ether	ND	93	500		µg/Kg	1.5	9/27/2014 02:27 AM
Bis(2-chloroisopropyl)ether	ND	85	500		µg/Kg	1.5	9/27/2014 02:27 AM
Bis(2-ethylhexyl)phthalate	ND	1200	5000		µg/Kg	15	9/27/2014 03:11 PM
Butylbenzylphthalate	ND	1000	5000		µg/Kg	15	9/27/2014 03:11 PM
Chrysene	ND	1200	5000		µg/Kg	15	9/27/2014 03:11 PM
Di-n-butylphthalate	ND	61	500		µg/Kg	1.5	9/27/2014 02:27 AM
Di-n-octylphthalate	ND	770	5000		µg/Kg	15	9/27/2014 03:11 PM
Dibenz(a,h)anthracene	ND	1400	3000		µg/Kg	15	9/27/2014 03:11 PM
Dibenzofuran	ND	60	500		µg/Kg	1.5	9/27/2014 02:27 AM
Diethylphthalate	ND	66	500		µg/Kg	1.5	9/27/2014 02:27 AM
Dimethylphthalate	ND	64	500		µg/Kg	1.5	9/27/2014 02:27 AM
Fluoranthene	ND	92	500		µg/Kg	1.5	9/27/2014 02:27 AM
Fluorene	ND	68	500		µg/Kg	1.5	9/27/2014 02:27 AM
Hexachlorobenzene	ND	71	500		µg/Kg	1.5	9/27/2014 02:27 AM
Hexachlorobutadiene	ND	91	990		µg/Kg	1.5	9/27/2014 02:27 AM
Hexachlorocyclopentadiene	ND	57	990		µg/Kg	1.5	9/27/2014 02:27 AM
Hexachloroethane	ND	63	500		µg/Kg	1.5	9/27/2014 02:27 AM
Indeno(1,2,3-cd)pyrene	ND	590	5000		µg/Kg	15	9/27/2014 03:11 PM
Isophorone	ND	88	500		µg/Kg	1.5	9/27/2014 02:27 AM
N-Nitrosodi-n-propylamine	ND	69	500		µg/Kg	1.5	9/27/2014 02:27 AM
N-Nitrosodiphenylamine	ND	72	500		µg/Kg	1.5	9/27/2014 02:27 AM
Naphthalene	ND	73	500		µg/Kg	1.5	9/27/2014 02:27 AM
Nitrobenzene	ND	85	500		µg/Kg	1.5	9/27/2014 02:27 AM
Pentachlorophenol	ND	52	2500		µg/Kg	1.5	9/27/2014 02:27 AM
Phenanthrene	ND	130	500		µg/Kg	1.5	9/27/2014 02:27 AM
Phenol	ND	57	500		µg/Kg	1.5	9/27/2014 02:27 AM
Pyrene	ND	70	500		µg/Kg	1.5	9/27/2014 02:27 AM
Surr: 1,2-Dichlorobenzene-d4	34.3	0	20-120		%REC	1.5	9/27/2014 02:27 AM
Surr: 2,4,6-Tribromophenol	27.3	0	31-125	S	%REC	1.5	9/27/2014 02:27 AM
Surr: 2-Chlorophenol-d4	48.1	0	29-120		%REC	1.5	9/27/2014 02:27 AM
Surr: 2-Fluorobiphenyl	43.5	0	35-120		%REC	1.5	9/27/2014 02:27 AM
Surr: 2-Fluorophenol	47.2	0	27-120		%REC	1.5	9/27/2014 02:27 AM
Surr: 4-Terphenyl-d14	45.2	0	26-142		%REC	15	9/27/2014 03:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-005

Client Sample ID: B18-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	44.7	0	25-120		%REC	1.5	9/27/2014 02:27 AM
Surr: Phenol-d5	46.6	0	20-120		%REC	1.5	9/27/2014 02:27 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	260	2.9	9.9		mg/Kg	1	9/29/2014 08:32 PM
ORO	650	1.8	9.9		mg/Kg	1	9/29/2014 08:32 PM
Surr: p-Terphenyl	81.9	0	49-173		%REC	1	9/29/2014 08:32 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:32 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 08:32 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 08:32 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:32 AM
alpha-BHC	1.6	0.25	1.0		µg/Kg	1	10/1/2014 08:32 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 08:32 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:32 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 08:32 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 08:32 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:32 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 08:32 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:32 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 08:32 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 08:32 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 08:32 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 08:32 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 08:32 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 08:32 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 08:32 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 08:32 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 08:32 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 08:32 AM
Surr: Tetrachloro-m-xylene	42.2	0	19-120		%REC	1	10/1/2014 08:32 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-005

Client Sample ID: B18-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	57.0	0	22-141		%REC	1	10/1/2014 08:32 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 04:38 PM
Surr: Chlorobenzene - d5	105	0	57-134		%REC	1	9/26/2014 04:38 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0041	0.098		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:01 PM
Arsenic	4.1	0.10	1.0		mg/Kg	1	9/25/2014 06:01 PM
Barium	80	0.14	1.0		mg/Kg	1	9/25/2014 06:01 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM
Chromium	11	0.14	1.0		mg/Kg	1	9/25/2014 06:01 PM
Cobalt	4.0	0.14	1.0		mg/Kg	1	9/25/2014 06:01 PM
Copper	15	0.11	2.0		mg/Kg	1	9/25/2014 06:01 PM
Lead	14	0.12	1.0		mg/Kg	1	9/25/2014 06:01 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM
Nickel	8.5	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:01 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:01 PM
Vanadium	22	0.14	1.0		mg/Kg	1	9/25/2014 06:01 PM
Zinc	45	0.13	1.0		mg/Kg	1	9/25/2014 06:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B18-5
Lab Order:	N013451	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013451-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 07:19 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/26/2014 07:19 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/26/2014 07:19 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 07:19 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/26/2014 07:19 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/26/2014 07:19 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/26/2014 07:19 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/26/2014 07:19 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/26/2014 07:19 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/26/2014 07:19 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/26/2014 07:19 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/26/2014 07:19 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/26/2014 07:19 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/26/2014 07:19 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/26/2014 07:19 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/26/2014 07:19 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/26/2014 07:19 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/26/2014 07:19 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/26/2014 07:19 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/26/2014 07:19 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 07:19 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/26/2014 07:19 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/26/2014 07:19 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 07:19 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/26/2014 07:19 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/26/2014 07:19 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/26/2014 07:19 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/26/2014 07:19 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/26/2014 07:19 PM
Anthracene	ND	64	330		µg/Kg	1	9/26/2014 07:19 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/26/2014 07:19 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/26/2014 07:19 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/26/2014 07:19 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/26/2014 07:19 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/26/2014 07:19 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/26/2014 07:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-006

Client Sample ID: B18-5
Collection Date: 9/24/2014
Matrix: SOIL

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140926B** QC Batch: **46579** PrepDate **9/26/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Benzoic acid	ND	110	1600		µg/Kg	1	9/26/2014 07:19 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/26/2014 07:19 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/26/2014 07:19 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/26/2014 07:19 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/26/2014 07:19 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/26/2014 07:19 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/26/2014 07:19 PM
Chrysene	ND	80	330		µg/Kg	1	9/26/2014 07:19 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/26/2014 07:19 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/26/2014 07:19 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/26/2014 07:19 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/26/2014 07:19 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/26/2014 07:19 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/26/2014 07:19 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/26/2014 07:19 PM
Fluorene	ND	45	330		µg/Kg	1	9/26/2014 07:19 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/26/2014 07:19 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/26/2014 07:19 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/26/2014 07:19 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/26/2014 07:19 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/26/2014 07:19 PM
Isophorone	ND	59	330		µg/Kg	1	9/26/2014 07:19 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/26/2014 07:19 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/26/2014 07:19 PM
Naphthalene	ND	48	330		µg/Kg	1	9/26/2014 07:19 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/26/2014 07:19 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/26/2014 07:19 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/26/2014 07:19 PM
Phenol	ND	38	330		µg/Kg	1	9/26/2014 07:19 PM
Pyrene	ND	47	330		µg/Kg	1	9/26/2014 07:19 PM
Surr: 1,2-Dichlorobenzene-d4	37.8	0	20-120		%REC	1	9/26/2014 07:19 PM
Surr: 2,4,6-Tribromophenol	51.0	0	31-125		%REC	1	9/26/2014 07:19 PM
Surr: 2-Chlorophenol-d4	48.6	0	29-120		%REC	1	9/26/2014 07:19 PM
Surr: 2-Fluorobiphenyl	43.0	0	35-120		%REC	1	9/26/2014 07:19 PM
Surr: 2-Fluorophenol	47.9	0	27-120		%REC	1	9/26/2014 07:19 PM
Surr: 4-Terphenyl-d14	60.6	0	26-142		%REC	1	9/26/2014 07:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-006

Client Sample ID: B18-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	46.1	0	25-120		%REC	1	9/26/2014 07:19 PM
Surr: Phenol-d5	47.1	0	20-120		%REC	1	9/26/2014 07:19 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	ND	2.9	10		mg/Kg	1	9/29/2014 08:58 PM
ORO	ND	1.8	10		mg/Kg	1	9/29/2014 08:58 PM
Surr: p-Terphenyl	90.8	0	49-173		%REC	1	9/29/2014 08:58 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:10 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 02:10 AM
4,4´-DDT	5.9	0.22	2.0		µg/Kg	1	10/1/2014 02:10 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:10 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 02:10 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 02:10 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:10 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 02:10 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 02:10 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:10 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 02:10 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:10 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 02:10 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 02:10 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:10 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:10 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:10 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 02:10 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 02:10 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:10 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 02:10 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 02:10 AM
Surr: Tetrachloro-m-xylene	51.5	0	19-120		%REC	1	10/1/2014 02:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-006

Client Sample ID: B18-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	56.1	0	22-141		%REC	1	10/1/2014 02:10 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 05:11 PM
Surr: Chlorobenzene - d5	111	0	57-134		%REC	1	9/26/2014 05:11 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.099		mg/Kg	1	9/25/2014
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:07 PM
Arsenic	3.2	0.10	1.0		mg/Kg	1	9/25/2014 06:07 PM
Barium	190	0.14	1.0		mg/Kg	1	9/25/2014 06:07 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM
Chromium	19	0.14	1.0		mg/Kg	1	9/25/2014 06:07 PM
Cobalt	8.2	0.14	1.0		mg/Kg	1	9/25/2014 06:07 PM
Copper	16	0.11	2.0		mg/Kg	1	9/25/2014 06:07 PM
Lead	5.0	0.12	1.0		mg/Kg	1	9/25/2014 06:07 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM
Nickel	15	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:07 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:07 PM
Vanadium	32	0.14	1.0		mg/Kg	1	9/25/2014 06:07 PM
Zinc	39	0.13	1.0		mg/Kg	1	9/25/2014 06:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B19-2
Lab Order:	N013451	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013451-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 07:46 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/26/2014 07:46 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/26/2014 07:46 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 07:46 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/26/2014 07:46 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/26/2014 07:46 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/26/2014 07:46 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/26/2014 07:46 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/26/2014 07:46 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/26/2014 07:46 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/26/2014 07:46 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/26/2014 07:46 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/26/2014 07:46 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/26/2014 07:46 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/26/2014 07:46 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/26/2014 07:46 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/26/2014 07:46 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/26/2014 07:46 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/26/2014 07:46 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/26/2014 07:46 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 07:46 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/26/2014 07:46 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/26/2014 07:46 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 07:46 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/26/2014 07:46 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/26/2014 07:46 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/26/2014 07:46 PM
Acenaphthene	ND	40	330		µg/Kg	1	9/26/2014 07:46 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/26/2014 07:46 PM
Anthracene	ND	64	330		µg/Kg	1	9/26/2014 07:46 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/26/2014 07:46 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/26/2014 07:46 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/26/2014 07:46 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/26/2014 07:46 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/26/2014 07:46 PM
Benzo(k)fluoranthene	ND	56	330		µg/Kg	1	9/26/2014 07:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-007

Client Sample ID: B19-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/26/2014 07:46 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/26/2014 07:46 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/26/2014 07:46 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/26/2014 07:46 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/26/2014 07:46 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/26/2014 07:46 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/26/2014 07:46 PM
Chrysene	ND	80	330		µg/Kg	1	9/26/2014 07:46 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/26/2014 07:46 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/26/2014 07:46 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/26/2014 07:46 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/26/2014 07:46 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/26/2014 07:46 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/26/2014 07:46 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/26/2014 07:46 PM
Fluorene	ND	45	330		µg/Kg	1	9/26/2014 07:46 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/26/2014 07:46 PM
Hexachlorobutadiene	ND	60	660		µg/Kg	1	9/26/2014 07:46 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/26/2014 07:46 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/26/2014 07:46 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/26/2014 07:46 PM
Isophorone	ND	59	330		µg/Kg	1	9/26/2014 07:46 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/26/2014 07:46 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/26/2014 07:46 PM
Naphthalene	ND	48	330		µg/Kg	1	9/26/2014 07:46 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/26/2014 07:46 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/26/2014 07:46 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/26/2014 07:46 PM
Phenol	ND	38	330		µg/Kg	1	9/26/2014 07:46 PM
Pyrene	ND	47	330		µg/Kg	1	9/26/2014 07:46 PM
Surr: 1,2-Dichlorobenzene-d4	38.2	0	20-120		%REC	1	9/26/2014 07:46 PM
Surr: 2,4,6-Tribromophenol	51.5	0	31-125		%REC	1	9/26/2014 07:46 PM
Surr: 2-Chlorophenol-d4	50.4	0	29-120		%REC	1	9/26/2014 07:46 PM
Surr: 2-Fluorobiphenyl	46.2	0	35-120		%REC	1	9/26/2014 07:46 PM
Surr: 2-Fluorophenol	49.7	0	27-120		%REC	1	9/26/2014 07:46 PM
Surr: 4-Terphenyl-d14	64.4	0	26-142		%REC	1	9/26/2014 07:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-007

Client Sample ID: B19-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	46.1	0	25-120		%REC	1	9/26/2014 07:46 PM
Surr: Phenol-d5	48.8	0	20-120		%REC	1	9/26/2014 07:46 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	ND	2.9	10		mg/Kg	1	9/29/2014 09:24 PM
ORO	ND	1.8	10		mg/Kg	1	9/29/2014 09:24 PM
Surr: p-Terphenyl	89.0	0	49-173		%REC	1	9/29/2014 09:24 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:32 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 02:32 AM
4,4´-DDT	ND	0.22	2.0		µg/Kg	1	10/1/2014 02:32 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:32 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 02:32 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 02:32 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:32 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 02:32 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 02:32 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:32 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 02:32 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:32 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 02:32 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 02:32 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:32 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:32 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:32 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 02:32 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 02:32 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:32 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 02:32 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 02:32 AM
Surr: Tetrachloro-m-xylene	53.9	0	19-120		%REC	1	10/1/2014 02:32 AM

Qualifiers:

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S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-007

Client Sample ID: B19-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	55.5	0	22-141		%REC	1	10/1/2014 02:32 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 05:44 PM
Surr: Chlorobenzene - d5	114	0	57-134		%REC	1	9/26/2014 05:44 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:13 PM
Arsenic	2.9	0.10	1.0		mg/Kg	1	9/25/2014 06:13 PM
Barium	220	0.14	1.0		mg/Kg	1	9/25/2014 06:13 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/25/2014 06:13 PM
Cobalt	7.8	0.14	1.0		mg/Kg	1	9/25/2014 06:13 PM
Copper	14	0.11	2.0		mg/Kg	1	9/25/2014 06:13 PM
Lead	4.8	0.12	1.0		mg/Kg	1	9/25/2014 06:13 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM
Nickel	14	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:13 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:13 PM
Vanadium	35	0.14	1.0		mg/Kg	1	9/25/2014 06:13 PM
Zinc	36	0.13	1.0		mg/Kg	1	9/25/2014 06:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B19-5
Lab Order:	N013451	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013451-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	9/26/2014 08:13 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/26/2014 08:13 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/26/2014 08:13 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 08:13 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/26/2014 08:13 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/26/2014 08:13 PM
2,4-Dichlorophenol	ND	40	1700		µg/Kg	1	9/26/2014 08:13 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/26/2014 08:13 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	9/26/2014 08:13 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/26/2014 08:13 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/26/2014 08:13 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/26/2014 08:13 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/26/2014 08:13 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/26/2014 08:13 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/26/2014 08:13 PM
2-Nitroaniline	ND	53	1700		µg/Kg	1	9/26/2014 08:13 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/26/2014 08:13 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/26/2014 08:13 PM
3-Nitroaniline	ND	48	1700		µg/Kg	1	9/26/2014 08:13 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	9/26/2014 08:13 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 08:13 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/26/2014 08:13 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/26/2014 08:13 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 08:13 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/26/2014 08:13 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	9/26/2014 08:13 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	9/26/2014 08:13 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/26/2014 08:13 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/26/2014 08:13 PM
Anthracene	ND	64	330		µg/Kg	1	9/26/2014 08:13 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	9/26/2014 08:13 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/26/2014 08:13 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/26/2014 08:13 PM
Benzo(b)fluoranthene	ND	41	330		µg/Kg	1	9/26/2014 08:13 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/26/2014 08:13 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/26/2014 08:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-008

Client Sample ID: B19-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	9/26/2014 08:13 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/26/2014 08:13 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/26/2014 08:13 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/26/2014 08:13 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/26/2014 08:13 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/26/2014 08:13 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/26/2014 08:13 PM
Chrysene	ND	80	330		µg/Kg	1	9/26/2014 08:13 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/26/2014 08:13 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/26/2014 08:13 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/26/2014 08:13 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/26/2014 08:13 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/26/2014 08:13 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/26/2014 08:13 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/26/2014 08:13 PM
Fluorene	ND	45	330		µg/Kg	1	9/26/2014 08:13 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/26/2014 08:13 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/26/2014 08:13 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/26/2014 08:13 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/26/2014 08:13 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/26/2014 08:13 PM
Isophorone	ND	59	330		µg/Kg	1	9/26/2014 08:13 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/26/2014 08:13 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/26/2014 08:13 PM
Naphthalene	ND	48	330		µg/Kg	1	9/26/2014 08:13 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/26/2014 08:13 PM
Pentachlorophenol	ND	34	1700		µg/Kg	1	9/26/2014 08:13 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/26/2014 08:13 PM
Phenol	ND	38	330		µg/Kg	1	9/26/2014 08:13 PM
Pyrene	ND	47	330		µg/Kg	1	9/26/2014 08:13 PM
Surr: 1,2-Dichlorobenzene-d4	53.0	0	20-120		%REC	1	9/26/2014 08:13 PM
Surr: 2,4,6-Tribromophenol	66.0	0	31-125		%REC	1	9/26/2014 08:13 PM
Surr: 2-Chlorophenol-d4	58.9	0	29-120		%REC	1	9/26/2014 08:13 PM
Surr: 2-Fluorobiphenyl	56.4	0	35-120		%REC	1	9/26/2014 08:13 PM
Surr: 2-Fluorophenol	58.9	0	27-120		%REC	1	9/26/2014 08:13 PM
Surr: 4-Terphenyl-d14	83.8	0	26-142		%REC	1	9/26/2014 08:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-008

Client Sample ID: B19-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	56.0	0	25-120		%REC	1	9/26/2014 08:13 PM
Surr: Phenol-d5	56.9	0	20-120		%REC	1	9/26/2014 08:13 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	ND	2.9	9.9		mg/Kg	1	9/29/2014 09:49 PM
ORO	ND	1.8	9.9		mg/Kg	1	9/29/2014 09:49 PM
Surr: p-Terphenyl	85.3	0	49-173		%REC	1	9/29/2014 09:49 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:55 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 02:55 AM
4,4´-DDT	2.9	0.22	2.0		µg/Kg	1	10/1/2014 02:55 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:55 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 02:55 AM
alpha-Chlordane	ND	0.11	1.0		µg/Kg	1	10/1/2014 02:55 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:55 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 02:55 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 02:55 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:55 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 02:55 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:55 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 02:55 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 02:55 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 02:55 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 02:55 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 02:55 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 02:55 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 02:55 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 02:55 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 02:55 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 02:55 AM
Surr: Tetrachloro-m-xylene	54.6	0	19-120		%REC	1	10/1/2014 02:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-008

