FINAL
HUMAN HEALTH RISK ASSESSMENT FOR HISTORICAL RELEASES TO SOIL AND GROUNDWATER
PHIBRO-TECH, INC. FACILITY
SANTA FE SPRINGS, CALIFORNIA

Prepared for:

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LIST OF ACRONYMS

ABTC	ambient-based target concentration
ADAF	age-dependent adjustment factor
atm-m^3/mol	atmosphere-cubic meter per mole
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CA	chemical concentration in air
Cal/EPA	California Environmental Protection Agency
CCR	Current Conditions Report
CD	chemical concentration in dust
CDI	chronic daily intake
CDM	Camp, Dresser, & McKee, Inc.
CFR	Code of Federal Regulations
COPC	chemical of potential concern
CPS	calcium polysulfide
CS	chemical concentration in soil
CSF	cancer slope factor
CSG	chemical concentration in soil gas
CSM	conceptual site model
DCA	dichloroethane
DCE	dichloroethene
DHS	Department of Health Services
DTSC	Department of Toxic Substances Control
EC	exposure concentration
EFH	extractable fuel hydrocarbons
EPC	exposure point concentration
FID	flame ionization detector
GAC	granular activated carbon
GC	gas chromatographic
HEAST	Health Effects Assessment Summary Tables
HRA	health risk assessment
HERD	Human and Ecologic Risk Division

HERO	Human and Ecological Risk Office
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
HVOC	halogenated volatile organic compound
IRIS	USEPA's Integrated Risk Information System
LARWQCB	Los Angeles Regional Water Quality Control Board
MADEP	Massachusetts Department of Environmental Protection (MADEP)
μg/dL	micrograms per deciliter
μg/kg	micrograms per kilogram
$\mu g/m^3$	micrograms per cubic meter
m^3/kg	cubic meters per kilogram
mg/kg	milligrams per kilogram
mg/kg-day	milligram of chemical per kilogram body weight per day
mg/m^3	milligrams per cubic meter
mm Hg	millimeters of mercury
NCEA	National Center of Environmental Assessment
NCP	National Contingency Plan
ND	non-detect
NOEL	No observed effects level
OEHHA	Cal/EPA Office of Environmental Health Hazard Assessment
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PEA	Preliminary Endangerment Assessment
PEF	particulate emission factor
PPRTV	provisional peer-reviewed toxicity value
PRG	preliminary remediation goal
PTI	Phibro-Tech, Inc.
PVC	polyvinyl chloride
RAGS	Risk Assessment Guidance for Superfund
RBTC	risk-based target concentration
RCRA	Resource Conservation and Recovery Act

REL	reference exposure limit
RfD	reference dose
RfC	reference concentration
RFI	RCRA facility investigation
RL	reporting limit
SCAQMD	South Coast Air Quality Management District
SCC	Southern California Chemical
STSC	Superfund Health Risk Technical Support Center
SVE	soil vapor extraction
SVOC	semi-volatile organic compound
TCA	trichloroethane
TCE	trichloroethene
TF	transfer factor
TPH	total petroleum hydrocarbons
TPHCWG	Total Petroleum Hydrocarbon Working Group
TPH-d	total petroleum hydrocarbons, diesel range
TPH-e	extractable total petroleum hydrocarbons
TPH-g	total petroleum hydrocarbons, gasoline range
TPH-mo	total petroleum hydrocarbons, motor oil range
TRW ALM	USEPA Technical Review Workgroup Adult Lead Methodology
UCL	upper confidence limit
URF	unit risk factor
USEPA	United States Environmental Protection Agency
UST	underground storage tank
UTL	upper tolerance limit
VF	volatilization factor
VOC	volatile organic compound
WP	Workplan

EXECUTIVE SUMMARY

Iris Environmental prepared this Human Health Risk Assessment (HHRA) on behalf of Phibro-Tech, Inc. (PTI) for the PTI Facility (the "Site"), located at 8851 Dice Road, Santa Fe Springs, California (Figure 1). The Site is situated on approximately 4.8 acres in an industrialized section of the city. The facility is a Resource Conservation and Recovery Act (RCRA)-permitted hazardous waste treatment and storage site. Certain waste products are conveyed to the sewer, under a permit with the Los Angeles County Sanitation District. Chemical manufacturing byproducts are transported to offsite recycling facilities or as a last resort to permitted disposal facilities. Surrounding PTI directly to the north, west, and east are other industrial complexes. Directly south of PTI are a set of railroad tracks, with additional industrial facilities south of the railroad tracks. The nearest residential neighborhood is approximately 1,000 feet to the north.

Objectives of the HHRA

The purpose of this HHRA is to assess whether the levels of chemicals detected in subsurface soil, soil gas, and groundwater at the Site could pose an unacceptable risk to human health. Specifically, the goal of the HHRA is to assess whether the levels of chemicals detected at the Site could pose a potential health risk to current and reasonably expected future receptors who may be present at or in nearby surroundings of the Site. Note that potential health risks associated with current process operations will be evaluated separately and the results of the risk evaluation presented in a separate report.

Since active remediation is currently underway to mitigate subsurface contaminants, the HHRA will be the basis for proposing risk-based cleanup standards for current and future corrective action. The results of the HHRA will also be used in identifying the types of mitigation measures that may be appropriate, if needed, to reduce risks associated with current subsurface Site conditions to levels that would be protective of human health.

Site Investigations

<u>Environmental Assessment by J.H. Kleinfelder and Associates (1985-1986)</u>
In January 1985, Kleinfelder and Associates conducted a Phase I environmental monitoring study in response to requests of the Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Health Services (DHS) concerning monitoring of the "steel-reinforced concrete wastewater pond" (Pond 1) per RCRA interim status detection monitoring requirements. A total of 12 soil samples were collected from the seven locations and analyzed for a combination of some or all of the following: pH, cadmium, chromium, copper, nickel, zinc, chloride, sulfate, ammonia nitrogen, and carbonate.

In June 1985, J.H. Kleinfelder and Associates conducted a Phase II environmental monitoring study in response to a request from DHS to determine if there had been any leakage of Pond 1, as evidenced by contamination of soil or groundwater in the area. A total of 59 soil samples were collected and analyzed for a combination of some or all of the following: pH, cadmium, chromium, copper, nickel, zinc, chloride, sulfate, ammonia nitrogen, and carbonate.

Soil Investigation by J.H. Kleinfelder and Associates (1988)

Eight soil borings were advanced in September 1988 in the ferric chloride area, west of the ferric chloride process facilities. Sixteen soil samples were collected from the eight locations and analyzed for cadmium, chromium, copper, nickel, lead, and zinc.

Phase I RCRA Facility Investigation (RFI) by CDM (1991)

The Phase I RFI was conducted in response to an Administrative Order of Consent per RCRA Section 3008(h) for which the objectives were (1) to determine the nature and extent of any release of hazardous waste and hazardous waste constituents at or from facility, (2) to perform a corrective measures study to identify and evaluate alternatives for corrective action, and (3) to address deficiencies noted in the LARWQCB report of "Comprehensive Groundwater Monitoring Evaluation of Southern California Chemical." The scope of work included soil sampling from 92 locations (45 surface locations and 47 subsurface locations) and analyzed for metals, cyanide, purgeable halocarbons, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), benzene, ethylbenzene, toluene and xylenes (BTEX), extractable total petroleum hydrocarbons (TPH-e), and volatile TPH.

Phase II RCRA Facility Investigation by CDM (1991)

The Phase II RFI was conducted to target areas of concern from the Phase I RFI. This includes samples from 18 soil boring locations. Forty-one soil samples were analyzed for metals, purgeable halocarbons, BTEX compounds, TPH-e, and PCBs. Notes that certain samples collected during this investigation were from an offsite parking area west of the Site.

Phase I and Phase II Soil Gas Surveys by CDM (2001 and 2005)

Two soil gas surveys were conducted by CDM, in 2001 and 2005, to evaluate the presence and extent of VOCs in soil gas. A total of 122 primary soil gas samples and 22 duplicate soil gas samples were taken at various depths (up to 45 feet bgs) from 49 locations. Soil gas samples were analyzed for volatile organic compounds (VOCs).

Data Gap Investigation by Iris Environmental (2007)

A data gap investigation was conducted by Iris Environmental in June 2007 to address recognized data gaps in the previously DTSC-approved Site conceptual model and to install test wells for use in the upcoming corrective action programs. All soil samples were analyzed for VOCs, CAM 17 metals, and hexavalent chromium. Soil samples located within the vicinity of the former gasoline and diesel underground storage tanks (USTs) were also analyzed for TPH in the gasoline, diesel and motor oil ranges (TPH-g, TPH-d, and TPH-mo), and samples located in areas with previous detections of PCBs were analyzed for these constituents in addition to VOCs, CAM 17 metals, and hexavalent chromium.

Remediation Activities

Two forms of remediation activities are currently being implemented at the Site to treat the halogenated volatile organic compounds (HVOCs), aromatic VOCs, and metals found onsite. The two activities are soil vapor extraction (SVE) and in situ chemical injection of calcium polysulfide (CPS). SVE is designed to treat HVOCs and aromatic VOCs in the soil and soil gas, and the in situ CPS injection is being pilot tested to treat metals, specifically to fixate hexavalent chromium in both soil and groundwater.

Soil Vapor Extraction

The SVE system was designed to encompass the areal extent of the vapor plume at the Site. The SVE system began operating on October 6, 2008 and has continued operating with little interruption since that time.

The system is monitored weekly and influent and effluent samples are collected on at least a monthly basis for laboratory analysis in accordance with South Coast Air Quality Management District (SCAQMD) requirements and also for system performance monitoring. Samples are collected at the outlet of the blower, the influent to the first granular activated carbon (GAC) vessel, and the effluent of the last GAC vessel and analyzed for VOCs and TPH-g.

Since system start-up in 2008, concentrations of VOCs and TPH-g in extracted soil gas have significantly decreased. Likewise, the magnitude of petroleum hydrocarbons in the gasoline range measured during the most recent sampling event (December 2012) has significantly decreased from the baseline conditions (November 2008).

The SVE system was shut off on March 29, 2012 in preparation for the in situ CPS injection Pilot Test, which was conducted in April, 2012. The SVE system was restarted in November 2012 after all Pilot Test activities were completed.

In Situ Fixation Pilot Test

The in situ Pilot Test was designed to evaluate the effectiveness of CPS at stabilizing hexavalent chromium in soil and groundwater. Bench testing indicated that the CPS may also be effective at removing or destroying HVOCs.

The Pilot Test activities were conducted near the former chromic acid UST. Injection activities were conducted in April 2012. An aqueous solution of CPS was injected into the subsurface using both direct push technologies and dedicated injection wells. In the vadose zone (up to 50 feet bgs), CPS was injected into the soil using a direct push drill rig on five-foot-center spacing. CPS was injected into the groundwater through dedicated injection wells screened from 53 to 63 feet bgs. Soil baseline and post-injection samples were collected and analyzed for hexavalent chromium, metals, VOCs, and other related compounds. Groundwater samples were collected before, during, and after groundwater injection activities and analyzed for similar compounds.

The Pilot Test program is complete. Evidence of change in hexavalent chromium concentrations were used to determine the effectiveness of CPS to stabilize hexavalent chromium in the vadose zone and groundwater under real world conditions. Based on comparison of pre- and post-injection data, injection of CPS was capable of effectively fixating total and hexavalent chromium in soil. Multiple sets of groundwater data indicate that full fixation of total and hexavalent chromium has occurred in the test area, and continued monitoring of groundwater quality parameters suggest that most monitoring wells influenced by the pilot test are approaching equilibration conditions, i.e., are returning to baseline concentrations. Soil baseline samples were collected from two borings and confirmation soil samples were collected from three borings. The confirmation borings were co-located within one foot of the partner baseline boring for correlation purposes. Samples collected from the paired borings were collected from as close to the same depth as possible. Samples were collected at three depths from the Gage Aquifer and at five depths from the unnamed aquitard at each boring. The samples were analyzed for VOCs, CAM 17 metals, hexavalent chromium, and other indicator compounds.

Nature and Extent of Impacts

Soils

Metals
The maximum detection of arsenic occurred within the area known as Pond 1 at a concentration of 72 mg/kg (Pl01 at 2.5 feet bgs). Most arsenic detections were one or more orders of magnitude lower than the maximum, with the exception of three samples (SB02 at 58 mg/kg, MW-17S at 40 mg/kg, and MW-19S at 44 mg/kg) taken from soil currently recognized as artificial fill material, up to 3.0 feet bgs, in the central area of the Site, and VZ-PM-1 at 47 mg/kg at 9 feet bgs, near the ammonia tank area.

Hexavalent chromium was detected in samples surrounding the former chromic acid UST at depths of up to 55 feet bgs, and below Pond 1. The maximum concentration of hexavalent chromium (3,200 mg/kg) was detected in soil boring VZ-PM-1, located near the ammonia tank area, at a depth of 9 feet bgs. The next highest hexavalent chromium concentration (1,040 mg/kg) occurred at SB07 at a depth of 5.5 feet bgs; all other detections across the Site were several orders of magnitude lower in concentration.

Lead was detected, where tested for, across the Site at depths of up to 95 feet bgs (in a saturated sample). The maximum concentration of lead occurred in the west area of the Site near the rainwater storage tanks at a concentration of 113,000 mg/kg (RS03 at 3 feet bgs). The next highest concentrations of lead were also detected in relatively shallow soils up to 10 feet bgs, but at concentrations orders of magnitude lower than the maximum concentration.

Nickel was detected in all sample locations, where tested for, at depths of up to 125.5 feet bgs. The maximum nickel concentration was 28,400 mg/kg, detected at MW-01D (2 feet bgs

TPH
TPH-g, TPH-d, and BTEX compounds were generally detected at maximum concentrations around the former gasoline and diesel USTs in the approximate center of the Site. Lower concentrations were detected in various fill material locations around the Site (*i.e.*, in the top 5 feet of material). The maximum TPH-g detection was 1,500 mg/kg in the area of the former fuel oil USTs (SMP-06B at 23 feet bgs), and the maximum TPH-d detection was 17,000 mg/kg (PZ-02 at 3.5 feet bgs and UST-SB07 at 17.5 feet bgs). TPH-mo had the maximum detections in fill material in the northwest portion of the Site (24,000 mg/kg at PZ-02 at 3.5 feet bgs).

BTEX
In general, the maximum concentrations of BTEX are located in the center of the Site, in the area of the former gasoline and diesel USTs. The maximum concentrations of BTEX compounds

were 5 mg/kg of benzene (UST-HB05 at 18 feet bgs and UST-SB-03 at 35 feet bgs), 310 mg/kg of toluene (UST-HB02 at 18 feet bgs), 37 mg/kg of ethylbenzene (UST-HB02 at 18 feet bgs), and 310 mg/kg of xylenes (UST-HB02 at 2 feet bgs).

VOCs
Prior to starting the SVE system, twenty-three halogenated VOCs were detected in soils across the Site, particularly in the western portion of the Site, at sample depths ranging from 1 foot bgs to 58.5 feet bgs. Many VOCs had maximum detections at locations near the former chromic acid UST. The most frequently detected halogenated VOCs included TCE (maximum concentration of 110,000 μg/kg at RS06 at 3 feet bgs), PCE (maximum concentration of 10,000 μg/kg at WMU20-HB1 at 1 foot bgs), 1,1-DCA (maximum concentration of 2,800 μg/kg at MW-18S at 10 feet bgs), cis-1,2-DCE (maximum concentration of 5,500 μg/kg at PZ-02 at 3.5 feet bgs), 1,1-DCE (maximum concentration of 1,000 μg/kg at MW-18S at 2.5 feet bgs), and chloroform (maximum concentration of 540 μg/kg at MW-18S at 2.5 feet bgs).

PCBs
Soil samples were analyzed for PCBs in the southwest portion of the Site in the area of the former electric railroad transformer and switch building and in and around the center of the Site. Aroclor 1260 was detected at high concentrations in shallow soil samples in the southwestern portion of the Site (80,000 μg/kg at FeCl-SB02 at 5 feet bgs and 50,000 μg/kg at FeCl-SB06 at 1 foot bgs).

<u>Groundwater</u>

Chlorinated VOCs
Between 2005 and 2012, there have been detections of VOCs in groundwater across the Site. The following chlorinated VOCs were detected in groundwater: 1,1,1-TCA; 1,1,2-TCA; 1,1-DCA; 1,1-DCE; 1,2,3-trichlorobenzene; 1,2,4-trichlorobenzene; 1,2-dichlorobenzene; 1,2-DCA; 1,4-dichlorobenzene; bromodichloromethane; carbon tetrachloride; chlorobenzene; chloroethane; chloroform; cis-1,2-DCE; methylene chloride; PCE; trans-1,2-DCE; TCE; trichlorofluoromethane; and vinyl chloride.

Aromatic VOCs
The following aromatic VOCs have been detected in groundwater samples since January 2005: benzene; ethylbenzene; isopropylbenzene; xylenes; naphthalene; n-propylbenzene; toluene; 1,4-dioxane; p-isopropyl toluene; and styrene. The highest and most frequent detections of aromatic VOCs occur in the central area of the Site (near wells MW-04, MW-10, MW-14S, and MW-14D).

Naphthalene, n-propylbenzene, 1,4-dioxane, p-isopropyl toluene, and styrene were detected infrequently and at low concentrations.

Metals
Since 2005, the following metals have been detected in groundwater: antimony, arsenic, barium, cadmium, chromium, hexavalent chromium, copper, lead, nickel, thallium, and zinc.

Historically, concentrations for metals of concern (cadmium, total chromium, hexavalent chromium, and copper), which are monitored on a quarterly basis, have been highest in well MW-04.

Summary of Groundwater COPCs Detected Above MCLs
Chlorinated VOCs exceeding their respective MCL include: TCE, PCE, 1,2-DCA, 1,1-DCA, 1,1-DCE, 1,2-DCE, carbon tetrachloride, chloroform, cis-1,2-DCE, methylene chloride. Aromatic VOCs exceeding their respective MCL include: benzene, ethylbenzene, toluene, and xylenes. Metals exceeding their respective MCL include: antimony, arsenic, cadmium, copper, hexavalent chromium (regulated under total chromium), mercury, thallium, and total chromium exceeded their respective MCL (note copper does not have an established MCL; rather, it is covered by "action levels" and a separate regulatory approach described in 22 CCR §64678. This regulation is known as the Lead and Copper Rule).

Soil Gas

Chlorinated VOCs
Concentrations of chlorinated VOCs have generally decreased or remained stable at levels since SVE system startup in 2008. Maximum concentrations of PCE, TCE, 1,2-DCE, trans-1,2-DCE, and vinyl chloride are generally detected near the former gasoline and diesel USTs in the central portion of the Site.

TPH-g
TPH-g in soil gas is quantified by reporting the total mass of volatile compounds that contain between 5 and 10 carbon atoms (*i.e.*, C5 to C10) using EPA Method TO-3. The analytical laboratory compares each gas chromatographic (GC) result from the flame ionization detector (FID) against a laboratory-specific gasoline standard to quantify a TPH-g result. The GC/FID does not differentiate between compounds, *i.e.*, the chromatogram includes all volatile compounds that have boiling points within the target range including non-petroleum hydrocarbon constituents.

The detected concentrations of TPH-g have generally declined significantly in non-source area locations. The suspected TPH-g source areas include SVE wells SVE-1A and SVE-3A, and monitoring points SMP-6A, SMP-7A, SMP-08A. In 2008, TPH-g was detected in 17 of 17 samples at concentrations in soil gas ranging from 430 $\mu g/m^3$ to a maximum of 6.3×10^6 $\mu g/m^3$ in SVE-3A. In 2012, TPH-g was detected in 16 of 21 locations sampled. The reported TPH-g concentrations ranged from below the reporting limit (at or above 7,400 $\mu g/m^3$) to a maximum concentration of 1.3×10^6 $\mu g/m^3$ in SVE-3A. Of the 16 TPH-g detections in 2012, nine samples had chromatograms with characteristics indicating the likely presence of petroleum hydrocarbon, the remainder of the samples had chromatograms with individual peaks rather than a typical petroleum hydrocarbon spectrum of molecular weights.

Identification of Chemicals of Potential Concern

All Site data collected during previous and recent Site investigations, as discussed in Section 2.0, are evaluated for use in the HHRA, with the exception of soil gas data collected prior to the startup of the SVE system (i.e., soil gas data collected in 2001 and 2005). The SVE system, which has operated since October 6, 2008, has considerably reduced VOC concentrations in the vadose zone at the Site, and thus 2012 soil gas data collected during the SVE rebound monitoring is considered more representative of current soil gas conditions at the Site. As such and per DTSC's recommendation (Cal/EPA, 2012), soil gas collected in 2012 during SVE rebound monitoring are included in the HHRA. Additionally, some historic soil sample results presented in the RCRA (CDM, 1991) did not have reporting limits available for NDs. As such, these data were excluded from the quantitative HHRA.

Chemicals detected in onsite soil that are included as COPCs in the quantitative HHRA are as follows: various volatile organic compounds (VOCs); SVOCs (1,2,4-trichlorobenzene, 2-methylnaphthalene, pyrene), TPH (extractable fuel hydrocarbons [EFH] C23-C40], TPH-e, TPH-d, TPH-g), Aroclor 1260, and various inorganics.

Chemicals detected in soil gas that are included as COPCs in the quantitative HHRA are as follows: various VOCs.

Potentially Exposed Populations and Complete Exposure Pathways

The primary focus of the HHRA will be on those exposure pathways that would be considered complete for the current and future onsite and offsite populations.

Land use at the Site is commercial/industrial and will likely remain as such in the future. Accordingly, the onsite populations that will be included in the HHRA are current and future commercial/industrial populations.

Land use in the vicinity of the Site is primarily commercial/industrial with the nearest residential neighborhood approximately 1,000 feet to the north. As these residents could potentially be exposed to chemicals present at the Site, an offsite resident population evaluation will be included in the quantitative HHRA. The results of the offsite resident population evaluation will be conservatively used to qualitatively assess whether chemicals detected at the Site could pose a risk to the offsite commercial populations as the exposure period for the offsite residential population is longer than that for the offsite commercial population.

In sum, the following human populations will be included in the HHRA:

- Current onsite commercial worker;
- Current offsite resident; and
- Future onsite commercial worker.

Results and Conclusions of the HHRA

Summary of Cumulative Cancer Risks and Hazards for Each Receptor Group

The table below summarizes the estimated cumulative, Site-related incremental cancer risks and noncancer HIs for the receptor groups evaluated in this HHRA. The estimated increase in blood lead level predicted for the fetus of a future onsite commercial worker is also presented. A brief discussion of conclusions for each receptor group follows the table.

Receptor	Cancer Risk	Noncancer HI	Blood Lead Level (µg/dL)
Current Onsite Commercial Worker	1.4E-07	0.57	NA
Current Offsite Resident	3.4E-08	0.019	NA
Future Onsite Commercial Worker	4.8E-05	7.4	19

NA = not applicable

Current Onsite Commercial Worker Scenario

The results of the HHRA indicate that none of the chemicals detected in soil gas at the Site pose a significant health risk to current onsite commercial populations working at the Site. Specifically, the results of the HHRA support that the conditions at the Site are fully protective of the health of current commercial worker populations. Estimated incremental cancer risks are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. Further, the estimated noncancer hazards for the current onsite commercial worker are below the acceptable HI of 1. Based on these conservative upper-bound risk estimates, remedial action, or other form of risk management, is not necessary to protect the health of current onsite commercial workers at the Site.

Current Offsite Residential Scenario

The results of the HHRA indicate that none of the chemicals detected in soil gas at the Site pose a significant health risk to current offsite residential populations living nearby the Site. Specifically, the results of the HHRA support that the conditions at the Site are fully protective of the health of current offsite residential populations. Estimated incremental cancer risks are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. Further, the estimated noncancer hazards for the current offsite resident are below the acceptable HI of 1. Based on these conservative upper-bound risk estimates, remedial action, or other form of risk management, is not necessary to protect the health of current offsite residential populations.

Future Onsite Commercial Worker Scenario

The results of the HHRA indicate that the estimated incremental cancer risks associated with COPCs in soil gas for future onsite commercial workers are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. The estimated noncancer hazards associated with COPCs in soil gas for future onsite commercial populations are below the acceptable HI of 1.

The estimated Site-related incremental cancer risk associated with COPCs in Site soil for the future onsite commercial population is at the high end of the acceptable risk range of 1×10^{-6} to

1×10^{-4}, due principally to the presence of Aroclor 1260, arsenic above ambient levels, hexavalent chromium, PCE, and naphthalene. The estimated noncancer hazard for the future onsite commercial population is above the acceptable HI of 1, due principally to the presence of TPH-d, arsenic above ambient levels, and Aroclor 1260. The levels of lead in soil at the Site may result in an increase in the blood lead level in the fetus of the future onsite commercial worker above OEHHA's benchmark value of 1 μg/dL.

Accordingly, the results of the HHRA support that levels of Aroclor 1260, arsenic above ambient levels, lead, TPH-d, hexavalent chromium, PCE, and naphthalene present in Site soil would require some remediation or other form of risk management (e.g., institutional controls) in the event that the existing physical mitigating features that currently exist on the Site were to be removed or altered and/or if the Site were to be developed in the future for other commercial purposes.

1.0 INTRODUCTION AND OBJECTIVES

Iris Environmental has prepared this Human Health Risk Assessment (HHRA) on behalf of Phibro-Tech, Inc. (PTI) for the PTI Facility (the "Site"), located at 8851 Dice Road, Santa Fe Springs, California (Figure 1). The Site is situated on approximately 4.8 acres in an industrialized section of the city. The facility is a Resource Conservation and Recovery Act (RCRA)-permitted hazardous waste treatment and storage site. Certain waste products are conveyed to the sewer, under a permit with the Los Angeles County Sanitation District. Chemical manufacturing byproducts are transported to offsite recycling facilities or as a last resort to permitted disposal facilities. Surrounding PTI directly to the north, west, and east are other industrial complexes. Directly south of PTI are a set of railroad tracks, with additional industrial facilities south of the railroad tracks. The nearest residential neighborhood is approximately 1000 feet to the north.

The specific requirement to conduct the HHRA is contained in the Section 7 of the *Corrective Action Consent Order*, issued by the DTSC and finalized on February 22, 2012 (Iris Environmental, 2013a):

> "Respondent is required to conduct an updated Human Health Risk Assessment to evaluate the potential human health risk and ecological risk associated with the operation of the Facility and past releases of hazardous waste or hazardous constituents from the Facility. The updated Human Health Risk Assessment can also be used to propose modifications to the site-specific action levels and cleanup standards for the implementation of corrective action at the Facility. "

This HHRA has been prepared in accordance with the DTSC-approval Revised Health Risk Assessment Workplan (HRA WP; Iris Environmental, 2013a). The purpose of this HHRA is to assess whether the levels of chemicals detected in subsurface soil, soil gas, and groundwater at the Site could pose an unacceptable risk to human health. Specifically, the goal of the HHRA is to assess whether the levels of chemicals detected at the Site could pose a potential health risk to current and reasonably expected future receptors who may be present at or in nearby surroundings of the Site. Note that potential health risks associated with current process operations will be evaluated separately and the results of the risk evaluation presented in a separate report.

Since active remediation is currently underway to mitigate subsurface contaminants, the HHRA will be the basis for proposing risk-based cleanup standards for current and future corrective action. The results of the HHRA will also be used in identifying the types of mitigation measures that may be appropriate, if needed, to reduce risks associated with current subsurface Site conditions to levels that would be protective of human health.

The specific objectives of this HHRA are as follows:

- Evaluate and characterize potential chronic hazards/risks to current and reasonably expected future onsite and offsite receptors posed by Site-related chemicals associated with impacted environmental media at the Site,
- Based on this evaluation, develop appropriate health-protective cleanup goals that can be used in evaluating the remedial action alternatives,

The methodology used in this HHRA is consistent with the relevant risk assessment guidelines provided and recommended by the United States Environmental Protection Agency (USEPA) and by the California Environmental Protection Agency (Cal/EPA), and consistent with the general steps outlined in the sections that follow. The methodology used will be based on, but not limited to, the following regulatory risk assessment guidance:

- Preliminary Endangerment Assessment (PEA) Guidance Manual (Cal/EPA, 2013);
- Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments at Hazardous Waste Site and Permitted Facilities (Cal/EPA, 1997);
- Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion in Indoor Air. Final. (Cal/EPA, 2011a);
- Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation Manual (Part A) (USEPA, 1989);
- Human Health Risk Assessment Note Number 1: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Military Facilities (Cal/EPA, 2011b);
- Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002a);
- User’s Guide for Evaluating Subsurface Vapor Intrusion into Buildings (USEPA, 2004a);
- Soil Screening Guidance: User’s Guide (USEPA, 1996);
- Supplemental Screening Guidance for Developing Soil Screening Levels for Superfund Sites (USEPA, 2002b);
- USEPA Exposure Factors Handbook (USEPA, 2011a);
- USEPA Recommendation of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposure to Lead in Soil, (USEPA, 2003b); and
- User’s Guide to LeadSpread 8 and Recommendations for Evaluation of Lead Exposures in Adults (Cal/EPA, 2011c).

According to the USEPA (1989), and as summarized below, there are four basic steps in the quantitative human health risk assessment process: (1) data collection and analysis, (2) exposure assessment, (3) toxicity assessment, and (4) risk characterization. These steps are summarized briefly as follows:

- Data Collection and Analysis: For this HHRA, all Site environmental soil, soil gas, and groundwater sampling data were reviewed to identify the chemicals of potential concern (COPCs) and their representative concentrations to which populations could be exposed. The dataset for the HHRA was obtained from Site investigations (as summarized in Section 2.2);
- Exposure Assessment: Site uses and physical features were evaluated to develop a Conceptual Site Model (CSM), which identifies the pathways by which current and potential future receptors could be exposed to COPCs. The magnitude of the potential human exposures was also estimated;
- Toxicity Assessment: This phase of the risk assessment presents the relationship between the magnitude of exposure and potential adverse effects (dose-response assessment). As a part of the toxicity assessment, toxicity values were identified from the Cal/EPA- and USEPA-recommended sources, and were then used to estimate the likelihood of adverse effects which could potentially occur at different exposure levels; and
- Risk Characterization: The exposure and toxicity assessments were combined to characterize and quantify the potential for adverse health effects as a result of potential Site-specific exposures. The risk characterization estimates the likelihood that the estimated potential exposures to COPCs at the Site will result in either cancer or other noncancer adverse health effects.

The remaining sections of this report are as follows:

- Section 2.0 provides a description of the Site features and brief summary of the historical and current operations at the Site.
- Section 3.0 presents a brief summary of previous investigations and remedial activities conducted at the Site.
- Section 4.0 discusses the analytical data and identifies the COPCs that have been included in this HHRA.
- Section 5.0 identifies the populations that may potentially be exposed to Site COPCs, the pathways by which potential exposures may occur, and the exposure assumptions used to quantify potential exposures. Section 4.0 also presents the methodology for estimating representative exposure concentrations for chemicals present in soil, soil gas and air.
- Section 6.0 presents the toxicity values used in the calculation of the incremental cancer risks and noncancer hazard indices. Section 5.0 also presents the methodology for evaluating health effects associated with the lead detected in soil.
- Section 7.0 presents the methodology used to calculate the incremental cancer risks and noncancer hazard indices and summarizes the results of the HHRA.

The references used in this report are presented in Section 8.0. There are nine appendices that accompany the report. Appendix A, B, and C were previously provided in the Revised HRA WP and contain map sheets from the *Final Site Conceptual Model* (CDM, March 9, 2005), historical groundwater monitoring data, and soil gas extraction rebound data, respectively. Appendix D presents all Site investigation data used in the calculations of health risks in this HHRA. The determination of ambient arsenic concentrations is presented in Appendix E. Appendix F presents the outputs of the statistical evaluation for the estimation of representative exposure concentrations for chemicals present in soil and soil gas. Appendix G presents the fate and transport modeling used to estimate the emissions of COPCs from the Site and the corresponding predicted air concentrations to which the various human populations may be exposed. Appendix H presents the derivation of toxicity values for total petroleum hydrocarbons in soil and soil gas. Appendix I discusses the uncertainties inherent in this HHRA.

2.0 SITE DESCRIPTION AND BACKGROUND INFORMATION

This section provides a brief description of the Site layout and other physical features in addition to a brief discussion of the historical operations that have occurred and current operations that are occurring at the Site. The information in this section was extracted from the *Final Site Conceptual Model* prepared by Camp, Dresser, & McKee, Inc. (CDM), dated March 9, 2005 (CDM, 2005a) and was presented in the Revised HRA WP (Iris Environmental, 2013a).

2.1 Site Description

The Site is located at 8851 Dice Road in Santa Fe Springs, Los Angeles County, California. It is situated on approximately 4.8 acres in an industrialized section of the city. Surrounding PTI directly to the north, west, and east are other industrial complexes. Directly south of PTI are a set of railroad tracks, with additional industrial facilities south of the railroad tracks. The nearest residential neighborhood is approximately 1000 feet to the north. The Site location is illustrated on Figure 1.

The facility is a RCRA-permitted hazardous waste treatment and storage site. Certain waste products are conveyed to the sewer, under a permit with the Los Angeles County Sanitation District. Chemical manufacturing byproducts are transported to offsite recycling facilities or as a last resort to permitted disposal facilities.

The facility is essentially an inorganic chemical manufacturing plant using certain hazardous wastes as a primary raw material. The facility is permitted to treat, store, and transfer both USEPA and California hazardous wastes. The facility employs a variety of regulated hazardous waste and non-hazardous waste operational processes such as reactors, settling tanks, holding tanks, wastewater treatment tanks, filter presses, multi-stage clarifiers, process and storm drain sumps, drum storage areas, and washing areas. Industrial wastes are currently shipped to the facility for recycling and treatment from various industries including, but not limited to:

- Electronics;
- Chemical;
- Metal Finishing; and
- Aerospace.

The facility recovers metals from inorganic waste streams, primarily spent metal plating and stripping etchants. Examples of wastes-types managed at the facility include:

- Alkaline and acidic metal etchants, metal strippers, and metal finishing baths;
- Alkaline and acidic materials which include solids, slurries, and other metal containing materials; and
- Other miscellaneous inorganic solutions and solids.

Waste management areas at the facility include four current and two proposed distinct waste treatment areas with associated storage and process tanks, four drum storage areas, and rail car and tanker truck loading and unloading areas. A laboratory is located on the western portion of the property. Other features include a maintenance building, an administration building, and parking area.

2.2 Site Topography and Surface Drainage

The Site is located on fairly flat land that slopes from northeast to southwest. Currently, the Site is entirely paved or covered with coated or uncoated concrete with the exception of the railroad tracks (CDM, 2005a). A majority of the surface soils at the railroad tracks are covered with crushed rock ballast. All storm water is collected and treated in the Site wastewater treatment system.

2.3 Site Geology and Hydrogeology

The geology and hydrology of the Site is presented in the *Final Site Conceptual Model* (CDM, 2005a) and in the *Data Gap Investigation Report* (Iris Environmental, 2007a). Pertinent information that will be used in this HHRA is summarized below.

2.3.1 Geological Setting

The Site is underlain by a series of Pleistocene alluvial aquifers separated by aquitards composed of fine-grained sediments. The three uppermost aquifers include the Gage Aquifer, Hollydale Aquifer, and Jefferson Aquifer. Five discrete hydrogeologic units were identified during the data gap investigation, which are generally consistent with the Site conceptual model: artificial fill, upper silty sand unit, sand unit of the Gage Aquifer, unnamed aquitard, and Upper Hollydale Aquifer.

Artificial fill material covers the Site and extends to depths ranging from 3 feet to 10 feet below ground surface (bgs). The upper silty sand unit (referred to as the Bellflower Aquiclude in the *Final Site Conceptual Model* [CDM, 2005a]) consists of mostly dark brown silty sand with fine to medium sand and a trace of clay, and is approximately 12 feet thick with the base at approximately 15 feet bgs. The Gage Aquifer is characterized as a sand with high permeability to both air and water, and occurs at depths of approximately 15 feet bgs to 31 feet bgs. The underlying unnamed aquitard is a hard, dense, fine-grained unit consisting of silts, clays and fine sand with occasional silty sand and sandy silt lenses. These sediments have a low hydraulic conductivity, low permeability to air, high porosity, and moderate moisture content. Although the thickness varies across the Site, generally the unnamed aquitard is approximately 24 feet thick with the base considered to occur at approximately 55 feet bgs. The upper Hollydale Aquifer is mostly sand with a high hydraulic conductivity and high porosity. The Hollydale Aquifer was documented in the *Final Site Conceptual Model* to be approximately 40 feet thick, with total depth ranging from approximately 95 feet bgs to 110 feet bgs (CDM, 2005a).

The lithology of the unnamed aquitard and the underlying Hollydale Aquifer and the nature of their contact are relatively consistent across much of the Site. However, this consistency changes in the southwest portion of the Site in the general proximity of well MW-14D. The current interpretation, based on a data gap investigation (Iris Environmental, 2007a), is that the aquitard bifurcates into two silt-clay units separated by a sand lens that thickens toward the southwest. This intra-aquitard sand was identified in CPT-04 as a 2-foot thick sand lens between 31 to 33 feet bgs. Continuous soil cores collected at PZ-01, the most southwesterly borehole installed during the data gap investigation, displayed interbedded sand and silty sand/sandy silt units from 25 to 40 feet bgs. Interpretation of downhole geophysical logs (conducted during the data gap investigation) for MW-14D and MW-15D suggest the presence of a 10 foot thick sand lens in the middle of the unnamed aquitard. The Hollydale Aquifer appears to be continuous beneath the lower of the two bifurcated aquitard facies.

2.3.2 Hydrogeological Setting

In January and June 1985, Kleinfelder and Associates installed 13 groundwater monitoring wells, MW-01S, MW-02, MW-03, MW-04, MW-04A, MW-05, MW-06A, MW-06B, MW-07, MW-08, MW-09, MW-10, and MW-11. During the Resource Conservation Recovery Act (RCRA) Facility Investigation (Phases I and II) in 1991, CDM installed seven additional wells, MW-01D, MW-06D, MW-12D, MW-13D, MW-14D, and MW-15D. In April 1992, three additional wells (MW-06B, MW-06D, and MW-16) were added to the quarterly monitoring program. In June and July 2007, Iris Environmental installed four new monitoring wells during a data gap investigation, MW-17S, MW-18S, MW-19S, and MW-20S. In May 2010, six new monitoring wells were constructed, MW-21S, MW-21D, MW-22S, MW-22D, MW-23S and MW-23D. The Site plan and monitoring well network are illustrated on Figure 2.

Groundwater elevation data indicate that groundwater in the Hollydale Aquifer generally flows to the southwest towards the San Gabriel River, located about 1.5 miles west of the Site. During the January 2012 sampling event, the groundwater gradient was approximately 0.0057 feet/foot and the depth to shallow groundwater in the Hollydale Aquifer range from 48.6 feet bgs (MW-23D) to 57.8 feet bgs (MW-03).

2.4 Site History

This section includes a discussion of the historical operations at the Site and current operations. All information contained in the Site History section of this report was obtained from the *Final Site Conceptual Model* (CDM, 2005a), as summarized below.

2.4.1 Historical Operations

Records indicate that the earliest use of the land at the Site was as a railroad switching station owned by Pacific Electric Railway Company. From the late 1940s to the early 1950s, a foundry casting facility operated on the property. Pacific Western Chemical Company occupied the Site from 1957 to 1960. On December 24, 1959, Pacific Western Chemical Company changed its name to Southern California Chemical (SCC). In 1984, CP Chemicals, Inc. acquired the SCC facility and property.

In 1988, USEPA performed an aerial photographic analysis of the Site spanning a 44 year period (1945 through 1988). The analysis noted that in 1945 the area was occupied by a small power generating facility and bulk oil storage tanks. In 1953, the power facility was gone and a small unidentified industry was noted in the southeast corner of the Site. In 1959, the active chemical facility was first noted. Throughout the approximately 30 year period following 1959, the analysis noted a variety of process areas, horizontal and vertical tanks, drums storage, staining, a spoil pile, and unlined and lined containment ponds. A 1988 photograph indicated that several impoundments in the Copper Cement Pond Area had been filled in, two settling basins were storage tank containment structures, and the number of 55-gallon drums in uncontained storage was approximately 4,700. The analysis noted that the facility continued to present a neat and clean appearance, indicating good housekeeping practices were in use at the Site.

The *Current Conditions Report* (CCR; CDM, 1990) provides additional information on historical activities at the Site. According to the CCR, information on facility manufacturing processes prior to 1971 is relatively scarce. Pacific Western Chemical applied for a waste disposal permit for a ferric chloride manufacturing process in 1957 and for chrome-bearing wastes in 1959. In 1961, operations reportedly included copper recovery, chrome recovery, zinc solution manufacturing, and several other processes. In 1971, facility operations included a zinc sulfate process, and ferric chloride, alkaline, and solder etchant manufacturing. As of 1977, operations reportedly included the same processes as 1971, although in different areas, with the addition of a copper leaching area and caustic etchant processes. In 1984, processes included the manufacture of a patented ammonia etchant, and copper oxide, ferric chloride, copper sulfate, and chromic acid solutions from a variety of spent etchant and acid solutions.

2.5 Current Operations

This section describes process operations and waste management methods currently used at the facility. PTI receives inorganic wastes and evaluates them to determine if they are amenable to processing for metals recovery or other treatment. PTI's laboratory evaluates any new waste type to determine if it can be recycled or treated, and if so, what types of processing equipment will provide the best recovery and product quality. The laboratory uses generator knowledge, chemical analyses, or bench-scale processes (or a combination of these) to make these assessments. Some potential wastes may be rejected prior to approval of the profile if the wastes do not meet the acceptance criteria specified in the Waste Analysis Plan. Further details on operations were presented in the *Part B RCRA Permit Application* (AECOM, 2012).

3.0 SITE INVESTIGATION AND REMEDIATION ACTIVITIES

All previous and recent onsite investigation and remediation activities, and a summary of chemicals present in the soil, soil gas and groundwater, as presented in the DTSC-approved Revised HRA WP (Iris Environmental, 2013a), are discussed below. Table 1 provides an overall summary of the Site investigations and the specific chemical analyses conducted to date. Figure 3 presents all onsite sample locations from the Site investigation activities.

3.1 Environmental Assessment by J.H. Kleinfelder and Associates (1985-1986)

In January 1985, Kleinfelder and Associates conducted a Phase I environmental monitoring study in response to requests of the Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Health Services (DHS) concerning monitoring of the “steel-reinforced concrete wastewater pond” (Pond 1) per RCRA interim status detection monitoring requirements. During this investigation, seven soil borings (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6A, and MW-6B) were drilled to a maximum depth of 90 feet bgs. All of these borings were completed as monitoring wells. A total of 12 soil samples were collected from the seven locations and analyzed for a combination of some or all of the following: pH, cadmium, chromium, copper, nickel, zinc, chloride, sulfate, ammonia nitrogen, and carbonate.

In June 1985, J.H. Kleinfelder and Associates conducted a Phase II environmental monitoring study in response to a request from DHS to determine if there had been any leakage of Pond 1, as evidenced by contamination of soil or groundwater in the area. During this investigation, 12 soil borings (MW-4A, MW-7, MW-8, MW-9, MW-10, MW-11, and B-1 through B-6) were advanced to depths ranging from 15 feet bgs to 107 feet bgs. Six of the boring locations were completed as monitoring wells. A total of 59 soil samples were collected and analyzed for a combination of some or all of the following: pH, cadmium, chromium, copper, nickel, zinc, chloride, sulfate, ammonia nitrogen, and carbonate.

The results of both the Phase I and Phase II environmental monitoring studies were summarized in an *Environmental Assessment* (J.H. Kleinfelder and Associates, 1986). All metals were detected in Site soils with maximum concentrations as follows: cadmium at 8.0 milligrams per kilogram (mg/kg) (B-1 at 50 feet bgs), chromium at 16,000 mg/kg (MW-4 at 10 feet bgs), copper at 12,000 mg/kg (B-5 at 15 feet bgs), nickel at 240 mg/kg (B-6 at 15 feet bgs), and zinc at 860 mg/kg (MW-2 at 30 feet bgs).

3.2 Soil Investigation by J.H. Kleinfelder and Associates (1988)

The information regarding this investigation was taken from the *Final Site Conceptual Model* (CDM, 2005a).

Eight soil borings were advanced in September 1988 in the ferric chloride area, west of the ferric chloride process facilities (B-7 through B-14). Sixteen soil samples were collected from the eight locations and analyzed for cadmium, chromium, copper, nickel, lead, and zinc. All metals were detected with maximum concentrations as follows: cadmium at 3.7 mg/kg (B-14 at 5 feet bgs), chromium at 814 mg/kg (B-13 at 5 feet bgs), copper at 502 mg/kg (B-8 at 5 feet bgs), nickel at 112 mg/kg (B-11 at 5 feet bgs), lead at 1,110 mg/kg (B-14 at 5.0 feet bgs), and zinc at 617 mg/kg (B-14 at 5.0 feet bgs).

3.3 Phase I RCRA Facility Investigation by CDM (1991)

The Phase I RFI was conducted in response to an Administrative Order of Consent per RCRA Section 3008(h) for which the objectives were (1) to determine the nature and extent of any release of hazardous waste and hazardous waste constituents at or from facility, (2) to perform a corrective measures study to identify and evaluate alternatives for corrective action, and (3) to address deficiencies noted in the LARWQCB report of "Comprehensive Groundwater Monitoring Evaluation of Southern California Chemical." The Order required the submittal of a RFI Workplan, which (according to the RFI report) is dated June 26, 1990 and was approved by the USEPA (CDM, 1991). The scope of work included soil sampling from 92 locations (45 surface locations and 47 subsurface locations).

Seventy-two surface soil samples and 215 subsurface soil samples were analyzed for metals (cadmium, total chromium, copper, iron, nickel, lead, and zinc) by USEPA Method 6010 and hexavalent chromium by USEPA Method 7196. Maximum concentrations of detected metals were as follows: cadmium at 161 mg/kg (RS03 at 3.0 feet bgs), hexavalent chromium at 1160 mg/kg (SB-7 at 40.5 feet bgs), total chromium at 37,000 mg/kg (PI-1 at 2.5 feet bgs), copper at 23,100 mg/kg (WMU-46B at 1.0 feet bgs), iron at 57,000 mg/kg (SB-7 at 5.5 feet bgs), nickel at 28,400 mg/kg (MW-01D at 2.0 feet bgs), lead at 113,000 mg/kg (RS03 at 3.0 feet bgs), and zinc at 40,100 mg/kg (MW-01D at 2.0 feet bgs).

Nine surface soil samples and 40 subsurface soil samples were analyzed for arsenic by USEPA Method 7060. The maximum detection of arsenic was 72 mg/kg (PI-1 at 2.5 feet bgs).

Nine surface soil samples and 39 subsurface soil samples were analyzed for cyanide (total and amenable) by USEPA Method 9010. Total cyanide was detected in four samples with a maximum concentration of 1.50 mg/kg (SB-2 at 1.5 feet bgs). Amenable cyanide was detected in two samples with a maximum concentration of 0.79 mg/kg in sample Pl01 at 37 feet bgs.

Nine surface soil samples and 11 subsurface soil samples were analyzed for mercury by USEPA Method 7471. Mercury was detected in five samples with a maximum concentration of 1.50 mg/kg detected in sample SB-7 at 3.5 feet bgs.

Four surface soil samples and 29 subsurface soil samples were analyzed for purgeable halocarbons by USEPA Method 8010, and an additional four subsurface soil samples were analyzed for these compounds by USEPA Method 8240. Trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethane (1,1-DCA), total 1,2-dichloroethene (1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), chloroform, methylene chloride, acetone, and 2-butanone were detected in Site soils. Maximum concentrations of purgeable halocarbons are as follows: TCE at 110,000 micrograms per kilogram (µg/kg) (RS-6 at 3 feet bgs); PCE at 1,200 µg/kg (SB-7 at 20 feet bgs); 1,1-DCA at 650 µg/kg (SB-7 at 3.5 feet bgs); 1,2-DCE at 59 µg/kg (SB-7 at 10 feet bgs); 1,1,1-TCA at 2,900 µg/kg (SB-7 at 20 feet bgs); chloroform at 510 µg/kg (SB-7 at 3.5 feet bgs); methylene chloride at 1,100 µg/kg (UST-SB7 at 17/15 feet bgs); acetone at 990 µg/kg (SB-7 at 40 feet bgs), and 2-butanone at 13 µg/kg (PI-4 at 21.5 feet bgs).

Eleven surface soil samples and 14 subsurface soil samples were analyzed for polychlorinated biphenyls (PCBs) by USEPA Method 8080. Twenty of these samples had detections of Aroclor 1260 and one sample had a detection of Aroclor 1254. The maximum concentration of Aroclor 1260 was 80,000 µg/kg (FeCl-SB2 at 5 feet bgs). Sample FeCl-SB7 (5 feet bgs) had a detection of Aroclor 1254 with a concentration of 100 µg/kg.

Seven surface soil samples and four subsurface soil samples were analyzed for semivolatile organic compounds (SVOCs) by USEPA Method 8270. 2-Methylnaphthalene, 1,2,4-trichlorobenzene, di-n-butyl-phthalate, bis(2-ethyl-hexyl)phthalate, and pyrene were detected in Site soils. Maximum concentrations of SVOCs are as follows: 2-methylnaphthalene at 26,000 µg/kg (SB-8 at 5.5 feet bgs), 1,2,4-trichlorobenzene at 1,200 µg/kg (FeCl-SB4 at 5.5 feet bgs), di-n-butyl-phthalate at 400 µg/kg (DD05 at 1 foot bgs), bis(2-ethyl-hexyl)phthalate at 410 µg/kg (DD06 at 1 foot bgs), and pyrene at 1,300 µg/kg (WMU18/19 at 1 foot bgs).

Twenty-two surface soil samples and 95 subsurface soil samples were analyzed for benzene, ethylbenzene, toluene and xylenes (BTEX) compounds by USEPA Method 8020 or 8240. All BTEX compounds were detected in Site soils. Maximum concentrations of BTEX compounds are as follows: benzene at 5 mg/kg (UST-SB3 at 30.5/28 feet bgs), ethylbenzene at 37 mg/kg (UST-HB2 at 18 feet bgs), toluene at 6 mg/kg (UST-HB2 at 18 feet bgs), and xylenes at 310 mg/kg (UST-HB2 at 18 feet bgs).

Sixteen surface soil samples and 55 subsurface soil samples were analyzed for extractable total petroleum hydrocarbons (TPH) by USEPA Method 8015M. Seven surface soil samples and 22 subsurface soil samples were analyzed for volatile TPH by USEPA Method 8015M. TPH (extractable and volatile) was detected in Site soils. The maximum concentration for extractable TPH is 17,000 mg/kg (UST-SB7 at 17.5 feet bgs) and for volatile TPH is 230 mg/kg (UST-HB5 at 18 feet bgs).

3.4 Phase II RCRA Facility Investigation by CDM (1991)

The information regarding this investigation was taken from the *Final Site Conceptual Model* (CDM, 2005a).

The Phase II RFI was conducted to target areas of concern from the Phase I RFI. This includes samples from 18 soil boring from onsite and offsite[1] locations. Forty-one soil samples were analyzed for metals by USEPA Method 6010, and for hexavalent chromium by USEPA Method 7196. Cadmium, total chromium, copper, iron, nickel, lead, and zinc were detected in Site soils.

[1] Offsite soil data, designated by a "WPL" or "SPRR" prefix in the sample name, were sampled from the offsite parking area west of the laboratory. Results of these offsite soil samples are discussed for informational purposes only as part of the Phase II RFI and were not included in the HHRA.

Maximum concentrations of these metals are as follows: cadmium at 6.1 mg/kg (WMU46-SB2 at 6 feet bgs), total chromium at 450 mg/kg (WMU12-SB2 at 3 feet bgs), copper at 2,800 mg/kg (WMU46-SB3 at 10 feet bgs), iron at 40,000 mg/kg (WMU12-SB1 at 10 feet bgs), nickel at 1,400 mg/kg (WMU46-SB3 at 10 feet bgs), lead at 68 mg/kg (WMU12-SB2 at 3 feet bgs), and zinc at 1,100 mg/kg (WMU46-SB2 at 3 feet bgs).

Thirty-one soil samples were analyzed for purgeable halocarbons by USEPA Method 8240 or 8010. TCE, PCE, 1,1-DCE, 1,1-DCA, trans-1,2-DCE, 1,1,1-TCA, chloroform, methylene chloride, 1,2-DCA, and cis-1,2-DCE were detected in Site soils. Maximum concentrations of purgeable halocarbons are as follows: TCE at 200 µg/kg (WMU12-SB1 at 40 feet bgs), PCE at 10,000 µg/kg (WMU20-HB1 at 1 foot bgs), 1,1-DCE at 37 µg/kg (WMU12-SB1 at 40 feet bgs), 1,1-DCA at 580 µg/kg (WMU12-SB1 at 40 feet bgs), trans-1,2-DCE at 2.6 µg/kg (WMU12-SB1 at 40 feet bgs), 1,1,1-TCA at 91 µg/kg (WMU12-SB1 at 15 feet bgs), chloroform at 20 µg/kg (WMU12-SB1 at 15 feet bgs), methylene chloride at 210 µg/kg (WMU12-SB1 at 40 feet bgs), 1,2-DCA at 150 µg/kg (UST-SB14 at 10 feet bgs), and cis-1,2-DCE at 11 µg/kg (WMU12-SB1 at 40 feet bgs).

Fifty-four soil samples were analyzed for BTEX compounds by USEPA Method 8020 and for extractable TPH by USEPA Method 8015M. All BTEX compounds and extractable TPH were detected in Site soils. Maximum concentrations of BTEX compounds are as follows: benzene at 0.010 mg/kg (UST-SB16 and UST-SB18 at 20 feet bgs and 5 feet bgs, respectively), ethylbenzene at 5.1 mg/kg (WMU46-SB3 at 10 feet bgs), toluene at 0.26 mg/kg (UST-SB18 at 25 feet bgs), and xylenes at 14.0 mg/kg (WMU46-SB3 at 10 feet bgs). The maximum concentration of extractable TPH of 9,000 mg/kg occurred at UST-SB14 (10 feet bgs).

Six soil samples were analyzed for PCBs by USEPA Method 8080. Aroclor 1260 was detected in all six samples, with a maximum concentration of 13.0 mg/kg (WPL-HB2 at 1 foot bgs). No other PCBs were detected.

3.5 Phase I and Phase II Soil Gas Surveys by CDM (2001 and 2005)

Two soil gas surveys were conducted by CDM, in 2001 and 2005, to evaluate the presence and extent of VOCs in soil gas. The Phase I soil gas survey was performed according to the methods described in the *Soil Vapor Survey Work Plan* (CDM, 1998). The results of the Phase I investigation were originally documented in the *Final Phase I Corrective Action Soil Vapor Survey Report* (CDM, 2001a). The Phase II investigation was performed according to the methods described in *Phase II Soil Vapor Survey and SVE Pilot Test Workplan* (CDM, 2001b). The results of both the Phase I and Phase II soil gas surveys are outlined in *Comprehensive Soil Vapor Survey Report and SVE Pilot Test Work Plan* (CDM, 2005b).

A total of 122 primary soil gas samples and 22 duplicate soil gas samples were taken at various depths (up to 45 feet bgs) from 49 locations. Soil gas samples were analyzed for volatile organic compounds (VOCs) by USEPA Method TO-14A, or 8260B.

VOCs in soil gas were detected in the chemicals and at the maximum concentrations shown in the table below.

Maximum Concentrations of Detected Soil Gas Volatile Organic Compounds Prior to Soil Vapor Extraction Program

Constituent	Concentration (µg/l)	Location	Depth (feet bgs)
1,1,1,2-tetrachloroethane	3.5	SV-29	18
1,1,1-TCA	430	SV-29	18
1,1,2-trichloro-1,2,2-trifluoroethane	450	SV-20 (duplicate)	18
1,1,2-TCA	2.2	SV-10	18
1,1-DCA	380	SV-29	18
1,1-DCE	540	SV-29	18
1,2,4-trimethylbenzene	1.9	SV-39	5
1,2-dichlorobenzene	0.29	SV-28 (duplicate)	18
1,2-DCA	2.7	SV-17	18
1,3,5-trimethylbenzene	1.3	SV-39	30
chloroethane	46	SV-23	30
chloroform	53	SV-29	18
cis-1,2-DCE	73	SV-15	5 and 18
dichlorofluoromethane	1.1	SV-33	5
ethylbenzene	5.1	SV-39	5
isopropylbenzene	2.4	SV-39	30
methylene chloride	21	SV-17	18
n-propylbenzene	1.8	SV-39	5
p-isopropyltoluene	1.5	SV-39	5
tert amyl methyl ether	2.2	SV-40	25
PCE	41	SV-29	18
toluene	11	SV-17	18
xylenes	8.2	SV-39	5
volatile TPH	0.5	SV-33	5, 18, and 45
trans-1,2-DCE	51	SV-22	18
TCE	880	SV-29	18
trichlorofluoromethane	1.8	SV-20 (duplicate)	18
vinyl chloride	3.2	SV-23	30

3.6 Data Gap Investigation by Iris Environmental (2007)

A data gap investigation was conducted by Iris Environmental in June 2007 to address recognized data gaps in the previously DTSC-approved Site conceptual model and to install test wells for use in the upcoming corrective action programs. All soil samples were analyzed for VOCs, CAM 17 metals, and hexavalent chromium. Soil samples located within the vicinity of the former gasoline and diesel underground storage tanks (USTs) were also analyzed for TPH in the gasoline, diesel and motor oil ranges (TPH-g, TPH-d, and TPH-mo), and samples located in areas with previous detections of PCBs were analyzed for these constituents in addition to VOCs, CAM 17 metals, and hexavalent chromium.

Eighty-one soil samples were analyzed for VOCs by USEPA Method 8260B. The detected VOCs include both halogenated VOCs (which will be referred to as HVOCs) and aromatic VOCs. Within the areas sampled during this investigation, detections of HVOCs and aromatic VOCs exhibited a pattern suggesting that two or more source mechanisms may exist. Aromatic VOCs are most often associated with petroleum products or byproducts, while HVOCs are more commonly derived from manufactured solvents and various chemical manufacturing processes.

The maximum concentrations of HVOCs were generally detected in borings drilled near former Pond 1 and the suspected former chromic acid tank. Twenty-three HVOCs were detected in soil. Maximum concentrations of the five most frequently detected HVOCs are as follows: TCE at 12,000 µg/kg (MW-18S at 2.5 feet bgs); 1,1-DCA at 2,800 µg/kg (MW-18S at 10 feet bgs); cis-1,2-DCE at 5,500 µg/kg (PZ-02 at 3.5 feet bgs); 1,1-DCE at 1,000 µg/kg (MW-18S at 2.5 feet bgs); and PCE at 1,300 µg/kg (MW-18S at 2.5 feet bgs). Elevated concentrations of 1,3-dichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,2,3-trichlorobenzene, and 1,4-dichlorobenzene were found in PZ-01 at 3.0 feet bgs, with concentrations ranging from 1,600 µg/kg to 130,000 µg/kg. Other detections of these constituents were found in samples representing artificial fill (0-5 feet bgs) at MW-17S, MW-19S, and MW-20S.

The maximum detections of aromatic VOCs in soils were generally located within the area of the former gasoline and diesel UST. Fourteen different aromatic VOCs were detected during this investigation, and include: isopropylbenzene; naphthalene; sec-butylbenzene; n-propylbenzene; benzene; ethylbenzene; m,p-xylenes; n-butylbenzene; o-xylene; toluene; 1,2,4-trimethylbenzene, p-isopropyltoluene; tert-butylbenzene; and 1,3,5-trimethylbenzene. Maximum concentrations of the five most frequently detected aromatic VOCs are as follows: isopropylbenzene at 3,700 µg/kg (SMP-08B at 26 feet bgs); naphthalene at 19,000 µg/kg (SVE-03B at 21 feet bgs); sec-butylbenzene at 2,600 µg/kg (SMP-08B at 26 feet bgs); n-propylbenzene at 5,100 µg/kg (SVE-03B at 21 feet bgs and SMP-08B at 26 feet bgs); and benzene at 68 µg/kg (MW-20S at 1.5 feet bgs) .

Eighty-one soil samples were analyzed for CAM 17 metals by USEPA Method 6010B, hexavalent chromium by USEPA Method 7199, and mercury by USEPA Method 7471A. Arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, zinc, hexavalent chromium, and mercury were detected in Site soils during the data gap investigation. Maximum concentrations of detected metals are as follows: arsenic at 44 mg/kg (MW-19S at 3 feet bgs); barium at 1,000 mg/kg (PZ-02 at 3.5 feet bgs); beryllium at 1.1 mg/kg (SMP-07 at 9.5 feet bgs and SMP-01B at 7.5 feet bgs; cadmium at 5.4 mg/kg (SMP-08 at 26 feet bgs); total chromium at 4,000 mg/kg (SMP-04B at 5.5 feet bgs); cobalt at 48 mg/kg (MW-18S at 10 feet bgs); copper at 8,700 mg/kg (MW-18S at 10 feet bgs); lead at 6,100 mg/kg (PZ-02 at 3.5 feet bgs); molybdenum at 14 mg/kg (PZ-01 at 3 feet bgs); nickel at 280 mg/kg (MW-18S at 10 feet bgs); vanadium at 75 mg/kg (MW-17S at 7.5 feet bgs); zinc at 900 mg/kg (SMP-04B at 5.5 feet bgs); hexavalent chromium at 330 mg/kg (MW-18S at 43.0 feet bgs); and mercury at 2.0 mg/kg (MW-18S at 10 feet bgs).

Thirty-three soil borings, located in areas of previous TPH detections, such as the area of the former gasoline and diesel USTs, were analyzed for TPH-g, TPH-d, and TPH-mo by USEPA Method 8015B. Maximum detections for these constituents are as follows: TPH-g at 1,500 mg/kg (SMP-06 at 23 feet bgs); TPH-d at 17,000 mg/kg (PZ-02 at 3.5 feet bgs); and TPH-mo at 24,000 mg/kg (PZ-02 at 3.5 feet bgs).

Three soil borings were analyzed for PCBs by USEPA Method 8082. There were two detections of Aroclor 1260 at 130 µg/kg (SMP-04B at 1.5 feet bgs) and 340 µg/kg (SMP-04B at 5.5 feet bgs).

3.7 Groundwater Monitoring by CDM and Iris Environmental (1985-2012)

Groundwater monitoring has been conducted at the Site since 1985. Historical groundwater data has consistently shown detections of VOCs and specific metals (chromium, hexavalent chromium, copper and cadmium). Historical groundwater monitoring data for the Site is contained in Appendix B. The maximum concentrations of VOCs typically occur in up-gradient well MW-11, located on the northern edge of the Site. The maximum concentrations of metals (particularly hexavalent chromium and total chromium) generally occur in wells MW-04 and MW-09, both located downgradient of the former chromic acid UST. Patterns of chemical concentrations in groundwater have remained relatively consistent over time. However, groundwater data collected from quarterly monitoring events over the past seven years (January 2005 through January 2012) are considered most representative of current groundwater quality conditions at the Site due to the dynamic nature of groundwater systems as compared to those of soil. Twenty monitoring wells (MW-01S, MW-01D, MW-03, MW-04, MW-04A, MW-06B, MW-06D, MW-07, MW-09, MW-11, MW-12S, MW-12D, MW14S, MW-16, MW-17S, MW-18S, MW-19S, MW-20S, MW-21S, and MW-21D) are being sampled on a quarterly basis. During the data gap investigation in June 2007, all 28 onsite wells were sampled.

Groundwater samples were analyzed for VOCs by USEPA Method 8260B. The following HVOCs have been detected in groundwater samples since January 2005: 1,1,1-TCA; 1,1,2-TCA; 1,1-DCA; 1,1-DCE; 1,2,3-trichlorobenzene; 1,2,4-trichlorobenzene; 1,2-dichlorobenzene; 1,2-DCA; 1,4-dichlorobenzene; bromodichloromethane; carbon tetrachloride; chlorobenzene; chloroethane; chloroform; cis-1,2-DCE; methylene chloride; PCE; trans-1,2-DCE; TCE; trichlorofluoromethane; and vinyl chloride. Maximum concentrations from 2005 to 2012 of the most frequently detected HVOCs were as follows: 1,1-DCA at 480 micrograms per liter (µg/l) (duplicate sample of MW-10 in July 2007); 1,1-DCE at 160 µg/l (MW-1D in April 2011); 1,2-DCA at 710 µg/l (MW-09 in July 2006); chloroform at 150 µg/l (MW-09 in April 2008); cis-1,2-DCE at 260 µg/l (MW-10 in July 2007); PCE at 240 µg/l (MW-21S in July 2011); and TCE at 1,300 µg/l (MW-11 in July 2005).

The following aromatic VOCs have been detected in groundwater samples since January 2005: 1,2,4-trimethylbenzene, benzene; ethylbenzene; isopropylbenzene; xylenes; naphthalene; n-propylbenzene; and toluene. The maximum concentrations of detected aromatic VOCs are as follows: 1,2,4-trichlorobenzene at 18 µg/l (MW-14S in January 2012); benzene at 17 µg/l (MW-10 in July 2007); ethylbenzene at 9,000 µg/l (MW-10 in July 2007); isopropylbenzene at 52 µg/l (duplicate sample of MW-04 in October 2007); naphthalene at 1.8 µg/l (MW-17S in October

2007); n-propylbenzene at 16 µg/l (MW-10 in July 2007); toluene at 480 µg/l (MW-10 in July 2007); and total xylenes at 13,100 µg/l (MW-10 in July 2007). Note that, as mentioned above, MW-10 was only sampled once in July 2007 as part of the data gap investigation.

Groundwater samples are analyzed on a quarterly basis for metals of concern (cadmium, copper, and total chromium) by USEPA Method 6010B and hexavalent chromium by USEPA Method 7199. Maximum concentrations of these chemicals from 2005 to 2012 are as follows: cadmium at 0.73 milligrams per liter (mg/l) (duplicate sample of MW-04 in April 2007); total chromium at 27 mg/l (MW-04 in July 2006); copper at 0.25 mg/l (MW-15D in January 2008); and hexavalent chromium at 29 mg/l (duplicate sample in MW-04 in July 2006).

As discussed in Section 3.10.2.1, total and hexavalent chromium concentrations have been reduced to low or non-detectable concentrations in groundwater following the In Situ Fixation Pilot Test.

3.8 Background Groundwater Studies

Several known sites with confirmed chemical impacts to groundwater exist in an upgradient direction from PTI. In particular, the former Omega Chemical Corporation site located at 12504 and 12512 East Whittier Boulevard, Whittier, California, is a Superfund site undergoing investigation and cleanup activities. The Omega Chemical Superfund Plume (OU-2) of groundwater contamination associated with the Omega site extends southwest from the Omega site for approximately 4 miles, and a portion of the plume extends onto the PTI property. Groundwater analytical data from PTI's onsite network of monitoring wells, as well as groundwater data from the Omega facility and other upgradient sites with groundwater impacts, are suggestive of certain chemicals migrating onto PTI from offsite sources.

PTI wells MW-01S and MW-01D were the designated background wells for the Site, and have been used to statistically test for chemical releases onsite. However, trends of chemical impacts detected in background wells MW-01S and MW-01D indicate that impacted groundwater is migrating onto the Site. To evaluate the quality of groundwater upgradient of the Site, in April 2009, Iris Environmental installed three groundwater monitoring wells pairs both on- and offsite in the upgradient direction. MW-21S and MW-21D are located onsite approximately 150 feet south of MW-01S and MW-01D, and are directly upgradient to wells MW-6B and MW-6D. MW-22S and MW-22D and MW-23S and MW-23D are located on Dice Road, approximately 500 feet upgradient to the MW-21 well pair and MW-01 well pair, respectively.

The six background monitoring wells have been included in the quarterly groundwater sampling program since the second quarter of 2009. The data for samples obtained from the background monitoring wells indicate that there is an elevated background level in groundwater for metals and VOCs. Hexavalent chromium concentrations in groundwater samples collected from the six background wells since January 2011 have ranged from 0.011 mg/L to 0.028 mg/L, which are typically higher than all wells onsite except for MW-4, MW-9, MW-18S, and MW-19S. Wells MW-4 and MW-9 are partially screened in the unnamed aquitard, which may elevate the biased detection of hexavalent chromium when water levels are high, as they are currently. Well MW-

18S is the closest well to the former chromic acid UST. Well MW-19S is cross-gradient from the former chromic acid UST. Concentrations of PCE and TCE have also been consistently higher in the six upgradient wells than in the onsite wells. In the January 2012 groundwater sampling event, only the following compounds had concentrations in onsite wells that exceeded the concentration in upgradient well MW-23D: hexavalent and total chromium (in 5 wells), cadmium (3 wells), copper (3 wells), benzene (4 wells), and ethylbenzene and total xylenes (1 well).

3.9 Remediation Activities

Two forms of remediation activities are currently being implemented at the Site to treat the HVOCs, aromatic VOCs, and metals found onsite. The two activities are soil vapor extraction (SVE) and in situ chemical injection of calcium polysulfide (CPS). SVE is designed to treat HVOCs and aromatic VOCs in the soil and soil gas, and the in situ CPS injection is being pilot tested to treat metals, specifically to fixate hexavalent chromium in both soil and groundwater.

3.9.1 Soil Vapor Extraction

The SVE system was designed to encompass the areal extent of the vapor plume at the Site. A permit to operate an SVE system onsite was obtained from the South Coast Air Quality Management District (SCAQMD) on July 25, 2008. The SVE system began operating on October 6, 2008 and has continued operating with little interruption since that time.

The SVE system consists of seven SVE wells (SVE-1A through SVE-7A), a 20 horsepower blower, and three 3,000-pound vessels of granular activated carbon (GAC) connected in series. The 4-inch diameter SVE wells each have 10- to 20-foot long, perforated polyvinyl chloride (PVC) screens and a maximum depth of approximately 30 feet bgs. A 25-foot above-grade exhaust stack vents treated vapors to the atmosphere. The extraction wells are connected via above- and below-ground PVC conveyance piping to a centrally located treatment area.

The system is monitored weekly and influent and effluent samples are collected on at least a monthly basis for laboratory analysis in accordance with SCAQMD requirements and also for system performance monitoring. Samples are collected at the outlet of the blower, the influent to the first GAC vessel, and the effluent of the last GAC vessel and analyzed for VOCs by USEPA Method TO-15 and for TPH-g by USEPA Method TO-3.

Since system start-up in 2008, concentrations of VOCs and TPH-g in extracted soil gas have significantly decreased. The total magnitude of VOCs detected in the most recent sampling event (4.6 micrograms per cubic meter [$\mu g/m^3$], December 2012) is significantly lower than the baseline conditions measured in 2008 (158.9 $\mu g/m^3$, November 2008). Likewise, the magnitude of petroleum hydrocarbons in the gasoline range measured during the most recent sampling event (85.9 $\mu g/m^3$, December 2012) has significantly decreased from the baseline conditions (771 $\mu g/m^3$, November 2008). The largest component of the mass entering the carbon vessels is TPH-g (as defined by Standard Method TO-3), which represents greater than 95 percent of the mass currently removed by the SVE system. Iris Environmental is currently working with the laboratory to better understand the composition of chemicals detected by the TO-3 method. The SVE system was shut off on March 29, 2012 in preparation for the in situ CPS injection Pilot Test, which was conducted in April, 2012. The SVE system was restarted in November 2012 after all Pilot Test activities were completed.

3.9.2 In Situ Fixation Pilot Test

The in situ Pilot Test was designed to evaluate the effectiveness of CPS at stabilizing hexavalent chromium in soil and groundwater. Chemical reduction or fixation of hexavalent chromium reduces it to the more thermodynamically stable trivalent chromium, which then precipitates or adsorbs to soil matrix material in the aquifer or aquitard. A reductant such as CPS can ultimately convert the more toxic and soluble hexavalent form of chromium into an insoluble non-toxic hydroxide compound. The final product of the hexavalent chromium (chromate) and CPS reaction is the insoluble non-toxic hydroxide compound, sulfur, calcium, and water. Bench testing indicated that the CPS may also be effective at removing or destroying HVOCs.

The Pilot Test activities were conducted under the oversight of the DTSC, which approved the *Revised Groundwater Corrective Action Pilot Test Work Plan* (Iris Environmental, 2008) dated May 29, 2008, on June 27, 2008. A Waste Discharge Requirements (WDR) permit was obtained from the LARWQCB on November 30, 2009.

The Pilot Test activities were conducted near the former chromic acid UST. Injection activities were conducted in April 2012. An aqueous solution of CPS was injected into the subsurface using both direct push technologies and dedicated injection wells. In the vadose zone (up to 50 feet bgs), CPS was injected into the soil using a direct push drill rig on five-foot-center spacing. CPS was injected into the groundwater through dedicated injection wells screened from 53 to 63 feet bgs. Soil baseline and post-injection samples were collected and analyzed for hexavalent chromium, metals, VOCs, and other related compounds. Groundwater samples were collected before, during, and after groundwater injection activities and analyzed for similar compounds.

The Pilot Test program is complete. Evidence of change in hexavalent chromium concentrations were used to determine the effectiveness of CPS to stabilize hexavalent chromium in the vadose zone and groundwater under real world conditions. Based on comparison of pre- and post-injection data, injection of CPS was capable of effectively fixating total and hexavalent chromium in soil. Multiple sets of groundwater data indicate that full fixation of total and hexavalent chromium has occurred in the test area, and continued monitoring of groundwater quality parameters suggest that most monitoring wells influenced by the pilot test are approaching equilibration conditions, i.e., are returning to baseline concentrations. A full description of the groundwater results was presented in the *Groundwater Corrective Action Pilot Test Report* (Iris Environmental, 2013b). Soil baseline samples were collected from two borings and confirmation soil samples were collected from three borings. The confirmation borings were co-located within one foot of the partner baseline boring for correlation purposes. Samples collected from the paired borings were collected from as close to the same depth as possible. Samples were collected at three depths from the Gage Aquifer and at five depths from the unnamed aquitard at each boring. The samples were analyzed for VOCs, CAM 17 metals, hexavalent chromium, and other indicator compounds. An abbreviated description of the results is presented below. A full description of the soil results was presented in the *Interim Soil Corrective Action Pilot Test Report* (Iris Environmental, 2012).

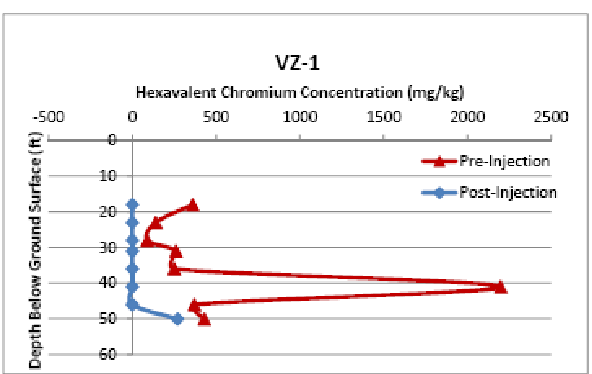
3.9.2.1 **Hexavalent Chromium**

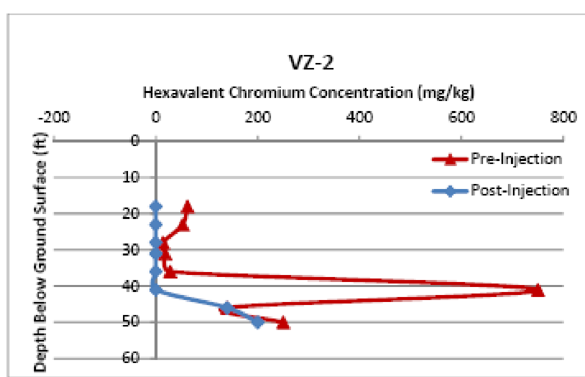
All baseline soil samples in the unsaturated Gage Aquifer contained concentrations of hexavalent chromium, and all corresponding confirmation soil samples taken after injection activities were non-detect for hexavalent chromium. All baseline soil samples in the unnamed aquifer contained concentrations of hexavalent chromium, and all but three of the corresponding confirmation soil samples taken after injection activities were non-detect for hexavalent chromium. Borings VZ-1 and VZ-2 were located within the Pilot Test injection area and were sampled both before and after injection, and Boring VZ-3 was located outside the injection area and sampled only after injection.

Hexavalent Chromium Concentration in Soil in mg/kg

	Depth (feet bgs)	**VZ-1**		**VZ-2**		**VZ-3**
		Baseline	Post-Injection	Baseline	Post-Injection	Post-Injection
Gage Aquifer	18-18.5	360	<2.3	62	<2.4	290
	20-25	140	<2.1	53	<2.5	210
	25-30	89	<2.1	14	<2.2	1,300
Unnamed Aquitard	31.8-32	260	<2.3	18	NS	2,100
	35-38	250	<2.4	28	<2.2	<2.2; 230
	41-41.5	2,200	<2.4	750	<2.3	77
	46-46.5	370	<2.4	140	140	240
	49.5-50	430	270	250	200	61

The pre- and post-injection hexavalent chromium concentrations by depth for the two boring pairs are displayed graphically below.



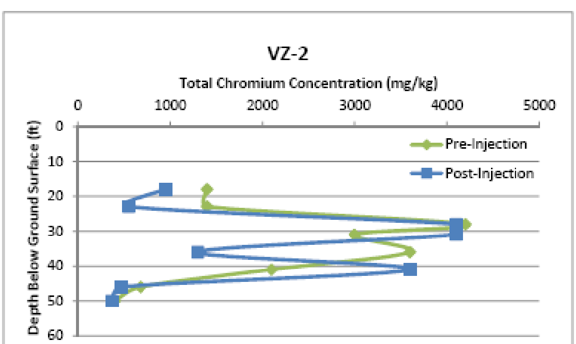


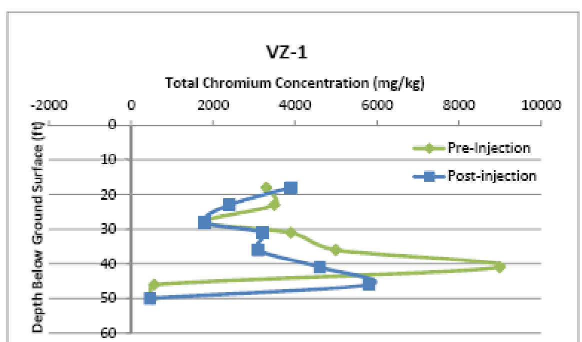
3.9.2.2 **Total Chromium**

The concentration of total chromium at five of the six sample pairs collected from the Gage Aquifer decreased or did not change after injection activities. Total chromium concentrations decreased in seven of ten sample pairs collected from the unnamed aquitard following injection. The four locations with increases in total chromium concentrations corresponded with decreases in hexavalent chromium, but the increase in total chromium concentration was at least double the amount of reduced hexavalent chromium. Increases in concentration and differences between total chromium concentration and the reduction of hexavalent chromium may be attributable to normal variations in metals concentration in soil.

Total Chromium Concentration in Soil in mg/kg						
	Depth (feet bgs)	**VZ-1**		**VZ-2**		**VZ-3**
		Baseline	Post-Injection	Baseline	Post-Injection	Post-Injection
Gage Aquifer	18-18.5	3,300	3,900	1,400	950	2,700
	20-25	3,500	2,400	1,400	550	2,500
	25-30	1,800	1,800	4,200	4,100	1,800
Unnamed Aquitard	31.8-32	3,900	3,200	3,000	NS	2,300
	35-38	5,000	3,100	3,600	1,300	35; 5,000
	41-41.5	9,000	4,600	2,100	3,600	280
	46-46.5	570	5,800	680	470	2,100
	49.5-50	520	460	400	370	130

The pre- and post-injection total chromium concentrations by depth for the two boring pairs are displayed graphically below.





3.9.2.3 **VOCs**

The concentrations of VOCs in the soil were minimal prior to injection, and therefore the effect the CPS injection had on VOC concentrations was not defined.

3.10 Nature and Extent of Impact

As mentioned in the *Final Site Conceptual Model* (CDM, 2005a), compounds typically detected at the Site include chlorinated and aromatic VOCs and metals (cadmium, total chromium, hexavalent chromium, and copper). Arsenic and iron are also detected in select areas of the Site. The following sections summarize the nature and extent of impacts found to date in onsite soils, groundwater, and soil gas at the Site. With the possible exception of one proposed monitoring well pair installation, the Site is well characterized. With DTSC concurrence, the main focus is on remediation performance monitoring. A summary of chemicals present in the soil, groundwater, and soil gas, originally presented in the DTSC-approved Revised HRA WP (Iris Environmental, 2013a), is discussed below. The data presented below were collected before, during, and in some cases after remedial actions (described in Section 3.9), and therefore may be considered to be worst case conditions. Where appropriate, the data are presented in the context of the remediation program.

3.10.1 Soil

Detections and concentration ranges of metals, TPH, VOCs, and PCBs in soil are presented below. Where applicable, detections are screened against the USEPA November 2014 Regional Screening Levels (RSLs) for commercial/industrial land use setting (USEPA, 2014a) for reference.

3.10.1.1 **Metals**

Metals have been detected in soil samples collected across the Site at depths ranging from 0.5 feet bgs to 125.5 feet bgs.

Arsenic was detected at 31 of 32 soil sample locations analyzed for this metal, with the maximum detection occurring within the area known as Pond 1 at a concentration of 72 mg/kg (Pl01 at 2.5 feet bgs). This value exceeds the RSL for arsenic of 3.0 mg/kg. Most arsenic detections were one or more orders of magnitude lower than the maximum, with the exception of three samples (SB02 at 58 mg/kg, MW-17S at 40 mg/kg, and MW-19S at 44 mg/kg) taken from soil currently recognized as artificial fill material, up to 3.0 feet bgs, in the central area of the Site.

Iron was detected at all 72 soil sample locations analyzed for this metal, with the maximum detection occurring in the area of the former chromic acid UST at a concentration of 57,000 mg/kg (SB07 at 5.5 feet bgs). Most iron detections were one or more orders of magnitude less than the maximum concentration. However, several detections across the Site were near the maximum value: 51,700 mg/kg (DD06 at 1 foot bgs, located offsite to the southeast); 49,700 mg/kg (SB02 at 1 foot bgs); 48,000 (SB06 at 6 feet bgs); 47,400 (MW-01D at 2 feet bgs. The RSL for iron is 820,000 mg/kg.

Total chromium was detected at all 111 soil sample locations analyzed for this metal, with the maximum total chromium concentration (37,000 mg/kg) detected in soil boring SB07, located near the former chromic acid UST, at a sample depth of 5.5 feet bgs. All other total chromium detections were significantly lower than the maximum at soil boring location SB07. There is no established RSL for total chromium at this time.

Hexavalent chromium was detected at 49 of 92 soil sample locations specifically analyzed for the hexavalent state. Detected concentrations occurred in samples surrounding the former chromic acid UST at depths of up to 55 feet bgs, and below Pond 1. The maximum concentration, 1,160 mg/kg, was detected in soil boring SB07, located near the former chromic acid UST, at a depth of 40.5 feet. This value exceeds the RSL for hexavalent chromium of 6.3 mg/kg. The next highest hexavalent chromium concentration (1,040 mg/kg) also occurred at this location at a depth of 5.5 feet bgs; all other detections across the Site were several orders of magnitude lower in concentration. The 2012 hexavalent chromium fixation Pilot Test was conducted adjacent to SB07.