Client Sample ID: B19-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3550B		**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	56.4	0	22-141		%REC	1	10/1/2014 02:55 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 01:21 PM
Surr: Chlorobenzene - d5	96.7	0	57-134		%REC	1	9/26/2014 01:21 PM
MERCURY BY COLD VAPOR TECHNIQUE							
	EPA 7471		**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
	EPA 3050B		**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:19 PM
Arsenic	4.4	0.10	1.0		mg/Kg	1	9/25/2014 06:19 PM
Barium	96	0.14	1.0		mg/Kg	1	9/25/2014 06:19 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM
Chromium	20	0.14	1.0		mg/Kg	1	9/25/2014 06:19 PM
Cobalt	8.4	0.14	1.0		mg/Kg	1	9/25/2014 06:19 PM
Copper	19	0.11	2.0		mg/Kg	1	9/25/2014 06:19 PM
Lead	4.9	0.12	1.0		mg/Kg	1	9/25/2014 06:19 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM
Nickel	15	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:19 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:19 PM
Vanadium	41	0.14	1.0		mg/Kg	1	9/25/2014 06:19 PM
Zinc	45	0.13	1.0		mg/Kg	1	9/25/2014 06:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-2
Lab Order:	N013451	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013451-009		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS3_140926B** QC Batch: **46579** PrepDate **9/26/2014** Analyst: **MDM**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 08:40 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/26/2014 08:40 PM
1,3-Dichlorobenzene	ND	49	330		µg/Kg	1	9/26/2014 08:40 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 08:40 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/26/2014 08:40 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/26/2014 08:40 PM
2,4-Dichlorophenol	ND	40	1600		µg/Kg	1	9/26/2014 08:40 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/26/2014 08:40 PM
2,4-Dinitrophenol	ND	27	1600		µg/Kg	1	9/26/2014 08:40 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/26/2014 08:40 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/26/2014 08:40 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/26/2014 08:40 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/26/2014 08:40 PM
2-Methylnaphthalene	ND	160	330		µg/Kg	1	9/26/2014 08:40 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/26/2014 08:40 PM
2-Nitroaniline	ND	53	1600		µg/Kg	1	9/26/2014 08:40 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/26/2014 08:40 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/26/2014 08:40 PM
3-Nitroaniline	ND	48	1600		µg/Kg	1	9/26/2014 08:40 PM
4,6-Dinitro-2-methylphenol	ND	52	1600		µg/Kg	1	9/26/2014 08:40 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 08:40 PM
4-Chloro-3-methylphenol	ND	40	660		µg/Kg	1	9/26/2014 08:40 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/26/2014 08:40 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 08:40 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/26/2014 08:40 PM
4-Nitroaniline	ND	46	1600		µg/Kg	1	9/26/2014 08:40 PM
4-Nitrophenol	ND	35	1600		µg/Kg	1	9/26/2014 08:40 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/26/2014 08:40 PM
Acenaphthylene	ND	37	330		µg/Kg	1	9/26/2014 08:40 PM
Anthracene	ND	64	330		µg/Kg	1	9/26/2014 08:40 PM
Benzidine (M)	ND	450	1600		µg/Kg	1	9/26/2014 08:40 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/26/2014 08:40 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/26/2014 08:40 PM
Benzo(b)fluoranthene	ND	40	330		µg/Kg	1	9/26/2014 08:40 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/26/2014 08:40 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/26/2014 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT:	Sharp Environmental Technologies	**Client Sample ID:**	B20-2
Lab Order:	N013451	**Collection Date:**	9/24/2014
Project:	ECI	**Matrix:**	SOIL
Lab ID:	N013451-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Benzoic acid	ND	110	1600		µg/Kg	1	9/26/2014 08:40 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/26/2014 08:40 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/26/2014 08:40 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/26/2014 08:40 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/26/2014 08:40 PM
Bis(2-ethylhexyl)phthalate	ND	80	330		µg/Kg	1	9/26/2014 08:40 PM
Butylbenzylphthalate	ND	67	330		µg/Kg	1	9/26/2014 08:40 PM
Chrysene	ND	80	330		µg/Kg	1	9/26/2014 08:40 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/26/2014 08:40 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/26/2014 08:40 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/26/2014 08:40 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/26/2014 08:40 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/26/2014 08:40 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/26/2014 08:40 PM
Fluoranthene	ND	61	330		µg/Kg	1	9/26/2014 08:40 PM
Fluorene	ND	45	330		µg/Kg	1	9/26/2014 08:40 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/26/2014 08:40 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/26/2014 08:40 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/26/2014 08:40 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/26/2014 08:40 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/26/2014 08:40 PM
Isophorone	ND	59	330		µg/Kg	1	9/26/2014 08:40 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/26/2014 08:40 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/26/2014 08:40 PM
Naphthalene	ND	48	330		µg/Kg	1	9/26/2014 08:40 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/26/2014 08:40 PM
Pentachlorophenol	ND	34	1600		µg/Kg	1	9/26/2014 08:40 PM
Phenanthrene	ND	83	330		µg/Kg	1	9/26/2014 08:40 PM
Phenol	ND	38	330		µg/Kg	1	9/26/2014 08:40 PM
Pyrene	ND	47	330		µg/Kg	1	9/26/2014 08:40 PM
Surr: 1,2-Dichlorobenzene-d4	39.6	0	20-120		%REC	1	9/26/2014 08:40 PM
Surr: 2,4,6-Tribromophenol	46.7	0	31-125		%REC	1	9/26/2014 08:40 PM
Surr: 2-Chlorophenol-d4	41.6	0	29-120		%REC	1	9/26/2014 08:40 PM
Surr: 2-Fluorobiphenyl	40.8	0	35-120		%REC	1	9/26/2014 08:40 PM
Surr: 2-Fluorophenol	43.6	0	27-120		%REC	1	9/26/2014 08:40 PM
Surr: 4-Terphenyl-d14	54.2	0	26-142		%REC	1	9/26/2014 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-009

Client Sample ID: B20-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	41.2	0	25-120		%REC	1	9/26/2014 08:40 PM
Surr: Phenol-d5	39.1	0	20-120		%REC	1	9/26/2014 08:40 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	ND	2.9	9.9		mg/Kg	1	9/29/2014 10:15 PM
ORO	ND	1.8	9.9		mg/Kg	1	9/29/2014 10:15 PM
Surr: p-Terphenyl	85.1	0	49-173		%REC	1	9/29/2014 10:15 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	6.9	0.19	2.0		µg/Kg	1	10/1/2014 03:17 AM
4,4´-DDE	20	0.42	2.0		µg/Kg	1	10/1/2014 03:17 AM
4,4´-DDT	110	2.2	20		µg/Kg	10	10/1/2014 09:16 PM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:17 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 03:17 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 03:17 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:17 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 03:17 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 03:17 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:17 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 03:17 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:17 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 03:17 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 03:17 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:17 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:17 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:17 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 03:17 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 03:17 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:17 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 03:17 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 03:17 AM
Surr: Tetrachloro-m-xylene	52.9	0	19-120		%REC	1	10/1/2014 03:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-009

Client Sample ID: B20-2
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	54.3	0	22-141		%REC	1	10/1/2014 03:17 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 01:54 PM
Surr: Chlorobenzene - d5	102	0	57-134		%REC	1	9/26/2014 01:54 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:25 PM
Arsenic	3.0	0.10	1.0		mg/Kg	1	9/25/2014 06:25 PM
Barium	220	0.14	1.0		mg/Kg	1	9/25/2014 06:25 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/25/2014 06:25 PM
Cobalt	8.6	0.14	1.0		mg/Kg	1	9/25/2014 06:25 PM
Copper	17	0.11	2.0		mg/Kg	1	9/25/2014 06:25 PM
Lead	5.3	0.12	1.0		mg/Kg	1	9/25/2014 06:25 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM
Nickel	15	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:25 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:25 PM
Vanadium	35	0.14	1.0		mg/Kg	1	9/25/2014 06:25 PM
Zinc	40	0.13	1.0		mg/Kg	1	9/25/2014 06:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-010

Client Sample ID: B20-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
1,2,4-Trichlorobenzene	ND	43	330		µg/Kg	1	9/26/2014 09:07 PM
1,2-Dichlorobenzene	ND	41	330		µg/Kg	1	9/26/2014 09:07 PM
1,3-Dichlorobenzene	ND	50	330		µg/Kg	1	9/26/2014 09:07 PM
1,4-Dichlorobenzene	ND	42	330		µg/Kg	1	9/26/2014 09:07 PM
2,4,5-Trichlorophenol	ND	41	330		µg/Kg	1	9/26/2014 09:07 PM
2,4,6-Trichlorophenol	ND	39	330		µg/Kg	1	9/26/2014 09:07 PM
2,4-Dichlorophenol	ND	41	1700		µg/Kg	1	9/26/2014 09:07 PM
2,4-Dimethylphenol	ND	90	330		µg/Kg	1	9/26/2014 09:07 PM
2,4-Dinitrophenol	ND	27	1700		µg/Kg	1	9/26/2014 09:07 PM
2,4-Dinitrotoluene	ND	44	330		µg/Kg	1	9/26/2014 09:07 PM
2,6-Dinitrotoluene	ND	43	330		µg/Kg	1	9/26/2014 09:07 PM
2-Chloronaphthalene	ND	45	330		µg/Kg	1	9/26/2014 09:07 PM
2-Chlorophenol	ND	43	330		µg/Kg	1	9/26/2014 09:07 PM
2-Methylnaphthalene	ND	170	330		µg/Kg	1	9/26/2014 09:07 PM
2-Methylphenol	ND	48	330		µg/Kg	1	9/26/2014 09:07 PM
2-Nitroaniline	ND	54	1700		µg/Kg	1	9/26/2014 09:07 PM
2-Nitrophenol	ND	45	330		µg/Kg	1	9/26/2014 09:07 PM
3,3´-Dichlorobenzidine	ND	24	660		µg/Kg	1	9/26/2014 09:07 PM
3-Nitroaniline	ND	49	1700		µg/Kg	1	9/26/2014 09:07 PM
4,6-Dinitro-2-methylphenol	ND	52	1700		µg/Kg	1	9/26/2014 09:07 PM
4-Bromophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 09:07 PM
4-Chloro-3-methylphenol	ND	41	660		µg/Kg	1	9/26/2014 09:07 PM
4-Chloroaniline	ND	44	660		µg/Kg	1	9/26/2014 09:07 PM
4-Chlorophenyl-phenylether	ND	45	330		µg/Kg	1	9/26/2014 09:07 PM
4-Methylphenol	ND	36	330		µg/Kg	1	9/26/2014 09:07 PM
4-Nitroaniline	ND	46	1700		µg/Kg	1	9/26/2014 09:07 PM
4-Nitrophenol	ND	35	1700		µg/Kg	1	9/26/2014 09:07 PM
Acenaphthene	ND	41	330		µg/Kg	1	9/26/2014 09:07 PM
Acenaphthylene	ND	38	330		µg/Kg	1	9/26/2014 09:07 PM
Anthracene	ND	64	330		µg/Kg	1	9/26/2014 09:07 PM
Benzidine (M)	ND	450	1700		µg/Kg	1	9/26/2014 09:07 PM
Benzo(a)anthracene	ND	75	330		µg/Kg	1	9/26/2014 09:07 PM
Benzo(a)pyrene	ND	64	200		µg/Kg	1	9/26/2014 09:07 PM
Benzo(b)fluoranthene	ND	41	330		µg/Kg	1	9/26/2014 09:07 PM
Benzo(g,h,i)perylene	ND	48	330		µg/Kg	1	9/26/2014 09:07 PM
Benzo(k)fluoranthene	ND	57	330		µg/Kg	1	9/26/2014 09:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-010

Client Sample ID: B20-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**			PrepDate	**9/26/2014**		Analyst: **MDM**
Benzoic acid	ND	120	1700		µg/Kg	1	9/26/2014 09:07 PM
Benzyl alcohol	ND	68	660		µg/Kg	1	9/26/2014 09:07 PM
Bis(2-chloroethoxy)methane	ND	64	330		µg/Kg	1	9/26/2014 09:07 PM
Bis(2-chloroethyl)ether	ND	62	330		µg/Kg	1	9/26/2014 09:07 PM
Bis(2-chloroisopropyl)ether	ND	57	330		µg/Kg	1	9/26/2014 09:07 PM
Bis(2-ethylhexyl)phthalate	ND	81	330		µg/Kg	1	9/26/2014 09:07 PM
Butylbenzylphthalate	ND	68	330		µg/Kg	1	9/26/2014 09:07 PM
Chrysene	ND	80	330		µg/Kg	1	9/26/2014 09:07 PM
Di-n-butylphthalate	ND	41	330		µg/Kg	1	9/26/2014 09:07 PM
Di-n-octylphthalate	ND	51	330		µg/Kg	1	9/26/2014 09:07 PM
Dibenz(a,h)anthracene	ND	93	200		µg/Kg	1	9/26/2014 09:07 PM
Dibenzofuran	ND	40	330		µg/Kg	1	9/26/2014 09:07 PM
Diethylphthalate	ND	44	330		µg/Kg	1	9/26/2014 09:07 PM
Dimethylphthalate	ND	43	330		µg/Kg	1	9/26/2014 09:07 PM
Fluoranthene	ND	62	330		µg/Kg	1	9/26/2014 09:07 PM
Fluorene	ND	45	330		µg/Kg	1	9/26/2014 09:07 PM
Hexachlorobenzene	ND	47	330		µg/Kg	1	9/26/2014 09:07 PM
Hexachlorobutadiene	ND	61	660		µg/Kg	1	9/26/2014 09:07 PM
Hexachlorocyclopentadiene	ND	38	660		µg/Kg	1	9/26/2014 09:07 PM
Hexachloroethane	ND	42	330		µg/Kg	1	9/26/2014 09:07 PM
Indeno(1,2,3-cd)pyrene	ND	39	330		µg/Kg	1	9/26/2014 09:07 PM
Isophorone	ND	59	330		µg/Kg	1	9/26/2014 09:07 PM
N-Nitrosodi-n-propylamine	ND	46	330		µg/Kg	1	9/26/2014 09:07 PM
N-Nitrosodiphenylamine	ND	48	330		µg/Kg	1	9/26/2014 09:07 PM
Naphthalene	ND	49	330		µg/Kg	1	9/26/2014 09:07 PM
Nitrobenzene	ND	57	330		µg/Kg	1	9/26/2014 09:07 PM
Pentachlorophenol	ND	35	1700		µg/Kg	1	9/26/2014 09:07 PM
Phenanthrene	ND	84	330		µg/Kg	1	9/26/2014 09:07 PM
Phenol	ND	38	330		µg/Kg	1	9/26/2014 09:07 PM
Pyrene	ND	47	330		µg/Kg	1	9/26/2014 09:07 PM
Surr: 1,2-Dichlorobenzene-d4	36.4	0	20-120		%REC	1	9/26/2014 09:07 PM
Surr: 2,4,6-Tribromophenol	46.4	0	31-125		%REC	1	9/26/2014 09:07 PM
Surr: 2-Chlorophenol-d4	43.2	0	29-120		%REC	1	9/26/2014 09:07 PM
Surr: 2-Fluorobiphenyl	38.7	0	35-120		%REC	1	9/26/2014 09:07 PM
Surr: 2-Fluorophenol	43.6	0	27-120		%REC	1	9/26/2014 09:07 PM
Surr: 4-Terphenyl-d14	56.4	0	26-142		%REC	1	9/26/2014 09:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-010

Client Sample ID: B20-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS3_140926B**	QC Batch: **46579**				PrepDate	**9/26/2014**	Analyst: **MDM**
Surr: Nitrobenzene-d5	40.9	0	25-120		%REC	1	9/26/2014 09:07 PM
Surr: Phenol-d5	43.0	0	20-120		%REC	1	9/26/2014 09:07 PM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3550B			**EPA 8015B**				
RunID: **GC1_140929A**	QC Batch: **46596**				PrepDate	**9/29/2014**	Analyst: **MDM**
DRO	ND	2.9	10		mg/Kg	1	9/29/2014 10:41 PM
ORO	ND	1.8	10		mg/Kg	1	9/29/2014 10:41 PM
Surr: p-Terphenyl	84.6	0	49-173		%REC	1	9/29/2014 10:41 PM
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
4,4´-DDD	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:40 AM
4,4´-DDE	ND	0.42	2.0		µg/Kg	1	10/1/2014 03:40 AM
4,4´-DDT	2.4	0.22	2.0		µg/Kg	1	10/1/2014 03:40 AM
Aldrin	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:40 AM
alpha-BHC	ND	0.25	1.0		µg/Kg	1	10/1/2014 03:40 AM
alpha-Chlordane	ND	0.10	1.0		µg/Kg	1	10/1/2014 03:40 AM
beta-BHC	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:40 AM
Chlordane	ND	1.4	8.5		µg/Kg	1	10/1/2014 03:40 AM
delta-BHC	ND	0.36	1.0		µg/Kg	1	10/1/2014 03:40 AM
Dieldrin	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:40 AM
Endosulfan I	ND	0.17	1.0		µg/Kg	1	10/1/2014 03:40 AM
Endosulfan II	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:40 AM
Endosulfan sulfate	ND	0.43	2.0		µg/Kg	1	10/1/2014 03:40 AM
Endrin	ND	0.31	2.0		µg/Kg	1	10/1/2014 03:40 AM
Endrin aldehyde	ND	0.20	2.0		µg/Kg	1	10/1/2014 03:40 AM
Endrin ketone	ND	0.19	2.0		µg/Kg	1	10/1/2014 03:40 AM
gamma-BHC	ND	0.13	1.0		µg/Kg	1	10/1/2014 03:40 AM
gamma-Chlordane	ND	0.19	1.0		µg/Kg	1	10/1/2014 03:40 AM
Heptachlor	ND	0.14	1.0		µg/Kg	1	10/1/2014 03:40 AM
Heptachlor epoxide	ND	0.12	1.0		µg/Kg	1	10/1/2014 03:40 AM
Methoxychlor	ND	1.2	8.5		µg/Kg	1	10/1/2014 03:40 AM
Toxaphene	ND	5.3	85		µg/Kg	1	10/1/2014 03:40 AM
Surr: Tetrachloro-m-xylene	54.8	0	19-120		%REC	1	10/1/2014 03:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *02-Oct-14*

CLIENT: Sharp Environmental Technologies
Lab Order: N013451
Project: ECI
Lab ID: N013451-010

Client Sample ID: B20-5
Collection Date: 9/24/2014
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3550B			**EPA 8081A**				
RunID: **GC7_140930A**	QC Batch: **46595**				PrepDate	**9/29/2014**	Analyst: **MDM**
Surr: Decachlorobiphenyl	56.7	0	22-141		%REC	1	10/1/2014 03:40 AM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_140926A**	QC Batch: **E14VS093**				PrepDate		Analyst: **QBM**
GRO	ND	0.011	1.0		mg/Kg	1	9/26/2014 02:26 PM
Surr: Chlorobenzene - d5	112	0	57-134		%REC	1	9/26/2014 02:26 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7471			**EPA 7471A**				
RunID: **AA1_140925A**	QC Batch: **46569**				PrepDate	**9/25/2014**	Analyst: **CEI**
Mercury	ND	0.0042	0.10		mg/Kg	1	9/25/2014
ICP METALS							
EPA 3050B			**EPA 6010B**				
RunID: **ICP2_140925C**	QC Batch: **46567**				PrepDate	**9/24/2014**	Analyst: **CEI**
Antimony	ND	0.21	2.0		mg/Kg	1	9/25/2014 06:41 PM
Arsenic	4.4	0.10	1.0		mg/Kg	1	9/25/2014 06:41 PM
Barium	130	0.14	1.0		mg/Kg	1	9/25/2014 06:41 PM
Beryllium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM
Cadmium	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM
Chromium	18	0.14	1.0		mg/Kg	1	9/25/2014 06:41 PM
Cobalt	7.0	0.14	1.0		mg/Kg	1	9/25/2014 06:41 PM
Copper	18	0.11	2.0		mg/Kg	1	9/25/2014 06:41 PM
Lead	4.3	0.12	1.0		mg/Kg	1	9/25/2014 06:41 PM
Molybdenum	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM
Nickel	14	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM
Selenium	ND	0.17	1.0		mg/Kg	1	9/25/2014 06:41 PM
Silver	ND	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM
Thallium	ND	0.16	1.0		mg/Kg	1	9/25/2014 06:41 PM
Vanadium	40	0.14	1.0		mg/Kg	1	9/25/2014 06:41 PM
Zinc	46	0.13	1.0		mg/Kg	1	9/25/2014 06:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **MB-46567** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/24/2014** RunNo: **95031**
Client ID: **PBS** Batch ID: **46567** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/25/2014** SeqNo: **1840895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.316	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.232	1.0									

Sample ID **LCS-46567** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/24/2014** RunNo: **95031**
Client ID: **LCSS** Batch ID: **46567** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/25/2014** SeqNo: **1840896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	23.332	2.0	25.00	0	93.3	80	120				
Arsenic	23.034	1.0	25.00	0	92.1	80	120				
Barium	24.256	1.0	25.00	0	97.0	80	120				
Beryllium	23.174	1.0	25.00	0	92.7	80	120				
Cadmium	23.349	1.0	25.00	0	93.4	80	120				
Chromium	23.592	1.0	25.00	0	94.4	80	120				
Cobalt	22.871	1.0	25.00	0	91.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **LCS-46567** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/24/2014** RunNo: **95031**
Client ID: **LCSS** Batch ID: **46567** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/25/2014** SeqNo: **1840896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	24.719	2.0	25.00	0	98.9	80	120				
Lead	24.005	1.0	25.00	0	96.0	80	120				
Molybdenum	24.363	1.0	25.00	0	97.5	80	120				
Nickel	22.802	1.0	25.00	0	91.2	80	120				
Selenium	21.744	1.0	25.00	0	87.0	80	120				
Silver	24.179	1.0	25.00	0	96.7	80	120				
Thallium	24.362	1.0	25.00	0	97.4	80	120				
Vanadium	23.783	1.0	25.00	0	95.1	80	120				
Zinc	23.080	1.0	25.00	0	92.3	80	120				

Sample ID **N013447-001E-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/24/2014** RunNo: **95031**
Client ID: **ZZZZZZ** Batch ID: **46567** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/25/2014** SeqNo: **1840900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	18.503	2.0	24.99	0	74.0	75	125				S
Arsenic	22.677	1.0	24.99	1.882	83.2	75	125				
Barium	47.514	1.0	24.99	29.25	73.1	75	125				S
Beryllium	21.084	1.0	24.99	0.1630	83.7	75	125				
Cadmium	20.363	1.0	24.99	0	81.5	75	125				
Chromium	28.926	1.0	24.99	8.102	83.3	75	125				
Cobalt	22.988	1.0	24.99	2.500	82.0	75	125				
Copper	27.537	2.0	24.99	5.756	87.2	75	125				
Lead	25.402	1.0	24.99	4.300	84.5	75	125				
Molybdenum	21.344	1.0	24.99	0	85.4	75	125				
Nickel	25.079	1.0	24.99	4.442	82.6	75	125				
Selenium	19.658	1.0	24.99	0	78.7	75	125				
Silver	20.142	1.0	24.99	0	80.6	75	125				
Thallium	19.794	1.0	24.99	0	79.2	75	125				
Vanadium	36.462	1.0	24.99	13.68	91.2	75	125				
Zinc	41.142	1.0	24.99	20.66	82.0	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID **N013447-001E-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/24/2014** RunNo: **95031**
Client ID: **ZZZZZZ** Batch ID: **46567** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/25/2014** SeqNo: **1840901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	18.842	2.0	24.93	0	75.6	75	125	18.50	1.82	20	
Arsenic	23.245	1.0	24.93	1.882	85.7	75	125	22.68	2.48	20	
Barium	47.764	1.0	24.93	29.25	74.3	75	125	47.51	0.524	20	S
Beryllium	20.722	1.0	24.93	0.1630	82.5	75	125	21.08	1.73	20	
Cadmium	20.452	1.0	24.93	0	82.1	75	125	20.36	0.441	20	
Chromium	29.054	1.0	24.93	8.102	84.1	75	125	28.93	0.441	20	
Cobalt	23.299	1.0	24.93	2.500	83.4	75	125	22.99	1.34	20	
Copper	27.620	2.0	24.93	5.756	87.7	75	125	27.54	0.301	20	
Lead	25.783	1.0	24.93	4.300	86.2	75	125	25.40	1.49	20	
Molybdenum	21.627	1.0	24.93	0	86.8	75	125	21.34	1.32	20	
Nickel	25.518	1.0	24.93	4.442	84.6	75	125	25.08	1.74	20	
Selenium	20.128	1.0	24.93	0	80.8	75	125	19.66	2.36	20	
Silver	20.214	1.0	24.93	0	81.1	75	125	20.14	0.353	20	
Thallium	20.050	1.0	24.93	0	80.4	75	125	19.79	1.29	20	
Vanadium	36.599	1.0	24.93	13.68	91.9	75	125	36.46	0.376	20	
Zinc	41.290	1.0	24.93	20.66	82.8	75	125	41.14	0.359	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID	LCS-46569	SampType:	LCS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/25/2014	RunNo:	95054
Client ID:	LCSS	Batch ID:	46569	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	9/25/2014	SeqNo:	1841627

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.399	0.10	0.4167	0	95.7	80	120				

Sample ID	MB-46569	SampType:	MBLK	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/25/2014	RunNo:	95054
Client ID:	PBS	Batch ID:	46569	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	9/25/2014	SeqNo:	1841628

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID	N013447-001E-MS	SampType:	MS	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/25/2014	RunNo:	95054
Client ID:	ZZZZZZ	Batch ID:	46569	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	9/25/2014	SeqNo:	1841634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.406	0.10	0.4202	0.01039	94.1	75	125				

Sample ID	N013447-001E-MSD	SampType:	MSD	TestCode:	7471_S	Units:	mg/Kg	Prep Date:	9/25/2014	RunNo:	95054
Client ID:	ZZZZZZ	Batch ID:	46569	TestNo:	EPA 7471A	EPA 7471		Analysis Date:	9/25/2014	SeqNo:	1841635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.398	0.099	0.4126	0.01039	94.0	75	125	0.4059	1.96	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM H

Sample ID **LCS-46596** SampType: **LCS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95060**
Client ID: **LCSS** Batch ID: **46596** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/29/2014** SeqNo: **1841846**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	861.999	10	1000	0	86.2	67	120				
Surr: p-Terphenyl	72.255		80.00		90.3	49	173				

Sample ID **MB-46596** SampType: **MBLK** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95060**
Client ID: **PBS** Batch ID: **46596** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/29/2014** SeqNo: **1841847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	4.840	10									
ORO	2.712	10									
Surr: p-Terphenyl	68.089		80.00		85.1	49	173				

Sample ID **N013460-006A-MS** SampType: **MS** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95060**
Client ID: **ZZZZZZ** Batch ID: **46596** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1841900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	944.437	10	995.0	19.92	92.9	47	187				
Surr: p-Terphenyl	79.834		79.60		100	49	173				

Sample ID **N013460-006A-MSD** SampType: **MSD** TestCode: **8015_S_DM** Units: **mg/Kg** Prep Date: **9/29/2014** RunNo: **95060**
Client ID: **ZZZZZZ** Batch ID: **46596** TestNo: **EPA 8015B** **EPA 3550B** Analysis Date: **9/30/2014** SeqNo: **1841901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	858.634	10	1002	19.92	83.7	47	187	944.4	9.52	20	
Surr: p-Terphenyl	88.000		80.16		110	49	173		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID **E140925LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95043**
Client ID: **LCSS** Batch ID: **E14VS092** TestNo: **EPA 8015B** Analysis Date: **9/25/2014** SeqNo: **1841180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.538	1.0	5.000	0	90.8	76	130				
Surr: Chlorobenzene - d5	88.620		100.0		88.6	57	134				

Sample ID **E140925MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95043**
Client ID: **PBS** Batch ID: **E14VS092** TestNo: **EPA 8015B** Analysis Date: **9/25/2014** SeqNo: **1841181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.041	1.0									
Surr: Chlorobenzene - d5	104.982		100.0		105	57	134				

Sample ID **N013451-002AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95043**
Client ID: **ZZZZZZ** Batch ID: **E14VS092** TestNo: **EPA 8015B** Analysis Date: **9/25/2014** SeqNo: **1841187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.421	1.0	5.000	0.02700	87.9	53	136				
Surr: Chlorobenzene - d5	105.203		100.0		105	57	134				

Sample ID **N013451-002AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95043**
Client ID: **ZZZZZZ** Batch ID: **E14VS092** TestNo: **EPA 8015B** Analysis Date: **9/25/2014** SeqNo: **1841188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	3.864	1.0	5.000	0.02700	76.7	53	136	4.421	13.4	20	
Surr: Chlorobenzene - d5	106.191		100.0		106	57	134		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID **E140926LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95034**
Client ID: **LCSS** Batch ID: **E14VS093** TestNo: **EPA 8015B** Analysis Date: **9/26/2014** SeqNo: **1841195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.939	1.0	5.000	0	98.8	76	130				
Surr: Chlorobenzene - d5	100.955		100.0		101	57	134				

Sample ID **E140926MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95034**
Client ID: **PBS** Batch ID: **E14VS093** TestNo: **EPA 8015B** Analysis Date: **9/26/2014** SeqNo: **1841196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.041	1.0									
Surr: Chlorobenzene - d5	111.752		100.0		112	57	134				

Sample ID **N013451-003AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95034**
Client ID: **ZZZZZZ** Batch ID: **E14VS093** TestNo: **EPA 8015B** Analysis Date: **9/26/2014** SeqNo: **1841207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.838	1.0	5.000	0.03200	96.1	53	136				
Surr: Chlorobenzene - d5	108.707		100.0		109	57	134				

Sample ID **N013451-003AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **95034**
Client ID: **ZZZZZZ** Batch ID: **E14VS093** TestNo: **EPA 8015B** Analysis Date: **9/26/2014** SeqNo: **1841208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.025	1.0	5.000	0.03200	99.9	53	136	4.838	3.79	20	
Surr: Chlorobenzene - d5	113.040		100.0		113	57	134		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **LCS-46595** SampType: **LCS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **LCSS** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	17.233	2.0	16.67	0	103	57	139				
4,4´-DDE	16.750	2.0	16.67	0	100	54	130				
4,4´-DDT	19.083	2.0	16.67	0	114	64	134				
Aldrin	14.483	1.0	16.67	0	86.9	40	120				
alpha-BHC	15.533	1.0	16.67	0	93.2	40	120				
alpha-Chlordane	15.317	1.0	16.67	0	91.9	52	120				
beta-BHC	14.422	1.0	16.67	0	86.5	48	120				
delta-BHC	16.783	1.0	16.67	0	101	23	120				
Dieldrin	16.767	2.0	16.67	0	101	53	130				
Endosulfan I	14.900	1.0	16.67	0	89.4	48	121				
Endosulfan II	16.617	2.0	16.67	0	99.7	59	127				
Endosulfan sulfate	17.258	2.0	16.67	0	104	54	127				
Endrin	18.783	2.0	16.67	0	113	53	171				
Endrin aldehyde	14.945	2.0	16.67	0	89.7	42	120				
Endrin ketone	15.633	2.0	16.67	0	93.8	33	144				
gamma-BHC	15.100	1.0	16.67	0	90.6	42	120				
gamma-Chlordane	15.767	1.0	16.67	0	94.6	52	125				
Heptachlor	14.717	1.0	16.67	0	88.3	25	139				
Heptachlor epoxide	14.983	1.0	16.67	0	89.9	50	121				
Methoxychlor	19.227	8.5	16.67	0	115	55	152				
Surr: Tetrachloro-m-xylene	12.597		16.67		75.6	19	120				
Surr: Decachlorobiphenyl	12.895		16.67		77.4	22	141				

Sample ID **N013460-003A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.522	2.0	16.64	0	87.3	57	139				
4,4´-DDE	14.677	2.0	16.64	0	88.2	54	130				
4,4´-DDT	20.549	2.0	16.64	0.5921	120	64	134				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-003A-MS** SampType: **MS** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aldrin	12.797	1.0	16.64	0	76.9	40	120				
alpha-BHC	13.444	1.0	16.64	0	80.8	40	120				
alpha-Chlordane	13.356	1.0	16.64	0	80.3	52	120				
beta-BHC	13.000	1.0	16.64	0	78.1	48	120				
delta-BHC	14.792	1.0	16.64	0	88.9	23	120				
Dieldrin	14.742	2.0	16.64	0	88.6	53	130				
Endosulfan I	13.065	1.0	16.64	0	78.5	48	121				
Endosulfan II	14.301	2.0	16.64	0	85.9	59	127				
Endosulfan sulfate	14.977	2.0	16.64	0	90.0	54	127				
Endrin	16.622	2.0	16.64	0	99.9	53	171				
Endrin aldehyde	13.419	2.0	16.64	0	80.6	42	120				
Endrin ketone	13.426	2.0	16.64	0	80.7	33	144				
gamma-BHC	13.045	1.0	16.64	0	78.4	42	120				
gamma-Chlordane	13.612	1.0	16.64	0	81.8	52	125				
Heptachlor	12.895	1.0	16.64	0	77.5	25	139				
Heptachlor epoxide	13.131	1.0	16.64	0	78.9	50	121				
Methoxychlor	16.531	8.5	16.64	0	99.3	55	152				
Surr: Tetrachloro-m-xylene	10.326		16.64		62.0	19	120				
Surr: Decachlorobiphenyl	10.729		16.64		64.5	22	141				

Sample ID **N013460-003A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.512	2.0	16.65	0	87.2	57	139	14.52	0.0699	20	
4,4´-DDE	14.249	2.0	16.65	0	85.6	54	130	14.68	2.96	20	
4,4´-DDT	16.348	2.0	16.65	0.5921	94.6	64	134	20.55	22.8	20	R
Aldrin	12.510	1.0	16.65	0	75.1	40	120	12.80	2.27	20	
alpha-BHC	13.149	1.0	16.65	0	79.0	40	120	13.44	2.22	20	
alpha-Chlordane	13.098	1.0	16.65	0	78.7	52	120	13.36	1.95	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID **N013460-003A-MSD** SampType: **MSD** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **ZZZZZZ** Batch ID: **46595** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
beta-BHC	12.610	1.0	16.65	0	75.7	48	120	13.00	3.05	20	
delta-BHC	14.547	1.0	16.65	0	87.4	23	120	14.79	1.67	20	
Dieldrin	14.437	2.0	16.65	0	86.7	53	130	14.74	2.09	20	
Endosulfan I	12.893	1.0	16.65	0	77.4	48	121	13.06	1.33	20	
Endosulfan II	14.412	2.0	16.65	0	86.6	59	127	14.30	0.775	20	
Endosulfan sulfate	14.897	2.0	16.65	0	89.5	54	127	14.98	0.535	20	
Endrin	16.450	2.0	16.65	0	98.8	53	171	16.62	1.04	20	
Endrin aldehyde	13.544	2.0	16.65	0	81.4	42	120	13.42	0.922	20	
Endrin ketone	13.580	2.0	16.65	0	81.6	33	144	13.43	1.14	20	
gamma-BHC	12.766	1.0	16.65	0	76.7	42	120	13.04	2.16	20	
gamma-Chlordane	13.346	1.0	16.65	0	80.2	52	125	13.61	1.98	20	
Heptachlor	12.583	1.0	16.65	0	75.6	25	139	12.90	2.45	20	
Heptachlor epoxide	12.830	1.0	16.65	0	77.1	50	121	13.13	2.33	20	
Methoxychlor	16.338	8.5	16.65	0	98.1	55	152	16.53	1.17	20	
Surr: Tetrachloro-m-xylene	10.371		16.65		62.3	19	120		0		
Surr: Decachlorobiphenyl	11.192		16.65		67.2	22	141		0		

Sample ID **MB-46595** SampType: **MBLK** TestCode: **8081SOIL** Units: **µg/Kg** Prep Date: **9/29/2014** RunNo: **95093**
Client ID: **PBS** Batch ID: **46595** TestNo: **EPA 8081A EPA 3550B** Analysis Date: **10/1/2014** SeqNo: **1843188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	ND	2.0									
4,4´-DDE	ND	2.0									
4,4´-DDT	0.542	2.0									
Aldrin	ND	1.0									
alpha-BHC	ND	1.0									
alpha-Chlordane	ND	1.0									
beta-BHC	ND	1.0									
Chlordane	ND	8.5									
delta-BHC	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081SOIL

Sample ID	MB-46595	SampType:	MBLK	TestCode:	8081SOIL	Units:	µg/Kg	Prep Date:	9/29/2014	RunNo:	95093
Client ID:	PBS	Batch ID:	46595	TestNo:	EPA 8081A	EPA 3550B		Analysis Date:	10/1/2014	SeqNo:	1843188

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dieldrin	ND	2.0									
Endosulfan I	ND	1.0									
Endosulfan II	ND	2.0									
Endosulfan sulfate	ND	2.0									
Endrin	ND	2.0									
Endrin aldehyde	ND	2.0									
Endrin ketone	ND	2.0									
gamma-BHC	ND	1.0									
gamma-Chlordane	ND	1.0									
Heptachlor	ND	1.0									
Heptachlor epoxide	ND	1.0									
Methoxychlor	ND	8.5									
Toxaphene	ND	85									
Surr: Tetrachloro-m-xylene	12.722		16.67		76.3	19	120				
Surr: Decachlorobiphenyl	13.207		16.67		79.2	22	141				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **LCS-46579** SampType: **LCS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **LCSS** Batch ID: **46579** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/26/2014** SeqNo: **1841292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2392.000	330	3330	0	71.8	35	120				
1,2-Dichlorobenzene	2115.667	330	3330	0	63.5	32	120				
1,3-Dichlorobenzene	2021.333	330	3330	0	60.7	29	120				
1,4-Dichlorobenzene	2109.667	330	3330	0	63.4	31	120				
2,4,5-Trichlorophenol	2469.000	330	3330	0	74.1	53	120				
2,4,6-Trichlorophenol	2520.000	330	3330	0	75.7	51	120				
2,4-Dichlorophenol	2396.667	1600	3330	0	72.0	45	120				
2,4-Dimethylphenol	2498.000	330	3330	0	75.0	44	120				
2,4-Dinitrophenol	1318.000	1600	3330	0	39.6	30	127				
2,4-Dinitrotoluene	2833.000	330	3330	0	85.1	53	120				
2,6-Dinitrotoluene	2893.667	330	3330	0	86.9	58	120				
2-Chloronaphthalene	2583.333	330	3330	0	77.6	46	120				
2-Chlorophenol	2349.333	330	3330	0	70.6	41	120				
2-Methylnaphthalene	2378.000	330	3330	0	71.4	45	120				
2-Methylphenol	2698.667	330	3330	0	81.0	44	120				
2-Nitroaniline	3006.000	1600	3330	0	90.3	43	132				
2-Nitrophenol	2356.667	330	3330	0	70.8	40	120				
3,3´-Dichlorobenzidine	6174.000	660	6660	0	92.7	37	120				
3-Nitroaniline	2975.000	1600	3330	0	89.3	54	120				
4,6-Dinitro-2-methylphenol	1964.333	1600	3330	0	59.0	45	126				
4-Bromophenyl-phenylether	2951.667	330	3330	0	88.6	58	120				
4-Chloro-3-methylphenol	2563.333	660	3330	0	77.0	53	120				
4-Chloroaniline	2730.000	660	3330	0	82.0	39	120				
4-Chlorophenyl-phenylether	2990.000	330	3330	0	89.8	56	120				
4-Methylphenol	2387.000	330	3330	0	71.7	47	120				
4-Nitroaniline	3275.333	1600	3330	0	98.4	49	120				
4-Nitrophenol	2682.667	1600	3330	0	80.6	40	127				
Acenaphthene	2780.667	330	3330	0	83.5	51	120				
Acenaphthylene	2744.333	330	3330	0	82.4	55	120				
Anthracene	2892.000	330	3330	0	86.8	57	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	LCS-46579	SampType:	LCS	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/26/2014	RunNo:	95047
Client ID:	LCSS	Batch ID:	46579	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	9/26/2014	SeqNo:	1841292

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzidine (M)	5789.000	1600	6660	0	86.9	0	120				
Benzo(a)anthracene	2965.667	330	3330	0	89.1	64	120				
Benzo(a)pyrene	2886.000	200	3330	0	86.7	59	120				
Benzo(b)fluoranthene	3383.000	330	3330	0	102	62	120				
Benzo(g,h,i)perylene	2311.000	330	3330	0	69.4	51	126				
Benzo(k)fluoranthene	2840.000	330	3330	0	85.3	59	120				
Benzoic acid	1063.000	1600	3330	0	31.9	23	120				
Benzyl alcohol	2434.667	660	3330	0	73.1	46	120				
Bis(2-chloroethoxy)methane	2621.667	330	3330	0	78.7	50	120				
Bis(2-chloroethyl)ether	2845.333	330	3330	0	85.4	38	120				
Bis(2-chloroisopropyl)ether	2619.667	330	3330	0	78.7	25	127				
Bis(2-ethylhexyl)phthalate	3453.000	330	3330	0	104	63	129				
Butylbenzylphthalate	3363.000	330	3330	0	101	64	128				
Chrysene	3074.667	330	3330	0	92.3	33	150				
Di-n-butylphthalate	3153.333	330	3330	0	94.7	62	121				
Di-n-octylphthalate	3595.667	330	3330	0	108	62	143				
Dibenz(a,h)anthracene	2925.333	200	3330	0	87.8	46	149				
Dibenzofuran	2656.000	330	3330	0	79.8	55	120				
Diethylphthalate	3264.667	330	3330	0	98.0	61	120				
Dimethylphthalate	3079.000	330	3330	0	92.5	59	120				
Fluoranthene	2987.333	330	3330	0	89.7	57	120				
Fluorene	2902.000	330	3330	0	87.1	56	120				
Hexachlorobenzene	2782.333	330	3330	0	83.6	60	120				
Hexachlorobutadiene	2574.667	660	3330	0	77.3	34	120				
Hexachlorocyclopentadiene	2334.000	660	3330	0	70.1	20	120				
Hexachloroethane	2101.000	330	3330	0	63.1	33	120				
Indeno(1,2,3-cd)pyrene	2517.333	330	3330	0	75.6	51	129				
Isophorone	2399.333	330	3330	0	72.1	47	120				
N-Nitrosodi-n-propylamine	2488.000	330	3330	0	74.7	51	120				
N-Nitrosodiphenylamine	2982.333	330	3330	0	89.6	63	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **LCS-46579** SampType: **LCS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **LCSS** Batch ID: **46579** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/26/2014** SeqNo: **1841292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2485.667	330	3330	0	74.6	40	120				
Nitrobenzene	2419.000	330	3330	0	72.6	43	120				
Pentachlorophenol	1984.667	1600	3330	0	59.6	46	120				
Phenanthrene	2901.000	330	3330	0	87.1	56	120				
Phenol	2302.667	330	3330	0	69.1	44	120				
Pyrene	2947.333	330	3330	0	88.5	57	120				
Surr: 1,2-Dichlorobenzene-d4	2266.000		3330		68.0	20	120				
Surr: 2,4,6-Tribromophenol	3016.667		3330		90.6	31	125				
Surr: 2-Chlorophenol-d4	2606.333		3330		78.3	29	120				
Surr: 2-Fluorobiphenyl	2651.667		3330		79.6	35	120				
Surr: 2-Fluorophenol	2556.000		3330		76.8	27	120				
Surr: 4-Terphenyl-d14	3186.333		3330		95.7	26	142				
Surr: Nitrobenzene-d5	2575.000		3330		77.3	25	120				
Surr: Phenol-d5	2597.667		3330		78.0	20	120				

Sample ID **MB-46579** SampType: **MBLK** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **PBS** Batch ID: **46579** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/26/2014** SeqNo: **1841293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	1600									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	MB-46579	SampType:	MBLK	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/26/2014	RunNo:	95047
Client ID:	PBS	Batch ID:	46579	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	9/26/2014	SeqNo:	1841293

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3´-Dichlorobenzidine	ND	660									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	660									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									
Acenaphthylene	ND	330									
Anthracene	ND	330									
Benzidine (M)	ND	1600									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	200									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID	MB-46579	SampType:	MBLK	TestCode:	8270SOIL	Units:	µg/Kg	Prep Date:	9/26/2014	RunNo:	95047
Client ID:	PBS	Batch ID:	46579	TestNo:	EPA 8270C	EPA 3550B		Analysis Date:	9/26/2014	SeqNo:	1841293

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	200									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	660									
Hexachlorocyclopentadiene	ND	660									
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									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	1890.000		3330		56.8	20	120				
Surr: 2,4,6-Tribromophenol	2235.000		3330		67.1	31	125				
Surr: 2-Chlorophenol-d4	2292.667		3330		68.8	29	120				
Surr: 2-Fluorobiphenyl	2181.333		3330		65.5	35	120				
Surr: 2-Fluorophenol	2289.000		3330		68.7	27	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **MB-46579** SampType: **MBLK** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **PBS** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/26/2014** SeqNo: **1841293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	3375.333		3330		101	26	142				
Surr: Nitrobenzene-d5	2200.667		3330		66.1	25	120				
Surr: Phenol-d5	2322.667		3330		69.7	20	120				