Copper was detected at all 110 soil sample locations analyzed for this metal, at depths ranging from 0 feet bgs to 125.5 feet bgs. The maximum detected concentration was 23,100 mg/kg (WMU46B at 1 foot bgs). The RSL for copper is 47,000 mg/kg.

Lead was detected at 88 of 91soil sample locations analyzed for this metal at depths of up to 95 feet bgs (in a saturated sample). The maximum detected concentration occurred in the west area of the Site near the rainwater storage tanks at a concentration of 113,000 mg/kg (RS03 at 3 feet bgs). This value exceeds the RSL for lead of 800 mg/kg. The next highest concentrations of lead were also detected in relatively shallow soils up to 10 feet bgs, but at concentrations orders of magnitude lower than the maximum concentration.

Cadmium was detected at 74 of 97 soil sample locations analyzed for this metal at depths of up to 65.5 feet bgs, although most detections occurred at sample depths shallower than 15 feet bgs. The maximum detection of cadmium was 161 mg/kg (RS03 at 3 feet bgs), located near the rainwater storage tanks in the west portion of the Site. The RSL for cadmium is 980 mg/kg.

Nickel was detected at all 106 soil sample locations analyzed for this metal at depths of up to 125.5 feet bgs. The maximum concentration was 28,400 mg/kg, detected at MW-01D (2 feet bgs). This value exceeds the RSL for nickel of 22,000 mg/kg.

Zinc was detected at all 110 soil sample locations analyzed for this metal at depths of up to 125.5 bgs. The maximum detections of zinc were 40,100 mg/kg (MW-01D at 2 feet bgs) and 30,800 mg/kg (SB02 at 1 foot bgs), located in the northeast portion of the Site. Other zinc detections were significantly lower. The RSL for zinc is 350,000 mg/kg.

Mercury was detected at 22 of 28 soil sample locations analyzed for this metal at depths of up to 71 feet bgs. The maximum detection of mercury was 2 mg/kg (MW-18S at 10 feet bgs). The RSL for mercury (in elemental form) is 40 mg/kg.

3.10.1.2 **TPH and BTEX**

TPH-g, TPH-d, and BTEX compounds were generally detected at maximum concentrations around the former gasoline and diesel USTs in the approximate center of the Site. Lower concentrations were detected in various fill material locations around the Site (*i.e.*, in the top 5 feet of material). TPH-mo was generally detected at maximum concentrations in fill material in the northwest portion of the Site. Currently, there are no established RSLs for the TPH product mixtures TPH-g, TPH-d, and TPH-mo.

TPH-g was detected at 12 of 33 soil sample locations analyzed for this TPH mixture, ranging in sample depth from 1.5 feet bgs to 45 feet bgs. The maximum TPH-g concentration was 1,500 mg/kg (SMP-06B at 23 feet bgs), and occurred in the area of the former fuel USTs.

TPH-d was detected at 17 of 38 soil sample locations, ranging in sample depth from 1.5 feet bgs to 49 feet bgs. The maximum TPH-d concentration was 17,000 mg/kg, which was detected at two locations (PZ-02 at 3.5 feet bgs and UST-SB07 at 17.5 feet bgs). The next highest TPH-d detections occurred near UST-SB07, in the area of the former gasoline and diesel USTs, at concentrations of 16,400 mg/kg (WMU42 at 4.5 feet bgs) and 16,000 mg/kg (UST-HB01 at 17 feet bgs).

TPH-mo was detected at 15 of 33 soil sample locations, ranging in sample depth from 1.5 feet bgs to 45 feet bgs. The maximum TPH-mo detection was 24,000 mg/kg and occurred at location PZ-02 (3.5 feet bgs), located in the northwest portion of the Site. The next highest TPH-mo detection was 3,900 mg/kg and occurred in sample location SMP-04B at 1.5 feet bgs.

Sixty-nine soil boring locations were analyzed for BTEX compounds across the Site. There were detections of benzene in 27 of the locations at sample depths ranging from 1.5 feet bgs to 40.5 feet bgs. The maximum detection of benzene was 5 mg/kg which was detected at two locations (UST-HB05 at 18 feet bgs and UST-SB03 at 35 feet bgs). The RSL for benzene is 5.1 mg/kg. Toluene was detected at 31 locations, in samples ranging in depth from 1.5 feet bgs to 49.5 feet bgs. The maximum detection of toluene was 310 mg/kg (UST-HB02 at 18 feet bgs). The RSL for toluene is 47,000 mg/kg. Ethylbenzene was detected at 30 locations, ranging in depth from 2 feet bgs to 40 feet bgs. The maximum detection of ethylbenzene was 37 mg/kg (UST-HB02 at 18 feet bgs). The RSL for ethylbenzene is 25 mg/kg. Xylenes were detected at 31 locations, ranging in depth from 1 foot bgs to 35 feet bgs. The maximum detection of xylenes was 310 mg/kg and occurred in soil boring UST-HB02 at 2 feet bgs, located in the area of the former gasoline and diesel USTs. The RSL for xylenes is 2,500 mg/kg. All other soil detections of BTEX compounds were several orders of magnitude lower in concentration than the maximum detection, and most detections occurred near the former fuel USTs.

3.10.1.3 **VOCs**

3.10.1.3.1 Halogenated VOCs

Prior to starting the SVE system, twenty-three halogenated VOCs were detected in soils across the Site, particularly in the western portion of the Site, at sample depths ranging from 1 foot bgs to 58.5 feet bgs. Many VOCs had maximum detections at locations near the former chromic acid

UST. The most frequently detected halogenated VOCs included TCE, PCE, 1,1-DCA, cis-1,2-DCE, 1,1-DCE, and chloroform. It is assumed that future sampling and analysis of soils will identify decreases in volatile compounds due to long term operation of the SVE system.

TCE was detected at 27 of 51 soil sample locations analyzed for this compound at sample depths ranging from 1 foot bgs to 60.5 feet bgs. The maximum detection of TCE was 110,000 µg/kg (RS06 at 3 feet bgs), and occurred in the western portion of the Site, north of the Pond 1 area. The RSL for TCE is 6,000 µg/kg. Other detections were observed in samples collected throughout the Site and were several orders of magnitude lower than the maximum concentration.

PCE was detected at 17 of 38 soil sample locations analyzed for this compound, which were limited to the west portion of the Site. The maximum detection of PCE occurred at sample location WMU20-HB1 (1 foot bgs) at a concentration of 10,000 µg/kg. The RSL for PCE is 100,000 µg/kg. The next highest concentrations were 1,300 µg/kg (MW-18S at 2.5 feet bgs), and 1,200 µg/kg (SB07 at 20 feet bgs). All other PCE detections were significantly lower.

1,1-DCA was detected at 22 of 38 soil sample locations analyzed for this compound at sample depths ranging from 2 feet bgs to 58.5 feet bgs. 1,1-DCE was detected at 16 of 37 soil sample locations analyzed for this compound at depths of 1.5 feet bgs to 55 feet bgs. The maximum detections of 1,1-DCA and 1,1-DCE were 2,800 µg/kg (MW-18S at 10 feet bgs), and 1,000 µg/kg (MW-18S at 2.5 feet bgs), respectively, and occurred in the area of the former chromic acid UST. The RSL for 1,1-DCA is 16,000 µg/kg and the RSL for 1,1-DCE is 1,000,000 µg/kg. Other detections of 1,1-DCA and 1,1-DCE occurred in the west area of the Site and had significantly lower concentrations than the maximum.

Chloroform was detected at 17 of 37 soil sample locations analyzed for this compound at sample depths ranging from 2.5 feet bgs to 55 feet bgs. The maximum detections of chloroform were 540 µg/kg (MW-18S at 2.5 feet bgs) and 510 µg/kg (SB07 at 3.5 feet bgs), and occurred near the former chromic acid UST. The RSL for chloroform is 1,400 µg/kg. Other sample detections were significantly lower than the maximum.

Cis-1,2-DCE was detected at 16 of 23 soil sample locations analyzed for this compound at sample depths ranging from 1.5 feet bgs to 53.5 feet bgs. The maximum detection of cis-1,2-DCE was 5,500 µg/kg (PZ-02 at 3.5 feet bgs), and other detections were significantly lower. The RSL for cis-1,2-DCE is 2,300,000 µg/kg.

3.10.1.3.2 Aromatic VOCs

Aromatic VOCs were detected at 17 soil sample locations, most frequently in the areas of the former chromic acid UST and the former fuel USTs. The following aromatic VOCs were detected in Site soils: 1,2,3-trichlorobenzene; 1,2,4-trichlorobenzene; 1,2-dichlorobenzene; 1,3,5-trimethylbenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; chlorobenzene; isopropylbenzene; n-butylbenzene; n-propylbenzene; sec-butylbenzene; and tert-butylbenzene.

1,2,3-Trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene were detected at two of 22, four of 28, five of 23, three of 23, and two of 23 soil sample locations analyzed for these compounds, respectively. The maximum detections, 18,000 µg/kg 1,2,3-trichlorobenzene, 130,000 µg/kg 1,2,4-trichlorobenzene, 1,200 µg/kg 1,2-dichlorobenzene, 20,000 µg/kg 1,3-dichlorobenzene, and 7,200 µg/kg 1,4-dichlorobenzene occurred at PZ-01 (3 feet bgs), which is located in fill material near the ferric chloride production area. The maximum detection of 1,2,4-trichlorobenzene exceeds its respective RSL of 110,000 µg/kg, but the maximum detected concentrations of 1,2,3-trichlorobenzene, 1,2-dichlorobenzene, and 1,4-dichlorobenzene are below their respective RSLs of 660,000 µg/kg, 9,300,000 µg/kg, and 11,000 µg/kg. There is no established RSL for 1,3-dichlorobenzene at this time.

N-propylbenzene was detected at eight of 22 soil sample locations analyzed for this compound, with depths ranging from 1.5 feet bgs to 35 feet bgs. The maximum sample detections of n-propylbenzene were 5,100 µg/kg (SVE-03B at 21 feet bgs and SMP-08 26 feet bgs), and 5,000 µg/kg (SMP-07 at 9.5 feet bgs). The RSL for n-propylbenzene is 22,000,000 µg/kg.

Isopropylbenzene was detected at nine of 22 soil sample locations analyzed for this compound, with sample depths ranging from 1.5 feet bgs to 35 feet bgs. The maximum concentrations of isopropylbenzene were 3,700 µg/kg (SMP-08 at 26 feet bgs), and 3,500 µg/kg (SVE-03B at 21 feet bgs and SMP-07 at 9.5 feet bgs), and occurred near the former fuel USTs. The RSL for isopropylbenzene is 9,900,000 µg/kg.

Sec-butylbenzene was detected at nine of 22 soil sample locations analyzed for this compound at sample depths ranging from 1.5 feet bgs to 32 feet bgs. The maximum concentrations of sec-butylbenzene were detected in borings SMP-08 (2,600 µg/kg at 26 feet bgs), SVE-03B (2,500 µg/kg at 21 feet bgs), and SMP-07 (1,900 µg/kg). The RSL for sec-butylbenzene is 120,000,000 µg/kg.

N-butylbenzene was detected at six of 22 soil sample locations analyzed for this compound at sample depths ranging from 1.5 feet bgs to 26 feet bgs. The maximum detection of n-butylbenzene was 540 µg/kg (SVE-03B at 21 feet bgs). The RSL for n-butylbenzene is 58,000,000 µg/kg.

Detections of tert-butylbenzene, chlorobenzene, and 1,3,5-trimethylbenzene were significantly lower and less frequent than those discussed above.

3.10.1.4 **PCBs**

Soil samples were analyzed for PCBs in the southwest portion of the Site in the area of the former electric railroad transformer and switch building. PCBs were detected at 11 of 27 soil sample locations; 22 soil samples had detections of Aroclor 1260 at depths ranging from 0.5 feet bgs to 9 feet bgs. The maximum sample detections of Aroclor 1260 were 80,000 µg/kg (FeCl-SB02 at 5 feet bgs), and 50,000 µg/kg (FeCl-SB06 at 1 foot bgs). These values exceed the RSL for Aroclor 1260 of 1,000 µg/kg. Other PCB detections occurred most often in the southwest portion of the Site (former transformer area), and were one or more orders of magnitude lower than the maximum concentrations.

3.10.2 Groundwater

Detections and concentration ranges of metals and contaminants in groundwater are presented below. Where applicable, detections are screened against California Maximum Contaminant Levels (MCLs) for drinking water for reference (CDPH, 2011).

3.10.2.1 **Metals**

Historically, concentrations for metals of concern (cadmium, total chromium, hexavalent chromium, and copper), which are monitored on a quarterly basis, have been highest in well MW-04. Samples from four wells (MW-04, MW-07, MW-11, and MW-14S) are analyzed for the full CAM 17 list of metals on an annual basis as part of the Appendix IX sampling program. Additionally, wells that are not sampled quarterly (MW-02, MW-05, MW-08, MW-10, MW-12S, MW-12D, MW-13S, MW-13D, MW-14D, MW-17S, MW-18S, MW-19S, and MW-20S) were analyzed for CAM 17 metals in July 2007. Since 2005, there have been metals detections in groundwater of antimony, arsenic, barium, cadmium, chromium, hexavalent chromium, copper, lead, nickel, thallium, and zinc.

Arsenic was detected at concentrations of 0.052 mg/l (MW-04 in October 2006), 0.053 mg/l (MW-07 in October 2006), 0.028 mg/l (MW-04 in October 2011), 0.023 mg/l (MW-10 in July 2007), 0.015 mg/l (MW-07 in October 2011), 0.014 mg/l (MW-14D in October 2009) and 0.01 mg/l (MW-04A in October 2009) but was not detected in any other wells during this time period. These values meet or exceed the MCL for arsenic of 0.010 mg/l.

Cadmium detections occurred in wells MW-04, MW-04A, MW-15S, and MW-20S (in the southwest portion of the Site) at concentrations ranging from 0.005 mg/l (MW-04A in January 2005) to 0.73 mg/l (duplicate sample of MW-04 in January 2007). These values meet or exceed the MCL for cadmium of 0.005 mg/l. As noted in previous groundwater monitoring reports, MW-04 has the highest and most frequent detections of cadmium.

Hexavalent chromium detections occurred across the Site in wells MW-01S, MW-01D, MW-02, MW-04, MW-04A, MW-06B, MW-06D, MW-08, MW-09, MW-11, MW-12S, MW-12D, MW-13S, MW-13D, MW-14S, MW-14D, MW-15D, MW-16, MW-17S, MW-18S, MW-19S, MW-20S, MW-21S, MW-21D, and all four offsite wells (MW-22S, MW-22D, MW-23S, and MW-23D). Detected concentrations range from 0.001 mg/l (MW-06B in January 2008) to 29 mg/l (MW-04 in July 2006). Hexavalent chromium is currently regulated under the total chromium MCL of 0.05 mg/l.

Total chromium detections occurred in several wells across the Site (MW-01D, MW-01S, MW-04, MW-04A, MW-06B, MW-06D, MW-07, MW-09, MW-11, MW-12S, MW-12D, MW-13S, MW-13D, MW-14D,MW-14S, MW-15D, MW-16, MW-17S, MW-18S, MW-19S, MW-20S, MW-21S, MW-21D), and all four offsite wells at concentrations ranging from 0.005 mg/l (MW-

06D in October 2006) to 27 mg/l (MW-04 in July 2006). The MCL for total chromium is 0.05 mg/l.

Copper was detected in several wells across the Site (MW-01D, MW-01S, MW-02, MW-03, MW-04A, MW-06B, MW-06D, MW-07, MW-08, MW-09, MW-10, MW-11, MW-12D, MW-14S, MW-14D, MW-15D, MW-16, MW-20S, MW-21D, MW-21S) at concentrations ranging from 0.01 mg/l (MW-06D in October 2005, January 2006, and October 2006; MW-14S in October 2005; and MW-15D in January 2007) to 0.29 mg/l (MW-20S in April 2009). Copper does not have an established MCL; rather, it is covered by "action levels" and a separate regulatory approach described in 22 CCR §64678. This regulation is known as the Lead and Copper Rule. The action level for copper is 1.3 mg/l.

Antimony was detected infrequently and only in well MW-04 at concentrations ranging from 0.027 (October 2011) to 0.048 mg/l (October 2005). These values exceed the MCL for antimony of 0.006 mg/l.

Mercury was detected infrequently in well MW-14S at concentrations ranging from 0.00026 (October 2005) to 0.0046 mg/l (October 2010) and infrequently at lower concentrations in wells MW-04 and MW-07. The MCL for mercury is 0.002 mg/l.

Thallium was detected in wells MW-04, MW-07, MW-11, MW-14S, and MW-20S at concentrations ranging from 0.013 mg/l (MW-20S in July 2007) to 0.077 mg/l (MW-07 in October 2006). These values exceed the MCL for thallium of 0.002 mg/l.

Barium, beryllium, cobalt, iron, lead, nickel, selenium, and zinc were detected infrequently and at low concentrations throughout the Site.

3.10.2.2 **VOCs**

3.10.2.2.1 Chlorinated VOCs

Between 2005 and 2012, there have been detections of VOCs in groundwater across the Site (and since 2010, in offsite, upgradient wells). The following chlorinated VOCs were detected in groundwater: 1,1,1-TCA; 1,1,2-TCA; 1,1-DCA; 1,1-DCE; 1,2,3-trichlorobenzene; 1,2,4-trichlorobenzene; 1,2-dichlorobenzene; 1,2-DCA; 1,4-dichlorobenzene; bromodichloromethane; carbon tetrachloride; chlorobenzene; chloroethane; chloroform; cis-1,2-DCE; methylene chloride; PCE; trans-1,2-DCE; TCE; trichlorofluoromethane; and vinyl chloride.

TCE is consistently detected in all onsite and offsite wells during quarterly monitoring events, with the maximum detections usually occurring in up-gradient well MW-11. It is expected that TCE contamination is due to a regional TCE plume, which originates up-gradient of PTI. The maximum concentration of TCE from 2005-2012 was 1,300 µg/l (MW-11 in July 2005). The next highest TCE concentrations ranged from 690 µg/l to 1,200 µg/l, and also occurred in well MW-11. Other TCE concentrations ranged from 1.4 µg/l (MW-15D in October 2008) to 640 µg/l (MW-14S in July 2008). The MCL for TCE is 5 µg/l.

PCE was detected in 31 of the 33 wells at concentrations ranging from 1.1 µg/l (MW-04A in July 2007) to 240 µg/l (MW-21S in July 2011). The highest concentrations of PCE were detected in upgradient wells (MW-12D, MW-13D, MW-21S and MW-21D in 2011) at concentrations between 210 µg/l and 240 µg/l. Other relatively high detections occurred in wells MW-08D (170 µg/l in January 2011) and MW-09 (170 µg/l in April 2011). PCE was detected in all four offsite wells at concentrations ranging from 51 µg/l (MW-22S in May 2010) to 300 µg/l (MW-23D in April 2011). The MCL for PCE is 5 µg/l.

1,2-DCA was detected in 30 wells, with concentrations ranging from 0.51 µg/l (MW-01S in July 2005) to 710 µg/l (duplicate sample of MW-09 in July 2006). The MCL for 1,2-DCA is 0.5 µg/l.

1,1-DCA has been detected in 23 wells, with concentrations ranging from 1 µg/l (MW-15S in January 2007) to 390 µg/l (MW-09 in April 2006). The MCL for 1,1-DCA is 5 µg/l.

1,1-DCE was detected in 30 wells at concentrations ranging from 1 µg/l (MW-17S in July 2007 to 160 µg/l (MW-01D in April 2011). The offsite wells had concentrations of 1,1-DCE ranging from 4.7 µg/l (MW-22D in May 2010) to 240 µg/l (MW-23D in April 2011). The MCL for 1,1-DCE is 6 µg/l.

Trans-1,2-DCE was detected in ten wells in the central and western portion of the Site, with concentrations ranging from 1.1 µg/l (MW-04A in October 2005) to 12 µg/l (MW-16 in October 2007). The MCL for trans-1,2-DCE is 10 µg/l.

Carbon tetrachloride has been detected in five wells in the southern and western portion of the Site, with concentrations ranging from 0.5 µg/l (MW-06D in April 2010) to 72 µg/l (MW-03 in July 2005). The MCL for carbon tetrachloride is 0.5 µg/l.

Chloroform has been detected in 29 wells on the Site, with concentrations ranging from 1 µg/l (MW-04A in July 2009) to 150 µg/l (duplicate sample of MW-09 in April 2008). The MCL for total trihalomethanes which chloroform is regulated under is 80 µg/l.

Cis-1,2-DCE has been detected in 30 wells across the Site, with concentrations ranging from 1 µg/l (MW-03 in July 2005) to 260 µg/l (MW-10 in July 2007). The MCL for cis-1,2-DCE is 6 µg/l.

Methylene chloride has been detected in five wells (MW-18S, MW-14S, MW-13D, MW-09, and MW-04), which are located in the area of the former chromic acid UST and downgradient. The maximum detections of methylene chloride occurred in well MW-09 with concentrations of 120 µg/l (January 2006) and 320 µg/l (October 2007). The MCL for methylene chloride is 5 µg/l. Methylene chloride is most consistently detected in wells MW-04 and MW-09.

Both 1,1,1-TCA and 1,1,2-TCA were detected in wells located in the central and western area of the Site (MW-04, MW-04A, MW-09, and MW-10), and in an up-gradient well (MW-11). Detections of 1,1,1-TCA ranged from 1.2 µg/l (MW-04A in January 2007) to 8.4 µg/l (MW-11) in April 2007. The MCL for 1,1,1-TCA is 200 µg/l. Detections of 1,1,2-TCA ranged from 1.1 µg/l (MW-09 in January 2007) to 1.8 µg/l (MW-09 in July 2007). The MCL for 1,1,2-TCA is 5 µg/l.

Trichlorofluoromethane was detected in 29 wells at concentrations ranging from 1 µg/l (MW-06B in April 2005) to 96 µg/l (MW-13D in October 2010). Trichlorofluoromethane was detected in all four offsite wells at concentrations ranging from 4.3 µg/l (MW-22D in October 2010) to 130 µg/l (MW-23D in April 2011). The MCL for trichlorofluoromethane is 150 µg/l.

Chlorobenzene was detected in nine wells, with concentrations ranging from 1 µg/l (MW-09 in October 2006 and January 2007) to 13 µg/l (MW-11 in April 2005). The MCL for chlorobenzene is 70 µg/l. The maximum concentrations of chlorobenzene occurred in MW-11 and MW-19S.

Bromodichloromethane, chloroethane, 1,2,3-trichlorobenzene, 1,2,4-trimethylbenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, and vinyl chloride were detected infrequently and at low concentrations.

Two downgradient wells at the Site (MW-14S and MW-15S) had detections of 1,2,4-trichlorobenzene ranging from 1.5 µg/l (MW-14S in January 2005) to 18 µg/l (MW-14S in January 2012). The MCL for 1,2,4-trichlorobenzene is 5 µg/l.

3.10.2.2.2 Aromatic VOCs

The following aromatic VOCs have been detected in groundwater samples since January 2005: benzene; ethylbenzene; isopropylbenzene; xylenes; naphthalene; n-propylbenzene; toluene; 1,4-dioxane; p-isopropyl toluene; and styrene. The highest and most frequent detections of aromatic VOCs occur in the central area of the Site (near wells MW-04, MW-10, MW-14S, and MW-14D).

Benzene was detected in 17 wells across the Site at concentrations ranging from 0.5 µg/l (MW-14S in January 2012) to 17 µg/l (MW-10 in July 2007). Well MW-04 most often had the highest concentration of benzene (MW-10 is not a regularly sampled well), with concentrations up to 13 µg/l in January 2007. The MCL for benzene is 1 µg/l.

Ethylbenzene was detected in 12 wells at concentrations ranging from 1 µg/l (MW-15S in January 2007) to 9,000 µg/l (MW-10 in July 2007). Wells MW-04 and MW-17S, located adjacent to one another, typically have the highest ethylbenzene concentrations (well MW-10 is not regularly sampled). The highest detections of ethylbenzene in MW-04 and MW-17S were 3,800 µg/l and 1,900 µg/l, respectively. The MCL for ethylbenzene is 300 µg/l.

Toluene was detected in four wells (MW-06D, MW-10, MW-11, and MW-17S), with concentrations ranging from 1.2 µg/l (MW-11 in January 2007) to 480 µg/l (MW-10 in July 2007). The next highest concentration of toluene was 54 µg/l (MW-11 in October 2006). Other detections of toluene were considerably lower. The MCL for toluene is 150 µg/l.

Xylenes were detected in ten wells, with concentrations ranging from 1 µg/l (MW-14S in July 2006) to 13,100 µg/l (MW-10 in July 2007). The highest detections of total xylenes most often occur in wells MW-04 and MW-11. The maximum detections of MW-04 and MW-11 were 2,410 µg/l (duplicate sample of MW-04 in July 2007) and 670 µg/l (MW-11 in April 2006). The MCL for total xylenes is 1750 µg/l.

Naphthalene, n-propylbenzene, 1,4-dioxane, p-isopropyl toluene, and styrene were detected infrequently and at low concentrations.

3.10.3 Soil Gas

Detections and concentration ranges of some chlorinated VOCs and TPH-g in soil gas are presented below. Where applicable, detections are screened against commercial/industrial soil gas screening levels developed from RSLs for industrial air (USEPA, 2014a) or DTSC-recommended, modified values calculated by the DTSC using the more health protective of toxicity criteria from the Cal/EPA and the RSL tables (Cal/EPA, 2014a). Soil gas screening levels were derived from the industrial air RSLs and DTSC-recommended alternative values using the DTSC-recommended default soil gas-to-indoor air attenuation factor of 0.001 for existing commercial/industrial buildings (protective of current as well as future worker populations) (Cal/EPA, 2011).

The SVE system, constructed in 2008, was designed to target VOCs detected in soil gas during previous Site investigations. Between 2000 and 2005, CDM collected soil gas samples from multiple depths at 44 locations across the central and west portion of the Site and analyzed for VOCs. Elevated VOC concentrations were detected throughout the sampled area at depths ranging from 5 feet bgs to 45 feet bgs. These data were used to design the current SVE system, which is described in more detail in Section 3.9.1.

The SVE system has operated continuously since 2008, with the exception of brief shut down periods for system maintenance. Iris Environmental installed shallow (“A”) and deep (“B”) extraction well pairs SVE-1A and SVE-1B; SVE-2A and SVE-2B; and SVE-3A and SVE-3B in 2007 as part of an initial soil gas extraction system pilot study (Iris Environmental, 2007b). Shallow extraction wells SVE-4, SVE-5A, SVE-6A, and SVE-7A were installed in 2008 after the completion of the initial pilot study (Iris Environmental, 2009). Eleven soil gas monitoring points (SMP-01A through SMP-11A) were installed between 2007 and 2008. Three piezometers (PZ-01 through PZ-03) were installed in 2007. Iris Environmental uses the SVE wells, SMPs, and piezometers to regularly monitor concentrations of volatile chemicals of concern (COCs) in the vadose zone. The locations of all soil gas extraction wells, monitoring points, and piezometers are shown on Figure 3.

3.10.3.1 Rebound Sampling

Regular rebound sampling has been conducted to monitor changes in VOC and TPH-g concentrations in the vadose zone since the SVE system startup in 2008. Soil gas samples are collected from SVE wells, SMPs, and piezometers after an extended period of SVE system inactivity. Periods of system shut-down offer an opportunity to evaluate contaminant reduction in the subsurface independent of extraction system influence, *i.e.*, there is no pressure differential to pull additional air into the subsurface and dilute the sample. Thus, the measured concentrations are representative of equilibrium conditions in the subsurface under static conditions. Rebound sampling has generally been conducted annually on permanent SVE wells. Data for Site wells from sampling rounds conducted between 2007 and 2012 are presented in Appendix C. In each sampling event, soil gas samples have been analyzed for VOCs by EPA Method TO-15 and for TPH-g by EPA Method TO-3. The following descriptions present the trends and most recent rebound sampling data.

Iris Environmental most recently collected soil gas samples from each Site extraction well and all shallow monitoring points in July and November 2012. Samples were collected during an extended shut-down period. The extraction system was turned off prior to the Pilot Test activities in April 2012 and remained off until November 2012. In the July 2012 sampling event, Iris Environmental collected samples for an extended suite of analyses from SVE-1A, SVE-2A, and SVE-3A. Typically, rebound samples have been collected for a standard list of VOCs and TPH-g in the C5 to C10 carbon range only. The following additional analyses were conducted to assess the presence of constituents in soil gas that are not quantified by the standard VOC and TPH-g analyses:

- Extended VOC list and petroleum constituents by EPA Modified TO-15;
- Aliphatic and aromatic petroleum hydrocarbons by EPA Modified TO-15 APH;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Modified Method TO-13A; and
- Petroleum hydrocarbons in the diesel range by EPA Method TO-17.

Based on the results of the extended suite of analytical testing, in which no PAHs were detected by Method TO-13A, and limited PAHs and TPH-d were detected by Method TO-17, the remaining extraction wells and all shallow monitoring points were sampled in November 2012 for the following:

- Extended VOC list, and petroleum constituents by EPA Modified TO-15;
- TPH-g by EPA Method TO-3; and
- Aliphatic and aromatic petroleum hydrocarbons by EPA Modified TO-15 APH.

The results of these additional analyses will be used to evaluate vapor intrusion risks at the Site as discussed in Section 7.0.

3.10.3.2 VOCs

Since the installation of the SVE system in 2008, there has been demonstrated contaminant reduction in soil gas across the Site. Details of the changes in the reported concentrations of

PCE and its breakdown products, TCE, cis-1,2-DCE, trans-1,2-DCE , and vinyl chloride are discussed below. These are a subset of the contaminants present in the Site subsurface and are discussed because PCE was the dominant chemical species in the soil gas samples collected in 2007 during the initial SVE pilot test. Concentrations of all VOCs and details for other monitoring locations not discussed below are presented in Appendix C. Changes in concentrations of VOCs in soil gas from 2008 to 2012 are presented graphically in Appendix C as well.

3.10.3.2.1 Chlorinated VOCs

Concentrations of chlorinated VOCs decreased in the vadose zone as a result of SVE system operations. Figure 4 presents total VOC concentrations at the start of the system in 2008. Figure 5 presents the same VOC measurements in 2012 after system shutdown and rebound.

PCE concentrations in soil gas at the Site have generally decreased since SVE system startup. At the time of SVE system startup in 2008, PCE concentrations in soil gas ranged from non-detect to 28,000 µg/m^3, which was measured in SVE-1A. In the 2012 rebound sampling event, PCE concentrations ranged from non-detect to 2,000 µg/m^3, which was measured in PZ-02. The distribution of PCE in soil gas during the 2012 rebound testing is shown on Figure 6. PCE concentration changes over time are shown for source-area wells SVE-1A, SVE-2A, and SVE-3A in Figure 7. (The 2012 PCE concentration in SVE-1A, which had the maximum concentration initially, was 420 µg/m^3.) The presence of non-target volatile compounds in the 2012 samples collected from SVE-6A and SVE-7A resulted in elevated reporting limits (*i.e.*, 12,500 and 2,670 µg/m^3), which are greater than the respective maximum historical detection. Further analysis by the analytical laboratory showed that the non-target constituents were likely components of polyvinyl chloride (PVC) solvent glue that was used in pipe repairs performed by others, less than 24 hours prior to sampling and not communicated to the sampling team at the time. PCE was not detected below the method detection limit in the samples collected from SVE-6A and SVE-7A during a re-analysis by the laboratory in which compounds present at concentrations below the limit of detection were identified. For reference, the commercial/industrial soil gas screening level for PCE, calculated from the DTSC-recommended industrial air screening level for PCE of 2.08 µg/m^3 (Cal/EPA, 2014a), is 2,080 µg/m^3.

TCE concentrations in soil gas at the Site have generally decreased since SVE system startup. In 2008, TCE concentrations in soil gas ranged from below the reporting limit to 390,000 µg/m^3, measured in SVE-1A. In 2012, TCE concentrations in soil gas ranged from non-detect to 9,569 µg/m^3, measured in SVE-1A. The distribution of TCE in soil gas during the 2012 rebound testing is shown on Figure 6. TCE concentration changes over time are shown for source-area wells SVE-1A, SVE-2A, and SVE-3A in Figure 7. For reference, the commercial/industrial soil gas screening level for TCE, calculated from the USEPA industrial air RSL for TCE of 3.0 µg/m^3 (USEPA, 2014a), is 3,000 µg/m^3.

Concentrations of cis-1,2-DCE have generally decreased in soil gas at the Site since system startup. In 2008, cis-1,2-DCE concentrations ranged from below the reporting limit to 16,000 µg/m^3 (in SVE-1A). In 2012, concentrations ranged from non-detect to 5,160 µg/m^3 (in SMP-03A). (The concentration of cis-1,2-DCE in SVE-1A was 890 µg/m^3 in 2012.) While most wells showed stable or decreasing trends in cis-1,2-DCE, an increasing trend was present in five wells. Concentrations in SMP-01A and SMP-02A increased between 2008 and 2012 (*i.e.*, from baseline 2008 concentrations of 160 and 690 $\mu g/m^3$ to the most recent 2012 concentrations of 352 and 799 $\mu g/m^3$, respectively). Concentrations in PZ-02, PZ-03, and SMP-03A increased between the two sampling events conducted in 2011 and 2012 from an initial range of 78 to 1,600 $\mu g/m^3$ in 2008 to a range of 189 to 5,340 $\mu g/m^3$ in 2012. For reference, the commercial/industrial soil gas screening level for cis-1,2-DCE, calculated from the DTSC-recommended industrial air screening level for cis-1,2-DCE of 31 $\mu g/m^3$ (Cal/EPA, 2014a), is 31,000 $\mu g/m^3$.

Concentrations of trans-1,2-DCE have generally decreased in soil gas at the Site since system startup. In 2008, trans-1,2-DCE concentrations ranged from below the reporting limit to 12,000 $\mu g/m^3$ (in SVE-1A). In 2012, concentrations ranged from non-detect to 298 $\mu g/m^3$ (in SMP-03A). (The concentration of trans-1,2-DCE in SVE-1A was 68 $\mu g/m^3$ in 2012.) While most wells showed stable or decreasing trends in trans-1,2-DCE, an increasing trend was present in three wells. Concentrations in SMP-01A increased between 2008 and 2012 (*i.e.*, from non-detect to 28 $\mu g/m^3$, respectively). Concentrations in PZ-02 and SMP-03A increased between the two sampling events conducted in 2011 and 2012 from an initial range of 11 to 76 $\mu g/m^3$ in 2008 to a range of 214 to 298 $\mu g/m^3$ in 2012. These slight increases are viewed as normal for the dynamic changes that occur during SVE operations and are not expected to further increase. In the absence of a USEPA industrial air RSL or DTSC-recommended alternative for trans-1,2-DCE (Cal/EPA, 2014a; USEPA, 2014a), the commercial/industrial soil gas screening level for cis-1,2-DCE, 31,000 $\mu g/m^3$, is conservatively used.

Vinyl chloride concentrations have generally decreased from baseline conditions or remained stable at levels below the reporting limit. Vinyl chloride was detected in five of 16 locations sampled in 2008 at concentrations ranging from 400 to 3,600 $\mu g/m^3$. In 2012, vinyl chloride was detected in nine of 20 locations sampled at concentrations ranging from 1.0 to 95 $\mu g/m^3$. In five locations, vinyl chloride was first detected in 2012 (SMP-02A, SMP-03A, SMP-04A, PZ-02, and PZ-03). For reference, the commercial/industrial soil gas screening level for vinyl chloride, calculated from the DTSC-recommended industrial air screening level for vinyl chloride of 0.16 $\mu g/m^3$ (Cal/EPA, 2014a), is 160 $\mu g/m^3$.

3.10.3.3 **TPH-g**

TPH-g in soil gas is quantified by reporting the total mass of volatile compounds that contain between 5 and 10 carbon atoms (*i.e.*, C5 to C10) using EPA Method TO-3. The analytical laboratory compares each gas chromatographic (GC) result from the flame ionization detector (FID) against a laboratory-specific gasoline standard to quantify a TPH-g result. The GC/FID does not differentiate between compounds, *i.e.*, the chromatogram includes all volatile compounds that have boiling points within the target range including non-petroleum hydrocarbon constituents. Iris Environmental has been working with the analytical laboratory to further differentiate the components of the TPH-g results on Site, as the vapor plume includes both chlorinated and petroleum hydrocarbon species.

The detected concentrations of TPH-g have generally declined significantly in non-source area locations. The areas of elevated TPH-g are represented by SVE wells SVE-1A and SVE-3A, and monitoring points SMP-6A, SMP-7A, SMP-08A. Extraction well SVE-3A, and monitoring points SMP-6A, SMP-7A, SMP-08A are all located either in or adjacent to the former TPH UST tank pit backfill. In 2008, TPH-g was detected in 17 of 17 samples at concentrations in soil gas ranging from 430 $\mu g/m^3$ to a maximum of $6.3x10^6$ $\mu g/m^3$ in SVE-3A. In 2012, TPH-g was detected in 16 of 21 locations sampled. The reported TPH-g concentrations ranged from below the reporting limit (at or above 7,400 $\mu g/m^3$) to a maximum concentration of $1.3x10^6$ $\mu g/m^3$ in SVE-3A. In the absence of established RSLs for TPH-g, no commercial/industrial soil gas screening level could be developed for reference for the TPH product mixture. Of the 16 TPH-g detections in 2012, nine samples had chromatograms with characteristics indicating the likely presence of petroleum hydrocarbons, the remainder of the samples had chromatograms with individual peaks rather than a typical petroleum hydrocarbon spectrum of molecular weights. The distribution of TPH-g in soil gas during the 2012 rebound testing is shown on Figure 10. TPH-g concentration changes over time are shown for source-area wells SVE-1A, SVE-2A, and SVE-3A in Figure 11. Iris Environmental understands that EPA Method TO-3 quantifies all compounds between a minimum and maximum boiling point, and is designed to target petroleum hydrocarbons between C5 and C10. At PTI, however, chlorinated or other organic constituents are present in soil gas samples and are quantified as TPH-g. The contribution of these other compounds to the reported TPH-g concentrations has likely decreased over time, based on the measured decreases in VOC concentrations at the Site. Iris Environmental will continue to work with the analytical laboratory to identify the individual components of the mass present in soil gas at the Site, to the extent possible.

4.0 DATA EVALUATION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

This section discusses the analytic data collected during Site investigations and the COPCs selected for inclusion in the HHRA.

4.1 Data Evaluation

All Site data collected during previous and recent Site investigations, as discussed in Section 2.0, are evaluated for use in the HHRA, with the exception of soil gas data collected prior to the startup of the SVE system (*i.e.,* soil gas data collected in 2001 and 2005). The SVE system, which has operated since October 6, 2008, has considerably reduced VOC concentrations in the vadose zone at the Site, and thus 2012 soil gas data collected during the SVE rebound monitoring is considered more representative of current soil gas conditions at the Site. As such and per DTSC's recommendation (Cal/EPA, 2012), soil gas collected in 2012 during SVE rebound monitoring are included in the HHRA. Additionally, some historic soil sample results presented in the RFI report (CDM, 1991) did not have reporting limits available for NDs. As such, these data were excluded from the quantitative HHRA. Exclusion of these data is discussed in Appendix I, Uncertainties in Risk Characterization.

In sum, all Site soil samples collected between 1985 and 2007 with reporting limits for NDs and soil gas samples collected in 2012 during SVE rebound monitoring are considered for use in the quantitative HHRA. Also, a total of 21 offsite background soil samples from seven sampling locations (0-10 feet bgs) were collected and analyzed for select inorganics during the 1991 Phase I RFI and 2010 offsite monitoring well installations. This background data will be used in the COPC selection process, as discussed in the following section. Soil data considered relevant for the HHRA include all available data for soil samples collected from depths up to and including 10 feet bgs, as 10 feet is considered a maximum depth for soil that could be excavated from subsurface and mixed during future development of the Site. All Site investigation soil and soil gas data used in the HHRA are compiled and presented in Appendix D.

As previously indicated and summarized in Section 3.0, groundwater monitoring has been conducted at the Site since 1985. Historical groundwater data has consistently shown detections of VOCs and specific metals. Use restrictions have been placed on underlying Site groundwater, and as such, the only potentially complete pathway by which exposure to chemicals in groundwater could occur is through the inhalation of vapors from groundwater emissions. Exposure to VOCs detected in groundwater via the vapor inhalation pathway will be evaluated using soil gas data.

4.2 Selection of Chemicals of Potential Concern

The selection of COPCs for the quantitative HHRA was based on guidance provided by USEPA (1989) and Cal/EPA (1997). In general, all chemicals detected in the Site soil and soil gas samples were initially included in the quantitative HHRA.

4.2.1 Inorganics

Cal/EPA guidance calls for the exclusion of inorganic chemicals from the quantitative risk assessment if they are detected at levels within the local background/ambient concentrations. As previously mentioned, 21 local background soil samples were collected from seven sampling locations at depths of 0 to 10 feet bgs and analyzed for metals. The analytical results of metals detected in these samples are presented in Appendix D, Table D-6. As presented, most of the 21 background samples were only analyzed for cadmium, total chromium, hexavalent chromium, copper, iron, lead, nickel and zinc. With only two background samples analyzed for barium, beryllium, cobalt, mercury, and vanadium, these background datasets were not considered robust enough for statistical comparison to their respective Site datasets and these metals were conservatively selected as COPCs without evaluation against the available background concentrations. Similarly, with only two detected concentrations of cadmium and five detected concentrations of hexavalent chromium in the background samples, these metals were also conservatively selected as COPCs without comparison to the available background concentrations. Only two background samples were also analyzed for arsenic. As background/ambient concentrations of arsenic commonly exceed concentrations corresponding to an incremental cancer risk of 10^{-6} under typical HHRA exposure scenarios (e.g., residential, commercial/industrial), a more detailed, Site-wide determination of background/ambient levels in soil was conducted to determine if arsenic should be considered a COPC and to develop a Site-specific ABTC. Results of the arsenic evaluation, provided in Appendix E, indicate that arsenic appears to be present at the Site at concentrations above background/ambient levels and arsenic was therefore included as a COPC. An ABTC for arsenic of 19 mg/kg was developed per Cal/EPA guidance (2009) using the dataset of arsenic samples collected at the Site as well as from offsite locations (e.g., background samples).

Data from the background samples analyzed for chromium, copper, iron, lead, nickel and zinc were used to represent local background concentrations for these metals. The specific approach used to assess whether these metals are present in Site soils within background levels was conservative and intentionally erred on the side of including chemicals in the quantitative analysis. Specifically, upper confidence limits (UCL) of the arithmetic mean were calculated for these metals in both the Site soil (0-10 feet bgs) and background datasets using the USEPA statistical program, ProUCL (USEPA, 2011b). Appendix F presents the resulting ProUCL output for these metals in Site soil and background soil. A metal was excluded from the quantitative risk assessment only if the maximum detected concentration and the UCL of the metal in Site soil were below the respective maximum detected concentration and UCL of the metal in background soil. As presented in Table 2, the maximum detected concentrations and UCLs in Site soil (0-10 feet bgs) of the metals, chromium, copper, iron, lead, nickel and zinc, are above their respective maximum detected concentrations and UCLs in background soil and these metals were therefore included as COPCs in the HHRA.

4.2.2 Total Petroleum Hydrocarbons

Various mixtures of TPH have been reported in Site soil (0-10 feet bgs) including: TPH-e in soil samples collected in 1990 and 1992; and TPH-g (C5-C10), TPH-d (C10-C24), and extractable fuel hydrocarbons (EFH) (C13-C40 and C23-C40) in soil samples collected in 2007 (Appendix D, Table D-3). TPH-g and TPH-d have also been reported in soil gas samples collected from approximately 25 to 30 feet bgs (Appendix D, Table D-6). Risks to human health associated with the presence of TPH are typically assessed by evaluating the significance of individual chemical constituents within the TPH mixtures (e.g., BTEX and PAHs). However, for this HHRA, at the request of the DTSC, the TPH product mixtures reported in soil and soil gas were also separately evaluated.[2] As described in detail in Section 6.2.1 below, toxicity criteria for use with the TPH mixtures in soil and soil gas were developed using toxicity information for specific aliphatic and aromatic hydrocarbon fractions found within each mixture.

The limitations/uncertainties associated with the various approaches for evaluating weathered TPH as mixtures are discussed in the Uncertainties in the Risk Assessment (Appendix I).

4.2.3 Summary of Chemicals of Potential Concern

The chemicals included as COPCs in the quantitative HHRA for Site soil (0-10 feet bgs) are as follows (Table 2):

- various VOCs;
- three SVOCs (1,2,4-trichlorobenzene, 2-methylnaphthalene, pyrene),
- TPH (EFH [C23-C40], TPH-e, TPH-d, TPH-g),
- Aroclor 1260, and
- various inorganics.

Various VOCs are also included as COPCs in the quantitative HHRA for Site soil gas (Table 3).

[2] Individually identified TPH-related constituents lacking promulgated toxicity values (e.g., 1,3-diethylbenzene, 1-heptene, etc.) were assumed to be accounted for through the evaluation of TPH mixture data (see Table 3 for list of TPH constituents in soil gas evaluated using TPH-g or TPH-d).

5.0 EXPOSURE ASSESSMENT

To determine whether the levels of chemicals present in soil, soil gas, and groundwater at the Site would pose a risk to human populations, it is necessary to identify the populations that may potentially be exposed to the chemicals present in soil, soil gas, and groundwater determine the pathways by which the exposures may occur. Identification of the potentially exposed populations requires an evaluation of the potential current and future land uses of the Site.

Once the potentially exposed populations are identified, the complete exposure pathways by which the individuals may contact chemicals present in soils, soil gas, and groundwater must be determined. As was presented in the HRA WP (Iris Environmental, 2013a) and again in this report (Figure 10), the CSM is used to show the relationship between the chemical sources in the subsurface, exposure pathways and potential receptors at the Site. These source-pathway-receptor relationships provide the basis for the quantitative exposure assessment. Only those complete source-pathway-receptor relationships will be included in the HHRA.

The following section presents a discussion of the chemical sources and potential transport mechanisms, identifies potentially exposed populations and complete and incomplete exposure pathways, discusses the human intake assumptions used in the HHRA, and summarizes the methodology for estimating representative exposure concentrations.

5.1 Chemical Sources and Potential Release Mechanisms

Historical operational activities at the Site may have resulted in the release of chemicals to the soil and groundwater. These releases are indicated by the detection of certain chemicals in the soil, soil gas, and groundwater during the Site investigation activities.

Once the chemicals associated with the former operations are released into the surface and subsurface soils, the potential secondary release mechanisms include the following:

- volatilization and dispersion of constituents in soil and groundwater into ambient (i.e., outdoor) or indoor air;
- wind erosion and atmospheric dispersion of particulate-bound constituents;
- migration of constituents from the subsurface soils down into the groundwater; and
- offsite transport of chemicals in soils through surface water runoff.

The mechanisms listed above represent the theoretically complete mechanisms through which chemicals at the Site can be released and transported from one environmental medium to another.

For the purposes of this assessment, chemicals potentially released during current operations (e.g., through fume, dust, and vapor emissions from process vessels; dust emissions from handling of dry products; and fumes and vapors generated during pavement wash-down operations) are theoretically complete mechanisms, but are outside the scope of this HHRA and will be evaluated in a separate risk evaluation. The current exposures are limited to an evaluation associated with subsurface Site conditions only.

A discussion of each of these transport mechanisms and resulting human exposure routes, including those that are considered to be incomplete, is incorporated into the subsequent sections.

5.2 Identification of Potentially Exposed Populations

As described above, the goal of the HHRA is to assess whether the levels of chemicals detected at the Site could pose a potential health risk to current and reasonably expected future receptors who may be present at or in nearby surroundings of the Site. Accordingly, the primary focus of the HHRA will be on those exposure pathways that would be considered complete for the current and future onsite and offsite populations described below.

Land use at the Site is commercial/industrial and will likely remain as such in the future. Accordingly, the onsite populations that will be included in the HHRA are current and future commercial/industrial populations.

Land use in the vicinity of the Site is primarily commercial/industrial with the nearest residential neighborhood approximately 1,000 feet to the north. As these residents could potentially be exposed to chemicals present at the Site, an offsite resident population evaluation will be included in the quantitative HHRA. The results of the offsite resident population evaluation will be conservatively used to qualitatively assess whether chemicals detected at the Site could pose a risk to the offsite commercial populations as the exposure period for the offsite residential population is longer than that for the offsite commercial population.

In sum, the following human populations will be included in the HHRA:

- Current onsite commercial worker;
- Current offsite resident; and
- Future onsite commercial worker.

5.3 Exposure Pathways

The following section identifies the potentially complete exposure pathways through which current and future populations could be exposed to COPCs detected in soil, soil gas, and groundwater. The section also provides the rationale for excluding certain exposure pathways from further consideration. All exposure pathways included in the HHRA are identified in Figure 12, the CSM for the Site.

5.3.1 Complete Exposure Pathways

As previously indicated, complete exposure pathways require chemical sources, migration routes, an exposure point for contact, and human exposure routes. The chemical sources at the Site were characterized as described in Section 3.0 (Site Investigation Activities). The pathways through which the onsite and offsite populations could be potentially exposed to chemicals detected at the Site are discussed below.

Exposure to Onsite Soil

As previously described, the Site is currently entirely paved or covered with coated or uncoated concrete with the exception of the railroad tracks (CDM, 2005a). A majority of the surface soils at the railroad tracks are covered with crushed rock ballast. Accordingly, under current conditions, the only pathway through which current onsite commercial workers could be exposed to chemicals present in Site soil and groundwater is through the inhalation of volatile compounds that have migrated up from the subsurface into the indoor and/or outdoor (ambient) air.

For current offsite populations, the inhalation of vapors (outdoor only) is considered the only complete pathway for exposure to COPCs detected in Site soils and groundwater as these populations are not expected to come into direct contact with soils at the Site.

Under future conditions, however, the surface covers could be removed, and it is possible future onsite commercial workers could be exposed to the chemicals in the soil through direct (*i.e.*, soil ingestion and dermal contact with soils) as well as indirect (*i.e.*, inhalation of particulates and vapors) pathways.

In sum, and based on our review of available Site data and the current Site and nearby surrounding land-use and reasonably expected future Site land-use, the complete pathways through which current onsite commercial and offsite residential and future onsite commercial populations may be exposed to chemicals detected at the Site to be included in the HHRA are the following (refer to Figure 10):

<u>Current Onsite Commercial Worker</u>

- Inhalation of volatiles migrating from soil, soil gas, and groundwater up through the soil column, and into indoor/ambient air.

<u>Current Offsite Resident</u>

- Inhalation of volatiles migrating from soil, soil gas, and groundwater up through the soil column, and into ambient air.

<u>Future Onsite Commercial Worker</u>

- Inhalation of volatiles migrating from soil, soil gas, and groundwater up through the soil column, and into indoor/ambient air;
- Inhalation of particulates;

- Soil ingestion; and
- Dermal contact with soil.

Exposure to Groundwater

The shallow groundwater beneath the Site is not currently used as a potable water source. Thus, under routine current conditions, the only potentially complete exposure pathway through which onsite and offsite populations can be exposed to chemicals detected in groundwater is through the inhalation of volatile constituents in groundwater that have migrated up through the soil column into the ambient/indoor air. Consistent with Cal/EPA risk assessment guidance, potential exposures to Site groundwater via the outdoor/indoor vapor inhalation pathway will be evaluated using Site soil gas data. Additionally, a sensitivity analysis comparing potential exposures to COPCs via the vapor intrusion pathway from Site groundwater and from soil gas is presented in Appendix I, Uncertainties in the Risk Assessment.

5.3.2 Incomplete Exposure Pathways

Exposure pathways considered incomplete were not included in the risk evaluation. Exposure pathways considered incomplete are discussed below:

- Exposures related to direct exposure pathways under current Site conditions: as described above in Section 5.3.1, under current conditions, the surface of the Site is entirely paved or covered with coated or uncoated concrete (with the exception of the railroad tracks), or buildings. A majority of the surface soils at the railroad tracks are covered with crushed rock ballast. As such, direct exposure to COPCs in soil by current onsite commercial workers and offsite residents is considered an incomplete exposure pathway under current Site conditions.
- Exposures related to the surface water runoff pathway: As noted previously, all storm water is collected and treated in the Site wastewater treatment system. For this reason, the exposure related to surface water runoff pathway is considered incomplete under current conditions and is not evaluated in the HHRA.
- Ingestion of and dermal contact with onsite groundwater: Groundwater in the Hollydale Aquifer immediately underlying the Site is not currently being extracted or used for beneficial use purposes (CDM, 2005a). A deed restriction has been recorded with the Los Angeles County Assessors Office for the property, which prohibits the underlying groundwater from being used for consumption (CDM, 2005a). Accordingly, direct contact with groundwater is not considered a complete pathway in this HHRA.

5.4 Human Intake Assumptions

The route-specific assumptions used to estimate exposure to the COPCs at the Site are presented in Table 4. Exposure assumptions are taken from DTSC and USEPA guidance documents, wherever possible, and are cited in Table 4.

As described in subsequent sections, the various exposure assumptions are combined to estimate the intake of a chemical through a given route of exposure (e.g., soil ingestion). The route-specific intakes are then combined in order to calculate the total intake, with all exposure pathways combined. The route-specific equations used to calculate chemical intake are presented in Table 5a for commercial workers and in Table 5b for residential populations.

The intake assumptions used to estimate exposure for the current and future onsite commercial workers and current offsite residents correspond to the standard default exposure assumptions recommended by Cal/EPA and USEPA.

5.5 Estimation of Representative Exposure Concentrations

The following section presents the methods used to estimate the representative concentration of the COPCs in the soil and air to which current and future populations could be exposed.

5.5.1 Estimation of COPC Concentrations in Soils

As discussed by the USEPA (2002a), an estimate of the risk associated with a given exposure is based on an estimate of the average concentration from the sampling results. Typically, a UCL of the arithmetic mean is used due to the uncertainty associated with estimating the true average concentration at a site. An estimate of the average concentration is used because:

1) carcinogenic and chronic noncarcinogenic toxicity criteria are based on lifetime average exposures; and
2) the average concentration is most representative of the concentration that would be contacted over an extended exposure period (USEPA, 2002a) (i.e., exposure point concentration [EPC]).

The UCL values for each chemical in soil were calculated using USEPA guidance (listed below) and the USEPA statistical program, ProUCL. Data for each chemical were analyzed to determine the distribution pattern (e.g., normal, lognormal, or gamma); printouts of ProUCL distribution analysis and recommended UCLs are included in Appendix F. As most chemical datasets did not fit a normal, lognormal, or gamma distribution pattern, nonparametric methods were used to calculate UCLs. In accordance with USEPA guidance (USEPA, 2010a), UCLs were not calculated for datasets with less than five detections or less than eight samples. Although the USEPA guidance (USEPA, 2010a) recommends either the use of the mean or the median when there are insufficient detections or samples in the dataset, the maximum detected concentration was conservatively used as the representative EPC in these cases in this HHRA.

The following documents were used for guidance in statistical analysis:

- U.S. Environmental Protection Agency (USEPA). 2002a. *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*. Office of Emergency and Remedial Response. Washington, D.C. OSWER 9285.6-10. December.

- U.S. Environmental Protection Agency (USEPA). 2010b. *ProUCL User Guide*. Office of Research and Development. Washington, D.C. EPA/600/R-07/038. May.

The dataset used in estimating exposures to chemicals present in soil at the Site is summarized below.

5.5.1.1 Future Onsite Commercial Workers

Under a future onsite commercial scenario, the subsurface soils down to 10 feet bgs could potentially be excavated and mixed with surface soils during Site development. Future onsite commercial workers are therefore assumed to be directly exposed to COPCs detected across the Site down to a depth of 10 feet bgs.

UCLs computed for COPCs from the Site soil (0-10 feet bgs) dataset were used in the quantitative HHRA to assess potential exposures to the future onsite commercial workers. Summary statistics for soil (0-10 feet bgs) dataset are presented in Table 1. The concentrations of chemicals in soil that were used as the representative EPC for evaluating potential exposures to future onsite commercial workers are presented in Table 6.

Potential risks associated with inhalation of volatile compounds in indoor and outdoor air will be evaluated using soil gas data as described in Section 5.5.2.1 below.

5.5.2 Estimation of Air Concentrations Resulting from Emissions from Onsite Soil and Groundwater

5.5.2.1 **Vapor Emissions**

5.5.2.1.1 Indoor Air

Volatile compounds and certain semi-volatile compounds have the potential to volatilize from soil and groundwater into soil gas, and migrate up through the soil column and into the indoor air space of an overlying building. This process is referred to as “vapor intrusion.” Building occupants could then be exposed via inhalation to these volatile compounds present in indoor air. Physicochemical properties of the COPCs in soil and soil gas are presented in Table 7.

In general, soil gas data, rather than soil or groundwater data, are preferred for use in transport modeling of volatile chemicals to indoor air, because soil gas data represent a direct measurement of the gas-phase constituents that may migrate to indoor air. Thus, soil gas data were used to evaluate the vapor intrusion pathway. However, DTSC guidance (Cal/EPA, 2011d recommends that the results of both soil gas and groundwater modeling be considered when evaluating this exposure pathway, particularly at sites with shallow groundwater plumes. As there is a known VOC-impacted groundwater plume underneath the Site, a sensitivity analysis comparing potential exposures to COPCs via the vapor intrusion pathway from Site groundwater and from soil gas is presented in Appendix I, Uncertainties in the Risk Assessment.

As previously mentioned, soil gas data collected from 21 onsite locations at 22.5, 23, 24, 24.5, 25, 27, 27.5, 28, 28.5, 29, 30, 31.5 and/or 35 feet bgs were used in the HHRA to evaluate the significance of the vapor intrusion pathway. Under the current land use scenario, potential vapor intrusion is evaluated for onsite commercial workers at the maintenance and laboratory buildings. To characterize worst-case impacts to current onsite commercial workers, vapor intrusion into the buildings are modeled on an individual soil gas sample basis, i.e., the transport of COPCs from each boring location and sampling depth is evaluated separately. Under the current land use scenario, vapor intrusion into the existing onsite commercial buildings was evaluated using soil gas samples collected from within approximately a 100-foot radius to each building, as these samples are most representative of soil gas conditions potentially beneath the current existing onsite buildings (Cal/EPA, 2011d). Sampling locations within approximately a 100-foot radius of the maintenance building include: SMP-07A at 27 feet bgs; and sampling locations within approximately a 100-foot radius of the laboratory building include: PZ-01 at 35 feet bgs and SMP-10A at 25 feet bgs.

Under the hypothetical future land use scenarios, commercial buildings could be built anywhere at the Site. Potential vapor intrusion into hypothetical future buildings is evaluated on an individual soil gas sample basis using results of soil gas sampling at all locations and sampling depths (i.e., 22.5, 23, 24, 24.5, 25, 27, 27.5, 28, 28.5, 29, 30, 31.5, and/or 35 feet bgs) (see Figure 2). The detected concentration of each VOC in each SVE monitoring well sampled after rebound in 2012 is used to estimate the health risks posed by each SVE monitoring well via the vapor intrusion pathway under the future commercial scenario, conservatively assuming no further SVE operations (this assumption is overly conservative since the SVE system will continue to operate until completion criteria are achieved).

As described in detail in Appendix G, potential vapor intrusion into current and future onsite buildings is modeled with the USEPA-recommended Johnson & Ettinger Model for soil gas (SG-SCREEN Version 2.0), as modified by the Cal/EPA DTSC HERO (USEPA, 2004a; Cal/EPA, 2011a).

In summary, the vapor intrusion pathway is evaluated for current and hypothetical future onsite commercial workers. The details of the fate and transport modeling used to estimate concentrations of volatile chemicals in indoor air are presented in Appendix G. The results of the soil gas evaluation are discussed in further detail in Section 7.0, Risk Characterization.

5.5.2.1.2 Ambient Air

The CSM (Figure 12) assumes that all receptor populations included in the HHRA could be exposed to volatile chemicals present in outdoor air as a result of transport from soil and groundwater. Exposure to volatile constituents present in outdoor air could occur via the inhalation pathway. In general, soil gas data, rather than soil or groundwater data, are preferred for use in transport modeling of volatile chemicals to outdoor air, because soil gas data represent a direct measurement of the gas-phase constituents that may migrate to outdoor air. Thus, soil gas data were used to evaluate the outdoor air pathway.

To evaluate the outdoor air pathway, representative average concentrations were determined for each COPC in soil gas (i.e., detected in SVE monitoring wells sampled after rebound in 2012) using all soil gas data combined, regardless of sample depth. Specifically, UCL values were calculated for the combined datasets using USEPA guidance and ProUCL[3]; printouts of ProUCL distribution analysis and recommended UCLs are included in Appendix F. As most datasets did not fit a normal, lognormal, or gamma distribution pattern, nonparametric methods were used to calculate the UCLs. Consistent with the determination of EPCs for the COPCs in soil, maximum detected concentrations were conservatively used as representative concentrations for any COPCs with insufficient detections or samples to calculate UCLs. Summary statistics for the soil gas dataset are presented in Table 3.

As discussed in Appendix G, transport from soil gas to outdoor air is modeled by assuming steady-state emissions in accordance with ASTM guidance (ASTM, 1995) and a dispersion factor estimated in accordance with the USEPA Soil Screening Guidance (USEPA, 1996; 2002b). This transport process is characterized by the "transfer factor" (TF), which is defined as the volatile chemical concentration in onsite outdoor air (CA) divided by the volatile chemical concentration in soil gas (CSG). Thus, the concentration of a volatile-phase chemical in outdoor air may be expressed as a function of the chemical concentration in soil gas and the TF:

$$\text{CA}\left(\text{mg/m}^3\right) = \text{CSG}\left(\text{mg/m}^3\right) \times \text{TF}$$

Chemical- and depth-specific TFs are developed as described in Appendix G, and are applied to the soil gas EPCs. To be conservative, the TFs were estimated using the shallowest depth of detected COPC concentrations, 22.5 feet bgs, as the soil gas sample depth.

The CSM assumes that, under the current land use scenario, volatile chemicals emitted from soil gas to onsite outdoor air are further transported via atmospheric dispersion (*e.g.*, wind) to offsite residential populations, where offsite residential receptors are exposed via inhalation. It is conservatively assumed that these *offsite* residential receptors are exposed to volatile chemicals at their estimated concentrations in *onsite* outdoor air. In actuality, the concentrations of volatile chemicals in outdoor air would likely be lower at offsite locations than onsite, due to dispersion.

5.5.2.2 **Particulate Emission**

The CSM assumes that future onsite populations included in the health risk assessment could be exposed to particulate-phase chemicals present in outdoor air as a result of transport from Site soil (*i.e.*, chemicals adhered to airborne dust particles). In general, the concentration of a particulate-phase chemical in air (CA) is the product of the concentration of dust in air (CD) and the concentration of the chemical in soils (CS):

[3] Consistent with UCL calculations for the COPCs in soil, UCLs were not calculated for soil gas datasets with less than five detections or less than eight samples; such datasets are not considered sufficiently large enough for ProUCL to reliably evaluate a specific data population (USEPA, 2010a).

$$\text{CA}\left(\text{mg/m}^3\right) = \text{CD}\left(\text{mg/m}^3\right) \times \text{CS}\left(\text{mg/kg}\right) \times 10^{-6}\left(\text{kg/mg}\right)$$

Thus, for a given concentration of a chemical in soils (CS), a determination of the concentration of that chemical in air (CA) requires a determination of the dust concentration in air (CD). In the context of modeling chemical transport from soils to outdoor air, the concentration of dust in air is expressed through the particulate emission factor (PEF). As defined by the USEPA Soil Screening Guidance (USEPA, 1996; 2002b), the PEF has units of cubic meters of air per kilogram of dust (m^3/kg), and is therefore equal to the reciprocal of the dust concentration:

$$\text{PEF}\left(\text{m}^3\text{/kg}\right) = \frac{1}{\text{CD}\left(\text{mg/m}^3\right)} \times 10^{+6}\left(\text{mg/kg}\right)$$

Combining the preceding two equations, the concentration of a particulate-phase chemical in outdoor air may be expressed as a function of the chemical concentration in soils and the PEF:

$$\text{CA}\left(\text{mg/m}^3\right) = \frac{\text{CS}\left(\text{mg/kg}\right)}{\text{PEF}\left(\text{m}^3\text{/kg}\right)}$$

The chemical concentration in soil (CS) used to estimate the chemical concentration in air (CA) for a particular receptor is the EPC in soil for that receptor.

For future onsite commercial populations, the dust concentration in air is assumed to be attributable to wind erosion. Wind erosion is modeled in accordance with the PEF methodology presented in the USEPA Soil Screening Guidance (USEPA, 1996; 2002b). The details of this calculation are described in Appendix G. Calculated PEFs and particulate-phase chemical concentrations in outdoor air are presented in Table 6 for future onsite commercial workers.

6.0 TOXICITY ASSESSMENT

The toxicity assessment characterizes the relationship between the magnitude of exposure to a chemical and the potential for adverse health effects. More specifically, the toxicity assessment identifies or derives toxicity values that can be used to estimate the likelihood of adverse health effects occurring in humans at different exposure levels. Consistent with regulatory risk assessment policy, adverse health effects resulting from chemical exposures are evaluated in two categories: carcinogenic effects and noncarcinogenic effects. All toxicity values used in the HHRA are presented in Table 8. For evaluation of lead exposures, the traditional reference doses (RfD) approach is not applied, because most human health effects data are based on blood lead concentrations, rather than external dose (Cal/EPA, 2011c).

6.1 Toxicity Assessment for Carcinogenic Effects

Current health risk assessment practice for carcinogens is based on the assumption that, for most substances, there is no threshold dose below which carcinogenic effects do not occur. This current "no-threshold" assumption for carcinogenic effects is based on an assumption that the carcinogenic processes are the same at high and low doses. This approach has generally been adopted by regulatory agencies as a conservative practice to protect public health, and the "no-threshold" assumption has been used in the agency-derived cancer slope factors (CSFs) and Unit Risk Factors (URFs) used in this HHRA. Although the magnitude of the risk declines with decreasing exposure, the risk is believed to be zero only at zero exposure.

The toxicity values used to quantify the response potency of a potential carcinogen are the following:

- The CSF, used in assessing the oral route of exposure, represents the excess lifetime cancer risk due to a continuous, constant lifetime exposure to a specified level of a carcinogen generally reported as excess incremental cancer risk per milligram of chemical per kilogram body weight per day $(mg/kg\text{-}day)^{-1}$.

- The URF, used to assess the inhalation route of exposure, represents the excess lifetime cancer risk due to a continuous, constant lifetime exposure to a specified level of a carcinogen in the air, generally reported as excess incremental cancer risk per microgram of chemical per cubic meter of air $(\mu g/m^3)^{-1}$; URFs are reported as excess incremental cancer risk per milligram of chemical per cubic meter of air $[(mg/m^3)^{-1}]$ in Table 8 for risk calculation purposes.

The Cal/EPA and USEPA have published a list of CSFs and URFs recommended for use in risk assessments. The hierarchy of toxicity values for carcinogenic effects used in this HHRA is as follows:

1. The Cal/EPA-recommended CSFs and URFs as maintained on the Cal/EPA Office of Environmental Health Hazard Assessment's (OEHHA) on-line toxicity criteria database (Cal/EPA, 2014).

2. The USEPA-recommended CSFs and URFs as maintained on the USEPA's Integrated Risk Information System (IRIS) on-line database (USEPA, 2014b); and

3. The National Center of Environmental Assessment (NCEA)/Superfund Health Risk Technical Support Center (STSC)-recommended provisional peer-reviewed toxicity values (PPRTVs; as cited in USEPA, 2014a or USEPA, 2004b).

The one exception to this hierarchy is for the CSF/URF for TCE. Per Cal/EPA DTSC recommendations (Cal/EPA, 2011a), the more recently promulgated USEPA CSF/URF for TCE should be used in lieu of the OEHHA CSF/URF for TCE. [4]

Table 8 presents the CSFs and URFs used in this HHRA. As indicated, chemicals detected in soil and soil gas at the Site that are currently regulated as carcinogens include :1,1,2-trichlorethane, 1,1-dichloroethane, 1,2-dichloroethane, 1,3-butadiene, 1,4-dichlorobenzene, 1,4-dioxane, 1-methylnaphthalene, acetaldehyde, benzaldehyde, benzene, butyraldehyde, carbon tetrachloride, chloroform, ethylbenzene, methylene chloride, naphthalene, PCE, TCE, vinyl chloride, Aroclor 1260, arsenic, beryllium, cadmium, hexavalent chromium, cobalt, and nickel.

6.2 Toxicity Assessment for Noncarcinogenic Effects

The toxicity assessment for noncarcinogenic effects requires the estimation of an exposure level below which no adverse health effects in humans are expected to occur. USEPA refers to these levels as RfDs for oral exposures and reference concentrations (RfCs) for inhalation exposures (USEPA, 1989). The noncancer RfD represents a dose, given in milligrams of chemical per kilogram of body weight per day (mg/kg-day), that would not be expected to cause adverse noncancer health effects in potentially exposed populations. The noncancer RfD is often referred to as the "acceptable dose." The noncancer RfC represents the airborne concentration (in units of milligrams per cubic meter [mg/m^3]) that would not be expected to cause adverse noncancer health effects in populations exposed through the inhalation pathway. OEHHA refers to these "acceptable air concentrations" as Reference Exposure Levels (RELs). As the inhalation RfCs/RELs are derived from inhalation toxicity studies, they are used for evaluating inhalation exposures (USEPA, 1989). Noncancer toxicity values used (i.e., RfDs and RfCs) correspond to those listed and recommended by Cal/EPA and USEPA.

Consistent with DTSC HERO's approach (Cal/EPA, 2011a), the more conservative RfD/REL and RfC/REL obtained from either OEHHA's list of chronic RELs (Cal/EPA, 2014b) or USEPA's sources listed below are used in this HHRA (e.g., RfC for naphthalene).

[4] Also, per Cal/EPA DTSC recommendation, the age-dependent adjustment factor (ADAF)-adjusted URF for TCE as calculated by USEPA (2011a) was used in this HHRA to evaluate potential exposure via inhalation pathway under the current offsite residential scenario. The non-ADAF adjusted URF for TCE was used to evaluate potential exposure via inhalation pathway under the current and future onsite commercial worker scenarios.

As recommended by USEPA (USEPA, 2003a), the hierarchy of USEPA toxicity values for noncarcinogenic effects for the oral and inhalation exposures (i.e., RfDs and RfCs, respectively) used in this HHRA is as follows:

1. The USEPA-recommended RfDs and RfCs as maintained on the USEPA's Integrated Risk Information System (*IRIS)* on-line database (USEPA, 2014b);

2. The NCEA/STSC-recommended PPRTVs (as cited in USEPA, 2014a or USEPA, 2004b); and

3. Other USEPA-recommended values (i.e., Health Effect Assessment Summary Tables [HEAST] toxicity values; USEPA, 1997).

All noncarcinogenic toxicity values used in this risk assessment for chemicals detected in soil and soil gas at the Site are presented in Table 8.

6.2.1 Derivation of Noncarcinogenic Toxicity Values for Total Petroleum Hydrocarbon Mixtures

Toxicity criteria for use with TPH mixtures are not available from the DTSC, OEHHA, or USEPA. However, noncancer toxicity criteria (i.e., RfDs and RfCs) have been developed specific to groups of aliphatic and aromatic hydrocarbons, notably for the following by the Total Petroleum Hydrocarbon Working Group (TPHCWG; 1997), Massachusetts Department of Environmental Protection (MADEP; 2002), and most recently by the USEPA as PPRTVs (USEPA, 2009b):

- C5-C8 aliphatics
- C6-C8 aromatics
- C9-C18 aliphatics
- C9-C16 aromatics
- C19-C32 aliphatics
- C17-C32 aromatics

To evaluate noncancer hazards associated with potential exposures to the various TPH mixtures reported in soil and soil gas at the Site, noncancer toxicity criteria were developed for the various mixtures by: 1) determining percentages and weight fractions of the aforementioned specific groups of aliphatic and aromatic hydrocarbon ranges associated with each mixture; and 2) using this information to calculate weighted criteria for the mixtures from the criteria for the specific aliphatic and aromatic hydrocarbon range groups. Noncancer toxicity criteria were specifically developed for TPH-g, TPH-d, TPH-e, and EFH (C23-C40) in soil, and TPH-g and TPH-d in soil gas. Noncancer toxicity criteria were not developed for EFH (C13-C40) in soil; potential noncancer hazards associated with the hydrocarbons in this range are accounted for through the evaluation of TPH-d (C10-C24) and EFH (C23-C40) in the same samples.

The development of the weighted noncancer toxicity criteria for the TPH mixtures in soil and soil gas including the assumed percentages and weight fractions of aliphatic and aromatic hydrocarbons and the toxicity criteria selected for the aliphatic and aromatic hydrocarbon range groups is presented in Appendix H. The weighted noncancer toxicity criteria developed for the TPH mixtures in soil and soil gas used in the HHRA are presented in Table 8.

6.3 Toxicity Assessment for Lead

The traditional RfD approach to the evaluation of chemicals is not applied to lead because most human health effects data are based on blood lead concentrations, rather than external dose (Cal/EPA, 2011c). Blood lead concentration is an integrated measure of internal dose, reflecting total exposure from Site-related and background sources. A clear "no observed effects level" (NOEL) has not been established for such lead-related health effects endpoints such as birth weight, gestation period, heme synthesis and neurobehavioral development in children and fetuses, and blood pressure in middle-aged men. The Cal/EPA OEHHA has developed a 1 micrograms per deciliter (µg/dL) benchmark for source-specific incremental change in blood lead levels for protection of school children and fetuses (OEHHA, 2007).

The USEPA has developed a methodology for evaluating exposure and the potential for adverse health effects resulting from nonresidential exposure to lead in the environment, in *Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (TRW ALM; USEPA, 2003b). The methodology results in a blood lead concentration of concern for the protection of fetal health (in women of child-bearing age) and presents an algorithm for predicting quasi-steady state blood lead concentrations among adults who have relatively steady patterns of site exposure. USEPA's Adult Lead Model (ALM as modified by DTSC; Cal/EPA, 2011c) was used to estimate the incremental increase in blood lead of the fetus of an adult worker based on blood lead concentration at the 90^{th} percentile of the USEPA ALM. HERO considers the 90^{th} percentile of the distribution appropriate for use in evaluating lead exposures as this would represent lead concentrations in soil that have no more than a 2.5% probability of decreasing IQ by more than 1 point in a 90^{th} percentile child or fetus (OEHHA, 2009). The incremental increase in blood lead for the fetus will be compared to OEHHA's recommended benchmark change in blood lead concentration of 1 µg/dL (OEHHA, 2007).

The results of the lead risk evaluation for the Site under the future onsite commercial scenario are discussed in Section 7.0 (Risk Characterization). The USEPA ALM is also used to derive a RBTC for lead in this HHRA and is presented in Section 8.0.

7.0 RISK CHARACTERIZATION

This section of the HHRA presents the quantitative characterization of risks posed by the COPCs identified in Site soil and soil gas, and the uncertainties associated with the projected risks.

This section is divided into three parts. The first part discusses the methodology used in calculating potential health risks to exposed populations posed by the presence of chemicals in the Site soil and soil gas. The second part presents the estimated cumulative potential incremental cancer risk and noncancer hazard posed by the presence of COPCs in Site soil and soil gas. The quantitative estimates of incremental cancer risk and noncancer hazard provide the basis for identifying the types of mitigation measures that may be appropriate, if needed, to reduce risks to levels that would be protective of human health. The third and final part of this section presents the summary and conclusions of the risk characterization. A detailed discussion of uncertainties associated with the HHRA is presented in Appendix I.

7.1 Methodology

Estimating incremental cancer risks and noncancer hazard indices for exposures to chemicals in Site soil and soil gas requires information regarding chemical concentrations in the various media, the level of intake of the chemical, and the relationship between intake of the chemical and its toxicity as a function of human exposure to the chemical. The methodology used to derive the incremental cancer risks and noncancer hazard indices for the selected COPCs is based principally on guidance provided in the regulatory documents listed below.

- U.S. Environmental Protection Agency (USEPA). 1989. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part A). Interim Final*. Office of Emergency and Remedial Response. EPA/540/1-89/002. Washington, D.C. December.

- U.S. Environmental Protection Agency (USEPA). 1991. *Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual. Supplemental Guidance. Standard Default Exposure Factors.* Office of Emergency and Remedial Response. March 25.

- U.S. Environmental Protection Agency (USEPA). 2009a. *Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment). Final.* OSWER Directive 9285.7-82. EPA-540-R1-070-002. January.

- California Environmental Protection Agency (Cal/EPA). 2013. *Preliminary Endangerment Assessment Manual,* Interim Final. Department of Toxic Substances Control (DTSC). October.

- California Environmental Protection Agency (Cal/EPA). 2011b. *DTSC/Office of Human and Ecological Risk (HERO) Human Health Risk Assessment (HHRA) Note Number 1. Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities.* Department of Toxic Substances Control. May 20.

The sections below present the equations used to derive the incremental cancer risks and noncancer hazard indices for the selected COPCs.

7.1.1 Carcinogenic Health Effects

The equations below describe the established relationship between the estimated intake of constituents, the toxicity of the specific chemicals, and the overall risk for carcinogenic health effects. For carcinogenic effects, the relationship for the inhalation pathway is given by the following equation (USEPA, 2009a):

$$\text{Cancer Risk} = \text{EC} \times \text{URF}$$

Where:

Cancer Risk	=	Cancer risk; the incremental probability of an individual developing cancer as a result of exposure to a particular cumulative concentration of a potential carcinogen (unitless);
EC	=	Exposure Concentration of a chemical (mg chemical/m^3 air); and
URF	=	Unit Risk Factor; the toxicity value which indicates the upper limit on lifetime incremental cancer risk per unit of concentration of chemical (mg chemical/m^3 air)$^{-1}$.

For the ingestion and dermal contact pathways, the relationship for carcinogenic effects is given by the following equation (USEPA, 1989):

$$\text{Cancer Risk} = \text{CDI} \times \text{CSF}$$

Where:

Cancer Risk	=	Cancer risk; the incremental probability of an individual developing cancer as a result of exposure to a particular cumulative dose of a potential carcinogen (unitless);
CDI	=	Chronic Daily Intake of a chemical (mg chemical/kg body weight-day); and
CSF	=	Cancer Slope Factor; the toxicity value which indicates the upper limit on lifetime incremental cancer risk per unit of dose of chemical (mg chemical/kg body weight-day)$^{-1}$.

The formulas for developing the ECs and CDIs used in this evaluation are presented in Tables 5a and 5b for commercial worker and residential populations, respectively.

Estimated ECs and incremental cancer risks associated with exposure to carcinogenic VOCs in soil gas via inhalation of vapors in indoor and outdoor air for exposure scenarios evaluated in this HHRA are presented in the following tables:

- Tables 9a and 9b: estimated ECs and indoor air (vapor intrusion) risks for current and future onsite commercial scenarios, respectively;
- Table 10: estimated ECs and outdoor air risks for current and future onsite commercial scenarios; and
- Table 11: estimated ECs and outdoor air risks for current offsite residential scenario.

The calculated ECs and CDIs for the future onsite commercial scenario for exposure to carcinogenic chemicals in Site soil (0-10 feet bgs) are summarized in Table 12. Estimated incremental cancer risks associated with exposure to these carcinogens for the future onsite commercial scenario are presented in Table 13.

As a point of reference, we note that the National Contingency Plan (NCP) (40 Code of Federal Regulations [CFR] 300) indicates that lifetime incremental cancer risks posed by a site should not exceed a range of one in one million (1×10^{-6}) to one hundred in a million (1×10^{-4}). The point of departure for excess incremental lifetime cancer risk for all receptor groups (i.e., residential and commercial populations) typically used by Cal/EPA and USEPA is 1×10^{-6}. Risk management decisions may lead to raising this criterion, depending on site-specific conditions.

7.1.2 Noncarcinogenic Health Effects

For noncarcinogenic effects, the relationship for the inhalation pathway is given by the following equation (USEPA, 2009a):

$$\text{Hazard Quotient} = \text{EC}/\text{RfC}$$
$$\text{Hazard Index} = \sum \text{Hazard Quotient}$$

Where:

Hazard Quotient	=	Hazard Quotient (HQ); an expression of the potential for a chemical to cause noncarcinogenic effects, which relates the allowable concentration of a chemical (reference concentration [RfC]) to the estimated site-specific exposure concentration (unitless);
Hazard Index	=	Hazard Index (HI); the sum of the chemical-specific HQs, which represents the cumulative potential for predicted exposures to result in noncarcinogenic effects (unitless);
EC	=	Exposure Concentration of a chemical (mg chemical/m^3 air); and

RfC = Reference concentration; the toxicity value indicating the threshold concentration of chemical contacted below which no adverse health effects are expected (mg chemical/m^3 air).

For the ingestion and dermal contact pathways, the relationship for noncarcinogenic effects is given by the following equation (USEPA, 1989):

Hazard Quotient = CDI/RfD
Hazard Index = ∑ Hazard Quotient

Where:

Hazard Quotient = HQ; an expression of the potential for a chemical to cause noncarcinogenic effects, which relates the allowable amount of a chemical (RfD) to the estimated Site-specific intake (unitless);
Hazard Index = HI; the sum of the chemical-specific HQs, which represents the cumulative potential for predicted exposures to result in noncarcinogenic effects (unitless);
CDI = Chronic Daily Intake of a chemical (mg chemical/kg body weight-day); and
RfD = Reference dose; the toxicity value indicating the threshold amount of chemical contacted below which no adverse health effects are expected (mg chemical/kg body weight-day).

The formulas for developing the ECs and CDIs used in this evaluation are presented in Tables 5a and 5b for commercial worker and residential populations, respectively.

Estimated ECs, noncancer HQs and noncancer HIs associated with exposure to noncarcinogenic VOCs in soil gas via inhalation of vapors in indoor and outdoor air exposure scenarios evaluated in this HHRA are presented in the following tables:

- Tables 9a and 9b: estimated ECs and indoor air (vapor intrusion) HQs and HIs for current and future onsite commercial scenarios, respectively;
- Table 10: estimated ECs and outdoor air HQs and HIs for current and future onsite commercial scenarios; and
- Table 11: estimated ECs and outdoor air HQs and HIs for current offsite residential scenario.

The calculated ECs and CDIs for the future onsite commercial scenario for exposure to noncarcinogenic chemicals in Site soil (0-10 feet bgs) are summarized in Table 14. Estimated noncancer HIs associated with exposure to the noncarcinogens for the future onsite commercial scenario are presented in Table 15.

For noncancer health effects, an HI of less than or equal to 1 implies that the intake for a given population and chemical is less than or equal to levels where adverse noncancer health effects could occur. For noncancer health hazards, an HI of 1 is identified as the target level of concern. Chemical exposures that yield hazard indices of less than 1 are not expected to result in adverse noncancer health effects (USEPA, 1989).

7.2 Results of Cancer Risk and Noncancer Hazard Assessment

This section presents the results of the incremental cancer risk and noncancer hazard estimates for exposures to COPCs in Site soil gas and soil under current and future land-use scenarios. The current land-use scenarios include the current onsite commercial worker and offsite residential scenarios. The future land-use scenario includes the future onsite commercial scenario.

As previously indicated, the incremental cancer risks and noncancer hazards estimated under the exposure scenarios evaluated in this HHRA are presented in Tables 9a through 11, 13, and 15. Incremental cancer risks and noncancer HIs presented in Tables 13 and 15 for COPCs in Site soil for the future onsite commercial worker are based on "total" measured concentrations of the COPCs, i.e., concentrations representative of Site-related plus background/ambient levels, and are thus representative of "total" incremental cancer risks and noncancer HIs. "Site-related" incremental cancer risks and noncancer HIs are presented and discussed in Section 7.2.2 below after accounting for contributions of arsenic at background/ambient levels. Finally, the results of the risk evaluation for lead in Site soil using ALM are presented in Table 16.

7.2.1 Current Land-Use Scenarios

Onsite Commercial Worker

Soil Gas: Vapor Intrusion
As indicated in Table 9a, the estimated incremental cancer risk and noncancer HI for the current onsite commercial worker population from indoor air VOC exposures are estimated using soil gas data collected closest in proximity to the occupied maintenance or laboratory buildings. Sampling locations considered closest to the laboratory building are samples PZ-01 and SMP-10A. The sampling location considered closest and to the maintenance building is SMP-07A. As shown in Table 9a, the estimated incremental cancer risk for the current onsite commercial workers from VOCs from the vapor intrusion pathway for the occupied buildings ranges from 3.1×10^{-8} (SMP-10A at 25 feet bgs primarily driven by PCE) to 1.4×10^{-7} (PZ-01 at 35 feet bgs, primarily driven by PCE). Estimated maximum noncancer HIs range from 0.0025 (SMP-10A at 25 feet bgs, primarily driven by TCE) to 0.57 (SMP-07A at 27 feet bgs, primarily driven by TPH-g). Estimated maximum incremental cancer risks for the current onsite commercial workers from the vapor intrusion pathway are below the lower end of the acceptable risk range of 1.0×10^{-6} to 1.0×10^{-4}. The estimated maximum noncancer HI is below the acceptable HI of 1.

Soil Gas: Outdoor Air

Estimated incremental cancer risks and noncancer HIs for the current onsite commercial worker from outdoor air VOC exposures were estimated using representative outdoor air EPCs modeled from representative soil gas concentrations (i.e., UCL or maximum concentration) based on data from all soil gas sampling locations. As shown in Table 10, the estimated incremental cancer risk and noncancer HI for the current onsite commercial worker from VOCs in outdoor air are 6.1×10^{-9} and 0.0046, respectively. The estimated incremental cancer risk is well below the lower end of the acceptable range of 1×10^{-6} to 1×10^{-4}, and the estimated noncancer HI is well below the acceptable HI of 1.

Cumulative Incremental Cancer Risks and Noncancer HIs

In sum, the estimated cumulative incremental cancer risk and noncancer HI from COPCs in Site soil gas for the current onsite commercial worker are **1.4×10^{-7}** and **0.57**, respectively. The cumulative incremental cancer risk for the current onsite commercial worker is below the lower end of the acceptable cancer risk range of 1×10^{-6} to 1×10^{-4}. The cumulative noncancer HI for the current onsite commercial worker is below the acceptable HI of 1.

Offsite Resident

The estimated incremental cancer risk and noncancer HI for the current offsite residential population posed by the presence of VOCs in soil gas are summarized in the following table:

Media	Cancer Risk	Noncancer HI
Soil Gas	3.4E-08	0.019

The estimated incremental cancer risk and noncancer HI for the current offsite resident from outdoor air VOC exposures were estimated using representative outdoor air EPCs modeled from representative soil gas concentrations (i.e., UCL or maximum concentration) based on data from all soil gas sampling locations. As shown in Table 11, the estimated incremental cancer risk and noncancer HI for the current offsite resident from VOCs in outdoor air are **3.4×10^{-8}** and **0.019**, respectively. The estimated incremental cancer risk is well below the lower end of the acceptable range of 1×10^{-6} to 1×10^{-4}, and the estimated noncancer HI is below the acceptable HI of 1.

7.2.2 Future Land-Use Scenario

Onsite Commercial Worker

Soil Gas: Vapor Intrusion

As shown in Table 9b, the estimated maximum incremental cancer risk for the future onsite commercial worker from the vapor intrusion pathway ranges from 8.5×10^{-9} (SVE-5 at 30 feet bgs) to 1.0×10^{-6} (SVE-6 at 31.5 feet bgs; primarily driven by 1,3-butadiene, carbon tetrachloride, and vinyl chloride, which were all conservatively assumed to be present at concentrations equivalent to one-half the reporting limits as these compounds were not detected above the laboratory reporting limit in SVE-6 at 31.5 feet bgs). Estimated maximum incremental cancer risks for the future onsite commercial worker from the vapor intrusion pathway is at the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}.

The estimated maximum noncancer HIs for the future onsite commercial worker from the vapor intrusion pathway range from 0.0014 (SVE-5 at 30 feet bgs) to 0.57 (SMP-07A at 27 feet bgs, primarily driven by TPH-g). Estimated noncancer HIs for the future onsite commercial worker from the vapor intrusion pathway are below the acceptable HI of 1.

Soil Gas: Outdoor Air

The estimated incremental cancer risk and noncancer HI from VOCs in outdoor air for the future onsite commercial worker, as shown in Table 10, are 6.1×10^{-9} and 0.0046, respectively, which are both well below acceptable risk and HI levels, respectively.

Soil

As indicated in Tables 13 and 15, the estimated total incremental cancer risk and total noncancer HI from COPCs in Site soil for the future onsite commercial worker is 1.3×10^{-4} and 14, respectively. COPCs contributing significantly to these estimates, i.e., contributing a chemical-specific incremental cancer risk above or equivalent to the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4} or a chemical specific HQ of 1 include arsenic, which contributes a chemical-specific incremental cancer risk of 1.0×10^{-4} and a chemical-specific HQ of 8.7. Other COPCs with estimated incremental cancer risks above or equivalent to 1×10^{-6} include Aroclor 1260 (2.1×10^{-5}), hexavalent chromium (3.0×10^{-6}), PCE (1.7×10^{-6}), and naphthalene (1.1×10^{-6}). Other COPCs with estimated chemical-specific HQs above 1 include TPH-d (2.5) and Aroclor 1260 (1.5).

Noted contributions from arsenic are based on total concentrations, not site-related concentrations above background/ambient levels. Incremental cancer risk and noncancer HQ associated with arsenic at the Site-specific ABTC, 19 mg/kg (Appendix E), are presented in the table below:

Receptor	Arsenic Ambient Cancer Risk	Arsenic Ambient Noncancer HQ
Future Onsite Commercial Worker	8.5×10^{-5}	7.1

As presented, the "ambient" cancer risk associated with arsenic at the Site-specific ABTC exceeds the 1×10^{-6} point of departure. Similarly, the "ambient" noncancer HQ exceeds 1. Deducting the aforementioned ambient cancer risk and noncancer HQ from the corresponding total cancer risk and noncancer HI presented in Tables 13 and 15, respectively, provide the following estimates of Site-related cancer risk and noncancer HI:

Receptor	Site-Related Cancer Risk	Site-Related Noncancer HI
Future Onsite Commercial Worker	4.7×10^{-5}	6.9

The Site-related cancer risk for future onsite commercial worker exposure to COPCs in Site soil is therefore **4.7×10^{-5}**, which is above the 1×10^{-6} point of departure and is at the high end of the USEPA acceptable risk range of 1×10^{-6} to 1×10^{-4}. The Site-related noncancer HI for future onsite commercial worker exposure to Site soil is **6.9**, which is above the acceptable HI of 1. Approximately 40% of the estimated Site-related incremental cancer risk and 24% of the estimated Site-related noncancer HI are attributable to arsenic above ambient levels. As previously mentioned, the maximum detection of arsenic occurred within the area known as Pond 1 at a concentration of 72 mg/kg (Pl01 at 2 feet bgs). Most arsenic detections were one or more orders of magnitude lower than the maximum, with the exception of four samples; SB02 at 58 mg/kg, MW-17S at 40 mg/kg, and MW-19S at 44 mg/kg taken from soil currently recognized as artificial fill material, up to 3.0 feet bgs, in the central area of the Site, and VZ-PM-1 at 47 mg/kg at 9 feet bgs, near the ammonia tank area.
The largest contribution to estimated Site-related incremental cancer risk is from Aroclor 1260 (45%). Aroclor 1260 also contributed 22% of the estimated Site-related noncancer HI. The highest concentrations of Aroclor 1260 occurred most often in the southwest portion of the Site.

The largest contribution to estimated Site-related noncancer HI is from TPH-d (37%). Due to the limited dataset for TPH-d, the maximum concentration of TPH-d detected of 17,000 mg/kg (PZ-02 at 3.5 feet bgs, near the former gasoline and diesel USTs) was conservatively used as the EPC. Other concentrations of TPH-d were one or more orders of magnitude lower than the maximum concentration. As such, potential noncancer hazard associated with exposure to TPH-d in soil is overestimated and likely lower than estimated in this HHRA.

Hexavalent chromium contributed a chemical-specific incremental cancer risk of 3.0×10^{-6} (6.4% of Site-related incremental cancer risk). Hexavalent chromium was detected in samples surrounding the former chromic acid UST and below Pond 1. The maximum concentration of hexavalent chromium (3,200 mg/kg) was detected in soil boring VZ-PM-1, located near the ammonia tank area, at a depth of 9 feet bgs. The next highest hexavalent chromium concentration (1,040 mg/kg) occurred at SB07 at a depth of 5.5 feet bgs; all other detections across the Site were several orders of magnitude lower in concentration. Note that the 2012 hexavalent chromium fixation Pilot Test was conducted near the former chromic acid UST and based on comparison of pre- and post-injection data, injection of CPS was capable of effectively fixating total and hexavalent chromium in soil.

Concentrations of PCE and naphthalene resulted in estimated Site-related incremental cancer risk slightly above or equivalent to the lower end of the risk range of 1×10^{-6} to 1×10^{-4}. The maximum PCE concentration of 10 mg/kg (WMU20-HB01 at 1 foot bgs) was an order of magnitude higher than the next highest concentration. Further note that the arithmetic mean for PCE is 0.48 mg/kg. As such, the UCL for PCE of 4.2 mg/kg is likely biased high by the maximum concentration. Naphthalene was detected in four out of 20 samples and, as such, the maximum concentration detected (9.8 mg/kg, SMP-07 at 9.5 feet bgs) was conservatively used as the EPC. Other detections of naphthalene were several orders of magnitude lower in concentration. Therefore, potential cancer risks and noncancer hazards associated with exposure to PCE and naphthalene in soil are overestimated and likely lower than estimated in this HHRA.

As shown in Table 16, the EPC of 5,917 mg/kg for lead in soil (0-10 feet bgs) results in an estimated increase in blood lead level of 19 μg/dL in the fetus of the future onsite commercial worker, which is above OEHHA's benchmark value of 1 μg/dL. High lead concentrations were detected in shallow soils across the Site. The maximum concentration of lead occurred in the west area of the Site near the rainwater storage tanks at a concentration of 113,000 mg/kg (RS03 at 3 feet bgs). The next highest concentrations of lead were also detected in relatively shallow soils and up to 10 feet bgs, but at concentrations orders of magnitude lower than the maximum concentration.

Cumulative Incremental Cancer Risks and Noncancer HIs
In sum, the estimated cumulative, Site-related incremental cancer risk and noncancer HI from COPCs in Site soil gas and soil for the future onsite commercial worker are **4.8×10^{-5}** and **7.4**, respectively. The cumulative incremental cancer risk estimate is above the 1×10^{-6} point of departure and is at the high end of the acceptable cancer risk range, due primarily to hypothetical direct contact with Aroclor 1260 and arsenic (above ambient levels) in Site soil. The cumulative noncancer HI is above the target HI of 1 due primarily to TPH-d, arsenic (above ambient levels), and Aroclor 1260 in Site soil. The levels of lead in soil at the Site may result in an increase in the blood lead level in the fetus of the future onsite commercial worker above OEHHA's benchmark value of 1 μg/dL.

7.2.3 Uncertainties in Risk Characterization

The risk assessment includes several uncertainties that warrant discussion. Many of the assumptions used in this risk assessment, regarding the representativeness of the sampling data, human exposures, fate and transport modeling, and chemical toxicity are conservative, following agency guidance, and reflect a 90^{th} or 95^{th} percentile value, rather than a typical or average value. The use of several conservative exposure and toxicity assumptions can introduce considerable uncertainty into the risk assessment. By using conservative exposure or toxicity estimates, the assessment can develop a significant conservative bias that may result in the calculation of significantly higher cancer risks or noncancer hazards than are actually posed by the chemicals present in soils and soil gas. A discussion of the key uncertainties used in this evaluation for the Site is presented in Appendix I.

7.3 Summary and Conclusions

An HHRA was conducted to assess whether the levels of chemicals detected at the Site could pose an unacceptable risk to human health to either current or potential future onsite commercial or current offsite residential populations at the Site. The results of the HHRA will be used to assist in identifying the types of mitigation measures or institutional controls that may be appropriate, if needed, to reduce risks to levels that would be fully protective of human health.

The HHRA was intended to be conservative, resulting in projected estimates of health risks that are likely higher than the actual risks that may be posed by the Site. The human receptors that could potentially be impacted through use of the Site and offsite areas were identified and included in the evaluation. All chemicals detected in Site soil within the top 10 feet were included in the evaluation of future commercial populations under the assumption that the UCL represents the EPC to which human populations may be exposed. All VOCs detected in soil gas were included in the evaluation and the maximum detected concentration at each sample location and depth was used to estimate the concentrations representative of indoor air EPCs to which human populations may be exposed, and the UCL of all samples and depths was used to estimate the concentrations representative of ambient air EPCs. The quantitative risk results and corresponding conclusions for each of the onsite and offsite land use scenarios are summarized below.

Current Onsite Commercial Worker Scenario

The results of the HHRA indicate that none of the chemicals detected in soil gas at the Site pose a significant health risk to current onsite commercial populations working at the Site. Specifically, the results of the HHRA support that the conditions at the Site are fully protective of the health of current commercial worker populations. Estimated incremental cancer risks are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. Further, the estimated noncancer hazards for the current onsite commercial worker are below the acceptable HI of 1. Based on these conservative upper-bound risk estimates, remedial action, or other form of risk management, is not necessary to protect the health of current onsite commercial workers at the Site.

Current Offsite Residential Scenario

The results of the HHRA indicate that none of the chemicals detected in soil gas at the Site pose a significant health risk to current offsite residential populations living nearby the Site. Specifically, the results of the HHRA support that the conditions at the Site are fully protective of the health of current offsite residential populations. Estimated incremental cancer risks are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. Further, the estimated noncancer hazards for the current offsite resident are below the acceptable HI of 1. Based on these conservative upper-bound risk estimates, remedial action, or other form of risk management, is not necessary to protect the health of current offsite residential populations.

Future Onsite Commercial Worker Scenario

The results of the HHRA indicate that the estimated incremental cancer risks associated with COPCs in soil gas for future onsite commercial workers are below the lower end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}. The estimated noncancer hazards associated with COPCs in soil gas for future onsite commercial populations are below the acceptable HI of 1.

The estimated Site-related incremental cancer risk associated with COPCs in Site soil for the future onsite commercial population is at the high end of the acceptable risk range of 1×10^{-6} to 1×10^{-4}, due principally to the presence of Aroclor 1260, arsenic above ambient levels, hexavalent chromium, PCE, and naphthalene, and assuming direct exposure. The estimated noncancer hazard for the future onsite commercial population is above the acceptable HI of 1, due principally to the presence of TPH-d, arsenic above ambient levels, and Aroclor 1260, and assuming direct exposure. The levels of lead in soil at the Site may result in an increase in the blood lead level in the fetus of the future onsite commercial worker above OEHHA's benchmark value of 1 μg/dL, assuming direct exposure.

Accordingly, the results of the HHRA support that levels of Aroclor 1260, arsenic above ambient levels, lead, TPH-d, hexavalent chromium, PCE, and naphthalene present in Site soil would require some remediation or other form of risk management (e.g., institutional controls) in the event that the existing physical mitigating features that currently exist on the Site were to be removed or altered and/or if the Site were to be developed in the future for other commercial purposes.

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TABLES

TABLE 1
SUMMARY OF PREVIOUS INVESTIGATIONS AND DATA SOURCES
Phibro-Tech, Inc.
Santa Fe Springs, California

Report	Report Author	Soil/Soil Gas	Soil/Soil Gas Analysis	Soil/Soil Gas Analysis Method	Groundwater Analysis	Groundwater Analysis Method
January 1986. *Environmental Assessment, Southern California Chemical Company, Santa Fe Springs, California*	J.H. Kleinfelder & Associates	Soil	pH Cadmium Chromium Copper Nickel	Unknown Unknown Unknown Unknown Unknown	Arsenic, Bariumm Cadmium, Chromium, Fluoride, Lead, Mercury, Nitrate, Selenium, Silver, Endrin, Lindane, Methoxychlor, Toxaphene, 2,4D, 2,4,5-TP Silvex, Gross Alpha, Gross Beta, pH, Specific Conductance, TOC, TOX, Chloride, Iron, Manganese, Phenols, Sodium, Sulfate, Sulfide, Hexavalent Chromium, Nickel, Zinc, Ammonia Nitrogen, Copper	Unknown
September 1988. *Unnamed Report of Soil Investigation, Ferric Chloride Process Expansion Area*	J.H. Kleinfelder & Associates	Soil	Cadmium Chromium Copper Nickel Lead Zinc	Unknown Unknown Unknown Unknown Unknown Unknown	No data	
December 1991. RCRA Facility Investigation, Phase I, Southern California Chemical, Santa Fe Springs, California	Camp, Dresser and McKee (CDM)	Soil	pH Metals Hexavalent Chromium Arsenic Cyanide Mercury Purgeable Halocarbons SVOCs PCBs BTEX TPH TOC TOS	US EPA 150.1 US EPA 6010 US EPA 7196 US EPA 7060 US EPA 9010 US EPA 7471 US EPA 8010 or US EPA 8240 US EPA 8270 US EPA 8080 US EPA 8020 US EPA 8015M US EPA 9060 US EPA 160.3	Halogenated VOCs BTEX Metals Hexavalent Chromium Chloride and Nitrates Cyanide EC, pH, TOC and TOX	US EPA 8010-L US EPA 8020-L US EPA 6010-L US EPA 7196 US EPA 300 US EPA 9012 Unknown
1991. RCRA Facility Investigation, Phase II, Southern California Chemical, Santa Fe Springs, California	Camp, Dresser and McKee (CDM)	Soil	pH Metals Hexavalent Chromium Purgeable Halocarbons BTEX TPH PCBs	US EPA 150.1 US EPA 6010 US EPA 7196 US EPA 8010 or US EPA 8240 US EPA 8020 US EPA 8015M US EPA 8080	Halogenated VOCs BTEX Metals Hexavalent Chromium pH Amonnia as Nitrogen TOC	US EPA 524.4 or US EPA 8011 US EPA 524.4 US EPA 6010-L US EPA 7196 US EPA 150.1 US EPA 350.3 US EPA 415.1

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SUMMARY OF PREVIOUS INVESTIGATIONS AND DATA SOURCES
Phibro-Tech, Inc.
Santa Fe Springs, California

Report	Report Author	Soil/Soil Gas	Soil/Soil Gas Analysis	Soil/Soil Gas Analysis Method	Groundwater Analysis	Groundwater Analysis Method
November 2001. Phase 1 Corrective Action Soil Vapor Survey	Camp, Dresser and McKee (CDM)	Soil Gas	VOCs	US EPA TO-14	No data	
2005. Phase 2 Corrective Action Soil Vapor Survey	Camp, Dresser and McKee (CDM)	Soil Gas	VOCs	US EPA TO-14	No data	
2007. Data Gap Investigation Report, Phibro-Tech, Inc., Santa Fe Springs, California	Iris Environmental	Soil	pH CAM 17 Metals Hexavalent Chromium VOCs TPH-g TPH-d/mo BTEX PCBs TOC	US EPA 9045 US EPA 6010 US EPA 7199 US EPA 8260 US EPA 8015B US EPA 8015B US EPA 8260 US EPA 8082 US EPA 415.2	pH CAM 17 Metals Hexavalent Chromium VOCs	US EPA 150.1 US EPA 6010 US EPA 7199 US EPA 8260
2012. Insitu Fixation Pilot Test, Phibro-Tech, Inc., Santa Fe Springs, California	Iris Environmental	Soil and Groundwater	pH CAM 17 Metals+Mn Hexavalent Chromium VOCs Alkalinity Sulfate Sulfide	SM4500-H,B US EPA 6010 US EPA 7199 US EPA 8260 SM2320B US EPA 300.0 SM4500-S,C,D	pH CAM 17 Metals+Mn Hexavalent Chromium VOCs Alkalinity Sulfate Sulfide Ca, Mg, Fe, Na, K	SM4500-H,B US EPA 6010 US EPA 7199 US EPA 8260 SM2320B US EPA 300.0 SM4500-S,C,D US EPA 300.0

Notes:

US EPA = United States Environmental Protection Agency
VOCs = Volatile organic compounds
SVOCs = Semi-volatile organic compounds
PCBs = Polychlorinated biphenyls

TABLE 2
Summary of Chemicals Included in the Risk Assessment: Soil (0-10 feet bgs)
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/ Samples Analyzed)	Range of Detected Site Concentrations (mg/kg)	Arithmetic Mean [a] (mg/kg)	95% UCL of Site Concentrations [b] (mg/kg)	Site-Specific Background Detection Frequency (Detections/ Samples Analyzed)	Range of Site-Specific Background Concentrations [a] (mg/kg)	95% UCL of Site-Specific Background Concentrations [b] (mg/kg)	Included in Risk Assessment [c]
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	0 / 20	ND	NC	NC	--	--	--	No
1,1,1-Trichloroethane	9 / 43	0.011 - 5.8	0.33	0.72	--	--	--	**Yes**
1,1,2,2-Tetrachloroethane	0 / 20	ND	NC	NC	--	--	--	No
1,1,2-Trichloroethane	1 / 20	0.0019	0.036	NC	--	--	--	**Yes**
1,1-Dichloroethane	24 / 45	0.0027 - 2.8	0.20	1.2	--	--	--	**Yes**
1,1-Dichloroethene	14 / 42	0.0030 - 1.0	0.15	0.59	--	--	--	**Yes**
1,1-Dichloropropene	0 / 20	ND	NC	NC	--	--	--	No
1,2,3-Trichlorobenzene	2 / 20	0.22 - 18	0.94	NC	--	--	--	**Yes**
1,2,3-Trichloropropane	0 / 20	ND	NC	NC	--	--	--	No
1,2,4-Trichlorobenzene	3 / 20	0.18 - 130	6.6	NC	--	--	--	**Yes** [d]
1,2,4-Trimethylbenzene	4 / 20	0.0030 - 1.6	0.095	NC	--	--	--	**Yes**
1,2-Dibromo-3-Chloropropane (DBCP)	0 / 20	ND	NC	NC	--	--	--	No
1,2-Dibromoethane (EDB)	0 / 20	ND	NC	NC	--	--	--	No
1,2-Dichlorobenzene	2 / 20	0.0043 - 1.6	0.093	NC	--	--	--	**Yes**
1,2-Dichloroethane	1 / 21	0.15	0.041	NC	--	--	--	**Yes**
1,2-Dichloroethene (total)	2 / 19	0.0060 - 0.059	0.033	NC	--	--	--	**Yes**
1,2-Dichloropropane	0 / 20	ND	NC	NC	--	--	--	No
1,3,5-Trimethylbenzene	1 / 20	0.011	0.036	NC	--	--	--	**Yes**
1,3-Dichlorobenzene	3 / 20	0.062 - 20	1.0	NC	--	--	--	**Yes**
1,3-Dichloropropane	0 / 20	ND	NC	NC	--	--	--	No
1,4-Dichlorobenzene	2 / 20	0.0027 - 7.2	0.37	NC	--	--	--	**Yes**
2,2-Dichloropropane	0 / 20	ND	NC	NC	--	--	--	No
2-Butanone (MEK)	2 / 18	0.010 - 0.011	0.011	NC	--	--	--	**Yes**
2-Chlorotoluene	1 / 20	0.0046	0.090	NC	--	--	--	**Yes**
4-Chlorotoluene	0 / 20	ND	NC	NC	--	--	--	No
4-Isopropyltoluene	2 / 20	0.013 - 0.014	0.037	NC	--	--	--	**Yes**
Acetone	4 / 18	0.020 - 0.12	0.060	NC	--	--	--	**Yes**
Benzene	10 / 82	0.0019 - 2.1	0.20	0.16	--	--	--	**Yes**
Bromobenzene	0 / 20	ND	NC	NC	--	--	--	No
Bromodichloromethane	0 / 20	ND	NC	NC	--	--	--	No

TABLE 2
Summary of Chemicals Included in the Risk Assessment: Soil (0-10 feet bgs)
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/ Samples Analyzed)	Range of Detected Site Concentrations (mg/kg)	Arithmetic Mean [a] (mg/kg)	95% UCL of Site Concentrations [b] (mg/kg)	Site-Specific Background Detection Frequency (Detections/ Samples Analyzed)	Range of Site-Specific Background Concentrations [a] (mg/kg)	95% UCL of Site-Specific Background Concentrations [b] (mg/kg)	Included in Risk Assessment [c]
Bromoform	0 / 20	ND	NC	NC	--	--	--	No
Bromomethane	0 / 20	ND	NC	NC	--	--	--	No
Butylbenzene	2 / 20	0.011 - 0.33	0.10	NC	--	--	--	**Yes**
Carbon Tetrachloride	0 / 20	ND	NC	NC	--	--	--	No
Chlorobenzene	3 / 20	0.0023 - 0.012	0.037	NC	--	--	--	**Yes**
Chlorobromomethane	0 / 20	ND	NC	NC	--	--	--	No
Chloroethane	0 / 20	ND	NC	NC	--	--	--	No
Chloroform	6 / 40	0.0034 - 0.54	0.080	0.12	--	--	--	**Yes**
Chloromethane	0 / 20	ND	NC	NC	--	--	--	No
cis-1,2-Dichloroethene	14 / 21	0.0033 - 5.5	0.32	2.9	--	--	--	**Yes**
cis-1,3-Dichloropropene	0 / 20	ND	NC	NC	--	--	--	No
Dibromochloromethane	0 / 20	ND	NC	NC	--	--	--	No
Dibromomethane	0 / 20	ND	NC	NC	--	--	--	No
Dichlorodifluoromethane (Freon 12)	0 / 20	ND	NC	NC	--	--	--	No
Ethylbenzene	19 / 67	0.0050 - 11	1.1	5.5	--	--	--	**Yes**
Hexachlorobutadiene	0 / 20	ND	NC	NC	--	--	--	No
Isopropylbenzene (Cumene)	3 / 20	0.0045 - 3.5	0.21	NC	--	--	--	**Yes**
Methylene Chloride	12 / 39	0.0090 - 0.51	0.27	0.10	--	--	--	**Yes**
Naphthalene	4 / 20	0.0046 - 9.8	0.58	NC	--	--	--	**Yes**
Propylbenzene	2 / 20	0.011 - 5.0	0.28	NC	--	--	--	**Yes**
sec-Butylbenzene	3 / 20	0.010 - 1.9	0.18	NC	--	--	--	**Yes**
Styrene	0 / 20	ND	NC	NC	--	--	--	No
tert-Butylbenzene	0 / 20	ND	NC	NC	--	--	--	No
Tetrachloroethene	13 / 42	0.0064 - 10	0.48	4.2	--	--	--	**Yes**
Toluene	26 / 65	0.0022 - 3.0	0.19	0.34	--	--	--	**Yes**
trans-1,2-Dichloroethene	7 / 20	0.0029 - 0.11	0.043	0.024	--	--	--	**Yes**
trans-1,3-Dichloropropene	0 / 20	ND	NC	NC	--	--	--	No
Trichloroethene	29 / 67	0.0042 - 110	2.2	13	--	--	--	**Yes**
Trichlorofluoromethane (Freon 11)	0 / 20	ND	NC	NC	--	--	--	No
Vinyl Chloride	1 / 20	0.0050	0.090	NC	--	--	--	**Yes**
Xylenes	23 / 67	0.0075 - 43	3.2	17	--	--	--	**Yes**

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Santa Fe Springs, California

Chemical	Detection Frequency (Detections/ Samples Analyzed)	Range of Detected Site Concentrations (mg/kg)	Arithmetic Mean [a] (mg/kg)	95% UCL of Site Concentrations [b] (mg/kg)	Site-Specific Background Detection Frequency (Detections/ Samples Analyzed)	Range of Site-Specific Background Concentrations [a] (mg/kg)	95% UCL of Site-Specific Background Concentrations [b] (mg/kg)	Included in Risk Assessment [c]
Semi-volatile Organic Compounds								
1,2,4-Trichlorobenzene	1 / 7	1.2	1.2	NC	--	--	--	**Yes** [d]
2-Methylnaphthalene	1 / 12	26	2.8	NC	--	--	--	**Yes**
Pyrene	1 / 7	1.3	1.3	NC	--	--	--	**Yes**
Total Petroleum Hydrocarbons								
EFH (C13 - C40)	7 / 7	5.9 - 41,000	7,798	NC	--	--	--	**Yes** [e]
EFH (C23 - C40)	6 / 7	250 - 24,000	4,643	NC	--	--	--	**Yes**
TPH (extractable)	21 / 24	29 - 16,400	3,174	6,613	--	--	--	**Yes**
TPH-Diesel	6 / 7	26 - 17,000	3,134	NC	--	--	--	**Yes**
TPH-Gasoline	3 / 7	0.64 - 580	85	NC	--	--	--	**Yes**
Polychlorinated Biphenyls								
Aroclor 1016	0 / 2	ND	NC	NC	--	--	--	No
Aroclor 1221	0 / 2	ND	NC	NC	--	--	--	No
Aroclor 1232	0 / 2	ND	NC	NC	--	--	--	No
Aroclor 1242	0 / 2	ND	NC	NC	--	--	--	No
Aroclor 1248	0 / 2	ND	NC	NC	--	--	--	No
Aroclor 1254	0 / 20	ND	NC	NC	--	--	--	No
Aroclor 1260	19 / 37	0.017 - 80	6.2	11	--	--	--	**Yes**
Inorganics								
Antimony	0 / 21	ND	NC	NC	0 / 2	ND	NC	No
Arsenic	38 / 41	2.0 - 72	13	23	2 / 2	7.1 - 10	NC	**Yes**
Barium	21 / 21	79 - 1,000	277	540	2 / 2	140 - 150	NC	**Yes**
Beryllium	10 / 21	0.50 - 1.1	0.89	0.71	1 / 2	0.69	NC	**Yes**
Cadmium	90 / 169	0.14 - 161	4.0	8.4	2 / 2	0.81 - 0.94	NC	**Yes**
Chromium	185 / 185	5.9 - 37,000	1,193	2,359	21 / 21	8.4 - 33	23	**Yes**
Chromium VI	44 / 168	0.24 - 3,200	35	165	5 / 5	0.38 - 3.1	NC	**Yes**
Cobalt	20 / 21	3.2 - 48	13	17	2 / 2	9.7 - 12	NC	**Yes**
Copper	184 / 184	17 - 23,100	1,583	2,700	21 / 21	9.3 - 36	25	**Yes**
Cyanide	3 / 20	0.72 - 1.5	1.2	NC	--	--	--	**Yes**
Iron	147 / 147	1,530 - 57,000	23,123	26,732	19 / 19	8,840 - 28,100	19,722	**Yes**
Lead	148 / 167	2.7 - 113,000	1,507	5,917	18 / 18	5.1 - 22	12	**Yes**

TABLE 2
Summary of Chemicals Included in the Risk Assessment: Soil (0-10 feet bgs)
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/ Samples Analyzed)	Range of Detected Site Concentrations (mg/kg)	Arithmetic Mean [a] (mg/kg)	95% UCL of Site Concentrations [b] (mg/kg)	Site-Specific Background Detection Frequency (Detections/ Samples Analyzed)	Range of Site-Specific Background Concentrations [a] (mg/kg)	95% UCL of Site-Specific Background Concentrations [b] (mg/kg)	Included in Risk Assessment [c]
Manganese	1 / 1	230	230	NC	--	--	--	**Yes**
Mercury	21 / 33	0.023 - 2.0	0.50	1.0	2 / 2	0.028 - 0.033	NC	**Yes**
Molybdenum	4 / 21	2.5 - 14	3.8	NC	0 / 2	ND	NC	**Yes**
Nickel	177 / 178	6.6 - 28,400	442	1,212	21 / 21	6.7 - 24	17	**Yes**
Selenium	0 / 21	ND	NC	NC	0 / 2	ND	NC	No
Silver	0 / 21	ND	NC	NC	0 / 2	ND	NC	No
Thallium	0 / 21	ND	NC	NC	0 / 2	ND	NC	No
Vanadium	21 / 21	14 - 75	45	51	2 / 2	49 - 54	NC	**Yes**
Zinc	178 / 179	14 - 40,100	1,517	3,832	19 / 19	5.1 - 61	41	**Yes**

Notes:

mg/kg = milligrams per kilogram.

NC = Not calculated. In order for ProUCL 4.1 to reliably evaluate a specific data population (e.g., dataset of concentrations of a particular chemical measured at the site), the population must include at least eight results including at least five detections and four distinct values (U.S. Environmental Protection Agency [USEPA], 2010).

ND = Not detected.

-- = Not analyzed for.

[a] Arithmetic means derived using one-half the reporting limit values for non-detect results.

[b] Upper Confidence Limits (UCLs) derived using ProUCL 4.1 (USEPA, 2011); ProUCL output is presented in Appendix F.

[c] Inorganics with a sufficient number of background samples for 95% UCL calculation (chromium, copper, iron, nickel and zinc) were included in the risk assessment if the maximum detected concentration and the 95% UCL of the Site data are above the respective maximum detected concentration and 95% UCL in the background data set. The background data set was presented in the Resource Conservation and Recovery Act (RCRA) report (CDM, 1991). All other chemicals (i.e., organics and inorganics with an insufficient number of background samples [except for arsenic]) were included in the risk assessment if they were ever detected in soil. As background/ambient concentrations of arsenic commonly exceed concentrations corresponding to an incremental cancer risk of 10^{-6} under typical HHRA exposure scenarios (e.g., residential, commercial/industrial), a more detailed, Site-wide determination of background levels in soil was conducted to determine if arsenic should be considered a COPC (Appendix E).

[d] 1,2,4-Trichlorobenzene was analyzed as both a volatile organic compound (VOC) and a semi-volatile organic compound (SVOC); the higher exposure point concentration of either the VOC or SVOC data for 1,2,4-trichlorobenzene were used in the risk calculations.

[e] Total petroleum hydrocarbons (TPH) evaluated by TPH-diesel and extractable fuel hydrocarbons (EFH) (C23-C40) as these constituents encompass the carbon range of C13-C40.

Sources:

United States Environmental Protection Agency (USEPA). 2010. ProUCL Version 4.1 User Guide (Draft). EPA/600/R-07/041. May.

TABLE 3
Summary of Chemicals Included in the Risk Assessment: Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/Samples Analyzed)	Range of Detected Concentrations [a] (mg/m^3)	Included in Risk Assessment [b]
Volatile Organic Chemicals			
1,1,1,2-Tetrafluoroethane (Freon 134a)	7 / 21	0.0010 - 0.036	**Yes**
1,1,1-Trichloroethane	14 / 21	0.0010 - 8.5	**Yes**
1,1,2,2-Tetrachloroethane	0 / 21	ND	No
1,1,2-Trichloroethane	3 / 21	0.0029 - 0.0077	**Yes**
1,1,2-Trichlorotrifluoroethane (Freon 113)	15 / 21	0.0024 - 0.19	**Yes**
1,1-Dichloroethane	17 / 21	0.0050 - 0.61	**Yes**
1,1-Dichloroethene	17 / 21	0.0013 - 3.7	**Yes**
1,2,3-Trimethylbenzene	0 / 21	ND	No
1,2,4-Trichlorobenzene	2 / 21	0.0051 - 0.010	**Yes**
1,2,4-Trimethylbenzene	2 / 21	0.00087 - 0.0058	**Yes**
1,2-Dibromoethane (EDB)	0 / 21	ND	No
1,2-Dichlorobenzene	3 / 21	0.0046 - 0.0084	**Yes**
1,2-Dichloroethane	6 / 21	0.0020 - 0.050	**Yes**
1,2-Dichloropropane	0 / 21	ND	No
1,2-Dichlorotetrafluoroethane (Freon 114)	0 / 21	ND	No
1,3,5-Trimethylbenzene	0 / 21	ND	No
1,3-Butadiene	1 / 21	0.0018	**Yes**
1,3-Dichlorobenzene	2 / 21	0.0030 - 0.0035	**Yes**
1,3-Diethylbenzene	4 / 21	0.022 - 0.32	**Yes** [c]
1,4-Dichlorobenzene	0 / 21	ND	No
1,4-Diethylbenzene	1 / 21	0.062	**Yes** [c]
1,4-Dioxane	3 / 21	0.0048 - 0.021	**Yes**
1-Butene/Isobutene	19 / 21	0.00073 - 0.76	**Yes**
1-Decene	0 / 21	ND	No
1-Heptene	3 / 21	0.0048 - 0.55	**Yes** [c]
1-Hexene	1 / 21	0.0093	**Yes** [c]
1-Methylcyclohexene	6 / 21	0.0021 - 0.074	**Yes** [c]
1-Methylcyclopentene	9 / 21	0.0016 - 0.057	**Yes** [c]
1-Methylnaphthalene	1 / 3	0.0026	**Yes**
1-Nonene	0 / 21	ND	No
1-Octene	2 / 21	0.012 - 8.9	**Yes** [c]
1-Pentene	11 / 21	0.00078 - 0.031	**Yes** [c]
1-Undecene	0 / 21	ND	No
2 & 3-Chlorotoluene	1 / 21	0.0051	**Yes**
2,2,3-Trimethylpentane	9 / 21	0.0052 - 7.8	**Yes** [c]
2,2,4-Trimethylpentane	8 / 21	0.00094 - 0.82	**Yes** [c]
2,2,5-Trimethylhexane	8 / 21	0.0026 - 4.9	**Yes** [c]
2,2-Dimethylbutane	14 / 21	0.00080 - 0.31	**Yes** [c]
2,3,4-Trimethylpentane	10 / 21	0.0012 - 31	**Yes** [c]
2,3-Dimethylbutane	16 / 21	0.00043 - 1.5	**Yes** [c]
2,3-Dimethylpentane	12 / 21	0.0013 - 13	**Yes** [c]
2,4,4-Trimethyl-1-pentene	0 / 21	ND	No

TABLE 3
Summary of Chemicals Included in the Risk Assessment: Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/Samples Analyzed)	Range of Detected Concentrations [a] (mg/m^3)	Included in Risk Assessment [b]
2,4,4-Trimethyl-2-pentene	0 / 21	ND	No
2,4-Dimethylpentane	10 / 21	0.0017 - 3.0	**Yes** [c]
2,5-Dimethylhexane	9 / 21	0.0057 - 21	**Yes** [c]
2-Butanone (MEK)	14 / 21	0.0018 - 303	**Yes**
2-Chloro-1,3-butadiene	0 / 2	ND	No
2-Ethyl-1-butene	0 / 21	ND	No
2-Ethyltoluene	0 / 21	ND	No
2-Hexanone	0 / 21	ND	No
2-Methyl-1-pentene	8 / 21	0.0019 - 0.021	**Yes** [c]
2-Methyl-2-butene	15 / 21	0.00055 - 0.25	**Yes** [c]
2-Methyl-2-pentene	11 / 21	0.0064 - 0.37	**Yes** [c]
2-Methylheptane	2 / 21	0.039 - 0.052	**Yes** [c]
2-Methylnaphthalene	1 / 3	0.0043	**Yes**
2-Propanol	7 / 21	0.00074 - 0.0051	**Yes**
3-Chloropropene	1 / 21	0.0080	**Yes**
3-Ethyltoluene	0 / 21	ND	No
3-Methyl-1-butene	14 / 21	0.00061 - 0.046	**Yes** [c]
3-Methylheptane	7 / 21	0.0077 - 21	**Yes** [c]
3-Methylhexane	10 / 21	0.00076 - 0.18	**Yes** [c]
3-Methylpentane	14 / 21	0.00075 - 0.44	**Yes** [c]
4-Chlorotoluene	0 / 21	ND	No
4-Ethyltoluene	0 / 21	ND	No
4-Isopropyltoluene	0 / 21	ND	No
4-Methyl-1-pentene	4 / 21	0.0031 - 0.0084	**Yes** [c]
4-Methyl-2-pentanone (MIBK)	0 / 21	ND	No
4-Nonene	0 / 21	ND	No
Acenaphthene	0 / 3	ND	No
Acenaphthylene	0 / 3	ND	No
Acetaldehyde	16 / 21	0.0099 - 0.13	**Yes**
Acetone	21 / 21	0.0055 - 125	**Yes**
Acetonitrile	3 / 21	0.0010 - 0.011	**Yes**
Acetylene	9 / 21	0.00071 - 0.0051	**Yes**
Acrylonitrile	0 / 21	ND	No
Alpha-Pinene	0 / 21	ND	No
Anthracene	0 / 3	ND	No
Benzaldehyde	4 / 21	0.0016 - 0.0034	**Yes**
Benzene	15 / 21	0.00051 - 0.023	**Yes**
Benzylchloride	0 / 21	ND	No
Beta-Pinene	0 / 21	ND	No
Bromodichloromethane	0 / 21	ND	No
Bromoform	0 / 21	ND	No
Bromomethane	0 / 21	ND	No
Bromomethene	0 / 21	ND	No

TABLE 3
Summary of Chemicals Included in the Risk Assessment: Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Detection Frequency (Detections/Samples Analyzed)	Range of Detected Concentrations [a] (mg/m^3)	Included in Risk Assessment [b]
Butane	19 / 21	0.0019 - 0.23	**Yes**
Butyl acrylate	0 / 21	ND	No
Butylbenzene	0 / 21	ND	No
Butyraldehyde	5 / 21	0.0018 - 0.016	**Yes**
Carbon Disulfide	8 / 21	0.0018 - 1.6	**Yes**
Carbon Tetrachloride	5 / 21	0.0018 - 0.085	**Yes**
Chlorobenzene	7 / 21	0.0021 - 0.025	**Yes**
Chlorobromomethane	0 / 21	ND	No
Chlorodifluoromethane (Freon 22)	7 / 21	0.0016 - 0.0090	**Yes**
Chloroethane	17 / 21	0.00084 - 0.14	**Yes**
Chloroform	15 / 21	0.0045 - 1.1	**Yes**
Chloromethane	16 / 21	0.00032 - 0.071	**Yes**
Chloroprene	0 / 21	ND	No
cis/trans-4-Methyl-2-pentene	7 / 21	0.0044 - 0.047	**Yes** [c]
cis-1,2-Dichloroethene	15 / 21	0.00099 - 5.3	**Yes**
cis-1,3-Dichloropropene	0 / 21	ND	No
cis-2-Butene	15 / 21	0.00042 - 0.075	**Yes**
cis-2-Hexene	0 / 21	ND	No
cis-2-Octene	1 / 21	0.0019	**Yes** [c]
cis-2-Pentene	7 / 21	0.00091 - 0.017	**Yes** [c]
cis-3-Heptene	1 / 21	0.029	**Yes** [c]
cis-3-Hexene	1 / 21	0.0029	**Yes** [c]
cis-3-Methyl-2-pentene	9 / 21	0.0021 - 0.015	**Yes** [c]
Cyclohexane	15 / 21	0.0011 - 0.42	**Yes**
Cyclohexanone	2 / 2	14 - 220	**Yes**
Cyclohexene	6 / 21	0.00089 - 0.0093	**Yes** [c]
Cyclopentane	10 / 21	0.00062 - 0.039	**Yes** [c]
Cyclopentene	7 / 21	0.00080 - 0.015	**Yes** [c]
Dibromochloromethane	0 / 21	ND	No
Dichlorodifluoromethane (Freon 12)	14 / 21	0.0025 - 0.0091	**Yes**
Dichlorofluoromethane	2 / 21	0.0018 - 0.0050	**Yes**
Diethyl ether	0 / 21	ND	No
Ethane	20 / 21	0.021 - 0.88	**Yes**
Ethanol	9 / 21	0.0021 - 0.060	**Yes**
Ethene	19 / 21	0.00077 - 0.53	**Yes**
Ethylbenzene	4 / 21	0.0010 - 0.017	**Yes**
Fluoranthene	0 / 3	ND	No
Fluorene	0 / 3	ND	No
TPH-gasoline	14 / 21	3.7 - 3,500	**Yes**
Heptanal	0 / 21	ND	No
Hexachlorobutadiene	0 / 21	ND	No
Indan	3 / 21	0.015 - 0.24	**Yes** [c]
Indene	0 / 21	ND	No

TABLE 3
Summary of Chemicals Included in the Risk Assessment: Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	**Detection Frequency (Detections/Samples Analyzed)**	**Range of Detected Concentrations [a] (mg/m^3)**	**Included in Risk Assessment [b]**
Isobutane	19 / 21	0.0042 - 0.14	**Yes**
Isobutylbenzene	4 / 21	0.051 - 0.58	**Yes** [c]
Isoheptane	7 / 21	0.0017 - 0.12	**Yes** [c]
Isohexane	14 / 21	0.00079 - 0.51	**Yes** [c]
Isopentane	19 / 21	0.0012 - 0.89	**Yes** [c]
Isoprene	7 / 21	0.00045 - 0.010	**Yes** [c]
Isopropylbenzene (Cumene)	5 / 21	0.0064 - 2.7	**Yes**
Limonene	1 / 21	0.0083	**Yes** [c]
Methanol	16 / 21	0.0034 - 0.091	**Yes** [c]
Methyl tert-butyl ether (MTBE)	0 / 21	ND	No
Methylcyclohexane	6 / 21	0.0050 - 0.70	**Yes** [c]
Methylcyclopentane	14 / 21	0.0011 - 0.14	**Yes** [c]
Methylene Chloride	15 / 21	0.0017 - 0.19	**Yes**
Naphthalene	5 / 21	0.0048 - 0.14	**Yes**
n-Butanol	4 / 21	0.0025 - 0.0074	**Yes**
n-Decane	5 / 21	0.0021 - 0.90	**Yes** [c]
Neopentane	7 / 21	0.00089 - 0.0042	**Yes** [c]
n-Heptane	4 / 21	0.00059 - 0.044	**Yes** [c]
n-Hexane	13 / 21	0.00065 - 0.14	**Yes**
n-Nonane	4 / 21	0.0020 - 1.6	**Yes**
n-Octane	0 / 21	ND	No
n-Pentane	17 / 21	0.00068 - 0.24	**Yes**
n-Undecane	6 / 21	0.00097 - 0.084	**Yes** [c]
Phenanthrene	0 / 3	ND	No
Propane	19 / 21	0.018 - 0.51	**Yes**
Propanol	0 / 21	ND	No
Propene	18 / 21	0.0019 - 0.99	**Yes**
Propylbenzene	3 / 21	0.068 - 2.1	**Yes**
Pyrene	0 / 3	ND	No
Styrene	1 / 21	0.0024	**Yes**
tert-Butylbenzene	0 / 21	ND	No
Tetrachloroethene	18 / 21	0.017 - 2.0	**Yes**
Tetrahydrofuran	6 / 6	0.036 - 1,100	**Yes**
Toluene	14 / 21	0.0017 - 0.26	**Yes**
TPH-diesel	3 / 3	5.5 - 120	**Yes**
trans-1,2-Dichloroethene	12 / 21	0.0037 - 0.30	**Yes**
trans-1,3-Dichloropropene	0 / 21	ND	No
trans-2-Butene	15 / 21	0.00050 - 0.092	**Yes**
trans-2-Heptene	0 / 21	ND	No
trans-2-Hexene	2 / 21	0.0030 - 0.0068	**Yes** [c]
trans-2-Pentene	9 / 21	0.00066 - 0.034	**Yes** [c]
trans-3-Heptene	0 / 21	ND	No
Trichloroethene	19 / 21	0.0076 - 14	**Yes**

TABLE 3
Summary of Chemicals Included in the Risk Assessment: Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	**Detection Frequency (Detections/Samples Analyzed)**	**Range of Detected Concentrations [a] (mg/m^3)**	**Included in Risk Assessment [b]**
Trichlorofluoromethane (Freon 11)	16 / 21	0.0018 - 0.039	**Yes**
Vinyl Acetate	1 / 21	0.0033	**Yes**
Vinyl Chloride	9 / 21	0.0015 - 0.095	**Yes**
Xylenes	5 / 21	0.0030 - 0.045	**Yes**
Polycyclic Aromatic Hydrocarbons			
1-Methylnaphthalene	1 / 3	0.0026	**Yes**
2-Chloronaphthalene	0 / 3	ND	No
2-Methylnaphthalene	1 / 3	0.0043	**Yes**
Acenaphthene	0 / 3	ND	No
Acenaphthylene	0 / 3	ND	No
Anthracene	0 / 3	ND	No
Benzo(a)anthracene	0 / 3	ND	No
Benzo(a)pyrene	0 / 3	ND	No
Benzo(b)fluoranthene	0 / 3	ND	No
Benzo(g,h,i)perylene	0 / 3	ND	No
Benzo(k)fluoranthene	0 / 3	ND	No
Chrysene	0 / 3	ND	No
Dibenz(a,h)anthracene	0 / 3	ND	No
Fluoranthene	0 / 3	ND	No
Fluorene	0 / 3	ND	No
Indeno(1,2,3-c,d)pyrene	0 / 3	ND	No
Naphthalene	0 / 3	ND	No
Phenanthrene	0 / 3	ND	No
Pyrene	0 / 3	ND	No

Notes:

mg/m^3 = milligrams per cubic meter.

ND = Not detected.

[a] The range of soil gas concentrations collected during site investigations in 2012.

[b] All detected volatile organic compounds (VOCs) in soil gas were included in the risk assessment.

[c] Total petroleum hydrcarbons (TPH) constituent evaluated using TPH-gasoline or TPH-diesel; see text for discussion.

TABLE 4
Exposure Parameters
Phibro-Tech, Inc.
Santa Fe Springs, California

Exposure Parameter	Symbol	Scenarios					Units
		Current Population				Future Population	
		Onsite Commercial Worker	Offsite Resident Child	Offsite Resident Adult	Offsite Resident, Age-Adjusted Adult	Onsite Commercial Worker	
Inhalation of Soil Particulates							
Particulate Emission Factor [a]	PEF	6.7E+08	6.7E+08	6.7E+08	6.7E+08	6.7E+08	m^3/kg
Dermal Contact with Soil							
Surface Area [b]	SA	NA	NA	NA	NA	5,700	cm^2/day
Adherence Factor [c]	AF	NA	NA	NA	NA	0.2	mg/cm^2
Absorption Factor-PCBs [d]	ABS-PCB	NA	NA	NA	NA	0.15	unitless
Absorption Factor-Metals [d]	ABS-Met	NA	NA	NA	NA	0.01	unitless
Absorption Factor-Arsenic [d]	ABS-As	NA	NA	NA	NA	0.03	unitless
Absorption Factor-Cadmium [d]	ABS-Cd	NA	NA	NA	NA	0.001	unitless
Absorption Factor-Chromium VI [d]	ABS-CrVI	NA	NA	NA	NA	0	unitless
Absorption Factor-Cyanide [d]	ABS-CN	NA	NA	NA	NA	0.01	unitless
Absorption Factor-Mercury [d]	ABS-Hg	NA	NA	NA	NA	0.01	unitless
Absorption Factor-Organics [d]	ABS-Org	NA	NA	NA	NA	0.1	unitless
Conversion Factor	CF	NA	NA	NA	NA	1.0E-06	kg/mg
Ingestion of Soil							
Ingestion Rate [e]	IR	NA	NA	NA	NA	100	mg/day
Conversion Factor	CF	NA	NA	NA	NA	1.0E-06	kg/mg
Population-Specific Intake Parameters							
Exposure Time	ET	NA	NA	NA	NA	8	hrs/day
Time Conversion Factor	TCF	NA	NA	NA	NA	24	hrs/day
Exposure Frequency [f]	EF	250	350	350	350	250	days/yr
Exposure Duration	ED	25	6 [g]	30 [g]	24 [g]	25	yrs
Body Weight	BW	70	15	NA	70	70	kg
Averaging Time-Carcinogens	AT_c	25,550	25,550	25,550	25,550	25,550	days
Averaging Time-Noncarcinogens	AT_{nc}	9,125	2,190	10,950	NA	9,125	days

Notes:

NA = Not applicable; incomplete exposure pathway or parameter not applicable to exposure scenario.

[a] The particulate emission factor (PEF) is calculated using the equations found in the Soil Screening Guidance (USEPA, 2002), with input parameters as found in Appendix G of this HHRA.

[b] Corresponds to the area of exposed skin in each respective population (Cal/EPA, 2011).

[c] Soil adherence factors for commercial worker populations recommended by Cal/EPA (2011).

[d] Dermal absorption factors for specific compound classes from Cal/EPA (2013).

[e] Ingestion rates recommended by Cal/EPA (2011) for commercial worker populations.

[f] For the commercial worker, corresponds to 5 days/week for 50 weeks/year.

[g] Per Cal/EPA guidance, cancer risks for current offsite residents are calculated using an age-adjusted approach to account for the higher exposures per body weight that occur during the childhood years. Accordingly, for carcinogenic effects, the evaluation assumes that the resident is a child for the first 6 years of exposure and an adult for the remaining 24 years. For noncarcinogenic hazards, the averaging time

Sources:

California Environmental Protection Agency (Cal/EPA). 2013. *Preliminary Endangerment Assessment Guidance Manual, Interim Final. Department of Toxic Substances Control (DTSC). October.*

California Environmental Protection Agency (Cal/EPA). 2011. *DTSC/HERO Human Health Risk Assessment (HHRA) Note Number 1: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Hazardous Waste Sites and Permitted Facilities.* Department of Toxic Substances Control (DTSC). May 20.

U.S. Environmental Protection Agency (USEPA). 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.* Office of Solid Waste and Emergency Response. Washington, DC, December.

TABLE 5a
Equations Used to Calculate Exposure Concentrations and Chronic Daily Intakes: Commercial Worker Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Exposure Concentration: Vapor Inhalation

Noncancer

$$EC_{inhv,\ worker,\ nc} = \frac{C_a \times ET \times (1/TCF) \times EF \times ED_{worker}}{AT_{nc,\ worker}}$$

Cancer

$$EC_{inhv,\ worker,\ c} = \frac{C_a \times ET \times (1/TCF) \times EF \times ED_{worker}}{AT_c}$$

where $C_a = C_{sg} \times AC$ for soil gas to indoor air pathway

where $C_a = C_{sg} \times TF$ for soil gas to outdoor air pathway

Exposure Concentration: Soil Particulate Inhalation

Noncancer

$$EC_{inhp,\ worker,\ nc} = \frac{C_s \times (1/PEF) \times ET \times 1/(TCF) \times EF \times ED_{worker}}{AT_{nc,\ worker}}$$

Cancer

$$EC_{inhp,\ worker,\ c} = \frac{C_s \times (1/PEF) \times ET \times (1/TCF) \times EF \times ED_{worker}}{ATc}$$

Chronic Daily Intake: Dermal Contact

Noncancer

$$CDI_{derm,\ worker,\ nc} = \frac{C_s \times SA_{worker} \times AF_{worker} \times ABS \times EF \times ED_{worker} \times CF}{BW_{worker} \times AT_{nc,\ worker}}$$

Cancer

$$CDI_{derm,\ worker,\ c} = \frac{C_s \times SA_{worker} \times AF_{worker} \times ABS \times EF \times ED_{worker} \times CF}{BW_{worker} \times AT_c}$$

Chronic Daily Intake: Soil Ingestion

Noncancer

$$CDI_{ing,\ worker,\ nc} = \frac{C_s \times IR_{worker} \times CF \times EF \times ED_{worker}}{BW_{worker} \times AT_{nc,\ worker}}$$

Cancer

$$CDI_{ing,\ worker,\ c} = \frac{C_s \times IR_{worker} \times CF \times EF \times ED_{worker}}{BW_{worker} \times AT_c}$$

TABLE 5a
Equations Used to Calculate Exposure Concentrations and Chronic Daily Intakes:
Commercial Worker Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Where:

ABS =	Absorption Factor [unitless]
AC =	Soil Gas-to-Indoor Air Attenuation Coefficient [unitless]
AF =	Soil to Skin Adherence Factor [mg/cm^2]
AT_c =	Averaging Time for Carcinogenic Compounds [days]
AT_{nc} =	Averaging Time for Noncarcinogenic Compounds [days]
BW =	Body Weight [kg]
C_a =	Concentration of Chemical in Air [mg/m^3]
C_s =	Concentration of Chemical in Soil [mg/kg]
C_{sg} =	Concentration of Chemical in Soil Gas [mg/m^3]
CDI_{derm} =	Chronic Daily Intake: Dermal Contact [$mg_{chemical}/kg_{body\ weight}$-day]
CDI_{ing} =	Chronic Daily Intake: Ingestion [$mg_{chemical}/kg_{body\ weight}$-day]
CF =	Conversion Factor [kg/mg]
EC_{inhp} =	Exposure Concentration: Soil Particulate Inhalation [$mg_{chemical}/m^3_{air}$]
EC_{inhv} =	Exposure Concentration: Vapor Inhalation [$mg_{chemical}/m^3_{air}$]
ED =	Exposure Duration [years]
EF =	Exposure Frequency [days/year]
ET =	Exposure Time [hours/day]
IR =	Soil Ingestion Rate [mg/day]
PEF =	Soil-to-Air Particulate Emission Factor [m^3/kg]
SA =	Surface Area of Exposed Skin [cm^2/day]
TCF =	Time Conversion Factor [hours/day]
TF =	Soil Gas-to-Air Transfer Factor [$mg/m^{3]}$/[mg/m^3]
worker =	Commercial worker

TABLE 5b
Equations Used to Calculate Exposure Concentrations and Chronic Daily Intakes: Residential Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Exposure Concentration: Vapor Inhalation

Noncancer

$$EC_{inhv,\,nc} = \frac{C_a \times EF \times ED_{adult}}{AT_{nc,\,adult}}$$

Cancer

$$EC_{inhv,\,c} = \frac{C_a \times EF \times ED_{adult}}{AT_c}$$

where $C_a = C_{sg} \times TF$ for soil gas to outdoor air pathway

Where:

AT_c =	Averaging Time for Carcinogenic Compounds [days]
AT_{nc} =	Averaging Time for Noncarcinogenic Compounds [days]
C_a =	Concentration of Chemical in Air [mg/m^3]
C_{sg} =	Concentration of Chemical in Soil Gas [mg/m3]
EC_{inhv} =	Exposure Concentration: Vapor Inhalation [$mg_{chemical}/m^3{}_{air}$]
ED =	Exposure Duration [years]
EF =	Exposure Frequency [days/year]
TF =	Soil Gas-to-Air Transfer Factor [mg/m$^{3]}$/[mg/m^3]

TABLE 6
Exposure Point and Predicted Outdoor Air Concentrations for
Chemicals of Potential Concern in Soil: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

	Future Onsite Commercial Worker		
Chemical	**Exposure Point Concentration for Soil (mg/kg) [a]**	**Particulate Emissions Factor (PEF) (m^3/kg)**	**Outdoor Airborne Particulate Concentration (mg/m^3) [b]**
Volatile Organic Compounds			
1,1,1-Trichloroethane	7.2E-01	6.7E+08	1.1E-09
1,1,2-Trichloroethane	***1.9E-03***	6.7E+08	2.8E-12
1,1-Dichloroethane	1.2E+00	6.7E+08	1.8E-09
1,1-Dichloroethene	5.9E-01	6.7E+08	8.8E-10
1,2,3-Trichlorobenzene	***1.8E+01***	6.7E+08	2.7E-08
1,2,4-Trichlorobenzene	***1.3E+02***	6.7E+08	1.9E-07
1,2,4-Trimethylbenzene	***1.6E+00***	6.7E+08	2.4E-09
1,2-Dichlorobenzene	***1.6E+00***	6.7E+08	2.4E-09
1,2-Dichloroethane	***1.5E-01***	6.7E+08	2.2E-10
1,2-Dichloroethene (total)	***2.9E+00***	6.7E+08	4.4E-09
1,3,5-Trimethylbenzene	***1.1E-02***	6.7E+08	1.6E-11
1,3-Dichlorobenzene	***2.0E+01***	6.7E+08	3.0E-08
1,4-Dichlorobenzene	***7.2E+00***	6.7E+08	1.1E-08
2-Butanone (MEK)	***1.1E-02***	6.7E+08	1.6E-11
2-Chlorotoluene	***4.6E-03***	6.7E+08	6.9E-12
4-Isopropyltoluene	***1.4E-02***	6.7E+08	2.1E-11
Acetone	***1.2E-01***	6.7E+08	1.8E-10
Benzene	1.6E-01	6.7E+08	2.4E-10
Butylbenzene	***3.3E-01***	6.7E+08	4.9E-10
Chlorobenzene	***1.2E-02***	6.7E+08	1.8E-11
Chloroform	1.2E-01	6.7E+08	1.7E-10
cis-1,2-Dichloroethene	2.9E+00	6.7E+08	4.4E-09
Ethylbenzene	5.5E+00	6.7E+08	8.2E-09
Isopropylbenzene (Cumene)	***3.5E+00***	6.7E+08	5.2E-09
Methylene Chloride	1.0E-01	6.7E+08	1.5E-10
Naphthalene	***9.8E+00***	6.7E+08	1.5E-08
Propylbenzene	***5.0E+00***	6.7E+08	7.5E-09
sec-Butylbenzene	***1.9E+00***	6.7E+08	2.8E-09
Tetrachloroethene	4.2E+00	6.7E+08	6.3E-09
Toluene	3.4E-01	6.7E+08	5.1E-10
trans-1,2-Dichloroethene	2.4E-02	6.7E+08	3.6E-11
Trichloroethene	1.3E+01	6.7E+08	1.9E-08
Vinyl Chloride	***5.0E-03***	6.7E+08	7.5E-12
Xylenes	1.7E+01	6.7E+08	2.5E-08
Total Petroleum Hydrocarbons			
EFH (C23 - C40)	***2.4E+04***	6.7E+08	3.6E-05
TPH (extractable)	6.6E+03	6.7E+08	9.9E-06
TPH-Diesel	***1.7E+04***	6.7E+08	2.5E-05
TPH-Gasoline	***5.8E+02***	6.7E+08	8.7E-07

TABLE 6
Exposure Point and Predicted Outdoor Air Concentrations for Chemicals of Potential Concern in Soil: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

	Future Onsite Commercial Worker		
Chemical	**Exposure Point Concentration for Soil (mg/kg) [a]**	**Particulate Emissions Factor (PEF) (m^3/kg)**	**Outdoor Airborne Particulate Concentration (mg/m^3) [b]**
Semi-Volatile Organic Compounds			
1,2,4-Trichlorobenzene	***1.2E+00***	6.7E+08	1.8E-09
2-Methylnaphthalene	***2.6E+01***	6.7E+08	3.9E-08
Pyrene	***1.3E+00***	6.7E+08	1.9E-09
Polychlorinated Biphenyls			
Aroclor 1260	1.1E+01	6.7E+08	1.7E-08
Metals			
Arsenic	2.3E+01	6.7E+08	3.5E-08
Barium	5.4E+02	6.7E+08	8.1E-07
Beryllium	7.1E-01	6.7E+08	1.1E-09
Cadmium	8.4E+00	6.7E+08	1.3E-08
Chromium	2.4E+03	6.7E+08	3.5E-06
Chromium VI	1.7E+02	6.7E+08	2.5E-07
Cobalt	1.7E+01	6.7E+08	2.5E-08
Copper	2.7E+03	6.7E+08	4.0E-06
Cyanide	***1.5E+00***	6.7E+08	2.2E-09
Iron	2.7E+04	6.7E+08	4.0E-05
Lead	5.9E+03	6.7E+08	8.8E-06
Manganese	***2.3E+02***	6.7E+08	3.4E-07
Mercury	1.0E+00	6.7E+08	1.6E-09
Molybdenum	***1.4E+01***	6.7E+08	2.1E-08
Nickel	1.2E+03	6.7E+08	1.8E-06
Vanadium	5.1E+01	6.7E+08	7.6E-08
Zinc	3.8E+03	6.7E+08	5.7E-06

Notes:

m^3/kg = meter cubed per kilogram.
mg/kg = milligrams per kilogram.

[a] The exposure point concentrations (EPCs) for onsite soil (0-10 feet bgs) dataset are used for the evaluation of direct contact exposure pathways (i.e., ingestion and dermal contact) and inhalation of outdoor air particulates. Unless otherwise indicated, the 95% upper confidence limit of the arithmetic mean concentrations (95% UCLs) of onsite soil (0-10 feet bgs) dataset are used as the representative EPCs. Maximum detected concentrations are bolded and italicized.

[b] Outdoor air particulate concentration is calculated by dividing the soil EPC by the PEF.

TABLE 7
Chemical Properties of the Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature (25° C), H' (unitless)		Organic Carbon Partition Coefficient, K_{oc} (cm^3/g)		Pure Component Water Solubility, S (mg/L)		Vapor Pressure, VP (mmHg)		Soil Saturation Concentration, C_{sat} , calculated (mg/kg)
Volatile Organic Compounds															
1,1,1,2-Tetrafluoroethane (Freon 134a)	8.2E-02	2	1.1E-05	2	5.0E-02	2	2.0E+00	2	8.6E+01	2	1.1E+03	2	NA		NA
1,1,1-Trichloroethane	7.8E-02	1	8.8E-06	1	1.7E-02	1	7.0E-01	1	1.1E+02	1	1.3E+03	1	1.3E+02	1	1.2E+03
1,1,2-Trichloroethane	7.8E-02	1	8.8E-06	1	9.1E-04	1	3.7E-02	1	5.0E+01	1	4.4E+03	1	2.3E+01	1	1.8E+03
1,1,2-Trichlorotrifluoroethane (Freon 11	7.8E-02	1	8.2E-06	1	4.8E-01	1	2.0E+01	1	1.1E+04	1	1.7E+02	1	3.0E+03	2	1.2E+04
1,1-Dichloroethane	7.4E-02	1	1.1E-05	1	5.6E-03	1	2.3E-01	1	3.2E+01	1	5.1E+03	1	2.2E+02	1	1.7E+03
1,1-Dichloroethene	9.0E-02	1	1.0E-05	1	2.6E-02	1	1.1E+00	1	5.9E+01	1	2.3E+03	1	4.6E+02	1	1.5E+03
1,2,3-Trichlorobenzene	4.0E-02	2	8.4E-06	2	1.3E-03	2	5.1E-02	2	1.4E+03	2	1.8E+01	2	2.1E-01	3	1.5E+02
1,2,4-Trichlorobenzene	3.0E-02	1	8.2E-06	1	1.4E-03	1	5.8E-02	1	1.8E+03	1	4.9E+01	1	1.8E+00	1	5.3E+02
1,2,4-Trimethylbenzene	6.1E-02	1	7.9E-06	1	6.1E-03	1	2.5E-01	1	1.4E+03	1	5.7E+01	1	2.4E+00	2	4.7E+02
1,2-Dichlorobenzene	6.9E-02	1	7.9E-06	1	1.9E-03	1	7.8E-02	1	6.2E+02	1	1.6E+02	1	1.5E+00	1	6.0E+02
1,2-Dichloroethane	1.0E-01	1	9.9E-06	1	9.8E-04	1	4.0E-02	1	1.7E+01	1	8.5E+03	1	6.4E+01	1	1.8E+03
1,2-Dichloroethene (total)	8.8E-02	2	1.1E-05	2	4.1E-03	2	1.7E-01	2	4.0E+01	2	3.5E+03	2	NA		1.2E+03
1,3,5-Trimethylbenzene	6.0E-02	1	8.7E-06	1	5.9E-03	1	2.4E-01	1	1.4E+03	1	2.0E+00	1	3.3E+00	2	1.7E+01
1,3-Butadiene	2.5E-01	1	1.1E-05	1	7.3E-02	1	3.0E+00	1	1.9E+01	1	7.4E+02	1	1.8E+03	2	7.4E+01
1,3-Dichlorobenzene	6.9E-02	1	7.9E-06	1	3.1E-03	1	1.3E-01	1	2.0E+03	1	1.3E+02	1	1.5E+00	2	1.6E+03
1,4-Dichlorobenzene	6.9E-02	1	7.9E-06	1	2.4E-03	1	9.8E-02	1	6.2E+02	1	7.9E+01	1	9.3E-01	1	3.0E+02
1,4-Dioxane	8.7E-02	2	1.1E-05	2	4.8E-06	2	2.0E-04	2	2.6E+00	2	1.0E+06	2	NA		NA
1-Butene/Isobutene	4.8E-02	2	5.6E-06	2	4.6E-07	2	1.9E-05	2	5.9E+05	2	1.6E-03	2	NA		NA
1-Methylnaphthalene	5.3E-02	2	7.8E-06	2	5.1E-04	2	2.1E-02	2	2.5E+03	2	2.6E+01	2	6.7E-02	3	2.6E+00
2 & 3-Chlorotoluene	6.3E-02	2	8.7E-06	2	3.6E-03	2	1.5E-01	2	3.8E+02	2	3.7E+02	2	3.4E+00	3	3.7E+01
2-Butanone (MEK)	8.1E-02	1	9.8E-06	1	5.6E-05	1	2.3E-03	1	2.3E+00	1	2.2E+05	1	3.8E+01	1	2.5E+04
2-Methylnaphthalene	5.2E-02	1	7.8E-06	1	5.2E-04	1	2.1E-02	1	2.8E+03	1	2.5E+01	1	6.8E-02	3	4.2E+02
2-Propanol	1.0E-01	2	1.1E-05	2	8.1E-06	2	3.3E-04	2	1.5E+00	2	1.0E+06	2	4.5E+01	3	NA
3-Chloropropene	9.4E-02	2	1.1E-05	2	1.1E-02	2	4.5E-01	2	4.0E+01	2	3.4E+03	2	NA		NA
4-Isopropyltoluene	6.4E-02	3	7.3E-06	4	1.1E-02	3	4.5E-01	3	5.3E+03	3	2.3E+01	3	1.5E+00	3	7.4E+02
Acetaldehyde	1.2E-01	1	1.4E-05	1	7.9E-05	1	3.2E-03	1	1.1E+00	1	1.0E+06	1	3.6E+02	2	NA
Acetone	1.2E-01	1	1.1E-05	1	3.9E-05	1	1.6E-03	1	5.8E-01	1	1.0E+06	1	5.1E+02	1	1.0E+05
Acetonitrile	1.3E-01	1	1.7E-05	1	3.5E-05	1	1.4E-03	1	4.2E+00	1	1.0E+06	1	3.7E+02	2	NA
Acetylene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA

TABLE 7
Chemical Properties of the Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature (25° C), H' (unitless)		Organic Carbon Partition Coefficient, K_{oc} (cm^3/g)		Pure Component Water Solubility, S (mg/L)		Vapor Pressure, VP (mmHg)		Soil Saturation Concentration, C_{sat}, calculated (mg/kg)
Benzaldehyde	7.2E-02	1	9.1E-06	1	2.4E-05	1	9.7E-04	1	4.6E+01	1	3.3E+03	1	5.6E-01	1	NA
Benzene	8.8E-02	1	9.8E-06	1	5.5E-03	1	2.3E-01	1	5.9E+01	1	1.8E+03	1	9.5E+01	1	8.8E+02
Butane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Butylbenzene	5.7E-02	1	8.1E-06	1	1.3E-02	1	5.4E-01	1	1.1E+03	1	2.0E+00	1	1.4E+00	2	1.4E+01
Butyraldehyde	1.2E-01	1	1.4E-05	1	7.9E-05	1	3.2E-03	1	1.1E+00	1	1.0E+06	1	3.6E+02	2	NA
Carbon Disulfide	1.0E-01	1	1.0E-05	1	3.0E-02	1	1.2E+00	1	4.6E+01	1	1.2E+03	1	3.6E+02	1	NA
Carbon Tetrachloride	7.8E-02	1	8.8E-06	1	3.0E-02	1	1.2E+00	1	1.7E+02	1	7.9E+02	1	1.2E+02	1	NA
Chlorobenzene	7.3E-02	1	8.7E-06	1	3.7E-03	1	1.5E-01	1	2.2E+02	1	4.7E+02	1	1.2E+01	1	6.8E+02
Chlorodifluoromethane (Freon 22)	1.0E-01	1	1.3E-05	1	2.7E-02	1	1.1E+00	1	4.8E+01	1	2.0E+00	1	7.3E+03	3	NA
Chloroethane	2.7E-01	1	1.2E-05	1	8.8E-03	1	3.6E-01	1	4.4E+00	1	5.7E+03	1	6.6E+02	2	NA
Chloroform	1.0E-01	1	1.0E-05	1	3.7E-03	1	1.5E-01	1	4.0E+01	1	7.9E+03	1	1.9E+02	1	2.9E+03
Chloromethane	1.3E-01	1	6.5E-06	1	8.8E-03	1	3.6E-01	1	2.1E+00	1	5.3E+03	1	1.1E+03	2	NA
cis-1,2-Dichloroethene	7.4E-02	1	1.1E-05	1	4.1E-03	1	1.7E-01	1	3.6E+01	1	3.5E+03	1	1.1E+02	1	1.2E+03
cis-2-Butene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Cyclohexane	8.0E-02	2	9.1E-06	2	1.5E-01	2	6.1E+00	2	1.5E+02	2	5.5E+01	2	4.0E+01	2	NA
Cyclohexanone	7.7E-02	2	9.4E-06	2	9.0E-06	2	3.7E-04	2	1.7E+01	2	2.5E+04	2	NA		NA
Dichlorodifluoromethane (Freon 12)	6.7E-02	1	9.9E-06	1	3.4E-01	1	1.4E+01	1	4.6E+02	1	2.8E+02	1	1.8E+02	2	NA
Dichlorofluoromethane	9.2E-02	3	NONE		1.1E-02	3	4.4E-01	3	2.5E+01	3	1.9E+04	3	1.4E+03	3	NA
Ethane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Ethanol	1.2E-01	3	1.3E-05	4	5.0E-06	3	2.1E-04	3	1.9E-01	3	1.0E+06	3	5.9E+01	3	NA
Ethene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Ethylbenzene	7.5E-02	1	7.8E-06	1	7.9E-03	1	3.2E-01	1	3.6E+02	1	1.7E+02	1	9.5E+00	1	3.9E+02
Isobutane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Isopropylbenzene (Cumene)	6.5E-02	1	7.1E-06	1	1.2E+00	1	4.7E+01	1	4.9E+02	1	6.1E+01	1	3.8E+02	1	NA
Methylene Chloride	1.0E-01	1	1.2E-05	1	2.2E-03	1	9.0E-02	1	1.2E+01	1	1.3E+04	1	2.5E+02	1	2.4E+03
Naphthalene	5.9E-02	1	7.5E-06	1	4.8E-04	1	2.0E-02	1	2.0E+03	1	3.1E+01	1	8.9E-02	1	3.8E+02
n-Butanol	9.0E-02	2	1.0E-05	2	8.8E-06	2	3.6E-04	2	3.5E+00	2	6.3E+04	2	6.7E+00	1	NA
n-Hexane	2.0E-01	1	7.8E-06	1	1.7E+00	1	6.8E+01	1	4.3E+01	1	1.2E+01	1	3.7E+01	2	NA
n-Nonane	5.1E-02	2	6.8E-06	2	3.4E+00	2	1.4E+02	2	8.0E+02	2	2.2E-01	2	NA		NA
n-Pentane	8.2E-02	2	8.8E-06	2	1.3E+00	2	5.1E+01	2	7.2E+01	2	3.8E+01	2	NA		NA

TABLE 7
Chemical Properties of the Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature (25° C), H' (unitless)		Organic Carbon Partition Coefficient, K_{oc} (cm^3/g)		Pure Component Water Solubility, S (mg/L)		Vapor Pressure, VP (mmHg)		Soil Saturation Concentration, C_{sat}, calculated (mg/kg)
Propane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Propene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	#N/A
Propylbenzene	6.0E-02	1	7.8E-06	1	1.1E-02	1	4.4E-01	1	5.6E+02	1	6.0E+01	1	3.4E+00	3	NA
sec-Butylbenzene	5.7E-02	1	8.1E-06	1	1.4E-02	1	5.7E-01	1	9.7E+02	1	3.9E+00	1	1.1E+00	2	2.3E+01
Styrene	7.1E-02	1	8.0E-06	1	2.7E-03	1	1.1E-01	1	7.8E+02	1	3.1E+02	1	6.2E+00	1	NA
Tetrachloroethene	7.2E-02	1	8.2E-06	1	1.8E-02	1	7.5E-01	1	1.6E+02	1	2.0E+02	1	1.7E+01	1	2.3E+02
Tetrahydrofuran	9.5E-02	2	1.1E-05	2	7.1E-05	2	2.9E-03	2	1.1E+01	2	1.0E+06	2	7.4E+02	3	NA
Toluene	8.7E-02	1	8.6E-06	1	6.6E-03	1	2.7E-01	1	1.8E+02	1	5.3E+02	1	2.9E+01	1	NA
trans-1,2-Dichloroethene	7.1E-02	1	1.2E-05	1	9.4E-03	1	3.8E-01	1	5.3E+01	1	6.3E+03	1	4.6E+02	1	3.0E+03
trans-2-Butene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	2.2E+01	2	2.0E+02	2	7.1E+02	3	NA
Trichloroethene	7.9E-02	1	9.1E-06	1	1.0E-02	1	4.2E-01	1	1.7E+02	1	1.5E+03	1	6.6E+01	1	1.7E+03
Trichlorofluoromethane (Freon 11)	8.7E-02	1	9.7E-06	1	9.7E-02	1	4.0E+00	1	5.0E+02	1	1.1E+03	1	5.4E+02	2	NA
Vinyl Acetate	8.5E-02	1	9.2E-06	1	5.1E-04	1	2.1E-02	1	5.3E+00	1	2.0E+04	1	9.0E+01	1	NA
Vinyl Chloride	1.1E-01	1	1.2E-05	1	2.7E-02	1	1.1E+00	1	1.9E+01	1	8.8E+03	1	9.1E+02	1	3.6E+03
Xylenes	8.5E-02	2	9.9E-06	2	5.2E-03	2	2.1E-01	2	3.8E+02	2	1.1E+02	2	6.6E+00	2	2.6E+02
Total Petroleum Hydrocarbons															
EFH (C23 - C40)	NONE		NONE		NONE		NONE		5.0E+03	5	5.0E+00	5	9.6E-08	5	NA
TPH (extractable)	7.0E-02	5	1.0E-05	5	7.2E-01	5	3.2E+01	5	5.0E+03	5	5.0E+00	5	1.1E-01	5	NA
TPH-Diesel	7.0E-02	5	1.0E-05	5	7.2E-01	5	3.2E+01	5	5.0E+03	5	5.0E+00	5	1.1E-01	5	NA
TPH-Gasoline	7.0E-02	5	1.0E-05	5	8.0E-01	5	3.3E+01	5	5.0E+03	5	1.5E+02	5	6.4E+01	5	5.4E+03
Semi-Volatile Organic Compounds															
1,2,4-Trichlorobenzene	3.0E-02	1	8.2E-06	1	1.4E-03	1	5.8E-02	1	1.8E+03	1	4.9E+01	1	1.8E+00	1	5.3E+02
2-Methylnaphthalene	5.2E-02	1	7.8E-06	1	5.2E-04	1	2.1E-02	1	2.8E+03	1	2.5E+01	1	6.8E-02	3	4.2E+02
Pyrene	2.7E-02	1	7.2E-06	1	1.1E-05	1	4.5E-04	1	1.1E+05	1	1.4E+00	1	5.6E-05	1	NA
Polychlorinated Biphenyls															
Aroclor 1260	3.5E-02	2	4.1E-06	2	3.4E-04	2	1.4E-02	2	3.5E+05	2	1.4E-02	2	4.1E-05	3	NA
Metals															
Arsenic	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Barium	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Beryllium	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA

TABLE 7
Chemical Properties of the Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature (25° C), H' (unitless)		Organic Carbon Partition Coefficient, K_{oc} (cm^3/g)		Pure Component Water Solubility, S (mg/L)		Vapor Pressure, VP (mmHg)		Soil Saturation Concentration, C_{sat}, calculated (mg/kg)
Cadmium	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Chromium	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Chromium VI	NONE		NONE		NONE		NONE		NONE		1.7E+06	2	NA		NA
Cobalt	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Copper	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Cyanide	2.1E-01	2	2.5E-05	2	NONE		NONE		NONE		NONE		NA		NA
Iron	NONE		NONE		NONE		NONE		NONE		NONE		NONE		NA
Lead	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Manganese	NONE		NONE		NONE		NONE		NONE		8.7E+04	3	4.2E-09	3	NA
Mercury	3.1E-02	1	6.3E-06	1	1.1E-02	1	4.4E-01	1	5.2E+01	1	2.0E+01	1	2.4E-03	1	NA
Molybdenum	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Nickel	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Vanadium	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA
Zinc	NONE		NONE		NONE		NONE		NONE		NONE		NA		NA

Notes:

NA = Not applicable.

References:

1. California Environmental Protection Department (Cal/EPA). 2005. Department of Toxic Substances Control (DTSC). Human and Ecological Risk Division (HERD). Johnson and Ettinger screening-level soil gas model contained in Excel spreadsheet "HERD_Soil_Gas_Screening_Model_2005.xls".
2. United States Environmental Protection Agency (USEPA). 2014. From *USEPA Regional Screening Levels*, November 2014. Available at: http://www.epa.gov/region9/superfund/prg.
3. SRC PhysProp Database. 2002. Found at http://esc.syrres.com/interkow/physdemo.htm and methods from Schwarzenback R. P. et al. 1993. Environmental Organic Chemistry. John Wiley and Sons, Inc., New York, NY.
4. United States Environmental Protection Agency (USEPA). 2006. *Water9, Version 3.* June 29. Available at: http://www.epa.gov/ttn/chief/software/water/water9_3.
5. Regional Water Quality Control Board (RWQCB). 2013. Environmental Screening Levels. Table J-1. Physical-Chemical Values. May.