Sample ID **N013457-001C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1563.314	330	3338	0	46.8	35	120				
1,2-Dichlorobenzene	1329.101	330	3338	0	39.8	32	120				
1,3-Dichlorobenzene	1309.389	330	3338	0	39.2	29	120				
1,4-Dichlorobenzene	1366.856	330	3338	0	41.0	31	120				
2,4,5-Trichlorophenol	2083.528	330	3338	0	62.4	53	120				
2,4,6-Trichlorophenol	2036.418	330	3338	0	61.0	51	120				
2,4-Dichlorophenol	1755.763	1700	3338	0	52.6	45	120				
2,4-Dimethylphenol	1728.032	330	3338	0	51.8	44	120				
2,4-Dinitrophenol	37.755	1700	3338	0	1.13	30	127				S
2,4-Dinitrotoluene	1974.942	330	3338	0	59.2	53	120				
2,6-Dinitrotoluene	1988.306	330	3338	0	59.6	58	120				
2-Chloronaphthalene	1765.453	330	3338	0	52.9	46	120				
2-Chlorophenol	1511.193	330	3338	0	45.3	41	120				
2-Methylnaphthalene	1587.371	330	3338	0	47.6	45	120				
2-Methylphenol	1589.709	330	3338	0	47.6	44	120				
2-Nitroaniline	2124.624	1700	3338	0	63.7	43	132				
2-Nitrophenol	1404.611	330	3338	0	42.1	40	120				
3-Nitroaniline	2117.942	1700	3338	0	63.5	54	120				
4,6-Dinitro-2-methylphenol	130.304	1700	3338	0	3.90	45	126				S
4-Bromophenyl-phenylether	2156.031	330	3338	0	64.6	58	120				
4-Chloro-3-methylphenol	1960.909	660	3338	0	58.7	53	120				
4-Chloroaniline	1712.997	660	3338	0	51.3	39	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-001C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorophenyl-phenylether	2079.519	330	3338	0	62.3	56	120				
4-Methylphenol	1608.420	330	3338	0	48.2	47	120				
4-Nitroaniline	2263.281	1700	3338	0	67.8	49	120				
4-Nitrophenol	2094.554	1700	3338	0	62.8	40	127				
Acenaphthene	1826.930	330	3338	0	54.7	51	120				
Acenaphthylene	1910.458	330	3338	0	57.2	55	120				
Anthracene	2119.612	330	3338	0	63.5	57	120				
Benzoic acid	854.995	1700	3338	0	25.6	23	120				
Benzyl alcohol	1663.548	660	3338	0	49.8	46	120				
Bis(2-chloroethoxy)methane	1562.980	330	3338	0	46.8	50	120				S
Bis(2-chloroethyl)ether	1484.130	330	3338	0	44.5	38	120				
Bis(2-chloroisopropyl)ether	1691.614	330	3338	0	50.7	25	127				
Di-n-butylphthalate	2309.389	330	3338	0	69.2	62	121				
Dibenzofuran	1900.434	330	3338	0	56.9	55	120				
Diethylphthalate	2359.506	330	3338	0	70.7	61	120				
Dimethylphthalate	2155.028	330	3338	0	64.6	59	120				
Fluoranthene	1776.478	330	3338	0	53.2	57	120				S
Fluorene	2088.540	330	3338	0	62.6	56	120				
Hexachlorobenzene	2061.143	330	3338	0	61.8	60	120				
Hexachlorobutadiene	1659.873	660	3338	0	49.7	34	120				
Hexachlorocyclopentadiene	124.958	660	3338	0	3.74	20	120				S
Hexachloroethane	934.180	330	3338	0	28.0	33	120				S
Isophorone	1499.499	330	3338	0	44.9	47	120				S
N-Nitrosodi-n-propylamine	1485.132	330	3338	0	44.5	51	120				S
N-Nitrosodiphenylamine	2202.138	330	3338	0	66.0	63	120				
Naphthalene	1561.978	330	3338	0	46.8	40	120				
Nitrobenzene	1487.137	330	3338	0	44.6	43	120				
Pentachlorophenol	1654.861	1700	3338	0	49.6	46	120				
Phenanthrene	2152.690	330	3338	0	64.5	56	120				
Phenol	1476.445	330	3338	0	44.2	44	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-001C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pyrene	1585.366	330	3338	0	47.5	57	120				S
Surr: 1,2-Dichlorobenzene-d4	1226.529		3338		36.7	20	120				
Surr: 2,4,6-Tribromophenol	2084.196		3338		62.4	31	125				
Surr: 2-Chlorophenol-d4	1429.001		3338		42.8	29	120				
Surr: 2-Fluorobiphenyl	1516.204		3338		45.4	35	120				
Surr: 2-Fluorophenol	1386.235		3338		41.5	27	120				
Surr: Nitrobenzene-d5	1354.160		3338		40.6	25	120				
Surr: Phenol-d5	1448.380		3338		43.4	20	120				

Sample ID **N013457-001C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1583.778	330	3334	0	47.5	35	120	1563	1.30	20	
1,2-Dichlorobenzene	1329.105	330	3334	0	39.9	32	120	1329	0.000319	20	
1,3-Dichlorobenzene	1278.705	330	3334	0	38.3	29	120	1309	2.37	20	
1,4-Dichlorobenzene	1338.117	330	3334	0	40.1	31	120	1367	2.12	20	
2,4,5-Trichlorophenol	2053.071	330	3334	0	61.6	53	120	2084	1.47	20	
2,4,6-Trichlorophenol	2038.051	330	3334	0	61.1	51	120	2036	0.0801	20	
2,4-Dichlorophenol	1774.366	1700	3334	0	53.2	45	120	1756	1.05	20	
2,4-Dimethylphenol	1783.044	330	3334	0	53.5	44	120	1728	3.13	20	
2,4-Dinitrophenol	ND	1700	3334	0	0	30	127	37.75	0	20	S
2,4-Dinitrotoluene	1954.606	330	3334	0	58.6	53	120	1975	1.03	20	
2,6-Dinitrotoluene	2015.354	330	3334	0	60.4	58	120	1988	1.35	20	
2-Chloronaphthalene	1805.407	330	3334	0	54.1	46	120	1765	2.24	20	
2-Chlorophenol	1545.060	330	3334	0	46.3	41	120	1511	2.22	20	
2-Methylnaphthalene	1616.489	330	3334	0	48.5	45	120	1587	1.82	20	
2-Methylphenol	1664.553	330	3334	0	49.9	44	120	1590	4.60	20	
2-Nitroaniline	2147.864	1700	3334	0	64.4	43	132	2125	1.09	20	
2-Nitrophenol	1394.192	330	3334	0	41.8	40	120	1405	0.744	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-001C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3-Nitroaniline	2111.482	1700	3334	0	63.3	54	120	2118	0.305	20	
4,6-Dinitro-2-methylphenol	135.514	1700	3334	0	4.06	45	126	130.3	0	20	S
4-Bromophenyl-phenylether	2159.212	330	3334	0	64.8	58	120	2156	0.147	20	
4-Chloro-3-methylphenol	1953.939	660	3334	0	58.6	53	120	1961	0.356	20	
4-Chloroaniline	1799.733	660	3334	0	54.0	39	120	1713	4.94	20	
4-Chlorophenyl-phenylether	2116.489	330	3334	0	63.5	56	120	2080	1.76	20	
4-Methylphenol	1652.203	330	3334	0	49.5	47	120	1608	2.69	20	
4-Nitroaniline	2161.215	1700	3334	0	64.8	49	120	2263	4.61	20	
4-Nitrophenol	2013.351	1700	3334	0	60.4	40	127	2095	3.95	20	
Acenaphthene	1850.801	330	3334	0	55.5	51	120	1827	1.30	20	
Acenaphthylene	1931.242	330	3334	0	57.9	55	120	1910	1.08	20	
Anthracene	2107.810	330	3334	0	63.2	57	120	2120	0.558	20	
Benzoic acid	799.733	1700	3334	0	24.0	23	120	855.0	0	20	
Benzyl alcohol	1745.327	660	3334	0	52.3	46	120	1664	4.80	20	
Bis(2-chloroethoxy)methane	1598.131	330	3334	0	47.9	50	120	1563	2.22	20	S
Bis(2-chloroethyl)ether	1119.826	330	3334	0	33.6	38	120	1484	28.0	20	SR
Bis(2-chloroisopropyl)ether	1718.959	330	3334	0	51.6	25	127	1692	1.60	20	
Di-n-butylphthalate	2313.418	330	3334	0	69.4	62	121	2309	0.174	20	
Dibenzofuran	1906.208	330	3334	0	57.2	55	120	1900	0.303	20	
Diethylphthalate	2355.140	330	3334	0	70.6	61	120	2360	0.185	20	
Dimethylphthalate	2181.909	330	3334	0	65.4	59	120	2155	1.24	20	
Fluoranthene	1743.324	330	3334	0	52.3	57	120	1776	1.88	20	S
Fluorene	2093.124	330	3334	0	62.8	56	120	2089	0.219	20	
Hexachlorobenzene	2014.686	330	3334	0	60.4	60	120	2061	2.28	20	
Hexachlorobutadiene	1679.573	660	3334	0	50.4	34	120	1660	1.18	20	
Hexachlorocyclopentadiene	165.888	660	3334	0	4.97	20	120	125.0	0	20	S
Hexachloroethane	914.219	330	3334	0	27.4	33	120	934.2	2.16	20	S
Isophorone	1560.748	330	3334	0	46.8	47	120	1499	4.00	20	S
N-Nitrosodi-n-propylamine	1535.381	330	3334	0	46.0	51	120	1485	3.33	20	S
N-Nitrosodiphenylamine	2216.956	330	3334	0	66.5	63	120	2202	0.671	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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DO	Surrogate Diluted Out		Calculations are based on raw values		

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES
3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-001C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95047**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1593.792	330	3334	0	47.8	40	120	1562	2.02	20	
Nitrobenzene	1510.347	330	3334	0	45.3	43	120	1487	1.55	20	
Pentachlorophenol	1486.649	1700	3334	0	44.6	46	120	1655	0	20	S
Phenanthrene	2137.850	330	3334	0	64.1	56	120	2153	0.692	20	
Phenol	1528.705	330	3334	0	45.8	44	120	1476	3.48	20	
Pyrene	1564.419	330	3334	0	46.9	57	120	1585	1.33	20	S
Surr: 1,2-Dichlorobenzene-d4	1233.311		3334		37.0	20	120		0		
Surr: 2,4,6-Tribromophenol	2031.375		3334		60.9	31	125		0		
Surr: 2-Chlorophenol-d4	1493.992		3334		44.8	29	120		0		
Surr: 2-Fluorobiphenyl	1564.753		3334		46.9	35	120		0		
Surr: 2-Fluorophenol	1423.899		3334		42.7	27	120		0		
Surr: Nitrobenzene-d5	1426.569		3334		42.8	25	120		0		
Surr: Phenol-d5	1502.003		3334		45.0	20	120		0		

Sample ID **N013457-001C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95050**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	3795.523	6600	6676	0	56.9	37	120				
Benzidine (M)	ND	17000	6676	0	0	0	120				
Benzo(a)anthracene	2218.510	3300	3338	0	66.5	64	120				
Benzo(a)pyrene	2161.711	2000	3338	0	64.8	59	120				
Benzo(b)fluoranthene	2589.375	3300	3338	0	77.6	62	120				
Benzo(g,h,i)perylene	738.390	3300	3338	0	22.1	51	126				S
Benzo(k)fluoranthene	3043.769	3300	3338	0	91.2	59	120				
Bis(2-ethylhexyl)phthalate	2288.674	3300	3338	0	68.6	63	129				
Butylbenzylphthalate	2285.332	3300	3338	0	68.5	64	128				
Chrysene	2165.052	3300	3338	0	64.9	33	150				
Di-n-octylphthalate	4009.355	3300	3338	0	120	62	143				
Dibenz(a,h)anthracene	ND	2000	3338	0	0	46	149				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Sharp Environmental Technologies
Work Order: N013451
Project: ECI

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270SOIL

Sample ID **N013457-001C-MS** SampType: **MS** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95050**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	838.623	3300	3338	0	25.1	51	129				S
Surr: 4-Terphenyl-d14	1971.266		3338		59.1	26	142				

Sample ID **N013457-001C-MSD** SampType: **MSD** TestCode: **8270SOIL** Units: **µg/Kg** Prep Date: **9/26/2014** RunNo: **95050**
Client ID: **ZZZZZZ** Batch ID: **46579** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **9/27/2014** SeqNo: **1841396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	3871.829	6600	6669	0	58.1	37	120	3796	0	20	
Benzidine (M)	ND	17000	6669	0	0	0	120	0	0	20	
Benzo(a)anthracene	2246.328	3300	3334	0	67.4	64	120	2219	0	20	
Benzo(a)pyrene	2136.182	2000	3334	0	64.1	59	120	2162	1.19	20	
Benzo(b)fluoranthene	2740.320	3300	3334	0	82.2	62	120	2589	0	20	
Benzo(g,h,i)perylene	720.961	3300	3334	0	21.6	51	126	738.4	0	20	S
Benzo(k)fluoranthene	3184.246	3300	3334	0	95.5	59	120	3044	0	20	
Bis(2-ethylhexyl)phthalate	2393.191	3300	3334	0	71.8	63	129	2289	0	20	
Butylbenzylphthalate	2346.462	3300	3334	0	70.4	64	128	2285	0	20	
Chrysene	2206.275	3300	3334	0	66.2	33	150	2165	0	20	
Di-n-octylphthalate	4335.781	3300	3334	0	130	62	143	4009	7.82	20	
Dibenz(a,h)anthracene	974.633	2000	3334	0	29.2	46	149	0	0	20	S
Indeno(1,2,3-cd)pyrene	837.784	3300	3334	0	25.1	51	129	838.6	0	20	S
Surr: 4-Terphenyl-d14	1962.617		3334		58.9	26	142		0		

Qualifiers:

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DO	Surrogate Diluted Out		Calculations are based on raw values		

Chain of Custody

Page 1 of 1

Client: SHARP ENV. TECHNOLOGIES
Address: 8395 S. BEACON. SAN PEDRO CA 90733
Phone: 310-505-3675 Fax:
Project Name: ECI
Project Number: PO #
Submitted By: GABI BAADER
Title: SR. GEOLOGIST
Signature: Date: 9-24-14
I hereby authorize ASSET Laboratories to perform the tests indicated below:

ASSET LABORATORIES

Nevada: 3151 W. Post Rd., LasVegas, NV 89118
Phone: 702.307.2659 Fax: 702.307.2691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
Temp 2.6°C IR# 2
Method of Cooling ice
Headspace NA
Intact Yes
Seal NONE
Comments

QA/QC: RTNE / RWQCB / CT / LEVEL IV

Work Order No.	Sample ID/Location	Date	Time	Matrix: Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	8260 (Volatiles)	8015M (GRO)	8015B (DRO/ORO)	CAM 17 6010/7470/7471)	SVOCs by EPA 8270C	TPH cc 8015	8081 OCPS								Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
N0134151-01	B16-2	9-24				X								X	X	X	X									1	T		
-02	B16-5					X																				1			
-03	B17-2					X																				1			
-04	B17-5					X																				1			
-05	B18-2					X																				1			
-06	B18-5					X																				1			
-07	B19-2					X																				1			
-08	B19-5					X																				1			
-09	B20-2					X																				1			
-10	B20-5					X																				1			

Send report to:
Name JEFF SHARP
Address sharpenvironmental@gmail.com
Email

Bill to:
Name SHARP ENV. TECH.
Address
Email

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Name G Baader Signature

Special Instruction/Comments:
CC Gabi Baader

Relinquished by (Signature):	Date	Time	Received by (Signature):	Date	Time
	9-24	17:11		9/24/14	17:11
	9-24-14	17:30		9/25/14	0917

TAT Starts at 8 AM the following day if samples received after 3 pm.
A ☐ ≤ 24 Hours
B ☐ = Next Workday
C ☐ = 2 Workdays
D ☐ = 3 Workdays
E ☒ = Routine 5-7 Workdays

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Carrier:
Airbill/Tracking #:

Container Type:
T = Tube V = VOA L = Liter P = Pint
J = Jar B = Tedlar G = Glass
M = Metal P = Plastic

EDD Requirement
Excel EDD ☐
Geotracker ☐ Global ID
LabSpec ☐

Sample/Records Storage
All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
Fees will be applied for extended storage.

White = Laboratory Copy Yellow = Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	9/25/2014	Workorder:	N013451
Rep sample Temp (Deg C):	2.6	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	Golden State Overnight		
Last 4 digits of Tracking No.:	8059	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑
15. Did the bottle labels indicate correct preservatives used?	Yes ☐	No ☐	NA ☑
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments

Checklist Completed B MBC for ACortes 09/25/14

Reviewed By: 09/29/14

GSO GOLDEN STATE OVERNIGHT

WebShip

800-322-5555 www.gso.com

Ship From:
MEYNARD LARIN
ASSET LABORATORIES
11060 ARTESIA BLVD., SUITE C
CERRITOS, CA 90703

Ship To:
MARLON CARTIN
ATL INC
3151 W. POST RD
LAS VEGAS, NV 89118

COD:
$0.00

Reference:

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 525718059

CPS

LVS

LAS VEGAS

D89103B

29062201

Print Date : 09/24/14 18:00 PM

Package 2 of 2

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.
Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

JONES ENVIRONMENTAL, INC.

P.O. Box 5387 | FULLERTON, CA 92838
(714) 449-9937 | Fax (714) 449-9685

JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B - Volatile Organics by GC/MS + Oxygenates

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers.

A tracer gas mixture of n-propanol and n-pentane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No n-propanol or n-pentane was found in any of the samples reported herein.

The sampling rate was approximately 200 cc/min except when noted differently on the chain of custody record using a gas tight syringe. 3 purge volumes were used.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, Matrix Spike (MS) and Matrix Spike Duplicates (MSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of sampling.

Approval: _____

Steve Jones, Ph.D.
Laboratory Manager

JONES ENVIRONMENTAL, INC.
P.O. Box 5387 | FULLERTON, CA 92838
(714) 449-9937 | FAX (714) 449-9685

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B16-10**	**B16-20**	**B16-30**	**B16-35**	**B17-5**		
JEL ID:	**D-0811-01**	**D-0811-02**	**D-0811-03**	**D-0811-04**	**D-0811-05**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	**0.033**	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	**0.045**	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	**0.271**	ND	**0.084**	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	**0.737**	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B16-10**	**B16-20**	**B16-30**	**B16-35**	**B17-5**		
JEL ID:	**D-0811-01**	**D-0811-02**	**D-0811-03**	**D-0811-04**	**D-0811-05**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	**1.43**	**0.282**	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	ND	ND	**0.168**	ND	**0.437**	0.008	µg/L
Toluene	**0.282**	**0.062**	**0.022**	**0.014**	**0.049**	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	ND	ND	**0.035**	ND	**0.490**	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	**0.280**	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	**0.076**	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.008	µg/L
Xylenes	**6.98**	**3.40**	**0.845**	**0.081**	**0.765**	0.008	µg/L
MTBE	ND	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	0.400	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	101%	101%	102%	102%	99%	75 - 125	
Toluene-d_8	100%	98%	98%	104%	96%	75 - 125	
4-Bromofluorobenzene	103%	102%	102%	98%	102%	75 - 125	
	D1-092514-D-0811	D2-092514-D-0811	D1-092514-D-0811	D2-092514-D-0811	D1-092514-D-0811		

ND= Not Detected

JONES ENVIRONMENTAL, INC.
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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B17-15**	**B17-25**	**B17-25 REP**	**B19-5**	**B19-15**		
JEL ID:	**D-0811-06**	**D-0811-07**	**D-0811-08**	**D-0811-09**	**D-0811-10**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B17-15**	**B17-25**	**B17-25 REP**	**B19-5**	**B19-15**		
JEL ID:	**D-0811-06**	**D-0811-07**	**D-0811-08**	**D-0811-09**	**D-0811-10**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	**0.054**	**1.57**	**1.24**	**0.074**	**0.097**	0.008	µg/L
Toluene	ND	ND	ND	ND	**0.019**	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	ND	**0.021**	**0.028**	ND	ND	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.008	µg/L
Xylenes	ND	ND	ND	ND	**0.722**	0.008	µg/L
MTBE	ND	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	0.400	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	102%	103%	97%	98%	108%	75 - 125	
Toluene-d_8	106%	97%	95%	95%	100%	75 - 125	
4-Bromofluorobenzene	99%	99%	99%	98%	97%	75 - 125	
	D2-092514-D-0811	D2-092514-D-0811	D2-092514-D-0811	D2-092514-D-0811	D1-092514-D-0811		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B19-25**	**B18-5**	**B18-15**	**B18-25**	**B21-5**		
JEL ID:	**D-0811-11**	**D-0811-12**	**D-0811-13**	**D-0811-14**	**D-0811-15**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	**0.208**	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B19-25**	**B18-5**	**B18-15**	**B18-25**	**B21-5**		
JEL ID:	**D-0811-11**	**D-0811-12**	**D-0811-13**	**D-0811-14**	**D-0811-15**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	**0.163**	**0.008**	**0.128**	**0.531**	ND	0.008	µg/L
Toluene	**0.030**	ND	**0.032**	ND	ND	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	ND	ND	ND	ND	ND	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.008	µg/L
Xylenes	**0.753**	ND	**0.750**	ND	ND	0.008	µg/L
MTBE	ND	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	0.400	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	111%	101%	101%	102%	101%	75 - 125	
Toluene-d_8	95%	102%	99%	104%	104%	75 - 125	
4-Bromofluorobenzene	99%	96%	101%	100%	105%	75 - 125	
	D1-092514-D-0811	D2-092514-D-0811	D1-092514-D-0811	D2-092514-D-0811	D2-092514-D-0811		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B21-15**	**B20-5**	**B20-15**	**B20-25**	**B22-5**		
JEL ID:	**D-0811-16**	**D-0811-17**	**D-0811-18**	**D-0811-19**	**D-0811-20**	**Practical Quantitation Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B21-15**	**B20-5**	**B20-15**	**B20-25**	**B22-5**		
JEL ID:	**D-0811-16**	**D-0811-17**	**D-0811-18**	**D-0811-19**	**D-0811-20**	**Practical Quantitation Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	**0.035**	ND	ND	ND	ND	0.008	µg/L
Toluene	ND	ND	**0.109**	ND	ND	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	**0.015**	ND	ND	ND	ND	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.008	µg/L
Xylenes	ND	ND	ND	ND	ND	0.008	µg/L
MTBE	ND	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	0.400	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	100%	98%	101%	103%	102%	75 - 125	
Toluene-d_8	98%	95%	97%	105%	94%	75 - 125	
4-Bromofluorobenzene	105%	103%	101%	101%	102%	75 - 125	
	D1-092514-D-0811	D2-092514-D-0811	D1-092514-D-0811	D2-092514-D-0811	D2-092514-D-0811		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B22-15**	**B22-15 REP**	**B23-5**	**B23-15**		
JEL ID:	**D-0811-21**	**D-0811-22**	**D-0811-23**	**D-0811-24**	**Practical Quantitation Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**B22-15**	**B22-15 REP**	**B23-5**	**B23-15**		
JEL ID:	**D-0811-21**	**D-0811-22**	**D-0811-23**	**D-0811-24**	**Practical Quantitation Limit**	**Units**
Analytes:						
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	ND	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	ND	ND	ND	ND	0.008	µg/L
Toluene	**0.088**	**0.069**	ND	ND	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	ND	ND	ND	ND	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	0.008	µg/L
Xylenes	ND	ND	ND	ND	0.008	µg/L
MTBE	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	0.400	µg/L
TIC:						
n-propanol	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	97%	101%	99%	97%	75 - 125	
Toluene-d_8	95%	95%	104%	102%	75 - 125	
4-Bromofluorobenzene	102%	105%	100%	101%	75 - 125	
	D1-092314-D-0811	D1-092314-D-0811	D2-092314-D-0811	D2-092314-D-0811		