TABLE 8
Carcinogenic and Noncarcinogenic Toxicity Values for Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Unit Risk Factor (URF) $(mg/m^3)^{-1}$		Cancer Slope Factor (CSF) $(mg/kg\text{-}day)^{-1}$		Chronic Reference Concentration (RfC) (mg/m^3)		Chronic Reference Dose (RfD) (mg/kg-day)	
	Inhalation	Source	Oral	Source	Inhalation	Source	Oral	Source
Volatile Organic Compounds								
1,1,1,2-Tetrafluoroethane (Freon 134a)	NC	1	NC	1	8.0E+01	2	2.3E+01	2a
1,1,1-Trichloroethane	NC	1	NC	1	1.0E+00	1	2.0E+00	2
1,1,2-Trichloroethane	1.6E-02	1	7.2E-02	1	2.0E-04	3	4.0E-03	2
1,1,2-Trichlorotrifluoroethane (Freon 113)	NC	1	NC	1	3.0E+01	4	3.0E+01	2
1,1-Dichloroethane	1.6E-03	1	5.7E-03	1	7.0E-01	5a	2.0E-01	5
1,1-Dichloroethene	NC	1	NC	1	7.0E-02	1	5.0E-02	2
1,2,3-Trichlorobenzene	NC	1	NC	1	2.8E-03	3a	8.0E-04	3
1,2,4-Trimethylbenzene	NC	1	NC	1	7.0E-03	5	5.0E-02	6
1,2-Dichlorobenzene	NC	1	NC	1	2.0E-01	4	9.0E-02	2
1,2-Dichloroethane	2.1E-02	1	4.7E-02	1	4.0E-01	1	6.0E-03	3
1,2-Dichloroethene (total)	NC	1	NC	1	7.0E-03	2a	2.0E-03	2
1,3,5-Trimethylbenzene	NC	1	NC	1	7.0E-03	5b	1.0E-02	3
1,3-Butadiene	1.7E-01	1	3.4E+00	1	2.0E-03	2	5.7E-04	2a
1,3-Dichlorobenzene	NC	1	NC	1	1.1E-01	7a	3.0E-02	7
1,4-Dichlorobenzene	1.1E-02	1	5.4E-03	1	8.0E-01	1	7.0E-02	8
1,4-Dioxane	7.7E-03	1	2.7E-02	1	3.0E-02	2	3.0E-02	2
1-Butene/Isobutene	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
1-Methylnaphthalene	NC	1	2.9E-02	5	2.5E-01	8a	7.0E-02	8
2 & 3-Chlorotoluene	NC	1	NC	1	7.0E-02	2a	2.0E-02	2
2-Butanone (MEK)	NC	1	NC	1	5.0E+00	2	6.0E-01	2
2-Propanol	NC	1	NC	1	7.0E+00	1	2.0E+00	1a
3-Chloropropene	6.0E-03	1	2.1E-02	1	1.0E-03	2	2.9E-04	2a
4-Isopropyltoluene	NC	1	NC	1	4.0E-01	2d	1.0E-01	2d
Acetaldehyde	2.7E-03	1	NC	1	9.0E-03	2	2.6E-03	2a
Acetone	NC	1	NC	1	3.1E+01	8	9.0E-01	2
Acetonitrile	NC	1	NC	1	6.0E-02	2	1.7E-02	2a
Acetylene	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Benzaldehyde	2.7E-03	1e	NC	1	9.0E-03	2e	2.6E-03	2a
Benzene	2.9E-02	1	1.0E-01	1	3.0E-02	2	4.0E-03	2
Butane	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Butylbenzene	NC	1	NC	1	1.8E-01	5a	5.0E-02	5
Butyraldehyde	2.7E-03	1e	NC	1	9.0E-03	2e	2.6E-03	2a
Carbon Disulfide	NC	1	NC	1	7.0E-01	2	1.0E-01	2
Carbon Tetrachloride	4.2E-02	1	1.5E-01	1	4.0E-02	1	4.0E-03	2
Chlorobenzene	NC	1	NC	1	1.0E+00	1	2.0E-02	2
Chlorodifluoromethane (Freon 22)	NC	1	NC	1	5.0E+01	2	1.4E+01	2a
Chloroethane	NC	1	NC	1	1.0E+01	2	4.0E-01	7
Chloroform	5.3E-03	1	3.1E-02	1	3.0E-01	1	1.0E-02	2
Chloromethane	NC	1	NC	1	9.0E-02	2	2.6E-02	2a
cis-1,2-Dichloroethene	NC	1	NC	1	7.0E-03	2a	2.0E-03	2
cis-2-Butene	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Cyclohexane	NC	1	NC	1	6.0E+00	2	1.7E+00	2a
Cyclohexanone	NC	1	NC	1	6.0E+00	2f	1.7E+00	2a
Dichlorodifluoromethane (Freon 12)	NC	1	NC	1	1.0E-01	3	2.0E-01	2
Dichlorofluoromethane	NC	1	NC	1	2.0E-01	4	2.0E-01	2g
Ethane	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Ethanol	NC	1	NC	1	7.0E+00	1h	2.0E+00	1a
Ethene	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Ethylbenzene	2.5E-03	1	1.1E-02	1	1.0E+00	2	1.0E-01	2
Isobutane	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Isopropylbenzene (Cumene)	NC	1	NC	1	4.0E-01	2	1.0E-01	2

TABLE 8
Carcinogenic and Noncarcinogenic Toxicity Values for Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

	Unit Risk Factor (URF) $(mg/m^3)^{-1}$		Cancer Slope Factor (CSF) $(mg/kg\text{-}day)^{-1}$		Chronic Reference Concentration (RfC) (mg/m^3)		Chronic Reference Dose (RfD) (mg/kg-day)	
Chemical	**Inhalation**	**Source**	**Oral**	**Source**	**Inhalation**	**Source**	**Oral**	**Source**
Methylene Chloride	1.0E-03	1	1.4E-02	1	4.0E-01	1	6.0E-03	2
Naphthalene	3.4E-02	1	1.2E-01	1a	3.0E-03	2	2.0E-02	2
n-Butanol	NC	1	NC	1	3.5E-01	2a	1.0E-01	2
n-Hexane	NC	1	NC	1	7.0E-01	2	6.0E-02	4
n-Nonane	NC	1	NC	1	2.0E-01	5	3.0E-04	5
n-Pentane	NC	1	NC	1	1.0E+00	5	2.9E-01	5a
Propane	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Propene	NC	1	NC	1	3.0E+00	1	8.6E-01	1a
Propylbenzene	NC	1	NC	1	1.0E+00	3	1.0E-01	3
sec-Butylbenzene	NC	1	NC	1	3.5E-01	3a	1.0E-01	3
Styrene	NC	1	NC	1	9.0E-01	1	2.0E-01	2
Tetrachloroethene	5.9E-03	1	5.4E-01	1	3.5E-02	1	6.0E-03	2
Tetrahydrofuran	NC	1	NC	1	2.0E+00	2	9.0E-01	2
Toluene	NC	1	NC	1	3.0E-01	1	8.0E-02	2
trans-1,2-Dichloroethene	NC	1	NC	1	6.0E-02	5	2.0E-02	2
trans-2-Butene	NC	1	NC	1	3.0E+00	1c	8.6E-01	1a
Trichloroethene	4.8E-03 (ADAF) / 4.1E-03	2i	4.6E-02	2	2.0E-03	2	5.0E-04	2
Trichlorofluoromethane (Freon 11)	NC	1	NC	1	7.0E-01	4	3.0E-01	2
Vinyl Acetate	NC	1	NC	1	2.0E-01	1	1.0E+00	4
Vinyl Chloride	7.8E-02	1	2.7E-01	1	1.0E-01	2	3.0E-03	2
Xylenes	NC	1	NC	1	1.0E-01	2	2.0E-01	2
Total Petroleum Hydrocarbons								
EFH (C23 - C40)	NC	1	NC	1	5.8E-01	9	1.7E-01	9
TPH (extractable)	NC	1	NC	1	2.7E-01	8	5.0E-02	8
TPH-Diesel	NC	1	NC	1	1.1E-01 (soil) / 1.0E-01 (soil gas)	9	1.4E-02	9
TPH-Gasoline	NC	1	NC	1	3.0E-01 (soil) / 1.3E-01 (soil gas)	9	3.2E-02	9
Semi-Volatile Organic Compounds								
1,2,4-Trichlorobenzene	NC	j	3.6E-03	1	2.0E-03	5	1.0E-02	2
2-Methylnaphthalene	NC	1	NC	1	1.4E-02	2a	4.0E-03	2
Pyrene	NC	1	NC	1	1.1E-01	2a	3.0E-02	2
Polychlorinated Biphenyls								
Aroclor 1260	5.7E-01	1	2.0E+00	1	7.0E-05	2a	2.0E-05	2k
Metals								
Arsenic	3.3E+00	1	9.5E+00	1	1.5E-05	1	3.5E-06	1
Barium	NC	1	NC	1	5.0E-04	4	2.0E-01	2
Beryllium	2.4E+00	1	NC	l	7.0E-06	1	2.0E-04	1
Cadmium	4.2E+00	1	NC	l	2.0E-05	1	5.0E-04	1
Chromium	NC	1m	NC	1m	5.3E+00	2a,m	1.5E+00	2m
Chromium VI	1.5E+02	1	NC	l	1.0E-04	2	3.0E-03	2
Cobalt	9.0E+00	5	NC	1	6.0E-06	5	3.0E-04	5
Copper	NC	1	NC	1	1.4E-01	4a	4.0E-02	4n
Cyanide	NC	1	NC	1	8.0E-04	2	6.0E-04	2
Iron	NC	1	NC	1	2.5E+00	5a	7.0E-01	5
Lead	NA	o	NA	o	NA	o	NA	o
Manganese	NC	1	NC	1	5.0E-05	2	1.4E-01	2
Mercury	NC	1	NC	1	3.0E-05	1	1.6E-04	1

TABLE 8
Carcinogenic and Noncarcinogenic Toxicity Values for Chemicals of Potential Concern
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Unit Risk Factor (URF) $(mg/m^3)^{-1}$		Cancer Slope Factor (CSF) $(mg/kg\text{-}day)^{-1}$		Chronic Reference Concentration (RfC) (mg/m^3)		Chronic Reference Dose (RfD) (mg/kg-day)	
	Inhalation	**Source**	**Oral**	**Source**	**Inhalation**	**Source**	**Oral**	**Source**
Molybdenum	NC	1	NC	1	1.8E-02	2a	5.0E-03	2
Nickel	2.6E-01	1	NC	l	1.4E-05	1	1.1E-02	1
Vanadium	NC	1	NC	1	1.0E-04	10p	5.0E-03	11
Zinc	NC	1	NC	1	1.1E+00	2a	3.0E-01	2

Notes:
NA = Not available or not applicable.
NC = Not considered to be a carcinogen.

a Route-to-route extrapolation.
b Surrogate value - assumes toxicity for 1,2,4-trimethylbenzene.
c Surrogate value - assumes toxicity for propene.
d Surrogate value - assumes toxicity for isopropylbenzene.
e Surrogate value - assumes toxicity for acetaldehyde.
f Surrogate value - assumes toxicity for cyclohexane.
g Surrogate value - assumes toxicity for dichlorodifluoromethane.
h Surrogate value - assumes toxicity for isopropanol (2-propanol).
i Age-dependent adjustment factor (ADAF)-adjusted URF for trichloroethene is used to evaluate potential inhalation exposure under current offsite residential scenario. Please see text for discussion.
j This chemical is not considered a carcinogen by the route of inhalation.
k Surrogate value - assumes toxicity for aroclor-1254.
l This chemical is not considered a carcinogen by the route of ingestion.
m Toxicity values for Chromium (III).
n The RfD for copper is based on a drinking water standard of 1.3 mg/L.
o Lead exposure is evaluated using Cal/EPA OEHHA's benchmark approach. See text for details.
p RfC for vanadium is a 2009 Minimal Risk Level (MRL) draft value.

Sources:

1. California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA). 2014. Toxicity Criteria Database. Table of cancer slope factors maintained at http://www.oehha.ca.gov/risk/ChemicalDB/index.asp; table of chronic RELs maintained online at http://www.oehha.ca.gov/air/allrels.html.
2. United States Environmental Protection Agency (USEPA). 2014. *Integrated Risk Information System Database.* Maintained online at http://www.epa.gov/iris/index.html.
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6. United States Environmental Protection Agency (USEPA). 2004. *Region IX Preliminary Remediation Goals.* November. Found at http://www.epa.gov/region9/superfund/prg/files/04prgtable.pdf.
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8. Agency for Toxic Substances and Disease Registry (ATSDR). 2013. From *USEPA Regional Screening Levels*, November, 2014. Available at: http://www.epa.gov/region9/superfund/prg.
9. Iris Environmental - toxicity value derived using guidance from the Total Petroleum Hydrocarbon Criteria Working Group (please see Appendix H).
10. Agency for Toxic Substances and Disease Registry (ATSDR). 2014. Minimal Risk Level (MRL). Available at: http://www.atsdr.cdc.gov/mrls/mrllist.asp
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TABLE 9a

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-01-11142012	11/14/12	35	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00090	8.4E-05	7.6E-08	6.2E-09	1.7E-08	NC	2.2E-10		
PZ-01-11142012	11/14/12	35	1,1,1-Trichloroethane	**0.0026**	8.0E-05	2.1E-07	1.7E-08	4.7E-08	NC	4.7E-08		
PZ-01-11142012	11/14/12	35	1,1,2-Trichloroethane	0.0012	8.0E-05	9.6E-08	7.8E-09	2.2E-08	1.3E-10	1.6E-06		
PZ-01-11142012	11/14/12	35	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.030**	8.0E-05	2.4E-06	2.0E-07	5.5E-07	NC	1.8E-08		
PZ-01-11142012	11/14/12	35	1,1-Dichloroethane	**0.12**	7.6E-05	9.1E-06	7.5E-07	2.1E-06	1.2E-09	3.0E-06		
PZ-01-11142012	11/14/12	35	1,1-Dichloroethene	**0.11**	9.1E-05	1.0E-05	8.2E-07	2.3E-06	NC	3.3E-05		
PZ-01-11142012	11/14/12	35	1,2,4-Trichlorobenzene	**0.010**	3.2E-05	3.2E-07	2.6E-08	7.3E-08	NC	3.7E-05		
PZ-01-11142012	11/14/12	35	1,2,4-Trimethylbenzene	0.0011	6.3E-05	6.9E-08	5.6E-09	1.6E-08	NC	2.3E-06		
PZ-01-11142012	11/14/12	35	1,2-Dichlorobenzene	**0.0084**	7.1E-05	6.0E-07	4.9E-08	1.4E-07	NC	6.8E-07		
PZ-01-11142012	11/14/12	35	1,2-Dichloroethane	**0.030**	1.0E-04	3.1E-06	2.5E-07	7.1E-07	5.4E-09	1.8E-06		
PZ-01-11142012	11/14/12	35	1,3-Butadiene	0.00042	2.2E-04	9.4E-08	7.6E-09	2.1E-08	1.3E-09	1.1E-05		
PZ-01-11142012	11/14/12	35	1,3-Dichlorobenzene	0.0013	7.1E-05	9.3E-08	7.6E-09	2.1E-08	NC	2.0E-07		
PZ-01-11142012	11/14/12	35	1,4-Dioxane	0.0021	9.5E-05	2.0E-07	1.6E-08	4.6E-08	1.3E-10	1.5E-06		
PZ-01-11142012	11/14/12	35	1-Butene/Isobutene	**0.0085**	8.6E-05	7.3E-07	6.0E-08	1.7E-07	NC	5.6E-08		
PZ-01-11142012	11/14/12	35	2 & 3-Chlorotoluene	0.0022	6.5E-05	1.4E-07	1.2E-08	3.3E-08	NC	4.7E-07		
PZ-01-11142012	11/14/12	35	2-Butanone (MEK)	**0.010**	8.3E-05	8.3E-07	6.8E-08	1.9E-07	NC	3.8E-08		
PZ-01-11142012	11/14/12	35	2-Propanol	**0.0026**	1.1E-04	2.8E-07	2.3E-08	6.4E-08	NC	9.1E-09		
PZ-01-11142012	11/14/12	35	3-Chloropropene	0.00066	9.5E-05	6.2E-08	5.1E-09	1.4E-08	3.1E-11	4.7E-09		
PZ-01-11142012	11/14/12	35	Acetaldehyde	**0.086**	1.2E-04	1.1E-05	8.6E-07	2.4E-06	2.3E-09	2.7E-04		
PZ-01-11142012	11/14/12	35	Acetone	**0.045**	1.2E-04	5.5E-06	4.5E-07	1.3E-06	NC	4.1E-08		
PZ-01-11142012	11/14/12	35	Acetonitrile	**0.0014**	1.2E-04	1.7E-07	1.4E-08	3.9E-08	NC	6.5E-07		
PZ-01-11142012	11/14/12	35	Acetylene	**0.0043**	1.1E-04	4.7E-07	3.8E-08	1.1E-07	NC	3.6E-08		
PZ-01-11142012	11/14/12	35	Benzaldehyde	**0.0032**	7.5E-05	2.4E-07	2.0E-08	5.5E-08	5.3E-11	6.1E-06		
PZ-01-11142012	11/14/12	35	Benzene	**0.0023**	8.9E-05	2.1E-07	1.7E-08	4.7E-08	4.9E-10	1.6E-06		
PZ-01-11142012	11/14/12	35	Butane	**0.0049**	1.1E-04	5.4E-07	4.4E-08	1.2E-07	NC	4.1E-08		
PZ-01-11142012	11/14/12	35	Butyraldehyde	**0.016**	1.2E-04	2.0E-06	1.6E-07	4.5E-07	4.3E-10	5.0E-05		
PZ-01-11142012	11/14/12	35	Carbon Disulfide	0.0023	1.0E-04	2.4E-07	2.0E-08	5.5E-08	NC	7.8E-08		
PZ-01-11142012	11/14/12	35	Carbon Tetrachloride	**0.085**	8.0E-05	6.8E-06	5.5E-07	1.5E-06	2.3E-08	3.9E-05		
PZ-01-11142012	11/14/12	35	Chlorobenzene	0.0010	7.5E-05	7.5E-08	6.1E-09	1.7E-08	NC	1.7E-08		
PZ-01-11142012	11/14/12	35	Chlorodifluoromethane (Freon 22)	**0.0035**	1.0E-04	3.6E-07	2.9E-08	8.1E-08	NC	1.6E-09		
PZ-01-11142012	11/14/12	35	Chloroethane	**0.0037**	2.4E-04	8.8E-07	7.2E-08	2.0E-07	NC	2.0E-08		
PZ-01-11142012	11/14/12	35	Chloroform	**0.14**	1.0E-04	1.5E-05	1.2E-06	3.3E-06	6.3E-09	1.1E-05		
PZ-01-11142012	11/14/12	35	Chloromethane	**0.019**	1.2E-04	2.4E-06	1.9E-07	5.4E-07	NC	6.0E-06		
PZ-01-11142012	11/14/12	35	cis-1,2-Dichloroethene	**0.025**	7.6E-05	1.9E-06	1.5E-07	4.3E-07	NC	6.2E-05		
PZ-01-11142012	11/14/12	35	cis-2-Butene	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	8.3E-09		
PZ-01-11142012	11/14/12	35	Cyclohexane	**0.0017**	8.2E-05	1.4E-07	1.1E-08	3.2E-08	NC	5.3E-09		
PZ-01-11142012	11/14/12	35	Dichlorodifluoromethane (Freon 12)	**0.0091**	6.9E-05	6.3E-07	5.1E-08	1.4E-07	NC	7.1E-07		
PZ-01-11142012	11/14/12	35	Dichlorofluoromethane	0.00091	9.3E-05	8.5E-08	6.9E-09	1.9E-08	NC	9.7E-08		
PZ-01-11142012	11/14/12	35	Ethane	**0.021**	1.1E-04	2.3E-06	1.9E-07	5.2E-07	NC	1.7E-07		
PZ-01-11142012	11/14/12	35	Ethanol	**0.0080**	1.3E-04	1.0E-06	8.4E-08	2.3E-07	NC	3.4E-08		
PZ-01-11142012	11/14/12	35	Ethene	**0.0038**	1.1E-04	4.2E-07	3.4E-08	9.5E-08	NC	3.2E-08		
PZ-01-11142012	11/14/12	35	Ethylbenzene	0.00093	7.7E-05	7.2E-08	5.8E-09	1.6E-08	1.5E-11	1.6E-08		
PZ-01-11142012	11/14/12	35	Isobutane	**0.0049**	1.1E-04	5.4E-07	4.4E-08	1.2E-07	NC	4.1E-08		

TABLE 9a

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-01-11142012	11/14/12	35	Isopropylbenzene (Cumene)	0.0020	6.7E-05	1.3E-07	1.1E-08	3.1E-08	NC	7.7E-08		
PZ-01-11142012	11/14/12	35	Methylene Chloride	**0.14**	1.0E-04	1.4E-05	1.2E-06	3.2E-06	1.2E-09	8.1E-06		
PZ-01-11142012	11/14/12	35	Naphthalene	0.0018	6.1E-05	1.1E-07	9.0E-09	2.5E-08	3.1E-10	8.4E-06		
PZ-01-11142012	11/14/12	35	n-Butanol	0.0022	9.5E-05	2.1E-07	1.7E-08	4.7E-08	NC	1.4E-07		
PZ-01-11142012	11/14/12	35	n-Hexane	**0.0049**	1.9E-04	9.1E-07	7.4E-08	2.1E-07	NC	3.0E-07		
PZ-01-11142012	11/14/12	35	n-Nonane	0.0011	5.4E-05	5.9E-08	4.8E-09	1.4E-08	NC	6.8E-08		
PZ-01-11142012	11/14/12	35	n-Pentane	**0.0032**	8.4E-05	2.7E-07	2.2E-08	6.1E-08	NC	6.1E-08		
PZ-01-11142012	11/14/12	35	Propane	**0.018**	1.1E-04	2.0E-06	1.6E-07	4.5E-07	NC	1.5E-07		
PZ-01-11142012	11/14/12	35	Propene	**0.0074**	1.1E-04	8.1E-07	6.6E-08	1.8E-07	NC	6.2E-08		
PZ-01-11142012	11/14/12	35	Propylbenzene	0.0011	6.2E-05	6.9E-08	5.6E-09	1.6E-08	NC	1.1E-07		
PZ-01-11142012	11/14/12	35	Styrene	0.00092	7.3E-05	6.7E-08	5.5E-09	1.5E-08	NC	1.7E-08		
PZ-01-11142012	11/14/12	35	Tetrachloroethene	**2.0**	7.4E-05	1.5E-04	1.2E-05	3.4E-05	7.1E-08	9.7E-04		
PZ-01-11142012	11/14/12	35	Toluene	**0.027**	8.8E-05	2.4E-06	1.9E-07	5.4E-07	NC	1.8E-06		
PZ-01-11142012	11/14/12	35	TPH-gasoline	1.7	7.2E-05	1.2E-04	1.0E-05	2.8E-05	NC	2.2E-04		
PZ-01-11142012	11/14/12	35	trans-1,2-Dichloroethene	**0.0063**	7.3E-05	4.6E-07	3.7E-08	1.0E-07	NC	1.7E-06		
PZ-01-11142012	11/14/12	35	trans-2-Butene	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	8.3E-09		
PZ-01-11142012	11/14/12	35	Trichloroethene	**1.0**	8.1E-05	8.1E-05	6.6E-06	1.8E-05	2.7E-08	9.2E-03		
PZ-01-11142012	11/14/12	35	Trichlorofluoromethane (Freon 11)	**0.011**	8.8E-05	9.7E-07	7.9E-08	2.2E-07	NC	3.2E-07		
PZ-01-11142012	11/14/12	35	Vinyl Acetate	0.0032	8.7E-05	2.8E-07	2.3E-08	6.3E-08	NC	3.2E-07		
PZ-01-11142012	11/14/12	35	Vinyl Chloride	0.00052	1.1E-04	5.5E-08	4.5E-09	1.3E-08	3.5E-10	1.3E-07		
PZ-01-11142012	11/14/12	35	Xylenes	**0.0030**	8.6E-05	2.6E-07	2.1E-08	5.9E-08	NC	5.9E-07	1.4E-07	1.1E-02
SMP-07A-11142012	11/14/12	27	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.020	1.1E-04	2.1E-06	1.7E-07	4.9E-07	NC	6.1E-09		
SMP-07A-11142012	11/14/12	27	1,1,1-Trichloroethane	0.025	1.0E-04	2.5E-06	2.1E-07	5.8E-07	NC	5.8E-07		
SMP-07A-11142012	11/14/12	27	1,1,2-Trichloroethane	0.025	1.0E-04	2.5E-06	2.1E-07	5.8E-07	3.3E-09	4.2E-05		
SMP-07A-11142012	11/14/12	27	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.036	1.0E-04	3.7E-06	3.0E-07	8.4E-07	NC	2.8E-08		
SMP-07A-11142012	11/14/12	27	1,1-Dichloroethane	0.019	9.7E-05	1.8E-06	1.5E-07	4.2E-07	2.4E-10	6.0E-07		
SMP-07A-11142012	11/14/12	27	1,1-Dichloroethene	0.022	1.2E-04	2.6E-06	2.1E-07	5.8E-07	NC	8.3E-06		
SMP-07A-11142012	11/14/12	27	1,2,4-Trichlorobenzene	0.034	4.1E-05	1.4E-06	1.1E-07	3.2E-07	NC	1.6E-04		
SMP-07A-11142012	11/14/12	27	1,2,4-Trimethylbenzene	0.023	8.1E-05	1.9E-06	1.5E-07	4.2E-07	NC	6.1E-05		
SMP-07A-11142012	11/14/12	27	1,2-Dichlorobenzene	0.028	9.1E-05	2.5E-06	2.1E-07	5.8E-07	NC	2.9E-06		
SMP-07A-11142012	11/14/12	27	1,2-Dichloroethane	0.019	1.3E-04	2.5E-06	2.0E-07	5.7E-07	4.3E-09	1.4E-06		
SMP-07A-11142012	11/14/12	27	1,3-Butadiene	0.0092	2.8E-04	2.5E-06	2.1E-07	5.8E-07	3.5E-08	2.9E-04		
SMP-07A-11142012	11/14/12	27	1,3-Dichlorobenzene	0.028	9.1E-05	2.6E-06	2.1E-07	5.8E-07	NC	5.6E-06		
SMP-07A-11142012	11/14/12	27	1,4-Dioxane	0.045	1.2E-04	5.4E-06	4.4E-07	1.2E-06	3.4E-09	4.1E-05		
SMP-07A-11142012	11/14/12	27	1-Butene/Isobutene	**0.62**	1.1E-04	6.8E-05	5.6E-06	1.6E-05	NC	5.2E-06		
SMP-07A-11142012	11/14/12	27	2 & 3-Chlorotoluene	0.049	8.4E-05	4.1E-06	3.3E-07	9.3E-07	NC	1.3E-05		
SMP-07A-11142012	11/14/12	27	2-Butanone (MEK)	0.027	1.1E-04	2.9E-06	2.3E-07	6.5E-07	NC	1.3E-07		
SMP-07A-11142012	11/14/12	27	2-Propanol	0.013	1.4E-04	1.8E-06	1.4E-07	4.0E-07	NC	5.8E-08		
SMP-07A-11142012	11/14/12	27	3-Chloropropene	0.014	1.2E-04	1.7E-06	1.4E-07	3.8E-07	8.2E-10	1.3E-07		
SMP-07A-11142012	11/14/12	27	Acetaldehyde	0.029	1.6E-04	4.5E-06	3.7E-07	1.0E-06	9.9E-10	1.1E-04		
SMP-07A-11142012	11/14/12	27	Acetone	**0.062**	1.6E-04	9.6E-06	7.9E-07	2.2E-06	NC	7.1E-08		
SMP-07A-11142012	11/14/12	27	Acetonitrile	0.0090	1.5E-04	1.4E-06	1.1E-07	3.2E-07	NC	5.3E-06		
SMP-07A-11142012	11/14/12	27	Acetylene	0.0096	1.4E-04	1.3E-06	1.1E-07	3.0E-07	NC	1.0E-07		

TABLE 9a

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-07A-11142012	11/14/12	27	Benzaldehyde	0.022	9.6E-05	2.1E-06	1.7E-07	4.8E-07	4.7E-10	5.4E-05		
SMP-07A-11142012	11/14/12	27	Benzene	0.011	1.1E-04	1.3E-06	1.0E-07	2.9E-07	3.0E-09	9.5E-06		
SMP-07A-11142012	11/14/12	27	Butane	**0.23**	1.4E-04	3.2E-05	2.6E-06	7.3E-06	NC	2.4E-06		
SMP-07A-11142012	11/14/12	27	Butyraldehyde	0.048	1.5E-04	7.4E-06	6.1E-07	1.7E-06	1.6E-09	1.9E-04		
SMP-07A-11142012	11/14/12	27	Carbon Disulfide	0.050	1.3E-04	6.6E-06	5.4E-07	1.5E-06	NC	2.2E-06		
SMP-07A-11142012	11/14/12	27	Carbon Tetrachloride	0.030	1.0E-04	3.1E-06	2.5E-07	7.0E-07	1.0E-08	1.7E-05		
SMP-07A-11142012	11/14/12	27	Chlorobenzene	0.022	9.6E-05	2.1E-06	1.7E-07	4.8E-07	NC	4.8E-07		
SMP-07A-11142012	11/14/12	27	Chlorodifluoromethane (Freon 22)	0.031	1.3E-04	4.0E-06	3.3E-07	9.1E-07	NC	1.8E-08		
SMP-07A-11142012	11/14/12	27	Chloroethane	**0.034**	2.9E-04	1.0E-05	8.1E-07	2.3E-06	NC	2.3E-07		
SMP-07A-11142012	11/14/12	27	Chloroform	0.023	1.3E-04	3.0E-06	2.5E-07	6.9E-07	1.3E-09	2.3E-06		
SMP-07A-11142012	11/14/12	27	Chloromethane	0.0079	1.6E-04	1.2E-06	1.0E-07	2.8E-07	NC	3.1E-06		
SMP-07A-11142012	11/14/12	27	cis-1,2-Dichloroethene	0.019	9.7E-05	1.8E-06	1.5E-07	4.2E-07	NC	6.0E-05		
SMP-07A-11142012	11/14/12	27	cis-2-Butene	**0.073**	1.4E-04	1.0E-05	8.3E-07	2.3E-06	NC	7.7E-07		
SMP-07A-11142012	11/14/12	27	Cyclohexane	**0.20**	1.0E-04	2.1E-05	1.7E-06	4.8E-06	NC	7.9E-07		
SMP-07A-11142012	11/14/12	27	Dichlorodifluoromethane (Freon 12)	0.023	8.8E-05	2.0E-06	1.6E-07	4.6E-07	NC	2.3E-06		
SMP-07A-11142012	11/14/12	27	Dichlorofluoromethane	0.020	1.2E-04	2.4E-06	1.9E-07	5.4E-07	NC	2.7E-06		
SMP-07A-11142012	11/14/12	27	Ethane	**0.88**	1.4E-04	1.2E-04	1.0E-05	2.8E-05	NC	9.3E-06		
SMP-07A-11142012	11/14/12	27	Ethanol	0.031	1.6E-04	5.0E-06	4.1E-07	1.1E-06	NC	1.6E-07		
SMP-07A-11142012	11/14/12	27	Ethene	**0.29**	1.4E-04	4.0E-05	3.3E-06	9.2E-06	NC	3.1E-06		
SMP-07A-11142012	11/14/12	27	Ethylbenzene	0.020	9.8E-05	2.0E-06	1.6E-07	4.5E-07	4.0E-10	4.5E-07		
SMP-07A-11142012	11/14/12	27	Isobutane	**0.14**	1.4E-04	1.9E-05	1.6E-06	4.4E-06	NC	1.5E-06		
SMP-07A-11142012	11/14/12	27	Isopropylbenzene (Cumene)	**2.7**	8.6E-05	2.3E-04	1.9E-05	5.3E-05	NC	1.3E-04		
SMP-07A-11142012	11/14/12	27	Methylene Chloride	0.017	1.3E-04	2.2E-06	1.8E-07	5.0E-07	1.8E-10	1.3E-06		
SMP-07A-11142012	11/14/12	27	Naphthalene	**0.14**	7.9E-05	1.1E-05	9.0E-07	2.5E-06	3.1E-08	8.4E-04		
SMP-07A-11142012	11/14/12	27	n-Butanol	0.048	1.2E-04	5.8E-06	4.7E-07	1.3E-06	NC	3.8E-06		
SMP-07A-11142012	11/14/12	27	n-Hexane	**0.036**	2.3E-04	8.3E-06	6.8E-07	1.9E-06	NC	2.7E-06		
SMP-07A-11142012	11/14/12	27	n-Nonane	**1.6**	6.9E-05	1.1E-04	9.0E-06	2.5E-05	NC	1.3E-04		
SMP-07A-11142012	11/14/12	27	n-Pentane	**0.13**	1.1E-04	1.4E-05	1.1E-06	3.2E-06	NC	3.2E-06		
SMP-07A-11142012	11/14/12	27	Propane	**0.47**	1.4E-04	6.5E-05	5.3E-06	1.5E-05	NC	5.0E-06		
SMP-07A-11142012	11/14/12	27	Propene	**0.81**	1.4E-04	1.1E-04	9.2E-06	2.6E-05	NC	8.5E-06		
SMP-07A-11142012	11/14/12	27	Propylbenzene	**2.1**	8.0E-05	1.7E-04	1.4E-05	3.8E-05	NC	2.7E-04		
SMP-07A-11142012	11/14/12	27	Styrene	0.020	9.3E-05	1.9E-06	1.5E-07	4.3E-07	NC	4.7E-07		
SMP-07A-11142012	11/14/12	27	Tetrachloroethene	**0.18**	9.5E-05	1.7E-05	1.4E-06	3.9E-06	8.2E-09	1.1E-04		
SMP-07A-11142012	11/14/12	27	Toluene	**0.11**	1.1E-04	1.2E-05	1.0E-06	2.8E-06	NC	9.4E-06		
SMP-07A-11142012	11/14/12	27	TPH-gasoline	**3,500**	9.2E-05	3.2E-01	2.6E-02	7.4E-02	NC	5.7E-01		
SMP-07A-11142012	11/14/12	27	trans-1,2-Dichloroethene	0.036	9.3E-05	3.4E-06	2.7E-07	7.7E-07	NC	1.3E-05		
SMP-07A-11142012	11/14/12	27	trans-2-Butene	**0.079**	1.4E-04	1.1E-05	8.9E-07	2.5E-06	NC	8.3E-07		
SMP-07A-11142012	11/14/12	27	Trichloroethene	**0.076**	1.0E-04	7.8E-06	6.4E-07	1.8E-06	2.6E-09	8.9E-04		
SMP-07A-11142012	11/14/12	27	Trichlorofluoromethane (Freon 11)	0.026	1.1E-04	2.9E-06	2.4E-07	6.7E-07	NC	9.5E-07		
SMP-07A-11142012	11/14/12	27	Vinyl Acetate	0.070	1.1E-04	7.7E-06	6.3E-07	1.8E-06	NC	8.8E-06		
SMP-07A-11142012	11/14/12	27	Vinyl Chloride	0.011	1.3E-04	1.5E-06	1.2E-07	3.4E-07	9.4E-09	3.4E-06		
SMP-07A-11142012	11/14/12	27	Xylenes	0.030	1.1E-04	3.3E-06	2.7E-07	7.5E-07	NC	7.5E-06	1.2E-07	5.7E-01
SMP-10A-11142012	11/14/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0011**	1.1E-04	1.3E-07	1.0E-08	2.9E-08	NC	3.6E-10		

TABLE 9a

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-10A-11142012	11/14/12	25	1,1,1-Trichloroethane	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	2.5E-08		
SMP-10A-11142012	11/14/12	25	1,1,2-Trichloroethane	0.00048	1.1E-04	5.3E-08	4.3E-09	1.2E-08	6.9E-11	8.6E-07		
SMP-10A-11142012	11/14/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.0046**	1.1E-04	5.0E-07	4.1E-08	1.2E-07	NC	3.8E-09		
SMP-10A-11142012	11/14/12	25	1,1-Dichloroethane	**0.011**	1.0E-04	1.2E-06	9.4E-08	2.6E-07	1.5E-10	3.8E-07		
SMP-10A-11142012	11/14/12	25	1,1-Dichloroethene	**0.0050**	1.2E-04	6.2E-07	5.1E-08	1.4E-07	NC	2.0E-06		
SMP-10A-11142012	11/14/12	25	1,2,4-Trichlorobenzene	0.00064	4.5E-05	2.9E-08	2.3E-09	6.5E-09	NC	3.3E-06		
SMP-10A-11142012	11/14/12	25	1,2,4-Trimethylbenzene	**0.00087**	8.7E-05	7.6E-08	6.2E-09	1.7E-08	NC	2.5E-06		
SMP-10A-11142012	11/14/12	25	1,2-Dichlorobenzene	0.00053	9.8E-05	5.2E-08	4.2E-09	1.2E-08	NC	5.9E-08		
SMP-10A-11142012	11/14/12	25	1,2-Dichloroethane	0.00036	1.4E-04	5.1E-08	4.2E-09	1.2E-08	8.7E-11	2.9E-08		
SMP-10A-11142012	11/14/12	25	1,3-Butadiene	0.00017	2.9E-04	5.0E-08	4.1E-09	1.1E-08	6.9E-10	5.7E-06		
SMP-10A-11142012	11/14/12	25	1,3-Dichlorobenzene	0.00053	9.8E-05	5.2E-08	4.2E-09	1.2E-08	NC	1.1E-07		
SMP-10A-11142012	11/14/12	25	1,4-Dioxane	0.00085	1.3E-04	1.1E-07	9.0E-09	2.5E-08	6.9E-11	8.4E-07		
SMP-10A-11142012	11/14/12	25	1-Butene/Isobutene	**0.00073**	1.2E-04	8.6E-08	7.0E-09	2.0E-08	NC	6.6E-09		
SMP-10A-11142012	11/14/12	25	2 & 3-Chlorotoluene	0.00092	9.0E-05	8.3E-08	6.7E-09	1.9E-08	NC	2.7E-07		
SMP-10A-11142012	11/14/12	25	2-Butanone (MEK)	**0.0083**	1.1E-04	9.4E-07	7.7E-08	2.2E-07	NC	4.3E-08		
SMP-10A-11142012	11/14/12	25	2-Propanol	**0.00087**	1.5E-04	1.3E-07	1.0E-08	2.9E-08	NC	4.1E-09		
SMP-10A-11142012	11/14/12	25	3-Chloropropene	0.00027	1.3E-04	3.5E-08	2.8E-09	8.0E-09	1.7E-11	2.7E-09		
SMP-10A-11142012	11/14/12	25	Acetaldehyde	**0.019**	1.7E-04	3.2E-06	2.6E-07	7.2E-07	6.9E-10	8.0E-05		
SMP-10A-11142012	11/14/12	25	Acetone	**0.016**	1.7E-04	2.7E-06	2.2E-07	6.1E-07	NC	2.0E-08		
SMP-10A-11142012	11/14/12	25	Acetonitrile	0.00017	1.7E-04	2.8E-08	2.3E-09	6.4E-09	NC	1.1E-07		
SMP-10A-11142012	11/14/12	25	Acetylene	0.00018	1.5E-04	2.7E-08	2.2E-09	6.1E-09	NC	2.0E-09		
SMP-10A-11142012	11/14/12	25	Benzaldehyde	**0.0016**	1.0E-04	1.7E-07	1.4E-08	3.8E-08	3.6E-11	4.2E-06		
SMP-10A-11142012	11/14/12	25	Benzene	**0.00051**	1.2E-04	6.2E-08	5.1E-09	1.4E-08	1.5E-10	4.7E-07		
SMP-10A-11142012	11/14/12	25	Butane	**0.0019**	1.5E-04	2.8E-07	2.3E-08	6.4E-08	NC	2.1E-08		
SMP-10A-11142012	11/14/12	25	Butyraldehyde	**0.0034**	1.7E-04	5.6E-07	4.6E-08	1.3E-07	1.2E-10	1.4E-05		
SMP-10A-11142012	11/14/12	25	Carbon Disulfide	0.00094	1.4E-04	1.3E-07	1.1E-08	3.0E-08	NC	4.3E-08		
SMP-10A-11142012	11/14/12	25	Carbon Tetrachloride	**0.026**	1.1E-04	2.8E-06	2.3E-07	6.5E-07	9.8E-09	1.6E-05		
SMP-10A-11142012	11/14/12	25	Chlorobenzene	0.00041	1.0E-04	4.2E-08	3.4E-09	9.6E-09	NC	9.6E-09		
SMP-10A-11142012	11/14/12	25	Chlorodifluoromethane (Freon 22)	**0.0018**	1.4E-04	2.5E-07	2.0E-08	5.7E-08	NC	1.1E-09		
SMP-10A-11142012	11/14/12	25	Chloroethane	**0.0014**	3.1E-04	4.4E-07	3.6E-08	1.0E-07	NC	1.0E-08		
SMP-10A-11142012	11/14/12	25	Chloroform	**0.019**	1.4E-04	2.7E-06	2.2E-07	6.2E-07	1.2E-09	2.1E-06		
SMP-10A-11142012	11/14/12	25	Chloromethane	**0.00038**	1.7E-04	6.4E-08	5.2E-09	1.5E-08	NC	1.6E-07		
SMP-10A-11142012	11/14/12	25	cis-1,2-Dichloroethene	**0.0024**	1.0E-04	2.5E-07	2.0E-08	5.7E-08	NC	8.1E-06		
SMP-10A-11142012	11/14/12	25	cis-2-Butene	0.00019	1.5E-04	2.8E-08	2.3E-09	6.4E-09	NC	2.1E-09		
SMP-10A-11142012	11/14/12	25	Cyclohexane	**0.0011**	1.1E-04	1.2E-07	1.0E-08	2.8E-08	NC	4.7E-09		
SMP-10A-11142012	11/14/12	25	Dichlorodifluoromethane (Freon 12)	**0.0036**	9.5E-05	3.4E-07	2.8E-08	7.8E-08	NC	3.9E-07		
SMP-10A-11142012	11/14/12	25	Dichlorofluoromethane	0.00037	1.3E-04	4.7E-08	3.9E-09	1.1E-08	NC	5.4E-08		
SMP-10A-11142012	11/14/12	25	Ethane	**0.043**	1.5E-04	6.4E-06	5.2E-07	1.5E-06	NC	4.9E-07		
SMP-10A-11142012	11/14/12	25	Ethanol	**0.0042**	1.7E-04	7.3E-07	5.9E-08	1.7E-07	NC	2.4E-08		
SMP-10A-11142012	11/14/12	25	Ethene	**0.00089**	1.5E-04	1.3E-07	1.1E-08	3.0E-08	NC	1.0E-08		
SMP-10A-11142012	11/14/12	25	Ethylbenzene	**0.0013**	1.1E-04	1.4E-07	1.1E-08	3.1E-08	2.8E-11	3.1E-08		
SMP-10A-11142012	11/14/12	25	Isobutane	**0.0042**	1.5E-04	6.2E-07	5.1E-08	1.4E-07	NC	4.8E-08		
SMP-10A-11142012	11/14/12	25	Isopropylbenzene (Cumene)	0.00084	9.3E-05	7.8E-08	6.3E-09	1.8E-08	NC	4.4E-08		

TABLE 9a

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-10A-11142012	11/14/12	25	Methylene Chloride	**0.0026**	1.4E-04	3.6E-07	2.9E-08	8.2E-08	2.9E-11	2.1E-07		
SMP-10A-11142012	11/14/12	25	Naphthalene	0.00074	8.5E-05	6.3E-08	5.1E-09	1.4E-08	1.7E-10	4.8E-06		
SMP-10A-11142012	11/14/12	25	n-Butanol	**0.0025**	1.3E-04	3.2E-07	2.6E-08	7.4E-08	NC	2.1E-07		
SMP-10A-11142012	11/14/12	25	n-Hexane	**0.00096**	2.5E-04	2.4E-07	1.9E-08	5.4E-08	NC	7.7E-08		
SMP-10A-11142012	11/14/12	25	n-Nonane	**0.0020**	7.4E-05	1.5E-07	1.2E-08	3.4E-08	NC	1.7E-07		
SMP-10A-11142012	11/14/12	25	n-Pentane	**0.00068**	1.1E-04	7.8E-08	6.4E-09	1.8E-08	NC	1.8E-08		
SMP-10A-11142012	11/14/12	25	Propane	**0.018**	1.5E-04	2.7E-06	2.2E-07	6.1E-07	NC	2.0E-07		
SMP-10A-11142012	11/14/12	25	Propene	0.00015	1.5E-04	2.2E-08	1.8E-09	5.1E-09	NC	1.7E-09		
SMP-10A-11142012	11/14/12	25	Propylbenzene	0.00044	8.6E-05	3.8E-08	3.1E-09	8.7E-09	NC	6.2E-08		
SMP-10A-11142012	11/14/12	25	Styrene	0.00038	1.0E-04	3.8E-08	3.1E-09	8.7E-09	NC	9.7E-09		
SMP-10A-11142012	11/14/12	25	Tetrachloroethene	**0.25**	1.0E-04	2.5E-05	2.1E-06	5.8E-06	1.2E-08	1.7E-04		
SMP-10A-11142012	11/14/12	25	Toluene	**0.26**	1.2E-04	3.1E-05	2.6E-06	7.2E-06	NC	2.4E-05		
SMP-10A-11142012	11/14/12	25	TPH-gasoline	1.7	9.9E-05	1.7E-04	1.4E-05	3.8E-05	NC	3.0E-04		
SMP-10A-11142012	11/14/12	25	trans-1,2-Dichloroethene	**0.0037**	1.0E-04	3.7E-07	3.0E-08	8.5E-08	NC	1.4E-06		
SMP-10A-11142012	11/14/12	25	trans-2-Butene	0.00018	1.5E-04	2.7E-08	2.2E-09	6.1E-09	NC	2.0E-09		
SMP-10A-11142012	11/14/12	25	Trichloroethene	**0.15**	1.1E-04	1.7E-05	1.4E-06	3.8E-06	5.6E-09	1.9E-03		
SMP-10A-11142012	11/14/12	25	Trichlorofluoromethane (Freon 11)	**0.0032**	1.2E-04	3.9E-07	3.2E-08	8.8E-08	NC	1.3E-07		
SMP-10A-11142012	11/14/12	25	Vinyl Acetate	0.0013	1.2E-04	1.5E-07	1.3E-08	3.5E-08	NC	1.8E-07		
SMP-10A-11142012	11/14/12	25	Vinyl Chloride	0.00021	1.4E-04	3.0E-08	2.5E-09	6.9E-09	1.9E-10	6.9E-08		
SMP-10A-11142012	11/14/12	25	Xylenes	**0.0041**	1.2E-04	4.8E-07	3.9E-08	1.1E-07	NC	1.1E-06	3.1E-08	2.5E-03

Notes:

bgs = below ground surface

NC = Not considered to be a carcinogen.

mg/m^3 = micrograms per cubic meter

[a] All locations and depths are included for soil gas samples representative of exposures to current onsite commercial workers.

[b] Measured chemical concentration in soil gas. Detected results are presented in bold. Non-detect results are represented by one-half the laboratory reporting limit; non-detect results are included if the chemical was detected in at least one site soil gas sample. In the case of non-detect results in both duplicate and primary samples, one-half of the lower of the two detection limits was evaluated.

[c] The attenuation factor represents the relationship between the chemical concentration in soil gas and the chemical concentration in indoor air (resulting from volatilization from soil gas, *i.e.* , vapor intrusion). The methodology used in the calculation of attenuation factors is presented in Appendix G.

[d] The exposure point concentration (EPC) in indoor air is the predicted estimated indoor air concentration the receptor may be exposed to.

[e] The exposure concentrations (ECs) are analagous to chronic daily intakes (CDIs).

[f] Incremental cancer risks and noncancer hazard quotients were calculated using equations presented in Table 5a and exposure parameters presented in Table 4.

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-01-11142012	11/14/12	35	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00090	8.4E-05	7.6E-08	6.2E-09	1.7E-08	NC	2.2E-10		
PZ-01-11142012	11/14/12	35	1,1,1-Trichloroethane	**0.0026**	8.0E-05	2.1E-07	1.7E-08	4.7E-08	NC	4.7E-08		
PZ-01-11142012	11/14/12	35	1,1,2-Trichloroethane	0.0012	8.0E-05	9.6E-08	7.8E-09	2.2E-08	1.3E-10	1.6E-06		
PZ-01-11142012	11/14/12	35	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.030**	8.0E-05	2.4E-06	2.0E-07	5.5E-07	NC	1.8E-08		
PZ-01-11142012	11/14/12	35	1,1-Dichloroethane	**0.12**	7.6E-05	9.1E-06	7.5E-07	2.1E-06	1.2E-09	3.0E-06		
PZ-01-11142012	11/14/12	35	1,1-Dichloroethene	**0.11**	9.1E-05	1.0E-05	8.2E-07	2.3E-06	NC	3.3E-05		
PZ-01-11142012	11/14/12	35	1,2,4-Trichlorobenzene	**0.010**	3.2E-05	3.2E-07	2.6E-08	7.3E-08	NC	3.7E-05		
PZ-01-11142012	11/14/12	35	1,2,4-Trimethylbenzene	0.0011	6.3E-05	6.9E-08	5.6E-09	1.6E-08	NC	2.3E-06		
PZ-01-11142012	11/14/12	35	1,2-Dichlorobenzene	**0.0084**	7.1E-05	6.0E-07	4.9E-08	1.4E-07	NC	6.8E-07		
PZ-01-11142012	11/14/12	35	1,2-Dichloroethane	**0.030**	1.0E-04	3.1E-06	2.5E-07	7.1E-07	5.4E-09	1.8E-06		
PZ-01-11142012	11/14/12	35	1,3-Butadiene	0.00042	2.2E-04	9.4E-08	7.6E-09	2.1E-08	1.3E-09	1.1E-05		
PZ-01-11142012	11/14/12	35	1,3-Dichlorobenzene	0.0013	7.1E-05	9.3E-08	7.6E-09	2.1E-08	NC	2.0E-07		
PZ-01-11142012	11/14/12	35	1,4-Dioxane	0.0021	9.5E-05	2.0E-07	1.6E-08	4.6E-08	1.3E-10	1.5E-06		
PZ-01-11142012	11/14/12	35	1-Butene/Isobutene	**0.0085**	8.6E-05	7.3E-07	6.0E-08	1.7E-07	NC	5.6E-08		
PZ-01-11142012	11/14/12	35	2 & 3-Chlorotoluene	0.0022	6.5E-05	1.4E-07	1.2E-08	3.3E-08	NC	4.7E-07		
PZ-01-11142012	11/14/12	35	2-Butanone (MEK)	**0.010**	8.3E-05	8.3E-07	6.8E-08	1.9E-07	NC	3.8E-08		
PZ-01-11142012	11/14/12	35	2-Propanol	**0.0026**	1.1E-04	2.8E-07	2.3E-08	6.4E-08	NC	9.1E-09		
PZ-01-11142012	11/14/12	35	3-Chloropropene	0.00066	9.5E-05	6.2E-08	5.1E-09	1.4E-08	3.1E-11	4.7E-09		
PZ-01-11142012	11/14/12	35	Acetaldehyde	**0.086**	1.2E-04	1.1E-05	8.6E-07	2.4E-06	2.3E-09	2.7E-04		
PZ-01-11142012	11/14/12	35	Acetone	**0.045**	1.2E-04	5.5E-06	4.5E-07	1.3E-06	NC	4.1E-08		
PZ-01-11142012	11/14/12	35	Acetonitrile	**0.0014**	1.2E-04	1.7E-07	1.4E-08	3.9E-08	NC	6.5E-07		
PZ-01-11142012	11/14/12	35	Acetylene	**0.0043**	1.1E-04	4.7E-07	3.8E-08	1.1E-07	NC	3.6E-08		
PZ-01-11142012	11/14/12	35	Benzaldehyde	**0.0032**	7.5E-05	2.4E-07	2.0E-08	5.5E-08	5.3E-11	6.1E-06		
PZ-01-11142012	11/14/12	35	Benzene	**0.0023**	8.9E-05	2.1E-07	1.7E-08	4.7E-08	4.9E-10	1.6E-06		
PZ-01-11142012	11/14/12	35	Butane	**0.0049**	1.1E-04	5.4E-07	4.4E-08	1.2E-07	NC	4.1E-08		
PZ-01-11142012	11/14/12	35	Butyraldehyde	**0.016**	1.2E-04	2.0E-06	1.6E-07	4.5E-07	4.3E-10	5.0E-05		
PZ-01-11142012	11/14/12	35	Carbon Disulfide	0.0023	1.0E-04	2.4E-07	2.0E-08	5.5E-08	NC	7.8E-08		
PZ-01-11142012	11/14/12	35	Carbon Tetrachloride	**0.085**	8.0E-05	6.8E-06	5.5E-07	1.5E-06	2.3E-08	3.9E-05		
PZ-01-11142012	11/14/12	35	Chlorobenzene	0.0010	7.5E-05	7.5E-08	6.1E-09	1.7E-08	NC	1.7E-08		
PZ-01-11142012	11/14/12	35	Chlorodifluoromethane (Freon 22)	**0.0035**	1.0E-04	3.6E-07	2.9E-08	8.1E-08	NC	1.6E-09		
PZ-01-11142012	11/14/12	35	Chloroethane	**0.0037**	2.4E-04	8.8E-07	7.2E-08	2.0E-07	NC	2.0E-08		
PZ-01-11142012	11/14/12	35	Chloroform	**0.14**	1.0E-04	1.5E-05	1.2E-06	3.3E-06	6.3E-09	1.1E-05		
PZ-01-11142012	11/14/12	35	Chloromethane	**0.019**	1.2E-04	2.4E-06	1.9E-07	5.4E-07	NC	6.0E-06		
PZ-01-11142012	11/14/12	35	cis-1,2-Dichloroethene	**0.025**	7.6E-05	1.9E-06	1.5E-07	4.3E-07	NC	6.2E-05		
PZ-01-11142012	11/14/12	35	cis-2-Butene	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	8.3E-09		
PZ-01-11142012	11/14/12	35	Cyclohexane	**0.0017**	8.2E-05	1.4E-07	1.1E-08	3.2E-08	NC	5.3E-09		
PZ-01-11142012	11/14/12	35	Dichlorodifluoromethane (Freon 12)	**0.0091**	6.9E-05	6.3E-07	5.1E-08	1.4E-07	NC	7.1E-07		
PZ-01-11142012	11/14/12	35	Dichlorofluoromethane	0.00091	9.3E-05	8.5E-08	6.9E-09	1.9E-08	NC	9.7E-08		
PZ-01-11142012	11/14/12	35	Ethane	**0.021**	1.1E-04	2.3E-06	1.9E-07	5.2E-07	NC	1.7E-07		
PZ-01-11142012	11/14/12	35	Ethanol	**0.0080**	1.3E-04	1.0E-06	8.4E-08	2.3E-07	NC	3.4E-08		
PZ-01-11142012	11/14/12	35	Ethene	**0.0038**	1.1E-04	4.2E-07	3.4E-08	9.5E-08	NC	3.2E-08		
PZ-01-11142012	11/14/12	35	Ethylbenzene	0.00093	7.7E-05	7.2E-08	5.8E-09	1.6E-08	1.5E-11	1.6E-08		
PZ-01-11142012	11/14/12	35	Isobutane	**0.0049**	1.1E-04	5.4E-07	4.4E-08	1.2E-07	NC	4.1E-08		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor $[(mg/m^3)/(mg/m^3)]$[c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-01-11142012	11/14/12	35	Isopropylbenzene (Cumene)	0.0020	6.7E-05	1.3E-07	1.1E-08	3.1E-08	NC	7.7E-08		
PZ-01-11142012	11/14/12	35	Methylene Chloride	**0.14**	1.0E-04	1.4E-05	1.2E-06	3.2E-06	1.2E-09	8.1E-06		
PZ-01-11142012	11/14/12	35	Naphthalene	0.0018	6.1E-05	1.1E-07	9.0E-09	2.5E-08	3.1E-10	8.4E-06		
PZ-01-11142012	11/14/12	35	n-Butanol	0.0022	9.5E-05	2.1E-07	1.7E-08	4.7E-08	NC	1.4E-07		
PZ-01-11142012	11/14/12	35	n-Hexane	**0.0049**	1.9E-04	9.1E-07	7.4E-08	2.1E-07	NC	3.0E-07		
PZ-01-11142012	11/14/12	35	n-Nonane	0.0011	5.4E-05	5.9E-08	4.8E-09	1.4E-08	NC	6.8E-08		
PZ-01-11142012	11/14/12	35	n-Pentane	**0.0032**	8.4E-05	2.7E-07	2.2E-08	6.1E-08	NC	6.1E-08		
PZ-01-11142012	11/14/12	35	Propane	**0.018**	1.1E-04	2.0E-06	1.6E-07	4.5E-07	NC	1.5E-07		
PZ-01-11142012	11/14/12	35	Propene	**0.0074**	1.1E-04	8.1E-07	6.6E-08	1.8E-07	NC	6.2E-08		
PZ-01-11142012	11/14/12	35	Propylbenzene	0.0011	6.2E-05	6.9E-08	5.6E-09	1.6E-08	NC	1.1E-07		
PZ-01-11142012	11/14/12	35	Styrene	0.00092	7.3E-05	6.7E-08	5.5E-09	1.5E-08	NC	1.7E-08		
PZ-01-11142012	11/14/12	35	Tetrachloroethene	**2.0**	7.4E-05	1.5E-04	1.2E-05	3.4E-05	7.1E-08	9.7E-04		
PZ-01-11142012	11/14/12	35	Toluene	**0.027**	8.8E-05	2.4E-06	1.9E-07	5.4E-07	NC	1.8E-06		
PZ-01-11142012	11/14/12	35	TPH-gasoline	1.7	7.2E-05	1.2E-04	1.0E-05	2.8E-05	NC	2.2E-04		
PZ-01-11142012	11/14/12	35	trans-1,2-Dichloroethene	**0.0063**	7.3E-05	4.6E-07	3.7E-08	1.0E-07	NC	1.7E-06		
PZ-01-11142012	11/14/12	35	trans-2-Butene	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	8.3E-09		
PZ-01-11142012	11/14/12	35	Trichloroethene	**1.0**	8.1E-05	8.1E-05	6.6E-06	1.8E-05	2.7E-08	9.2E-03		
PZ-01-11142012	11/14/12	35	Trichlorofluoromethane (Freon 11)	**0.011**	8.8E-05	9.7E-07	7.9E-08	2.2E-07	NC	3.2E-07		
PZ-01-11142012	11/14/12	35	Vinyl Acetate	0.0032	8.7E-05	2.8E-07	2.3E-08	6.3E-08	NC	3.2E-07		
PZ-01-11142012	11/14/12	35	Vinyl Chloride	0.00052	1.1E-04	5.5E-08	4.5E-09	1.3E-08	3.5E-10	1.3E-07		
PZ-01-11142012	11/14/12	35	Xylenes	**0.0030**	8.6E-05	2.6E-07	2.1E-08	5.9E-08	NC	5.9E-07	1.4E-07	1.1E-02
PZ-02-11152012	11/15/12	24	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00086	1.2E-04	1.0E-07	8.4E-09	2.3E-08	NC	2.9E-10		
PZ-02-11152012	11/15/12	24	1,1,1-Trichloroethane	**0.51**	1.1E-04	5.8E-05	4.7E-06	1.3E-05	NC	1.3E-05		
PZ-02-11152012	11/15/12	24	1,1,2-Trichloroethane	0.0011	1.1E-04	1.3E-07	1.0E-08	2.9E-08	1.6E-10	2.0E-06		
PZ-02-11152012	11/15/12	24	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.0040**	1.1E-04	4.5E-07	3.7E-08	1.0E-07	NC	3.5E-09		
PZ-02-11152012	11/15/12	24	1,1-Dichloroethane	**0.19**	1.1E-04	2.1E-05	1.7E-06	4.7E-06	2.7E-09	6.7E-06		
PZ-02-11152012	11/15/12	24	1,1-Dichloroethene	**0.44**	1.3E-04	5.7E-05	4.6E-06	1.3E-05	NC	1.9E-04		
PZ-02-11152012	11/15/12	24	1,2,4-Trichlorobenzene	0.0015	4.6E-05	7.0E-08	5.7E-09	1.6E-08	NC	7.9E-06		
PZ-02-11152012	11/15/12	24	1,2,4-Trimethylbenzene	0.0010	9.0E-05	9.0E-08	7.4E-09	2.1E-08	NC	2.9E-06		
PZ-02-11152012	11/15/12	24	1,2-Dichlorobenzene	0.0012	1.0E-04	1.2E-07	1.0E-08	2.8E-08	NC	1.4E-07		
PZ-02-11152012	11/15/12	24	1,2-Dichloroethane	0.00083	1.5E-04	1.2E-07	1.0E-08	2.8E-08	2.1E-10	7.0E-08		
PZ-02-11152012	11/15/12	24	1,3-Butadiene	0.00040	3.0E-04	1.2E-07	9.8E-09	2.8E-08	1.7E-09	1.4E-05		
PZ-02-11152012	11/15/12	24	1,3-Dichlorobenzene	0.0012	1.0E-04	1.2E-07	1.0E-08	2.8E-08	NC	2.7E-07		
PZ-02-11152012	11/15/12	24	1,4-Dioxane	0.0020	1.3E-04	2.7E-07	2.2E-08	6.1E-08	1.7E-10	2.0E-06		
PZ-02-11152012	11/15/12	24	1-Butene/Isobutene	**0.18**	1.2E-04	2.2E-05	1.8E-06	5.0E-06	NC	1.7E-06		
PZ-02-11152012	11/15/12	24	2 & 3-Chlorotoluene	0.0021	9.3E-05	2.0E-07	1.6E-08	4.5E-08	NC	6.4E-07		
PZ-02-11152012	11/15/12	24	2-Butanone (MEK)	0.0012	1.2E-04	1.4E-07	1.2E-08	3.2E-08	NC	6.5E-09		
PZ-02-11152012	11/15/12	24	2-Propanol	0.00055	1.5E-04	8.3E-08	6.8E-09	1.9E-08	NC	2.7E-09		
PZ-02-11152012	11/15/12	24	3-Chloropropene	0.00063	1.3E-04	8.4E-08	6.9E-09	1.9E-08	4.1E-11	6.4E-09		
PZ-02-11152012	11/15/12	24	Acetaldehyde	**0.014**	1.7E-04	2.4E-06	2.0E-07	5.5E-07	5.3E-10	6.1E-05		
PZ-02-11152012	11/15/12	24	Acetone	**0.0091**	1.7E-04	1.6E-06	1.3E-07	3.6E-07	NC	1.2E-08		
PZ-02-11152012	11/15/12	24	Acetonitrile	0.00039	1.7E-04	6.7E-08	5.5E-09	1.5E-08	NC	2.5E-07		
PZ-02-11152012	11/15/12	24	Acetylene	**0.0025**	1.5E-04	3.9E-07	3.1E-08	8.8E-08	NC	2.9E-08		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-02-11152012	11/15/12	24	Benzaldehyde	0.00096	1.1E-04	1.0E-07	8.4E-09	2.4E-08	2.3E-11	2.6E-06		
PZ-02-11152012	11/15/12	24	Benzene	**0.0032**	1.3E-04	4.1E-07	3.3E-08	9.3E-08	9.6E-10	3.1E-06		
PZ-02-11152012	11/15/12	24	Butane	**0.057**	1.5E-04	8.8E-06	7.2E-07	2.0E-06	NC	6.7E-07		
PZ-02-11152012	11/15/12	24	Butyraldehyde	0.0021	1.7E-04	3.6E-07	2.9E-08	8.2E-08	7.9E-11	9.1E-06		
PZ-02-11152012	11/15/12	24	Carbon Disulfide	0.0022	1.5E-04	3.2E-07	2.6E-08	7.4E-08	NC	1.1E-07		
PZ-02-11152012	11/15/12	24	Carbon Tetrachloride	0.0013	1.1E-04	1.5E-07	1.2E-08	3.4E-08	5.1E-10	8.4E-07		
PZ-02-11152012	11/15/12	24	Chlorobenzene	**0.0024**	1.1E-04	2.6E-07	2.1E-08	5.9E-08	NC	5.9E-08		
PZ-02-11152012	11/15/12	24	Chlorodifluoromethane (Freon 22)	0.0014	1.4E-04	2.0E-07	1.6E-08	4.6E-08	NC	9.2E-10		
PZ-02-11152012	11/15/12	24	Chloroethane	**0.0100**	3.2E-04	3.2E-06	2.6E-07	7.3E-07	NC	7.3E-08		
PZ-02-11152012	11/15/12	24	Chloroform	**0.18**	1.5E-04	2.6E-05	2.2E-06	6.0E-06	1.1E-08	2.0E-05		
PZ-02-11152012	11/15/12	24	Chloromethane	**0.0010**	1.7E-04	1.7E-07	1.4E-08	4.0E-08	NC	4.4E-07		
PZ-02-11152012	11/15/12	24	cis-1,2-Dichloroethene	**5.3**	1.1E-04	5.7E-04	4.7E-05	1.3E-04	NC	1.9E-02		
PZ-02-11152012	11/15/12	24	cis-2-Butene	**0.0059**	1.5E-04	9.1E-07	7.4E-08	2.1E-07	NC	6.9E-08		
PZ-02-11152012	11/15/12	24	Cyclohexane	**0.0020**	1.2E-04	2.3E-07	1.9E-08	5.3E-08	NC	8.9E-09		
PZ-02-11152012	11/15/12	24	Dichlorodifluoromethane (Freon 12)	**0.0033**	9.8E-05	3.2E-07	2.6E-08	7.4E-08	NC	3.7E-07		
PZ-02-11152012	11/15/12	24	Dichlorofluoromethane	0.00087	1.3E-04	1.2E-07	9.4E-09	2.6E-08	NC	1.3E-07		
PZ-02-11152012	11/15/12	24	Ethane	**0.21**	1.5E-04	3.2E-05	2.6E-06	7.4E-06	NC	2.5E-06		
PZ-02-11152012	11/15/12	24	Ethanol	0.0013	1.8E-04	2.3E-07	1.9E-08	5.3E-08	NC	7.6E-09		
PZ-02-11152012	11/15/12	24	Ethene	**0.090**	1.5E-04	1.4E-05	1.1E-06	3.2E-06	NC	1.1E-06		
PZ-02-11152012	11/15/12	24	Ethylbenzene	0.00089	1.1E-04	9.8E-08	8.0E-09	2.2E-08	2.0E-11	2.2E-08		
PZ-02-11152012	11/15/12	24	Isobutane	**0.041**	1.5E-04	6.3E-06	5.2E-07	1.4E-06	NC	4.8E-07		
PZ-02-11152012	11/15/12	24	Isopropylbenzene (Cumene)	0.0020	9.6E-05	1.9E-07	1.6E-08	4.4E-08	NC	1.1E-07		
PZ-02-11152012	11/15/12	24	Methylene Chloride	**0.014**	1.4E-04	2.0E-06	1.6E-07	4.6E-07	1.6E-10	1.1E-06		
PZ-02-11152012	11/15/12	24	Naphthalene	0.0017	8.8E-05	1.5E-07	1.2E-08	3.4E-08	4.2E-10	1.1E-05		
PZ-02-11152012	11/15/12	24	n-Butanol	0.0021	1.3E-04	2.8E-07	2.3E-08	6.4E-08	NC	1.8E-07		
PZ-02-11152012	11/15/12	24	n-Hexane	0.00066	2.5E-04	1.7E-07	1.4E-08	3.8E-08	NC	5.5E-08		
PZ-02-11152012	11/15/12	24	n-Nonane	0.0011	7.7E-05	8.5E-08	6.9E-09	1.9E-08	NC	9.7E-08		
PZ-02-11152012	11/15/12	24	n-Pentane	**0.0092**	1.2E-04	1.1E-06	8.9E-08	2.5E-07	NC	2.5E-07		
PZ-02-11152012	11/15/12	24	Propane	**0.19**	1.5E-04	2.9E-05	2.4E-06	6.7E-06	NC	2.2E-06		
PZ-02-11152012	11/15/12	24	Propene	**0.092**	1.5E-04	1.4E-05	1.2E-06	3.2E-06	NC	1.1E-06		
PZ-02-11152012	11/15/12	24	Propylbenzene	0.0010	9.0E-05	9.0E-08	7.3E-09	2.0E-08	NC	1.5E-07		
PZ-02-11152012	11/15/12	24	Styrene	0.00088	1.0E-04	9.2E-08	7.5E-09	2.1E-08	NC	2.3E-08		
PZ-02-11152012	11/15/12	24	Tetrachloroethene	**0.43**	1.1E-04	4.5E-05	3.7E-06	1.0E-05	2.2E-08	3.0E-04		
PZ-02-11152012	11/15/12	24	Toluene	0.00078	1.3E-04	9.8E-08	8.0E-09	2.2E-08	NC	7.5E-08		
PZ-02-11152012	11/15/12	24	TPH-gasoline	**4.5**	1.0E-04	4.6E-04	3.8E-05	1.1E-04	NC	8.1E-04		
PZ-02-11152012	11/15/12	24	trans-1,2-Dichloroethene	**0.21**	1.0E-04	2.2E-05	1.8E-06	5.0E-06	NC	8.3E-05		
PZ-02-11152012	11/15/12	24	trans-2-Butene	**0.0099**	1.5E-04	1.5E-06	1.2E-07	3.5E-07	NC	1.2E-07		
PZ-02-11152012	11/15/12	24	Trichloroethene	**6.2**	1.2E-04	7.1E-04	5.8E-05	1.6E-04	2.4E-07	8.1E-02		
PZ-02-11152012	11/15/12	24	Trichlorofluoromethane (Freon 11)	**0.0023**	1.3E-04	2.9E-07	2.4E-08	6.6E-08	NC	9.4E-08		
PZ-02-11152012	11/15/12	24	Vinyl Acetate	0.0031	1.2E-04	3.8E-07	3.1E-08	8.7E-08	NC	4.4E-07		
PZ-02-11152012	11/15/12	24	Vinyl Chloride	**0.0059**	1.5E-04	8.8E-07	7.2E-08	2.0E-07	5.6E-09	2.0E-06		
PZ-02-11152012	11/15/12	24	Xylenes	0.0013	1.2E-04	1.6E-07	1.3E-08	3.6E-08	NC	3.6E-07	2.9E-07	1.0E-01
PZ-03-11152012	11/15/12	22.5	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0074**	1.3E-04	9.4E-07	7.6E-08	2.1E-07	NC	2.7E-09		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-03-11152012	11/15/12	22.5	1,1,1-Trichloroethane	**0.13**	1.2E-04	1.6E-05	1.3E-06	3.6E-06	NC	3.6E-06		
PZ-03-11152012	11/15/12	22.5	1,1,2-Trichloroethane	0.0011	1.2E-04	1.3E-07	1.1E-08	3.0E-08	1.7E-10	2.2E-06		
PZ-03-11152012	11/15/12	22.5	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.043**	1.2E-04	5.2E-06	4.2E-07	1.2E-06	NC	4.0E-08		
PZ-03-11152012	11/15/12	22.5	1,1-Dichloroethane	**0.16**	1.2E-04	1.8E-05	1.5E-06	4.2E-06	2.4E-09	6.0E-06		
PZ-03-11152012	11/15/12	22.5	1,1-Dichloroethene	**0.079**	1.4E-04	1.1E-05	8.8E-07	2.5E-06	NC	3.5E-05		
PZ-03-11152012	11/15/12	22.5	1,2,4-Trichlorobenzene	0.0015	4.9E-05	7.4E-08	6.0E-09	1.7E-08	NC	8.5E-06		
PZ-03-11152012	11/15/12	22.5	1,2,4-Trimethylbenzene	0.0010	9.6E-05	9.6E-08	7.8E-09	2.2E-08	NC	3.1E-06		
PZ-03-11152012	11/15/12	22.5	1,2-Dichlorobenzene	0.0012	1.1E-04	1.3E-07	1.1E-08	3.0E-08	NC	1.5E-07		
PZ-03-11152012	11/15/12	22.5	1,2-Dichloroethane	**0.0032**	1.6E-04	5.0E-07	4.1E-08	1.1E-07	8.5E-10	2.8E-07		
PZ-03-11152012	11/15/12	22.5	1,3-Butadiene	0.00040	3.2E-04	1.3E-07	1.0E-08	2.9E-08	1.8E-09	1.4E-05		
PZ-03-11152012	11/15/12	22.5	1,3-Dichlorobenzene	0.0012	1.1E-04	1.3E-07	1.1E-08	3.0E-08	NC	2.8E-07		
PZ-03-11152012	11/15/12	22.5	1,4-Dioxane	0.0020	1.4E-04	2.9E-07	2.3E-08	6.5E-08	1.8E-10	2.2E-06		
PZ-03-11152012	11/15/12	22.5	1-Butene/Isobutene	**0.49**	1.3E-04	6.4E-05	5.2E-06	1.5E-05	NC	4.8E-06		
PZ-03-11152012	11/15/12	22.5	2 & 3-Chlorotoluene	0.0021	9.9E-05	2.1E-07	1.7E-08	4.8E-08	NC	6.8E-07		
PZ-03-11152012	11/15/12	22.5	2-Butanone (MEK)	**0.0073**	1.3E-04	9.2E-07	7.5E-08	2.1E-07	NC	4.2E-08		
PZ-03-11152012	11/15/12	22.5	2-Propanol	0.00055	1.6E-04	8.8E-08	7.2E-09	2.0E-08	NC	2.9E-09		
PZ-03-11152012	11/15/12	22.5	3-Chloropropene	0.00063	1.4E-04	9.0E-08	7.3E-09	2.0E-08	4.4E-11	6.8E-09		
PZ-03-11152012	11/15/12	22.5	Acetaldehyde	**0.023**	1.8E-04	4.2E-06	3.4E-07	9.6E-07	9.2E-10	1.1E-04		
PZ-03-11152012	11/15/12	22.5	Acetone	**0.022**	1.8E-04	4.0E-06	3.3E-07	9.2E-07	NC	3.0E-08		
PZ-03-11152012	11/15/12	22.5	Acetonitrile	0.00039	1.8E-04	7.1E-08	5.8E-09	1.6E-08	NC	2.7E-07		
PZ-03-11152012	11/15/12	22.5	Acetylene	**0.0021**	1.6E-04	3.4E-07	2.8E-08	7.8E-08	NC	2.6E-08		
PZ-03-11152012	11/15/12	22.5	Benzaldehyde	0.00096	1.1E-04	1.1E-07	8.9E-09	2.5E-08	2.4E-11	2.8E-06		
PZ-03-11152012	11/15/12	22.5	Benzene	**0.0018**	1.3E-04	2.4E-07	2.0E-08	5.5E-08	5.7E-10	1.8E-06		
PZ-03-11152012	11/15/12	22.5	Butane	**0.059**	1.6E-04	9.6E-06	7.9E-07	2.2E-06	NC	7.3E-07		
PZ-03-11152012	11/15/12	22.5	Butyraldehyde	0.0021	1.8E-04	3.8E-07	3.1E-08	8.7E-08	8.4E-11	9.7E-06		
PZ-03-11152012	11/15/12	22.5	Carbon Disulfide	**0.018**	1.6E-04	2.8E-06	2.3E-07	6.4E-07	NC	9.2E-07		
PZ-03-11152012	11/15/12	22.5	Carbon Tetrachloride	0.0013	1.2E-04	1.6E-07	1.3E-08	3.6E-08	5.4E-10	9.0E-07		
PZ-03-11152012	11/15/12	22.5	Chlorobenzene	**0.0034**	1.1E-04	3.9E-07	3.2E-08	8.8E-08	NC	8.8E-08		
PZ-03-11152012	11/15/12	22.5	Chlorodifluoromethane (Freon 22)	0.0013	1.5E-04	2.0E-07	1.6E-08	4.5E-08	NC	9.0E-10		
PZ-03-11152012	11/15/12	22.5	Chloroethane	**0.11**	3.4E-04	3.7E-05	3.0E-06	8.5E-06	NC	8.5E-07		
PZ-03-11152012	11/15/12	22.5	Chloroform	**0.069**	1.6E-04	1.1E-05	8.8E-07	2.5E-06	4.6E-09	8.2E-06		
PZ-03-11152012	11/15/12	22.5	Chloromethane	**0.019**	1.8E-04	3.5E-06	2.8E-07	8.0E-07	NC	8.9E-06		
PZ-03-11152012	11/15/12	22.5	cis-1,2-Dichloroethene	**0.19**	1.1E-04	2.2E-05	1.8E-06	5.0E-06	NC	7.1E-04		
PZ-03-11152012	11/15/12	22.5	cis-2-Butene	**0.024**	1.6E-04	3.9E-06	3.2E-07	8.9E-07	NC	3.0E-07		
PZ-03-11152012	11/15/12	22.5	Cyclohexane	**0.0014**	1.2E-04	1.7E-07	1.4E-08	3.9E-08	NC	6.6E-09		
PZ-03-11152012	11/15/12	22.5	Dichlorodifluoromethane (Freon 12)	**0.0036**	1.0E-04	3.8E-07	3.1E-08	8.6E-08	NC	4.3E-07		
PZ-03-11152012	11/15/12	22.5	Dichlorofluoromethane	**0.0018**	1.4E-04	2.5E-07	2.1E-08	5.8E-08	NC	2.9E-07		
PZ-03-11152012	11/15/12	22.5	Ethane	**0.17**	1.6E-04	2.8E-05	2.3E-06	6.3E-06	NC	2.1E-06		
PZ-03-11152012	11/15/12	22.5	Ethanol	0.0013	1.9E-04	2.5E-07	2.0E-08	5.6E-08	NC	8.1E-09		
PZ-03-11152012	11/15/12	22.5	Ethene	**0.11**	1.6E-04	1.8E-05	1.5E-06	4.1E-06	NC	1.4E-06		
PZ-03-11152012	11/15/12	22.5	Ethylbenzene	0.00089	1.2E-04	1.0E-07	8.5E-09	2.4E-08	2.1E-11	2.4E-08		
PZ-03-11152012	11/15/12	22.5	Isobutane	**0.081**	1.6E-04	1.3E-05	1.1E-06	3.0E-06	NC	1.0E-06		
PZ-03-11152012	11/15/12	22.5	Isopropylbenzene (Cumene)	0.0019	1.0E-04	1.9E-07	1.6E-08	4.4E-08	NC	1.1E-07		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
PZ-03-11152012	11/15/12	22.5	Methylene Chloride	**0.0055**	1.5E-04	8.4E-07	6.8E-08	1.9E-07	6.8E-11	4.8E-07		
PZ-03-11152012	11/15/12	22.5	Naphthalene	0.0017	9.4E-05	1.6E-07	1.3E-08	3.6E-08	4.4E-10	1.2E-05		
PZ-03-11152012	11/15/12	22.5	n-Butanol	0.0021	1.4E-04	3.0E-07	2.4E-08	6.8E-08	NC	1.9E-07		
PZ-03-11152012	11/15/12	22.5	n-Hexane	**0.0014**	2.7E-04	3.8E-07	3.1E-08	8.6E-08	NC	1.2E-07		
PZ-03-11152012	11/15/12	22.5	n-Nonane	0.0011	8.2E-05	9.1E-08	7.4E-09	2.1E-08	NC	1.0E-07		
PZ-03-11152012	11/15/12	22.5	n-Pentane	**0.0077**	1.3E-04	9.7E-07	7.9E-08	2.2E-07	NC	2.2E-07		
PZ-03-11152012	11/15/12	22.5	Propane	**0.16**	1.6E-04	2.6E-05	2.1E-06	6.0E-06	NC	2.0E-06		
PZ-03-11152012	11/15/12	22.5	Propene	**0.27**	1.6E-04	4.4E-05	3.6E-06	1.0E-05	NC	3.4E-06		
PZ-03-11152012	11/15/12	22.5	Propylbenzene	0.0010	9.5E-05	9.5E-08	7.8E-09	2.2E-08	NC	1.6E-07		
PZ-03-11152012	11/15/12	22.5	Styrene	0.00087	1.1E-04	9.6E-08	7.9E-09	2.2E-08	NC	2.4E-08		
PZ-03-11152012	11/15/12	22.5	Tetrachloroethene	**0.21**	1.1E-04	2.4E-05	1.9E-06	5.4E-06	1.1E-08	1.5E-04		
PZ-03-11152012	11/15/12	22.5	Toluene	**0.0017**	1.3E-04	2.3E-07	1.8E-08	5.2E-08	NC	1.7E-07		
PZ-03-11152012	11/15/12	22.5	TPH-gasoline	1.7	1.1E-04	1.9E-04	1.5E-05	4.2E-05	NC	3.3E-04		
PZ-03-11152012	11/15/12	22.5	trans-1,2-Dichloroethene	**0.017**	1.1E-04	1.9E-06	1.5E-07	4.3E-07	NC	7.1E-06		
PZ-03-11152012	11/15/12	22.5	trans-2-Butene	**0.030**	1.6E-04	4.9E-06	4.0E-07	1.1E-06	NC	3.7E-07		
PZ-03-11152012	11/15/12	22.5	Trichloroethene	**0.52**	1.2E-04	6.4E-05	5.2E-06	1.4E-05	2.1E-08	7.2E-03		
PZ-03-11152012	11/15/12	22.5	Trichlorofluoromethane (Freon 11)	**0.0094**	1.3E-04	1.3E-06	1.0E-07	2.9E-07	NC	4.1E-07		
PZ-03-11152012	11/15/12	22.5	Vinyl Acetate	0.0030	1.3E-04	3.9E-07	3.2E-08	8.9E-08	NC	4.5E-07		
PZ-03-11152012	11/15/12	22.5	Vinyl Chloride	**0.0020**	1.6E-04	3.2E-07	2.6E-08	7.2E-08	2.0E-09	7.2E-07		
PZ-03-11152012	11/15/12	22.5	Xylenes	0.0013	1.3E-04	1.7E-07	1.4E-08	3.9E-08	NC	3.9E-07	4.7E-08	8.7E-03
SMP-01A-11142012	11/14/12	29	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00090	1.0E-04	9.0E-08	7.4E-09	2.1E-08	NC	2.6E-10		
SMP-01A-11142012	11/14/12	29	1,1,1-Trichloroethane	**0.15**	9.5E-05	1.4E-05	1.2E-06	3.3E-06	NC	3.3E-06		
SMP-01A-11142012	11/14/12	29	1,1,2-Trichloroethane	0.0012	9.5E-05	1.1E-07	9.3E-09	2.6E-08	1.5E-10	1.9E-06		
SMP-01A-11142012	11/14/12	29	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.0016	9.5E-05	1.5E-07	1.2E-08	3.5E-08	NC	1.2E-09		
SMP-01A-11142012	11/14/12	29	1,1-Dichloroethane	**0.11**	9.1E-05	1.0E-05	8.2E-07	2.3E-06	1.3E-09	3.3E-06		
SMP-01A-11142012	11/14/12	29	1,1-Dichloroethene	**0.10**	1.1E-04	1.1E-05	8.9E-07	2.5E-06	NC	3.5E-05		
SMP-01A-11142012	11/14/12	29	1,2,4-Trichlorobenzene	0.0015	3.9E-05	5.8E-08	4.7E-09	1.3E-08	NC	6.6E-06		
SMP-01A-11142012	11/14/12	29	1,2,4-Trimethylbenzene	0.0011	7.5E-05	8.3E-08	6.8E-09	1.9E-08	NC	2.7E-06		
SMP-01A-11142012	11/14/12	29	1,2-Dichlorobenzene	0.0013	8.5E-05	1.1E-07	9.0E-09	2.5E-08	NC	1.3E-07		
SMP-01A-11142012	11/14/12	29	1,2-Dichloroethane	0.00087	1.2E-04	1.1E-07	8.8E-09	2.5E-08	1.8E-10	6.2E-08		
SMP-01A-11142012	11/14/12	29	1,3-Butadiene	0.00042	2.6E-04	1.1E-07	8.9E-09	2.5E-08	1.5E-09	1.2E-05		
SMP-01A-11142012	11/14/12	29	1,3-Dichlorobenzene	0.0013	8.5E-05	1.1E-07	9.0E-09	2.5E-08	NC	2.4E-07		
SMP-01A-11142012	11/14/12	29	1,4-Dioxane	0.0021	1.1E-04	2.4E-07	1.9E-08	5.4E-08	1.5E-10	1.8E-06		
SMP-01A-11142012	11/14/12	29	1-Butene/Isobutene	**0.0090**	1.0E-04	9.3E-07	7.5E-08	2.1E-07	NC	7.0E-08		
SMP-01A-11142012	11/14/12	29	2 & 3-Chlorotoluene	0.0022	7.8E-05	1.7E-07	1.4E-08	3.9E-08	NC	5.6E-07		
SMP-01A-11142012	11/14/12	29	2-Butanone (MEK)	0.0012	9.9E-05	1.2E-07	9.7E-09	2.7E-08	NC	5.4E-09		
SMP-01A-11142012	11/14/12	29	2-Propanol	0.00058	1.3E-04	7.4E-08	6.0E-09	1.7E-08	NC	2.4E-09		
SMP-01A-11142012	11/14/12	29	3-Chloropropene	0.00066	1.1E-04	7.4E-08	6.1E-09	1.7E-08	3.6E-11	5.7E-09		
SMP-01A-11142012	11/14/12	29	Acetaldehyde	**0.023**	1.5E-04	3.3E-06	2.7E-07	7.6E-07	7.4E-10	8.5E-05		
SMP-01A-11142012	11/14/12	29	Acetone	**0.012**	1.5E-04	1.8E-06	1.4E-07	4.0E-07	NC	1.3E-08		
SMP-01A-11142012	11/14/12	29	Acetonitrile	0.00041	1.5E-04	6.0E-08	4.9E-09	1.4E-08	NC	2.3E-07		
SMP-01A-11142012	11/14/12	29	Acetylene	0.00044	1.3E-04	5.7E-08	4.7E-09	1.3E-08	NC	4.4E-09		
SMP-01A-11142012	11/14/12	29	Benzaldehyde	0.0010	9.0E-05	9.0E-08	7.3E-09	2.1E-08	2.0E-11	2.3E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

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Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-01A-11142012	11/14/12	29	Benzene	**0.0011**	1.1E-04	1.2E-07	9.6E-09	2.7E-08	2.8E-10	8.9E-07		
SMP-01A-11142012	11/14/12	29	Butane	**0.0042**	1.3E-04	5.5E-07	4.5E-08	1.2E-07	NC	4.2E-08		
SMP-01A-11142012	11/14/12	29	Butyraldehyde	0.0022	1.5E-04	3.2E-07	2.6E-08	7.3E-08	7.0E-11	8.1E-06		
SMP-01A-11142012	11/14/12	29	Carbon Disulfide	0.0023	1.2E-04	2.8E-07	2.3E-08	6.5E-08	NC	9.3E-08		
SMP-01A-11142012	11/14/12	29	Carbon Tetrachloride	0.0014	9.5E-05	1.3E-07	1.1E-08	3.0E-08	4.6E-10	7.6E-07		
SMP-01A-11142012	11/14/12	29	Chlorobenzene	**0.0021**	9.0E-05	1.9E-07	1.5E-08	4.3E-08	NC	4.3E-08		
SMP-01A-11142012	11/14/12	29	Chlorodifluoromethane (Freon 22)	0.0014	1.2E-04	1.7E-07	1.4E-08	3.9E-08	NC	7.7E-10		
SMP-01A-11142012	11/14/12	29	Chloroethane	**0.0022**	2.8E-04	6.1E-07	5.0E-08	1.4E-07	NC	1.4E-08		
SMP-01A-11142012	11/14/12	29	Chloroform	**0.046**	1.2E-04	5.7E-06	4.6E-07	1.3E-06	2.5E-09	4.3E-06		
SMP-01A-11142012	11/14/12	29	Chloromethane	0.00036	1.5E-04	5.3E-08	4.3E-09	1.2E-08	NC	1.3E-07		
SMP-01A-11142012	11/14/12	29	cis-1,2-Dichloroethene	**0.35**	9.0E-05	3.2E-05	2.6E-06	7.2E-06	NC	1.0E-03		
SMP-01A-11142012	11/14/12	29	cis-2-Butene	0.00047	1.3E-04	6.1E-08	5.0E-09	1.4E-08	NC	4.6E-09		
SMP-01A-11142012	11/14/12	29	Cyclohexane	0.00054	9.8E-05	5.3E-08	4.3E-09	1.2E-08	NC	2.0E-09		
SMP-01A-11142012	11/14/12	29	Dichlorodifluoromethane (Freon 12)	**0.0034**	8.2E-05	2.8E-07	2.3E-08	6.4E-08	NC	3.2E-07		
SMP-01A-11142012	11/14/12	29	Dichlorofluoromethane	0.00090	1.1E-04	1.0E-07	8.2E-09	2.3E-08	NC	1.1E-07		
SMP-01A-11142012	11/14/12	29	Ethane	**0.099**	1.3E-04	1.3E-05	1.0E-06	2.9E-06	NC	9.8E-07		
SMP-01A-11142012	11/14/12	29	Ethanol	0.0014	1.5E-04	2.1E-07	1.7E-08	4.9E-08	NC	6.9E-09		
SMP-01A-11142012	11/14/12	29	Ethene	**0.0088**	1.3E-04	1.1E-06	9.3E-08	2.6E-07	NC	8.7E-08		
SMP-01A-11142012	11/14/12	29	Ethylbenzene	0.00093	9.2E-05	8.5E-08	7.0E-09	2.0E-08	1.7E-11	2.0E-08		
SMP-01A-11142012	11/14/12	29	Isobutane	**0.016**	1.3E-04	2.1E-06	1.7E-07	4.7E-07	NC	1.6E-07		
SMP-01A-11142012	11/14/12	29	Isopropylbenzene (Cumene)	0.0020	8.0E-05	1.6E-07	1.3E-08	3.7E-08	NC	9.2E-08		
SMP-01A-11142012	11/14/12	29	Methylene Chloride	0.00075	1.2E-04	9.1E-08	7.4E-09	2.1E-08	7.4E-12	5.2E-08		
SMP-01A-11142012	11/14/12	29	Naphthalene	0.0018	7.4E-05	1.3E-07	1.1E-08	3.0E-08	3.7E-10	1.0E-05		
SMP-01A-11142012	11/14/12	29	n-Butanol	0.0022	1.1E-04	2.5E-07	2.0E-08	5.7E-08	NC	1.6E-07		
SMP-01A-11142012	11/14/12	29	n-Hexane	0.00069	2.2E-04	1.5E-07	1.2E-08	3.4E-08	NC	4.9E-08		
SMP-01A-11142012	11/14/12	29	n-Nonane	0.0011	6.5E-05	7.1E-08	5.8E-09	1.6E-08	NC	8.1E-08		
SMP-01A-11142012	11/14/12	29	n-Pentane	0.00063	1.0E-04	6.3E-08	5.1E-09	1.4E-08	NC	1.4E-08		
SMP-01A-11142012	11/14/12	29	Propane	**0.052**	1.3E-04	6.8E-06	5.5E-07	1.5E-06	NC	5.1E-07		
SMP-01A-11142012	11/14/12	29	Propene	**0.0020**	1.3E-04	2.6E-07	2.1E-08	5.9E-08	NC	2.0E-08		
SMP-01A-11142012	11/14/12	29	Propylbenzene	0.0011	7.5E-05	8.2E-08	6.7E-09	1.9E-08	NC	1.3E-07		
SMP-01A-11142012	11/14/12	29	Styrene	0.00092	8.7E-05	8.0E-08	6.6E-09	1.8E-08	NC	2.0E-08		
SMP-01A-11142012	11/14/12	29	Tetrachloroethene	**0.37**	8.9E-05	3.3E-05	2.7E-06	7.5E-06	1.6E-08	2.1E-04		
SMP-01A-11142012	11/14/12	29	Toluene	**0.0023**	1.1E-04	2.4E-07	2.0E-08	5.5E-08	NC	1.8E-07		
SMP-01A-11142012	11/14/12	29	TPH-gasoline	1.7	8.6E-05	1.5E-04	1.2E-05	3.3E-05	NC	2.6E-04		
SMP-01A-11142012	11/14/12	29	trans-1,2-Dichloroethene	**0.028**	8.7E-05	2.4E-06	2.0E-07	5.6E-07	NC	9.3E-06		
SMP-01A-11142012	11/14/12	29	trans-2-Butene	0.00045	1.3E-04	5.8E-08	4.8E-09	1.3E-08	NC	4.5E-09		
SMP-01A-11142012	11/14/12	29	Trichloroethene	**2.1**	9.6E-05	2.0E-04	1.7E-05	4.6E-05	6.8E-08	2.3E-02		
SMP-01A-11142012	11/14/12	29	Trichlorofluoromethane (Freon 11)	**0.0026**	1.1E-04	2.7E-07	2.2E-08	6.3E-08	NC	8.9E-08		
SMP-01A-11142012	11/14/12	29	Vinyl Acetate	0.0032	1.0E-04	3.3E-07	2.7E-08	7.5E-08	NC	3.8E-07		
SMP-01A-11142012	11/14/12	29	Vinyl Chloride	0.00052	1.3E-04	6.6E-08	5.3E-09	1.5E-08	4.2E-10	1.5E-07		
SMP-01A-11142012	11/14/12	29	Xylenes	0.0014	1.0E-04	1.4E-07	1.2E-08	3.3E-08	NC	3.3E-07	9.2E-08	2.5E-02
SMP-02A-11152012	11/15/12	24.5	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00086	1.2E-04	1.0E-07	8.2E-09	2.3E-08	NC	2.9E-10		
SMP-02A-11152012	11/15/12	24.5	1,1,1-Trichloroethane	**3.3**	1.1E-04	3.7E-04	3.0E-05	8.4E-05	NC	8.4E-05		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-02A-11152012	11/15/12	24.5	1,1,2-Trichloroethane	**0.0035**	1.1E-04	3.9E-07	3.2E-08	8.9E-08	5.1E-10	6.4E-06		
SMP-02A-11152012	11/15/12	24.5	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.013**	1.1E-04	1.5E-06	1.2E-07	3.3E-07	NC	1.1E-08		
SMP-02A-11152012	11/15/12	24.5	1,1-Dichloroethane	**0.33**	1.1E-04	3.5E-05	2.9E-06	8.0E-06	4.6E-09	1.1E-05		
SMP-02A-11152012	11/15/12	24.5	1,1-Dichloroethene	**1.0**	1.3E-04	1.3E-04	1.0E-05	2.9E-05	NC	4.1E-04		
SMP-02A-11152012	11/15/12	24.5	1,2,4-Trichlorobenzene	0.0015	4.5E-05	6.8E-08	5.6E-09	1.6E-08	NC	7.8E-06		
SMP-02A-11152012	11/15/12	24.5	1,2,4-Trimethylbenzene	0.0010	8.8E-05	8.8E-08	7.2E-09	2.0E-08	NC	2.9E-06		
SMP-02A-11152012	11/15/12	24.5	1,2-Dichlorobenzene	0.0012	1.0E-04	1.2E-07	9.8E-09	2.7E-08	NC	1.4E-07		
SMP-02A-11152012	11/15/12	24.5	1,2-Dichloroethane	0.00083	1.4E-04	1.2E-07	9.8E-09	2.7E-08	2.1E-10	6.8E-08		
SMP-02A-11152012	11/15/12	24.5	1,3-Butadiene	0.00040	3.0E-04	1.2E-07	9.7E-09	2.7E-08	1.6E-09	1.4E-05		
SMP-02A-11152012	11/15/12	24.5	1,3-Dichlorobenzene	**0.0030**	1.0E-04	3.0E-07	2.4E-08	6.9E-08	NC	6.5E-07		
SMP-02A-11152012	11/15/12	24.5	1,4-Dioxane	**0.0051**	1.3E-04	6.7E-07	5.5E-08	1.5E-07	4.2E-10	5.1E-06		
SMP-02A-11152012	11/15/12	24.5	1-Butene/Isobutene	**0.15**	1.2E-04	1.8E-05	1.5E-06	4.1E-06	NC	1.4E-06		
SMP-02A-11152012	11/15/12	24.5	2 & 3-Chlorotoluene	0.0021	9.2E-05	1.9E-07	1.6E-08	4.4E-08	NC	6.3E-07		
SMP-02A-11152012	11/15/12	24.5	2-Butanone (MEK)	0.0012	1.2E-04	1.4E-07	1.1E-08	3.2E-08	NC	6.4E-09		
SMP-02A-11152012	11/15/12	24.5	2-Propanol	0.00055	1.5E-04	8.2E-08	6.7E-09	1.9E-08	NC	2.7E-09		
SMP-02A-11152012	11/15/12	24.5	3-Chloropropene	0.00063	1.3E-04	8.3E-08	6.8E-09	1.9E-08	4.1E-11	6.3E-09		
SMP-02A-11152012	11/15/12	24.5	Acetaldehyde	**0.012**	1.7E-04	2.0E-06	1.7E-07	4.6E-07	4.5E-10	5.1E-05		
SMP-02A-11152012	11/15/12	24.5	Acetone	**0.0063**	1.7E-04	1.1E-06	8.7E-08	2.4E-07	NC	7.9E-09		
SMP-02A-11152012	11/15/12	24.5	Acetonitrile	0.00039	1.7E-04	6.6E-08	5.4E-09	1.5E-08	NC	2.5E-07		
SMP-02A-11152012	11/15/12	24.5	Acetylene	0.00042	1.5E-04	6.4E-08	5.2E-09	1.5E-08	NC	4.8E-09		
SMP-02A-11152012	11/15/12	24.5	Benzaldehyde	0.00096	1.1E-04	1.0E-07	8.3E-09	2.3E-08	2.2E-11	2.6E-06		
SMP-02A-11152012	11/15/12	24.5	Benzene	**0.0034**	1.2E-04	4.2E-07	3.4E-08	9.7E-08	1.0E-09	3.2E-06		
SMP-02A-11152012	11/15/12	24.5	Butane	**0.030**	1.5E-04	4.5E-06	3.7E-07	1.0E-06	NC	3.5E-07		
SMP-02A-11152012	11/15/12	24.5	Butyraldehyde	0.0021	1.7E-04	3.5E-07	2.9E-08	8.1E-08	7.8E-11	9.0E-06		
SMP-02A-11152012	11/15/12	24.5	Carbon Disulfide	0.0022	1.4E-04	3.2E-07	2.6E-08	7.3E-08	NC	1.0E-07		
SMP-02A-11152012	11/15/12	24.5	Carbon Tetrachloride	0.0013	1.1E-04	1.5E-07	1.2E-08	3.3E-08	5.0E-10	8.3E-07		
SMP-02A-11152012	11/15/12	24.5	Chlorobenzene	**0.0061**	1.1E-04	6.4E-07	5.2E-08	1.5E-07	NC	1.5E-07		
SMP-02A-11152012	11/15/12	24.5	Chlorodifluoromethane (Freon 22)	0.0014	1.4E-04	2.0E-07	1.6E-08	4.5E-08	NC	9.0E-10		
SMP-02A-11152012	11/15/12	24.5	Chloroethane	**0.032**	3.2E-04	1.0E-05	8.3E-07	2.3E-06	NC	2.3E-07		
SMP-02A-11152012	11/15/12	24.5	Chloroform	**0.51**	1.4E-04	7.4E-05	6.0E-06	1.7E-05	3.2E-08	5.6E-05		
SMP-02A-11152012	11/15/12	24.5	Chloromethane	**0.00070**	1.7E-04	1.2E-07	9.7E-09	2.7E-08	NC	3.0E-07		
SMP-02A-11152012	11/15/12	24.5	cis-1,2-Dichloroethene	**0.80**	1.1E-04	8.5E-05	6.9E-06	1.9E-05	NC	2.8E-03		
SMP-02A-11152012	11/15/12	24.5	cis-2-Butene	**0.0021**	1.5E-04	3.2E-07	2.6E-08	7.3E-08	NC	2.4E-08		
SMP-02A-11152012	11/15/12	24.5	Cyclohexane	**0.0057**	1.1E-04	6.5E-07	5.3E-08	1.5E-07	NC	2.5E-08		
SMP-02A-11152012	11/15/12	24.5	Dichlorodifluoromethane (Freon 12)	**0.0033**	9.6E-05	3.2E-07	2.6E-08	7.3E-08	NC	3.6E-07		
SMP-02A-11152012	11/15/12	24.5	Dichlorofluoromethane	0.00086	1.3E-04	1.1E-07	9.1E-09	2.6E-08	NC	1.3E-07		
SMP-02A-11152012	11/15/12	24.5	Ethane	**0.088**	1.5E-04	1.3E-05	1.1E-06	3.0E-06	NC	1.0E-06		
SMP-02A-11152012	11/15/12	24.5	Ethanol	0.0013	1.8E-04	2.3E-07	1.9E-08	5.2E-08	NC	7.5E-09		
SMP-02A-11152012	11/15/12	24.5	Ethene	**0.019**	1.5E-04	2.9E-06	2.3E-07	6.6E-07	NC	2.2E-07		
SMP-02A-11152012	11/15/12	24.5	Ethylbenzene	0.00089	1.1E-04	9.6E-08	7.8E-09	2.2E-08	2.0E-11	2.2E-08		
SMP-02A-11152012	11/15/12	24.5	Isobutane	**0.047**	1.5E-04	7.1E-06	5.8E-07	1.6E-06	NC	5.4E-07		
SMP-02A-11152012	11/15/12	24.5	Isopropylbenzene (Cumene)	0.0019	9.4E-05	1.8E-07	1.5E-08	4.1E-08	NC	1.0E-07		
SMP-02A-11152012	11/15/12	24.5	Methylene Chloride	**0.017**	1.4E-04	2.4E-06	2.0E-07	5.5E-07	2.0E-10	1.4E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-02A-11152012	11/15/12	24.5	Naphthalene	0.0017	8.6E-05	1.5E-07	1.2E-08	3.4E-08	4.1E-10	1.1E-05		
SMP-02A-11152012	11/15/12	24.5	n-Butanol	0.0021	1.3E-04	2.8E-07	2.3E-08	6.3E-08	NC	1.8E-07		
SMP-02A-11152012	11/15/12	24.5	n-Hexane	**0.0061**	2.5E-04	1.5E-06	1.2E-07	3.5E-07	NC	5.0E-07		
SMP-02A-11152012	11/15/12	24.5	n-Nonane	0.0011	7.6E-05	8.4E-08	6.8E-09	1.9E-08	NC	9.5E-08		
SMP-02A-11152012	11/15/12	24.5	n-Pentane	**0.0053**	1.2E-04	6.2E-07	5.1E-08	1.4E-07	NC	1.4E-07		
SMP-02A-11152012	11/15/12	24.5	Propane	**0.15**	1.5E-04	2.3E-05	1.9E-06	5.2E-06	NC	1.7E-06		
SMP-02A-11152012	11/15/12	24.5	Propene	**0.036**	1.5E-04	5.4E-06	4.4E-07	1.2E-06	NC	4.1E-07		
SMP-02A-11152012	11/15/12	24.5	Propylbenzene	0.0010	8.8E-05	8.8E-08	7.2E-09	2.0E-08	NC	1.4E-07		
SMP-02A-11152012	11/15/12	24.5	Styrene	0.00087	1.0E-04	8.9E-08	7.3E-09	2.0E-08	NC	2.3E-08		
SMP-02A-11152012	11/15/12	24.5	Tetrachloroethene	**0.81**	1.0E-04	8.4E-05	6.9E-06	1.9E-05	4.0E-08	5.5E-04		
SMP-02A-11152012	11/15/12	24.5	Toluene	**0.018**	1.2E-04	2.2E-06	1.8E-07	5.1E-07	NC	1.7E-06		
SMP-02A-11152012	11/15/12	24.5	TPH-gasoline	**3.7**	1.0E-04	3.7E-04	3.0E-05	8.5E-05	NC	6.6E-04		
SMP-02A-11152012	11/15/12	24.5	trans-1,2-Dichloroethene	**0.056**	1.0E-04	5.7E-06	4.7E-07	1.3E-06	NC	2.2E-05		
SMP-02A-11152012	11/15/12	24.5	trans-2-Butene	**0.0034**	1.5E-04	5.1E-07	4.2E-08	1.2E-07	NC	3.9E-08		
SMP-02A-11152012	11/15/12	24.5	Trichloroethene	**7.1**	1.1E-04	8.0E-04	6.5E-05	1.8E-04	2.7E-07	9.1E-02		
SMP-02A-11152012	11/15/12	24.5	Trichlorofluoromethane (Freon 11)	**0.0026**	1.2E-04	3.2E-07	2.6E-08	7.3E-08	NC	1.0E-07		
SMP-02A-11152012	11/15/12	24.5	Vinyl Acetate	0.0031	1.2E-04	3.7E-07	3.1E-08	8.5E-08	NC	4.3E-07		
SMP-02A-11152012	11/15/12	24.5	Vinyl Chloride	**0.0021**	1.5E-04	3.1E-07	2.5E-08	7.0E-08	2.0E-09	7.0E-07		
SMP-02A-11152012	11/15/12	24.5	Xylenes	0.0013	1.2E-04	1.6E-07	1.3E-08	3.6E-08	NC	3.6E-07	3.5E-07	9.6E-02
SMP-03-11152012	11/15/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00085	1.1E-04	9.8E-08	8.0E-09	2.2E-08	NC	2.8E-10		
SMP-03-11152012	11/15/12	25	1,1,1-Trichloroethane	**3.4**	1.1E-04	3.7E-04	3.0E-05	8.5E-05	NC	8.5E-05		
SMP-03-11152012	11/15/12	25	1,1,2-Trichloroethane	**0.0029**	1.1E-04	3.2E-07	2.6E-08	7.3E-08	4.1E-10	5.2E-06		
SMP-03-11152012	11/15/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.012**	1.1E-04	1.3E-06	1.1E-07	3.0E-07	NC	1.0E-08		
SMP-03-11152012	11/15/12	25	1,1-Dichloroethane	**0.39**	1.0E-04	4.1E-05	3.3E-06	9.3E-06	5.3E-09	1.3E-05		
SMP-03-11152012	11/15/12	25	1,1-Dichloroethene	**1.6**	1.2E-04	2.0E-04	1.6E-05	4.6E-05	NC	6.5E-04		
SMP-03-11152012	11/15/12	25	1,2,4-Trichlorobenzene	0.0015	4.5E-05	6.7E-08	5.5E-09	1.5E-08	NC	7.6E-06		
SMP-03-11152012	11/15/12	25	1,2,4-Trimethylbenzene	0.0010	8.7E-05	8.7E-08	7.1E-09	2.0E-08	NC	2.8E-06		
SMP-03-11152012	11/15/12	25	1,2-Dichlorobenzene	0.0012	9.8E-05	1.2E-07	9.6E-09	2.7E-08	NC	1.3E-07		
SMP-03-11152012	11/15/12	25	1,2-Dichloroethane	0.00083	1.4E-04	1.2E-07	9.6E-09	2.7E-08	2.0E-10	6.7E-08		
SMP-03-11152012	11/15/12	25	1,3-Butadiene	0.00039	2.9E-04	1.1E-07	9.3E-09	2.6E-08	1.6E-09	1.3E-05		
SMP-03-11152012	11/15/12	25	1,3-Dichlorobenzene	0.0012	9.8E-05	1.2E-07	9.6E-09	2.7E-08	NC	2.6E-07		
SMP-03-11152012	11/15/12	25	1,4-Dioxane	**0.021**	1.3E-04	2.7E-06	2.2E-07	6.2E-07	1.7E-09	2.1E-05		
SMP-03-11152012	11/15/12	25	1-Butene/Isobutene	**0.33**	1.2E-04	3.9E-05	3.2E-06	8.9E-06	NC	3.0E-06		
SMP-03-11152012	11/15/12	25	2 & 3-Chlorotoluene	0.0021	9.0E-05	1.9E-07	1.5E-08	4.3E-08	NC	6.2E-07		
SMP-03-11152012	11/15/12	25	2-Butanone (MEK)	0.0012	1.1E-04	1.4E-07	1.1E-08	3.1E-08	NC	6.2E-09		
SMP-03-11152012	11/15/12	25	2-Propanol	0.00055	1.5E-04	8.0E-08	6.5E-09	1.8E-08	NC	2.6E-09		
SMP-03-11152012	11/15/12	25	3-Chloropropene	0.00063	1.3E-04	8.1E-08	6.6E-09	1.9E-08	4.0E-11	6.2E-09		
SMP-03-11152012	11/15/12	25	Acetaldehyde	**0.015**	1.7E-04	2.5E-06	2.0E-07	5.7E-07	5.5E-10	6.3E-05		
SMP-03-11152012	11/15/12	25	Acetone	**0.0089**	1.7E-04	1.5E-06	1.2E-07	3.4E-07	NC	1.1E-08		
SMP-03-11152012	11/15/12	25	Acetonitrile	0.00039	1.7E-04	6.5E-08	5.3E-09	1.5E-08	NC	2.5E-07		
SMP-03-11152012	11/15/12	25	Acetylene	**0.0022**	1.5E-04	3.3E-07	2.7E-08	7.5E-08	NC	2.5E-08		
SMP-03-11152012	11/15/12	25	Benzaldehyde	0.00095	1.0E-04	9.8E-08	8.0E-09	2.2E-08	2.2E-11	2.5E-06		
SMP-03-11152012	11/15/12	25	Benzene	**0.0081**	1.2E-04	9.9E-07	8.1E-08	2.3E-07	2.3E-09	7.5E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-03-11152012	11/15/12	25	Butane	**0.072**	1.5E-04	1.1E-05	8.7E-07	2.4E-06	NC	8.1E-07		
SMP-03-11152012	11/15/12	25	Butyraldehyde	0.0021	1.7E-04	3.5E-07	2.8E-08	7.9E-08	7.7E-11	8.8E-06		
SMP-03-11152012	11/15/12	25	Carbon Disulfide	0.0022	1.4E-04	3.1E-07	2.5E-08	7.1E-08	NC	1.0E-07		
SMP-03-11152012	11/15/12	25	Carbon Tetrachloride	0.0013	1.1E-04	1.4E-07	1.2E-08	3.3E-08	4.9E-10	8.1E-07		
SMP-03-11152012	11/15/12	25	Chlorobenzene	**0.020**	1.0E-04	2.1E-06	1.7E-07	4.7E-07	NC	4.7E-07		
SMP-03-11152012	11/15/12	25	Chlorodifluoromethane (Freon 22)	0.0013	1.4E-04	1.8E-07	1.5E-08	4.1E-08	NC	8.2E-10		
SMP-03-11152012	11/15/12	25	Chloroethane	**0.021**	3.1E-04	6.5E-06	5.3E-07	1.5E-06	NC	1.5E-07		
SMP-03-11152012	11/15/12	25	Chloroform	**0.68**	1.4E-04	9.6E-05	7.9E-06	2.2E-05	4.2E-08	7.3E-05		
SMP-03-11152012	11/15/12	25	Chloromethane	**0.00083**	1.7E-04	1.4E-07	1.1E-08	3.2E-08	NC	3.5E-07		
SMP-03-11152012	11/15/12	25	cis-1,2-Dichloroethene	**5.2**	1.0E-04	5.4E-04	4.4E-05	1.2E-04	NC	1.8E-02		
SMP-03-11152012	11/15/12	25	cis-2-Butene	**0.0066**	1.5E-04	9.8E-07	8.0E-08	2.2E-07	NC	7.5E-08		
SMP-03-11152012	11/15/12	25	Cyclohexane	**0.0063**	1.1E-04	7.1E-07	5.8E-08	1.6E-07	NC	2.7E-08		
SMP-03-11152012	11/15/12	25	Dichlorodifluoromethane (Freon 12)	**0.0044**	9.5E-05	4.2E-07	3.4E-08	9.5E-08	NC	4.8E-07		
SMP-03-11152012	11/15/12	25	Dichlorofluoromethane	0.00086	1.3E-04	1.1E-07	8.9E-09	2.5E-08	NC	1.3E-07		
SMP-03-11152012	11/15/12	25	Ethane	**0.25**	1.5E-04	3.7E-05	3.0E-06	8.5E-06	NC	2.8E-06		
SMP-03-11152012	11/15/12	25	Ethanol	0.0013	1.7E-04	2.3E-07	1.8E-08	5.1E-08	NC	7.4E-09		
SMP-03-11152012	11/15/12	25	Ethene	**0.096**	1.5E-04	1.4E-05	1.2E-06	3.3E-06	NC	1.1E-06		
SMP-03-11152012	11/15/12	25	Ethylbenzene	0.00088	1.1E-04	9.3E-08	7.6E-09	2.1E-08	1.9E-11	2.1E-08		
SMP-03-11152012	11/15/12	25	Isobutane	**0.066**	1.5E-04	9.8E-06	8.0E-07	2.2E-06	NC	7.5E-07		
SMP-03-11152012	11/15/12	25	Isopropylbenzene (Cumene)	0.0019	9.3E-05	1.8E-07	1.4E-08	4.0E-08	NC	1.0E-07		
SMP-03-11152012	11/15/12	25	Methylene Chloride	**0.022**	1.4E-04	3.0E-06	2.5E-07	6.9E-07	2.5E-10	1.7E-06		
SMP-03-11152012	11/15/12	25	Naphthalene	0.0017	8.5E-05	1.4E-07	1.2E-08	3.3E-08	4.0E-10	1.1E-05		
SMP-03-11152012	11/15/12	25	n-Butanol	0.0021	1.3E-04	2.7E-07	2.2E-08	6.2E-08	NC	1.8E-07		
SMP-03-11152012	11/15/12	25	n-Hexane	**0.0046**	2.5E-04	1.1E-06	9.2E-08	2.6E-07	NC	3.7E-07		
SMP-03-11152012	11/15/12	25	n-Nonane	0.0011	7.4E-05	8.2E-08	6.7E-09	1.9E-08	NC	9.4E-08		
SMP-03-11152012	11/15/12	25	n-Pentane	**0.011**	1.1E-04	1.3E-06	1.0E-07	2.9E-07	NC	2.9E-07		
SMP-03-11152012	11/15/12	25	Propane	**0.26**	1.5E-04	3.9E-05	3.2E-06	8.8E-06	NC	2.9E-06		
SMP-03-11152012	11/15/12	25	Propene	**0.11**	1.5E-04	1.6E-05	1.3E-06	3.7E-06	NC	1.2E-06		
SMP-03-11152012	11/15/12	25	Propylbenzene	0.0010	8.6E-05	8.6E-08	7.0E-09	2.0E-08	NC	1.4E-07		
SMP-03-11152012	11/15/12	25	Styrene	0.00087	1.0E-04	8.7E-08	7.1E-09	2.0E-08	NC	2.2E-08		
SMP-03-11152012	11/15/12	25	Tetrachloroethene	**1.2**	1.0E-04	1.2E-04	1.0E-05	2.8E-05	5.9E-08	8.0E-04		
SMP-03-11152012	11/15/12	25	Toluene	**0.012**	1.2E-04	1.5E-06	1.2E-07	3.3E-07	NC	1.1E-06		
SMP-03-11152012	11/15/12	25	TPH-gasoline	**7.0**	9.9E-05	6.9E-04	5.7E-05	1.6E-04	NC	1.2E-03		
SMP-03-11152012	11/15/12	25	trans-1,2-Dichloroethene	**0.30**	1.0E-04	3.0E-05	2.4E-06	6.9E-06	NC	1.1E-04		
SMP-03-11152012	11/15/12	25	trans-2-Butene	**0.012**	1.5E-04	1.8E-06	1.5E-07	4.1E-07	NC	1.4E-07		
SMP-03-11152012	11/15/12	25	Trichloroethene	**14**	1.1E-04	1.6E-03	1.3E-04	3.5E-04	5.2E-07	1.8E-01		
SMP-03-11152012	11/15/12	25	Trichlorofluoromethane (Freon 11)	**0.0032**	1.2E-04	3.9E-07	3.2E-08	8.8E-08	NC	1.3E-07		
SMP-03-11152012	11/15/12	25	Vinyl Acetate	0.0030	1.2E-04	3.6E-07	2.9E-08	8.1E-08	NC	4.1E-07		
SMP-03-11152012	11/15/12	25	Vinyl Chloride	**0.0070**	1.4E-04	1.0E-06	8.2E-08	2.3E-07	6.4E-09	2.3E-06		
SMP-03-11152012	11/15/12	25	Xylenes	0.0013	1.2E-04	1.5E-07	1.3E-08	3.5E-08	NC	3.5E-07	6.4E-07	2.0E-01
SMP-04A-11152012	11/15/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.0036	1.1E-04	4.1E-07	3.4E-08	9.5E-08	NC	1.2E-09		
SMP-04A-11152012	11/15/12	25	1,1,1-Trichloroethane	**0.37**	1.1E-04	4.1E-05	3.3E-06	9.3E-06	NC	9.3E-06		
SMP-04A-11152012	11/15/12	25	1,1,2-Trichloroethane	0.0046	1.1E-04	5.0E-07	4.1E-08	1.2E-07	6.6E-10	8.2E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-04A-11152012	11/15/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.044**	1.1E-04	4.8E-06	3.9E-07	1.1E-06	NC	3.7E-08		
SMP-04A-11152012	11/15/12	25	1,1-Dichloroethane	**0.21**	1.0E-04	2.2E-05	1.8E-06	5.0E-06	2.9E-09	7.2E-06		
SMP-04A-11152012	11/15/12	25	1,1-Dichloroethene	**0.35**	1.2E-04	4.4E-05	3.6E-06	1.0E-05	NC	1.4E-04		
SMP-04A-11152012	11/15/12	25	1,2,4-Trichlorobenzene	0.0062	4.5E-05	2.8E-07	2.3E-08	6.3E-08	NC	3.2E-05		
SMP-04A-11152012	11/15/12	25	1,2,4-Trimethylbenzene	0.0042	8.7E-05	3.6E-07	3.0E-08	8.3E-08	NC	1.2E-05		
SMP-04A-11152012	11/15/12	25	1,2-Dichlorobenzene	0.0051	9.8E-05	5.0E-07	4.1E-08	1.1E-07	NC	5.7E-07		
SMP-04A-11152012	11/15/12	25	1,2-Dichloroethane	0.0035	1.4E-04	5.0E-07	4.0E-08	1.1E-07	8.5E-10	2.8E-07		
SMP-04A-11152012	11/15/12	25	1,3-Butadiene	0.0017	2.9E-04	5.0E-07	4.1E-08	1.1E-07	6.9E-09	5.7E-05		
SMP-04A-11152012	11/15/12	25	1,3-Dichlorobenzene	0.0051	9.8E-05	5.0E-07	4.1E-08	1.1E-07	NC	1.1E-06		
SMP-04A-11152012	11/15/12	25	1,4-Dioxane	0.0083	1.3E-04	1.1E-06	8.8E-08	2.5E-07	6.8E-10	8.2E-06		
SMP-04A-11152012	11/15/12	25	1-Butene/Isobutene	**0.75**	1.2E-04	8.9E-05	7.2E-06	2.0E-05	NC	6.7E-06		
SMP-04A-11152012	11/15/12	25	2 & 3-Chlorotoluene	0.0089	9.0E-05	8.0E-07	6.5E-08	1.8E-07	NC	2.6E-06		
SMP-04A-11152012	11/15/12	25	2-Butanone (MEK)	**0.015**	1.1E-04	1.7E-06	1.4E-07	3.9E-07	NC	7.8E-08		
SMP-04A-11152012	11/15/12	25	2-Propanol	0.0023	1.5E-04	3.4E-07	2.7E-08	7.7E-08	NC	1.1E-08		
SMP-04A-11152012	11/15/12	25	3-Chloropropene	0.0026	1.3E-04	3.4E-07	2.7E-08	7.7E-08	1.6E-10	2.6E-08		
SMP-04A-11152012	11/15/12	25	Acetaldehyde	0.0054	1.7E-04	9.0E-07	7.3E-08	2.0E-07	2.0E-10	2.3E-05		
SMP-04A-11152012	11/15/12	25	Acetone	**0.0055**	1.7E-04	9.2E-07	7.5E-08	2.1E-07	NC	6.7E-09		
SMP-04A-11152012	11/15/12	25	Acetonitrile	0.0016	1.7E-04	2.7E-07	2.2E-08	6.1E-08	NC	1.0E-06		
SMP-04A-11152012	11/15/12	25	Acetylene	0.0018	1.5E-04	2.7E-07	2.2E-08	6.1E-08	NC	2.0E-08		
SMP-04A-11152012	11/15/12	25	Benzaldehyde	0.0040	1.0E-04	4.1E-07	3.4E-08	9.5E-08	9.1E-11	1.1E-05		
SMP-04A-11152012	11/15/12	25	Benzene	**0.0045**	1.2E-04	5.5E-07	4.5E-08	1.3E-07	1.3E-09	4.2E-06		
SMP-04A-11152012	11/15/12	25	Butane	**0.10**	1.5E-04	1.5E-05	1.2E-06	3.4E-06	NC	1.1E-06		
SMP-04A-11152012	11/15/12	25	Butyraldehyde	0.0087	1.7E-04	1.4E-06	1.2E-07	3.3E-07	3.2E-10	3.7E-05		
SMP-04A-11152012	11/15/12	25	Carbon Disulfide	**0.060**	1.4E-04	8.5E-06	6.9E-07	1.9E-06	NC	2.8E-06		
SMP-04A-11152012	11/15/12	25	Carbon Tetrachloride	0.0054	1.1E-04	5.9E-07	4.8E-08	1.4E-07	2.0E-09	3.4E-06		
SMP-04A-11152012	11/15/12	25	Chlorobenzene	0.0040	1.0E-04	4.1E-07	3.4E-08	9.4E-08	NC	9.4E-08		
SMP-04A-11152012	11/15/12	25	Chlorodifluoromethane (Freon 22)	0.0057	1.4E-04	7.9E-07	6.4E-08	1.8E-07	NC	3.6E-09		
SMP-04A-11152012	11/15/12	25	Chloroethane	**0.13**	3.1E-04	4.1E-05	3.3E-06	9.3E-06	NC	9.3E-07		
SMP-04A-11152012	11/15/12	25	Chloroform	**0.10**	1.4E-04	1.4E-05	1.2E-06	3.2E-06	6.1E-09	1.1E-05		
SMP-04A-11152012	11/15/12	25	Chloromethane	**0.014**	1.7E-04	2.3E-06	1.9E-07	5.4E-07	NC	6.0E-06		
SMP-04A-11152012	11/15/12	25	cis-1,2-Dichloroethene	**0.070**	1.0E-04	7.3E-06	5.9E-07	1.7E-06	NC	2.4E-04		
SMP-04A-11152012	11/15/12	25	cis-2-Butene	**0.043**	1.5E-04	6.4E-06	5.2E-07	1.5E-06	NC	4.9E-07		
SMP-04A-11152012	11/15/12	25	Cyclohexane	**0.0061**	1.1E-04	6.8E-07	5.6E-08	1.6E-07	NC	2.6E-08		
SMP-04A-11152012	11/15/12	25	Dichlorodifluoromethane (Freon 12)	0.0042	9.5E-05	4.0E-07	3.2E-08	9.1E-08	NC	4.5E-07		
SMP-04A-11152012	11/15/12	25	Dichlorofluoromethane	0.0036	1.3E-04	4.6E-07	3.7E-08	1.0E-07	NC	5.2E-07		
SMP-04A-11152012	11/15/12	25	Ethane	**0.28**	1.5E-04	4.2E-05	3.4E-06	9.5E-06	NC	3.2E-06		
SMP-04A-11152012	11/15/12	25	Ethanol	0.0056	1.7E-04	9.7E-07	7.9E-08	2.2E-07	NC	3.2E-08		
SMP-04A-11152012	11/15/12	25	Ethene	**0.38**	1.5E-04	5.6E-05	4.6E-06	1.3E-05	NC	4.3E-06		
SMP-04A-11152012	11/15/12	25	Ethylbenzene	0.0037	1.1E-04	3.9E-07	3.2E-08	8.9E-08	8.0E-11	8.9E-08		
SMP-04A-11152012	11/15/12	25	Isobutane	**0.083**	1.5E-04	1.2E-05	1.0E-06	2.8E-06	NC	9.4E-07		
SMP-04A-11152012	11/15/12	25	Isopropylbenzene (Cumene)	0.0082	9.3E-05	7.6E-07	6.2E-08	1.7E-07	NC	4.3E-07		
SMP-04A-11152012	11/15/12	25	Methylene Chloride	**0.025**	1.4E-04	3.5E-06	2.8E-07	7.9E-07	2.8E-10	2.0E-06		
SMP-04A-11152012	11/15/12	25	Naphthalene	0.0072	8.5E-05	6.1E-07	5.0E-08	1.4E-07	1.7E-09	4.6E-05		

TABLE 9b

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Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-04A-11152012	11/15/12	25	n-Butanol	0.0088	1.3E-04	1.1E-06	9.3E-08	2.6E-07	NC	7.4E-07		
SMP-04A-11152012	11/15/12	25	n-Hexane	**0.0076**	2.5E-04	1.9E-06	1.5E-07	4.3E-07	NC	6.1E-07		
SMP-04A-11152012	11/15/12	25	n-Nonane	0.0045	7.4E-05	3.4E-07	2.7E-08	7.7E-08	NC	3.8E-07		
SMP-04A-11152012	11/15/12	25	n-Pentane	**0.030**	1.1E-04	3.4E-06	2.8E-07	7.9E-07	NC	7.9E-07		
SMP-04A-11152012	11/15/12	25	Propane	**0.24**	1.5E-04	3.6E-05	2.9E-06	8.1E-06	NC	2.7E-06		
SMP-04A-11152012	11/15/12	25	Propene	**0.68**	1.5E-04	1.0E-04	8.2E-06	2.3E-05	NC	7.7E-06		
SMP-04A-11152012	11/15/12	25	Propylbenzene	0.0043	8.6E-05	3.7E-07	3.0E-08	8.5E-08	NC	6.0E-07		
SMP-04A-11152012	11/15/12	25	Styrene	0.0037	1.0E-04	3.7E-07	3.0E-08	8.5E-08	NC	9.4E-08		
SMP-04A-11152012	11/15/12	25	Tetrachloroethene	**0.16**	1.0E-04	1.6E-05	1.3E-06	3.7E-06	7.8E-09	1.1E-04		
SMP-04A-11152012	11/15/12	25	Toluene	0.0032	1.2E-04	3.9E-07	3.2E-08	8.8E-08	NC	2.9E-07		
SMP-04A-11152012	11/15/12	25	TPH-gasoline	**180**	9.9E-05	1.8E-02	1.5E-03	4.1E-03	NC	3.1E-02		
SMP-04A-11152012	11/15/12	25	trans-1,2-Dichloroethene	**0.021**	1.0E-04	2.1E-06	1.7E-07	4.8E-07	NC	8.0E-06		
SMP-04A-11152012	11/15/12	25	trans-2-Butene	**0.053**	1.5E-04	7.9E-06	6.4E-07	1.8E-06	NC	6.0E-07		
SMP-04A-11152012	11/15/12	25	Trichloroethene	**0.38**	1.1E-04	4.2E-05	3.4E-06	9.6E-06	1.4E-08	4.8E-03		
SMP-04A-11152012	11/15/12	25	Trichlorofluoromethane (Freon 11)	**0.011**	1.2E-04	1.3E-06	1.1E-07	3.0E-07	NC	4.3E-07		
SMP-04A-11152012	11/15/12	25	Vinyl Acetate	0.013	1.2E-04	1.5E-06	1.3E-07	3.5E-07	NC	1.8E-06		
SMP-04A-11152012	11/15/12	25	Vinyl Chloride	**0.021**	1.4E-04	3.0E-06	2.5E-07	6.9E-07	1.9E-08	6.9E-06		
SMP-04A-11152012	11/15/12	25	Xylenes	0.0055	1.2E-04	6.5E-07	5.3E-08	1.5E-07	NC	1.5E-06	6.5E-08	3.7E-02
SMP-05A-11152012	11/15/12	29	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00086	1.0E-04	8.6E-08	7.0E-09	2.0E-08	NC	2.5E-10		
SMP-05A-11152012	11/15/12	29	1,1,1-Trichloroethane	**0.065**	9.5E-05	6.2E-06	5.1E-07	1.4E-06	NC	1.4E-06		
SMP-05A-11152012	11/15/12	29	1,1,2-Trichloroethane	0.0011	9.5E-05	1.0E-07	8.6E-09	2.4E-08	1.4E-10	1.7E-06		
SMP-05A-11152012	11/15/12	29	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.026**	9.5E-05	2.5E-06	2.0E-07	5.7E-07	NC	1.9E-08		
SMP-05A-11152012	11/15/12	29	1,1-Dichloroethane	**0.19**	9.1E-05	1.7E-05	1.4E-06	3.9E-06	2.3E-09	5.6E-06		
SMP-05A-11152012	11/15/12	29	1,1-Dichloroethene	**0.0029**	1.1E-04	3.2E-07	2.6E-08	7.2E-08	NC	1.0E-06		
SMP-05A-11152012	11/15/12	29	1,2,4-Trichlorobenzene	0.0015	3.9E-05	5.8E-08	4.7E-09	1.3E-08	NC	6.6E-06		
SMP-05A-11152012	11/15/12	29	1,2,4-Trimethylbenzene	0.0010	7.5E-05	7.5E-08	6.1E-09	1.7E-08	NC	2.5E-06		
SMP-05A-11152012	11/15/12	29	1,2-Dichlorobenzene	**0.0046**	8.5E-05	3.9E-07	3.2E-08	8.9E-08	NC	4.5E-07		
SMP-05A-11152012	11/15/12	29	1,2-Dichloroethane	0.00084	1.2E-04	1.0E-07	8.5E-09	2.4E-08	1.8E-10	5.9E-08		
SMP-05A-11152012	11/15/12	29	1,3-Butadiene	0.00040	2.6E-04	1.0E-07	8.5E-09	2.4E-08	1.4E-09	1.2E-05		
SMP-05A-11152012	11/15/12	29	1,3-Dichlorobenzene	0.0012	8.5E-05	1.0E-07	8.3E-09	2.3E-08	NC	2.2E-07		
SMP-05A-11152012	11/15/12	29	1,4-Dioxane	0.0020	1.1E-04	2.3E-07	1.8E-08	5.2E-08	1.4E-10	1.7E-06		
SMP-05A-11152012	11/15/12	29	1-Butene/Isobutene	**0.0027**	1.0E-04	2.8E-07	2.3E-08	6.3E-08	NC	2.1E-08		
SMP-05A-11152012	11/15/12	29	2 & 3-Chlorotoluene	0.0021	7.8E-05	1.6E-07	1.3E-08	3.7E-08	NC	5.3E-07		
SMP-05A-11152012	11/15/12	29	2-Butanone (MEK)	0.0012	9.9E-05	1.2E-07	9.7E-09	2.7E-08	NC	5.4E-09		
SMP-05A-11152012	11/15/12	29	2-Propanol	0.00056	1.3E-04	7.1E-08	5.8E-09	1.6E-08	NC	2.3E-09		
SMP-05A-11152012	11/15/12	29	3-Chloropropene	0.00064	1.1E-04	7.2E-08	5.9E-09	1.6E-08	3.5E-11	5.5E-09		
SMP-05A-11152012	11/15/12	29	Acetaldehyde	**0.0099**	1.5E-04	1.4E-06	1.2E-07	3.3E-07	3.2E-10	3.7E-05		
SMP-05A-11152012	11/15/12	29	Acetone	**0.0078**	1.5E-04	1.1E-06	9.3E-08	2.6E-07	NC	8.4E-09		
SMP-05A-11152012	11/15/12	29	Acetonitrile	0.00039	1.5E-04	5.7E-08	4.6E-09	1.3E-08	NC	2.2E-07		
SMP-05A-11152012	11/15/12	29	Acetylene	0.00042	1.3E-04	5.5E-08	4.5E-09	1.2E-08	NC	4.2E-09		
SMP-05A-11152012	11/15/12	29	Benzaldehyde	0.00096	9.0E-05	8.6E-08	7.1E-09	2.0E-08	1.9E-11	2.2E-06		
SMP-05A-11152012	11/15/12	29	Benzene	0.00050	1.1E-04	5.3E-08	4.3E-09	1.2E-08	1.3E-10	4.1E-07		
SMP-05A-11152012	11/15/12	29	Butane	**0.0059**	1.3E-04	7.7E-07	6.3E-08	1.8E-07	NC	5.8E-08		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-05A-11152012	11/15/12	29	Butyraldehyde	0.0021	1.5E-04	3.0E-07	2.5E-08	7.0E-08	6.7E-11	7.7E-06		
SMP-05A-11152012	11/15/12	29	Carbon Disulfide	0.0022	1.2E-04	2.7E-07	2.2E-08	6.2E-08	NC	8.9E-08		
SMP-05A-11152012	11/15/12	29	Carbon Tetrachloride	0.0013	9.5E-05	1.2E-07	1.0E-08	2.8E-08	4.2E-10	7.1E-07		
SMP-05A-11152012	11/15/12	29	Chlorobenzene	**0.0063**	9.0E-05	5.6E-07	4.6E-08	1.3E-07	NC	1.3E-07		
SMP-05A-11152012	11/15/12	29	Chlorodifluoromethane (Freon 22)	0.0014	1.2E-04	1.7E-07	1.4E-08	3.9E-08	NC	7.7E-10		
SMP-05A-11152012	11/15/12	29	Chloroethane	0.00039	2.8E-04	1.1E-07	8.8E-09	2.5E-08	NC	2.5E-09		
SMP-05A-11152012	11/15/12	29	Chloroform	**0.028**	1.2E-04	3.5E-06	2.8E-07	7.9E-07	1.5E-09	2.6E-06		
SMP-05A-11152012	11/15/12	29	Chloromethane	**0.0019**	1.5E-04	2.8E-07	2.3E-08	6.4E-08	NC	7.1E-07		
SMP-05A-11152012	11/15/12	29	cis-1,2-Dichloroethene	**0.0053**	9.0E-05	4.8E-07	3.9E-08	1.1E-07	NC	1.6E-05		
SMP-05A-11152012	11/15/12	29	cis-2-Butene	0.00045	1.3E-04	5.8E-08	4.8E-09	1.3E-08	NC	4.5E-09		
SMP-05A-11152012	11/15/12	29	Cyclohexane	0.00052	9.8E-05	5.1E-08	4.1E-09	1.2E-08	NC	1.9E-09		
SMP-05A-11152012	11/15/12	29	Dichlorodifluoromethane (Freon 12)	**0.0031**	8.2E-05	2.5E-07	2.1E-08	5.8E-08	NC	2.9E-07		
SMP-05A-11152012	11/15/12	29	Dichlorofluoromethane	0.00087	1.1E-04	9.7E-08	7.9E-09	2.2E-08	NC	1.1E-07		
SMP-05A-11152012	11/15/12	29	Ethane	**0.021**	1.3E-04	2.7E-06	2.2E-07	6.2E-07	NC	2.1E-07		
SMP-05A-11152012	11/15/12	29	Ethanol	0.0014	1.5E-04	2.1E-07	1.7E-08	4.9E-08	NC	6.9E-09		
SMP-05A-11152012	11/15/12	29	Ethene	**0.00077**	1.3E-04	1.0E-07	8.2E-09	2.3E-08	NC	7.6E-09		
SMP-05A-11152012	11/15/12	29	Ethylbenzene	0.00090	9.2E-05	8.3E-08	6.7E-09	1.9E-08	1.7E-11	1.9E-08		
SMP-05A-11152012	11/15/12	29	Isobutane	**0.021**	1.3E-04	2.7E-06	2.2E-07	6.2E-07	NC	2.1E-07		
SMP-05A-11152012	11/15/12	29	Isopropylbenzene (Cumene)	0.0020	8.0E-05	1.6E-07	1.3E-08	3.7E-08	NC	9.2E-08		
SMP-05A-11152012	11/15/12	29	Methylene Chloride	0.00073	1.2E-04	8.8E-08	7.2E-09	2.0E-08	7.2E-12	5.0E-08		
SMP-05A-11152012	11/15/12	29	Naphthalene	0.0017	7.4E-05	1.3E-07	1.0E-08	2.9E-08	3.5E-10	9.5E-06		
SMP-05A-11152012	11/15/12	29	n-Butanol	0.0021	1.1E-04	2.4E-07	1.9E-08	5.4E-08	NC	1.5E-07		
SMP-05A-11152012	11/15/12	29	n-Hexane	0.00066	2.2E-04	1.4E-07	1.2E-08	3.3E-08	NC	4.7E-08		
SMP-05A-11152012	11/15/12	29	n-Nonane	0.0011	6.5E-05	7.1E-08	5.8E-09	1.6E-08	NC	8.1E-08		
SMP-05A-11152012	11/15/12	29	n-Pentane	0.00061	1.0E-04	6.1E-08	5.0E-09	1.4E-08	NC	1.4E-08		
SMP-05A-11152012	11/15/12	29	Propane	**0.041**	1.3E-04	5.3E-06	4.3E-07	1.2E-06	NC	4.1E-07		
SMP-05A-11152012	11/15/12	29	Propene	**0.0019**	1.3E-04	2.5E-07	2.0E-08	5.6E-08	NC	1.9E-08		
SMP-05A-11152012	11/15/12	29	Propylbenzene	0.0010	7.5E-05	7.5E-08	6.1E-09	1.7E-08	NC	1.2E-07		
SMP-05A-11152012	11/15/12	29	Styrene	0.00088	8.7E-05	7.7E-08	6.3E-09	1.8E-08	NC	2.0E-08		
SMP-05A-11152012	11/15/12	29	Tetrachloroethene	**0.15**	8.9E-05	1.3E-05	1.1E-06	3.0E-06	6.4E-09	8.7E-05		
SMP-05A-11152012	11/15/12	29	Toluene	0.00078	1.1E-04	8.2E-08	6.7E-09	1.9E-08	NC	6.3E-08		
SMP-05A-11152012	11/15/12	29	TPH-gasoline	1.7	8.6E-05	1.5E-04	1.2E-05	3.3E-05	NC	2.6E-04		
SMP-05A-11152012	11/15/12	29	trans-1,2-Dichloroethene	**0.010**	8.7E-05	8.7E-07	7.1E-08	2.0E-07	NC	3.3E-06		
SMP-05A-11152012	11/15/12	29	trans-2-Butene	0.00043	1.3E-04	5.6E-08	4.6E-09	1.3E-08	NC	4.3E-09		
SMP-05A-11152012	11/15/12	29	Trichloroethene	**1.1**	9.6E-05	1.1E-04	8.7E-06	2.4E-05	3.5E-08	1.2E-02		
SMP-05A-11152012	11/15/12	29	Trichlorofluoromethane (Freon 11)	**0.0026**	1.1E-04	2.7E-07	2.2E-08	6.3E-08	NC	8.9E-08		
SMP-05A-11152012	11/15/12	29	Vinyl Acetate	0.0031	1.0E-04	3.2E-07	2.6E-08	7.3E-08	NC	3.7E-07		
SMP-05A-11152012	11/15/12	29	Vinyl Chloride	0.00050	1.3E-04	6.3E-08	5.1E-09	1.4E-08	4.0E-10	1.4E-07		
SMP-05A-11152012	11/15/12	29	Xylenes	0.0013	1.0E-04	1.3E-07	1.1E-08	3.1E-08	NC	3.1E-07	4.9E-08	1.3E-02
SMP-06-11142012	11/14/12	23	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00088	1.2E-04	1.1E-07	8.9E-09	2.5E-08	NC	3.1E-10		
SMP-06-11142012	11/14/12	23	1,1,1-Trichloroethane	0.0011	1.2E-04	1.3E-07	1.1E-08	3.0E-08	NC	3.0E-08		
SMP-06-11142012	11/14/12	23	1,1,2-Trichloroethane	0.0011	1.2E-04	1.3E-07	1.1E-08	3.0E-08	1.7E-10	2.1E-06		
SMP-06-11142012	11/14/12	23	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.014**	1.2E-04	1.7E-06	1.4E-07	3.8E-07	NC	1.3E-08		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-06-11142012	11/14/12	23	1,1-Dichloroethane	**0.0063**	1.1E-04	7.1E-07	5.8E-08	1.6E-07	9.3E-11	2.3E-07		
SMP-06-11142012	11/14/12	23	1,1-Dichloroethene	**0.0059**	1.3E-04	7.9E-07	6.5E-08	1.8E-07	NC	2.6E-06		
SMP-06-11142012	11/14/12	23	1,2,4-Trichlorobenzene	**0.0051**	4.8E-05	2.5E-07	2.0E-08	5.6E-08	NC	2.8E-05		
SMP-06-11142012	11/14/12	23	1,2,4-Trimethylbenzene	0.0010	9.4E-05	9.4E-08	7.7E-09	2.1E-08	NC	3.1E-06		
SMP-06-11142012	11/14/12	23	1,2-Dichlorobenzene	0.0013	1.1E-04	1.4E-07	1.1E-08	3.1E-08	NC	1.6E-07		
SMP-06-11142012	11/14/12	23	1,2-Dichloroethane	0.00086	1.5E-04	1.3E-07	1.1E-08	3.0E-08	2.3E-10	7.5E-08		
SMP-06-11142012	11/14/12	23	1,3-Butadiene	0.00041	3.1E-04	1.3E-07	1.0E-08	2.9E-08	1.8E-09	1.5E-05		
SMP-06-11142012	11/14/12	23	1,3-Dichlorobenzene	0.0013	1.1E-04	1.4E-07	1.1E-08	3.1E-08	NC	3.0E-07		
SMP-06-11142012	11/14/12	23	1,4-Dioxane	0.0020	1.4E-04	2.8E-07	2.3E-08	6.4E-08	1.8E-10	2.1E-06		
SMP-06-11142012	11/14/12	23	1-Butene/Isobutene	**0.39**	1.3E-04	5.0E-05	4.1E-06	1.1E-05	NC	3.8E-06		
SMP-06-11142012	11/14/12	23	2 & 3-Chlorotoluene	0.0022	9.7E-05	2.1E-07	1.7E-08	4.9E-08	NC	7.0E-07		
SMP-06-11142012	11/14/12	23	2-Butanone (MEK)	0.0012	1.2E-04	1.5E-07	1.2E-08	3.4E-08	NC	6.7E-09		
SMP-06-11142012	11/14/12	23	2-Propanol	**0.0026**	1.6E-04	4.1E-07	3.3E-08	9.3E-08	NC	1.3E-08		
SMP-06-11142012	11/14/12	23	3-Chloropropene	0.00065	1.4E-04	9.1E-08	7.4E-09	2.1E-08	4.4E-11	6.9E-09		
SMP-06-11142012	11/14/12	23	Acetaldehyde	**0.11**	1.8E-04	2.0E-05	1.6E-06	4.5E-06	4.3E-09	5.0E-04		
SMP-06-11142012	11/14/12	23	Acetone	**0.11**	1.8E-04	2.0E-05	1.6E-06	4.5E-06	NC	1.5E-07		
SMP-06-11142012	11/14/12	23	Acetonitrile	0.00040	1.8E-04	7.1E-08	5.8E-09	1.6E-08	NC	2.7E-07		
SMP-06-11142012	11/14/12	23	Acetylene	**0.0013**	1.6E-04	2.1E-07	1.7E-08	4.8E-08	NC	1.6E-08		
SMP-06-11142012	11/14/12	23	Benzaldehyde	0.00099	1.1E-04	1.1E-07	9.0E-09	2.5E-08	2.4E-11	2.8E-06		
SMP-06-11142012	11/14/12	23	Benzene	**0.010**	1.3E-04	1.3E-06	1.1E-07	3.0E-07	3.1E-09	1.0E-05		
SMP-06-11142012	11/14/12	23	Butane	**0.083**	1.6E-04	1.3E-05	1.1E-06	3.0E-06	NC	1.0E-06		
SMP-06-11142012	11/14/12	23	Butyraldehyde	0.0021	1.8E-04	3.7E-07	3.1E-08	8.5E-08	8.2E-11	9.5E-06		
SMP-06-11142012	11/14/12	23	Carbon Disulfide	**0.0046**	1.5E-04	7.0E-07	5.7E-08	1.6E-07	NC	2.3E-07		
SMP-06-11142012	11/14/12	23	Carbon Tetrachloride	0.0013	1.2E-04	1.5E-07	1.3E-08	3.5E-08	5.3E-10	8.8E-07		
SMP-06-11142012	11/14/12	23	Chlorobenzene	0.00098	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	2.5E-08		
SMP-06-11142012	11/14/12	23	Chlorodifluoromethane (Freon 22)	**0.0090**	1.5E-04	1.3E-06	1.1E-07	3.1E-07	NC	6.1E-09		
SMP-06-11142012	11/14/12	23	Chloroethane	**0.0067**	3.3E-04	2.2E-06	1.8E-07	5.1E-07	NC	5.1E-08		
SMP-06-11142012	11/14/12	23	Chloroform	0.0010	1.5E-04	1.5E-07	1.2E-08	3.5E-08	6.6E-11	1.2E-07		
SMP-06-11142012	11/14/12	23	Chloromethane	**0.0058**	1.8E-04	1.0E-06	8.5E-08	2.4E-07	NC	2.7E-06		
SMP-06-11142012	11/14/12	23	cis-1,2-Dichloroethene	0.00084	1.1E-04	9.4E-08	7.7E-09	2.2E-08	NC	3.1E-06		
SMP-06-11142012	11/14/12	23	cis-2-Butene	**0.038**	1.6E-04	6.1E-06	5.0E-07	1.4E-06	NC	4.6E-07		
SMP-06-11142012	11/14/12	23	Cyclohexane	**0.039**	1.2E-04	4.7E-06	3.8E-07	1.1E-06	NC	1.8E-07		
SMP-06-11142012	11/14/12	23	Dichlorodifluoromethane (Freon 12)	**0.0036**	1.0E-04	3.7E-07	3.0E-08	8.4E-08	NC	4.2E-07		
SMP-06-11142012	11/14/12	23	Dichlorofluoromethane	**0.0050**	1.4E-04	6.9E-07	5.6E-08	1.6E-07	NC	7.9E-07		
SMP-06-11142012	11/14/12	23	Ethane	**0.24**	1.6E-04	3.8E-05	3.1E-06	8.8E-06	NC	2.9E-06		
SMP-06-11142012	11/14/12	23	Ethanol	**0.0076**	1.9E-04	1.4E-06	1.2E-07	3.2E-07	NC	4.6E-08		
SMP-06-11142012	11/14/12	23	Ethene	**0.029**	1.6E-04	4.6E-06	3.8E-07	1.1E-06	NC	3.5E-07		
SMP-06-11142012	11/14/12	23	Ethylbenzene	0.00092	1.1E-04	1.1E-07	8.6E-09	2.4E-08	2.1E-11	2.4E-08		
SMP-06-11142012	11/14/12	23	Isobutane	**0.061**	1.6E-04	9.8E-06	8.0E-07	2.2E-06	NC	7.4E-07		
SMP-06-11142012	11/14/12	23	Isopropylbenzene (Cumene)	**0.0064**	1.0E-04	6.4E-07	5.2E-08	1.5E-07	NC	3.7E-07		
SMP-06-11142012	11/14/12	23	Methylene Chloride	0.00074	1.5E-04	1.1E-07	9.0E-09	2.5E-08	9.0E-12	6.3E-08		
SMP-06-11142012	11/14/12	23	Naphthalene	**0.0054**	9.2E-05	5.0E-07	4.0E-08	1.1E-07	1.4E-09	3.8E-05		
SMP-06-11142012	11/14/12	23	n-Butanol	**0.0045**	1.4E-04	6.3E-07	5.1E-08	1.4E-07	NC	4.1E-07		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-06-11142012	11/14/12	23	n-Hexane	**0.088**	2.6E-04	2.3E-05	1.9E-06	5.3E-06	NC	7.6E-06		
SMP-06-11142012	11/14/12	23	n-Nonane	0.0011	8.1E-05	8.9E-08	7.2E-09	2.0E-08	NC	1.0E-07		
SMP-06-11142012	11/14/12	23	n-Pentane	**0.084**	1.2E-04	1.0E-05	8.5E-07	2.4E-06	NC	2.4E-06		
SMP-06-11142012	11/14/12	23	Propane	**0.25**	1.6E-04	4.0E-05	3.3E-06	9.1E-06	NC	3.0E-06		
SMP-06-11142012	11/14/12	23	Propene	**0.33**	1.6E-04	5.3E-05	4.3E-06	1.2E-05	NC	4.0E-06		
SMP-06-11142012	11/14/12	23	Propylbenzene	0.0010	9.3E-05	9.3E-08	7.6E-09	2.1E-08	NC	1.5E-07		
SMP-06-11142012	11/14/12	23	Styrene	0.00090	1.1E-04	9.8E-08	8.0E-09	2.2E-08	NC	2.5E-08		
SMP-06-11142012	11/14/12	23	Tetrachloroethene	**0.047**	1.1E-04	5.2E-06	4.2E-07	1.2E-06	2.5E-09	3.4E-05		
SMP-06-11142012	11/14/12	23	Toluene	**0.071**	1.3E-04	9.3E-06	7.6E-07	2.1E-06	NC	7.1E-06		
SMP-06-11142012	11/14/12	23	TPH-gasoline	**150**	1.1E-04	1.6E-02	1.3E-03	3.7E-03	NC	2.8E-02		
SMP-06-11142012	11/14/12	23	trans-1,2-Dichloroethene	0.0016	1.1E-04	1.7E-07	1.4E-08	4.0E-08	NC	6.6E-07		
SMP-06-11142012	11/14/12	23	trans-2-Butene	**0.039**	1.6E-04	6.2E-06	5.1E-07	1.4E-06	NC	4.8E-07		
SMP-06-11142012	11/14/12	23	Trichloroethene	**0.0076**	1.2E-04	9.1E-07	7.4E-08	2.1E-07	3.0E-10	1.0E-04		
SMP-06-11142012	11/14/12	23	Trichlorofluoromethane (Freon 11)	**0.0038**	1.3E-04	5.0E-07	4.0E-08	1.1E-07	NC	1.6E-07		
SMP-06-11142012	11/14/12	23	Vinyl Acetate	0.0031	1.3E-04	4.0E-07	3.2E-08	9.1E-08	NC	4.5E-07		
SMP-06-11142012	11/14/12	23	Vinyl Chloride	**0.0015**	1.6E-04	2.3E-07	1.9E-08	5.3E-08	1.5E-09	5.3E-07		
SMP-06-11142012	11/14/12	23	Xylenes	0.0014	1.3E-04	1.8E-07	1.5E-08	4.1E-08	NC	4.1E-07	1.6E-08	2.9E-02
SMP-07A-11142012	11/14/12	27	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.020	1.1E-04	2.1E-06	1.7E-07	4.9E-07	NC	6.1E-09		
SMP-07A-11142012	11/14/12	27	1,1,1-Trichloroethane	0.025	1.0E-04	2.5E-06	2.1E-07	5.8E-07	NC	5.8E-07		
SMP-07A-11142012	11/14/12	27	1,1,2-Trichloroethane	0.025	1.0E-04	2.5E-06	2.1E-07	5.8E-07	3.3E-09	4.2E-05		
SMP-07A-11142012	11/14/12	27	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.036	1.0E-04	3.7E-06	3.0E-07	8.4E-07	NC	2.8E-08		
SMP-07A-11142012	11/14/12	27	1,1-Dichloroethane	0.019	9.7E-05	1.8E-06	1.5E-07	4.2E-07	2.4E-10	6.0E-07		
SMP-07A-11142012	11/14/12	27	1,1-Dichloroethene	0.022	1.2E-04	2.6E-06	2.1E-07	5.8E-07	NC	8.3E-06		
SMP-07A-11142012	11/14/12	27	1,2,4-Trichlorobenzene	0.034	4.1E-05	1.4E-06	1.1E-07	3.2E-07	NC	1.6E-04		
SMP-07A-11142012	11/14/12	27	1,2,4-Trimethylbenzene	0.023	8.1E-05	1.9E-06	1.5E-07	4.2E-07	NC	6.1E-05		
SMP-07A-11142012	11/14/12	27	1,2-Dichlorobenzene	0.028	9.1E-05	2.5E-06	2.1E-07	5.8E-07	NC	2.9E-06		
SMP-07A-11142012	11/14/12	27	1,2-Dichloroethane	0.019	1.3E-04	2.5E-06	2.0E-07	5.7E-07	4.3E-09	1.4E-06		
SMP-07A-11142012	11/14/12	27	1,3-Butadiene	0.0092	2.8E-04	2.5E-06	2.1E-07	5.8E-07	3.5E-08	2.9E-04		
SMP-07A-11142012	11/14/12	27	1,3-Dichlorobenzene	0.028	9.1E-05	2.6E-06	2.1E-07	5.8E-07	NC	5.6E-06		
SMP-07A-11142012	11/14/12	27	1,4-Dioxane	0.045	1.2E-04	5.4E-06	4.4E-07	1.2E-06	3.4E-09	4.1E-05		
SMP-07A-11142012	11/14/12	27	1-Butene/Isobutene	**0.62**	1.1E-04	6.8E-05	5.6E-06	1.6E-05	NC	5.2E-06		
SMP-07A-11142012	11/14/12	27	2 & 3-Chlorotoluene	0.049	8.4E-05	4.1E-06	3.3E-07	9.3E-07	NC	1.3E-05		
SMP-07A-11142012	11/14/12	27	2-Butanone (MEK)	0.027	1.1E-04	2.9E-06	2.3E-07	6.5E-07	NC	1.3E-07		
SMP-07A-11142012	11/14/12	27	2-Propanol	0.013	1.4E-04	1.8E-06	1.4E-07	4.0E-07	NC	5.8E-08		
SMP-07A-11142012	11/14/12	27	3-Chloropropene	0.014	1.2E-04	1.7E-06	1.4E-07	3.8E-07	8.2E-10	1.3E-07		
SMP-07A-11142012	11/14/12	27	Acetaldehyde	0.029	1.6E-04	4.5E-06	3.7E-07	1.0E-06	9.9E-10	1.1E-04		
SMP-07A-11142012	11/14/12	27	Acetone	**0.062**	1.6E-04	9.6E-06	7.9E-07	2.2E-06	NC	7.1E-08		
SMP-07A-11142012	11/14/12	27	Acetonitrile	0.0090	1.5E-04	1.4E-06	1.1E-07	3.2E-07	NC	5.3E-06		
SMP-07A-11142012	11/14/12	27	Acetylene	0.0096	1.4E-04	1.3E-06	1.1E-07	3.0E-07	NC	1.0E-07		
SMP-07A-11142012	11/14/12	27	Benzaldehyde	0.022	9.6E-05	2.1E-06	1.7E-07	4.8E-07	4.7E-10	5.4E-05		
SMP-07A-11142012	11/14/12	27	Benzene	0.011	1.1E-04	1.3E-06	1.0E-07	2.9E-07	3.0E-09	9.5E-06		
SMP-07A-11142012	11/14/12	27	Butane	**0.23**	1.4E-04	3.2E-05	2.6E-06	7.3E-06	NC	2.4E-06		
SMP-07A-11142012	11/14/12	27	Butyraldehyde	0.048	1.5E-04	7.4E-06	6.1E-07	1.7E-06	1.6E-09	1.9E-04		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-07A-11142012	11/14/12	27	Carbon Disulfide	0.050	1.3E-04	6.6E-06	5.4E-07	1.5E-06	NC	2.2E-06		
SMP-07A-11142012	11/14/12	27	Carbon Tetrachloride	0.030	1.0E-04	3.1E-06	2.5E-07	7.0E-07	1.0E-08	1.7E-05		
SMP-07A-11142012	11/14/12	27	Chlorobenzene	0.022	9.6E-05	2.1E-06	1.7E-07	4.8E-07	NC	4.8E-07		
SMP-07A-11142012	11/14/12	27	Chlorodifluoromethane (Freon 22)	0.031	1.3E-04	4.0E-06	3.3E-07	9.1E-07	NC	1.8E-08		
SMP-07A-11142012	11/14/12	27	Chloroethane	**0.034**	2.9E-04	1.0E-05	8.1E-07	2.3E-06	NC	2.3E-07		
SMP-07A-11142012	11/14/12	27	Chloroform	0.023	1.3E-04	3.0E-06	2.5E-07	6.9E-07	1.3E-09	2.3E-06		
SMP-07A-11142012	11/14/12	27	Chloromethane	0.0079	1.6E-04	1.2E-06	1.0E-07	2.8E-07	NC	3.1E-06		
SMP-07A-11142012	11/14/12	27	cis-1,2-Dichloroethene	0.019	9.7E-05	1.8E-06	1.5E-07	4.2E-07	NC	6.0E-05		
SMP-07A-11142012	11/14/12	27	cis-2-Butene	**0.073**	1.4E-04	1.0E-05	8.3E-07	2.3E-06	NC	7.7E-07		
SMP-07A-11142012	11/14/12	27	Cyclohexane	**0.20**	1.0E-04	2.1E-05	1.7E-06	4.8E-06	NC	7.9E-07		
SMP-07A-11142012	11/14/12	27	Dichlorodifluoromethane (Freon 12)	0.023	8.8E-05	2.0E-06	1.6E-07	4.6E-07	NC	2.3E-06		
SMP-07A-11142012	11/14/12	27	Dichlorofluoromethane	0.020	1.2E-04	2.4E-06	1.9E-07	5.4E-07	NC	2.7E-06		
SMP-07A-11142012	11/14/12	27	Ethane	**0.88**	1.4E-04	1.2E-04	1.0E-05	2.8E-05	NC	9.3E-06		
SMP-07A-11142012	11/14/12	27	Ethanol	0.031	1.6E-04	5.0E-06	4.1E-07	1.1E-06	NC	1.6E-07		
SMP-07A-11142012	11/14/12	27	Ethene	**0.29**	1.4E-04	4.0E-05	3.3E-06	9.2E-06	NC	3.1E-06		
SMP-07A-11142012	11/14/12	27	Ethylbenzene	0.020	9.8E-05	2.0E-06	1.6E-07	4.5E-07	4.0E-10	4.5E-07		
SMP-07A-11142012	11/14/12	27	Isobutane	**0.14**	1.4E-04	1.9E-05	1.6E-06	4.4E-06	NC	1.5E-06		
SMP-07A-11142012	11/14/12	27	Isopropylbenzene (Cumene)	**2.7**	8.6E-05	2.3E-04	1.9E-05	5.3E-05	NC	1.3E-04		
SMP-07A-11142012	11/14/12	27	Methylene Chloride	0.017	1.3E-04	2.2E-06	1.8E-07	5.0E-07	1.8E-10	1.3E-06		
SMP-07A-11142012	11/14/12	27	Naphthalene	**0.14**	7.9E-05	1.1E-05	9.0E-07	2.5E-06	3.1E-08	8.4E-04		
SMP-07A-11142012	11/14/12	27	n-Butanol	0.048	1.2E-04	5.8E-06	4.7E-07	1.3E-06	NC	3.8E-06		
SMP-07A-11142012	11/14/12	27	n-Hexane	**0.036**	2.3E-04	8.3E-06	6.8E-07	1.9E-06	NC	2.7E-06		
SMP-07A-11142012	11/14/12	27	n-Nonane	**1.6**	6.9E-05	1.1E-04	9.0E-06	2.5E-05	NC	1.3E-04		
SMP-07A-11142012	11/14/12	27	n-Pentane	**0.13**	1.1E-04	1.4E-05	1.1E-06	3.2E-06	NC	3.2E-06		
SMP-07A-11142012	11/14/12	27	Propane	**0.47**	1.4E-04	6.5E-05	5.3E-06	1.5E-05	NC	5.0E-06		
SMP-07A-11142012	11/14/12	27	Propene	**0.81**	1.4E-04	1.1E-04	9.2E-06	2.6E-05	NC	8.5E-06		
SMP-07A-11142012	11/14/12	27	Propylbenzene	**2.1**	8.0E-05	1.7E-04	1.4E-05	3.8E-05	NC	2.7E-04		
SMP-07A-11142012	11/14/12	27	Styrene	0.020	9.3E-05	1.9E-06	1.5E-07	4.3E-07	NC	4.7E-07		
SMP-07A-11142012	11/14/12	27	Tetrachloroethene	**0.18**	9.5E-05	1.7E-05	1.4E-06	3.9E-06	8.2E-09	1.1E-04		
SMP-07A-11142012	11/14/12	27	Toluene	**0.11**	1.1E-04	1.2E-05	1.0E-06	2.8E-06	NC	9.4E-06		
SMP-07A-11142012	11/14/12	27	TPH-gasoline	**3,500**	9.2E-05	3.2E-01	2.6E-02	7.4E-02	NC	5.7E-01		
SMP-07A-11142012	11/14/12	27	trans-1,2-Dichloroethene	0.036	9.3E-05	3.4E-06	2.7E-07	7.7E-07	NC	1.3E-05		
SMP-07A-11142012	11/14/12	27	trans-2-Butene	**0.079**	1.4E-04	1.1E-05	8.9E-07	2.5E-06	NC	8.3E-07		
SMP-07A-11142012	11/14/12	27	Trichloroethene	**0.076**	1.0E-04	7.8E-06	6.4E-07	1.8E-06	2.6E-09	8.9E-04		
SMP-07A-11142012	11/14/12	27	Trichlorofluoromethane (Freon 11)	0.026	1.1E-04	2.9E-06	2.4E-07	6.7E-07	NC	9.5E-07		
SMP-07A-11142012	11/14/12	27	Vinyl Acetate	0.070	1.1E-04	7.7E-06	6.3E-07	1.8E-06	NC	8.8E-06		
SMP-07A-11142012	11/14/12	27	Vinyl Chloride	0.011	1.3E-04	1.5E-06	1.2E-07	3.4E-07	9.4E-09	3.4E-06		
SMP-07A-11142012	11/14/12	27	Xylenes	0.030	1.1E-04	3.3E-06	2.7E-07	7.5E-07	NC	7.5E-06	1.2E-07	5.7E-01
SMP-08A-11142012	11/14/12	27	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.036**	1.1E-04	3.9E-06	3.1E-07	8.8E-07	NC	1.1E-08		
SMP-08A-11142012	11/14/12	27	1,1,1-Trichloroethane	0.0056	1.0E-04	5.7E-07	4.7E-08	1.3E-07	NC	1.3E-07		
SMP-08A-11142012	11/14/12	27	1,1,2-Trichloroethane	0.0056	1.0E-04	5.7E-07	4.7E-08	1.3E-07	7.4E-10	9.3E-06		
SMP-08A-11142012	11/14/12	27	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.017**	1.0E-04	1.7E-06	1.4E-07	4.0E-07	NC	1.3E-08		
SMP-08A-11142012	11/14/12	27	1,1-Dichloroethane	**0.015**	9.7E-05	1.5E-06	1.2E-07	3.3E-07	1.9E-10	4.8E-07		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-08A-11142012	11/14/12	27	1,1-Dichloroethene	**0.029**	1.2E-04	3.4E-06	2.7E-07	7.7E-07	NC	1.1E-05		
SMP-08A-11142012	11/14/12	27	1,2,4-Trichlorobenzene	0.0074	4.1E-05	3.1E-07	2.5E-08	7.0E-08	NC	3.5E-05		
SMP-08A-11142012	11/14/12	27	1,2,4-Trimethylbenzene	0.0051	8.1E-05	4.1E-07	3.4E-08	9.4E-08	NC	1.3E-05		
SMP-08A-11142012	11/14/12	27	1,2-Dichlorobenzene	0.0062	9.1E-05	5.6E-07	4.6E-08	1.3E-07	NC	6.4E-07		
SMP-08A-11142012	11/14/12	27	1,2-Dichloroethane	0.0042	1.3E-04	5.6E-07	4.5E-08	1.3E-07	9.5E-10	3.2E-07		
SMP-08A-11142012	11/14/12	27	1,3-Butadiene	0.0020	2.8E-04	5.5E-07	4.5E-08	1.3E-07	7.6E-09	6.3E-05		
SMP-08A-11142012	11/14/12	27	1,3-Dichlorobenzene	0.0062	9.1E-05	5.7E-07	4.6E-08	1.3E-07	NC	1.2E-06		
SMP-08A-11142012	11/14/12	27	1,4-Dioxane	0.0100	1.2E-04	1.2E-06	9.9E-08	2.8E-07	7.6E-10	9.2E-06		
SMP-08A-11142012	11/14/12	27	1-Butene/Isobutene	**0.76**	1.1E-04	8.4E-05	6.8E-06	1.9E-05	NC	6.4E-06		
SMP-08A-11142012	11/14/12	27	2 & 3-Chlorotoluene	0.011	8.4E-05	9.2E-07	7.5E-08	2.1E-07	NC	3.0E-06		
SMP-08A-11142012	11/14/12	27	2-Butanone (MEK)	**0.014**	1.1E-04	1.5E-06	1.2E-07	3.4E-07	NC	6.8E-08		
SMP-08A-11142012	11/14/12	27	2-Propanol	0.0028	1.4E-04	3.8E-07	3.1E-08	8.7E-08	NC	1.2E-08		
SMP-08A-11142012	11/14/12	27	3-Chloropropene	**0.0080**	1.2E-04	9.6E-07	7.8E-08	2.2E-07	4.7E-10	7.3E-08		
SMP-08A-11142012	11/14/12	27	Acetaldehyde	**0.13**	1.6E-04	2.0E-05	1.6E-06	4.6E-06	4.4E-09	5.1E-04		
SMP-08A-11142012	11/14/12	27	Acetone	**0.10**	1.6E-04	1.6E-05	1.3E-06	3.6E-06	NC	1.1E-07		
SMP-08A-11142012	11/14/12	27	Acetonitrile	0.0020	1.5E-04	3.1E-07	2.5E-08	7.1E-08	NC	1.2E-06		
SMP-08A-11142012	11/14/12	27	Acetylene	0.0021	1.4E-04	2.9E-07	2.4E-08	6.6E-08	NC	2.2E-08		
SMP-08A-11142012	11/14/12	27	Benzaldehyde	0.0048	9.6E-05	4.6E-07	3.8E-08	1.1E-07	1.0E-10	1.2E-05		
SMP-08A-11142012	11/14/12	27	Benzene	**0.023**	1.1E-04	2.6E-06	2.1E-07	6.0E-07	6.2E-09	2.0E-05		
SMP-08A-11142012	11/14/12	27	Butane	**0.23**	1.4E-04	3.2E-05	2.6E-06	7.3E-06	NC	2.4E-06		
SMP-08A-11142012	11/14/12	27	Butyraldehyde	0.010	1.5E-04	1.5E-06	1.3E-07	3.5E-07	3.4E-10	3.9E-05		
SMP-08A-11142012	11/14/12	27	Carbon Disulfide	**0.022**	1.3E-04	2.9E-06	2.4E-07	6.6E-07	NC	9.5E-07		
SMP-08A-11142012	11/14/12	27	Carbon Tetrachloride	0.0065	1.0E-04	6.6E-07	5.4E-08	1.5E-07	2.3E-09	3.8E-06		
SMP-08A-11142012	11/14/12	27	Chlorobenzene	0.0048	9.6E-05	4.6E-07	3.8E-08	1.1E-07	NC	1.1E-07		
SMP-08A-11142012	11/14/12	27	Chlorodifluoromethane (Freon 22)	0.0068	1.3E-04	8.8E-07	7.2E-08	2.0E-07	NC	4.0E-09		
SMP-08A-11142012	11/14/12	27	Chloroethane	**0.022**	2.9E-04	6.5E-06	5.3E-07	1.5E-06	NC	1.5E-07		
SMP-08A-11142012	11/14/12	27	Chloroform	0.0051	1.3E-04	6.7E-07	5.5E-08	1.5E-07	2.9E-10	5.1E-07		
SMP-08A-11142012	11/14/12	27	Chloromethane	0.0017	1.6E-04	2.7E-07	2.2E-08	6.1E-08	NC	6.8E-07		
SMP-08A-11142012	11/14/12	27	cis-1,2-Dichloroethene	0.0041	9.7E-05	4.0E-07	3.2E-08	9.0E-08	NC	1.3E-05		
SMP-08A-11142012	11/14/12	27	cis-2-Butene	**0.075**	1.4E-04	1.0E-05	8.5E-07	2.4E-06	NC	7.9E-07		
SMP-08A-11142012	11/14/12	27	Cyclohexane	**0.092**	1.0E-04	9.6E-06	7.8E-07	2.2E-06	NC	3.7E-07		
SMP-08A-11142012	11/14/12	27	Dichlorodifluoromethane (Freon 12)	0.0051	8.8E-05	4.5E-07	3.7E-08	1.0E-07	NC	5.1E-07		
SMP-08A-11142012	11/14/12	27	Dichlorofluoromethane	0.0044	1.2E-04	5.2E-07	4.3E-08	1.2E-07	NC	6.0E-07		
SMP-08A-11142012	11/14/12	27	Ethane	**0.66**	1.4E-04	9.2E-05	7.5E-06	2.1E-05	NC	7.0E-06		
SMP-08A-11142012	11/14/12	27	Ethanol	0.0068	1.6E-04	1.1E-06	9.0E-08	2.5E-07	NC	3.6E-08		
SMP-08A-11142012	11/14/12	27	Ethene	**0.20**	1.4E-04	2.8E-05	2.3E-06	6.3E-06	NC	2.1E-06		
SMP-08A-11142012	11/14/12	27	Ethylbenzene	0.0045	9.8E-05	4.4E-07	3.6E-08	1.0E-07	9.0E-11	1.0E-07		
SMP-08A-11142012	11/14/12	27	Isobutane	**0.14**	1.4E-04	1.9E-05	1.6E-06	4.4E-06	NC	1.5E-06		
SMP-08A-11142012	11/14/12	27	Isopropylbenzene (Cumene)	0.0098	8.6E-05	8.4E-07	6.9E-08	1.9E-07	NC	4.8E-07		
SMP-08A-11142012	11/14/12	27	Methylene Chloride	**0.012**	1.3E-04	1.5E-06	1.3E-07	3.5E-07	1.3E-10	8.8E-07		
SMP-08A-11142012	11/14/12	27	Naphthalene	0.0086	7.9E-05	6.8E-07	5.5E-08	1.5E-07	1.9E-09	5.2E-05		
SMP-08A-11142012	11/14/12	27	n-Butanol	0.011	1.2E-04	1.3E-06	1.1E-07	3.0E-07	NC	8.6E-07		
SMP-08A-11142012	11/14/12	27	n-Hexane	**0.14**	2.3E-04	3.2E-05	2.6E-06	7.4E-06	NC	1.1E-05		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-08A-11142012	11/14/12	27	n-Nonane	0.0054	6.9E-05	3.7E-07	3.0E-08	8.5E-08	NC	4.3E-07		
SMP-08A-11142012	11/14/12	27	n-Pentane	**0.24**	1.1E-04	2.6E-05	2.1E-06	5.9E-06	NC	5.9E-06		
SMP-08A-11142012	11/14/12	27	Propane	**0.51**	1.4E-04	7.1E-05	5.8E-06	1.6E-05	NC	5.4E-06		
SMP-08A-11142012	11/14/12	27	Propene	**0.74**	1.4E-04	1.0E-04	8.4E-06	2.3E-05	NC	7.8E-06		
SMP-08A-11142012	11/14/12	27	Propylbenzene	0.0052	8.0E-05	4.2E-07	3.4E-08	9.5E-08	NC	6.8E-07		
SMP-08A-11142012	11/14/12	27	Styrene	0.0044	9.3E-05	4.1E-07	3.4E-08	9.4E-08	NC	1.0E-07		
SMP-08A-11142012	11/14/12	27	Tetrachloroethene	**0.34**	9.5E-05	3.2E-05	2.6E-06	7.4E-06	1.5E-08	2.1E-04		
SMP-08A-11142012	11/14/12	27	Toluene	**0.036**	1.1E-04	4.1E-06	3.3E-07	9.3E-07	NC	3.1E-06		
SMP-08A-11142012	11/14/12	27	TPH-gasoline	**630**	9.2E-05	5.8E-02	4.7E-03	1.3E-02	NC	1.0E-01		
SMP-08A-11142012	11/14/12	27	trans-1,2-Dichloroethene	0.0079	9.3E-05	7.4E-07	6.0E-08	1.7E-07	NC	2.8E-06		
SMP-08A-11142012	11/14/12	27	trans-2-Butene	**0.092**	1.4E-04	1.3E-05	1.0E-06	2.9E-06	NC	9.7E-07		
SMP-08A-11142012	11/14/12	27	Trichloroethene	**0.041**	1.0E-04	4.2E-06	3.4E-07	9.7E-07	1.4E-09	4.8E-04		
SMP-08A-11142012	11/14/12	27	Trichlorofluoromethane (Freon 11)	0.0058	1.1E-04	6.5E-07	5.3E-08	1.5E-07	NC	2.1E-07		
SMP-08A-11142012	11/14/12	27	Vinyl Acetate	0.015	1.1E-04	1.7E-06	1.3E-07	3.8E-07	NC	1.9E-06		
SMP-08A-11142012	11/14/12	27	Vinyl Chloride	**0.0081**	1.3E-04	1.1E-06	8.9E-08	2.5E-07	6.9E-09	2.5E-06		
SMP-08A-11142012	11/14/12	27	Xylenes	0.0067	1.1E-04	7.4E-07	6.0E-08	1.7E-07	NC	1.7E-06	5.0E-08	1.0E-01
SMP-09A-11152012	11/15/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0010**	1.1E-04	1.1E-07	9.4E-09	2.6E-08	NC	3.3E-10		
SMP-09A-11152012	11/15/12	25	1,1,1-Trichloroethane	**0.0060**	1.1E-04	6.6E-07	5.4E-08	1.5E-07	NC	1.5E-07		
SMP-09A-11152012	11/15/12	25	1,1,2-Trichloroethane	0.00045	1.1E-04	4.9E-08	4.0E-09	1.1E-08	6.4E-11	8.0E-07		
SMP-09A-11152012	11/15/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.0024**	1.1E-04	2.6E-07	2.1E-08	6.0E-08	NC	2.0E-09		
SMP-09A-11152012	11/15/12	25	1,1-Dichloroethane	**0.0068**	1.0E-04	7.1E-07	5.8E-08	1.6E-07	9.3E-11	2.3E-07		
SMP-09A-11152012	11/15/12	25	1,1-Dichloroethene	**0.0013**	1.2E-04	1.6E-07	1.3E-08	3.7E-08	NC	5.3E-07		
SMP-09A-11152012	11/15/12	25	1,2,4-Trichlorobenzene	0.00060	4.5E-05	2.7E-08	2.2E-09	6.1E-09	NC	3.1E-06		
SMP-09A-11152012	11/15/12	25	1,2,4-Trimethylbenzene	0.00041	8.7E-05	3.6E-08	2.9E-09	8.1E-09	NC	1.2E-06		
SMP-09A-11152012	11/15/12	25	1,2-Dichlorobenzene	0.00049	9.8E-05	4.8E-08	3.9E-09	1.1E-08	NC	5.5E-08		
SMP-09A-11152012	11/15/12	25	1,2-Dichloroethane	**0.011**	1.4E-04	1.6E-06	1.3E-07	3.6E-07	2.7E-09	8.9E-07		
SMP-09A-11152012	11/15/12	25	1,3-Butadiene	0.00016	2.9E-04	4.7E-08	3.8E-09	1.1E-08	6.5E-10	5.3E-06		
SMP-09A-11152012	11/15/12	25	1,3-Dichlorobenzene	0.00049	9.8E-05	4.8E-08	3.9E-09	1.1E-08	NC	1.0E-07		
SMP-09A-11152012	11/15/12	25	1,4-Dioxane	0.00080	1.3E-04	1.0E-07	8.5E-09	2.4E-08	6.5E-11	7.9E-07		
SMP-09A-11152012	11/15/12	25	1-Butene/Isobutene	**0.0028**	1.2E-04	3.3E-07	2.7E-08	7.5E-08	NC	2.5E-08		
SMP-09A-11152012	11/15/12	25	2 & 3-Chlorotoluene	0.00087	9.0E-05	7.8E-08	6.4E-09	1.8E-08	NC	2.5E-07		
SMP-09A-11152012	11/15/12	25	2-Butanone (MEK)	**0.0030**	1.1E-04	3.4E-07	2.8E-08	7.8E-08	NC	1.6E-08		
SMP-09A-11152012	11/15/12	25	2-Propanol	0.00022	1.5E-04	3.2E-08	2.6E-09	7.3E-09	NC	1.0E-09		
SMP-09A-11152012	11/15/12	25	3-Chloropropene	0.00026	1.3E-04	3.4E-08	2.7E-09	7.7E-09	1.6E-11	2.6E-09		
SMP-09A-11152012	11/15/12	25	Acetaldehyde	**0.011**	1.7E-04	1.8E-06	1.5E-07	4.2E-07	4.0E-10	4.6E-05		
SMP-09A-11152012	11/15/12	25	Acetone	**0.0091**	1.7E-04	1.5E-06	1.2E-07	3.5E-07	NC	1.1E-08		
SMP-09A-11152012	11/15/12	25	Acetonitrile	0.00016	1.7E-04	2.7E-08	2.2E-09	6.1E-09	NC	1.0E-07		
SMP-09A-11152012	11/15/12	25	Acetylene	**0.0011**	1.5E-04	1.6E-07	1.3E-08	3.7E-08	NC	1.2E-08		
SMP-09A-11152012	11/15/12	25	Benzaldehyde	0.00039	1.0E-04	4.0E-08	3.3E-09	9.2E-09	8.9E-12	1.0E-06		
SMP-09A-11152012	11/15/12	25	Benzene	0.00020	1.2E-04	2.4E-08	2.0E-09	5.6E-09	5.8E-11	1.9E-07		
SMP-09A-11152012	11/15/12	25	Butane	**0.062**	1.5E-04	9.2E-06	7.5E-07	2.1E-06	NC	7.0E-07		
SMP-09A-11152012	11/15/12	25	Butyraldehyde	**0.0030**	1.7E-04	5.0E-07	4.1E-08	1.1E-07	1.1E-10	1.3E-05		
SMP-09A-11152012	11/15/12	25	Carbon Disulfide	0.00088	1.4E-04	1.2E-07	1.0E-08	2.8E-08	NC	4.1E-08		