ND= Not Detected

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**	**METHOD BLANK**	**SAMPLING BLANK**		
JEL ID:	**D-0811-25**	**D-0811-26**	**D-0811-30**	**D-0811-31**	**Practical Quantitation Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	ND	0.008	µg/L
Bromobenzene	ND	ND	ND	ND	0.008	µg/L
Bromodichloromethane	ND	ND	ND	ND	0.008	µg/L
Bromoform	ND	ND	ND	ND	0.008	µg/L
n-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
sec-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
tert-Butylbenzene	ND	ND	ND	ND	0.008	µg/L
Carbon tetrachloride	ND	ND	ND	ND	0.008	µg/L
Chlorobenzene	ND	ND	ND	ND	0.008	µg/L
Chloroform	ND	ND	ND	ND	0.008	µg/L
2-Chlorotoluene	ND	ND	ND	ND	0.008	µg/L
4-Chlorotoluene	ND	ND	ND	ND	0.008	µg/L
Dibromochloromethane	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	0.008	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.008	µg/L
Dibromomethane	ND	ND	ND	ND	0.008	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	0.008	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	0.008	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	0.008	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	0.008	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**	**METHOD BLANK**	**SAMPLING BLANK**		
JEL ID:	**D-0811-25**	**D-0811-26**	**D-0811-30**	**D-0811-31**	**Practical Quantitation Limit**	**Units**
Analytes:						
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.008	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.008	µg/L
Ethylbenzene	ND	ND	ND	ND	0.008	µg/L
Freon 113	ND	ND	ND	ND	0.040	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	0.008	µg/L
Isopropylbenzene	ND	ND	ND	ND	0.008	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	0.008	µg/L
Methylene chloride	ND	ND	ND	ND	0.008	µg/L
Naphthalene	ND	ND	ND	ND	0.008	µg/L
n-Propylbenzene	ND	ND	ND	ND	0.008	µg/L
Styrene	ND	ND	ND	ND	0.008	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	0.008	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.008	µg/L
Tetrachloroethylene	ND	ND	ND	ND	0.008	µg/L
Toluene	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	0.008	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	0.008	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	0.008	µg/L
Trichloroethylene	ND	ND	ND	ND	0.008	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	0.008	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	0.008	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.008	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.008	µg/L
Vinyl chloride	ND	ND	ND	ND	0.008	µg/L
Xylenes	ND	ND	ND	ND	0.008	µg/L
MTBE	ND	ND	ND	ND	0.040	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	0.040	µg/L
Di-isopropylether	ND	ND	ND	ND	0.040	µg/L
tert-amylmethylether	ND	ND	ND	ND	0.040	µg/L
tert-Butylalcohol	ND	ND	ND	ND	0.400	µg/L
TIC:						
n-propanol	ND	ND	ND	ND	0.080	µg/L
n-pentane	ND	ND	ND	ND	0.008	µg/L
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	103%	98%	102%	98%	75 - 125	
Toluene-d_8	101%	97%	102%	104%	75 - 125	
4-Bromofluorobenzene	99%	101%	100%	98%	75 - 125	
	D1-092514-D-0811	D1-092514-D-0811	D2-092514-D-0811	D2-092514-D-0811		

ND= Not Detected

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JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample Spiked: Ambient Air **GC#:** D1-092514-D-0811

JEL ID:	**D-0811-28**	**D-0811-29**			**D-0811-27**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	120%	126%	5.0%	60-140	115%	70-130
1,1-Dichloroethylene	80%	84%	4.6%	60-140	79%	70-130
Cis-1,2-Dichloroethene	86%	87%	1.7%	70-130	85%	70-130
1,1,1-Trichloroethane	102%	103%	0.9%	70-130	100%	70-130
Benzene	87%	91%	3.8%	70-130	88%	70-130
Trichloroethylene	101%	103%	2.0%	70-130	98%	70-130
Toluene	96%	94%	2.3%	70-130	83%	70-130
Tetrachloroethene	103%	103%	0.0%	70-130	92%	70-130
Chlorobenzene	119%	109%	9.0%	70-130	89%	70-130
Ethylbenzene	100%	99%	1.5%	70-130	89%	70-130
1,2,4 Trimethylbenzene	96%	95%	0.8%	70-130	83%	70-130
Surrogate Recovery:						
Dibromofluoromethane	99%	96%		75-125	99%	75-125
Toluene-d_8	93%	105%		75-125	94%	75-125
4-Bromofluorobenzene	105%	99%		75-125	109%	75-125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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JONES ENVIRONMENTAL
QUALITY CONTROL INFORMATION

Client:	Sharp Environmental Technologies, Inc.	**Report date:**	9/25/2014
Client Address:	746 W. 17th Street San Pedro, CA 90731	**JEL Ref. No.:**	D-0811
Attn:	Jeff Sharp	**Date Sampled:**	9/25/2014
		Date Received:	9/25/2014
		Date Analyzed:	9/25/2014
Project Address:	20846 Normandie Torrance, CA	**Physical State:**	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample Spiked: Ambient Air **GC#:** D2-092514-D-0811

JEL ID:	**D-0811-33**	**D-0811-34**			**D-0811-32**	
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	106%	107%	1.4%	60-140	108%	70-130
1,1-Dichloroethylene	95%	99%	4.4%	60-140	97%	70-130
Cis-1,2-Dichloroethene	97%	100%	3.2%	70-130	96%	70-130
1,1,1-Trichloroethane	96%	99%	2.4%	70-130	97%	70-130
Benzene	81%	82%	1.7%	70-130	80%	70-130
Trichloroethylene	99%	102%	3.7%	70-130	93%	70-130
Toluene	87%	87%	1.0%	70-130	84%	70-130
Tetrachloroethene	99%	99%	0.0%	70-130	99%	70-130
Chlorobenzene	102%	106%	4.0%	70-130	102%	70-130
Ethylbenzene	84%	84%	0.7%	70-130	82%	70-130
1,2,4 Trimethylbenzene	92%	94%	2.0%	70-130	88%	70-130
Surrogate Recovery:						
Dibromofluoromethane	100%	99%		75-125	97%	75-125
Toluene-d_8	104%	103%		75-125	105%	75-125
4-Bromofluorobenzene	95%	99%		75-125	100%	75-125

Method Blank = Not Detected

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%

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Chain-of-Custody Record

Client: Sharp Environmental Tech., Inc.
Date: 9/25/14
Project Name:
Client Project #:
Project Address: 20846 Normandie, Torrance, CA
Project Contact: Jeff Sharp

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24-48 Hours
- ☐ Rush 72-96 Hours
- ☐ Normal
- ☒ Mobile Lab

SOIL GAS
Purge Number: ☐ 1P ☒ 3P ☐ 7P ☐ 10P
Purge Rate: ~200 cc/min
Shut in Test (Y) / N
Tracer:
- ☒ n-propanol
- ☒ n-pentane
- ☐ 1,1-DFA
- ☐ Helium
- ☐ _____

JEL Project #: D-0811
Page 1 of 3

Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☒ no
Sealed ☒ yes ☐ no

Analysis Requested

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)	EPA 8260BC (VOCs & OVOCs)				Magnehelic Vacuum (in/H_2O)	Number of Containers	Remarks/Special Instructions
B16-10	3	1383	9/25	0755	0800	D-0811-01	SG	X				14	2	glass gastight syringe
B16-20	3	1547		0758	0803	D-0811-02	SG	X				14	2	
B16-30	3	1711		0806	0819	D-0811-03	SG	X				<2	2	
B16-35	3	1793		0809	0815	D-0811-04	SG	X				10	2	
B17-5	3	1301		0836	0842	D-0811-05	SG	X				8	2	
B17-15	3	1465		0838	0840	D-0811-06	SG	X				12	2	
B17-25	3	1629		0854	0856	D-0811-07	SG	X				10	2	
B17-25REP	3	1629		0908	0914	D-0811-08	SG	X				10	2	
B19-5	3	1301		0938	0943	D-0811-09	SG	X				<2	2	
B19-15	3	1465		0940	0945	D-0811-10	SG	X				<2	2	

❶ Relinquished by (signature)	Date 9/25/14	❷ Received by (signature)	Date 9/25/14
Company Sharp Env	Time 1330	Company Jones Env.	Time 1322
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature)	Date
Company	Time	Company	Time

Total Number of Containers

The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

JONES ENVIRONMENTAL, INC
P.O. Box 5387
Fullerton, CA 92838
(714) 449-9937
Fax (714) 449-9685
www.jonesenvironmentallab.com

Chain-of-Custody Record

Client: Sharp Environmental Tech., Inc.
Date: 9/25/14
Project Name:
Client Project #:
Project Address: 20846 Normandie, Torrance, CA
Project Contact: Jeff Sharp

Turn Around Requested:
- [x] Immediate Attention
- [ ] Rush 24-48 Hours
- [ ] Rush 72-96 Hours
- [ ] Normal
- [x] Mobile Lab

SOIL GAS
Purge Number: [ ] 1P [x] 3P [ ] 7P [ ] 10P
Purge Rate: ~200 cc/min
Shut in Test (Y) N
Tracer:
- [x] n-propanol
- [x] n-pentane
- [ ] 1,1-DFA
- [ ] Helium
- [ ] _____

JEL Project #: D-0811
Page 2 of 3

Lab Use Only
Sample Condition as Received:
Chilled [ ] yes [x] no
Sealed [x] yes [ ] no

Analysis Requested: EPA 8260B (VOCs; 0-75)

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)	EPA 8260B (VOCs; 0-75)				Magnehelic Vacuum (in/H_2O)	Number of Containers	Remarks/Special Instructions
B19-25	3	1629	9/25	0952	1001	D-0811-11	SG	X				10	2	glass gastight syringe
B18-5	3	1301		1033	1037	D-0811-12	SG	X				20	2	LOW FLOW
B18-15	3	1465		1035	1039	D-0811-13	SG	X				10	2	LOW FLOW
B18-25	3	1629		1043	1053	D-0811-14	SG	X				10	2	
B21-5	3	1301		1107	1111	D-0811-15	SG	X				22	2	
B21-15	3	1465		1109	1112	D-0811-16	SG	X				64	2	LOW FLOW
B20-5	3	1301		1137	1141	D-0811-17	SG	X				4	2	
B20-15	3	1465		1139	1142	D-0811-18	SG	X				10	2	LOW FLOW
B20-25	3	1629		1150	1155	D-0811-19	SG	X				8	2	
B22-5	3	1301		1214	1217	D-0811-20	SG	X				6	2	

1 Relinquished by (signature)	Date 9/25/14	2 Received by (signature)	Date 9/25/14
Company Sharp Environmental	Time 1330	Company Jones Env.	Time 1322
3 Relinquished by (signature)	Date	4 Received by Laboratory (signature)	Date
Company	Time	Company	Time

Total Number of Containers

The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

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- ☐ Normal
- ☒ Mobile Lab

SOIL GAS
Purge Number: ☐ 1P ☒ 3P ☐ 7P ☐ 10P
Purge Rate: ~200 cc/min
Shut in Test (Y) / N
Tracer:
- ☒ n-propanol
- ☒ n-pentane
- ☐ 1,1-DFA
- ☐ Helium
- ☐ _____

JEL Project #: D0811

Page 3 of 3

Lab Use Only
Sample Condition as Received:
Chilled ☐ yes ☒ no
Sealed ☒ yes ☐ no

Analysis Requested

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)	EPA 8260B (VOCs & Oxys)				Magnehelic Vacuum (in/H_2O)	Number of Containers	Remarks/Special Instructions
B22-15	3	1465	9/25	1216	1219	D-0811-21	SG	X				6	2	glass gastight syringe
B22-15 REP	3	1465	↓	1226	1237	D-0811-22	SG	X				6	2	↓
B23-5	3	1301	↓	1230	1233	D-0811-23	SG	X				40	2	LOW FLOW
B23-15	3	1465	↓	1244	1249	D-0811-24	SG	X				62	2	↓ LOW FLOW

❶ Relinquished by (signature)	Date 9/26/14	❷ Received by (signature)	Date 9/25/14	Total Number of Containers
Company: Sharp Environmental	Time 1230	Company: Jones Env.	Time 1322	The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.
❸ Relinquished by (signature)	Date	❹ Received by Laboratory (signature)	Date	
Company	Time	Company	Time	

APPENDIX C

Johnson Ettinger Models

DTSC Vapor Intrusion Screening Model - Soil Gas

Introduction

This vapor intrusion model should be used in conjunction with the 2011 Department of Toxic Substances Control (DTSC) document: "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion into Indoor Air", also called the Vapor Intrusion Guidance (VIG).

The Johnson and Ettinger (J&E) model (1991) predicts indoor air concentrations resulting from subsurface vapor migration into indoor air. The model produces an attenuation factor "alpha" that represents the ratio of the indoor air concentration to the subsurface concentration. Indoor air concentrations can be estimated from subsurface data (contaminant concentration in soil gas or groundwater) and the attenuation factor. The USEPA programmed the J&E model into Microsoft EXCEL™ and added a human health risk component that calculates the risk associated with inhalation of a specific contaminant at the estimated indoor air concentration (USEPA Vapor Intrusion Model; 2004a). The USEPA "User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings" (2004b) should be reviewed for documentation and instructions for using the vapor intrusion model provided in the spreadsheets. The USEPA screening level model can be used an additional line of evidence for evaluating vapor intrusion at a site. The model has been modified by the DTSC Human and Ecological Risk Office (HERO) to include Cal/EPA toxicity criteria values for the risk calculation component.

After preliminary evaluation of a site for potential vapor intrusion by use of default vapor attenuation factors (DTSC VIG, Step 5), a site-specific screening evaluation may be conducted using physical parameter data collected for the site and the DTSC version of the USEPA Vapor Intrusion Model (DTSC VIG, Steps 6 and 7). Table 3 of the DTSC VIG lists the input parameters for Site-Specific Screening Evaluations and provides default values for several parameters.

Users of the spreadsheet should be familiar with the assumptions and limitations of the model and recognize when the model is not appropriate for evaluating a site. For example, the model cannot evaluate preferential migration pathways and fractured bedrock conditions, which have the potential to significantly increase the rate of vapor intrusion beyond what the model would predict. Input parameters for a given site must be appropriately conservative and match site-specific conditions. The user should understand the sensitivity of the model to various input parameters and the DTSC recommends that all vapor intrusion evaluations include a sensitivity analysis. (See DTSC 2011 and USEPA 2004b).

March 2014 Revisions (last update - December 2011)

The DTSC version of the USEPA vapor intrusion spreadsheet model has been revised to (1) reflect recommendations in the Final DTSC Vapor Intrusion Guidance (2011), (2) provide additional receptor exposure scenarios, and (3) update toxicity criteria values from Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) and USEPA as currently recommended by the DTSC Human and Ecological Risk Office. Other revisions include changes in default soil properties and values for chemical physical properties, addition of references and comments for specific toxicity criteria, and messages and flags to refer the user to additional information.

Soil Properties (DATENTER H24, F36:H36)

The default values for soil properties for screening evaluations have been revised to those for sand (SCS soil type "S"; previous values were from USEPA Soil Screening Guidance, 1996), and are consistent with the values used to derive the California Human Health Screening Levels (OEHHA, 2005). Site-specific values may be used for site-specific vapor intrusion evaluations (see Appendices D and H of the VIG).

Additional Receptors (DATENTER Row 47)

A pull-down menu has been provided to allow for evaluation of a commercial/industrial receptor or a user-defined receptor, in addition to the residential receptor.

Receptor Exposure Parameters (DATENTER Row 47)

The auto-fill feature (using the "Lookup Receptor Parameters" button) will provide default exposure assumptions and air exchange rate for the residential and commercial scenarios. The user can also enter site-specific expsoure parameters if the "user-defined" scenario is selected.

Exposure Time (DATENTER I47)

Exposure Time was added as a parameter for receptor inhalation exposures. This revision is consistent with USEPA (2009) methodology to use the type of human health toxicity values which are currently derived by the USEPA Integrated Risk Information System (IRIS) as concentrations (Reference Concentrations, [or Cal/EPA OEHHA References Exposure Levels] for non-cancer effects and Inhalation Unit Risk values for cancer endpoints) rather than the earlier and now superseded intake-based approach. This revision is also needed for evaluation of receptor daily exposures that are less than 24 hours.

Air Exchange Rate (DATENTER J47)

The Air Exchange Rate was added as an input parameter specific to a receptor scenario—residential (default = 0.5 changes per hour), commercial (default = 1.0 changes per hour), or user-defined. A user-defined site-specific air exchange rate may be higher or lower than the default. However, the exchange rate must be within a reasonable range and the basis for the value must be technically supported. The building dimensions remain fixed for the screening scenarios (INTERCALCS I10).

Default Attenuation Factor (alpha) for Subslab Soil Gas Data (DATENTER E24, F24, J36, J37; INTERCALCS A10, H31; message at RESULTS B19 and DATENTER K9)

For soil gas, the "source - building separation", L_T, is calculated by the model as the difference between the depth below grade to the bottom of the enclosed space, L_F (E24), and the soil gas sampling depth below grade, L_S (F24) (ideally, the depth to the source): $L_T = L_S - L_F$

If L_T, is less than 40 cm (OEHHA 2005; engineered fill scenario), the model defaults to the empirically derived subslab attenuation factor of 0.05 (DTSC VIG Table 2 and Appendix B):

If L_T < 40 cm, alpha = 0.05

Minimum Attenuation Factor (DATENTER L7; INTERCALCS H31; message at INTERCALCS H32, RESULTS B19 and DATENTER K9)

In certain site-specific situations, the model can yield very low attenuation factors, lower than reasonable values. DTSC does not anticipate that many sites will have attenuation factors less than 0.00006 (6E-05) for soil gas, as indicated by the empirical data in USEPA's database (5th percentile of attenuation factors remaining after source strength screen of 500X for exterior soil gas; USEPA, 2012). A warning message will appear on the INTERCALCS, RESULTS and DATENTER worksheets if the calculated attenuation factor is less than 0.00006. Use of attenuation factors less than 0.00006 should be fully explained and justified with site-specific information and a weight-of-evidence approach.

Results Summary (DATENTER J4:N7)

The receptor scenario, soil gas concentration (source vapor concentration, C_{source}), attenuation factor (alpha), indoor air concentration ($C_{building}$), cancer risk and hazard quotient are now shown on the DATENTER worksheet for easy reference and printing. For the soil gas model, C_{source} is the measured soil gas concentration input into the model. For the groundwater model, C_{source} is calculated from the groundwater concentration input into the model.

Chemical Properties (VLOOKUP, Chemical Properties Lookup Table)

The Chemical Properties Lookup Table columns C through H represent the current DTSC/HERO recommendations. These values reflect the chemical properties listed in the USEPA November 2013 Regional Screening Level (RSL) Table and USEPA online Vapor Intrusion Screening Level Calculator, except for the chemicals listed below:

75296 **2-Chloropropane** - Not listed in the RSL table; original spreadsheet values are retained.
108872 **Methylcyclohexane** - Not listed in the RSL table; original spreadsheet values are retained.
541731 **1,3-Dichlorobenzene** - Not listed in the RSL table; average values for 1,2- and 1,4-isomers from the RSL table are used as surrogate.

Toxicity Criteria (VLOOKUP, Chemical Properties Lookup Table)

The toxicity criteria listed in the Chemical Properties Lookup Table columns M (Inhalation Unit Risk, IUR) and N (Reference Concentration, RfC), represent current DTSC/HERO recommendations. These values are used by the model for calculating risk and hazard. The toxicity criteria listed in columns S (IUR) and T (RfC) are from the USEPA November 2013 Regional Screening Level (RSL) Tables. For screening evaluations, DTSC/HERO applies route-extrapolation of oral toxicity values when inhalation criteria are not available. The RSL table excludes inhalation critiera derived by route-extrapolation from oral toxicity values. Many of the RfCs previously based on route-extrapolation have been replaced by USEPA provisional RfC or screening RfCs. Toxicity criteria from the original USEPA version of the model are shown as "Archive" values in columns W and X. Chemicals for which toxicity criteria values in columns M and N have been revised are listed below. See cell notes in VLOOKUP for further information.