TABLE 9b

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Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-09A-11152012	11/15/12	25	Carbon Tetrachloride	0.00052	1.1E-04	5.7E-08	4.6E-09	1.3E-08	2.0E-10	3.3E-07		
SMP-09A-11152012	11/15/12	25	Chlorobenzene	0.00039	1.0E-04	4.0E-08	3.3E-09	9.2E-09	NC	9.2E-09		
SMP-09A-11152012	11/15/12	25	Chlorodifluoromethane (Freon 22)	**0.0016**	1.4E-04	2.2E-07	1.8E-08	5.1E-08	NC	1.0E-09		
SMP-09A-11152012	11/15/12	25	Chloroethane	**0.00084**	3.1E-04	2.6E-07	2.1E-08	6.0E-08	NC	6.0E-09		
SMP-09A-11152012	11/15/12	25	Chloroform	**0.013**	1.4E-04	1.8E-06	1.5E-07	4.2E-07	8.0E-10	1.4E-06		
SMP-09A-11152012	11/15/12	25	Chloromethane	**0.00032**	1.7E-04	5.4E-08	4.4E-09	1.2E-08	NC	1.4E-07		
SMP-09A-11152012	11/15/12	25	cis-1,2-Dichloroethene	**0.0020**	1.0E-04	2.1E-07	1.7E-08	4.7E-08	NC	6.8E-06		
SMP-09A-11152012	11/15/12	25	cis-2-Butene	0.00018	1.5E-04	2.7E-08	2.2E-09	6.1E-09	NC	2.0E-09		
SMP-09A-11152012	11/15/12	25	Cyclohexane	0.00021	1.1E-04	2.4E-08	1.9E-09	5.4E-09	NC	9.0E-10		
SMP-09A-11152012	11/15/12	25	Dichlorodifluoromethane (Freon 12)	**0.0027**	9.5E-05	2.6E-07	2.1E-08	5.8E-08	NC	2.9E-07		
SMP-09A-11152012	11/15/12	25	Dichlorofluoromethane	0.00035	1.3E-04	4.5E-08	3.6E-09	1.0E-08	NC	5.1E-08		
SMP-09A-11152012	11/15/12	25	Ethane	**0.42**	1.5E-04	6.2E-05	5.1E-06	1.4E-05	NC	4.8E-06		
SMP-09A-11152012	11/15/12	25	Ethanol	**0.0021**	1.7E-04	3.6E-07	3.0E-08	8.3E-08	NC	1.2E-08		
SMP-09A-11152012	11/15/12	25	Ethene	**0.0099**	1.5E-04	1.5E-06	1.2E-07	3.4E-07	NC	1.1E-07		
SMP-09A-11152012	11/15/12	25	Ethylbenzene	0.00036	1.1E-04	3.8E-08	3.1E-09	8.7E-09	7.8E-12	8.7E-09		
SMP-09A-11152012	11/15/12	25	Isobutane	**0.11**	1.5E-04	1.6E-05	1.3E-06	3.7E-06	NC	1.2E-06		
SMP-09A-11152012	11/15/12	25	Isopropylbenzene (Cumene)	0.00079	9.3E-05	7.3E-08	6.0E-09	1.7E-08	NC	4.2E-08		
SMP-09A-11152012	11/15/12	25	Methylene Chloride	**0.0017**	1.4E-04	2.3E-07	1.9E-08	5.4E-08	1.9E-11	1.3E-07		
SMP-09A-11152012	11/15/12	25	Naphthalene	0.00069	8.5E-05	5.8E-08	4.8E-09	1.3E-08	1.6E-10	4.4E-06		
SMP-09A-11152012	11/15/12	25	n-Butanol	0.00085	1.3E-04	1.1E-07	8.9E-09	2.5E-08	NC	7.2E-08		
SMP-09A-11152012	11/15/12	25	n-Hexane	0.00026	2.5E-04	6.4E-08	5.2E-09	1.5E-08	NC	2.1E-08		
SMP-09A-11152012	11/15/12	25	n-Nonane	0.00044	7.4E-05	3.3E-08	2.7E-09	7.5E-09	NC	3.7E-08		
SMP-09A-11152012	11/15/12	25	n-Pentane	**0.0026**	1.1E-04	3.0E-07	2.4E-08	6.8E-08	NC	6.8E-08		
SMP-09A-11152012	11/15/12	25	Propane	**0.39**	1.5E-04	5.8E-05	4.7E-06	1.3E-05	NC	4.4E-06		
SMP-09A-11152012	11/15/12	25	Propene	**0.0022**	1.5E-04	3.3E-07	2.7E-08	7.5E-08	NC	2.5E-08		
SMP-09A-11152012	11/15/12	25	Propylbenzene	0.00041	8.6E-05	3.5E-08	2.9E-09	8.1E-09	NC	5.8E-08		
SMP-09A-11152012	11/15/12	25	Styrene	0.00035	1.0E-04	3.5E-08	2.9E-09	8.0E-09	NC	8.9E-09		
SMP-09A-11152012	11/15/12	25	Tetrachloroethene	**0.062**	1.0E-04	6.3E-06	5.1E-07	1.4E-06	3.0E-09	4.1E-05		
SMP-09A-11152012	11/15/12	25	Toluene	0.00031	1.2E-04	3.7E-08	3.1E-09	8.6E-09	NC	2.9E-08		
SMP-09A-11152012	11/15/12	25	TPH-gasoline	1.7	9.9E-05	1.7E-04	1.4E-05	3.8E-05	NC	3.0E-04		
SMP-09A-11152012	11/15/12	25	trans-1,2-Dichloroethene	0.00064	1.0E-04	6.4E-08	5.2E-09	1.5E-08	NC	2.4E-07		
SMP-09A-11152012	11/15/12	25	trans-2-Butene	0.00017	1.5E-04	2.5E-08	2.1E-09	5.8E-09	NC	1.9E-09		
SMP-09A-11152012	11/15/12	25	Trichloroethene	**0.31**	1.1E-04	3.4E-05	2.8E-06	7.8E-06	1.1E-08	3.9E-03		
SMP-09A-11152012	11/15/12	25	Trichlorofluoromethane (Freon 11)	**0.0018**	1.2E-04	2.2E-07	1.8E-08	5.0E-08	NC	7.1E-08		
SMP-09A-11152012	11/15/12	25	Vinyl Acetate	0.0012	1.2E-04	1.4E-07	1.2E-08	3.2E-08	NC	1.6E-07		
SMP-09A-11152012	11/15/12	25	Vinyl Chloride	0.00020	1.4E-04	2.9E-08	2.4E-09	6.6E-09	1.8E-10	6.6E-08		
SMP-09A-11152012	11/15/12	25	Xylenes	0.00054	1.2E-04	6.4E-08	5.2E-09	1.5E-08	NC	1.5E-07	2.0E-08	4.4E-03
SMP-10A-11142012	11/14/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0011**	1.1E-04	1.3E-07	1.0E-08	2.9E-08	NC	3.6E-10		
SMP-10A-11142012	11/14/12	25	1,1,1-Trichloroethane	**0.0010**	1.1E-04	1.1E-07	8.9E-09	2.5E-08	NC	2.5E-08		
SMP-10A-11142012	11/14/12	25	1,1,2-Trichloroethane	0.00048	1.1E-04	5.3E-08	4.3E-09	1.2E-08	6.9E-11	8.6E-07		
SMP-10A-11142012	11/14/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.0046**	1.1E-04	5.0E-07	4.1E-08	1.2E-07	NC	3.8E-09		
SMP-10A-11142012	11/14/12	25	1,1-Dichloroethane	**0.011**	1.0E-04	1.2E-06	9.4E-08	2.6E-07	1.5E-10	3.8E-07		
SMP-10A-11142012	11/14/12	25	1,1-Dichloroethene	**0.0050**	1.2E-04	6.2E-07	5.1E-08	1.4E-07	NC	2.0E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-10A-11142012	11/14/12	25	1,2,4-Trichlorobenzene	0.00064	4.5E-05	2.9E-08	2.3E-09	6.5E-09	NC	3.3E-06		
SMP-10A-11142012	11/14/12	25	1,2,4-Trimethylbenzene	**0.00087**	8.7E-05	7.6E-08	6.2E-09	1.7E-08	NC	2.5E-06		
SMP-10A-11142012	11/14/12	25	1,2-Dichlorobenzene	0.00053	9.8E-05	5.2E-08	4.2E-09	1.2E-08	NC	5.9E-08		
SMP-10A-11142012	11/14/12	25	1,2-Dichloroethane	0.00036	1.4E-04	5.1E-08	4.2E-09	1.2E-08	8.7E-11	2.9E-08		
SMP-10A-11142012	11/14/12	25	1,3-Butadiene	0.00017	2.9E-04	5.0E-08	4.1E-09	1.1E-08	6.9E-10	5.7E-06		
SMP-10A-11142012	11/14/12	25	1,3-Dichlorobenzene	0.00053	9.8E-05	5.2E-08	4.2E-09	1.2E-08	NC	1.1E-07		
SMP-10A-11142012	11/14/12	25	1,4-Dioxane	0.00085	1.3E-04	1.1E-07	9.0E-09	2.5E-08	6.9E-11	8.4E-07		
SMP-10A-11142012	11/14/12	25	1-Butene/Isobutene	**0.00073**	1.2E-04	8.6E-08	7.0E-09	2.0E-08	NC	6.6E-09		
SMP-10A-11142012	11/14/12	25	2 & 3-Chlorotoluene	0.00092	9.0E-05	8.3E-08	6.7E-09	1.9E-08	NC	2.7E-07		
SMP-10A-11142012	11/14/12	25	2-Butanone (MEK)	**0.0083**	1.1E-04	9.4E-07	7.7E-08	2.2E-07	NC	4.3E-08		
SMP-10A-11142012	11/14/12	25	2-Propanol	**0.00087**	1.5E-04	1.3E-07	1.0E-08	2.9E-08	NC	4.1E-09		
SMP-10A-11142012	11/14/12	25	3-Chloropropene	0.00027	1.3E-04	3.5E-08	2.8E-09	8.0E-09	1.7E-11	2.7E-09		
SMP-10A-11142012	11/14/12	25	Acetaldehyde	**0.019**	1.7E-04	3.2E-06	2.6E-07	7.2E-07	6.9E-10	8.0E-05		
SMP-10A-11142012	11/14/12	25	Acetone	**0.016**	1.7E-04	2.7E-06	2.2E-07	6.1E-07	NC	2.0E-08		
SMP-10A-11142012	11/14/12	25	Acetonitrile	0.00017	1.7E-04	2.8E-08	2.3E-09	6.4E-09	NC	1.1E-07		
SMP-10A-11142012	11/14/12	25	Acetylene	0.00018	1.5E-04	2.7E-08	2.2E-09	6.1E-09	NC	2.0E-09		
SMP-10A-11142012	11/14/12	25	Benzaldehyde	**0.0016**	1.0E-04	1.7E-07	1.4E-08	3.8E-08	3.6E-11	4.2E-06		
SMP-10A-11142012	11/14/12	25	Benzene	**0.00051**	1.2E-04	6.2E-08	5.1E-09	1.4E-08	1.5E-10	4.7E-07		
SMP-10A-11142012	11/14/12	25	Butane	**0.0019**	1.5E-04	2.8E-07	2.3E-08	6.4E-08	NC	2.1E-08		
SMP-10A-11142012	11/14/12	25	Butyraldehyde	**0.0034**	1.7E-04	5.6E-07	4.6E-08	1.3E-07	1.2E-10	1.4E-05		
SMP-10A-11142012	11/14/12	25	Carbon Disulfide	0.00094	1.4E-04	1.3E-07	1.1E-08	3.0E-08	NC	4.3E-08		
SMP-10A-11142012	11/14/12	25	Carbon Tetrachloride	**0.026**	1.1E-04	2.8E-06	2.3E-07	6.5E-07	9.8E-09	1.6E-05		
SMP-10A-11142012	11/14/12	25	Chlorobenzene	0.00041	1.0E-04	4.2E-08	3.4E-09	9.6E-09	NC	9.6E-09		
SMP-10A-11142012	11/14/12	25	Chlorodifluoromethane (Freon 22)	**0.0018**	1.4E-04	2.5E-07	2.0E-08	5.7E-08	NC	1.1E-09		
SMP-10A-11142012	11/14/12	25	Chloroethane	**0.0014**	3.1E-04	4.4E-07	3.6E-08	1.0E-07	NC	1.0E-08		
SMP-10A-11142012	11/14/12	25	Chloroform	**0.019**	1.4E-04	2.7E-06	2.2E-07	6.2E-07	1.2E-09	2.1E-06		
SMP-10A-11142012	11/14/12	25	Chloromethane	**0.00038**	1.7E-04	6.4E-08	5.2E-09	1.5E-08	NC	1.6E-07		
SMP-10A-11142012	11/14/12	25	cis-1,2-Dichloroethene	**0.0024**	1.0E-04	2.5E-07	2.0E-08	5.7E-08	NC	8.1E-06		
SMP-10A-11142012	11/14/12	25	cis-2-Butene	0.00019	1.5E-04	2.8E-08	2.3E-09	6.4E-09	NC	2.1E-09		
SMP-10A-11142012	11/14/12	25	Cyclohexane	**0.0011**	1.1E-04	1.2E-07	1.0E-08	2.8E-08	NC	4.7E-09		
SMP-10A-11142012	11/14/12	25	Dichlorodifluoromethane (Freon 12)	**0.0036**	9.5E-05	3.4E-07	2.8E-08	7.8E-08	NC	3.9E-07		
SMP-10A-11142012	11/14/12	25	Dichlorofluoromethane	0.00037	1.3E-04	4.7E-08	3.9E-09	1.1E-08	NC	5.4E-08		
SMP-10A-11142012	11/14/12	25	Ethane	**0.043**	1.5E-04	6.4E-06	5.2E-07	1.5E-06	NC	4.9E-07		
SMP-10A-11142012	11/14/12	25	Ethanol	**0.0042**	1.7E-04	7.3E-07	5.9E-08	1.7E-07	NC	2.4E-08		
SMP-10A-11142012	11/14/12	25	Ethene	**0.00089**	1.5E-04	1.3E-07	1.1E-08	3.0E-08	NC	1.0E-08		
SMP-10A-11142012	11/14/12	25	Ethylbenzene	**0.0013**	1.1E-04	1.4E-07	1.1E-08	3.1E-08	2.8E-11	3.1E-08		
SMP-10A-11142012	11/14/12	25	Isobutane	**0.0042**	1.5E-04	6.2E-07	5.1E-08	1.4E-07	NC	4.8E-08		
SMP-10A-11142012	11/14/12	25	Isopropylbenzene (Cumene)	0.00084	9.3E-05	7.8E-08	6.3E-09	1.8E-08	NC	4.4E-08		
SMP-10A-11142012	11/14/12	25	Methylene Chloride	**0.0026**	1.4E-04	3.6E-07	2.9E-08	8.2E-08	2.9E-11	2.1E-07		
SMP-10A-11142012	11/14/12	25	Naphthalene	0.00074	8.5E-05	6.3E-08	5.1E-09	1.4E-08	1.7E-10	4.8E-06		
SMP-10A-11142012	11/14/12	25	n-Butanol	**0.0025**	1.3E-04	3.2E-07	2.6E-08	7.4E-08	NC	2.1E-07		
SMP-10A-11142012	11/14/12	25	n-Hexane	**0.00096**	2.5E-04	2.4E-07	1.9E-08	5.4E-08	NC	7.7E-08		
SMP-10A-11142012	11/14/12	25	n-Nonane	**0.0020**	7.4E-05	1.5E-07	1.2E-08	3.4E-08	NC	1.7E-07		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-10A-11142012	11/14/12	25	n-Pentane	**0.00068**	1.1E-04	7.8E-08	6.4E-09	1.8E-08	NC	1.8E-08		
SMP-10A-11142012	11/14/12	25	Propane	**0.018**	1.5E-04	2.7E-06	2.2E-07	6.1E-07	NC	2.0E-07		
SMP-10A-11142012	11/14/12	25	Propene	0.00015	1.5E-04	2.2E-08	1.8E-09	5.1E-09	NC	1.7E-09		
SMP-10A-11142012	11/14/12	25	Propylbenzene	0.00044	8.6E-05	3.8E-08	3.1E-09	8.7E-09	NC	6.2E-08		
SMP-10A-11142012	11/14/12	25	Styrene	0.00038	1.0E-04	3.8E-08	3.1E-09	8.7E-09	NC	9.7E-09		
SMP-10A-11142012	11/14/12	25	Tetrachloroethene	**0.25**	1.0E-04	2.5E-05	2.1E-06	5.8E-06	1.2E-08	1.7E-04		
SMP-10A-11142012	11/14/12	25	Toluene	**0.26**	1.2E-04	3.1E-05	2.6E-06	7.2E-06	NC	2.4E-05		
SMP-10A-11142012	11/14/12	25	TPH-gasoline	1.7	9.9E-05	1.7E-04	1.4E-05	3.8E-05	NC	3.0E-04		
SMP-10A-11142012	11/14/12	25	trans-1,2-Dichloroethene	**0.0037**	1.0E-04	3.7E-07	3.0E-08	8.5E-08	NC	1.4E-06		
SMP-10A-11142012	11/14/12	25	trans-2-Butene	0.00018	1.5E-04	2.7E-08	2.2E-09	6.1E-09	NC	2.0E-09		
SMP-10A-11142012	11/14/12	25	Trichloroethene	**0.15**	1.1E-04	1.7E-05	1.4E-06	3.8E-06	5.6E-09	1.9E-03		
SMP-10A-11142012	11/14/12	25	Trichlorofluoromethane (Freon 11)	**0.0032**	1.2E-04	3.9E-07	3.2E-08	8.8E-08	NC	1.3E-07		
SMP-10A-11142012	11/14/12	25	Vinyl Acetate	0.0013	1.2E-04	1.5E-07	1.3E-08	3.5E-08	NC	1.8E-07		
SMP-10A-11142012	11/14/12	25	Vinyl Chloride	0.00021	1.4E-04	3.0E-08	2.5E-09	6.9E-09	1.9E-10	6.9E-08		
SMP-10A-11142012	11/14/12	25	Xylenes	**0.0041**	1.2E-04	4.8E-07	3.9E-08	1.1E-07	NC	1.1E-06	3.1E-08	2.5E-03
SMP-11A-11142012	11/14/12	25	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0032**	1.1E-04	3.7E-07	3.0E-08	8.4E-08	NC	1.1E-09		
SMP-11A-11142012	11/14/12	25	1,1,1-Trichloroethane	**0.0015**	1.1E-04	1.6E-07	1.3E-08	3.8E-08	NC	3.8E-08		
SMP-11A-11142012	11/14/12	25	1,1,2-Trichloroethane	0.00045	1.1E-04	4.9E-08	4.0E-09	1.1E-08	6.4E-11	8.0E-07		
SMP-11A-11142012	11/14/12	25	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.19**	1.1E-04	2.1E-05	1.7E-06	4.8E-06	NC	1.6E-07		
SMP-11A-11142012	11/14/12	25	1,1-Dichloroethane	**0.019**	1.0E-04	2.0E-06	1.6E-07	4.5E-07	2.6E-10	6.5E-07		
SMP-11A-11142012	11/14/12	25	1,1-Dichloroethene	**0.13**	1.2E-04	1.6E-05	1.3E-06	3.7E-06	NC	5.3E-05		
SMP-11A-11142012	11/14/12	25	1,2,4-Trichlorobenzene	0.00060	4.5E-05	2.7E-08	2.2E-09	6.1E-09	NC	3.1E-06		
SMP-11A-11142012	11/14/12	25	1,2,4-Trimethylbenzene	0.00041	8.7E-05	3.6E-08	2.9E-09	8.1E-09	NC	1.2E-06		
SMP-11A-11142012	11/14/12	25	1,2-Dichlorobenzene	0.00049	9.8E-05	4.8E-08	3.9E-09	1.1E-08	NC	5.5E-08		
SMP-11A-11142012	11/14/12	25	1,2-Dichloroethane	**0.0072**	1.4E-04	1.0E-06	8.3E-08	2.3E-07	1.7E-09	5.8E-07		
SMP-11A-11142012	11/14/12	25	1,3-Butadiene	0.00016	2.9E-04	4.7E-08	3.8E-09	1.1E-08	6.5E-10	5.3E-06		
SMP-11A-11142012	11/14/12	25	1,3-Dichlorobenzene	0.00049	9.8E-05	4.8E-08	3.9E-09	1.1E-08	NC	1.0E-07		
SMP-11A-11142012	11/14/12	25	1,4-Dioxane	0.00080	1.3E-04	1.0E-07	8.5E-09	2.4E-08	6.5E-11	7.9E-07		
SMP-11A-11142012	11/14/12	25	1-Butene/Isobutene	**0.0081**	1.2E-04	9.6E-07	7.8E-08	2.2E-07	NC	7.3E-08		
SMP-11A-11142012	11/14/12	25	2 & 3-Chlorotoluene	0.00087	9.0E-05	7.8E-08	6.4E-09	1.8E-08	NC	2.5E-07		
SMP-11A-11142012	11/14/12	25	2-Butanone (MEK)	**0.0018**	1.1E-04	2.0E-07	1.7E-08	4.7E-08	NC	9.4E-09		
SMP-11A-11142012	11/14/12	25	2-Propanol	**0.00074**	1.5E-04	1.1E-07	8.8E-09	2.5E-08	NC	3.5E-09		
SMP-11A-11142012	11/14/12	25	3-Chloropropene	0.00026	1.3E-04	3.4E-08	2.7E-09	7.7E-09	1.6E-11	2.6E-09		
SMP-11A-11142012	11/14/12	25	Acetaldehyde	**0.013**	1.7E-04	2.2E-06	1.8E-07	4.9E-07	4.8E-10	5.5E-05		
SMP-11A-11142012	11/14/12	25	Acetone	**0.027**	1.7E-04	4.5E-06	3.7E-07	1.0E-06	NC	3.3E-08		
SMP-11A-11142012	11/14/12	25	Acetonitrile	0.00016	1.7E-04	2.7E-08	2.2E-09	6.1E-09	NC	1.0E-07		
SMP-11A-11142012	11/14/12	25	Acetylene	**0.00071**	1.5E-04	1.1E-07	8.6E-09	2.4E-08	NC	8.0E-09		
SMP-11A-11142012	11/14/12	25	Benzaldehyde	0.00039	1.0E-04	4.0E-08	3.3E-09	9.2E-09	8.9E-12	1.0E-06		
SMP-11A-11142012	11/14/12	25	Benzene	**0.00056**	1.2E-04	6.8E-08	5.6E-09	1.6E-08	1.6E-10	5.2E-07		
SMP-11A-11142012	11/14/12	25	Butane	**0.011**	1.5E-04	1.6E-06	1.3E-07	3.7E-07	NC	1.2E-07		
SMP-11A-11142012	11/14/12	25	Butyraldehyde	**0.0018**	1.7E-04	3.0E-07	2.4E-08	6.8E-08	6.6E-11	7.6E-06		
SMP-11A-11142012	11/14/12	25	Carbon Disulfide	0.00088	1.4E-04	1.2E-07	1.0E-08	2.8E-08	NC	4.1E-08		
SMP-11A-11142012	11/14/12	25	Carbon Tetrachloride	**0.0044**	1.1E-04	4.8E-07	3.9E-08	1.1E-07	1.7E-09	2.8E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SMP-11A-11142012	11/14/12	25	Chlorobenzene	0.00039	1.0E-04	4.0E-08	3.3E-09	9.2E-09	NC	9.2E-09		
SMP-11A-11142012	11/14/12	25	Chlorodifluoromethane (Freon 22)	**0.0017**	1.4E-04	2.4E-07	1.9E-08	5.4E-08	NC	1.1E-09		
SMP-11A-11142012	11/14/12	25	Chloroethane	**0.0079**	3.1E-04	2.5E-06	2.0E-07	5.6E-07	NC	5.6E-08		
SMP-11A-11142012	11/14/12	25	Chloroform	**0.038**	1.4E-04	5.4E-06	4.4E-07	1.2E-06	2.3E-09	4.1E-06		
SMP-11A-11142012	11/14/12	25	Chloromethane	**0.0021**	1.7E-04	3.5E-07	2.9E-08	8.0E-08	NC	8.9E-07		
SMP-11A-11142012	11/14/12	25	cis-1,2-Dichloroethene	**0.0071**	1.0E-04	7.4E-07	6.0E-08	1.7E-07	NC	2.4E-05		
SMP-11A-11142012	11/14/12	25	cis-2-Butene	**0.00075**	1.5E-04	1.1E-07	9.1E-09	2.5E-08	NC	8.5E-09		
SMP-11A-11142012	11/14/12	25	Cyclohexane	0.00021	1.1E-04	2.4E-08	1.9E-09	5.4E-09	NC	9.0E-10		
SMP-11A-11142012	11/14/12	25	Dichlorodifluoromethane (Freon 12)	**0.0045**	9.5E-05	4.3E-07	3.5E-08	9.7E-08	NC	4.9E-07		
SMP-11A-11142012	11/14/12	25	Dichlorofluoromethane	0.00035	1.3E-04	4.5E-08	3.6E-09	1.0E-08	NC	5.1E-08		
SMP-11A-11142012	11/14/12	25	Ethane	**0.029**	1.5E-04	4.3E-06	3.5E-07	9.8E-07	NC	3.3E-07		
SMP-11A-11142012	11/14/12	25	Ethanol	**0.0037**	1.7E-04	6.4E-07	5.2E-08	1.5E-07	NC	2.1E-08		
SMP-11A-11142012	11/14/12	25	Ethene	**0.016**	1.5E-04	2.4E-06	1.9E-07	5.4E-07	NC	1.8E-07		
SMP-11A-11142012	11/14/12	25	Ethylbenzene	**0.0010**	1.1E-04	1.1E-07	8.6E-09	2.4E-08	2.2E-11	2.4E-08		
SMP-11A-11142012	11/14/12	25	Isobutane	**0.0075**	1.5E-04	1.1E-06	9.1E-08	2.5E-07	NC	8.5E-08		
SMP-11A-11142012	11/14/12	25	Isopropylbenzene (Cumene)	0.00079	9.3E-05	7.3E-08	6.0E-09	1.7E-08	NC	4.2E-08		
SMP-11A-11142012	11/14/12	25	Methylene Chloride	**0.0018**	1.4E-04	2.5E-07	2.0E-08	5.7E-08	2.0E-11	1.4E-07		
SMP-11A-11142012	11/14/12	25	Naphthalene	0.00069	8.5E-05	5.8E-08	4.8E-09	1.3E-08	1.6E-10	4.4E-06		
SMP-11A-11142012	11/14/12	25	n-Butanol	0.00085	1.3E-04	1.1E-07	8.9E-09	2.5E-08	NC	7.2E-08		
SMP-11A-11142012	11/14/12	25	n-Hexane	**0.00065**	2.5E-04	1.6E-07	1.3E-08	3.7E-08	NC	5.2E-08		
SMP-11A-11142012	11/14/12	25	n-Nonane	0.00044	7.4E-05	3.3E-08	2.7E-09	7.5E-09	NC	3.7E-08		
SMP-11A-11142012	11/14/12	25	n-Pentane	**0.0034**	1.1E-04	3.9E-07	3.2E-08	8.9E-08	NC	8.9E-08		
SMP-11A-11142012	11/14/12	25	Propane	**0.035**	1.5E-04	5.2E-06	4.2E-07	1.2E-06	NC	4.0E-07		
SMP-11A-11142012	11/14/12	25	Propene	**0.025**	1.5E-04	3.7E-06	3.0E-07	8.5E-07	NC	2.8E-07		
SMP-11A-11142012	11/14/12	25	Propylbenzene	0.00041	8.6E-05	3.5E-08	2.9E-09	8.1E-09	NC	5.8E-08		
SMP-11A-11142012	11/14/12	25	Styrene	0.00035	1.0E-04	3.5E-08	2.9E-09	8.0E-09	NC	8.9E-09		
SMP-11A-11142012	11/14/12	25	Tetrachloroethene	**0.41**	1.0E-04	4.2E-05	3.4E-06	9.5E-06	2.0E-08	2.7E-04		
SMP-11A-11142012	11/14/12	25	Toluene	**0.0017**	1.2E-04	2.1E-07	1.7E-08	4.7E-08	NC	1.6E-07		
SMP-11A-11142012	11/14/12	25	TPH-gasoline	**5.7**	9.9E-05	5.7E-04	4.6E-05	1.3E-04	NC	9.9E-04		
SMP-11A-11142012	11/14/12	25	trans-1,2-Dichloroethene	0.00064	1.0E-04	6.4E-08	5.2E-09	1.5E-08	NC	2.4E-07		
SMP-11A-11142012	11/14/12	25	trans-2-Butene	**0.0014**	1.5E-04	2.1E-07	1.7E-08	4.8E-08	NC	1.6E-08		
SMP-11A-11142012	11/14/12	25	Trichloroethene	**0.11**	1.1E-04	1.2E-05	9.9E-07	2.8E-06	4.1E-09	1.4E-03		
SMP-11A-11142012	11/14/12	25	Trichlorofluoromethane (Freon 11)	**0.039**	1.2E-04	4.7E-06	3.8E-07	1.1E-06	NC	1.5E-06		
SMP-11A-11142012	11/14/12	25	Vinyl Acetate	0.0012	1.2E-04	1.4E-07	1.2E-08	3.2E-08	NC	1.6E-07		
SMP-11A-11142012	11/14/12	25	Vinyl Chloride	0.00020	1.4E-04	2.9E-08	2.4E-09	6.6E-09	1.8E-10	6.6E-08		
SMP-11A-11142012	11/14/12	25	Xylenes	**0.0048**	1.2E-04	5.7E-07	4.6E-08	1.3E-07	NC	1.3E-06	3.2E-08	2.8E-03
SVE-1A-071812	7/18/12	29	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.0027	1.0E-04	2.7E-07	2.2E-08	6.2E-08	NC	7.7E-10		
SVE-1A-071812	7/18/12	29	1,1,1-Trichloroethane	**3.8**	9.5E-05	3.6E-04	3.0E-05	8.3E-05	NC	8.3E-05		
SVE-1A-071812	7/18/12	29	1,1,2-Trichloroethane	0.0035	9.5E-05	3.3E-07	2.7E-08	7.6E-08	4.4E-10	5.4E-06		
SVE-1A-071812	7/18/12	29	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.049**	9.5E-05	4.7E-06	3.8E-07	1.1E-06	NC	3.6E-08		
SVE-1A-071812	7/18/12	29	1,1-Dichloroethane	**0.42**	9.1E-05	3.8E-05	3.1E-06	8.7E-06	5.0E-09	1.2E-05		
SVE-1A-071812	7/18/12	29	1,1-Dichloroethene	**2.6**	1.1E-04	2.8E-04	2.3E-05	6.5E-05	NC	9.2E-04		
SVE-1A-071812	7/18/12	29	1,2,4-Trichlorobenzene	0.0047	3.9E-05	1.8E-07	1.5E-08	4.1E-08	NC	2.1E-05		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-1A-071812	7/18/12	29	1,2,4-Trimethylbenzene	0.0032	7.5E-05	2.4E-07	2.0E-08	5.5E-08	NC	7.9E-06		
SVE-1A-071812	7/18/12	29	1,2-Dichlorobenzene	0.0039	8.5E-05	3.3E-07	2.7E-08	7.6E-08	NC	3.8E-07		
SVE-1A-071812	7/18/12	29	1,2-Dichloroethane	0.0026	1.2E-04	3.2E-07	2.6E-08	7.4E-08	5.5E-10	1.8E-07		
SVE-1A-071812	7/18/12	29	1,3-Butadiene	0.0013	2.6E-04	3.4E-07	2.8E-08	7.7E-08	4.7E-09	3.9E-05		
SVE-1A-071812	7/18/12	29	1,3-Dichlorobenzene	0.0039	8.5E-05	3.3E-07	2.7E-08	7.6E-08	NC	7.2E-07		
SVE-1A-071812	7/18/12	29	1,4-Dioxane	0.0063	1.1E-04	7.1E-07	5.8E-08	1.6E-07	4.5E-10	5.4E-06		
SVE-1A-071812	7/18/12	29	1-Butene/Isobutene	**0.48**	1.0E-04	4.9E-05	4.0E-06	1.1E-05	NC	3.8E-06		
SVE-1A-071812	7/18/12	29	1-Methylnaphthalene	**0.0026**	6.6E-05	1.7E-07	1.4E-08	3.9E-08	NC	1.6E-07		
SVE-1A-071812	7/18/12	29	2 & 3-Chlorotoluene	0.0068	7.8E-05	5.3E-07	4.3E-08	1.2E-07	NC	1.7E-06		
SVE-1A-071812	7/18/12	29	2-Butanone (MEK)	**0.47**	9.9E-05	4.7E-05	3.8E-06	1.1E-05	NC	2.1E-06		
SVE-1A-071812	7/18/12	29	2-Methylnaphthalene	**0.0043**	6.6E-05	2.8E-07	2.3E-08	6.4E-08	NC	4.6E-06		
SVE-1A-071812	7/18/12	29	2-Propanol	**0.0051**	1.3E-04	6.5E-07	5.3E-08	1.5E-07	NC	2.1E-08		
SVE-1A-071812	7/18/12	29	3-Chloropropene	0.0020	1.1E-04	2.3E-07	1.8E-08	5.1E-08	1.1E-10	1.7E-08		
SVE-1A-071812	7/18/12	29	Acetaldehyde	**0.018**	1.5E-04	2.6E-06	2.1E-07	6.0E-07	5.8E-10	6.6E-05		
SVE-1A-071812	7/18/12	29	Acetone	**0.33**	1.5E-04	4.8E-05	3.9E-06	1.1E-05	NC	3.5E-07		
SVE-1A-071812	7/18/12	29	Acetonitrile	**0.011**	1.5E-04	1.6E-06	1.3E-07	3.6E-07	NC	6.1E-06		
SVE-1A-071812	7/18/12	29	Acetylene	0.0013	1.3E-04	1.7E-07	1.4E-08	3.9E-08	NC	1.3E-08		
SVE-1A-071812	7/18/12	29	Benzaldehyde	0.0031	9.0E-05	2.8E-07	2.3E-08	6.4E-08	6.1E-11	7.1E-06		
SVE-1A-071812	7/18/12	29	Benzene	**0.016**	1.1E-04	1.7E-06	1.4E-07	3.9E-07	4.0E-09	1.3E-05		
SVE-1A-071812	7/18/12	29	Butane	**0.083**	1.3E-04	1.1E-05	8.8E-07	2.5E-06	NC	8.2E-07		
SVE-1A-071812	7/18/12	29	Butyraldehyde	0.0067	1.5E-04	9.7E-07	7.9E-08	2.2E-07	2.1E-10	2.5E-05		
SVE-1A-071812	7/18/12	29	Carbon Disulfide	**1.6**	1.2E-04	2.0E-04	1.6E-05	4.5E-05	NC	6.5E-05		
SVE-1A-071812	7/18/12	29	Carbon Tetrachloride	0.0041	9.5E-05	3.9E-07	3.2E-08	8.9E-08	1.3E-09	2.2E-06		
SVE-1A-071812	7/18/12	29	Chlorobenzene	0.0030	9.0E-05	2.7E-07	2.2E-08	6.1E-08	NC	6.1E-08		
SVE-1A-071812	7/18/12	29	Chlorodifluoromethane (Freon 22)	0.0043	1.2E-04	5.2E-07	4.2E-08	1.2E-07	NC	2.4E-09		
SVE-1A-071812	7/18/12	29	Chloroethane	**0.054**	2.8E-04	1.5E-05	1.2E-06	3.4E-06	NC	3.4E-07		
SVE-1A-071812	7/18/12	29	Chloroform	**0.71**	1.2E-04	8.8E-05	7.2E-06	2.0E-05	3.8E-08	6.7E-05		
SVE-1A-071812	7/18/12	29	Chloromethane	**0.0069**	1.5E-04	1.0E-06	8.3E-08	2.3E-07	NC	2.6E-06		
SVE-1A-071812	7/18/12	29	cis-1,2-Dichloroethene	**0.89**	9.0E-05	8.0E-05	6.6E-06	1.8E-05	NC	2.6E-03		
SVE-1A-071812	7/18/12	29	cis-2-Butene	**0.041**	1.3E-04	5.3E-06	4.3E-07	1.2E-06	NC	4.1E-07		
SVE-1A-071812	7/18/12	29	Cyclohexane	**0.42**	9.8E-05	4.1E-05	3.3E-06	9.4E-06	NC	1.6E-06		
SVE-1A-071812	7/18/12	29	Dichlorodifluoromethane (Freon 12)	0.0032	8.2E-05	2.6E-07	2.1E-08	6.0E-08	NC	3.0E-07		
SVE-1A-071812	7/18/12	29	Dichlorofluoromethane	0.0028	1.1E-04	3.1E-07	2.5E-08	7.1E-08	NC	3.6E-07		
SVE-1A-071812	7/18/12	29	Ethane	**0.21**	1.3E-04	2.7E-05	2.2E-06	6.2E-06	NC	2.1E-06		
SVE-1A-071812	7/18/12	29	Ethanol	**0.060**	1.5E-04	9.1E-06	7.4E-07	2.1E-06	NC	3.0E-07		
SVE-1A-071812	7/18/12	29	Ethene	**0.53**	1.3E-04	6.9E-05	5.6E-06	1.6E-05	NC	5.2E-06		
SVE-1A-071812	7/18/12	29	Ethylbenzene	**0.017**	9.2E-05	1.6E-06	1.3E-07	3.6E-07	3.2E-10	3.6E-07		
SVE-1A-071812	7/18/12	29	Isobutane	**0.041**	1.3E-04	5.3E-06	4.3E-07	1.2E-06	NC	4.1E-07		
SVE-1A-071812	7/18/12	29	Isopropylbenzene (Cumene)	**0.018**	8.0E-05	1.4E-06	1.2E-07	3.3E-07	NC	8.3E-07		
SVE-1A-071812	7/18/12	29	Methylene Chloride	**0.14**	1.2E-04	1.7E-05	1.4E-06	3.9E-06	1.4E-09	9.6E-06		
SVE-1A-071812	7/18/12	29	Naphthalene	**0.017**	7.4E-05	1.3E-06	1.0E-07	2.9E-07	3.5E-09	9.5E-05		
SVE-1A-071812	7/18/12	29	n-Butanol	0.0067	1.1E-04	7.5E-07	6.2E-08	1.7E-07	NC	4.9E-07		
SVE-1A-071812	7/18/12	29	n-Hexane	**0.023**	2.2E-04	5.0E-06	4.1E-07	1.1E-06	NC	1.6E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-1A-071812	7/18/12	29	n-Nonane	**0.030**	6.5E-05	1.9E-06	1.6E-07	4.4E-07	NC	2.2E-06		
SVE-1A-071812	7/18/12	29	n-Pentane	**0.027**	1.0E-04	2.7E-06	2.2E-07	6.2E-07	NC	6.2E-07		
SVE-1A-071812	7/18/12	29	Propane	**0.19**	1.3E-04	2.5E-05	2.0E-06	5.6E-06	NC	1.9E-06		
SVE-1A-071812	7/18/12	29	Propene	**0.99**	1.3E-04	1.3E-04	1.0E-05	2.9E-05	NC	9.8E-06		
SVE-1A-071812	7/18/12	29	Propylbenzene	**0.068**	7.5E-05	5.1E-06	4.1E-07	1.2E-06	NC	8.3E-06		
SVE-1A-071812	7/18/12	29	Styrene	0.0028	8.7E-05	2.4E-07	2.0E-08	5.6E-08	NC	6.2E-08		
SVE-1A-071812	7/18/12	29	Tetrachloroethene	**0.42**	8.9E-05	3.7E-05	3.0E-06	8.5E-06	1.8E-08	2.4E-04		
SVE-1A-071812	7/18/12	29	Tetrahydrofuran	**2.0**	1.2E-04	2.3E-04	1.9E-05	5.3E-05	NC	2.6E-05		
SVE-1A-071812	7/18/12	29	Toluene	**0.024**	1.1E-04	2.5E-06	2.1E-07	5.8E-07	NC	1.9E-06		
SVE-1A-071812	7/18/12	29	TPH-diesel	**90**	8.6E-05	7.8E-03	6.3E-04	1.8E-03	NC	1.8E-02		
SVE-1A-071812	7/18/12	29	TPH-gasoline	**300**	8.6E-05	2.6E-02	2.1E-03	5.9E-03	NC	4.5E-02		
SVE-1A-071812	7/18/12	29	trans-1,2-Dichloroethene	**0.068**	8.7E-05	5.9E-06	4.8E-07	1.4E-06	NC	2.3E-05		
SVE-1A-071812	7/18/12	29	trans-2-Butene	**0.069**	1.3E-04	9.0E-06	7.3E-07	2.0E-06	NC	6.8E-07		
SVE-1A-071812	7/18/12	29	Trichloroethene	**3.6**	9.6E-05	3.5E-04	2.8E-05	7.9E-05	1.2E-07	4.0E-02		
SVE-1A-071812	7/18/12	29	Trichlorofluoromethane (Freon 11)	**0.0086**	1.1E-04	9.1E-07	7.4E-08	2.1E-07	NC	3.0E-07		
SVE-1A-071812	7/18/12	29	Vinyl Acetate	0.0098	1.0E-04	1.0E-06	8.2E-08	2.3E-07	NC	1.2E-06		
SVE-1A-071812	7/18/12	29	Vinyl Chloride	**0.095**	1.3E-04	1.2E-05	9.8E-07	2.7E-06	7.6E-08	2.7E-05		
SVE-1A-071812	7/18/12	29	Xylenes	**0.045**	1.0E-04	4.6E-06	3.8E-07	1.1E-06	NC	1.1E-05	2.7E-07	1.1E-01
SVE-2A-071812	7/18/12	28.5	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.00067	1.0E-04	6.8E-08	5.6E-09	1.6E-08	NC	1.9E-10		
SVE-2A-071812	7/18/12	28.5	1,1,1-Trichloroethane	**8.5**	9.7E-05	8.2E-04	6.7E-05	1.9E-04	NC	1.9E-04		
SVE-2A-071812	7/18/12	28.5	1,1,2-Trichloroethane	**0.0077**	9.7E-05	7.5E-07	6.1E-08	1.7E-07	9.7E-10	1.2E-05		
SVE-2A-071812	7/18/12	28.5	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.025**	9.7E-05	2.4E-06	2.0E-07	5.5E-07	NC	1.8E-08		
SVE-2A-071812	7/18/12	28.5	1,1-Dichloroethane	**0.61**	9.3E-05	5.6E-05	4.6E-06	1.3E-05	7.4E-09	1.8E-05		
SVE-2A-071812	7/18/12	28.5	1,1-Dichloroethene	**3.7**	1.1E-04	4.1E-04	3.3E-05	9.3E-05	NC	1.3E-03		
SVE-2A-071812	7/18/12	28.5	1,2,4-Trichlorobenzene	0.0012	3.9E-05	4.7E-08	3.8E-09	1.1E-08	NC	5.4E-06		
SVE-2A-071812	7/18/12	28.5	1,2,4-Trimethylbenzene	0.00079	7.7E-05	6.1E-08	4.9E-09	1.4E-08	NC	2.0E-06		
SVE-2A-071812	7/18/12	28.5	1,2-Dichlorobenzene	**0.0050**	8.7E-05	4.3E-07	3.5E-08	9.9E-08	NC	4.9E-07		
SVE-2A-071812	7/18/12	28.5	1,2-Dichloroethane	**0.050**	1.3E-04	6.3E-06	5.1E-07	1.4E-06	1.1E-08	3.6E-06		
SVE-2A-071812	7/18/12	28.5	1,3-Butadiene	0.00031	2.6E-04	8.2E-08	6.7E-09	1.9E-08	1.1E-09	9.3E-06		
SVE-2A-071812	7/18/12	28.5	1,3-Dichlorobenzene	**0.0035**	8.7E-05	3.0E-07	2.5E-08	6.9E-08	NC	6.6E-07		
SVE-2A-071812	7/18/12	28.5	1,4-Dioxane	**0.0048**	1.1E-04	5.5E-07	4.5E-08	1.3E-07	3.5E-10	4.2E-06		
SVE-2A-071812	7/18/12	28.5	1-Butene/Isobutene	**0.23**	1.0E-04	2.4E-05	2.0E-06	5.5E-06	NC	1.8E-06		
SVE-2A-071812	7/18/12	28.5	1-Methylnaphthalene	0.0013	6.7E-05	8.8E-08	7.1E-09	2.0E-08	NC	8.2E-08		
SVE-2A-071812	7/18/12	28.5	2 & 3-Chlorotoluene	**0.0051**	7.9E-05	4.0E-07	3.3E-08	9.2E-08	NC	1.3E-06		
SVE-2A-071812	7/18/12	28.5	2-Butanone (MEK)	**0.048**	1.0E-04	4.8E-06	3.9E-07	1.1E-06	NC	2.2E-07		
SVE-2A-071812	7/18/12	28.5	2-Methylnaphthalene	0.0013	6.7E-05	8.7E-08	7.1E-09	2.0E-08	NC	1.4E-06		
SVE-2A-071812	7/18/12	28.5	2-Propanol	**0.0022**	1.3E-04	2.9E-07	2.3E-08	6.5E-08	NC	9.3E-09		
SVE-2A-071812	7/18/12	28.5	3-Chloropropene	0.00049	1.1E-04	5.6E-08	4.6E-09	1.3E-08	2.7E-11	4.3E-09		
SVE-2A-071812	7/18/12	28.5	Acetaldehyde	**0.025**	1.5E-04	3.7E-06	3.0E-07	8.4E-07	8.1E-10	9.4E-05		
SVE-2A-071812	7/18/12	28.5	Acetone	**0.034**	1.5E-04	5.0E-06	4.1E-07	1.2E-06	NC	3.7E-08		
SVE-2A-071812	7/18/12	28.5	Acetonitrile	0.00031	1.5E-04	4.6E-08	3.7E-09	1.0E-08	NC	1.7E-07		
SVE-2A-071812	7/18/12	28.5	Acetylene	0.00033	1.3E-04	4.4E-08	3.6E-09	9.9E-09	NC	3.3E-09		
SVE-2A-071812	7/18/12	28.5	Benzaldehyde	**0.0020**	9.2E-05	1.8E-07	1.5E-08	4.2E-08	4.0E-11	4.6E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-2A-071812	7/18/12	28.5	Benzene	**0.0082**	1.1E-04	8.9E-07	7.2E-08	2.0E-07	2.1E-09	6.8E-06		
SVE-2A-071812	7/18/12	28.5	Butane	**0.044**	1.3E-04	5.8E-06	4.7E-07	1.3E-06	NC	4.4E-07		
SVE-2A-071812	7/18/12	28.5	Butyraldehyde	0.0016	1.5E-04	2.4E-07	1.9E-08	5.4E-08	5.2E-11	6.0E-06		
SVE-2A-071812	7/18/12	28.5	Carbon Disulfide	**0.027**	1.3E-04	3.4E-06	2.8E-07	7.8E-07	NC	1.1E-06		
SVE-2A-071812	7/18/12	28.5	Carbon Tetrachloride	**0.0024**	9.7E-05	2.3E-07	1.9E-08	5.3E-08	8.0E-10	1.3E-06		
SVE-2A-071812	7/18/12	28.5	Chlorobenzene	**0.025**	9.1E-05	2.3E-06	1.9E-07	5.2E-07	NC	5.2E-07		
SVE-2A-071812	7/18/12	28.5	Chlorodifluoromethane (Freon 22)	0.0011	1.2E-04	1.4E-07	1.1E-08	3.1E-08	NC	6.2E-10		
SVE-2A-071812	7/18/12	28.5	Chloroethane	**0.14**	2.8E-04	3.9E-05	3.2E-06	9.0E-06	NC	9.0E-07		
SVE-2A-071812	7/18/12	28.5	Chloroform	**1.1**	1.3E-04	1.4E-04	1.1E-05	3.2E-05	6.0E-08	1.1E-04		
SVE-2A-071812	7/18/12	28.5	Chloromethane	**0.0054**	1.5E-04	8.1E-07	6.6E-08	1.8E-07	NC	2.0E-06		
SVE-2A-071812	7/18/12	28.5	cis-1,2-Dichloroethene	**0.95**	9.2E-05	8.7E-05	7.1E-06	2.0E-05	NC	2.8E-03		
SVE-2A-071812	7/18/12	28.5	cis-2-Butene	**0.0040**	1.3E-04	5.3E-07	4.3E-08	1.2E-07	NC	4.0E-08		
SVE-2A-071812	7/18/12	28.5	Cyclohexane	**0.014**	9.9E-05	1.4E-06	1.1E-07	3.2E-07	NC	5.3E-08		
SVE-2A-071812	7/18/12	28.5	Dichlorodifluoromethane (Freon 12)	**0.0037**	8.4E-05	3.1E-07	2.5E-08	7.1E-08	NC	3.5E-07		
SVE-2A-071812	7/18/12	28.5	Dichlorofluoromethane	0.00068	1.1E-04	7.7E-08	6.3E-09	1.8E-08	NC	8.8E-08		
SVE-2A-071812	7/18/12	28.5	Ethane	**0.091**	1.3E-04	1.2E-05	9.8E-07	2.7E-06	NC	9.1E-07		
SVE-2A-071812	7/18/12	28.5	Ethanol	**0.057**	1.5E-04	8.8E-06	7.2E-07	2.0E-06	NC	2.9E-07		
SVE-2A-071812	7/18/12	28.5	Ethene	**0.060**	1.3E-04	7.9E-06	6.5E-07	1.8E-06	NC	6.0E-07		
SVE-2A-071812	7/18/12	28.5	Ethylbenzene	0.00070	9.3E-05	6.5E-08	5.3E-09	1.5E-08	1.3E-11	1.5E-08		
SVE-2A-071812	7/18/12	28.5	Isobutane	**0.031**	1.3E-04	4.1E-06	3.3E-07	9.3E-07	NC	3.1E-07		
SVE-2A-071812	7/18/12	28.5	Isopropylbenzene (Cumene)	0.0015	8.2E-05	1.2E-07	1.0E-08	2.8E-08	NC	7.0E-08		
SVE-2A-071812	7/18/12	28.5	Methylene Chloride	**0.081**	1.2E-04	9.9E-06	8.1E-07	2.3E-06	8.1E-10	5.7E-06		
SVE-2A-071812	7/18/12	28.5	Naphthalene	0.0013	7.5E-05	9.7E-08	7.9E-09	2.2E-08	2.7E-10	7.4E-06		
SVE-2A-071812	7/18/12	28.5	n-Butanol	**0.0074**	1.1E-04	8.5E-07	6.9E-08	1.9E-07	NC	5.5E-07		
SVE-2A-071812	7/18/12	28.5	n-Hexane	0.00052	2.2E-04	1.2E-07	9.4E-09	2.6E-08	NC	3.8E-08		
SVE-2A-071812	7/18/12	28.5	n-Nonane	0.00085	6.6E-05	5.6E-08	4.6E-09	1.3E-08	NC	6.4E-08		
SVE-2A-071812	7/18/12	28.5	n-Pentane	**0.0067**	1.0E-04	6.8E-07	5.6E-08	1.6E-07	NC	1.6E-07		
SVE-2A-071812	7/18/12	28.5	Propane	**0.13**	1.3E-04	1.7E-05	1.4E-06	3.9E-06	NC	1.3E-06		
SVE-2A-071812	7/18/12	28.5	Propene	**0.091**	1.3E-04	1.2E-05	9.8E-07	2.7E-06	NC	9.1E-07		
SVE-2A-071812	7/18/12	28.5	Propylbenzene	0.00080	7.6E-05	6.1E-08	5.0E-09	1.4E-08	NC	9.9E-08		
SVE-2A-071812	7/18/12	28.5	Styrene	0.00069	8.9E-05	6.1E-08	5.0E-09	1.4E-08	NC	1.6E-08		
SVE-2A-071812	7/18/12	28.5	Tetrachloroethene	**1.2**	9.0E-05	1.1E-04	8.8E-06	2.5E-05	5.2E-08	7.0E-04		
SVE-2A-071812	7/18/12	28.5	Tetrahydrofuran	**0.22**	1.2E-04	2.6E-05	2.1E-06	5.9E-06	NC	2.9E-06		
SVE-2A-071812	7/18/12	28.5	Toluene	**0.18**	1.1E-04	1.9E-05	1.6E-06	4.4E-06	NC	1.5E-05		
SVE-2A-071812	7/18/12	28.5	TPH-diesel	**5.5**	8.8E-05	4.8E-04	3.9E-05	1.1E-04	NC	1.1E-03		
SVE-2A-071812	7/18/12	28.5	TPH-gasoline	**8.5**	8.8E-05	7.5E-04	6.1E-05	1.7E-04	NC	1.3E-03		
SVE-2A-071812	7/18/12	28.5	trans-1,2-Dichloroethene	**0.052**	8.8E-05	4.6E-06	3.8E-07	1.1E-06	NC	1.8E-05		
SVE-2A-071812	7/18/12	28.5	trans-2-Butene	**0.012**	1.3E-04	1.6E-06	1.3E-07	3.6E-07	NC	1.2E-07		
SVE-2A-071812	7/18/12	28.5	Trichloroethene	**9.6**	9.8E-05	9.4E-04	7.7E-05	2.1E-04	3.1E-07	1.1E-01		
SVE-2A-071812	7/18/12	28.5	Trichlorofluoromethane (Freon 11)	**0.0030**	1.1E-04	3.2E-07	2.6E-08	7.3E-08	NC	1.0E-07		
SVE-2A-071812	7/18/12	28.5	Vinyl Acetate	0.0024	1.0E-04	2.5E-07	2.1E-08	5.7E-08	NC	2.9E-07		
SVE-2A-071812	7/18/12	28.5	Vinyl Chloride	**0.0090**	1.3E-04	1.2E-06	9.4E-08	2.6E-07	7.3E-09	2.6E-06		
SVE-2A-071812	7/18/12	28.5	Xylenes	0.0010	1.0E-04	1.0E-07	8.5E-09	2.4E-08	NC	2.4E-07	4.6E-07	1.2E-01

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-3A-071812	7/18/12	27.5	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.015	1.1E-04	1.6E-06	1.3E-07	3.6E-07	NC	4.5E-09		
SVE-3A-071812	7/18/12	27.5	1,1,1-Trichloroethane	0.019	1.0E-04	1.9E-06	1.6E-07	4.3E-07	NC	4.3E-07		
SVE-3A-071812	7/18/12	27.5	1,1,2-Trichloroethane	0.019	1.0E-04	1.9E-06	1.6E-07	4.3E-07	2.5E-09	3.1E-05		
SVE-3A-071812	7/18/12	27.5	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.027	1.0E-04	2.7E-06	2.2E-07	6.2E-07	NC	2.1E-08		
SVE-3A-071812	7/18/12	27.5	1,1-Dichloroethane	0.014	9.6E-05	1.3E-06	1.1E-07	3.1E-07	1.7E-10	4.4E-07		
SVE-3A-071812	7/18/12	27.5	1,1-Dichloroethene	0.017	1.1E-04	1.9E-06	1.6E-07	4.4E-07	NC	6.3E-06		
SVE-3A-071812	7/18/12	27.5	1,2,4-Trichlorobenzene	0.025	4.1E-05	1.0E-06	8.3E-08	2.3E-07	NC	1.2E-04		
SVE-3A-071812	7/18/12	27.5	1,2,4-Trimethylbenzene	0.017	7.9E-05	1.3E-06	1.1E-07	3.1E-07	NC	4.4E-05		
SVE-3A-071812	7/18/12	27.5	1,2-Dichlorobenzene	0.021	8.9E-05	1.9E-06	1.5E-07	4.3E-07	NC	2.1E-06		
SVE-3A-071812	7/18/12	27.5	1,2-Dichloroethane	0.014	1.3E-04	1.8E-06	1.5E-07	4.2E-07	3.1E-09	1.0E-06		
SVE-3A-071812	7/18/12	27.5	1,3-Butadiene	0.0069	2.7E-04	1.9E-06	1.5E-07	4.3E-07	2.6E-08	2.1E-04		
SVE-3A-071812	7/18/12	27.5	1,3-Dichlorobenzene	0.021	9.0E-05	1.9E-06	1.5E-07	4.3E-07	NC	4.1E-06		
SVE-3A-071812	7/18/12	27.5	1,4-Dioxane	0.034	1.2E-04	4.0E-06	3.3E-07	9.2E-07	2.5E-09	3.1E-05		
SVE-3A-071812	7/18/12	27.5	1-Butene/Isobutene	**0.51**	1.1E-04	5.5E-05	4.5E-06	1.3E-05	NC	4.2E-06		
SVE-3A-071812	7/18/12	27.5	1-Methylnaphthalene	0.0013	7.0E-05	9.1E-08	7.4E-09	2.1E-08	NC	8.4E-08		
SVE-3A-071812	7/18/12	27.5	2 & 3-Chlorotoluene	0.037	8.2E-05	3.0E-06	2.5E-07	6.9E-07	NC	9.9E-06		
SVE-3A-071812	7/18/12	27.5	2-Butanone (MEK)	**1.7**	1.0E-04	1.8E-04	1.4E-05	4.0E-05	NC	8.1E-06		
SVE-3A-071812	7/18/12	27.5	2-Methylnaphthalene	0.0013	6.9E-05	9.0E-08	7.3E-09	2.0E-08	NC	1.5E-06		
SVE-3A-071812	7/18/12	27.5	2-Propanol	0.0095	1.3E-04	1.3E-06	1.0E-07	2.9E-07	NC	4.1E-08		
SVE-3A-071812	7/18/12	27.5	3-Chloropropene	0.011	1.2E-04	1.3E-06	1.1E-07	3.0E-07	6.4E-10	9.9E-08		
SVE-3A-071812	7/18/12	27.5	Acetaldehyde	0.022	1.5E-04	3.4E-06	2.7E-07	7.7E-07	7.4E-10	8.5E-05		
SVE-3A-071812	7/18/12	27.5	Acetone	**0.47**	1.5E-04	7.2E-05	5.9E-06	1.6E-05	NC	5.3E-07		
SVE-3A-071812	7/18/12	27.5	Acetonitrile	0.0068	1.5E-04	1.0E-06	8.4E-08	2.4E-07	NC	3.9E-06		
SVE-3A-071812	7/18/12	27.5	Acetylene	0.0072	1.4E-04	9.8E-07	8.0E-08	2.2E-07	NC	7.5E-08		
SVE-3A-071812	7/18/12	27.5	Benzaldehyde	0.017	9.5E-05	1.6E-06	1.3E-07	3.7E-07	3.5E-10	4.1E-05		
SVE-3A-071812	7/18/12	27.5	Benzene	0.0085	1.1E-04	9.5E-07	7.8E-08	2.2E-07	2.2E-09	7.2E-06		
SVE-3A-071812	7/18/12	27.5	Butane	**0.11**	1.4E-04	1.5E-05	1.2E-06	3.4E-06	NC	1.1E-06		
SVE-3A-071812	7/18/12	27.5	Butyraldehyde	0.036	1.5E-04	5.5E-06	4.5E-07	1.3E-06	1.2E-09	1.4E-04		
SVE-3A-071812	7/18/12	27.5	Carbon Disulfide	0.037	1.3E-04	4.8E-06	3.9E-07	1.1E-06	NC	1.6E-06		
SVE-3A-071812	7/18/12	27.5	Carbon Tetrachloride	0.022	1.0E-04	2.2E-06	1.8E-07	5.0E-07	7.5E-09	1.3E-05		
SVE-3A-071812	7/18/12	27.5	Chlorobenzene	0.016	9.4E-05	1.5E-06	1.2E-07	3.4E-07	NC	3.4E-07		
SVE-3A-071812	7/18/12	27.5	Chlorodifluoromethane (Freon 22)	0.023	1.3E-04	2.9E-06	2.4E-07	6.7E-07	NC	1.3E-08		
SVE-3A-071812	7/18/12	27.5	Chloroethane	0.0066	2.9E-04	1.9E-06	1.6E-07	4.4E-07	NC	4.4E-08		
SVE-3A-071812	7/18/12	27.5	Chloroform	0.017	1.3E-04	2.2E-06	1.8E-07	5.0E-07	9.6E-10	1.7E-06		
SVE-3A-071812	7/18/12	27.5	Chloromethane	**0.046**	1.5E-04	7.1E-06	5.8E-07	1.6E-06	NC	1.8E-05		
SVE-3A-071812	7/18/12	27.5	cis-1,2-Dichloroethene	0.014	9.5E-05	1.3E-06	1.1E-07	3.0E-07	NC	4.3E-05		
SVE-3A-071812	7/18/12	27.5	cis-2-Butene	**0.038**	1.4E-04	5.2E-06	4.2E-07	1.2E-06	NC	3.9E-07		
SVE-3A-071812	7/18/12	27.5	Cyclohexane	**0.39**	1.0E-04	4.0E-05	3.3E-06	9.1E-06	NC	1.5E-06		
SVE-3A-071812	7/18/12	27.5	Dichlorodifluoromethane (Freon 12)	0.017	8.6E-05	1.5E-06	1.2E-07	3.4E-07	NC	1.7E-06		
SVE-3A-071812	7/18/12	27.5	Dichlorofluoromethane	0.015	1.2E-04	1.8E-06	1.4E-07	4.0E-07	NC	2.0E-06		
SVE-3A-071812	7/18/12	27.5	Ethane	**0.45**	1.4E-04	6.1E-05	5.0E-06	1.4E-05	NC	4.7E-06		
SVE-3A-071812	7/18/12	27.5	Ethanol	0.023	1.6E-04	3.7E-06	3.0E-07	8.4E-07	NC	1.2E-07		
SVE-3A-071812	7/18/12	27.5	Ethene	**0.42**	1.4E-04	5.7E-05	4.7E-06	1.3E-05	NC	4.4E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-3A-071812	7/18/12	27.5	Ethylbenzene	0.015	9.7E-05	1.4E-06	1.2E-07	3.3E-07	3.0E-10	3.3E-07		
SVE-3A-071812	7/18/12	27.5	Isobutane	**0.058**	1.4E-04	7.9E-06	6.5E-07	1.8E-06	NC	6.0E-07		
SVE-3A-071812	7/18/12	27.5	Isopropylbenzene (Cumene)	**0.093**	8.5E-05	7.9E-06	6.4E-07	1.8E-06	NC	4.5E-06		
SVE-3A-071812	7/18/12	27.5	Methylene Chloride	**0.19**	1.3E-04	2.4E-05	2.0E-06	5.5E-06	2.0E-09	1.4E-05		
SVE-3A-071812	7/18/12	27.5	Naphthalene	**0.0048**	7.7E-05	3.7E-07	3.0E-08	8.5E-08	1.0E-09	2.8E-05		
SVE-3A-071812	7/18/12	27.5	n-Butanol	0.036	1.2E-04	4.3E-06	3.5E-07	9.7E-07	NC	2.8E-06		
SVE-3A-071812	7/18/12	27.5	n-Hexane	0.011	2.3E-04	2.5E-06	2.0E-07	5.7E-07	NC	8.2E-07		
SVE-3A-071812	7/18/12	27.5	n-Nonane	**0.19**	6.8E-05	1.3E-05	1.1E-06	2.9E-06	NC	1.5E-05		
SVE-3A-071812	7/18/12	27.5	n-Pentane	**0.036**	1.1E-04	3.8E-06	3.1E-07	8.6E-07	NC	8.6E-07		
SVE-3A-071812	7/18/12	27.5	Propane	**0.22**	1.4E-04	3.0E-05	2.4E-06	6.9E-06	NC	2.3E-06		
SVE-3A-071812	7/18/12	27.5	Propene	**0.44**	1.4E-04	6.0E-05	4.9E-06	1.4E-05	NC	4.6E-06		
SVE-3A-071812	7/18/12	27.5	Propylbenzene	**0.15**	7.9E-05	1.2E-05	9.6E-07	2.7E-06	NC	1.9E-05		
SVE-3A-071812	7/18/12	27.5	Styrene	0.015	9.2E-05	1.4E-06	1.1E-07	3.1E-07	NC	3.5E-07		
SVE-3A-071812	7/18/12	27.5	Tetrachloroethene	0.024	9.3E-05	2.2E-06	1.8E-07	5.1E-07	1.1E-09	1.5E-05		
SVE-3A-071812	7/18/12	27.5	Tetrahydrofuran	**21**	1.2E-04	2.5E-03	2.1E-04	5.8E-04	NC	2.9E-04		
SVE-3A-071812	7/18/12	27.5	Toluene	0.013	1.1E-04	1.4E-06	1.2E-07	3.3E-07	NC	1.1E-06		
SVE-3A-071812	7/18/12	27.5	TPH-diesel	**120**	9.1E-05	1.1E-02	8.9E-04	2.5E-03	NC	2.5E-02		
SVE-3A-071812	7/18/12	27.5	TPH-gasoline	**1,300**	9.1E-05	1.2E-01	9.6E-03	2.7E-02	NC	2.1E-01		
SVE-3A-071812	7/18/12	27.5	trans-1,2-Dichloroethene	0.027	9.2E-05	2.5E-06	2.0E-07	5.6E-07	NC	9.4E-06		
SVE-3A-071812	7/18/12	27.5	trans-2-Butene	**0.033**	1.4E-04	4.5E-06	3.7E-07	1.0E-06	NC	3.4E-07		
SVE-3A-071812	7/18/12	27.5	Trichloroethene	**0.041**	1.0E-04	4.2E-06	3.4E-07	9.5E-07	1.4E-09	4.7E-04		
SVE-3A-071812	7/18/12	27.5	Trichlorofluoromethane (Freon 11)	0.020	1.1E-04	2.2E-06	1.8E-07	5.1E-07	NC	7.2E-07		
SVE-3A-071812	7/18/12	27.5	Vinyl Acetate	0.053	1.1E-04	5.7E-06	4.7E-07	1.3E-06	NC	6.6E-06		
SVE-3A-071812	7/18/12	27.5	Vinyl Chloride	0.0085	1.3E-04	1.1E-06	9.2E-08	2.6E-07	7.2E-09	2.6E-06		
SVE-3A-071812	7/18/12	27.5	Xylenes	0.023	1.1E-04	2.5E-06	2.0E-07	5.7E-07	NC	5.7E-06	6.1E-08	2.3E-01
SVE-4-11152012	11/15/12	28	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0030**	1.0E-04	3.1E-07	2.5E-08	7.1E-08	NC	8.9E-10		
SVE-4-11152012	11/15/12	28	1,1,1-Trichloroethane	0.0011	9.9E-05	1.1E-07	8.8E-09	2.5E-08	NC	2.5E-08		
SVE-4-11152012	11/15/12	28	1,1,2-Trichloroethane	0.0011	9.9E-05	1.1E-07	8.8E-09	2.5E-08	1.4E-10	1.8E-06		
SVE-4-11152012	11/15/12	28	1,1,2-Trichlorotrifluoroethane (Freon 113)	**0.035**	9.9E-05	3.4E-06	2.8E-07	7.9E-07	NC	2.6E-08		
SVE-4-11152012	11/15/12	28	1,1-Dichloroethane	**0.088**	9.4E-05	8.3E-06	6.8E-07	1.9E-06	1.1E-09	2.7E-06		
SVE-4-11152012	11/15/12	28	1,1-Dichloroethene	**0.031**	1.1E-04	3.5E-06	2.8E-07	7.9E-07	NC	1.1E-05		
SVE-4-11152012	11/15/12	28	1,2,4-Trichlorobenzene	0.0015	4.0E-05	6.0E-08	4.9E-09	1.4E-08	NC	6.8E-06		
SVE-4-11152012	11/15/12	28	1,2,4-Trimethylbenzene	**0.0058**	7.8E-05	4.5E-07	3.7E-08	1.0E-07	NC	1.5E-05		
SVE-4-11152012	11/15/12	28	1,2-Dichlorobenzene	0.0012	8.8E-05	1.1E-07	8.6E-09	2.4E-08	NC	1.2E-07		
SVE-4-11152012	11/15/12	28	1,2-Dichloroethane	**0.0020**	1.3E-04	2.6E-07	2.1E-08	5.8E-08	4.4E-10	1.5E-07		
SVE-4-11152012	11/15/12	28	1,3-Butadiene	**0.0018**	2.7E-04	4.8E-07	3.9E-08	1.1E-07	6.7E-09	5.5E-05		
SVE-4-11152012	11/15/12	28	1,3-Dichlorobenzene	0.0012	8.8E-05	1.1E-07	8.6E-09	2.4E-08	NC	2.3E-07		
SVE-4-11152012	11/15/12	28	1,4-Dioxane	0.0020	1.2E-04	2.3E-07	1.9E-08	5.3E-08	1.5E-10	1.8E-06		
SVE-4-11152012	11/15/12	28	1-Butene/Isobutene	**0.23**	1.1E-04	2.4E-05	2.0E-06	5.6E-06	NC	1.9E-06		
SVE-4-11152012	11/15/12	28	2 & 3-Chlorotoluene	0.0022	8.1E-05	1.8E-07	1.4E-08	4.1E-08	NC	5.8E-07		
SVE-4-11152012	11/15/12	28	2-Butanone (MEK)	**0.0075**	1.0E-04	7.7E-07	6.3E-08	1.8E-07	NC	3.5E-08		
SVE-4-11152012	11/15/12	28	2-Propanol	0.00056	1.3E-04	7.4E-08	6.0E-09	1.7E-08	NC	2.4E-09		
SVE-4-11152012	11/15/12	28	3-Chloropropene	0.00064	1.2E-04	7.4E-08	6.1E-09	1.7E-08	3.6E-11	5.7E-09		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-4-11152012	11/15/12	28	Acetaldehyde	**0.013**	1.5E-04	2.0E-06	1.6E-07	4.5E-07	4.3E-10	5.0E-05		
SVE-4-11152012	11/15/12	28	Acetone	**0.026**	1.5E-04	3.9E-06	3.2E-07	8.9E-07	NC	2.9E-08		
SVE-4-11152012	11/15/12	28	Acetonitrile	0.00040	1.5E-04	6.0E-08	4.9E-09	1.4E-08	NC	2.3E-07		
SVE-4-11152012	11/15/12	28	Acetylene	**0.0051**	1.3E-04	6.8E-07	5.6E-08	1.6E-07	NC	5.2E-08		
SVE-4-11152012	11/15/12	28	Benzaldehyde	0.00097	9.3E-05	9.0E-08	7.4E-09	2.1E-08	2.0E-11	2.3E-06		
SVE-4-11152012	11/15/12	28	Benzene	**0.010**	1.1E-04	1.1E-06	9.0E-08	2.5E-07	2.6E-09	8.4E-06		
SVE-4-11152012	11/15/12	28	Butane	**0.032**	1.3E-04	4.3E-06	3.5E-07	9.8E-07	NC	3.3E-07		
SVE-4-11152012	11/15/12	28	Butyraldehyde	0.0021	1.5E-04	3.1E-07	2.6E-08	7.2E-08	6.9E-11	8.0E-06		
SVE-4-11152012	11/15/12	28	Carbon Disulfide	**0.056**	1.3E-04	7.2E-06	5.8E-07	1.6E-06	NC	2.3E-06		
SVE-4-11152012	11/15/12	28	Carbon Tetrachloride	0.0013	9.9E-05	1.3E-07	1.0E-08	2.9E-08	4.4E-10	7.3E-07		
SVE-4-11152012	11/15/12	28	Chlorobenzene	0.00097	9.3E-05	9.0E-08	7.3E-09	2.1E-08	NC	2.1E-08		
SVE-4-11152012	11/15/12	28	Chlorodifluoromethane (Freon 22)	**0.0033**	1.2E-04	4.1E-07	3.4E-08	9.4E-08	NC	1.9E-09		
SVE-4-11152012	11/15/12	28	Chloroethane	**0.048**	2.9E-04	1.4E-05	1.1E-06	3.1E-06	NC	3.1E-07		
SVE-4-11152012	11/15/12	28	Chloroform	**0.011**	1.3E-04	1.4E-06	1.1E-07	3.2E-07	6.1E-10	1.1E-06		
SVE-4-11152012	11/15/12	28	Chloromethane	**0.071**	1.5E-04	1.1E-05	8.8E-07	2.5E-06	NC	2.7E-05		
SVE-4-11152012	11/15/12	28	cis-1,2-Dichloroethene	**0.043**	9.3E-05	4.0E-06	3.3E-07	9.2E-07	NC	1.3E-04		
SVE-4-11152012	11/15/12	28	cis-2-Butene	**0.024**	1.3E-04	3.2E-06	2.6E-07	7.4E-07	NC	2.5E-07		
SVE-4-11152012	11/15/12	28	Cyclohexane	**0.0033**	1.0E-04	3.3E-07	2.7E-08	7.6E-08	NC	1.3E-08		
SVE-4-11152012	11/15/12	28	Dichlorodifluoromethane (Freon 12)	**0.0032**	8.5E-05	2.7E-07	2.2E-08	6.2E-08	NC	3.1E-07		
SVE-4-11152012	11/15/12	28	Dichlorofluoromethane	0.00088	1.2E-04	1.0E-07	8.3E-09	2.3E-08	NC	1.2E-07		
SVE-4-11152012	11/15/12	28	Ethane	**0.099**	1.3E-04	1.3E-05	1.1E-06	3.0E-06	NC	1.0E-06		
SVE-4-11152012	11/15/12	28	Ethanol	**0.013**	1.6E-04	2.0E-06	1.7E-07	4.7E-07	NC	6.7E-08		
SVE-4-11152012	11/15/12	28	Ethene	**0.31**	1.3E-04	4.2E-05	3.4E-06	9.5E-06	NC	3.2E-06		
SVE-4-11152012	11/15/12	28	Ethylbenzene	**0.0049**	9.5E-05	4.7E-07	3.8E-08	1.1E-07	9.5E-11	1.1E-07		
SVE-4-11152012	11/15/12	28	Isobutane	**0.014**	1.3E-04	1.9E-06	1.5E-07	4.3E-07	NC	1.4E-07		
SVE-4-11152012	11/15/12	28	Isopropylbenzene (Cumene)	**0.011**	8.3E-05	9.2E-07	7.5E-08	2.1E-07	NC	5.2E-07		
SVE-4-11152012	11/15/12	28	Methylene Chloride	**0.023**	1.2E-04	2.9E-06	2.3E-07	6.5E-07	2.3E-10	1.6E-06		
SVE-4-11152012	11/15/12	28	Naphthalene	**0.039**	7.6E-05	3.0E-06	2.4E-07	6.8E-07	8.2E-09	2.3E-04		
SVE-4-11152012	11/15/12	28	n-Butanol	0.0021	1.2E-04	2.4E-07	2.0E-08	5.6E-08	NC	1.6E-07		
SVE-4-11152012	11/15/12	28	n-Hexane	**0.0051**	2.2E-04	1.1E-06	9.3E-08	2.6E-07	NC	3.7E-07		
SVE-4-11152012	11/15/12	28	n-Nonane	0.0011	6.7E-05	7.3E-08	6.0E-09	1.7E-08	NC	8.4E-08		
SVE-4-11152012	11/15/12	28	n-Pentane	**0.0098**	1.0E-04	1.0E-06	8.3E-08	2.3E-07	NC	2.3E-07		
SVE-4-11152012	11/15/12	28	Propane	**0.11**	1.3E-04	1.5E-05	1.2E-06	3.4E-06	NC	1.1E-06		
SVE-4-11152012	11/15/12	28	Propene	**0.51**	1.3E-04	6.8E-05	5.6E-06	1.6E-05	NC	5.2E-06		
SVE-4-11152012	11/15/12	28	Propylbenzene	0.0010	7.7E-05	7.7E-08	6.3E-09	1.8E-08	NC	1.3E-07		
SVE-4-11152012	11/15/12	28	Styrene	**0.0024**	9.0E-05	2.2E-07	1.8E-08	4.9E-08	NC	5.5E-08		
SVE-4-11152012	11/15/12	28	Tetrachloroethene	**0.080**	9.1E-05	7.3E-06	6.0E-07	1.7E-06	3.5E-09	4.8E-05		
SVE-4-11152012	11/15/12	28	Tetrahydrofuran	**0.036**	1.2E-04	4.3E-06	3.5E-07	9.8E-07	NC	4.9E-07		
SVE-4-11152012	11/15/12	28	Toluene	**0.015**	1.1E-04	1.6E-06	1.3E-07	3.7E-07	NC	1.2E-06		
SVE-4-11152012	11/15/12	28	TPH-gasoline	**55**	8.9E-05	4.9E-03	4.0E-04	1.1E-03	NC	8.6E-03		
SVE-4-11152012	11/15/12	28	trans-1,2-Dichloroethene	**0.0042**	9.0E-05	3.8E-07	3.1E-08	8.6E-08	NC	1.4E-06		
SVE-4-11152012	11/15/12	28	trans-2-Butene	**0.027**	1.3E-04	3.6E-06	3.0E-07	8.3E-07	NC	2.8E-07		
SVE-4-11152012	11/15/12	28	Trichloroethene	**0.074**	1.0E-04	7.4E-06	6.0E-07	1.7E-06	2.5E-09	8.4E-04		

TABLE 9b

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Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration $(mg/m^3)^b$	Attenuation Factor $[(mg/m^3)/(mg/m^3)]^c$	Exposure Point Concentration (EPC) in Indoor Air $(mg/m^3)^d$	Exposure Concentration (EC) in Indoor Air – Cancer Effects $(mg/m^3)^e$	Exposure Concentration (EC) in Indoor Air – Noncancer Effects $(mg/m^3)^e$	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-4-11152012	11/15/12	28	Trichlorofluoromethane (Freon 11)	**0.0091**	1.1E-04	9.9E-07	8.1E-08	2.3E-07	NC	3.2E-07		
SVE-4-11152012	11/15/12	28	Vinyl Acetate	0.0031	1.1E-04	3.3E-07	2.7E-08	7.5E-08	NC	3.8E-07		
SVE-4-11152012	11/15/12	28	Vinyl Chloride	0.00050	1.3E-04	6.5E-08	5.3E-09	1.5E-08	4.1E-10	1.5E-07		
SVE-4-11152012	11/15/12	28	Xylenes	**0.0057**	1.1E-04	6.1E-07	4.9E-08	1.4E-07	NC	1.4E-06	2.8E-08	1.0E-02
SVE-5-11142012	11/14/12	30	1,1,1,2-Tetrafluoroethane (Freon 134a)	**0.0021**	9.7E-05	2.0E-07	1.7E-08	4.7E-08	NC	5.8E-10		
SVE-5-11142012	11/14/12	30	1,1,1-Trichloroethane	**0.0081**	9.2E-05	7.5E-07	6.1E-08	1.7E-07	NC	1.7E-07		
SVE-5-11142012	11/14/12	30	1,1,2-Trichloroethane	0.00047	9.2E-05	4.3E-08	3.5E-09	9.9E-09	5.7E-11	7.1E-07		
SVE-5-11142012	11/14/12	30	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.00067	9.2E-05	6.2E-08	5.0E-09	1.4E-08	NC	4.7E-10		
SVE-5-11142012	11/14/12	30	1,1-Dichloroethane	**0.0050**	8.8E-05	4.4E-07	3.6E-08	1.0E-07	5.8E-11	1.4E-07		
SVE-5-11142012	11/14/12	30	1,1-Dichloroethene	**0.0099**	1.1E-04	1.0E-06	8.5E-08	2.4E-07	NC	3.4E-06		
SVE-5-11142012	11/14/12	30	1,2,4-Trichlorobenzene	0.00062	3.7E-05	2.3E-08	1.9E-09	5.3E-09	NC	2.6E-06		
SVE-5-11142012	11/14/12	30	1,2,4-Trimethylbenzene	0.00043	7.3E-05	3.1E-08	2.6E-09	7.2E-09	NC	1.0E-06		
SVE-5-11142012	11/14/12	30	1,2-Dichlorobenzene	0.00052	8.2E-05	4.3E-08	3.5E-09	9.8E-09	NC	4.9E-08		
SVE-5-11142012	11/14/12	30	1,2-Dichloroethane	0.00035	1.2E-04	4.2E-08	3.4E-09	9.6E-09	7.2E-11	2.4E-08		
SVE-5-11142012	11/14/12	30	1,3-Butadiene	0.00017	2.5E-04	4.3E-08	3.5E-09	9.8E-09	6.0E-10	4.9E-06		
SVE-5-11142012	11/14/12	30	1,3-Dichlorobenzene	0.00052	8.3E-05	4.3E-08	3.5E-09	9.8E-09	NC	9.3E-08		
SVE-5-11142012	11/14/12	30	1,4-Dioxane	0.00084	1.1E-04	9.2E-08	7.5E-09	2.1E-08	5.8E-11	7.0E-07		
SVE-5-11142012	11/14/12	30	1-Butene/Isobutene	**0.0027**	1.0E-04	2.7E-07	2.2E-08	6.1E-08	NC	2.0E-08		
SVE-5-11142012	11/14/12	30	2 & 3-Chlorotoluene	0.00090	7.6E-05	6.8E-08	5.5E-09	1.6E-08	NC	2.2E-07		
SVE-5-11142012	11/14/12	30	2-Butanone (MEK)	**0.0063**	9.6E-05	6.0E-07	4.9E-08	1.4E-07	NC	2.8E-08		
SVE-5-11142012	11/14/12	30	2-Propanol	**0.0012**	1.2E-04	1.5E-07	1.2E-08	3.4E-08	NC	4.8E-09		
SVE-5-11142012	11/14/12	30	3-Chloropropene	0.00027	1.1E-04	2.9E-08	2.4E-09	6.7E-09	1.4E-11	2.2E-09		
SVE-5-11142012	11/14/12	30	Acetaldehyde	**0.098**	1.4E-04	1.4E-05	1.1E-06	3.2E-06	3.0E-09	3.5E-04		
SVE-5-11142012	11/14/12	30	Acetone	**0.029**	1.4E-04	4.1E-06	3.3E-07	9.4E-07	NC	3.0E-08		
SVE-5-11142012	11/14/12	30	Acetonitrile	**0.0010**	1.4E-04	1.4E-07	1.1E-08	3.2E-08	NC	5.4E-07		
SVE-5-11142012	11/14/12	30	Acetylene	**0.0032**	1.3E-04	4.0E-07	3.3E-08	9.2E-08	NC	3.1E-08		
SVE-5-11142012	11/14/12	30	Benzaldehyde	**0.0034**	8.7E-05	3.0E-07	2.4E-08	6.8E-08	6.5E-11	7.5E-06		
SVE-5-11142012	11/14/12	30	Benzene	**0.0016**	1.0E-04	1.7E-07	1.3E-08	3.8E-08	3.9E-10	1.3E-06		
SVE-5-11142012	11/14/12	30	Butane	**0.015**	1.3E-04	1.9E-06	1.5E-07	4.3E-07	NC	1.4E-07		
SVE-5-11142012	11/14/12	30	Butyraldehyde	**0.0031**	1.4E-04	4.4E-07	3.6E-08	1.0E-07	9.6E-11	1.1E-05		
SVE-5-11142012	11/14/12	30	Carbon Disulfide	**0.0018**	1.2E-04	2.2E-07	1.8E-08	4.9E-08	NC	7.1E-08		
SVE-5-11142012	11/14/12	30	Carbon Tetrachloride	**0.0018**	9.2E-05	1.7E-07	1.4E-08	3.8E-08	5.7E-10	9.5E-07		
SVE-5-11142012	11/14/12	30	Chlorobenzene	0.00040	8.7E-05	3.5E-08	2.8E-09	7.9E-09	NC	7.9E-09		
SVE-5-11142012	11/14/12	30	Chlorodifluoromethane (Freon 22)	**0.0031**	1.2E-04	3.6E-07	3.0E-08	8.3E-08	NC	1.7E-09		
SVE-5-11142012	11/14/12	30	Chloroethane	**0.0010**	2.7E-04	2.7E-07	2.2E-08	6.2E-08	NC	6.2E-09		
SVE-5-11142012	11/14/12	30	Chloroform	**0.0045**	1.2E-04	5.4E-07	4.4E-08	1.2E-07	2.3E-10	4.1E-07		
SVE-5-11142012	11/14/12	30	Chloromethane	**0.00089**	1.4E-04	1.3E-07	1.0E-08	2.9E-08	NC	3.2E-07		
SVE-5-11142012	11/14/12	30	cis-1,2-Dichloroethene	**0.00099**	8.8E-05	8.7E-08	7.1E-09	2.0E-08	NC	2.8E-06		
SVE-5-11142012	11/14/12	30	cis-2-Butene	**0.00042**	1.3E-04	5.3E-08	4.3E-09	1.2E-08	NC	4.0E-09		
SVE-5-11142012	11/14/12	30	Cyclohexane	**0.0012**	9.4E-05	1.1E-07	9.2E-09	2.6E-08	NC	4.3E-09		
SVE-5-11142012	11/14/12	30	Dichlorodifluoromethane (Freon 12)	**0.0025**	8.0E-05	2.0E-07	1.6E-08	4.5E-08	NC	2.3E-07		
SVE-5-11142012	11/14/12	30	Dichlorofluoromethane	0.00036	1.1E-04	3.9E-08	3.2E-09	8.9E-09	NC	4.4E-08		
SVE-5-11142012	11/14/12	30	Ethane	**0.022**	1.3E-04	2.8E-06	2.3E-07	6.3E-07	NC	2.1E-07		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m³)[b]	Attenuation Factor [(mg/m³)/(mg/m³)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m³)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m³)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m³)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-5-11142012	11/14/12	30	Ethanol	**0.0063**	1.5E-04	9.3E-07	7.6E-08	2.1E-07	NC	3.0E-08		
SVE-5-11142012	11/14/12	30	Ethene	**0.0092**	1.3E-04	1.2E-06	9.5E-08	2.6E-07	NC	8.8E-08		
SVE-5-11142012	11/14/12	30	Ethylbenzene	0.00038	8.9E-05	3.4E-08	2.8E-09	7.7E-09	6.9E-12	7.7E-09		
SVE-5-11142012	11/14/12	30	Isobutane	**0.0050**	1.3E-04	6.3E-07	5.1E-08	1.4E-07	NC	4.8E-08		
SVE-5-11142012	11/14/12	30	Isopropylbenzene (Cumene)	0.00083	7.8E-05	6.5E-08	5.3E-09	1.5E-08	NC	3.7E-08		
SVE-5-11142012	11/14/12	30	Methylene Chloride	**0.0047**	1.2E-04	5.5E-07	4.5E-08	1.3E-07	4.5E-11	3.1E-07		
SVE-5-11142012	11/14/12	30	Naphthalene	0.00072	7.1E-05	5.1E-08	4.2E-09	1.2E-08	1.4E-10	3.9E-06		
SVE-5-11142012	11/14/12	30	n-Butanol	**0.0029**	1.1E-04	3.2E-07	2.6E-08	7.2E-08	NC	2.1E-07		
SVE-5-11142012	11/14/12	30	n-Hexane	**0.00076**	2.1E-04	1.6E-07	1.3E-08	3.7E-08	NC	5.3E-08		
SVE-5-11142012	11/14/12	30	n-Nonane	0.00045	6.2E-05	2.8E-08	2.3E-09	6.4E-09	NC	3.2E-08		
SVE-5-11142012	11/14/12	30	n-Pentane	**0.011**	9.7E-05	1.1E-06	8.7E-08	2.4E-07	NC	2.4E-07		
SVE-5-11142012	11/14/12	30	Propane	**0.024**	1.3E-04	3.0E-06	2.5E-07	6.9E-07	NC	2.3E-07		
SVE-5-11142012	11/14/12	30	Propene	**0.0040**	1.3E-04	5.0E-07	4.1E-08	1.2E-07	NC	3.8E-08		
SVE-5-11142012	11/14/12	30	Propylbenzene	0.00043	7.2E-05	3.1E-08	2.5E-09	7.1E-09	NC	5.1E-08		
SVE-5-11142012	11/14/12	30	Styrene	0.00037	8.5E-05	3.1E-08	2.6E-09	7.1E-09	NC	7.9E-09		
SVE-5-11142012	11/14/12	30	Tetrachloroethene	**0.017**	8.6E-05	1.5E-06	1.2E-07	3.3E-07	7.0E-10	9.5E-06		
SVE-5-11142012	11/14/12	30	Toluene	**0.017**	1.0E-04	1.7E-06	1.4E-07	4.0E-07	NC	1.3E-06		
SVE-5-11142012	11/14/12	30	TPH-gasoline	1.7	8.4E-05	1.4E-04	1.2E-05	3.2E-05	NC	2.5E-04		
SVE-5-11142012	11/14/12	30	trans-1,2-Dichloroethene	0.00067	8.4E-05	5.6E-08	4.6E-09	1.3E-08	NC	2.1E-07		
SVE-5-11142012	11/14/12	30	trans-2-Butene	**0.00050**	1.3E-04	6.3E-08	5.1E-09	1.4E-08	NC	4.8E-09		
SVE-5-11142012	11/14/12	30	Trichloroethene	**0.069**	9.3E-05	6.4E-06	5.3E-07	1.5E-06	2.2E-09	7.4E-04		
SVE-5-11142012	11/14/12	30	Trichlorofluoromethane (Freon 11)	**0.0024**	1.0E-04	2.5E-07	2.0E-08	5.6E-08	NC	8.0E-08		
SVE-5-11142012	11/14/12	30	Vinyl Acetate	**0.0033**	1.0E-04	3.3E-07	2.7E-08	7.5E-08	NC	3.8E-07		
SVE-5-11142012	11/14/12	30	Vinyl Chloride	0.00021	1.2E-04	2.6E-08	2.1E-09	5.9E-09	1.6E-10	5.9E-08		
SVE-5-11142012	11/14/12	30	Xylenes	0.00056	1.0E-04	5.6E-08	4.6E-09	1.3E-08	NC	1.3E-07	8.5E-09	1.4E-03
SVE-6-11142012	11/14/12	31.5	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.29	9.3E-05	2.7E-05	2.2E-06	6.1E-06	NC	7.7E-08		
SVE-6-11142012	11/14/12	31.5	1,1,1-Trichloroethane	0.37	8.8E-05	3.3E-05	2.7E-06	7.4E-06	NC	7.4E-06		
SVE-6-11142012	11/14/12	31.5	1,1,2-Trichloroethane	0.37	8.8E-05	3.3E-05	2.7E-06	7.5E-06	4.3E-08	5.3E-04		
SVE-6-11142012	11/14/12	31.5	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.53	8.8E-05	4.7E-05	3.8E-06	1.1E-05	NC	3.6E-07		
SVE-6-11142012	11/14/12	31.5	1,1-Dichloroethane	0.28	8.4E-05	2.4E-05	1.9E-06	5.4E-06	3.1E-09	7.7E-06		
SVE-6-11142012	11/14/12	31.5	1,1-Dichloroethene	0.32	1.0E-04	3.2E-05	2.6E-06	7.4E-06	NC	1.1E-04		
SVE-6-11142012	11/14/12	31.5	1,2,4-Trichlorobenzene	0.49	3.6E-05	1.7E-05	1.4E-06	4.0E-06	NC	2.0E-03		
SVE-6-11142012	11/14/12	31.5	1,2,4-Trimethylbenzene	0.34	7.0E-05	2.4E-05	1.9E-06	5.4E-06	NC	7.7E-04		
SVE-6-11142012	11/14/12	31.5	1,2-Dichlorobenzene	0.41	7.9E-05	3.2E-05	2.6E-06	7.4E-06	NC	3.7E-05		
SVE-6-11142012	11/14/12	31.5	1,2-Dichloroethane	0.28	1.1E-04	3.2E-05	2.6E-06	7.3E-06	5.5E-08	1.8E-05		
SVE-6-11142012	11/14/12	31.5	1,3-Butadiene	0.13	2.4E-04	3.2E-05	2.6E-06	7.2E-06	4.4E-07	3.6E-03		
SVE-6-11142012	11/14/12	31.5	1,3-Dichlorobenzene	0.41	7.9E-05	3.2E-05	2.6E-06	7.4E-06	NC	7.0E-05		
SVE-6-11142012	11/14/12	31.5	1,4-Dioxane	0.66	1.0E-04	6.9E-05	5.6E-06	1.6E-05	4.3E-08	5.3E-04		
SVE-6-11142012	11/14/12	31.5	1-Butene/Isobutene	0.17	9.5E-05	1.6E-05	1.3E-06	3.7E-06	NC	1.2E-06		
SVE-6-11142012	11/14/12	31.5	2 & 3-Chlorotoluene	0.71	7.2E-05	5.1E-05	4.2E-06	1.2E-05	NC	1.7E-04		
SVE-6-11142012	11/14/12	31.5	2-Butanone (MEK)	**303**	9.2E-05	2.8E-02	2.3E-03	6.3E-03	NC	1.3E-03		
SVE-6-11142012	11/14/12	31.5	2-Propanol	0.18	1.2E-04	2.1E-05	1.7E-06	4.9E-06	NC	6.9E-07		
SVE-6-11142012	11/14/12	31.5	3-Chloropropene	0.21	1.0E-04	2.2E-05	1.8E-06	5.0E-06	1.1E-08	1.7E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m3)[b]	Attenuation Factor [(mg/m3)/(mg/m3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-6-11142012	11/14/12	31.5	Acetaldehyde	0.43	1.4E-04	5.8E-05	4.7E-06	1.3E-05	1.3E-08	1.5E-03		
SVE-6-11142012	11/14/12	31.5	Acetone	**125**	1.4E-04	1.7E-02	1.4E-03	3.9E-03	NC	1.2E-04		
SVE-6-11142012	11/14/12	31.5	Acetonitrile	0.13	1.3E-04	1.8E-05	1.4E-06	4.0E-06	NC	6.7E-05		
SVE-6-11142012	11/14/12	31.5	Acetylene	0.14	1.2E-04	1.7E-05	1.4E-06	3.9E-06	NC	1.3E-06		
SVE-6-11142012	11/14/12	31.5	Benzaldehyde	0.32	8.3E-05	2.7E-05	2.2E-06	6.1E-06	5.9E-09	6.8E-04		
SVE-6-11142012	11/14/12	31.5	Benzene	0.17	9.9E-05	1.7E-05	1.4E-06	3.8E-06	4.0E-08	1.3E-04		
SVE-6-11142012	11/14/12	31.5	Butane	0.024	1.2E-04	2.9E-06	2.4E-07	6.6E-07	NC	2.2E-07		
SVE-6-11142012	11/14/12	31.5	Butyraldehyde	0.70	1.3E-04	9.4E-05	7.7E-06	2.2E-05	2.1E-08	2.4E-03		
SVE-6-11142012	11/14/12	31.5	Carbon Disulfide	0.73	1.1E-04	8.4E-05	6.8E-06	1.9E-05	NC	2.7E-05		
SVE-6-11142012	11/14/12	31.5	Carbon Tetrachloride	0.43	8.8E-05	3.8E-05	3.1E-06	8.7E-06	1.3E-07	2.2E-04		
SVE-6-11142012	11/14/12	31.5	Chlorobenzene	0.32	8.3E-05	2.7E-05	2.2E-06	6.1E-06	NC	6.1E-06		
SVE-6-11142012	11/14/12	31.5	Chlorodifluoromethane (Freon 22)	0.45	1.1E-04	5.0E-05	4.1E-06	1.2E-05	NC	2.3E-07		
SVE-6-11142012	11/14/12	31.5	Chloroethane	0.13	2.6E-04	3.4E-05	2.8E-06	7.7E-06	NC	7.7E-07		
SVE-6-11142012	11/14/12	31.5	Chloroform	0.33	1.1E-04	3.8E-05	3.1E-06	8.7E-06	1.6E-08	2.9E-05		
SVE-6-11142012	11/14/12	31.5	Chloromethane	0.12	1.4E-04	1.6E-05	1.3E-06	3.7E-06	NC	4.2E-05		
SVE-6-11142012	11/14/12	31.5	cis-1,2-Dichloroethene	0.27	8.4E-05	2.3E-05	1.8E-06	5.2E-06	NC	7.4E-04		
SVE-6-11142012	11/14/12	31.5	cis-2-Butene	0.15	1.2E-04	1.8E-05	1.5E-06	4.1E-06	NC	1.4E-06		
SVE-6-11142012	11/14/12	31.5	Cyclohexane	0.17	9.0E-05	1.5E-05	1.3E-06	3.5E-06	NC	5.8E-07		
SVE-6-11142012	11/14/12	31.5	Cyclohexanone	**220**	9.0E-05	2.0E-02	1.6E-03	4.5E-03	NC	7.6E-04		
SVE-6-11142012	11/14/12	31.5	Dichlorodifluoromethane (Freon 12)	0.34	7.6E-05	2.6E-05	2.1E-06	5.9E-06	NC	2.9E-05		
SVE-6-11142012	11/14/12	31.5	Dichlorofluoromethane	0.29	1.0E-04	3.0E-05	2.4E-06	6.8E-06	NC	3.4E-05		
SVE-6-11142012	11/14/12	31.5	Ethane	0.061	1.2E-04	7.4E-06	6.0E-07	1.7E-06	NC	5.6E-07		
SVE-6-11142012	11/14/12	31.5	Ethanol	0.45	1.4E-04	6.4E-05	5.2E-06	1.5E-05	NC	2.1E-06		
SVE-6-11142012	11/14/12	31.5	Ethene	0.023	1.2E-04	2.8E-06	2.3E-07	6.3E-07	NC	2.1E-07		
SVE-6-11142012	11/14/12	31.5	Ethylbenzene	0.30	8.5E-05	2.6E-05	2.1E-06	5.8E-06	5.2E-09	5.8E-06		
SVE-6-11142012	11/14/12	31.5	Isobutane	0.17	1.2E-04	2.0E-05	1.7E-06	4.7E-06	NC	1.6E-06		
SVE-6-11142012	11/14/12	31.5	Isopropylbenzene (Cumene)	0.65	7.4E-05	4.8E-05	3.9E-06	1.1E-05	NC	2.8E-05		
SVE-6-11142012	11/14/12	31.5	Methylene Chloride	0.24	1.1E-04	2.7E-05	2.2E-06	6.1E-06	2.2E-09	1.5E-05		
SVE-6-11142012	11/14/12	31.5	Naphthalene	0.12	6.8E-05	8.2E-06	6.6E-07	1.9E-06	2.3E-08	6.2E-04		
SVE-6-11142012	11/14/12	31.5	n-Butanol	0.70	1.0E-04	7.3E-05	6.0E-06	1.7E-05	NC	4.8E-05		
SVE-6-11142012	11/14/12	31.5	n-Hexane	0.22	2.0E-04	4.5E-05	3.6E-06	1.0E-05	NC	1.5E-05		
SVE-6-11142012	11/14/12	31.5	n-Nonane	0.36	6.0E-05	2.1E-05	1.7E-06	4.9E-06	NC	2.4E-05		
SVE-6-11142012	11/14/12	31.5	n-Pentane	0.20	9.3E-05	1.9E-05	1.5E-06	4.2E-06	NC	4.2E-06		
SVE-6-11142012	11/14/12	31.5	Propane	0.015	1.2E-04	1.8E-06	1.5E-07	4.1E-07	NC	1.4E-07		
SVE-6-11142012	11/14/12	31.5	Propene	0.011	1.2E-04	1.3E-06	1.1E-07	3.0E-07	NC	1.0E-07		
SVE-6-11142012	11/14/12	31.5	Propylbenzene	0.34	6.9E-05	2.3E-05	1.9E-06	5.4E-06	NC	3.8E-05		
SVE-6-11142012	11/14/12	31.5	Styrene	0.29	8.1E-05	2.3E-05	1.9E-06	5.3E-06	NC	5.9E-06		
SVE-6-11142012	11/14/12	31.5	Tetrachloroethene	0.46	8.2E-05	3.8E-05	3.1E-06	8.6E-06	1.8E-08	2.5E-04		
SVE-6-11142012	11/14/12	31.5	Tetrahydrofuran	**1,100**	1.1E-04	1.2E-01	9.6E-03	2.7E-02	NC	1.3E-02		
SVE-6-11142012	11/14/12	31.5	Toluene	0.26	9.8E-05	2.5E-05	2.1E-06	5.8E-06	NC	1.9E-05		
SVE-6-11142012	11/14/12	31.5	TPH-gasoline	**1,200**	8.0E-05	9.6E-02	7.8E-03	2.2E-02	NC	1.7E-01		
SVE-6-11142012	11/14/12	31.5	trans-1,2-Dichloroethene	0.53	8.0E-05	4.3E-05	3.5E-06	9.7E-06	NC	1.6E-04		
SVE-6-11142012	11/14/12	31.5	trans-2-Butene	0.14	1.2E-04	1.7E-05	1.4E-06	3.9E-06	NC	1.3E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m3)[b]	Attenuation Factor [(mg/m3)/(mg/m3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-6-11142012	11/14/12	31.5	Trichloroethene	0.37	8.9E-05	3.3E-05	2.7E-06	7.5E-06	1.1E-08	3.8E-03		
SVE-6-11142012	11/14/12	31.5	Trichlorofluoromethane (Freon 11)	0.026	9.8E-05	2.5E-06	2.1E-07	5.8E-07	NC	8.3E-07		
SVE-6-11142012	11/14/12	31.5	Vinyl Acetate	1.0	9.6E-05	9.6E-05	7.8E-06	2.2E-05	NC	1.1E-04		
SVE-6-11142012	11/14/12	31.5	Vinyl Chloride	0.16	1.2E-04	1.9E-05	1.5E-06	4.3E-06	1.2E-07	4.3E-05		
SVE-6-11142012	11/14/12	31.5	Xylenes	0.44	9.5E-05	4.2E-05	3.4E-06	9.6E-06	NC	9.6E-05	1.0E-06	2.0E-01
SVE-7-11152012	11/15/12	28	1,1,1,2-Tetrafluoroethane (Freon 134a)	0.061	1.0E-04	6.3E-06	5.1E-07	1.4E-06	NC	1.8E-08		
SVE-7-11152012	11/15/12	28	1,1,1-Trichloroethane	0.079	9.9E-05	7.8E-06	6.3E-07	1.8E-06	NC	1.8E-06		
SVE-7-11152012	11/15/12	28	1,1,2-Trichloroethane	0.079	9.9E-05	7.8E-06	6.3E-07	1.8E-06	1.0E-08	1.3E-04		
SVE-7-11152012	11/15/12	28	1,1,2-Trichlorotrifluoroethane (Freon 113)	0.11	9.9E-05	1.1E-05	8.8E-07	2.5E-06	NC	8.2E-08		
SVE-7-11152012	11/15/12	28	1,1-Dichloroethane	0.059	9.4E-05	5.6E-06	4.5E-07	1.3E-06	7.2E-10	1.8E-06		
SVE-7-11152012	11/15/12	28	1,1-Dichloroethene	0.069	1.1E-04	7.7E-06	6.3E-07	1.8E-06	NC	2.5E-05		
SVE-7-11152012	11/15/12	28	1,2,4-Trichlorobenzene	0.10	4.0E-05	4.0E-06	3.3E-07	9.1E-07	NC	4.6E-04		
SVE-7-11152012	11/15/12	28	1,2,4-Trimethylbenzene	0.072	7.8E-05	5.6E-06	4.6E-07	1.3E-06	NC	1.8E-04		
SVE-7-11152012	11/15/12	28	1,2-Dichlorobenzene	0.087	8.8E-05	7.7E-06	6.2E-07	1.7E-06	NC	8.7E-06		
SVE-7-11152012	11/15/12	28	1,2-Dichloroethane	0.059	1.3E-04	7.6E-06	6.2E-07	1.7E-06	1.3E-08	4.3E-06		
SVE-7-11152012	11/15/12	28	1,3-Butadiene	0.028	2.7E-04	7.5E-06	6.1E-07	1.7E-06	1.0E-07	8.6E-04		
SVE-7-11152012	11/15/12	28	1,3-Dichlorobenzene	0.087	8.8E-05	7.7E-06	6.3E-07	1.8E-06	NC	1.7E-05		
SVE-7-11152012	11/15/12	28	1,4-Dioxane	0.14	1.2E-04	1.6E-05	1.3E-06	3.7E-06	1.0E-08	1.2E-04		
SVE-7-11152012	11/15/12	28	1-Butene/Isobutene	0.036	1.1E-04	3.8E-06	3.1E-07	8.7E-07	NC	2.9E-07		
SVE-7-11152012	11/15/12	28	2 & 3-Chlorotoluene	0.15	8.1E-05	1.2E-05	9.9E-07	2.8E-06	NC	3.9E-05		
SVE-7-11152012	11/15/12	28	2-Butanone (MEK)	**35**	1.0E-04	3.6E-03	2.9E-04	8.2E-04	NC	1.6E-04		
SVE-7-11152012	11/15/12	28	2-Propanol	0.039	1.3E-04	5.1E-06	4.2E-07	1.2E-06	NC	1.7E-07		
SVE-7-11152012	11/15/12	28	3-Chloropropene	0.045	1.2E-04	5.2E-06	4.3E-07	1.2E-06	2.6E-09	4.0E-07		
SVE-7-11152012	11/15/12	28	Acetaldehyde	0.065	1.5E-04	9.8E-06	8.0E-07	2.2E-06	2.1E-09	2.5E-04		
SVE-7-11152012	11/15/12	28	Acetone	**13**	1.5E-04	2.0E-03	1.6E-04	4.5E-04	NC	1.4E-05		
SVE-7-11152012	11/15/12	28	Acetonitrile	0.028	1.5E-04	4.2E-06	3.4E-07	9.6E-07	NC	1.6E-05		
SVE-7-11152012	11/15/12	28	Acetylene	0.030	1.3E-04	4.0E-06	3.3E-07	9.2E-07	NC	3.1E-07		
SVE-7-11152012	11/15/12	28	Benzaldehyde	0.068	9.3E-05	6.3E-06	5.2E-07	1.4E-06	1.4E-09	1.6E-04		
SVE-7-11152012	11/15/12	28	Benzene	0.035	1.1E-04	3.9E-06	3.1E-07	8.8E-07	9.1E-09	2.9E-05		
SVE-7-11152012	11/15/12	28	Butane	0.014	1.3E-04	1.9E-06	1.5E-07	4.3E-07	NC	1.4E-07		
SVE-7-11152012	11/15/12	28	Butyraldehyde	0.15	1.5E-04	2.2E-05	1.8E-06	5.1E-06	4.9E-09	5.7E-04		
SVE-7-11152012	11/15/12	28	Carbon Disulfide	0.15	1.3E-04	1.9E-05	1.6E-06	4.4E-06	NC	6.3E-06		
SVE-7-11152012	11/15/12	28	Carbon Tetrachloride	0.092	9.9E-05	9.1E-06	7.4E-07	2.1E-06	3.1E-08	5.2E-05		
SVE-7-11152012	11/15/12	28	Chlorobenzene	0.068	9.3E-05	6.3E-06	5.1E-07	1.4E-06	NC	1.4E-06		
SVE-7-11152012	11/15/12	28	Chlorodifluoromethane (Freon 22)	0.096	1.2E-04	1.2E-05	9.8E-07	2.7E-06	NC	5.5E-08		
SVE-7-11152012	11/15/12	28	Chloroethane	0.027	2.9E-04	7.7E-06	6.3E-07	1.8E-06	NC	1.8E-07		
SVE-7-11152012	11/15/12	28	Chloroform	0.071	1.3E-04	9.1E-06	7.4E-07	2.1E-06	3.9E-09	6.9E-06		
SVE-7-11152012	11/15/12	28	Chloromethane	0.025	1.5E-04	3.8E-06	3.1E-07	8.7E-07	NC	9.6E-06		
SVE-7-11152012	11/15/12	28	cis-1,2-Dichloroethene	0.058	9.3E-05	5.4E-06	4.4E-07	1.2E-06	NC	1.8E-04		
SVE-7-11152012	11/15/12	28	cis-2-Butene	0.032	1.3E-04	4.3E-06	3.5E-07	9.8E-07	NC	3.3E-07		
SVE-7-11152012	11/15/12	28	Cyclohexane	0.037	1.0E-04	3.7E-06	3.0E-07	8.5E-07	NC	1.4E-07		
SVE-7-11152012	11/15/12	28	Cyclohexanone	**14**	1.0E-04	1.4E-03	1.2E-04	3.2E-04	NC	5.4E-05		
SVE-7-11152012	11/15/12	28	Dichlorodifluoromethane (Freon 12)	0.072	8.5E-05	6.1E-06	5.0E-07	1.4E-06	NC	7.0E-06		

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/(mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard
SVE-7-11152012	11/15/12	28	Dichlorofluoromethane	0.062	1.2E-04	7.1E-06	5.8E-07	1.6E-06	NC	8.1E-06		
SVE-7-11152012	11/15/12	28	Ethane	**0.045**	1.3E-04	6.0E-06	4.9E-07	1.4E-06	NC	4.6E-07		
SVE-7-11152012	11/15/12	28	Ethanol	0.096	1.6E-04	1.5E-05	1.2E-06	3.4E-06	NC	4.9E-07		
SVE-7-11152012	11/15/12	28	Ethene	0.012	1.3E-04	1.6E-06	1.3E-07	3.7E-07	NC	1.2E-07		
SVE-7-11152012	11/15/12	28	Ethylbenzene	0.064	9.5E-05	6.1E-06	5.0E-07	1.4E-06	1.2E-09	1.4E-06		
SVE-7-11152012	11/15/12	28	Isobutane	0.0035	1.3E-04	4.7E-07	3.8E-08	1.1E-07	NC	3.6E-08		
SVE-7-11152012	11/15/12	28	Isopropylbenzene (Cumene)	0.14	8.3E-05	1.2E-05	9.5E-07	2.7E-06	NC	6.6E-06		
SVE-7-11152012	11/15/12	28	Methylene Chloride	0.051	1.2E-04	6.4E-06	5.2E-07	1.5E-06	5.2E-10	3.6E-06		
SVE-7-11152012	11/15/12	28	Naphthalene	0.12	7.6E-05	9.1E-06	7.4E-07	2.1E-06	2.5E-08	6.9E-04		
SVE-7-11152012	11/15/12	28	n-Butanol	0.15	1.2E-04	1.7E-05	1.4E-06	4.0E-06	NC	1.1E-05		
SVE-7-11152012	11/15/12	28	n-Hexane	0.047	2.2E-04	1.1E-05	8.6E-07	2.4E-06	NC	3.4E-06		
SVE-7-11152012	11/15/12	28	n-Nonane	0.077	6.7E-05	5.1E-06	4.2E-07	1.2E-06	NC	5.9E-06		
SVE-7-11152012	11/15/12	28	n-Pentane	0.013	1.0E-04	1.3E-06	1.1E-07	3.1E-07	NC	3.1E-07		
SVE-7-11152012	11/15/12	28	Propane	0.025	1.3E-04	3.4E-06	2.7E-07	7.7E-07	NC	2.6E-07		
SVE-7-11152012	11/15/12	28	Propene	0.0037	1.3E-04	5.0E-07	4.0E-08	1.1E-07	NC	3.8E-08		
SVE-7-11152012	11/15/12	28	Propylbenzene	0.073	7.7E-05	5.6E-06	4.6E-07	1.3E-06	NC	9.2E-06		
SVE-7-11152012	11/15/12	28	Styrene	0.062	9.0E-05	5.6E-06	4.6E-07	1.3E-06	NC	1.4E-06		
SVE-7-11152012	11/15/12	28	Tetrachloroethene	0.099	9.1E-05	9.1E-06	7.4E-07	2.1E-06	4.4E-09	5.9E-05		
SVE-7-11152012	11/15/12	28	Tetrahydrofuran	**130**	1.2E-04	1.5E-02	1.3E-03	3.5E-03	NC	1.8E-03		
SVE-7-11152012	11/15/12	28	Toluene	0.012	1.1E-04	1.3E-06	1.1E-07	3.0E-07	NC	9.9E-07		
SVE-7-11152012	11/15/12	28	trans-1,2-Dichloroethene	0.11	9.0E-05	9.9E-06	8.1E-07	2.3E-06	NC	3.8E-05		
SVE-7-11152012	11/15/12	28	trans-2-Butene	0.030	1.3E-04	4.0E-06	3.3E-07	9.2E-07	NC	3.1E-07		
SVE-7-11152012	11/15/12	28	Trichloroethene	0.079	1.0E-04	7.9E-06	6.4E-07	1.8E-06	2.6E-09	9.0E-04		
SVE-7-11152012	11/15/12	28	Trichlorofluoromethane (Freon 11)	0.0033	1.1E-04	3.6E-07	2.9E-08	8.2E-08	NC	1.2E-07		
SVE-7-11152012	11/15/12	28	Vinyl Acetate	0.22	1.1E-04	2.3E-05	1.9E-06	5.4E-06	NC	2.7E-05		
SVE-7-11152012	11/15/12	28	Vinyl Chloride	0.035	1.3E-04	4.6E-06	3.7E-07	1.0E-06	2.9E-08	1.0E-05		
SVE-7-11152012	11/15/12	28	Xylenes	0.094	1.1E-04	1.0E-05	8.1E-07	2.3E-06	NC	2.3E-05		
SVE-7-11162012	11/16/12	28	TPH-gasoline	**110**	8.9E-05	9.8E-03	8.0E-04	2.2E-03	NC	1.7E-02	2.6E-07	2.4E-02

Notes:

bgs = below ground surface

NC = Not considered to be a carcinogen.

mg/m^3 = micrograms per cubic meter

[a] All locations and depths are included for soil gas samples representative of exposures to future onsite commercial workers.

[b] Measured chemical concentration in soil gas. Detected results are presented in bold. Non-detect results are represented by one-half the laboratory reporting limit; non-detect results are included if the chemical was detected in at least one site soil gas sample. In the case of non-detect results in both duplicate and primary samples, one-half of the lower of the two detection limits was evaluated.

[c] The attenuation factor represents the relationship between the chemical concentration in soil gas and the chemical concentration in indoor air (resulting from volatilization from soil gas, *i.e.* , vapor intrusion). The methodology used in the calculation of attenuation factors is presented in Appendix G.

[d] The exposure point concentration (EPC) in indoor air is the predicted estimated indoor air concentration the receptor may be exposed to.

[e] The exposure concentrations (ECs) are analagous to chronic daily intakes (CDIs).

TABLE 9b

Estimated Vapor Intrusion Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

Sample ID[a]	Sample Date	Sampling Depth (feet bgs)	Chemical	Soil Gas Concentration (mg/m^3)[b]	Attenuation Factor [(mg/m^3)/ (mg/m^3)][c]	Exposure Point Concentration (EPC) in Indoor Air (mg/m^3)[d]	Exposure Concentration (EC) in Indoor Air – Cancer Effects (mg/m^3)[e]	Exposure Concentration (EC) in Indoor Air – Noncancer Effects (mg/m^3)[e]	Incremental Cancer Risk from Vapor Intrusion (unitless)[f]	Noncancer Hazard Quotient from Vapor Intrusion (unitless)[f]	Cumulative Cancer Risk	Cumulative Noncancer Hazard

[f] Incremental cancer risks and noncancer hazard quotients were calculated using equations presented in Table 5a and exposure parameters presented in Table 4.

TABLE 10

Estimated Outdoor Air Inhalation Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current and Future Onsite Commercial Scenarios
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Representative Concentration in Soil Gas (mg/m³)[a]	Transfer Factor [(mg/m³)/(mg/m³)][b]	Exposure Point Concentration (EPC) in Outdoor Air (mg/m³)[c]	Exposure Concentration (EC) in Outdoor Air – Cancer Effects (mg/m³)[d]	Exposure Concentration (EC) in Outdoor Air – Noncancer Effects (mg/m³)[d]	Incremental Cancer Risk in Outdoor Air (unitless)[e]	Noncancer Hazard Quotient in Outdoor Air (unitless)[e]
1,1,1,2-Tetrafluoroethane (Freon 134a)	0.0072	2.0E-06	1.5E-08	1.2E-09	3.3E-09	NC	4.1E-11
1,1,1-Trichloroethane	1.9	1.9E-06	3.6E-06	3.0E-07	8.3E-07	NC	8.3E-07
1,1,2-Trichloroethane	***0.0077***	1.9E-06	1.5E-08	1.2E-09	3.4E-09	2.0E-11	2.4E-07
1,1,2-Trichlorotrifluoroethane (Freon 113	0.071	1.9E-06	1.4E-07	1.1E-08	3.1E-08	NC	1.0E-09
1,1-Dichloroethane	0.31	1.8E-06	5.7E-07	4.6E-08	1.3E-07	7.4E-11	1.8E-07
1,1-Dichloroethene	1.4	2.2E-06	3.1E-06	2.5E-07	7.0E-07	NC	1.0E-05
1,2,4-Trichlorobenzene	***0.010***	7.5E-07	7.5E-09	6.1E-10	1.7E-09	NC	8.6E-07
1,2,4-Trimethylbenzene	***0.0058***	1.5E-06	8.6E-09	7.0E-10	2.0E-09	NC	2.8E-07
1,2-Dichlorobenzene	***0.0084***	1.7E-06	1.4E-08	1.2E-09	3.3E-09	NC	1.6E-08
1,2-Dichloroethane	0.014	2.6E-06	3.6E-08	2.9E-09	8.2E-09	6.2E-11	2.1E-08
1,3-Butadiene	***0.0018***	6.1E-06	1.1E-08	8.9E-10	2.5E-09	1.5E-10	1.3E-06
1,3-Dichlorobenzene	***0.0035***	1.7E-06	6.0E-09	4.9E-10	1.4E-09	NC	1.3E-08
1,4-Dioxane	***0.021***	8.8E-06	1.9E-07	1.5E-08	4.2E-08	1.2E-10	1.4E-06
1-Butene/Isobutene	0.50	3.8E-05	1.9E-05	1.6E-06	4.4E-06	NC	1.5E-06
1-Methylnaphthalene	***0.0026***	1.3E-06	3.5E-09	2.8E-10	7.9E-10	NC	3.2E-09
2 & 3-Chlorotoluene	***0.0051***	1.5E-06	7.9E-09	6.4E-10	1.8E-09	NC	2.6E-08
2-Butanone (MEK)	162	2.5E-06	4.1E-04	3.4E-05	9.4E-05	NC	1.9E-05
2-Methylnaphthalene	***0.0043***	1.3E-06	5.7E-09	4.7E-10	1.3E-09	NC	9.3E-08
2-Propanol	0.0022	6.8E-06	1.5E-08	1.2E-09	3.4E-09	NC	4.8E-10
3-Chloropropene	***0.0080***	2.3E-06	1.8E-08	1.5E-09	4.2E-09	9.0E-12	1.4E-09
Acetaldehyde	0.050	3.6E-06	1.8E-07	1.5E-08	4.1E-08	4.0E-11	4.6E-06
Acetone	66	4.0E-06	2.6E-04	2.1E-05	6.0E-05	NC	1.9E-06
Acetonitrile	***0.011***	3.4E-06	3.7E-08	3.1E-09	8.6E-09	NC	1.4E-07
Acetylene	0.0025	2.7E-06	6.7E-09	5.5E-10	1.5E-09	NC	5.1E-10
Benzaldehyde	***0.0034***	3.0E-06	1.0E-08	8.4E-10	2.4E-09	2.3E-12	2.6E-07
Benzene	0.012	2.2E-06	2.6E-08	2.1E-09	5.9E-09	6.1E-11	2.0E-07
Butane	0.12	2.7E-06	3.2E-07	2.6E-08	7.4E-08	NC	2.5E-08
Butyraldehyde	0.0055	3.3E-06	1.8E-08	1.5E-09	4.1E-09	4.0E-12	4.6E-07
Carbon Disulfide	0.87	2.5E-06	2.2E-06	1.8E-07	5.1E-07	NC	7.2E-07
Carbon Tetrachloride	0.016	1.9E-06	3.1E-08	2.5E-09	7.0E-09	1.0E-10	1.7E-07
Chlorobenzene	0.0081	1.8E-06	1.5E-08	1.2E-09	3.3E-09	NC	3.3E-09
Chlorodifluoromethane (Freon 22)	0.0034	2.5E-06	8.4E-09	6.9E-10	1.9E-09	NC	3.9E-11
Chloroethane	0.074	6.6E-06	4.9E-07	4.0E-08	1.1E-07	NC	1.1E-08
Chloroform	0.47	2.6E-06	1.2E-06	9.8E-08	2.7E-07	5.2E-10	9.1E-07
Chloromethane	0.028	3.1E-06	8.6E-08	7.0E-09	2.0E-08	NC	2.2E-07
cis-1,2-Dichloroethene	2.2	1.8E-06	4.0E-06	3.2E-07	9.1E-07	NC	1.3E-04
cis-2-Butene	0.044	2.7E-06	1.2E-07	9.6E-09	2.7E-08	NC	9.0E-09
Cyclohexane	0.33	2.0E-06	6.5E-07	5.3E-08	1.5E-07	NC	2.5E-08
Cyclohexanone	***220***	5.1E-06	1.1E-03	9.1E-05	2.5E-04	NC	4.2E-05
Dichlorodifluoromethane (Freon 12)	0.0045	1.6E-06	7.3E-09	6.0E-10	1.7E-09	NC	8.4E-09
Dichlorofluoromethane	***0.0050***	2.3E-06	1.1E-08	9.2E-10	2.6E-09	NC	1.3E-08
Ethane	0.43	2.7E-06	1.2E-06	9.4E-08	2.6E-07	NC	8.8E-08
Ethanol	0.018	1.1E-05	2.0E-07	1.6E-08	4.5E-08	NC	6.4E-09
Ethene	0.28	2.7E-06	7.5E-07	6.1E-08	1.7E-07	NC	5.7E-08
Ethylbenzene	***0.017***	1.8E-06	3.1E-08	2.6E-09	7.1E-09	6.4E-12	7.1E-09
Isobutane	0.091	2.7E-06	2.4E-07	2.0E-08	5.6E-08	NC	1.9E-08
Isopropylbenzene (Cumene)	0.39	1.6E-06	6.2E-07	5.1E-08	1.4E-07	NC	3.5E-07
Methylene Chloride	0.091	2.5E-06	2.3E-07	1.8E-08	5.2E-08	1.8E-11	1.3E-07
Naphthalene	0.028	1.5E-06	4.2E-08	3.4E-09	9.6E-09	1.2E-10	3.2E-06
n-Butanol	***0.0074***	5.7E-06	4.2E-08	3.4E-09	9.6E-09	NC	2.8E-08
n-Hexane	0.033	4.9E-06	1.6E-07	1.3E-08	3.7E-08	NC	5.3E-08
n-Nonane	***1.6***	1.3E-06	2.0E-06	1.6E-07	4.6E-07	NC	2.3E-06
n-Pentane	0.16	2.0E-06	3.2E-07	2.6E-08	7.3E-08	NC	7.3E-08
Propane	0.31	2.7E-06	8.3E-07	6.8E-08	1.9E-07	NC	6.3E-08

TABLE 10

Estimated Outdoor Air Inhalation Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current and Future Onsite Commercial Scenarios
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Representative Concentration in Soil Gas $(mg/m^3)^a$	Transfer Factor $[(mg/m^3)/(mg/m^3)]^b$	Exposure Point Concentration (EPC) in Outdoor Air $(mg/m^3)^c$	Exposure Concentration (EC) in Outdoor Air – Cancer Effects $(mg/m^3)^d$	Exposure Concentration (EC) in Outdoor Air – Noncancer Effects $(mg/m^3)^d$	Incremental Cancer Risk in Outdoor Air (unitless)[e]	Noncancer Hazard Quotient in Outdoor Air (unitless)[e]
Propylbenzene	***2.1***	1.5E-06	3.1E-06	2.5E-07	7.1E-07	NC	5.0E-06
Propene	0.55	2.7E-06	1.5E-06	1.2E-07	3.4E-07	NC	1.1E-07
Styrene	***0.0024***	1.7E-06	4.2E-09	3.4E-10	9.6E-10	NC	1.1E-09
Tetrachloroethene	0.89	1.8E-06	1.6E-06	1.3E-07	3.6E-07	7.6E-10	1.0E-05
Tetrahydrofuran	***1,100***	2.8E-06	3.1E-03	2.5E-04	7.0E-04	NC	3.5E-04
Toluene	0.071	2.1E-06	1.5E-07	1.2E-08	3.5E-08	NC	1.2E-07
TPH-Diesel	***120***	1.7E-06	2.1E-04	1.7E-05	4.7E-05	NC	4.7E-04
TPH-Gasoline	751	1.7E-06	1.3E-03	1.0E-04	2.9E-04	NC	2.3E-03
trans-1,2-Dichloroethene	0.077	1.7E-06	1.3E-07	1.1E-08	3.1E-08	NC	5.1E-07
trans-2-Butene	0.035	2.7E-06	9.4E-08	7.7E-09	2.1E-08	NC	7.2E-09
Trichloroethene	5.8	1.9E-06	1.1E-05	9.2E-07	2.6E-06	3.8E-09	1.3E-03
Trichlorofluoromethane (Freon 11)	0.011	2.1E-06	2.3E-08	1.9E-09	5.4E-09	NC	7.6E-09
Vinyl Acetate	***0.0033***	2.1E-06	7.1E-09	5.8E-10	1.6E-09	NC	8.1E-09
Vinyl Chloride	0.019	2.6E-06	4.9E-08	4.0E-09	1.1E-08	3.1E-10	1.1E-07
Xylenes	0.013	2.1E-06	2.7E-08	2.2E-09	6.2E-09	NC	6.2E-08
					Total	**6.1E-09**	**4.6E-03**

Notes:
NC = Not considered to be a carcinogen.
mg/m^3 = micrograms per cubic meter

[a] Unless otherwise indicated, upper confidence limits (UCLs) of the arithmetic mean of all soil gas data combined (i.e., regardless of soil gas sample depth) are used as representative concentrations in soil gas for evaluating inhalation of VOCs in outdoor air. Maximum detected concentrations are bolded and italicized.

[b] The transfer factor represents the relationship between the chemical concentration in soil gas and the chemical concentration in outdoor air (resulting from volatilization from soil gas into outdoor

[c] The exposure point concentration (EPC) in outdoor air is the predicted estimated concentration the receptor is exposed to while in outdoor air.

[d] The exposure concentrations (ECs) are analagous to chronic daily intakes (CDIs).

[e] Incremental cancer risks and noncancer hazard quotients were calculated using equations presented in Table 5a and exposure parameters presented in Table 4.

TABLE 11

Estimated Outdoor Air Inhalation Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Offsite Residential Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Representative Concentration in Soil Gas (mg/m^3)[a]	Transfer Factor [(mg/m^3)/(mg/m^3)][b]	Exposure Point Concentration (EPC) in Outdoor Air (mg/m^3)[c]	Exposure Concentration (EC) in Outdoor Air – Cancer Effects (mg/m^3)[d]	Exposure Concentration (EC) in Outdoor Air – Noncancer Effects (mg/m^3)[d]	Incremental Cancer Risk in Outdoor Air (unitless)[e]	Noncancer Hazard Quotient in Outdoor Air (unitless)[e]
1,1,1,2-Tetrafluoroethane (Freon 134a)	0.0072	2.0E-06	1.5E-08	6.0E-09	1.4E-08	NC	1.7E-10
1,1,1-Trichloroethane	1.9	1.9E-06	3.6E-06	1.5E-06	3.5E-06	NC	3.5E-06
1,1,2-Trichloroethane	***0.0077***	1.9E-06	1.5E-08	6.1E-09	1.4E-08	9.8E-11	1.0E-06
1,1,2-Trichlorotrifluoroethane (Freon 113	0.071	1.9E-06	1.4E-07	5.6E-08	1.3E-07	NC	4.3E-09
1,1-Dichloroethane	0.31	1.8E-06	5.7E-07	2.3E-07	5.4E-07	3.7E-10	7.7E-07
1,1-Dichloroethene	1.4	2.2E-06	3.1E-06	1.3E-06	3.0E-06	NC	4.2E-05
1,2,4-Trichlorobenzene	***0.010***	7.5E-07	7.5E-09	3.1E-09	7.2E-09	NC	3.6E-06
1,2,4-Trimethylbenzene	***0.0058***	1.5E-06	8.6E-09	3.5E-09	8.3E-09	NC	1.2E-06
1,2-Dichlorobenzene	***0.0084***	1.7E-06	1.4E-08	5.9E-09	1.4E-08	NC	6.9E-08
1,2-Dichloroethane	0.014	2.6E-06	3.6E-08	1.5E-08	3.5E-08	3.1E-10	8.7E-08
1,3-Butadiene	***0.0018***	6.1E-06	1.1E-08	4.5E-09	1.1E-08	7.7E-10	5.3E-06
1,3-Dichlorobenzene	***0.0035***	1.7E-06	6.0E-09	2.4E-09	5.7E-09	NC	5.4E-08
1,4-Dioxane	***0.021***	8.8E-06	1.9E-07	7.6E-08	1.8E-07	5.9E-10	5.9E-06
1-Butene/Isobutene	0.50	3.8E-05	1.9E-05	7.9E-06	1.8E-05	NC	6.1E-06
1-Methylnaphthalene	***0.0026***	1.3E-06	3.5E-09	1.4E-09	3.3E-09	NC	1.4E-08
2 & 3-Chlorotoluene	***0.0051***	1.5E-06	7.9E-09	3.2E-09	7.6E-09	NC	1.1E-07
2-Butanone (MEK)	162	2.5E-06	4.1E-04	1.7E-04	3.9E-04	NC	7.9E-05
2-Methylnaphthalene	***0.0043***	1.3E-06	5.7E-09	2.3E-09	5.5E-09	NC	3.9E-07
2-Propanol	0.0022	6.8E-06	1.5E-08	6.1E-09	1.4E-08	NC	2.0E-09
3-Chloropropene	***0.0080***	2.3E-06	1.8E-08	7.5E-09	1.8E-08	4.5E-11	5.9E-09
Acetaldehyde	0.050	3.6E-06	1.8E-07	7.4E-08	1.7E-07	2.0E-10	1.9E-05
Acetone	66	4.0E-06	2.6E-04	1.1E-04	2.5E-04	NC	8.1E-06
Acetonitrile	***0.011***	3.4E-06	3.7E-08	1.5E-08	3.6E-08	NC	6.0E-07
Acetylene	0.0025	2.7E-06	6.7E-09	2.8E-09	6.4E-09	NC	2.1E-09
Benzaldehyde	***0.0034***	3.0E-06	1.0E-08	4.2E-09	9.9E-09	1.1E-11	1.1E-06
Benzene	0.012	2.2E-06	2.6E-08	1.1E-08	2.5E-08	3.1E-10	8.3E-07
Butane	0.12	2.7E-06	3.2E-07	1.3E-07	3.1E-07	NC	1.0E-07
Butyraldehyde	0.0055	3.3E-06	1.8E-08	7.4E-09	1.7E-08	2.0E-11	1.9E-06
Carbon Disulfide	0.87	2.5E-06	2.2E-06	9.1E-07	2.1E-06	NC	3.0E-06
Carbon Tetrachloride	0.016	1.9E-06	3.1E-08	1.3E-08	2.9E-08	5.3E-10	7.3E-07
Chlorobenzene	0.0081	1.8E-06	1.5E-08	6.0E-09	1.4E-08	NC	1.4E-08
Chlorodifluoromethane (Freon 22)	0.0034	2.5E-06	8.4E-09	3.5E-09	8.1E-09	NC	1.6E-10
Chloroethane	0.074	6.6E-06	4.9E-07	2.0E-07	4.7E-07	NC	4.7E-08
Chloroform	0.47	2.6E-06	1.2E-06	4.9E-07	1.2E-06	2.6E-09	3.8E-06
Chloromethane	0.028	3.1E-06	8.6E-08	3.6E-08	8.3E-08	NC	9.2E-07
cis-1,2-Dichloroethene	2.2	1.8E-06	4.0E-06	1.6E-06	3.8E-06	NC	5.5E-04
cis-2-Butene	0.044	2.7E-06	1.2E-07	4.9E-08	1.1E-07	NC	3.8E-08
Cyclohexane	0.33	2.0E-06	6.5E-07	2.7E-07	6.2E-07	NC	1.0E-07
Cyclohexanone	***220***	5.1E-06	1.1E-03	4.6E-04	1.1E-03	NC	1.8E-04
Dichlorodifluoromethane (Freon 12)	0.0045	1.6E-06	7.3E-09	3.0E-09	7.0E-09	NC	3.5E-08
Dichlorofluoromethane	***0.0050***	2.3E-06	1.1E-08	4.7E-09	1.1E-08	NC	5.4E-08
Ethane	0.43	2.7E-06	1.2E-06	4.7E-07	1.1E-06	NC	3.7E-07
Ethanol	0.018	1.1E-05	2.0E-07	8.1E-08	1.9E-07	NC	2.7E-08
Ethene	0.28	2.7E-06	7.5E-07	3.1E-07	7.2E-07	NC	2.4E-07
Ethylbenzene	***0.017***	1.8E-06	3.1E-08	1.3E-08	3.0E-08	3.2E-11	3.0E-08
Isobutane	0.091	2.7E-06	2.4E-07	1.0E-07	2.3E-07	NC	7.8E-08
Isopropylbenzene (Cumene)	0.39	1.6E-06	6.2E-07	2.6E-07	6.0E-07	NC	1.5E-06
Methylene Chloride	0.091	2.5E-06	2.3E-07	9.3E-08	2.2E-07	9.3E-11	5.4E-07
Naphthalene	0.028	1.5E-06	4.2E-08	1.7E-08	4.0E-08	5.9E-10	1.3E-05
n-Butanol	***0.0074***	5.7E-06	4.2E-08	1.7E-08	4.1E-08	NC	1.2E-07
n-Hexane	0.033	4.9E-06	1.6E-07	6.6E-08	1.5E-07	NC	2.2E-07
n-Nonane	***1.6***	1.3E-06	2.0E-06	8.3E-07	1.9E-06	NC	9.7E-06
n-Pentane	0.16	2.0E-06	3.2E-07	1.3E-07	3.1E-07	NC	3.1E-07
Propane	0.31	2.7E-06	8.3E-07	3.4E-07	8.0E-07	NC	2.7E-07

TABLE 11

Estimated Outdoor Air Inhalation Cancer Risks and Noncancer Hazard Indices for VOCs in Soil Gas: Current Offsite Residential Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Representative Concentration in Soil Gas (mg/m^3)[a]	Transfer Factor [(mg/m^3)/(mg/m^3)][b]	Exposure Point Concentration (EPC) in Outdoor Air (mg/m^3)[c]	Exposure Concentration (EC) in Outdoor Air – Cancer Effects (mg/m^3)[d]	Exposure Concentration (EC) in Outdoor Air – Noncancer Effects (mg/m^3)[d]	Incremental Cancer Risk in Outdoor Air (unitless)[e]	Noncancer Hazard Quotient in Outdoor Air (unitless)[e]
Propylbenzene	***2.1***	1.5E-06	3.1E-06	1.3E-06	3.0E-06	NC	2.1E-05
Propene	0.55	2.7E-06	1.5E-06	6.1E-07	1.4E-06	NC	4.7E-07
Styrene	***0.0024***	1.7E-06	4.2E-09	1.7E-09	4.0E-09	NC	4.5E-09
Tetrachloroethene	0.89	1.8E-06	1.6E-06	6.5E-07	1.5E-06	3.8E-09	4.3E-05
Tetrahydrofuran	***1,100***	2.8E-06	3.1E-03	1.3E-03	3.0E-03	NC	1.5E-03
Toluene	0.071	2.1E-06	1.5E-07	6.2E-08	1.5E-07	NC	4.8E-07
TPH-Diesel	***120***	1.7E-06	2.1E-04	8.5E-05	2.0E-04	NC	2.0E-03
TPH-Gasoline	751	1.7E-06	1.3E-03	5.3E-04	1.2E-03	NC	9.5E-03
trans-1,2-Dichloroethene	0.077	1.7E-06	1.3E-07	5.5E-08	1.3E-07	NC	2.1E-06
trans-2-Butene	0.035	2.7E-06	9.4E-08	3.9E-08	9.0E-08	NC	3.0E-08
Trichloroethene	5.8	1.9E-06	1.1E-05	4.6E-06	1.1E-05	2.2E-08	5.4E-03
Trichlorofluoromethane (Freon 11)	0.011	2.1E-06	2.3E-08	9.6E-09	2.2E-08	NC	3.2E-08
Vinyl Acetate	***0.0033***	2.1E-06	7.1E-09	2.9E-09	6.8E-09	NC	3.4E-08
Vinyl Chloride	0.019	2.6E-06	4.9E-08	2.0E-08	4.7E-08	1.6E-09	4.7E-07
Xylenes	0.013	2.1E-06	2.7E-08	1.1E-08	2.6E-08	NC	2.6E-07
					Total	**3.4E-08**	**1.9E-02**

Notes:
NC = Not considered to be a carcinogen
mg/m^3 = micrograms per cubic meter

[a] Unless otherwise indicated, upper confidence limits (UCLs) of the arithmetic mean of all soil gas data combined (i.e., regardless of soil gas sample depth) are used as representative concentrations in soil gas for evaluating inhalation of VOCs in outdoor air. Maximum detected concentrations are bolded and italicized.

[b] The transfer factor represents the relationship between the chemical concentration in soil gas and the chemical concentration in outdoor air (resulting from volatilization from soil gas into outdoor

[c] The exposure point concentration (EPC) in outdoor air is the predicted estimated concentration the receptor is exposed to while in outdoor air.

[d] The exposure concentrations (ECs) are analagous to chronic daily intakes (CDIs).

[e] Incremental cancer risks and noncancer hazard quotients were calculated using equations presented in Table 5b and exposure parameters presented in Table 4.

TABLE 12
Exposure Concentration and Chronic Daily Intake for Carcinogens in Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker		
	Soil Pathway		
	EC: Particulate Inhalation (mg/m^3)	CDI: Dermal Contact (mg/kg-day)	CDI: Ingestion (mg/kg-day)
Volatile Organic Compounds			
1,1,1-Trichloroethane	NC	NC	NC
1,1,2-Trichloroethane	2.3E-13	7.6E-10	6.6E-10
1,1-Dichloroethane	1.4E-10	4.7E-07	4.1E-07
1,1-Dichloroethene	NC	NC	NC
1,2,3-Trichlorobenzene	NC	NC	NC
1,2,4-Trichlorobenzene	NC	5.2E-05	4.5E-05
1,2,4-Trimethylbenzene	NC	NC	NC
1,2-Dichlorobenzene	NC	NC	NC
1,2-Dichloroethane	1.8E-11	6.0E-08	5.2E-08
1,2-Dichloroethene (total)	NC	NC	NC
1,3,5-Trimethylbenzene	NC	NC	NC
1,3-Dichlorobenzene	NC	NC	NC
1,4-Dichlorobenzene	8.8E-10	2.9E-06	2.5E-06
2-Butanone (MEK)	NC	NC	NC
2-Chlorotoluene	NC	NC	NC
4-Isopropyltoluene	NC	NC	NC
Acetone	NC	NC	NC
Benzene	2.0E-11	6.5E-08	5.7E-08
Butylbenzene	NC	NC	NC
Chlorobenzene	NC	NC	NC
Chloroform	1.4E-11	4.7E-08	4.1E-08
cis-1,2-Dichloroethene	NC	NC	NC
Ethylbenzene	6.7E-10	2.2E-06	1.9E-06
Isopropylbenzene (Cumene)	NC	NC	NC
Methylene Chloride	1.3E-11	4.1E-08	3.6E-08
Naphthalene	1.2E-09	5.9E-06	3.4E-06
Propylbenzene	NC	NC	NC
sec-Butylbenzene	NC	NC	NC
Tetrachloroethene	5.1E-10	1.7E-06	1.5E-06
Toluene	NC	NC	NC
trans-1,2-Dichloroethene	NC	NC	NC
Trichloroethene	1.5E-09	5.1E-06	4.4E-06
Vinyl Chloride	6.1E-13	2.0E-09	1.7E-09
Xylenes	NC	NC	NC
Total Petroleum Hydrocarbons			
EFH (C23 - C40)	NC	NC	NC
TPH (extractable)	NC	NC	NC
TPH-Diesel	NC	NC	NC
TPH-Gasoline	NC	NC	NC

TABLE 12
Exposure Concentration and Chronic Daily Intake for Carcinogens in Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker		
	Soil Pathway		
	EC: Particulate Inhalation (mg/m^3)	CDI: Dermal Contact (mg/kg-day)	CDI: Ingestion (mg/kg-day)
Semi-Volatile Organic Compounds			
1,2,4-Trichlorobenzene	NC	4.8E-07	4.2E-07
2-Methylnaphthalene	NC	NC	NC
Pyrene	NC	NC	NC
Polychlorinated Biphenyls			
Aroclor 1260	1.4E-09	6.7E-06	3.9E-06
Metals			
Arsenic	2.8E-09	2.8E-06	8.1E-06
Barium	NC	NC	NC
Beryllium	8.6E-11	NC	NC
Cadmium	1.0E-09	NC	NC
Chromium	NC	NC	NC
Chromium VI	2.0E-08	NC	NC
Cobalt	2.0E-09	NC	NC
Copper	NC	NC	NC
Cyanide	NC	NC	NC
Iron	NC	NC	NC
Lead	na	na	na
Manganese	NC	NC	NC
Mercury	NC	NC	NC
Molybdenum	NC	NC	NC
Nickel	1.5E-07	NC	NC
Vanadium	NC	NC	NC
Zinc	NC	NC	NC

Notes:

CDI = Chronic Daily Intake.
EC = Exposure Concentration.
mg/m^3 = milligrams per cubic meter.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using DTSC's Adult Lead Model. Please see text for discussion.
NC = Not considered a carcinogen.

TABLE 13
Estimated Cancer Risks from Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker			
	Soil Pathway			
	Particulate Inhalation	Dermal Contact	Ingestion	Total Cancer Risk
Volatile Organic Compounds				
1,1,1-Trichloroethane	NC	NC	NC	NC
1,1,2-Trichloroethane	3.7E-15	5.4E-11	4.8E-11	1.0E-10
1,1-Dichloroethane	2.3E-13	2.7E-09	2.4E-09	5.1E-09
1,1-Dichloroethene	NC	NC	NC	NC
1,2,3-Trichlorobenzene	NC	NC	NC	NC
1,2,4-Trichlorobenzene	NC	1.9E-07	1.6E-07	3.5E-07
1,2,4-Trimethylbenzene	NC	NC	NC	NC
1,2-Dichlorobenzene	NC	NC	NC	NC
1,2-Dichloroethane	3.8E-13	2.8E-09	2.5E-09	5.3E-09
1,2-Dichloroethene (total)	NC	NC	NC	NC
1,3,5-Trimethylbenzene	NC	NC	NC	NC
1,3-Dichlorobenzene	NC	NC	NC	NC
1,4-Dichlorobenzene	9.6E-12	1.5E-08	1.4E-08	2.9E-08
2-Butanone (MEK)	NC	NC	NC	NC
2-Chlorotoluene	NC	NC	NC	NC
4-Isopropyltoluene	NC	NC	NC	NC
Acetone	NC	NC	NC	NC
Benzene	5.7E-13	6.5E-09	5.7E-09	1.2E-08
Butylbenzene	NC	NC	NC	NC
Chlorobenzene	NC	NC	NC	NC
Chloroform	7.5E-14	1.4E-09	1.3E-09	2.7E-09
cis-1,2-Dichloroethene	NC	NC	NC	NC
Ethylbenzene	1.7E-12	2.4E-08	2.1E-08	4.5E-08
Isopropylbenzene (Cumene)	NC	NC	NC	NC
Methylene Chloride	1.3E-14	5.7E-10	5.0E-10	1.1E-09
Naphthalene	4.1E-11	7.0E-07	4.1E-07	1.1E-06
Propylbenzene	NC	NC	NC	NC
sec-Butylbenzene	NC	NC	NC	NC
Tetrachloroethene	3.0E-12	9.1E-07	8.0E-07	1.7E-06
Toluene	NC	NC	NC	NC
trans-1,2-Dichloroethene	NC	NC	NC	NC
Trichloroethene	6.3E-12	2.3E-07	2.0E-07	4.4E-07
Vinyl Chloride	4.7E-14	5.4E-10	4.7E-10	1.0E-09
Xylenes	NC	NC	NC	NC
Total Petroleum Hydrocarbons				
EFH (C23 - C40)	NC	NC	NC	NC
TPH (extractable)	NC	NC	NC	NC
TPH-Diesel	NC	NC	NC	NC
TPH-Gasoline	NC	NC	NC	NC

TABLE 13
Estimated Cancer Risks from Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker			
	Soil Pathway			
	Particulate Inhalation	Dermal Contact	Ingestion	Total Cancer Risk
Semi-Volatile Organic Compounds				
1,2,4-Trichlorobenzene	NC	1.7E-09	1.5E-09	3.2E-09
2-Methylnaphthalene	NC	NC	NC	NC
Pyrene	NC	NC	NC	NC
Polychlorinated Biphenyls				
Aroclor 1260	7.8E-10	1.3E-05	7.9E-06	2.1E-05
Metals				
Arsenic	9.4E-09	2.6E-05	7.7E-05	1.0E-04
Barium	NC	NC	NC	NC
Beryllium	2.1E-10	NC	NC	2.1E-10
Cadmium	4.3E-09	NC	NC	4.3E-09
Chromium	NC	NC	NC	NC
Chromium VI	3.0E-06	NC	NC	3.0E-06
Cobalt	1.8E-08	NC	NC	1.8E-08
Copper	NC	NC	NC	NC
Cyanide	NC	NC	NC	NC
Iron	NC	NC	NC	NC
Lead	na	na	na	na
Manganese	NC	NC	NC	NC
Mercury	NC	NC	NC	NC
Molybdenum	NC	NC	NC	NC
Nickel	3.8E-08	NC	NC	3.8E-08
Vanadium	NC	NC	NC	NC
Zinc	NC	NC	NC	NC
Total Cancer Risk	**3.1E-06**	**4.2E-05**	**8.7E-05**	**1.3E-04**

Notes:
na = Not applicable. Potential exposure to lead is evaluated using DTSC's Adult Lead Model. Please see text for discussion.
NC = Not considered a carcinogen.

TABLE 14
Exposure Concentration and Chronic Daily Intake for Noncarcinogens in Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker		
	Soil Pathway		
	EC: Particulate Inhalation (mg/m^3)	CDI: Dermal Contact (mg/kg-day)	CDI: Ingestion (mg/kg-day)
Volatile Organic Compounds			
1,1,1-Trichloroethane	2.4E-10	8.0E-07	7.0E-07
1,1,2-Trichloroethane	6.5E-13	2.1E-09	1.9E-09
1,1-Dichloroethane	4.0E-10	1.3E-06	1.2E-06
1,1-Dichloroethene	2.0E-10	6.6E-07	5.8E-07
1,2,3-Trichlorobenzene	6.1E-09	2.0E-05	1.8E-05
1,2,4-Trichlorobenzene	4.4E-08	1.5E-04	1.3E-04
1,2,4-Trimethylbenzene	5.4E-10	1.8E-06	1.6E-06
1,2-Dichlorobenzene	5.4E-10	1.8E-06	1.6E-06
1,2-Dichloroethane	5.1E-11	1.7E-07	1.5E-07
1,2-Dichloroethene (total)	9.9E-10	3.3E-06	2.9E-06
1,3,5-Trimethylbenzene	3.7E-12	1.2E-08	1.1E-08
1,3-Dichlorobenzene	6.8E-09	2.2E-05	2.0E-05
1,4-Dichlorobenzene	2.5E-09	8.0E-06	7.0E-06
2-Butanone (MEK)	3.7E-12	1.2E-08	1.1E-08
2-Chlorotoluene	1.6E-12	5.1E-09	4.5E-09
4-Isopropyltoluene	4.8E-12	1.6E-08	1.4E-08
Acetone	4.1E-11	1.3E-07	1.2E-07
Benzene	5.6E-11	1.8E-07	1.6E-07
Butylbenzene	1.1E-10	3.7E-07	3.2E-07
Chlorobenzene	4.1E-12	1.3E-08	1.2E-08
Chloroform	4.0E-11	1.3E-07	1.1E-07
cis-1,2-Dichloroethene	9.9E-10	3.3E-06	2.9E-06
Ethylbenzene	1.9E-09	6.1E-06	5.4E-06
Isopropylbenzene (Cumene)	1.2E-09	3.9E-06	3.4E-06
Methylene Chloride	3.5E-11	1.1E-07	1.0E-07
Naphthalene	3.3E-09	1.6E-05	9.6E-06
Propylbenzene	1.7E-09	5.6E-06	4.9E-06
sec-Butylbenzene	6.5E-10	2.1E-06	1.9E-06
Tetrachloroethene	1.4E-09	4.7E-06	4.1E-06
Toluene	1.2E-10	3.8E-07	3.4E-07
trans-1,2-Dichloroethene	8.1E-12	2.7E-08	2.3E-08
Trichloroethene	4.3E-09	1.4E-05	1.2E-05
Vinyl Chloride	1.7E-12	5.6E-09	4.9E-09
Xylenes	5.7E-09	1.9E-05	1.6E-05
Total Petroleum Hydrocarbons			
EFH (C23 - C40)	8.2E-06	2.7E-02	2.3E-02
TPH (extractable)	2.3E-06	7.4E-03	6.5E-03
TPH-Diesel	5.8E-06	1.9E-02	1.7E-02
TPH-Gasoline	2.0E-07	6.5E-04	5.7E-04

TABLE 14
Exposure Concentration and Chronic Daily Intake for Noncarcinogens in Soil: Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker		
	Soil Pathway		
	EC: Particulate Inhalation (mg/m^3)	CDI: Dermal Contact (mg/kg-day)	CDI: Ingestion (mg/kg-day)
Semi-Volatile Organic Compounds			
1,2,4-Trichlorobenzene	4.1E-10	1.3E-06	1.2E-06
2-Methylnaphthalene	8.9E-09	4.4E-05	2.5E-05
Pyrene	4.4E-10	2.2E-06	1.3E-06
Polychlorinated Biphenyls			
Aroclor 1260	3.8E-09	1.9E-05	1.1E-05
Metals			
Arsenic	7.9E-09	7.8E-06	2.3E-05
Barium	1.8E-07	6.0E-05	5.3E-04
Beryllium	2.4E-10	7.9E-08	6.9E-07
Cadmium	2.9E-09	9.4E-08	8.3E-06
Chromium	8.0E-07	2.6E-04	2.3E-03
Chromium VI	5.6E-08	0.0E+00	1.6E-04
Cobalt	5.7E-09	1.9E-06	1.6E-05
Copper	9.2E-07	3.0E-04	2.6E-03
Cyanide	5.1E-10	1.7E-06	1.5E-06
Iron	9.1E-06	3.0E-03	2.6E-02
Lead	na	na	na
Manganese	7.8E-08	2.6E-05	2.3E-04
Mercury	3.6E-10	1.2E-07	1.0E-06
Molybdenum	4.8E-09	1.6E-06	1.4E-05
Nickel	4.1E-07	1.4E-04	1.2E-03
Vanadium	1.7E-08	5.7E-06	5.0E-05
Zinc	1.3E-06	4.3E-04	3.7E-03

Notes:

CDI = Chronic Daily Intake.
EC = Exposure Concentration.
mg/m^3 = milligrams per cubic meter.
mg/kg-day = milligrams per kilogram per day.
na = Not applicable. Potential exposure to lead is evaluated using DTSC's Adult Lead Model. Please see text for discussion.

TABLE 15
Estimated Noncancer Hazard Indices from Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker			
	Soil Pathway			
	Particulate Inhalation	Dermal Contact	Ingestion	Total Hazard Index
Volatile Organic Compounds				
1,1,1-Trichloroethane	2.4E-10	4.0E-07	3.5E-07	7.5E-07
1,1,2-Trichloroethane	3.2E-09	5.3E-07	4.6E-07	1.0E-06
1,1-Dichloroethane	5.8E-10	6.6E-06	5.8E-06	1.2E-05
1,1-Dichloroethene	2.9E-09	1.3E-05	1.2E-05	2.5E-05
1,2,3-Trichlorobenzene	2.2E-06	2.5E-02	2.2E-02	4.7E-02
1,2,4-Trichlorobenzene	2.2E-05	1.5E-02	1.3E-02	2.7E-02
1,2,4-Trimethylbenzene	7.8E-08	3.6E-05	3.1E-05	6.7E-05
1,2-Dichlorobenzene	2.7E-09	2.0E-05	1.7E-05	3.7E-05
1,2-Dichloroethane	1.3E-10	2.8E-05	2.4E-05	5.2E-05
1,2-Dichloroethene (total)	1.4E-07	1.6E-03	1.4E-03	3.1E-03
1,3,5-Trimethylbenzene	5.4E-10	1.2E-06	1.1E-06	2.3E-06
1,3-Dichlorobenzene	6.5E-08	7.4E-04	6.5E-04	1.4E-03
1,4-Dichlorobenzene	3.1E-09	1.1E-04	1.0E-04	2.2E-04
2-Butanone (MEK)	7.5E-13	2.0E-08	1.8E-08	3.8E-08
2-Chlorotoluene	2.2E-11	2.6E-07	2.3E-07	4.8E-07
4-Isopropyltoluene	1.2E-11	1.6E-07	1.4E-07	2.9E-07
Acetone	1.3E-12	1.5E-07	1.3E-07	2.8E-07
Benzene	1.9E-09	4.5E-05	4.0E-05	8.5E-05
Butylbenzene	6.4E-10	7.4E-06	6.5E-06	1.4E-05
Chlorobenzene	4.1E-12	6.7E-07	5.9E-07	1.3E-06
Chloroform	1.3E-10	1.3E-05	1.1E-05	2.4E-05
cis-1,2-Dichloroethene	1.4E-07	1.6E-03	1.4E-03	3.1E-03
Ethylbenzene	1.9E-09	6.1E-05	5.4E-05	1.1E-04
Isopropylbenzene (Cumene)	3.0E-09	3.9E-05	3.4E-05	7.3E-05
Methylene Chloride	8.8E-11	1.9E-05	1.7E-05	3.6E-05
Naphthalene	1.1E-06	8.2E-04	4.8E-04	1.3E-03
Propylbenzene	1.7E-09	5.6E-05	4.9E-05	1.0E-04
sec-Butylbenzene	1.8E-09	2.1E-05	1.9E-05	4.0E-05
Tetrachloroethene	4.1E-08	7.8E-04	6.9E-04	1.5E-03
Toluene	3.9E-10	4.8E-06	4.2E-06	9.0E-06
trans-1,2-Dichloroethene	1.4E-10	1.3E-06	1.2E-06	2.5E-06
Trichloroethene	2.2E-06	2.8E-02	2.5E-02	5.3E-02
Vinyl Chloride	1.7E-11	1.9E-06	1.6E-06	3.5E-06
Xylenes	5.7E-08	9.4E-05	8.2E-05	1.8E-04
Total Petroleum Hydrocarbons				
EFH (C23 - C40)	1.4E-05	1.6E-01	1.4E-01	3.0E-01
TPH (extractable)	8.3E-06	1.5E-01	1.3E-01	2.8E-01
TPH-Diesel	5.3E-05	1.4E+00	1.2E+00	2.5E+00
TPH-Gasoline	6.6E-07	2.0E-02	1.8E-02	3.8E-02

TABLE 15
Estimated Noncancer Hazard Indices from Soil:
Future Onsite Commercial Scenario
Phibro-Tech, Inc.
Santa Fe Springs, California

Chemical	Future Onsite Commercial Worker			
	Soil Pathway			
	Particulate Inhalation	Dermal Contact	Ingestion	Total Hazard Index
Semi-Volatile Organic Compounds				
1,2,4-Trichlorobenzene	2.0E-07	1.3E-04	1.2E-04	2.5E-04
2-Methylnaphthalene	6.3E-07	1.1E-02	6.4E-03	1.7E-02
Pyrene	4.2E-09	7.3E-05	4.2E-05	1.1E-04
Polychlorinated Biphenyls				
Aroclor 1260	5.5E-05	9.4E-01	5.5E-01	1.5E+00
Metals				
Arsenic	5.3E-04	2.2E+00	6.5E+00	8.7E+00
Barium	3.7E-04	3.0E-04	2.6E-03	3.3E-03
Beryllium	3.4E-05	3.9E-04	3.5E-03	3.9E-03
Cadmium	1.4E-04	1.9E-04	1.7E-02	1.7E-02
Chromium	1.5E-07	1.8E-04	1.5E-03	1.7E-03
Chromium VI	5.6E-04	0.0E+00	5.4E-02	5.4E-02
Cobalt	9.5E-04	6.2E-03	5.5E-02	6.2E-02
Copper	6.6E-06	7.5E-03	6.6E-02	7.4E-02
Cyanide	6.4E-07	2.8E-03	2.4E-03	5.2E-03
Iron	3.7E-06	4.3E-03	3.7E-02	4.2E-02
Lead	na	na	na	na
Manganese	1.6E-03	1.8E-04	1.6E-03	3.4E-03
Mercury	1.2E-05	7.3E-04	6.4E-03	7.1E-03
Molybdenum	2.7E-07	3.1E-04	2.7E-03	3.1E-03
Nickel	2.9E-02	1.2E-02	1.1E-01	1.5E-01
Vanadium	1.7E-04	1.1E-03	1.0E-02	1.1E-02
Zinc	1.2E-06	1.4E-03	1.2E-02	1.4E-02
Total Hazard Index	**3.4E-02**	**5.0E+00**	**9.0E+00**	**1.4E+01**

Notes:
na = Not applicable. Potential exposure to lead is evaluated using DTSC's Adult Lead Model. Please see text for discussion.