OEHHA = Cal/EPA Office of Environmental Health Hazard Assessment
IRIS = USEPA Integrated Risk Information System
RSL = USEPA Regional Screening Level (Tables and Chemical-Specific values)
PPRTV = USEPA Provisional Peer-Reviewed Toxicity Value (PPRTV also refers to the USEPA document)
IUR = Inhalation Unit Risk
REL = Reference Exposure Level (Cal/EPA OEHHA inhalation reference concentration)
RfC = Reference Concentration
RfDi = Inhalation Reference Dose
RfDo = Oral Reference Dose
ATSDR = Agency for Toxic Substances and Disease Registry
MRL = ATSDR Minimal Risk Level

67663 **Chloroform** - IUR was revised to USEPA IRIS value. RfC was revised to ATSDR value as recommended in November 2013 RSL table.

67721 **Hexachloroethane** - RfC updated to 2011 USEPA RfC.

71432 **Benzene** - RfC from USEPA 2003 IRIS replaced with OEHHA 2014 REL

71556 **1,1,1-Trichloroethane** - RfC replaced with OEHHA REL.

74873 **Methyl Chloride** (Chloromethane) - IUR value withdrawn; USEPA 2012 PPRTV determined data are inadequate for assessment of carcinogenic potential.

74908 **Hydrogen Cyanide** - RfC updated to 2010 IRIS RfC.

74953 **Methylene Bromide** (Dibromomethane) - RfC derived from RfDo replaced with USEPA 2009 PPRTV Appendix A screening chronic RfC.

75003 **Chloroethane** - IUR value withdrawn by USEPA. 2007 PPRTV characterized chloroethane as likely to be carcinogenic to humans; however, data are inadequate for calculation of inhalation unit risk. Listed in 1990 as Cal/EPA Prop. 65 carcinogen.

75718 **Dichlorodifluoromethane** - RfC updated with 2010 PPRTV Appendix A screening chronic RfC.

79005 **1,1,2-Trichloroethane** - RfC derived from RfDo replaced with 2011 PPRTV Appendix A screening chronic RfC.

79345 **1,1,2,2-Tetrachloroethane** - RfC derived from PPRTV RfDo was updated using route-to-route extrapolation of 2010 IRIS RfDo.

88722 **o-Nitrotoluene** - Added IUR derived from route extrapolation of USEPA 2008 PPRTV oral cancer slope factor. USEPA classified as likely to be carcinogenic to humans. Listed in 1998 as Cal/EPA Prop. 65 carcinogen.

92524 **Biphenyl** - RfC derived from RfDo replaced with USEPA 2011 PPRTV Appendix A screening chronic RfC. Suggestive evidence of carcinogenicity.

96333 **Methyl Acrylate** - RfC derived from RfDo replaced with 2012 PPRTV RfC recommended in the November 2013 RSL Table.

97632 **Ethylmethylacrylate** - RfC derived from RfDo replaced with 2010 PPRTV RfC recommended in the November 2013 RSL Table.

98066 ***tert*-Butylbenzene** - RfC derived from RfDo replaced with IRIS RfC for isopropylbenzene (cumene), surrogate recommended by 2012 PPRTV for tert-butylbenzene.

98953 **Nitrobenzene** - IUR added and RfC updated with the 2009 IRIS assessment. Likely to be carcinogenic to humans (combined route).

103651 **n-Propylbenzene** - RfC derived from RfDo replaced with IRIS RfC for ethyl benzene, surrogate recommended in 2009 PPRTV Appendix A and used in November 2013 RSL table.

104518 **n-Butylbenzene** - RfC derived from provisional RfDo updated using route-to-route extrapolation of 2010 IRIS RfDo.

106934 **1,2-Dibromoethane** - IUR from OEHHA replaced with more conservative IRIS IUR.

107062 **1,2-Dichloroethane** - IUR from OEHHA replaced with IRIS IUR. RfC (OEHHA 2000 REL) updated with USEPA 2010 PPRTV RfC.

108678 **1,3,5-Trimethylbenzene** - RfC derived as 2003 PPRTV was withdrawn by USEPA; replaced with RfC HERO derived by route extrapolation of 2009 PPRTV screening chronic RfDo.

108872 **Methylcyclohexane** - RfC from HEAST replaced with IRIS 2005 RfC for surrogate hexane.

108907 **Chlorobenzene** - RfC from OEHHA (REL) replaced with USEPA 2006 PPRTV RfC.

120821 **1,2,4-Trichlorobenzene** - RfC from 2002 PPRTV updated with USEPA 2009 PPRTV RfC.

126987 **Methacrylonitrile** - RfC from HEAST updated with USEPA 2013 PPRTV RfC.

126998 **2-Chloro-1,3-butadiene** (Chloroprene) - IUR added and RfC from HEAST updated with IRIS RfC. USEPA 2010 IRIS assessment characterized chloroprene as likely to be carcinogenic to humans. Listed in 2000 as Cal/EPA Prop. 65 carcinogen.

132649 **Dibenzofuran** - RfC derived from provisional RfDo replaced with RfC derived from route-extrapolation of USEPA 2007 PPRTV screening chronic RfDo.

135988 ***sec*-Butylbenzene** - RfC replaced with IRIS RfC for isopropylbenzene, surrogate recommended by 2012 PPRTV for sec-butylbenzene.

141786 **Ethylacetate** - RfC derived from 1988 IRIS RfDo replaced by USEPA 2013 PPRTV RfC.

156592 ***cis*-1,2-Dichloroethylene** - RfC derived from HEAST RfDo replaced with RfC derived from extrapolation of the 2010 IRIS RfDo.

319846 **alpha-HCH** (Hexachlorohexane; alpha-BHC) - IUR from OEHHA replaced with more conservative USEPA IRIS IUR.

Additional Chemicals (VLOOKUP, Chemical Properties Lookup Table)

Chemicals have been added to the list for vapor intrusion evaluation as a result of toxicity criteria being derived or revised, more frequent detection at sites, and/or as needed for specific sites. See cell notes in VLOOKUP for chemical-specific information.

109999 **Tetrahydrofuran**

96128 **1,2-Dibromo-3-chloropropane**

142289 **1,3-Dichloropropane**
123-91-1 **1,4-Dioxane**
108-60-1 **bis(2-Chloroisopropyl)ether**
542-88-1 **bis(Chloromethyl)ether**
108-20-3 **Diisopropyl ether (DIPE)**
106-89-8 **Epichlorohydrin**
924-16-3 **N-Nitroso-di-n-butylamine**
109660 **Pentane, n-**
110827 **Cyclohexane**

Chemical-Specific Information - Message (DATENTER I13)

For certain chemicals, a message will appear beneath the chemical name referring the user to the VLOOKUP Chemical Properties Lookup Table for comments on chemical properties and/or toxicity criteria. The comments provide chemical-specific information important for interpretation and/or application of the results in risk characterization and risk management. Included are possible or likely carcinogens for which inhalation unit risks have not been developed for quantifying potential risks.

Trichloroethylene (Trichloroethene, TCE; VLOOKUP, Chemical Properties Lookup Table M70, N70; message at DATENTER I13)

To protect women in the first trimester of pregnancy as one of the most sensitive populations, due to potential developmental toxicity from exposure to TCE, USEPA Region 9 (2013) developed health-protective interim response action levels and guidelines to address short-term inhalation exposures to TCE in indoor air from subsurface vapor intrusion. HERO concurs with use of the USEPA Region 9's "Prompt Response Action Levels" of 2 $\mu g/m^3$ and 9 $\mu g/m^3$ for exposure to TCE under residential and commercial/industrial 8-hour workday scenarios, respectively.

In the event the model-predicted indoor air concentration of TCE for a site approaches or exceeds these interim action levels, the DTSC Project Manager and Toxicologist should be contacted for a site-specific evaluation.

(Note that these prompt response action levels are close to the long-term exposure, cancer risk-based indoor air concentrations for 10^{-6} risk, 0.4 $\mu g/m^3$ for residential exposures and 3 $\mu g/m^3$ for 8-hour/day commercial/industrial exposures.)

References

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Soil Properties Lookup Table

SCS Soil Type	K_s (cm/h)	α_1 (1/cm)	N (unitless)	M (unitless)	n (cm^3/cm^3)	θ_r (cm^3/cm^3)	Mean Grain Diameter (cm)	Bulk Density (g/cm^3)	θ_w (cm^3/cm^3)	SCS Soil Name
C	0.61	0.01496	1.253	0.2019	0.459	0.098	0.0092	1.43	0.215	Clay
CL	0.34	0.01581	1.416	0.2938	0.442	0.079	0.016	1.48	0.168	Clay Loam
L	0.50	0.01112	1.472	0.3207	0.399	0.061	0.020	1.59	0.148	Loam
LS	4.38	0.03475	1.746	0.4273	0.390	0.049	0.040	1.62	0.076	Loamy Sand
S	26.78	0.03524	3.177	0.6852	0.375	0.053	0.044	1.66	0.054	Sand
SC	0.47	0.03342	1.208	0.1722	0.385	0.117	0.025	1.63	0.197	Sandy Clay
SCL	0.55	0.02109	1.330	0.2481	0.384	0.063	0.029	1.63	0.146	Sandy Clay Loam
SI	1.82	0.00658	1.679	0.4044	0.489	0.050	0.0046	1.35	0.167	Silt
SIC	0.40	0.01622	1.321	0.2430	0.481	0.111	0.0039	1.38	0.216	Silty Clay
SICL	0.46	0.00839	1.521	0.3425	0.482	0.090	0.0056	1.37	0.198	Silty Clay Loam
SIL	0.76	0.00506	1.663	0.3987	0.439	0.065	0.011	1.49	0.180	Silt Loam
SL	1.60	0.02667	1.449	0.3099	0.387	0.039	0.030	1.62	0.103	Sandy Loam

NEW => Receptor Lookup Table (added by HERO)

Receptor Type	AT_C (yrs)	AT_{NC} (yrs)	ED (yrs)	EF (days/yr)	ET (hrs/day)	ACH (1/hour)
Residential	70	30	30	350	24	0.5
Commercial	70	25	25	250	8	1
User-Defined						

Notes on Toxicity Criteria (see cell comments for individual chemical toxicity values)

1. Chemical name (blue) = Carcinogens with IUR
2. Values are from USEPA IRIS database except as indicated.
3. **Bold** = Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) toxicity value
4. IUR or RfC (red) = revised values (March 2014 update of December 2011 values)
5. X denotes route extrapolation from oral toxicity criteria.
   (Values posted by USEPA or OEHHA as inhalation criteria, including cancer slope factors, are not denoted except as in original USEPA 2002 Draft VI guidance.)

Chemical Properties Lookup Table (K_{oc}, D_a, D_w, S, H', H values updated per USEPA November 2013 RSL Table)

NEW => 11 Additional Chemicals (CAS No. in red)

DTSC-Recommended Toxicity Criteria Values Used to Calculate Risk and Hazard (last updated March 2014) (0.0E+00 = no value available) | USEPA-Recommended Toxicity Criteria Values November 2013 RSL Table | ARCHIVE Original USEPA Toxicity Criteria (USEPA 2002 Draft Vapor Intrusion Guidance)

CAS No.	Chemical	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Pure component water solubility, S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	DTSC Inhalation Unit Risk IUR $(\mu g/m^3)^{-1}$	DTSC Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)	DTSC Extrapolated from oral toxicity value IUR (X)	DTSC Extrapolated from oral toxicity value RfC (X)	Comment Flag (y)	USEPA Inhalation Unit Risk IUR $(\mu g/m^3)^{-1}$	USEPA Reference conc., RfC (mg/m^3)	USEPA Extrapolated from oral toxicity value IUR (X)	USEPA Extrapolated from oral toxicity value RfC (X)	ARCHIVE Unit Risk Factor URF $(\mu g/m^3)^{-1}$	ARCHIVE Reference conc., RfC (mg/m^3)	ARCHIVE Extrapolated from oral toxicity value URF (X)	ARCHIVE Extrapolated from oral toxicity value RfC (X)
56235	Carbon tetrachloride	4.39E+01	5.71E-02	9.79E-06	7.93E+02	1.13E+00	2.76E-02	25	349.9	556.6	7,127	**4.2E-05**	**4.0E-02**	1.54E+02				6.0E-06	1.0E-01			1.5E-05	0.0E+00		
57749	Chlordane	3.38E+04	3.44E-02	4.02E-06	5.60E-02	1.99E-03	4.85E-05	25	624.2	885.7	14,000	**3.4E-04**	7.0E-04	4.10E+02				1.0E-04	7.0E-04			1.0E-04	7.0E-04		
58899	gamma-HCH (Lindane)	2.81E+03	4.33E-02	5.06E-06	7.30E+00	2.10E-04	5.14E-06	25	596.6	839.4	15,000	**3.1E-04**	1.1E-03	2.91E+02		X		3.1E-04				3.7E-04	1.1E-03	X	X
60297	Ethyl ether	9.70E+00	8.52E-02	9.36E-06	6.04E+04	5.03E-02	1.23E-03	25	307.5	466.7	6,338	0.0E+00	7.0E-01	7.41E+01		X						0.0E+00	7.0E-01		X
60571	Dieldrin	2.01E+04	2.33E-02	6.01E-06	1.95E-01	4.09E-04	1.00E-05	25	613.3	842.3	17,000	**4.6E-03**	1.8E-04	3.81E+02		X		4.6E-03				4.6E-03	1.8E-04		X
67641	Acetone	2.36E+00	1.06E-01	1.15E-05	1.00E+06	1.43E-03	3.50E-05	25	329.2	508.1	6,955	0.0E+00	3.1E+01	5.81E+01					3.1E+01			0.0E+00	3.5E-01		X
67663	Chloroform	3.18E+01	7.69E-02	1.09E-05	7.95E+03	1.50E-01	3.67E-03	25	334.3	536.4	6,988	2.3E-05	9.8E-02	1.19E+02				2.3E-05	9.8E-02			2.3E-05	0.0E+00		
67721	Hexachloroethane	1.97E+02	3.21E-02	8.89E-06	5.00E+01	1.59E-01	3.89E-03	25	458.0	695.0	9,510	**1.1E-05**	3.0E-02	2.37E+02				1.1E-05	3.0E-02			4.0E-06	3.5E-03		X
71432	Benzene	1.46E+02	8.95E-02	1.03E-05	1.79E+03	2.27E-01	5.55E-03	25	353.2	562.2	7,342	**2.9E-05**	**3.0E-03**	7.81E+01			y	7.8E-06	3.0E-02			7.8E-06	0.0E+00		
71556	1,1,1-Trichloroethane	4.39E+01	6.48E-02	9.60E-06	1.29E+03	7.03E-01	1.72E-02	25	347.2	545.0	7,136	0.0E+00	**1.0E+00**	1.33E+02					5.0E+00			0.0E+00	2.2E+00		
72435	Methoxychlor	2.69E+04	2.21E-02	5.59E-06	1.00E-01	8.30E-06	2.03E-07	25	651.0	848.5	16,000	0.0E+00	1.8E-02	3.46E+02		X						0.0E+00	1.8E-02		X
72559	DDE	1.18E+05	4.08E-02	4.76E-06	4.00E-02	1.70E-03	4.16E-05	25	636.4	860.4	15,000	**9.7E-05**	0.0E+00	3.18E+02	X			9.7E-05		X		9.7E-05	0.0E+00	X	
74839	Methyl bromide (bromomethane)	1.32E+01	1.00E-01	1.35E-05	1.52E+04	3.00E-01	7.34E-03	25	276.7	467.0	5,714	0.0E+00	**5.0E-03**	9.49E+01					5.0E-03			0.0E+00	5.0E-03		
74873	Methyl chloride (chloromethane)	1.32E+01	1.24E-01	1.36E-05	5.32E+03	3.61E-01	8.82E-03	25	249.0	416.3	5,115	0.0E+00	9.0E-02	5.05E+01			y		9.0E-02			1.0E-06	9.0E-02		
74908	Hydrogen cyanide	3.80E+00	1.68E-01	1.68E-05	1.00E+06	5.44E-03	1.33E-04	25	299.0	456.7	6,676	0.0E+00	8.0E-04	2.70E+01					8.0E-04			0.0E+00	3.0E-03		
74953	Methylene bromide (dibromomethane)	2.17E+01	5.51E-02	1.19E-05	1.19E+04	3.36E-02	8.22E-04	25	370.0	583.0	7,868	0.0E+00	4.0E-03	1.74E+02					4.0E-03			0.0E+00	3.5E-02		X
75003	Chloroethane (ethyl chloride)	2.17E+01	1.04E-01	1.16E-05	6.71E+03	4.54E-01	1.11E-02	25	285.3	460.4	5,879	1.3E-06	1.0E+01	6.45E+01	X		y		1.0E+01			8.3E-07	1.0E+01	X	
75014	Vinyl chloride (chloroethene)	2.17E+01	1.07E-01	1.20E-05	8.80E+03	1.14E+00	2.78E-02	25	259.3	432.0	5,250	**7.8E-05**	1.0E-01	6.25E+01				8.8E-06	1.0E-01			8.8E-06	1.0E-01		
75058	Acetonitrile	4.67E+00	1.34E-01	1.41E-05	1.00E+06	1.41E-03	3.45E-05	25	354.6	545.5	7,110	0.0E+00	6.0E-02	4.11E+01					6.0E-02			0.0E+00	6.0E-02		
75070	Acetaldehyde	1.00E+00	1.28E-01	1.35E-05	1.00E+06	2.73E-03	6.67E-05	25	293.1	466.0	6,157	**2.7E-06**	9.0E-03	4.41E+01				2.2E-06	9.0E-03			2.2E-06	9.0E-03		
75092	Methylene chloride (dichloromethane)	2.17E+01	9.99E-02	1.25E-05	1.30E+04	1.33E-01	3.25E-03	25	313.0	510.0	6,706	**1.0E-06**	**4.0E-01**	8.49E+01				1.0E-08	6.0E-01			4.7E-07	3.0E+00		
75150	Carbon disulfide	2.17E+01	1.06E-01	1.30E-05	2.16E+03	5.89E-01	1.44E-02	25	319.0	552.0	6,391	0.0E+00	7.0E-01	7.61E+01					7.0E-01			0.0E+00	7.0E-01		
75218	Ethylene oxide	3.24E+00	1.34E-01	1.45E-05	1.00E+06	6.05E-03	1.48E-04	25	283.6	469.0	6,104	**8.8E-05**	**3.0E-02**	4.41E+01				8.8E-05	3.0E-02			1.0E-04	0.0E+00		
75252	Bromoform	3.18E+01	3.57E-02	1.04E-05	3.10E+03	2.19E-02	5.35E-04	25	422.4	696.0	9,479	1.1E-06	7.0E-02	2.53E+02		X		1.1E-06				1.1E-06	7.0E-02		X
75274	Bromodichloromethane	3.18E+01	5.63E-02	1.07E-05	3.03E+03	8.67E-02	2.12E-03	25	363.2	585.9	7,800	**3.7E-05**	7.0E-02	1.64E+02	X	X		3.7E-05		X		1.8E-05	7.0E-02	X	X
75296	2-Chloropropane	9.14E+00	8.88E-02	1.01E-05	3.73E+03	5.93E-01	1.45E-02	25	308.7	485.0	6,286	0.0E+00	1.0E-01	7.85E+01			y					0.0E+00	1.0E-01		
75343	1,1-Dichloroethane	3.18E+01	8.36E-02	1.06E-05	5.04E+03	2.30E-01	5.62E-03	25	330.6	523.0	6,895	**1.6E-06**	7.0E-01	9.90E+01	X	X		1.6E-06				0.0E+00	5.0E-01		
75354	1,1-Dichloroethylene	3.18E+01	8.63E-02	1.10E-05	2.42E+03	1.07E+00	2.61E-02	25	304.8	576.1	6,247	0.0E+00	**7.0E-02**	9.69E+01					2.0E-01			0.0E+00	2.0E-01		
75456	Chlorodifluoromethane	3.18E+01	1.03E-01	1.33E-05	2.77E+03	1.66E+00	4.06E-02	25	232.4	369.3	4,836	0.0E+00	5.0E+01	8.65E+01					5.0E+01			0.0E+00	5.0E+01		
75694	Trichlorofluoromethane	4.39E+01	6.54E-02	1.00E-05	1.10E+03	3.97E+00	9.70E-02	25	296.7	471.0	5,999	0.0E+00	7.0E-01	1.37E+02					7.0E-01			0.0E+00	7.0E-01		
75718	Dichlorodifluoromethane	4.39E+01	7.60E-02	1.08E-05	2.80E+02	1.40E+01	3.43E-01	25	243.2	385.0	9,421	0.0E+00	1.0E-01	1.21E+02					1.0E-01			0.0E+00	2.0E-01		
76131	1,1,2-Trichloro-1,2,2-trifluoroethane	1.97E+02	3.76E-02	8.59E-06	1.70E+02	2.15E+01	5.26E-01	25	320.7	487.3	6,463	0.0E+00	3.0E+01	1.87E+02					3.0E+01			0.0E+00	3.0E+01		
76448	Heptachlor	4.13E+04	2.23E-02	5.70E-06	1.80E-01	1.20E-02	2.94E-04	25	603.7	846.3	13,000	**1.2E-03**	1.8E-03	3.73E+02		X		1.3E-03				1.3E-03	1.8E-03		X
77474	Hexachlorocyclopentadiene	1.40E+03	2.72E-02	7.22E-06	1.80E+00	1.10E+00	2.70E-02	25	512.2	746.0	10,931	0.0E+00	2.0E-04	2.73E+02					2.0E-04			0.0E+00	2.0E-04		
78831	Isobutanol	2.92E+00	8.97E-02	1.00E-05	8.50E+04	4.00E-04	9.78E-06	25	381.0	547.8	10,936	0.0E+00	1.1E+00	7.41E+01		X						0.0E+00	1.1E+00		X
78875	1,2-Dichloropropane	6.07E+01	7.33E-02	9.73E-06	2.80E+03	1.15E-01	2.82E-03	25	369.5	572.0	7,590	**1.0E-05**	4.0E-03	1.13E+02	X			1.0E-05	4.0E-03			1.9E-05	4.0E-03	X	
78933	Methylethylketone (2-butanone)	4.51E+00	9.14E-02	1.02E-05	2.23E+05	2.33E-03	5.69E-05	25	352.5	536.8	7,481	0.0E+00	5.0E+00	7.21E+01					5.0E+00			0.0E+00	1.0E+00		
79005	1,1,2-Trichloroethane	6.07E+01	6.69E-02	1.00E-05	4.59E+03	3.37E-02	8.24E-04	25	386.2	602.0	8,322	1.6E-05	2.0E-04	1.33E+02				1.6E-05	2.0E-04			1.6E-05	1.4E-02		X
79016	Trichloroethylene	6.07E+01	6.87E-02	1.02E-05	1.28E+03	4.03E-01	9.85E-03	25	360.4	544.2	7,505	4.1E-06	2.0E-03	1.31E+02			y	4.1E-06	2.0E-03			1.1E-04	4.0E-02	X	
79209	Methyl acetate	3.06E+00	9.58E-02	1.10E-05	2.43E+05	4.70E-03	1.15E-04	25	329.8	506.7	7,260	0.0E+00	3.5E+00	7.41E+01		X						0.0E+00	3.5E+00		X
79345	1,1,2,2-Tetrachloroethane	9.49E+01	4.89E-02	9.29E-06	2.83E+03	1.50E-02	3.67E-04	25	419.6	661.2	8,996	**5.8E-05**	7.0E-02	1.68E+02		X		5.8E-05				5.8E-05	2.1E-01		X
79469	2-Nitropropane	3.08E+01	8.47E-02	1.02E-05	1.70E+04	4.87E-03	1.19E-04	25	393.2	594.0	8,383	2.7E-03	2.0E-02	8.91E+01				2.7E-03	2.0E-02			2.7E-03	2.0E-02		
80626	Methylmethacrylate	9.14E+00	7.50E-02	9.21E-06	1.50E+04	1.30E-02	3.19E-04	25	373.5	567.0	8,975	0.0E+00	7.0E-01	1.00E+02					7.0E-01			0.0E+00	7.0E-01		
83329	Acenaphthene	5.03E+03	5.06E-02	8.33E-06	3.90E+00	7.52E-03	1.84E-04	25	550.5	803.2	12,155	0.0E+00	2.1E-01	1.54E+02		X						0.0E+00	2.1E-01		X
86737	Fluorene	9.16E+03	4.40E-02	7.89E-06	1.69E+00	3.93E-03	9.62E-05	25	570.4	870.0	12,666	0.0E+00	1.4E-01	1.66E+02		X						0.0E+00	1.4E-01		X
87683	Hexachloro-1,3-butadiene	8.45E+02	2.67E-02	7.03E-06	3.20E+00	4.21E-01	1.03E-02	25	486.2	738.0	10,206	2.2E-05	3.5E-03	2.61E+02		X		2.2E-05				2.2E-05	7.0E-04		X
88722	o-Nitrotoluene	3.71E+02	5.88E-02	8.67E-06	6.50E+02	5.11E-04	1.25E-05	25	495.0	720.0	12,239	6.3E-05	3.2E-03	1.37E+02	X	X	y					0.0E+00	3.5E-02		X
91203	Naphthalene	1.54E+03	6.05E-02	8.38E-06	3.10E+01	1.80E-02	4.40E-04	25	491.1	748.4	10,373	**3.4E-05**	3.0E-03	1.28E+02				3.4E-05	3.0E-03			0.0E+00	3.0E-03		
91576	2-Methylnaphthalene	2.48E+03	5.24E-02	7.78E-06	2.46E+01	2.11E-02	5.18E-04	25	514.3	761.0	12,600	0.0E+00	1.4E-02	1.42E+02		X						0.0E+00	7.0E-02		X
92524	Biphenyl	5.13E+03	4.71E-02	7.56E-06	6.94E+00	1.26E-02	3.08E-04	25	529.1	789.0	10,890	0.0E+00	4.0E-04	1.54E+02			y		4.0E-04			0.0E+00	1.8E-01		X
95476	o-Xylene	3.83E+02	6.89E-02	8.53E-06	1.78E+02	2.12E-01	5.18E-03	25	417.6	630.3	8,661	0.0E+00	1.0E-01	1.06E+02					1.0E-01			0.0E+00	1.0E-01		
95501	1,2-Dichlorobenzene	3.83E+02	5.62E-02	8.92E-06	1.56E+02	7.85E-02	1.92E-03	25	453.6	705.0	9,700	0.0E+00	2.0E-01	1.47E+02					2.0E-01			0.0E+00	2.0E-01		
95578	2-Chlorophenol	3.07E+02	6.61E-02	9.48E-06	1.13E+04	4.58E-04	1.12E-05	25	447.5	675.0	9,572	0.0E+00	1.8E-02	1.29E+02		X						0.0E+00	1.8E-02		X
95636	1,2,4-Trimethylbenzene	6.14E+02	6.07E-02	7.92E-06	5.70E+01	2.52E-01	6.16E-03	25	442.3	649.2	9,369	0.0E+00	7.0E-03	1.20E+02					7.0E-03			0.0E+00	6.0E-03		
96128	1,2-Dibromo-3-chloropropane	1.16E+02	3.21E-02	8.90E-06	1.23E+03	6.01E-03	1.47E-04	25	469.0	703.5	9,960	6.0E-03	2.0E-04	2.36E+02				6.0E-03	2.0E-04						
96184	1,2,3-Trichloropropane	1.16E+02	5.75E-02	9.24E-06	1.75E+03	1.40E-02	3.43E-04	25	430.0	652.0	9,171	8.6E-03	3.0E-04	1.47E+02	X		y		3.0E-04			5.7E-04	4.9E-03	X	
96333	Methyl acrylate	5.84E+00	8.60E-02	1.02E-05	4.94E+04	8.14E-03	1.99E-04	25	353.7	536.0	7,749	0.0E+00	2.0E-02	8.61E+01					2.0E-02			0.0E+00	1.1E-01		X
97632	Ethylmethacrylate	1.67E+01	6.53E-02	8.38E-06	5.40E+03	2.34E-02	5.73E-04	25	390.0	571.0	10,957	0.0E+00	3.0E-01	1.14E+02					3.0E-01			0.0E+00	3.2E-01		X
98066	tert-Butylbenzene	1.00E+03	5.30E-02	7.37E-06	2.95E+01	5.40E-01	1.32E-02	25	442.1	1,220.0	8,980	0.0E+00	4.0E-01	1.34E+02								0.0E+00	1.4E-01		X
98828	Cumene	6.98E+02	6.03E-02	7.86E-06	6.13E+01	4.70E-01	1.15E-02	25	425.6	631.1	10,335	0.0E+00	4.0E-01	1.20E+02			y		4.0E-01			0.0E+00	4.0E-01		
98862	Acetophenone	5.19E+01	6.52E-02	8.72E-06	6.13E+03	4.25E-04	1.04E-05	25	475.0	709.5	11,732	0.0E+00	3.5E-01	1.20E+02		X						0.0E+00	3.5E-01		X
98953	Nitrobenzene	2.26E+02	6.81E-02	9.45E-06	2.09E+03	9.81E-04	2.40E-05	25	484.0	719.0	10,566	4.0E-05	9.0E-03	1.23E+02				4.0E-05	9.0E-03			0.0E+00	2.0E-03		
100414	Ethylbenzene	4.46E+02	6.85E-02	8.46E-06	1.69E+02	3.22E-01	7.88E-03	25	409.3	617.2	8,501	**2.5E-06**	1.0E+00	1.06E+02				2.5E-06	1.0E+00			0.0E+00	1.0E+00		
100425	Styrene	4.46E+02	7.11E-02	8.78E-06	3.10E+02	1.12E-01	2.75E-03	25	418.3	636.0	8,737	0.0E+00	**9.0E-01**	1.04E+02					1.0E+00			0.0E+00	1.0E+00		
100447	Benzylchloride	4.46E+02	6.34E-02	8.81E-06	5.25E+02	1.68E-02	4.12E-04	25	452.0	685.0	8,773	**4.9E-05**	1.0E-03	1.27E+02	X			4.9E-05	1.0E-03			4.9E-05	0.0E+00	X	
100527	Benzaldehyde	1.11E+01	7.44E-02	9.46E-06	6.95E+03	1.09E-03	2.67E-05	25	452.0	695.0	11,658	0.0E+00	3.5E-01	1.06E+02		X						0.0E+00	3.5E-01		X
103651	n-Propylbenzene	8.13E+02	6.02E-02	7.83E-06	5.22E+01	4.29E-01	1.05E-02	25	432.2	630.0	9,123	0.0E+00	1.0E+00	1.20E+02					1.0E+00			0.0E+00	1.4E-01		X
104518	n-Butylbenzene	1.48E+03	5.28E-02	7.33E-06	1.18E+01	6.50E-01	1.59E-02	25	456.5	660.5	9,290	0.0E+00	1.8E-01	1.34E+02		X						0.0E+00	1.4E-01		X
106423	p-Xylene	3.75E+02	6.82E-02	8.42E-06	1.62E+02	2.82E-01	6.90E-03	25	411.5	616.2	8,525	0.0E+00	1.0E-01	1.06E+02					1.0E-01			0.0E+00	1.0E-01		
106467	1,4-Dichlorobenzene	3.75E+02	5.50E-02	8.68E-06	8.13E+01	9.85E-02	2.41E-03	25	447.2	684.8	9,271	**1.1E-05**	**8.0E-01**	1.47E+02				1.1E-05	8.0E-01			0.0E+00	8.0E-01		
106898	Epichlorohydrin	9.91E+00	8.89E-02	1.11E-05	6.59E+04	1.24E-03	3.04E-05	25	390.0	600.0	10	**2.3E-05**	1.0E-03	9.25E+01				1.2E-06	1.0E-03						
106934	1,2-Dibromoethane (ethylene dibromid	3.96E+01	4.30E-02	1.04E-05	3.91E+03	2.66E-02	6.50E-04	25	404.6	583.0	8,310	6.0E-04	**8.0E-04**	1.88E+02				6.0E-04	9.0E-03			6.0E-04	9.0E-03		
106990	1,3-Butadiene	3.96E+01	1.00E-01	1.03E-05	7.35E+02	3.01E+00	7.36E-02	25	268.6	425.0	5,370	**1.7E-04**	**2.0E-03**	5.41E+01				3.0E-05	2.0E-03			3.0E-05	0.0E+00		
107028	Acrolein	1.00E+00	1.12E-01	1.22E-05	2.12E+05	4.99E-03	1.22E-04	25	325.6	506.0	6,731	0.0E+00	2.0E-05	5.61E+01					2.0E-05			0.0E+00	2.0E-05		
107062	1,2-Dichloroethane	3.96E+01	8.57E-02	1.10E-05	8.60E+03	4.82E-02	1.18E-03	25	356.7	561.0	7,643	2.6E-05	7.0E-03	9.90E+01				2.6E-05	7.0E-03			2.6E-05	0.0E+00		
107131	Acrylonitrile	8.51E+00	1.14E-01	1.23E-05	7.45E+04	5.64E-03	1.38E-04	25	350.3	519.0	7,786	**2.9E-04**	2.0E-03	5.31E+01				6.8E-05	2.0E-03			6.8E-05	2.0E-03		
108054	Vinyl acetate	5.58E+00	8.49E-02	1.00E-05	2.00E+04	2.09E-02	5.11E-04	25	345.7	519.1	7,800	0.0E+00	**2.0E-01**	8.61E+01					2.0E-01			0.0E+00	2.0E-01		
108101	Methylisobutylketone (4-methyl-2-penta	1.26E+01	6.98E-02	8.35E-06	1.90E+04	5.64E-03	1.38E-04	25	389.5	571.0	8,243	0.0E+00	3.0E+00	1.00E+02			y		3.0E+00			0.0E+00	8.0E-02		

NEW => 11 Additional Chemicals (CAS No. in red)		Chemical Properties Lookup Table (K_{oc}, D_a, D_w, S, H', H values updated per USEPA November 2013 RSL Table)											DTSC-Recommended Toxicity Criteria Values Used to Calculate Risk and Hazard (last updated March 2014) (0.0E+00 = no value available)						USEPA-Recommended Toxicity Criteria Values November 2013 RSL Table				ARCHIVE Original USEPA Toxicity Criteria (USEPA 2002 Draft Vapor Intrusion Guidance)			
		Organic carbon partition coefficient,	Diffusivity in air,	Diffusivity in water,	Pure component water solubility,	Henry's law constant	Henry's law constant at reference temperature,	Henry's law constant reference temperature,	Normal boiling point,	Critical temperature,	Enthalpy of vaporization at the normal boiling point,	Inhalation Unit Risk	Reference conc.,	Molecular weight,	Extrapolated from oral toxicity value		Comment	Inhalation Unit Risk	Reference conc.,	Extrapolated from oral toxicity value		Unit Risk Factor	Reference conc.,	Extrapolated from oral toxicity value	
CAS No.	Chemical	K_{oc}	D_a	D_w	S	H'	H	T_R	T_B	T_C	DH_{vb}	IUR	RfC	MW	IUR	RfC	Flag	IUR	RfC	IUR	RfC	URF	RfC	URF	RfC
		(cm^3/g)	(cm^2/s)	(cm^2/s)	(mg/L)	(unitless)	(atm-m^3/mol)	(^oC)	(^oK)	(^oK)	(cal/mol)	($\mu g/m^3)^{-1}$	(mg/m^3)	(g/mol)	(X)	(X)	(y)	($\mu g/m^3)^{-1}$	(mg/m^3)	(X)	(X)	($\mu g/m^3)^{-1}$	(mg/m^3)	(X)	(X)
108203	Diisopropyl ether (DIPE)	2.28E+01	6.54E-02	7.76E-06	8.80E+03	7.76E-06	2.56E-03	25	341.5	499.9	6,950	0.0E+00	7.0E-01	1.02E+02					7.0E-01						
108383	m-Xylene	3.75E+02	6.84E-02	8.44E-06	1.61E+02	2.94E-01	7.18E-03	25	412.3	617.1	8,523	0.0E+00	1.0E-01	1.06E+02					1.0E-01			0.0E+00	1.0E-01		
108601	bis(2-Chloroisopropyl)ether	8.29E+01	3.99E-02	7.36E-06	1.70E+03	3.03E-03	7.42E-05	25	460.0	690.0	9,695	1.0E-05	1.4E-01	1.71E+02	X			1.0E-05							
108678	1,3,5-Trimethylbenzene	6.02E+02	6.02E-02	7.84E-06	4.82E+01	3.59E-01	8.77E-03	25	437.9	637.3	9,321	0.0E+00	3.5E-02	1.20E+02		X						0.0E+00	6.0E-03		
108872	Methylcyclohexane	7.85E+01	7.35E-02	8.52E-06	1.40E+01	4.22E+00	1.03E-01	25	373.9	572.2	7,474	0.0E+00	7.0E-01	9.82E+01			y					0.0E+00	3.0E+00		
108883	Toluene	2.34E+02	7.78E-02	9.20E-06	5.26E+02	2.71E-01	6.64E-03	25	383.8	591.8	7,930	0.0E+00	**3.0E-01**	9.21E+01					5.0E+00			0.0E+00	4.0E-01		
108907	Chlorobenzene	2.34E+02	7.21E-02	9.48E-06	4.98E+02	1.27E-01	3.11E-03	25	404.9	632.4	8,410	0.0E+00	5.0E-02	1.13E+02					5.0E-02			0.0E+00	6.0E-02		
109660	Pentane, n-	7.22E+01	8.21E-02	8.80E-06	3.80E+01	5.11E+01	1.25E+00	25	309.0	469.7	6,155	0.0E+00	1.0E+00	7.22E+01					1.0E+00						
109693	1-Chlorobutane	7.22E+01	7.84E-02	9.33E-06	1.10E+03	6.83E-01	1.67E-02	25	351.6	542.0	7,263	0.0E+00	1.4E-01	9.26E+01		X						0.0E+00	1.4E+00		X
109999	Tetrahydrofuran	1.08E+01	9.54E-02	1.08E-05	1.00E+06	2.88E-03	7.05E-05	25	339.0	541.0	7,074	0.0E+00	2.0E+00	7.21E+01			y		2.0E+00						
110009	Furan	8.00E+01	1.03E-01	1.17E-05	1.00E+04	2.21E-01	5.40E-03	25	304.6	490.2	6,477	0.0E+00	3.5E-03	6.81E+01		X	y					0.0E+00	3.5E-03		X
110543	Hexane	1.32E+02	7.31E-02	8.17E-06	9.50E+00	7.36E+01	1.80E+00	25	341.7	508.0	6,895	0.0E+00	7.0E-01	8.62E+01					7.0E-01			0.0E+00	2.0E-01		
110827	Cyclohexane	1.46E+02	8.00E-02	9.11E-06	5.50E+01	6.13E+00	1.50E-01	25	353.7	553.4	7,154	0.0E+00	6.0E+00	8.42E+01					6.0E+00						
111444	Bis(2-chloroethyl)ether	3.22E+01	5.67E-02	8.71E-06	1.72E+04	6.95E-04	1.70E-05	25	451.2	659.8	10,803	**7.1E-04**	0.0E+00	1.43E+02				3.3E-04				3.3E-04	0.0E+00		
115297	Endosulfan	6.76E+03	2.25E-02	5.76E-06	3.25E-01	2.66E-03	6.50E-05	25	674.4	942.9	14,000	0.0E+00	2.1E-02	4.07E+02		X						0.0E+00	2.1E-02		X
118741	Hexachlorobenzene	6.20E+03	2.90E-02	7.85E-06	6.20E-03	6.95E-02	1.70E-03	25	582.6	825.0	14,447	**5.1E-04**	2.8E-03	2.85E+02		X		4.6E-04				4.6E-04	2.8E-03		X
120821	1,2,4-Trichlorobenzene	1.36E+03	3.96E-02	8.40E-06	4.90E+01	5.81E-02	1.42E-03	25	486.2	725.0	10,471	0.0E+00	2.0E-03	1.81E+02					2.0E-03			0.0E+00	2.0E-01		
123739	Crotonaldehyde (2-butenal)	1.79E+00	9.56E-02	1.08E-05	1.50E+05	7.93E-04	1.94E-05	25	375.2	568.0	9	5.4E-04	0.0E+00	7.01E+01	X							5.4E-04	0.0E+00	X	
123911	1,4-Dioxane	2.63E+00	8.74E-02	1.05E-05	1.00E+06	1.96E-04	4.80E-06	25	374.3	587.2	8,164	**7.7E-06**	3.0E-02	8.81E+01				5.0E-06	3.0E-02						
124481	Dibromochloromethane	3.18E+01	3.66E-02	1.06E-05	2.70E+03	3.20E-02	7.83E-04	25	416.1	678.2	5,900	**2.7E-05**	7.0E-02	2.08E+02		X		2.7E-05				2.4E-05	7.0E-02	X	X
126987	Methacrylonitrile	1.31E+01	9.64E-02	1.06E-05	2.54E+04	1.01E-02	2.47E-04	25	363.3	554.0	7,600	0.0E+00	3.0E-02	6.71E+01					3.0E-02			0.0E+00	7.0E-04		
126998	2-Chloro-1,3-butadiene (chloroprene)	6.07E+01	8.42E-02	1.00E-05	8.37E+02	2.29E+00	5.61E-02	25	332.4	525.0	8,075	3.0E-04	2.0E-02	8.85E+01				3.0E-04	2.0E-02			0.0E+00	7.0E-03		
127184	Tetrachloroethylene	9.49E+01	5.05E-02	9.46E-06	2.06E+02	7.24E-01	1.77E-02	25	394.4	620.2	8,288	**5.9E-06**	**3.5E-02**	1.66E+02				2.6E-07	4.0E-02			3.0E-06	0.0E+00		
129000	Pyrene	5.43E+04	2.78E-02	7.25E-06	1.35E-01	4.87E-04	1.19E-05	25	668.0	936.0	14,370	0.0E+00	1.1E-01	2.02E+02		X						0.0E+00	1.1E-01		X
132649	Dibenzofuran	9.16E+03	4.11E-02	7.38E-06	3.10E+00	8.71E-03	2.13E-04	25	560.0	824.0	66,400	0.0E+00	3.5E-03	1.68E+02		X						0.0E+00	1.4E-02		X
135988	sec-Butylbenzene	1.33E+03	5.28E-02	7.34E-06	1.76E+01	7.20E-01	1.76E-02	25	446.5	679.0	88,730	0.0E+00	4.0E-01	1.34E+02								0.0E+00	1.4E-01		X
141786	Ethylacetate	5.58E+00	8.23E-02	9.70E-06	8.00E+04	5.48E-03	1.34E-04	25	350.3	523.3	7,634	0.0E+00	7.0E-02	8.81E+01								0.0E+00	3.2E+00		X
142289	1,3-Dichloropropane	7.22E+01	7.39E-02	9.82E-06	2.75E+03	3.99E-02	9.76E-04	25	393.9	590.9	8,103	0.0E+00	7.0E-02	1.13E+02		X									
156592	cis-1,2-Dichloroethylene	3.96E+01	8.84E-02	1.13E-05	6.41E+03	1.67E-01	4.08E-03	25	333.7	544.0	7,192	0.0E+00	7.0E-03	9.69E+01		X						0.0E+00	3.5E-02		X
156605	trans-1,2-Dichloroethylene	3.96E+01	8.76E-02	1.12E-05	4.52E+03	1.67E-01	4.08E-03	25	320.9	516.5	6,717	0.0E+00	6.0E-02	9.69E+01					6.0E-02			0.0E+00	7.0E-02		X
205992	Benzo(b)fluoranthene	5.99E+05	4.76E-02	5.56E-06	1.50E-03	2.69E-05	6.57E-07	25	715.9	969.3	17,000	**1.1E-04**	0.0E+00	2.52E+02				1.1E-04				2.1E-04	0.0E+00	X	
218019	Chrysene	1.81E+05	2.61E-02	6.75E-06	2.00E-03	2.14E-04	5.23E-06	25	714.2	979.0	16,455	**1.1E-05**	0.0E+00	2.28E+02				1.1E-05				2.1E-06	0.0E+00	X	
309002	Aldrin	8.20E+04	3.72E-02	4.35E-06	1.70E-02	1.80E-03	4.40E-05	25	603.0	839.4	15,000	**4.9E-03**	1.1E-04	3.65E+02		X		4.9E-03				4.9E-03	1.1E-04		X
319846	alpha-HCH (alpha-BHC)	2.81E+03	4.33E-02	5.06E-06	2.00E+00	2.10E-04	5.14E-06	25	596.6	839.4	15,000	1.8E-03	0.0E+00	2.91E+02				1.8E-03				1.8E-03	0.0E+00		
541731	1,3-Dichlorobenzene	3.79E+02	5.56E-02	8.80E-06	1.19E+02	8.85E-02	2.17E-03	25	446.0	684.0	9,230	0.0E+00	1.1E-01	1.47E+02		X	y					0.0E+00	1.1E-01		X
542756	1,3-Dichloropropene	7.22E+01	7.63E-02	1.01E-05	2.80E+03	1.45E-01	3.55E-03	25	381.2	587.4	7,900	**1.6E-05**	2.0E-02	1.11E+02				4.0E-06	2.0E-02			4.0E-06	2.0E-02		
542881	bis(Chloromethyl)ether	9.70E+00	7.63E-02	1.04E-05	2.20E+04	1.78E-01	4.36E-03	25	379.0	568.5	7,910	6.2E-02	0.0E+00	1.15E+02			y	6.2E-02							
630206	1,1,1,2-Tetrachloroethane	8.60E+01	4.82E-02	9.10E-06	1.07E+03	1.02E-01	2.50E-03	25	403.5	624.0	9,768	7.4E-06	1.1E-01	1.68E+02		X		7.4E-06				7.4E-06	1.1E-01		X
924163	N-Nitroso-di-n-butylamine	9.15E+02	6.49E-02	7.59E-06	1.27E+03	5.40E-04	1.32E-05	25	389.0	583.5	11,200	**3.1E-03**	0.0E+00	1.58E+02				1.6E-03							
1634044	MTBE (methyl-*tert*-butyl ether)	1.16E+01	7.53E-02	8.59E-06	5.10E+04	2.40E-02	5.87E-04	25	328.3	497.1	6,678	**2.6E-07**	3.0E+00	8.82E+01				2.6E-07	3.0E+00			0.0E+00	3.0E+00		
7439976	Mercury (elemental)	5.20E+01	3.07E-02	6.30E-06	6.00E-02	4.67E-01	1.14E-02	25	629.9	1,750.0	14,127	0.0E+00	**3.0E-05**	2.01E+02					3.0E-04			0.0E+00	3.0E-04		

B16-10

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: n-Butylbenzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.50E+01	6.4E-04	2.9E-02	NA	1.6E-04

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
104518	4.50E+01			n-Butylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

n-Butylbenzene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.28E-02	7.33E-06	1.59E-02	25	9,290	456.46	660.50	0.0E+00	1.8E-01	134.22

END

Scenario: **Residential**

Chemical: **n-Butylbenzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	4.50E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	11,671	1.49E-02	6.10E-01	1.80E-04	8.53E-03	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	4.50E+01	1.25	8.33E+01	8.53E-03	5.00E+03	3.05E+08	**6.42E-04**	2.89E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.8E-01

END

Scenario: **Residential**
Chemical: **n-Butylbenzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.6E-04

MESSAGE SUMMARY BELOW:

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Ethylbenzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.43E+03	7.7E-04	1.1E+00	1.1E-06	1.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	1.43E+03			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Ethylbenzene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.85E-02	8.46E-06	7.88E-03	25	8,501	409.34	617.20	2.5E-06	1.0E+00	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Ethylbenzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.43E+03	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,994	7.45E-03	3.05E-01	1.80E-04	1.11E-02	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.43E+03	1.25	8.33E+01	1.11E-02	5.00E+03	3.47E+06	**7.73E-04**	1.11E+00

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
2.5E-06	1.0E+00

END

Scenario: **Residential**
Chemical: **Ethylbenzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.1E-06	1.1E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Benzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.30E+01	9.2E-04	3.0E-02	3.6E-07	9.7E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	3.30E+01			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Benzene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
8.95E-02	1.03E-05	5.55E-03	25	7,342	353.24	562.16	2.9E-05	3.0E-03	78.11

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Benzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.30E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	7,977	5.30E-03	2.18E-01	1.80E-04	1.45E-02	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	3.30E+01	1.25	8.33E+01	1.45E-02	5.00E+03	1.00E+05	**9.22E-04**	3.04E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
2.9E-05	3.0E-03

END

Scenario: **Residential**
Chemical: **Benzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.6E-07	9.7E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: 1,3,5-Trimethylbenzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.60E+01	7.1E-04	5.4E-02	NA	1.5E-03

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108678	7.60E+01			1,3,5-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour⁻¹)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

1,3,5-Trimethylbenzene

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Unit risk factor, URF ($\mu g/m^3$)	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)
6.02E-02	7.84E-06	8.77E-03	25	9,321	437.89	637.25	0.0E+00	3.5E-02	120.20

END

Scenario: **Residential**

Chemical: **1,3,5-Trimethylbenzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (μg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.60E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	11,495	8.22E-03	3.37E-01	1.80E-04	9.74E-03	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} (μg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (μg/m^3)
15	7.60E+01	1.25	8.33E+01	9.74E-03	5.00E+03	2.72E+07	**7.07E-04**	5.37E-02

Unit risk factor, URF (μg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.5E-02

END

Scenario: **Residential**
Chemical: **1,3,5-Trimethylbenzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.5E-03

MESSAGE SUMMARY BELOW:

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: 1,2,4-Trimethylbenzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.80E+02	7.1E-04	2.0E-01	NA	2.7E-02

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95636	2.80E+02			1,2,4-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

1,2,4-Trimethylbenzene

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Unit risk factor, URF ($\mu g/m^3$)	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)
6.07E-02	7.92E-06	6.16E-03	25	9,369	442.30	649.17	0.0E+00	7.0E-03	120.20

END

Scenario: **Residential**

Chemical: **1,2,4-Trimethylbenzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.80E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	11,516	5.77E-03	2.37E-01	1.80E-04	9.81E-03	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	2.80E+02	1.25	8.33E+01	9.81E-03	5.00E+03	2.40E+07	**7.10E-04**	1.99E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	7.0E-03

END

Scenario: **Residential**
Chemical: **1,2,4-Trimethylbenzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.7E-02

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: 1,1-Dichloroethane

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.71E+02	8.8E-04	2.4E-01	1.6E-07	3.3E-04

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
75343	2.71E+02			1,1-Dichloroethane

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

1,1-Dichloroethane

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
8.36E-02	1.06E-05	5.62E-03	25	6,895	330.55	523.00	1.6E-06	7.0E-01	98.96

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **1,1-Dichloroethane**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (µg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.71E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	7,294	5.39E-03	2.21E-01	1.80E-04	1.35E-02	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)
15	2.71E+02	1.25	8.33E+01	1.35E-02	5.00E+03	2.25E+05	**8.83E-04**	2.39E-01

Unit risk factor, URF (µg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
1.6E-06	7.0E-01

END

Scenario: **Residential**
Chemical: **1,1-Dichloroethane**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.6E-07	3.3E-04

MESSAGE SUMMARY BELOW:

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
6.98E+03	7.7E-04	5.4E+00	NA	5.2E-02

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	6.98E+03			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	6.98E+03	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	6.98E+03	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**7.72E-04**	5.39E+00

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	5.2E-02

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.82E+02	8.4E-04	2.4E-01	NA	7.6E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	2.82E+02			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	304.8	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
289.8	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.82E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	289.8

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	2.82E+02	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**8.42E-04**	2.37E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	7.6E-04

MESSAGE SUMMARY BELOW:

END

B16-20

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
6.20E+01	5.0E-04	3.1E-02	NA	9.9E-05

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	6.20E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	609.6	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
594.6	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	6.20E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	594.6

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	6.20E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**4.98E-04**	3.09E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	9.9E-05

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Ethylbenzene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.82E+02	4.5E-04	1.3E-01	1.3E-07	1.2E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	2.82E+02			Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	609.6	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Ethylbenzene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.85E-02	8.46E-06	7.88E-03	25	8,501	409.34	617.20	2.5E-06	1.0E+00	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Ethylbenzene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
594.6	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.82E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,994	7.45E-03	3.05E-01	1.80E-04	1.11E-02	594.6

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	2.82E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.47E+06	**4.49E-04**	1.27E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
2.5E-06	1.0E+00

END

Scenario: **Residential**
Chemical: **Ethylbenzene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.3E-07	1.2E-04

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.40E+03	4.5E-04	1.5E+00	NA	1.5E-02

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	3.40E+03			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	609.6	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
594.6	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.40E+03	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	594.6

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	3.40E+03	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**4.48E-04**	1.52E+00

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.5E-02

MESSAGE SUMMARY BELOW:

END

B16-30

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.20E+01	3.5E-04	7.8E-03	NA	2.5E-05

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	2.20E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	914.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (µg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
899.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.20E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	899.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)
15	2.20E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**3.53E-04**	7.77E-03

Unit risk factor, URF (µg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.5E-05

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.50E+01	3.2E-04	1.1E-02	1.9E-08	5.3E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	3.50E+01			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	914.4	24	S		

MORE ↓

Lookup Soil

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Trichloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.87E-02	1.02E-05	9.85E-03	25	7,505	360.36	544.20	4.1E-06	2.0E-03	131.39

END

Scenario: **Residential**

Chemical: **Trichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
899.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.50E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	8,382	9.39E-03	3.85E-01	1.80E-04	1.11E-02	899.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	3.50E+01	1.25	8.33E+01	1.11E-02	5.00E+03	3.32E+06	**3.17E-04**	1.11E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
4.1E-06	2.0E-03

END

Scenario: **Residential**
Chemical: **Trichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.9E-08	5.3E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.68E+02	2.4E-04	4.1E-02	9.8E-08	1.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	1.68E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	914.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
899.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.68E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	899.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.68E+02	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**2.41E-04**	4.06E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
9.8E-08	1.1E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: 1,1-Dichloroethane

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
8.40E+01	3.8E-04	3.2E-02	2.1E-08	4.3E-05

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
75343	8.40E+01			1,1-Dichloroethane

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	914.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

1,1-Dichloroethane

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
8.36E-02	1.06E-05	5.62E-03	25	6,895	330.55	523.00	1.6E-06	7.0E-01	98.96

END

Scenario: **Residential**

Chemical: **1,1-Dichloroethane**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
899.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	8.40E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	7,294	5.39E-03	2.21E-01	1.80E-04	1.35E-02	899.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	8.40E+01	1.25	8.33E+01	1.35E-02	5.00E+03	2.25E+05	**3.76E-04**	3.16E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
1.6E-06	7.0E-01

END

Scenario: **Residential**
Chemical: **1,1-Dichloroethane**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
2.1E-08	4.3E-05

MESSAGE SUMMARY BELOW:

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
8.45E+02	3.2E-04	2.7E-01	NA	2.6E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	8.45E+02			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	914.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
899.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	8.45E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	899.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	8.45E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**3.16E-04**	2.67E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.6E-03

MESSAGE SUMMARY BELOW:

END

B17-5

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.90E-01	1.2E-03	5.9E-04	1.0E-09	2.8E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	4.90E-01			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	152.4	24	S		

MORE ↓

Lookup Soil

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Trichloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.87E-02	1.02E-05	9.85E-03	25	7,505	360.36	544.20	4.1E-06	2.0E-03	131.39

END

Scenario: **Residential**

Chemical: **Trichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	4.90E-01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	8,382	9.39E-03	3.85E-01	1.80E-04	1.11E-02	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	4.90E-01	1.25	8.33E+01	1.11E-02	5.00E+03	3.32E+06	**1.21E-03**	5.93E-04

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
4.1E-06	2.0E-03

END

Scenario: **Residential**
Chemical: **Trichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.0E-09	2.8E-04

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.37E+02	1.0E-03	4.5E-01	1.1E-06	1.2E-02

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	4.37E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	152.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm²/cm²)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	4.37E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	4.37E+02	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**1.02E-03**	4.47E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.1E-06	1.2E-02

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: cis-1,2-Dichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.37E+02	1.4E-03	1.0E+00	NA	1.4E-01

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
156592	7.37E+02			cis-1,2-Dichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

cis-1,2-Dichloroethylene

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Unit risk factor, URF ($\mu g/m^3$)	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)
8.84E-02	1.13E-05	4.08E-03	25	7,192	333.65	544.00	0.0E+00	7.0E-03	96.94

END

Scenario: **Residential**

Chemical: **cis-1,2-Dichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (µg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.37E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	7,592	3.91E-03	1.60E-01	1.80E-04	1.43E-02	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)
15	7.37E+02	1.25	8.33E+01	1.43E-02	5.00E+03	1.16E+05	**1.37E-03**	1.01E+00

Unit risk factor, URF (µg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	7.0E-03

END

Scenario: **Residential**
Chemical: **cis-1,2-Dichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.4E-01

MESSAGE SUMMARY BELOW:

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.65E+02	1.2E-03	9.2E-01	NA	8.9E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	7.65E+02			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.65E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	7.65E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**1.21E-03**	9.24E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	8.9E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
4.90E+01	1.3E-03	6.3E-02	NA	2.0E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	4.90E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	152.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	4.90E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	4.90E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**1.29E-03**	6.31E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.0E-04

MESSAGE SUMMARY BELOW:

END

B17-15

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
5.40E+01	4.5E-04	2.4E-02	5.8E-08	6.6E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	5.40E+01			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	5.40E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	5.40E+01	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**4.46E-04**	2.41E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
5.8E-08	6.6E-04

MESSAGE SUMMARY BELOW:

END

B17-25

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.57E+03	2.8E-04	4.5E-01	1.1E-06	1.2E-02

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	1.57E+03			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.57E+03	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.57E+03	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**2.85E-04**	4.47E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.1E-06	1.2E-02

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.80E+01	3.7E-04	1.0E-02	1.8E-08	5.0E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	2.80E+01			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	762	24	S		

MORE ↓

Lookup Soil

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Trichloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.87E-02	1.02E-05	9.85E-03	25	7,505	360.36	544.20	4.1E-06	2.0E-03	131.39

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Trichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.80E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	8,382	9.39E-03	3.85E-01	1.80E-04	1.11E-02	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	2.80E+01	1.25	8.33E+01	1.11E-02	5.00E+03	3.32E+06	**3.72E-04**	1.04E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
4.1E-06	2.0E-03

END

Scenario: **Residential**
Chemical: **Trichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.8E-08	5.0E-03

MESSAGE SUMMARY BELOW:

END

B18-15

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.20E+01	6.3E-04	2.0E-02	NA	6.4E-05

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	3.20E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (µg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.20E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)
15	3.20E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**6.26E-04**	2.00E-02

Unit risk factor, URF (µg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	6.4E-05

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.28E+02	4.5E-04	5.7E-02	1.4E-07	1.6E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	1.28E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour⁻¹)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.28E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.28E+02	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**4.46E-04**	5.71E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.4E-07	1.6E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.50E+02	5.7E-04	4.3E-01	NA	4.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	7.50E+02			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.50E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	7.50E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**5.67E-04**	4.26E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	4.1E-03

MESSAGE SUMMARY BELOW:

END

B18-25

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
5.31E+02	2.8E-04	1.5E-01	3.7E-07	4.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	5.31E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	5.31E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	5.31E+02	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**2.85E-04**	1.51E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.7E-07	4.1E-03

MESSAGE SUMMARY BELOW:

END

B19-5

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.40E+01	1.0E-03	7.6E-02	1.8E-07	2.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	7.40E+01			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	152.4	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
137.4	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.40E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	137.4

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	7.40E+01	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**1.02E-03**	7.57E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.8E-07	2.1E-03

MESSAGE SUMMARY BELOW:

END

B19-15

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.90E+01	6.3E-04	1.2E-02	NA	3.8E-05

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	1.90E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.90E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.90E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**6.26E-04**	1.19E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	3.8E-05

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
9.70E+01	4.5E-04	4.3E-02	1.0E-07	1.2E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	9.70E+01			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	9.70E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_V (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	9.70E+01	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**4.46E-04**	4.32E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.0E-07	1.2E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.22E+02	5.7E-04	4.1E-01	NA	3.9E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	7.22E+02			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.22E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	7.22E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**5.67E-04**	4.10E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	3.9E-03

MESSAGE SUMMARY BELOW:

END

B19-25

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Toluene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.00E+01	4.1E-04	1.2E-02	NA	4.0E-05

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	3.00E+01			Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Toluene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
7.78E-02	9.20E-06	6.64E-03	25	7,930	383.78	591.79	0.0E+00	3.0E-01	92.14

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Toluene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.00E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,001	6.31E-03	2.59E-01	1.80E-04	1.26E-02	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	3.00E+01	1.25	8.33E+01	1.26E-02	5.00E+03	5.69E+05	**4.13E-04**	1.24E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.0E-01

END

Scenario: **Residential**
Chemical: **Toluene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	4.0E-05

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.63E+02	2.8E-04	4.6E-02	1.1E-07	1.3E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	1.63E+02			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm²/cm²)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.63E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.63E+02	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**2.85E-04**	4.64E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.1E-07	1.3E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: 1,1-Dichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
2.08E+02	4.5E-04	9.4E-02	NA	1.3E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
75354	2.08E+02			1,1-Dichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

1,1-Dichloroethylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
8.63E-02	1.10E-05	2.61E-02	25	6,247	304.75	576.05	0.0E+00	7.0E-02	96.94

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **1,1-Dichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. (µg/m^3)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	2.08E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	6,299	2.52E-02	1.03E+00	1.80E-04	1.40E-02	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)
15	2.08E+02	1.25	8.33E+01	1.40E-02	5.00E+03	1.54E+05	**4.50E-04**	9.37E-02

Unit risk factor, URF (µg/m^3)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	7.0E-02

END

Scenario: **Residential**
Chemical: **1,1-Dichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.3E-03

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: m-Xylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
7.53E+02	3.7E-04	2.8E-01	NA	2.7E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108383	7.53E+02			m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	762	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

m-Xylene

Diffusivity in air, D_a (cm˜/s)	Diffusivity in water, D_w (cm˜/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.84E-02	8.44E-06	7.18E-03	25	8,523	412.27	617.05	0.0E+00	1.0E-01	106.17

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **m-Xylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
747	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	7.53E+02	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	10,090	6.78E-03	2.78E-01	1.80E-04	1.11E-02	747

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	7.53E+02	1.25	8.33E+01	1.11E-02	5.00E+03	3.54E+06	**3.71E-04**	2.79E-01

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
NA	1.0E-01

END

Scenario: **Residential**
Chemical: **m-Xylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.7E-03

MESSAGE SUMMARY BELOW:

END

B21-15

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Tetrachloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
3.50E+01	4.5E-04	1.6E-02	3.8E-08	4.3E-04

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	3.50E+01			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm²)
15	457.2	24	S		

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm³)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm³/cm³)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Tetrachloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	5.9E-06	3.5E-02	165.83

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Tetrachloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	3.50E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	9,410	1.68E-02	6.88E-01	1.80E-04	8.16E-03	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	3.50E+01	1.25	8.33E+01	8.16E-03	5.00E+03	7.45E+08	**4.46E-04**	1.56E-02

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
5.9E-06	3.5E-02

END

Scenario: **Residential**
Chemical: **Tetrachloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.8E-08	4.3E-04

MESSAGE SUMMARY BELOW:

END

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
March 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Scenario: Residential
Chemical: Trichloroethylene

Results Summary				
Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk	Noncancer Hazard
1.50E+01	5.7E-04	8.5E-03	1.4E-08	4.1E-03

Reset to

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	1.50E+01			Trichloroethylene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457.2	24	S		

MORE ↓

Lookup Soil

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.66	0.375	0.054	5

MORE ↓

Lookup

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour)
NEW=> Residential	70	30	30	350	24	0.5
					(NEW)	(NEW)

END

Trichloroethylene

Diffusivity in air, D_a (cm˘/s)	Diffusivity in water, D_w (cm˘/s)	Henry's law constant at reference temperature, H (atm-m˘/mol)	Henry's law constant reference temperature, T_R (˘C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (˘K)	Critical temperature, T_C (˘K)	Unit risk factor, URF (µg/m˘)	Reference conc., RfC (mg/m˘)	Molecular weight, MW (g/mol)
6.87E-02	1.02E-05	9.85E-03	25	7,505	360.36	544.20	4.1E-06	2.0E-03	131.39

END

INTERMEDIATE CALCULATIONS SHEET

Scenario: **Residential**

Chemical: **Trichloroethylene**

Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
442.2	0.321	0.003	1.02E-07	0.998	1.01E-07	4,000	1.50E+01	3.39E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	15	8,382	9.39E-03	3.85E-01	1.80E-04	1.11E-02	442.2

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.50E+01	1.25	8.33E+01	1.11E-02	5.00E+03	3.32E+06	**5.69E-04**	8.54E-03

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
4.1E-06	2.0E-03

END

Scenario: **Residential**
Chemical: **Trichloroethylene**

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.4E-08	4.1E-03

MESSAGE SUMMARY BELOW:

END