TABLE 16

Risk Evaluation for Lead in Soil: Future Onsite Commercial Scenario

Phibro-Tech, Inc.

Santa Fe Springs, California

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELIMINARY REMEDIATION GOAL (PRG)

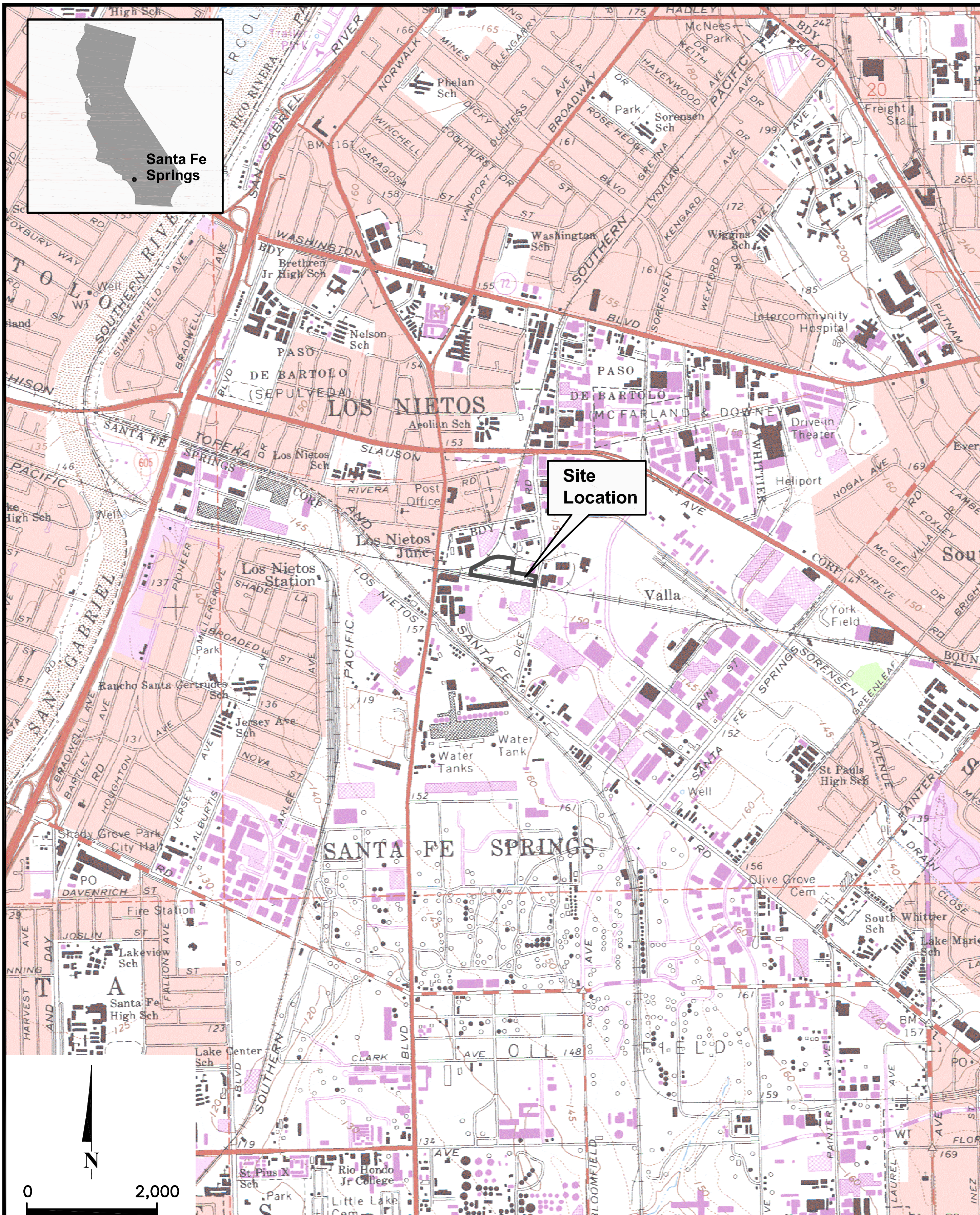
EDIT RED CELL

Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	5,917
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**9.7**
$PbB_{fetal, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	19
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**1.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	**%**	**99.99%**

PRG90 **318**

Click here for REFERENCES

FIGURES



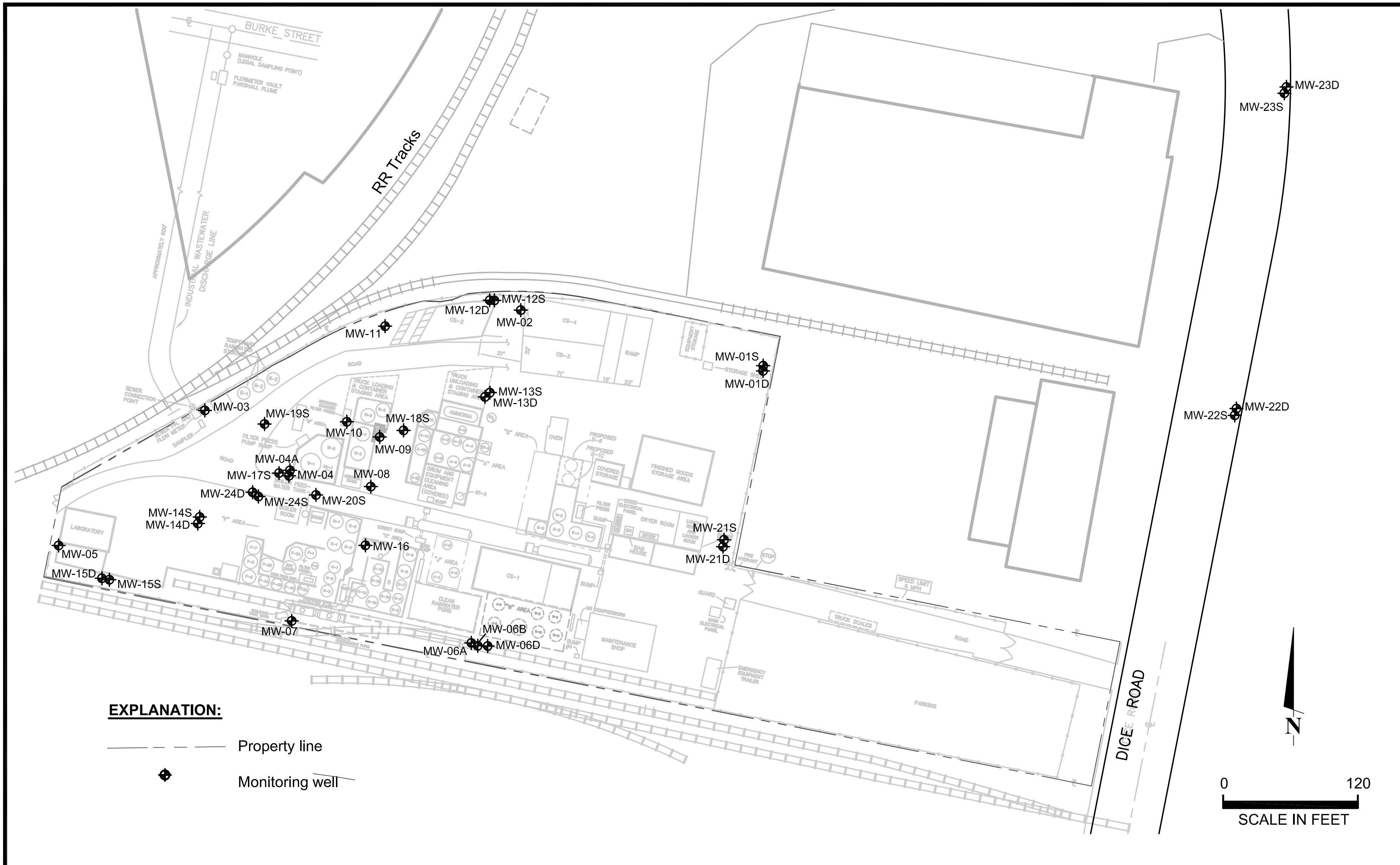
Source: USGS 7.5' Whittier Quadrangle

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Site Vicinity Map
Phibro-Tech, Inc.
Santa Fe Springs, California

Figure
1

Drafter: EC
Date: 09/05/13
Contract Number: 06-441Q



IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Site Plan
Human Health Risk Assessment
Phibro-Tech, Inc.
8851 Dice Road, Santa Fe Springs, California

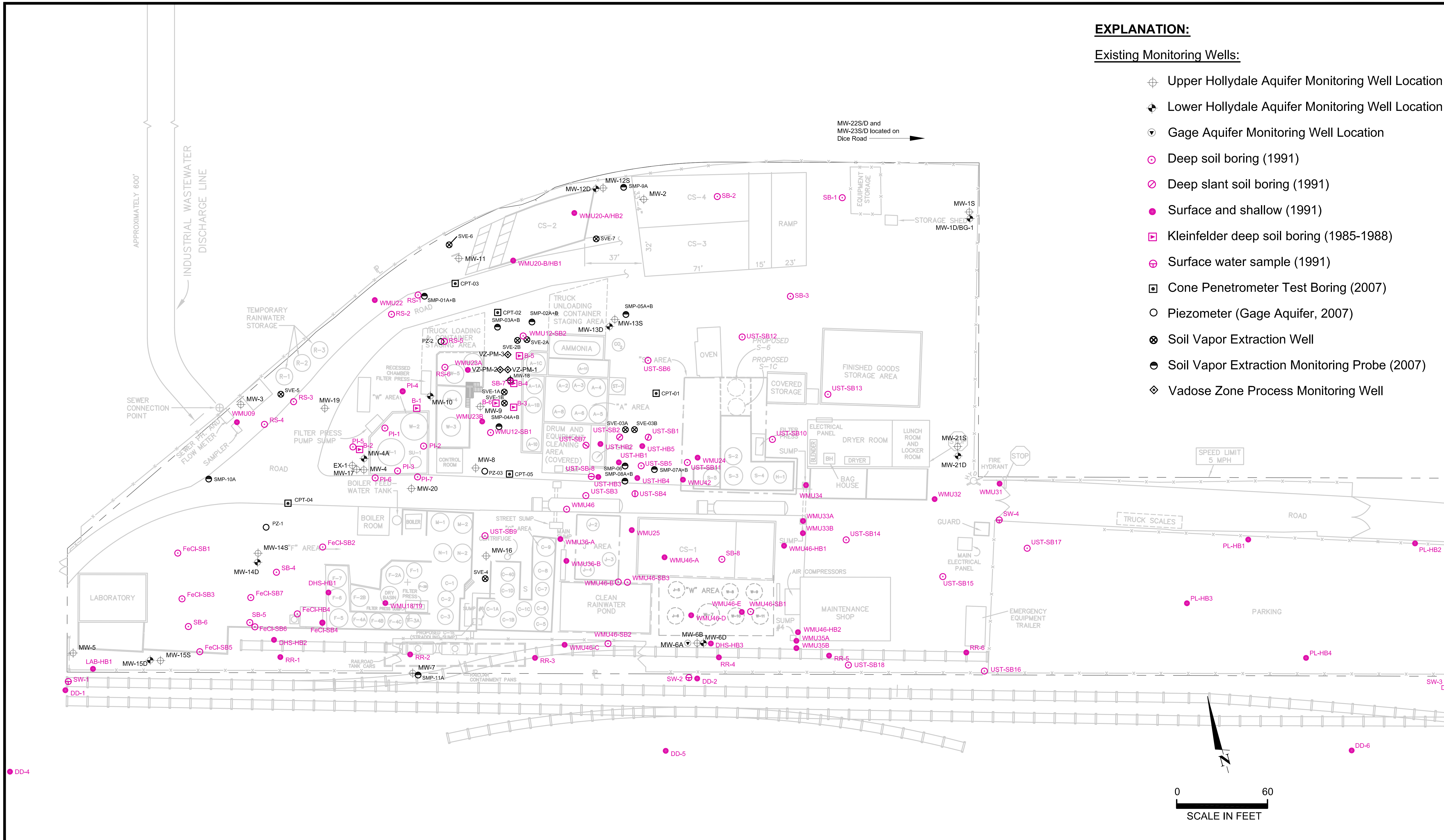
Figure
2

Drafter: EC

Date: 11/14/14

Contract Number: 06-441Q

I:\CAD\06\06-441-Q\Site plan.dwg, 11/17/2014 9:39:06 AM



IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Site Layout Showing Historic Sample Locations
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

Figure
3

Drafter: EBH

Date: 11/21/13

Contract Number: 06-441Q

EXPLANATION:

⊗ SVE-7	SVE Well
○ PZ-3	Piezometer
SMP-11A	SVE Monitoring Point
SMP-08A+B	Nested Shallow and Deep SVE Monitoring Point
- - - -	Trench SVE piping
——	Aboveground SVE piping
500	Total VOC Concentration (mg/m^3, dashed where inferred)
— - —	Property line
⊕	Monitoring well
A	Shallow SVE Well (screened in upper aquifer, see note)
B	Deep SVE Well (screened in deeper aquifer, see note)
SVE	Soil Vapor Extraction
VOC	Volatile Organic Compound
mg/m^3	Milligrams per cubic meter
*	Not used in contouring

NOTES:

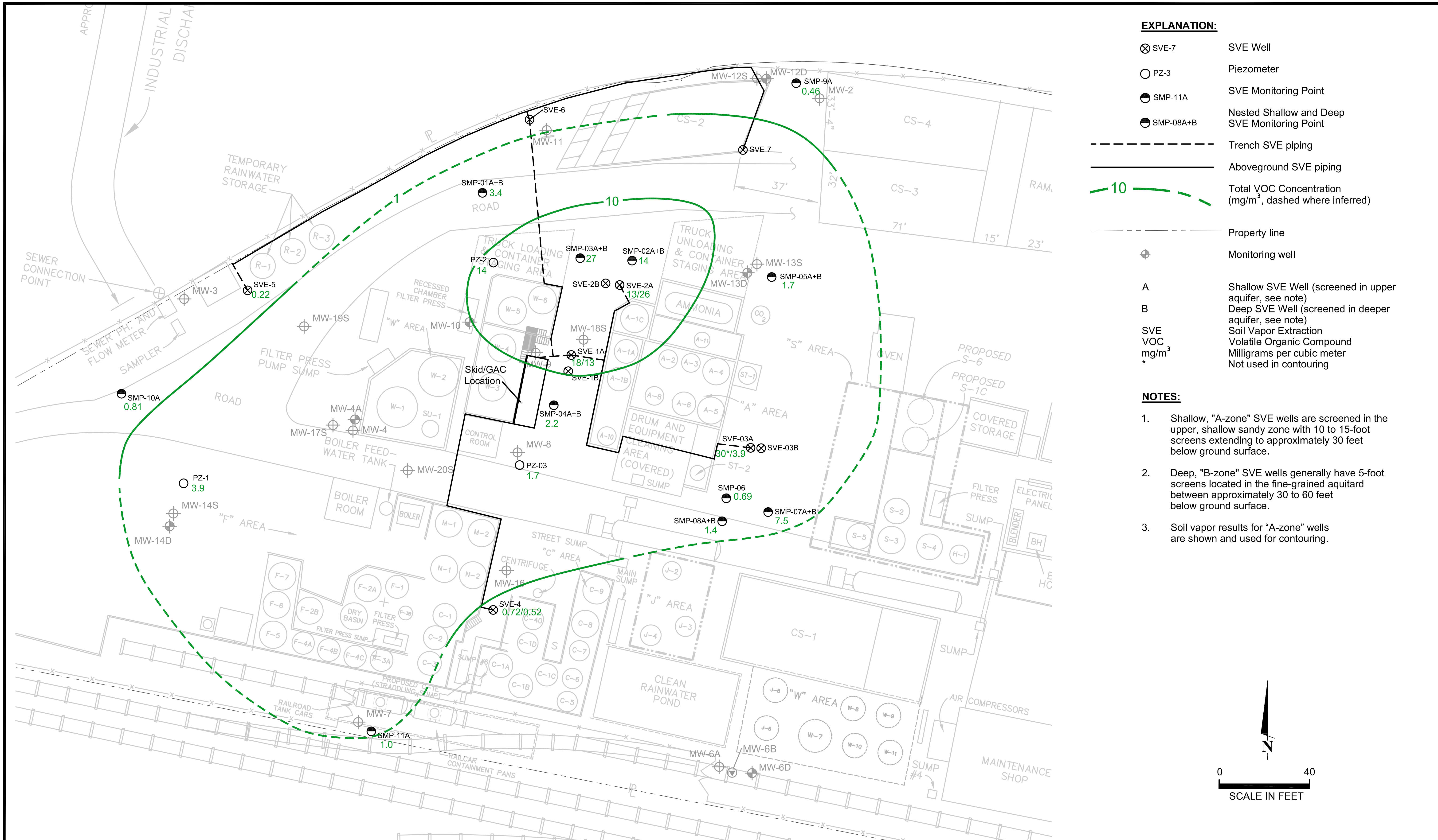
1. Shallow, "A-zone" SVE wells are screened in the upper, shallow sandy zone with 10 to 15-foot screens extending to approximately 30 feet below ground surface.
2. Deep, "B-zone" SVE wells generally have 5-foot screens located in the fine-grained aquitard between approximately 30 to 60 feet below ground surface.
3. Soil vapor results for "A-zone" wells are shown and used for contouring.

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Total VOCs in Soil Vapor - October 2008
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

Figure
4

Drafter: EC
Date: 12/19/14
Contract Number: 06-441Q

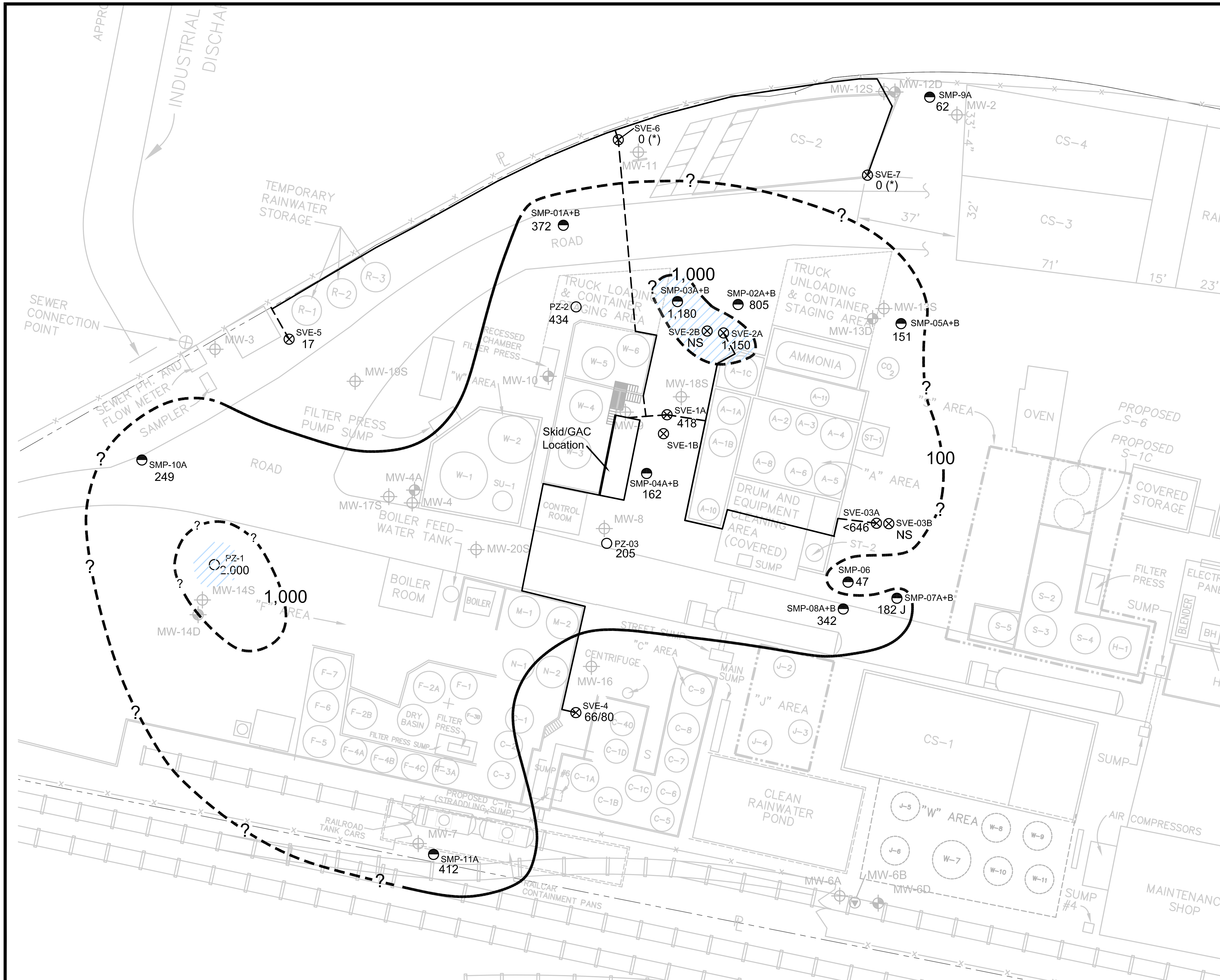


IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Total VOCs in Soil Vapor - July/November 2012
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

Figure
5

Drafter: EC
Date: 12/19/14
Contract Number: 06-441Q



EXPLANATION:

SVE-7	SVE Well
PZ-3	Piezometer
SMP-11A	SVE Monitoring Point
SMP-08A+B	Nested Shallow and Deep SVE Monitoring Point
	Trench SVE piping
	Aboveground SVE piping
10	PCE Concentrations (mg/m³,dashed where inferred)
	Property line
	Groundwater monitoring well
A	Shallow SVE Well (screened in upper aquifer, see note)
B	Deep SVE Well (screened in deeper aquifer, see note)
CHHSL	California Human Health screening level
SVE	Soil Vapor Extraction
PCE	Tetrachloroethene
μg/m³	Micrograms per cubic meter
66/80	Primary and duplicate sample results shown
<2,110	Not detected at or above the laboratory reporting limit indicated
J	Estimated concentration detected between the method detection limit and laboratory reporting limit
(*)	Sample result reported to 0 μg/m³ by analytical laboratory . No PCE detected
	Exceeds the commercial PCE CHHSL 1,600 μg/m³

NOTES:

1. Soil vapor samples were collected on July 18, 2012, November 14, 2012, and November 15, 2012 during a system-wide shut down period.
2. Samples are analyzed for TCE by extended Method TO-15 by Test America of Austin, Texas.
3. Results are shown for samples collected from SVE wells screened in the shallow zone only, i.e. "A-zone".
4. Shallow, "A-zone" SVE wells are screened in the upper, shallow sandy zone with 10 to 15-foot screens extending to approximately 30 feet below ground surface.
5. Deep, "B-zone" SVE wells generally have 5-foot screens located in the fine-grained aquitard between approximately 30 to 60 feet below ground surface.

N

0 40
SCALE IN FEET

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

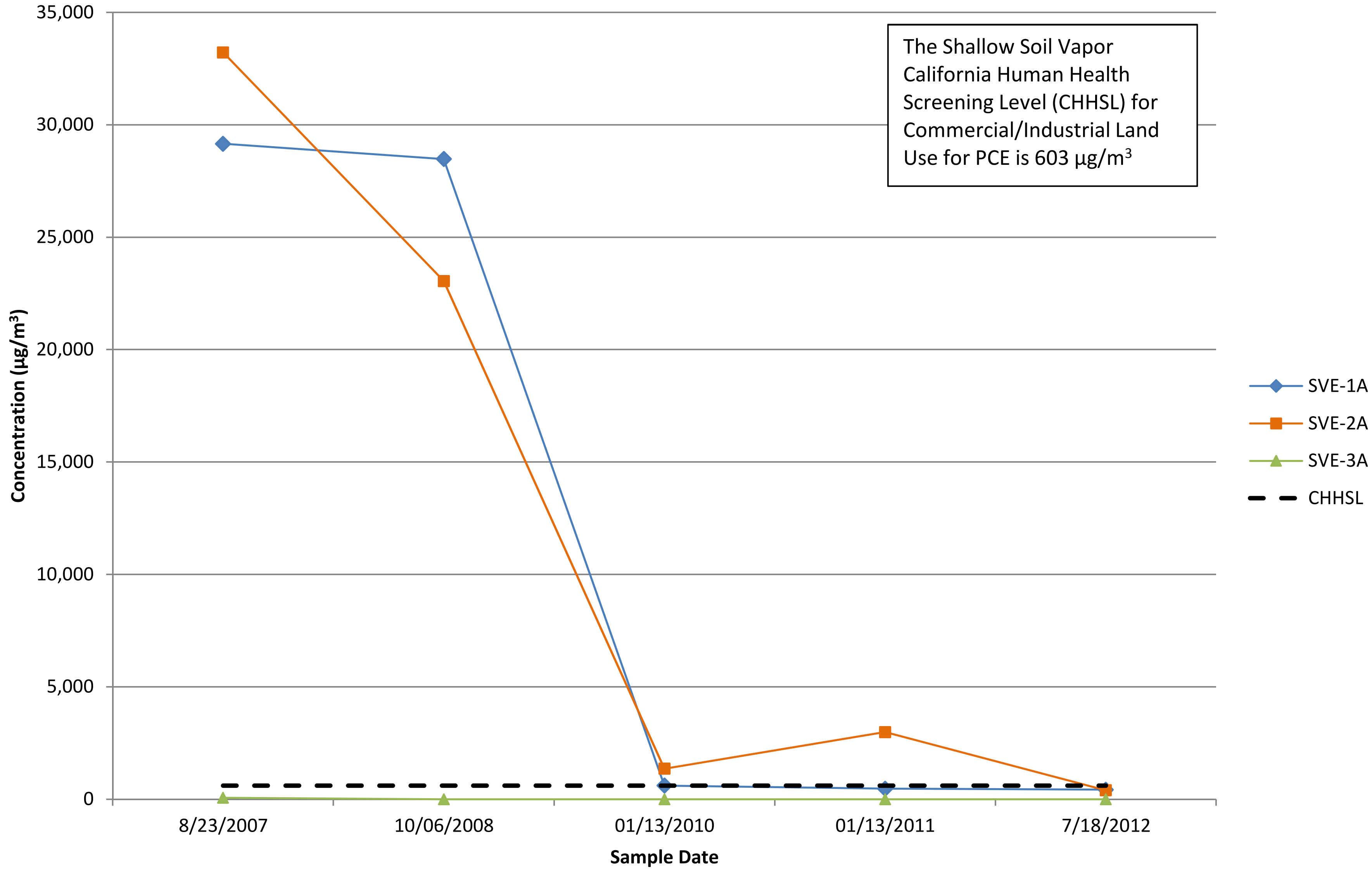
PCE Iso-Contour Plot - 2012 Rebound Sampling
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

Figure
6

Drafter: EC
Date: 11/21/13
Contract Number: 12/19/14

Figure 7: Tetrachloroethene (PCE) Concentrations in Soil Gas

Phibro-Tech, Inc.
Santa Fe Springs, CA



EXPLANATION:

Symbol	Description
SVE-7	SVE Well
PZ-3	Piezometer
SMP-11A	SVE Monitoring Point
SMP-08A+B	Nested Shallow and Deep SVE Monitoring Point
- - - -	Trench SVE piping
——	Aboveground SVE piping
—10— – –	TCE Concentrations (mg/m³,dashed where inferred)
— - —	Property line
	Groundwater monitoring well
A	Shallow SVE Well (screened in upper aquifer, see note)
B	Deep SVE Well (screened in deeper aquifer, see note)
CHHSL	California Human Health Screening Level
SVE	Soil Vapor Extraction
TCE	Trichloroethene
µg/m³	Micrograms per cubic meter
60/74	Primary and duplicate sample results shown
<2,110	Not detected at or above the laboratory reporting limit indicated
J	Estimated concentration detected between the method detection limit and laboratory reporting limit
*	Sample non-detect reporting limit not included in contouring
(hatched)	Exceeds default commercial TCE CHHSL 1,770 µg/m³

NOTES:

1. Soil vapor samples were collected on July 18, 2012, November 14, 2012, and November 15, 2012 during a system-wide shut down period.
2. Samples were analyzed for TCE by extended Method TO-15 by Test America of Austin, Texas.
3. Results are shown for samples collected from SVE wells screened in the shallow zone only, i.e. "A-zone".
4. Shallow, "A-zone" SVE wells are screened in the upper, shallow sandy zone with 10 to 15-foot screens extending to approximately 30 feet below ground surface.
5. Deep, "B-zone" SVE wells generally have 5-foot screens located in the fine-grained aquitard between approximately 30 to 60 feet below ground surface.

N

0 40
SCALE IN FEET

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

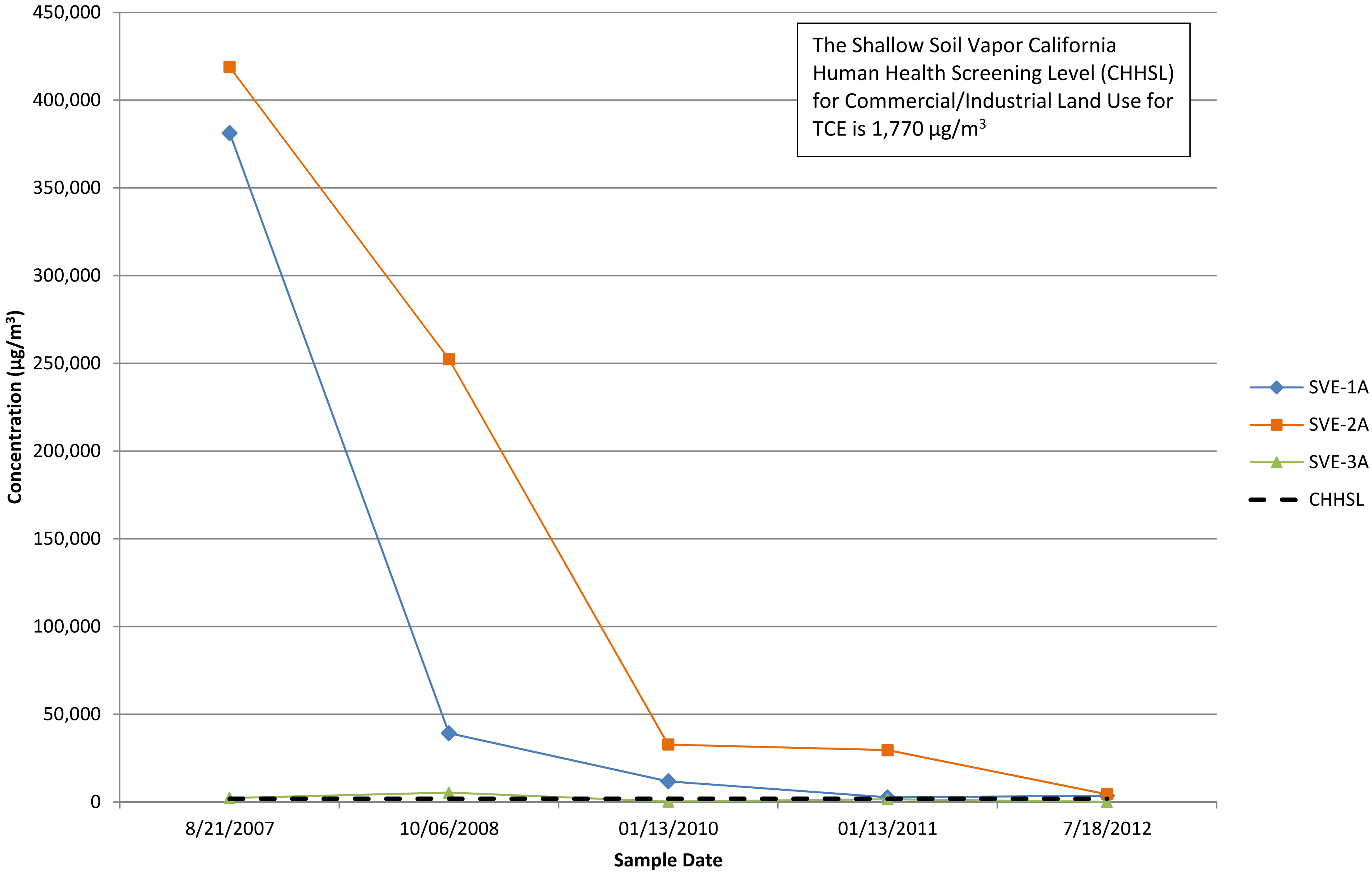
TCE Iso-Contour Plot - 2012 Rebound Sampling
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

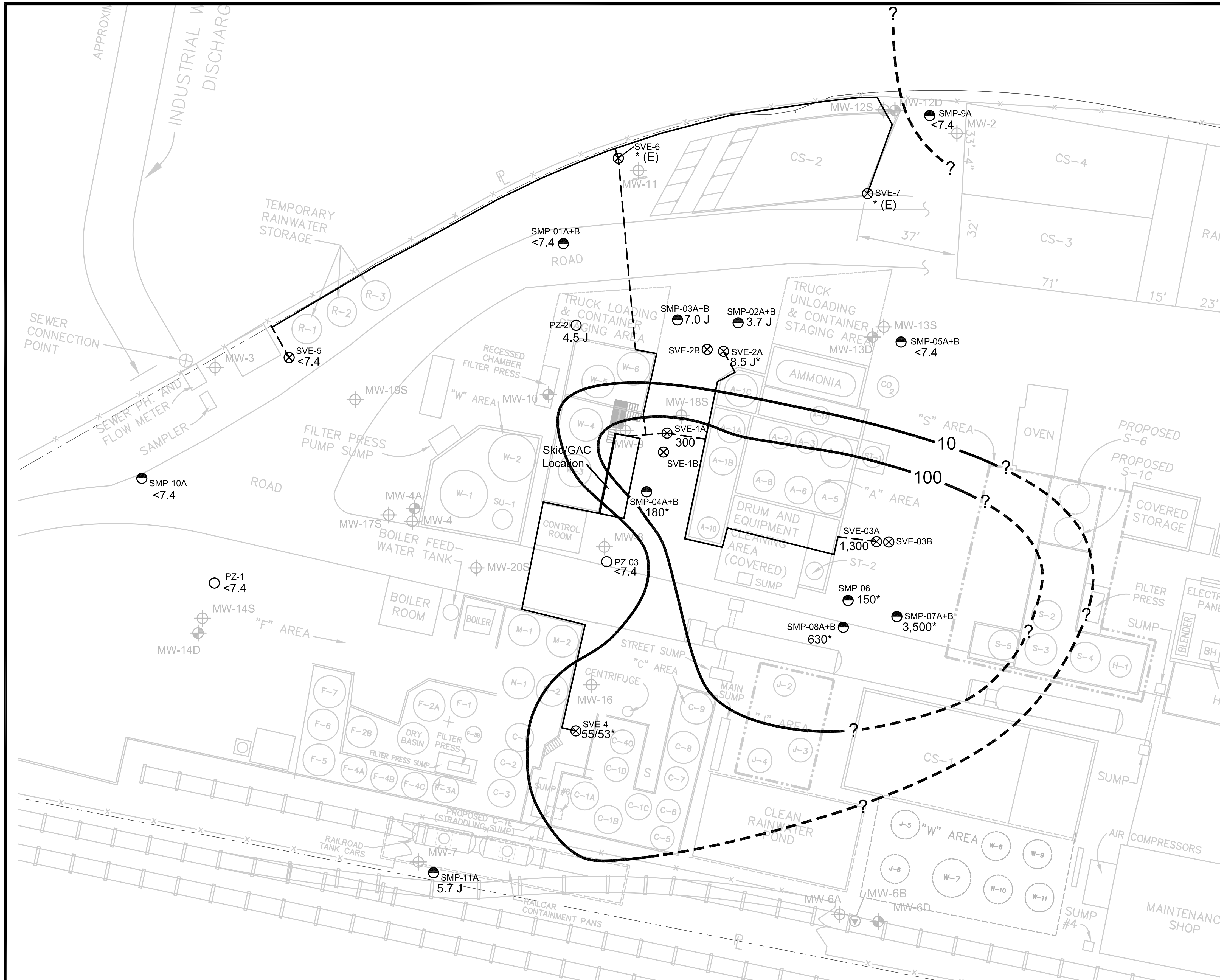
Figure
8

Drafter: EC
Date: 12/19/14
Contract Number: 06-441Q

Figure 9: Trichloroethene (TCE) Concentrations in Soil Gas

Phibro-Tech, Inc.
Santa Fe Springs, CA





EXPLANATION:

SVE-7	SVE Well
PZ-3	Piezometer
SMP-11A	SVE Monitoring Point
SMP-08A+B	Nested Shallow and Deep SVE Monitoring Point
	Trench SVE piping
	Aboveground SVE piping
100	Total Petroleum Hydrocarbons as gasoline (TPHg); reported in milligrams per cubic meter (mg/m^3, dashed where inferred)
	Property line
	Groundwater monitoring well
A	Shallow SVE Well (screened in upper aquifer, see note)
B	Deep SVE Well (screened in deeper aquifer, see note)
<7.4	Not detected at or above the laboratory reporting limit indicated
55/53	Primary and duplicate sample results shown
NS	Not Sampled
SVE	Soil Vapor Extraction
TPHg	Total Petroleum Hydrocarbons as Gasoline
mg/m^3	Milligrams per cubic meter (equivalent to micrograms per liter (µg/L))
E	Excluded from iso-contouring due to presence of single, non-target volatile organic compounds likely due to pipe repair conducted with solvent glue. No petroleum hydrocarbons detected
J	Estimated concentration detected between the method detection limit and laboratory reporting limit
*	The TPHg results is due to individual peaks in the chromatogram and is not typical of a fuel pattern

NOTES:

1. Samples were analyzed by Test America of Costa Mesa, CA for TPHg using Modified Method T0-3.
2. Samples were collected on July 18, 2012, November 14, 2012, and November 15, 2012 during a system-wide shut down period.
3. Results are shown for samples collected from SVE wells screened in the shallow zone only, i.e., "A-zone".
4. Shallow "A-zone" SVE wells are screened in the upper, shallow sandy zone with 10 to 15-foot screens extending to approximately 30 feet below ground surface.

N

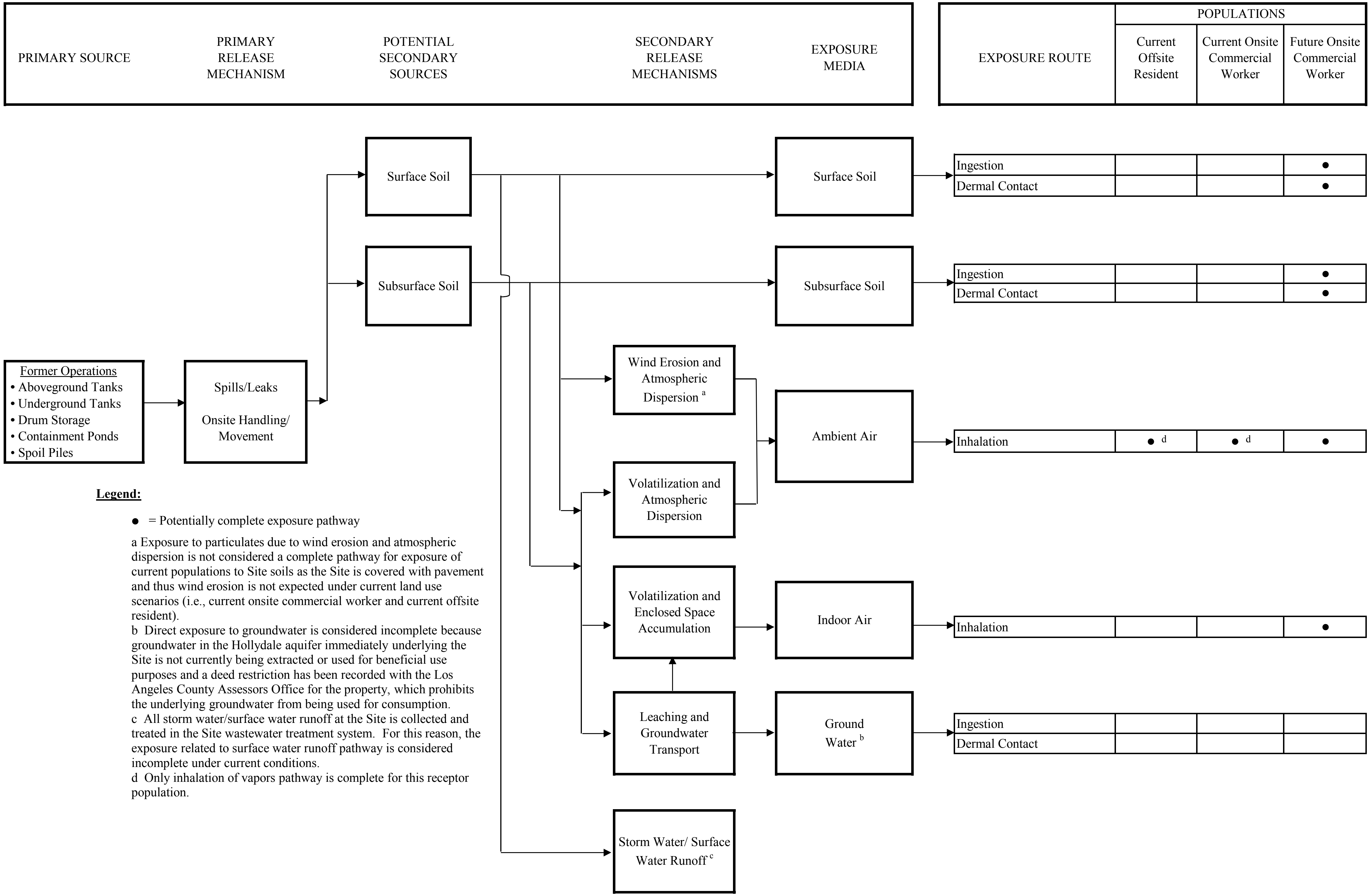
0 40
SCALE IN FEET

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

T0-3 Iso-Contour Plot - 2012 Rebound Sampling
Phibro-Tech, Inc.
8851 Dice Road
Santa Fe Springs, California

Figure
10

Drafter: EC | Date: 12/19/14 | Contract Number: 06-441Q



EXPOSURE MEDIA	EXPOSURE ROUTE	POPULATIONS: Current Offsite Resident	Current Onsite Commercial Worker	Future Onsite Commercial Worker
Surface Soil	Ingestion			●
	Dermal Contact			●
Subsurface Soil	Ingestion			●
	Dermal Contact			●
Ambient Air	Inhalation	● d	● d	●
Indoor Air	Inhalation			●
Ground Water b	Ingestion			
	Dermal Contact			

Legend:

● = Potentially complete exposure pathway

a Exposure to particulates due to wind erosion and atmospheric dispersion is not considered a complete pathway for exposure of current populations to Site soils as the Site is covered with pavement and thus wind erosion is not expected under current land use scenarios (i.e., current onsite commercial worker and current offsite resident).

b Direct exposure to groundwater is considered incomplete because groundwater in the Hollydale aquifer immediately underlying the Site is not currently being extracted or used for beneficial use purposes and a deed restriction has been recorded with the Los Angeles County Assessors Office for the property, which prohibits the underlying groundwater from being used for consumption.

c All storm water/surface water runoff at the Site is collected and treated in the Site wastewater treatment system. For this reason, the exposure related to surface water runoff pathway is considered incomplete under current conditions.

d Only inhalation of vapors pathway is complete for this receptor population.

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Conceptual Site Model for Human Health Risk Assessment
Phibro-Tech, Inc.
Santa Fe Springs, California

Figure 11

By: SS   Date: 6/21/2012   Contract Number: 06-441-Q

\\irisds01\iris\Phibro-Tech\HRA WP\Fig 4-1 CSM_Figure_rev

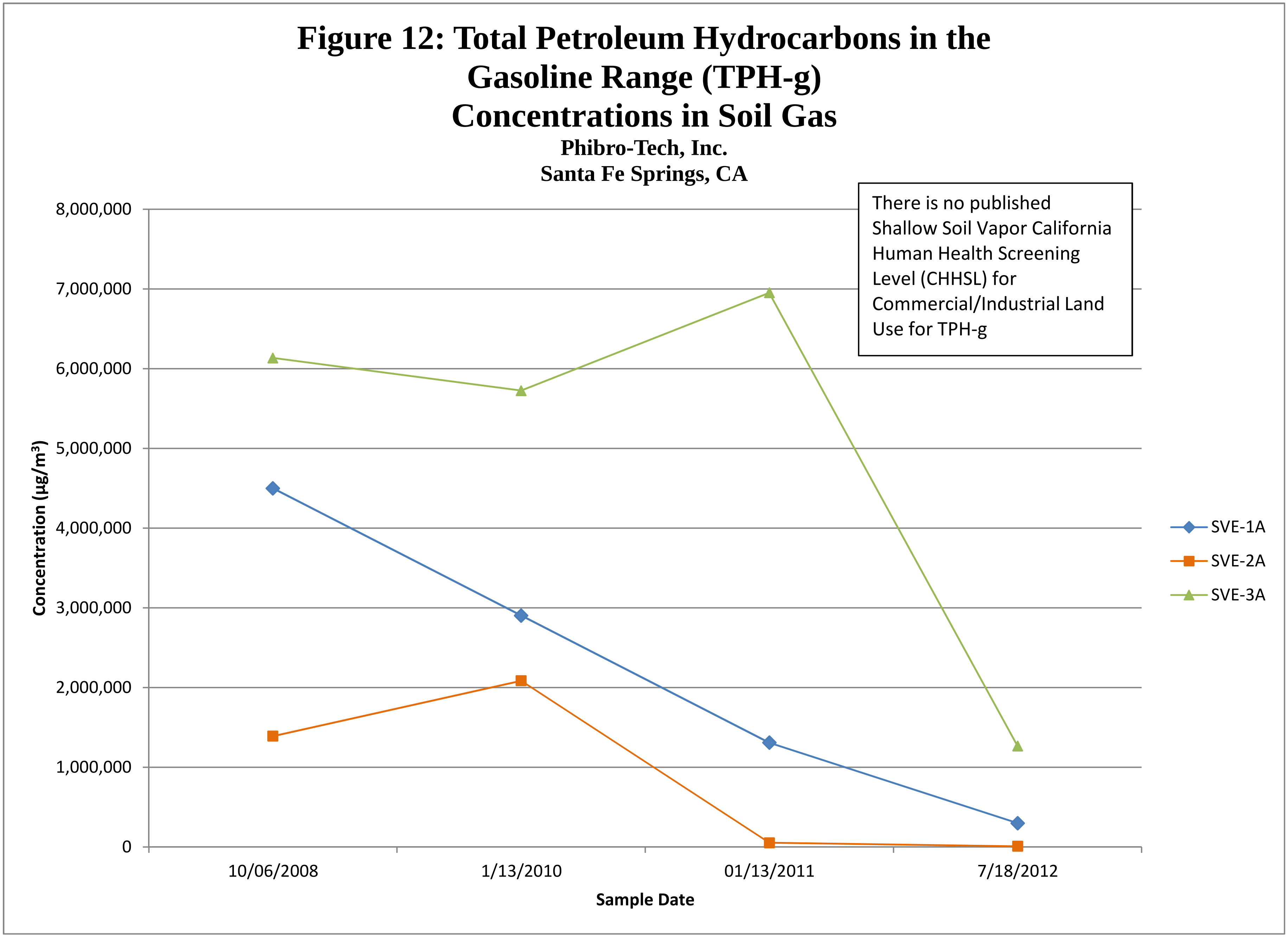
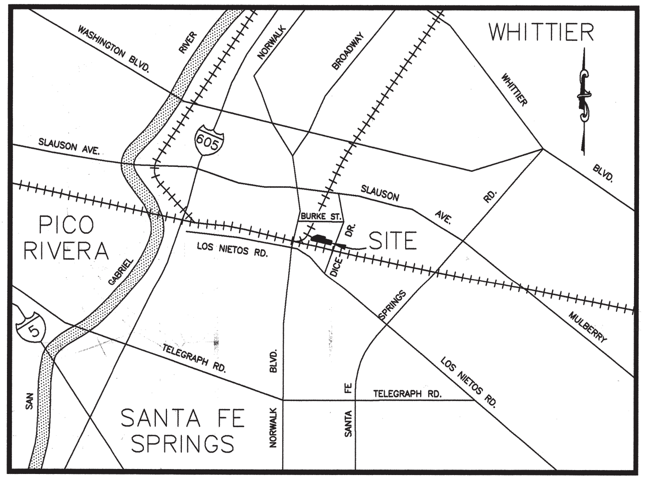


Figure 12: Total Petroleum Hydrocarbons in the Gasoline Range (TPH-g) Concentrations in Soil Gas
Phibro-Tech, Inc.
Santa Fe Springs, CA
There is no published Shallow Soil Vapor California Human Health Screening Level (CHHSL) for Commercial/Industrial Land Use for TPH-g
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
Concentration (µg/m³)
10/06/2008
1/13/2010
01/13/2011
7/18/2012
Sample Date
SVE-1A
SVE-2A
SVE-3A

APPENDIX A

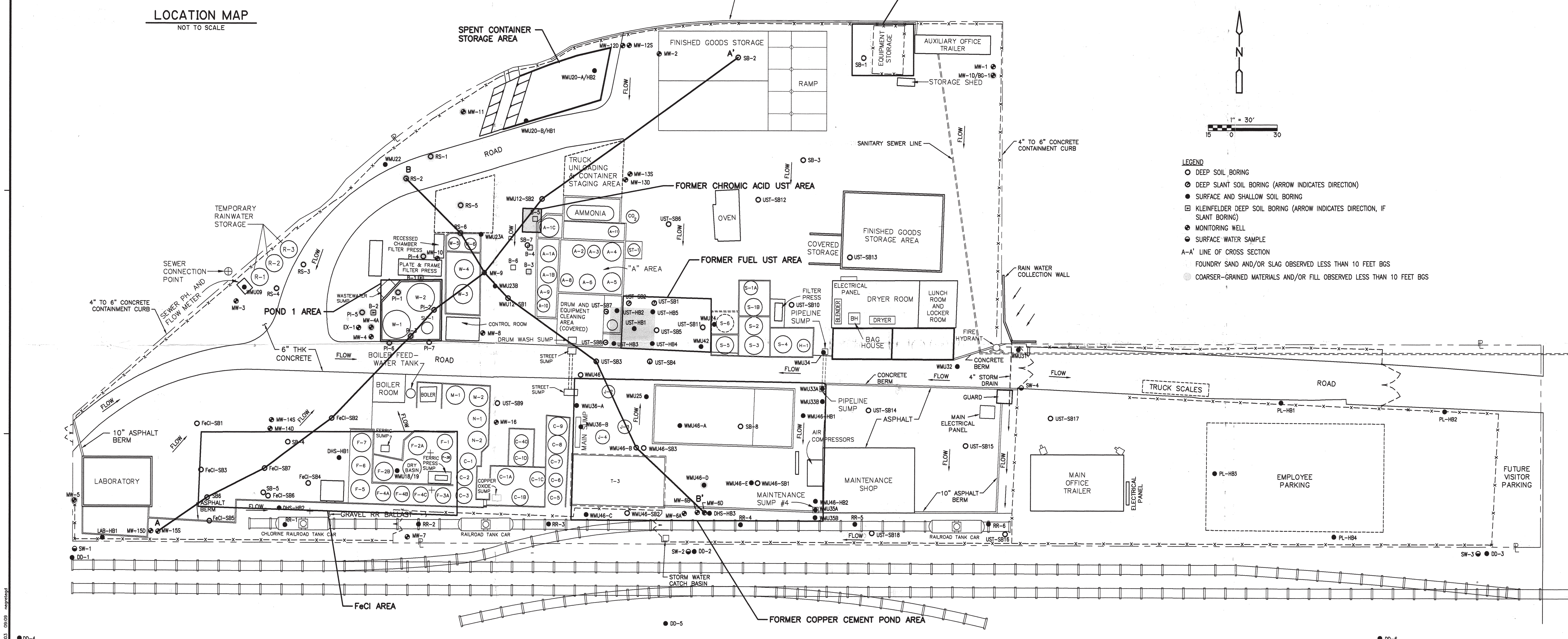
MAP SHEETS FROM THE FINAL SITE CONCEPTUAL MODEL (CDM, MARCH 9, 2005)



LOCATION MAP
NOT TO SCALE

WASTE MANAGEMENT UNIT SUMMARY

WMU NO.	WMU NAME	WMU NO.	WMU NAME
1	COPPER CEMENT DRYING POND NO 7	27	PRE-1975 SUMP NO 3
2	RAINWATER HOLDING POND NO 3	28	PRE-1975 SUMP NO 4
3	POND NO 8	29	PRE-1975 SUMP NO 5
4	POND NO 1	30	PRE-1975 SUMP NO 7
6	POND NO 2	31	SUMP NO 1
9	FORMER THREE STAGE CLARIFIER	32	SUMP NO 2
11	OLD WASTEWATER TREATMENT SYSTEM	33	SUMP NO 3-C
12	OLD CHROMIC-SULFURIC UST	34	SUMPS NO 3-A AND 3-B
14	DISPOSAL PIT	35	SUMP NO 4
17	FERRIC CHLORIDE AREA DRUM WASHING UNIT AND SUMP	36	SUMPS NO 5-A, 5-B AND 5-C
18	FERRIC CHLORIDE AREA FILTER PRESS	37	SUMP NO 6-A
19	FERRIC CHLORIDE AREA FILTER PRESS SUMP	38	SUMP NO 6-B
20	RCRA-REGULATED DRUM STORAGE AREA	39	SUMP NO 7
21	DRUM STORAGE AREA NO 1	40	SUMP NO 8
22	DRUM STORAGE AREA NO 2	41	SUMP NO 9
23	DRUM STORAGE AREA NO 3	42	SUMPS NO 13 AND 14
24	DRUM STORAGE AREA NO 4	43	SUMP NO 16
25	DRUM STORAGE AREA NO 5	46	COPPER CEMENT DRYING PONDS NO 1, 2, 4, 5 AND 6
26	PRE-1975 SUMP NO 2	37	TOTAL WMU'S



1" = 30'
15 0 30

LEGEND
- DEEP SOIL BORING
- DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- SURFACE AND SHALLOW SOIL BORING
- KLEINFELDER DEEP SOIL BORING (ARROW INDICATES DIRECTION, IF SLANT BORING)
- MONITORING WELL
- SURFACE WATER SAMPLE

A-A' LINE OF CROSS SECTION
- FOUNDRY SAND AND/OR SLAG OBSERVED LESS THAN 10 FEET BGS
- COARSER-GRAINED MATERIALS AND/OR FILL OBSERVED LESS THAN 10 FEET BGS

BASE MAP SOURCE: R.L. WOOD & ASSOCIATES, INC. ENGINEERING

REV. NO.	DATE	DRWN	CHKD	REMARKS

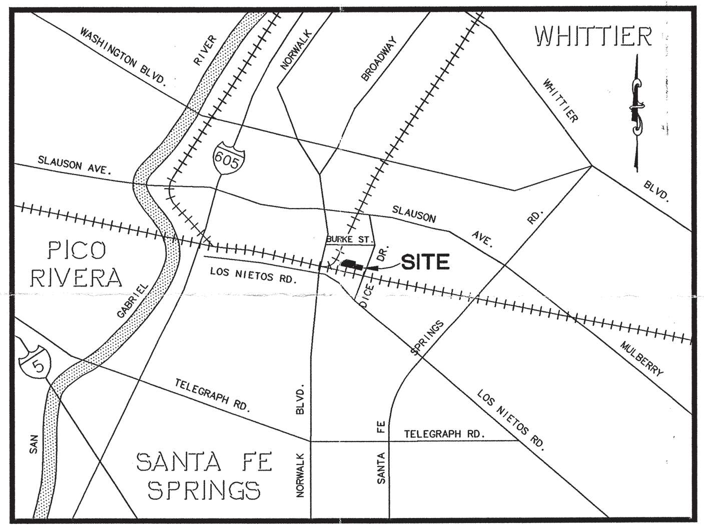
DESIGNED BY:
DRAWN BY:
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE:

CDM Camp Dresser & McKee Inc.
consulting engineering construction operations
18581 Teller Avenue
Suite 200
Irvine, California 92612
(714) 752-5452 Fax: (714) 752-1307

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

HISTORICAL SAMPLE LOCATION MAP

PROJECT NO.
FILE NAME: M-400.dwg
SHEET NO.
PLATE 1



LOCATION MAP

N.T.S.

LEGEND

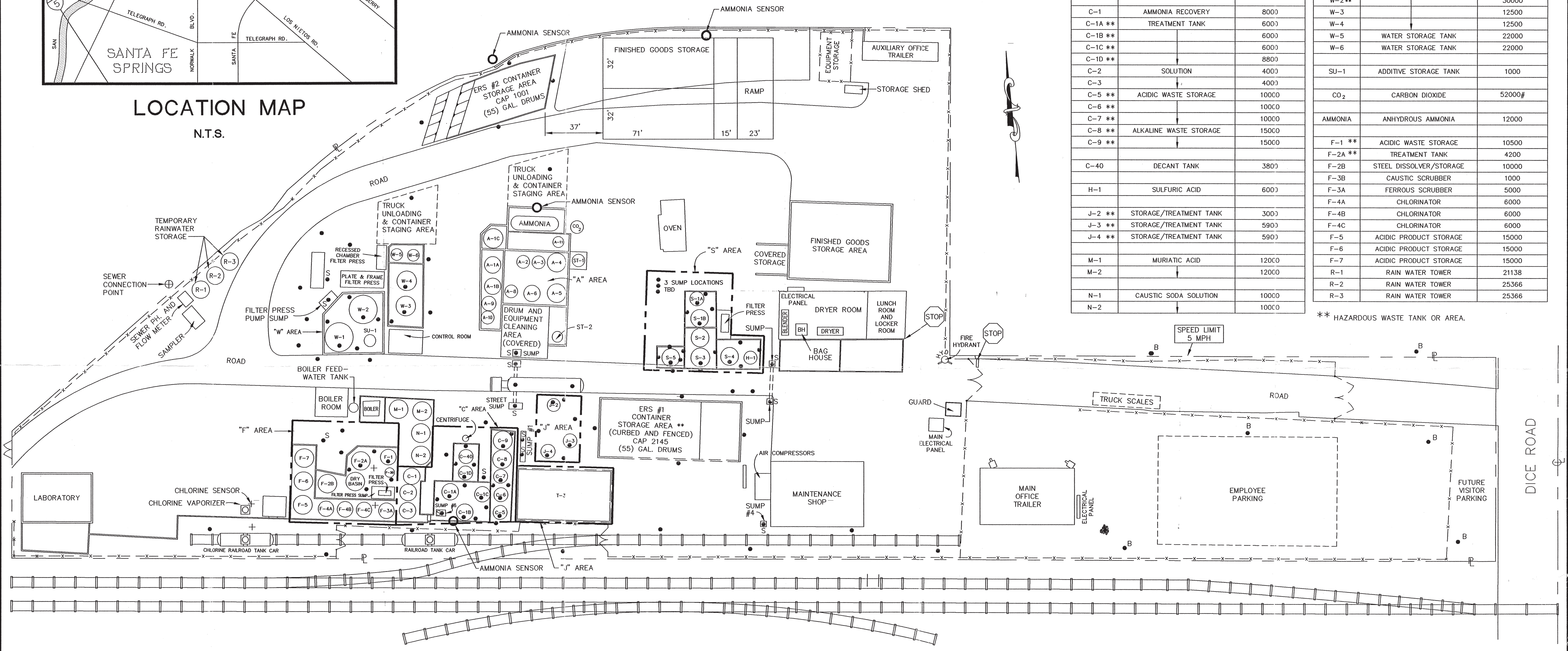
- PROPERTY LINE
- FENCE LINE
- SURVEILLANCE CAMERA
- TRUCK LOADING/UNLOADING AREA
- ● SOIL SAMPLE LOCATIONS (APPROXIMATE)
- ● S SOIL SAMPLES FROM UNDER SUMPS
- ● B BACKGROUND SOIL SAMPLES

TANK SUMMARY

TANK No.	PRODUCT	CAPACITY (GAL.)
A-1A	10% AQUA AMMONIA SOLUTION	8000
A-1B	↓	8000
A-1C	↓	8000
A-2	↓	10000
A-3	↓	6000
A-4	↓	13000
A-5	↓	10575
A-6	↓	6000
A-8	SCRUBBER AND PUMP TANK	6000
A-9	SOLUTION	12000
A-10	↓	4500
A-11	SCRUBBER AND PUMP TANK	10000
C-1	AMMONIA RECOVERY	8000
C-1A **	TREATMENT TANK	6000
C-1B **	↓	6000
C-1C **	↓	6000
C-1D **	↓	8800
C-2	SOLUTION	4000
C-3	↓	4000
C-5 **	ACIDIC WASTE STORAGE	10000
C-6 **	↓	10000
C-7 **	↓	10000
C-8 **	ALKALINE WASTE STORAGE	15000
C-9 **	↓	15000
C-40	DECANT TANK	3800
H-1	SULFURIC ACID	6000
J-2 **	STORAGE/TREATMENT TANK	3000
J-3 **	STORAGE/TREATMENT TANK	5900
J-4 **	STORAGE/TREATMENT TANK	5900
M-1	MURIATIC ACID	12000
M-2	↓	12000
N-1	CAUSTIC SODA SOLUTION	10000
N-2	↓	10000

TANK No.	PRODUCT	CAPACITY (GAL.)
S-1A **	INORGANIC MIX TANK	6400
S-1B **	↓	6400
S-2	INORGANIC SOLUTION	9300
S-3 **	↓	12000
S-4	↓	12000
S-5 **	↓	10000
ST-1	PRODUCT MIX TANK	3100
ST-2	PRODUCT MIX TANK	1000
T-3	WATER STORAGE	130000
W-1 **	WATER TREATMENT TANK	30000
W-2 **	↓	30000
W-3	↓	12500
W-4	↓	12500
W-5	WATER STORAGE TANK	22000
W-6	WATER STORAGE TANK	22000
SU-1	ADDITIVE STORAGE TANK	1000
CO_2	CARBON DIOXIDE	52000#
AMMONIA	ANHYDROUS AMMONIA	12000
F-1 **	ACIDIC WASTE STORAGE	10500
F-2A **	TREATMENT TANK	4200
F-2B	STEEL DISSOLVER/STORAGE	10000
F-3B	CAUSTIC SCRUBBER	1000
F-3A	FERROUS SCRUBBER	5000
F-4A	CHLORINATOR	6000
F-4B	CHLORINATOR	6000
F-4C	CHLORINATOR	6000
F-5	ACIDIC PRODUCT STORAGE	15000
F-6	ACIDIC PRODUCT STORAGE	15000
F-7	ACIDIC PRODUCT STORAGE	15000
R-1	RAIN WATER TOWER	21138
R-2	RAIN WATER TOWER	25366
R-3	RAIN WATER TOWER	25366

** HAZARDOUS WASTE TANK OR AREA.



SITE PLAN

REVISED: 06-13-02

PROJECT NO.	DATE
DESIGNED BY	
DRAWN BY TL	6-13-02
CHECKED BY QT	6-13-02
ENGINEER	
DRAWING NUMBER:	DATE

Clayton GROUP SERVICES

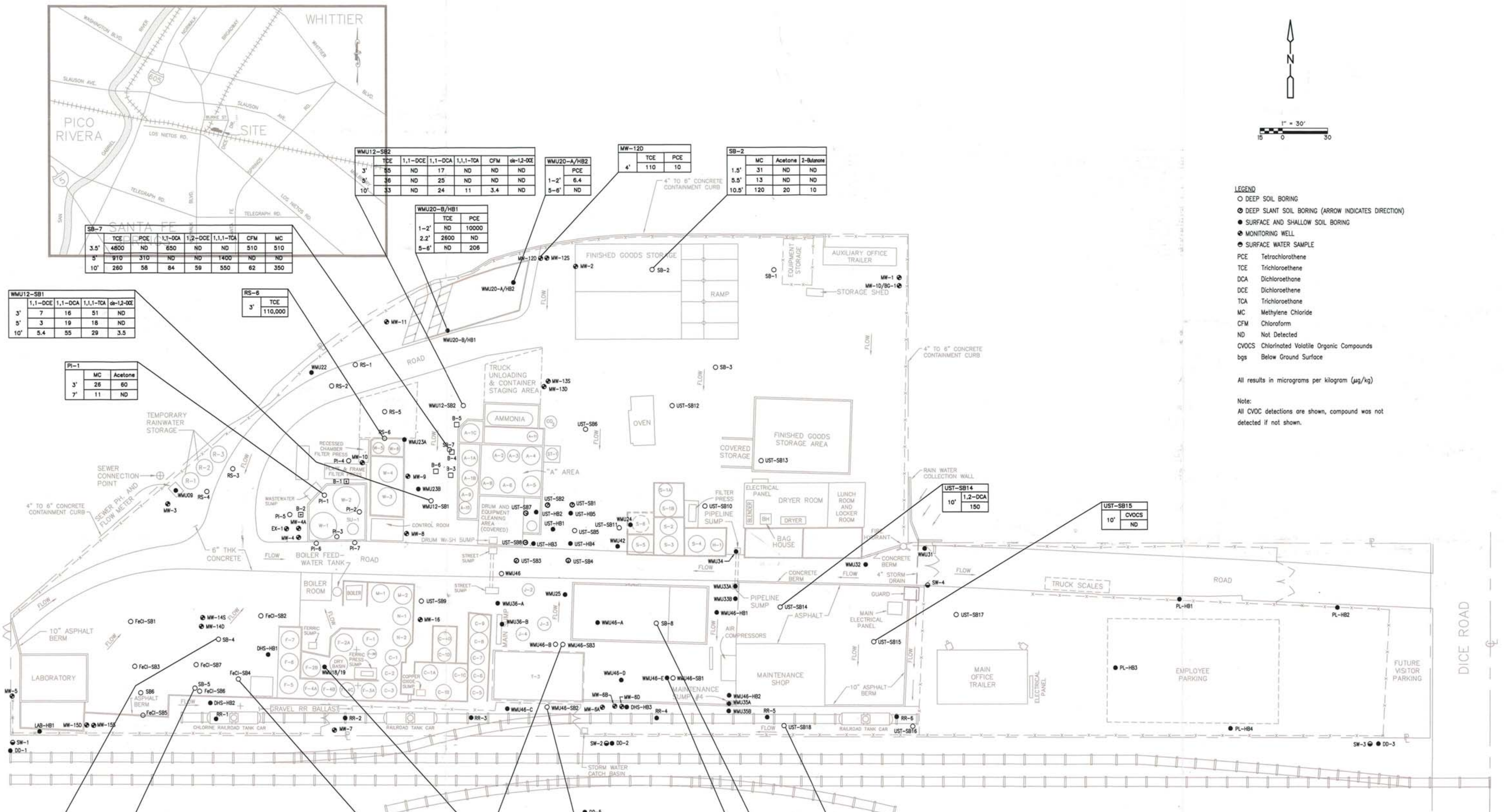
mt

MARK THOMAS & CO. INC.
6920 KOLL CENTER PARKWAY, SUITE 219
PLEASANTON, CA 94566
(925) 417-8000

PHIBRO-TECH, INC.
8851 DICE ROAD
SANTA FE SPRINGS, CALIFORNIA

FACILITY PLOT PLAN AND SAMPLE LOCATIONS

SCALE 1" = 30'-0"
CLAYTON PROJECT# : 70-02742
DRAWING NUMBER
FIGURE 2



WMU12-SB2	TCE	1,1-DCE	1,1-DCA	1,1,1-TCA	CFM	cis-1,2-DCE
3'	55	ND	17	ND	ND	ND
5'	36	ND	25	ND	ND	ND
10'	33	ND	24	11	3.4	ND

WMU20-A/HB2	PCE
1-2'	6.4
5-6'	ND

MW-12D	TCE	PCE
4'	110	10

SB-2	MC	Acetone	2-Butanone
1.5'	31	ND	ND
5.5'	13	ND	ND
10.5'	120	20	10

WMU20-B/HB1	TCE	PCE
1-2'	ND	10000
2.2'	2600	ND
5-6'	ND	206

SB-7	TCE	PCE	1,1-DCA	1,2-DCE	1,1,1-TCA	CFM	MC
3.5'	4800	ND	650	ND	ND	510	510
5'	910	310	ND	ND	1400	ND	ND
10'	260	58	84	59	550	62	350

WMU12-SB1	1,1-DCE	1,1-DCA	1,1,1-TCA	cis-1,2-DCE
3'	7	16	51	ND
5'	3	19	18	ND
10'	5.4	55	29	3.5

RS-6	TCE
3'	110,000

PI-1	MC	Acetone
3'	26	60
7'	11	ND

UST-SB14	1,2-DCA
10'	150

UST-SB15	CVOCS
10'	ND

SB-4	TCE
6'	90

SB-5	TCE
5.5'	125

FeCl-SB4	TCE	PCE	1,2-DCE	MC	Acetone	2-Butanone
0.5'	ND	ND	ND	9	ND	ND
5.5'	110	11	6	10	38	11
11'	ND	ND	ND	8	ND	ND

WMU18/19	TCE	Acetone
1-2'	9	ND
3-4'	ND	120

WMU46-SB3	CVOCS
10'	ND

WMU46-SB2	CVOCS
6'	ND
10'	ND

WMU46-E	MC
3.5'	28

SB-8	MC
10'	40

UST-SB18	CVOCS
10'	ND

LEGEND

- ○ DEEP SOIL BORING
- DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- ● SURFACE AND SHALLOW SOIL BORING
- MONITORING WELL
- SURFACE WATER SAMPLE

PCE	Tetrachlorothene
TCE	Trichloroethene
DCA	Dichloroethane
DCE	Dichloroethene
TCA	Trichloroethane
MC	Methylene Chloride
CFM	Chloroform
ND	Not Detected
CVOCS	Chlorinated Volatile Organic Compounds
bgs	Below Ground Surface

All results in micrograms per kilogram (μg/kg)

Note:
All CVOC detections are shown, compound was not detected if not shown.

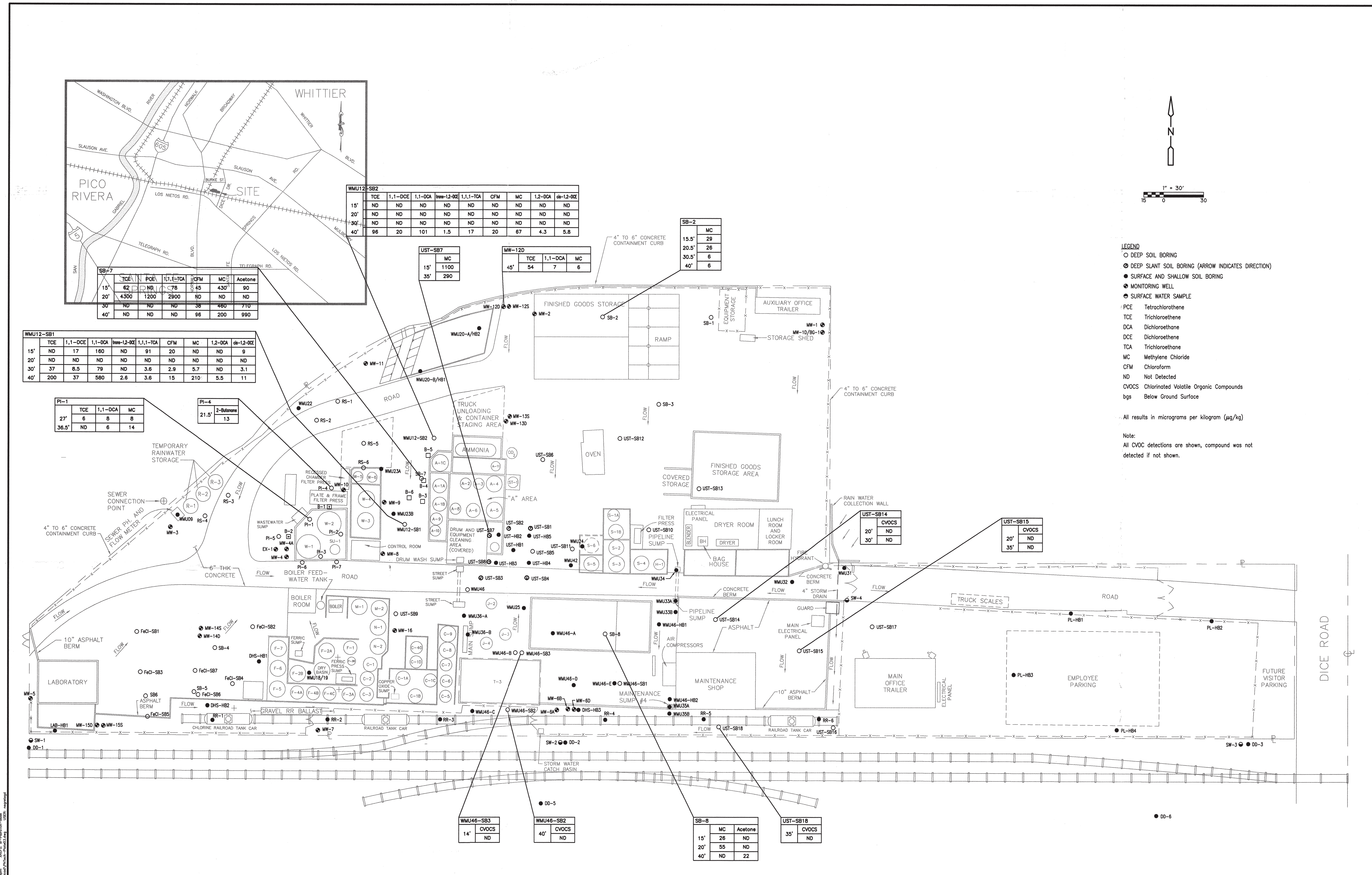
DATE: Mar 10, 2005 9:40am XREFS: w-Plbrtch-Base USER: negretegd
DWG: P:\2779-2779-OC\Dosel\Phitech-Plate02.dwg

CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Shallow Soil Clorinated VOC Results (0 to 14 Feet bgs)

Plate 2



WMU12-SB2

	TCE	1,1-DCE	1,1-DCA	trans-1,2-DCE	1,1,1-TCA	CFM	MC	1,2-DCA	cis-1,2-DCE
15'	ND	ND	ND	ND	ND	ND	ND	ND	ND
20'	ND	ND	ND	ND	ND	ND	ND	ND	ND
30'	ND	ND	ND	ND	ND	ND	ND	ND	ND
40'	96	20	101	1.5	17	20	67	4.3	5.8

UST-SB7

	MC
15'	1100
35'	290

MW-12D

	TCE	1,1-DCA	MC
45'	54	7	6

SB-2

	MC
15.5'	29
20.5'	26
30.5'	6
40'	6

SB-7

	TCE	PCE	1,1,1-TCA	CFM	MC	Acetone
15'	62	ND	78	45	430	90
20'	4300	1200	2900	ND	ND	ND
30'	ND	ND	ND	38	460	710
40'	ND	ND	ND	96	200	990

WMU12-SB1

	TCE	1,1-DCE	1,1-DCA	trans-1,2-DCE	1,1,1-TCA	CFM	MC	1,2-DCA	cis-1,2-DCE
15'	ND	17	160	ND	91	20	ND	ND	9
20'	ND	ND	ND	ND	ND	ND	ND	ND	ND
30'	37	8.5	79	ND	3.6	2.9	5.7	ND	3.1
40'	200	37	580	2.6	3.6	15	210	5.5	11

PI-1

	TCE	1,1-DCA	MC
27'	6	8	8
36.5'	ND	6	14

PI-4

	2-Butanone
21.5'	13

UST-SB14

	CVOCS
20'	ND
30'	ND

UST-SB15

	CVOCS
20'	ND
35'	ND

WMU46-SB3

	CVOCS
14'	ND

WMU46-SB2

	CVOCS
40'	ND

SB-8

	MC	Acetone
15'	26	ND
20'	55	ND
40'	ND	22

UST-SB18

	CVOCS
35'	ND

LEGEND

- ○ DEEP SOIL BORING
- DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- ● SURFACE AND SHALLOW SOIL BORING
- MONITORING WELL
- SURFACE WATER SAMPLE

PCE	Tetrachlorothene
TCE	Trichloroethene
DCA	Dichloroethane
DCE	Dichloroethene
TCA	Trichloroethane
MC	Methylene Chloride
CFM	Chloroform
ND	Not Detected
CVOCS	Chlorinated Volatile Organic Compounds
bgs	Below Ground Surface

All results in micrograms per kilogram (μg/kg)

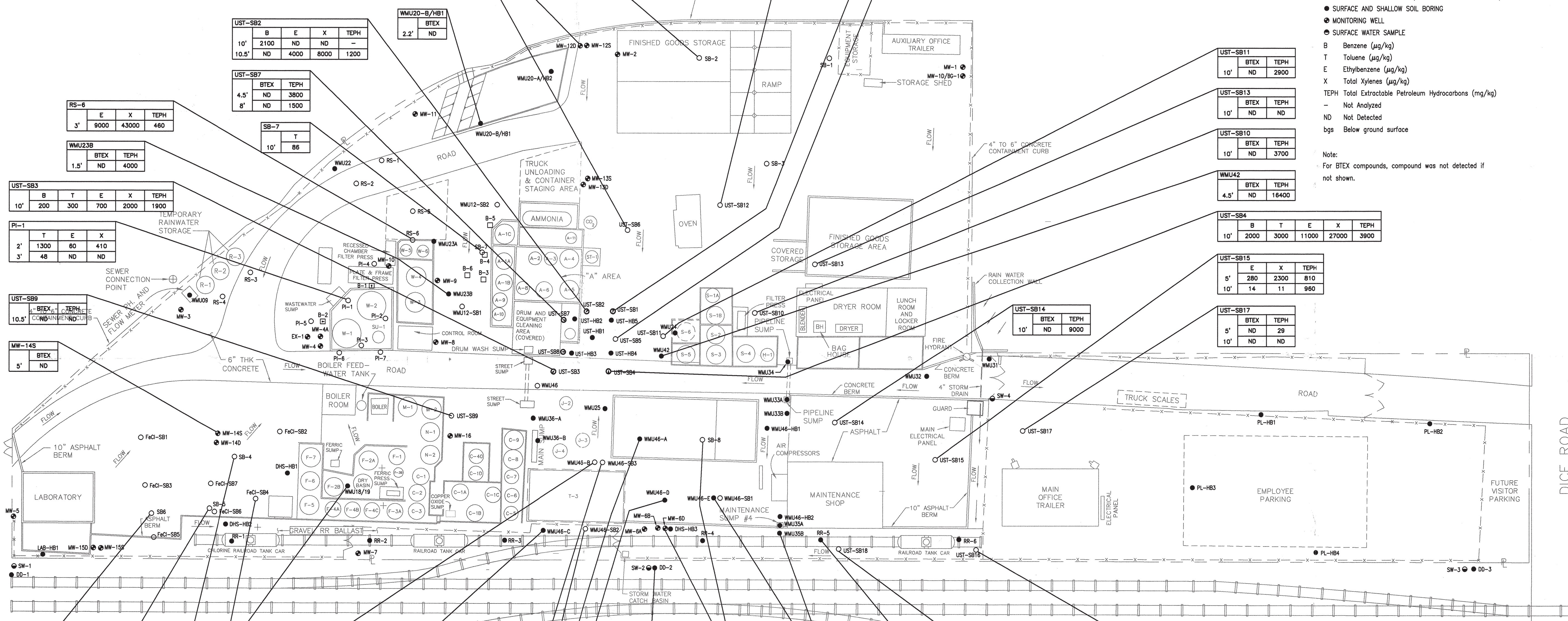
Note:
All CVOC detections are shown, compound was not detected if not shown.

CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Deep Soil Clorinated VOC Results (14 to 40 Feet bgs)

Plate 3



LEGEND

- ○ DEEP SOIL BORING
- ⊘ DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- ● SURFACE AND SHALLOW SOIL BORING
- ◕ MONITORING WELL
- ◓ SURFACE WATER SAMPLE
- B Benzene (μg/kg)
- T Toluene (μg/kg)
- E Ethylbenzene (μg/kg)
- X Total Xylenes (μg/kg)
- TEPH Total Extractable Petroleum Hydrocarbons (mg/kg)
- – Not Analyzed
- ND Not Detected
- bgs Below ground surface

Note:
For BTEX compounds, compound was not detected if not shown.

SB-2

	T
1.5'	41
5.5'	5
10.5'	22

MW-12D

	BTEX
4'	ND

UST-SB6

	BTEX	TEPH
5.5'	ND	7400
10'	ND	3100

WMU20-B/HB1

	BTEX
2.2'	ND

UST-SB2

	B	E	X	TEPH
10'	2100	ND	ND	–
10.5'	ND	4000	8000	1200

UST-SB7

	BTEX	TEPH
4.5'	ND	3800
8'	ND	1500

RS-6

	E	X	TEPH
3'	9000	43000	460

SB-7

	T
10'	86

WMU23B

	BTEX	TEPH
1.5'	ND	4000

UST-SB3

	B	T	E	X	TEPH
10'	200	300	700	2000	1900

PI-1

	T	E	X
2'	1300	60	410
3'	48	ND	ND

UST-SB9

	BTEX	TEPH
10.5'	ND	ND

MW-14S

	BTEX
5'	ND

UST-SB12

	BTEX	TEPH
10'	ND	ND

UST-SB1

	E	X	TEPH
10'	5000	14000	2100

UST-SB5

	B	X	TEPH
5.5'	1700	9000	2000
10.5'	ND	3000	550

UST-SB11

	BTEX	TEPH
10'	ND	2900

UST-SB13

	BTEX	TEPH
10'	ND	ND

UST-SB10

	BTEX	TEPH
10'	ND	3700

WMU42

	BTEX	TEPH
4.5'	ND	16400

UST-SB4

	B	T	E	X	TEPH
10'	2000	3000	11000	27000	3900

UST-SB15

	E	X	TEPH
5'	280	2300	810
10'	14	11	960

UST-SB14

	BTEX	TEPH
10'	ND	9000

UST-SB17

	BTEX	TEPH
5'	ND	29
10'	ND	ND

SB6

	T
6'	380

SB-5

	T	E	X
5.5'	340	70	210
10.5'	ND	ND	ND

SB-4

	T
6'	65

FeCl-SB4

	T	X
0.5'	79	ND
5.5'	100	220
11'	40	ND

WMU46-B

	BTEX	TEPH
10.5'	ND	200

WMU18/19

	T	X
1-2'	9	10

WMU46-C

	BTEX	TEPH
2'	ND	–

WMU46-SB3

	E	X	TEPH
10'	5100	14000	3400

WMU46-SB2

	T	E	X	TEPH
3'	ND	5	10	44
6'	10	77	140	470
10'	43	750	1400	2600

WMU46-D

	T
3.5'	260

WMU46-A

	BTEX	TEPH
4'	ND	8500

MW-6D

	T
10.5'	310

DD-2

	BTEX	TEPH
2'	ND	5400

WMU46-E

	T
3.5'	330

SB-8

	B	T	E	X	TEPH
5.5'	ND	400	3300	ND	4200
10'	ND	130	ND	56	1500

WMU35-B

	BTEX	TEPH
7'	ND	1000

RR-5

	BTEX
1-2'	ND

UST-SB18

	B	T	E	X	TEPH
5'	10	55	130	2300	1900
10'	ND	190	47	160	3000

UST-SB16

	BTEX	TEPH
5'	ND	ND
10'	ND	ND

DATE: Mar 08, 2005 4:24pm XREFS: xr-PibraTch-Base USER: negretegd
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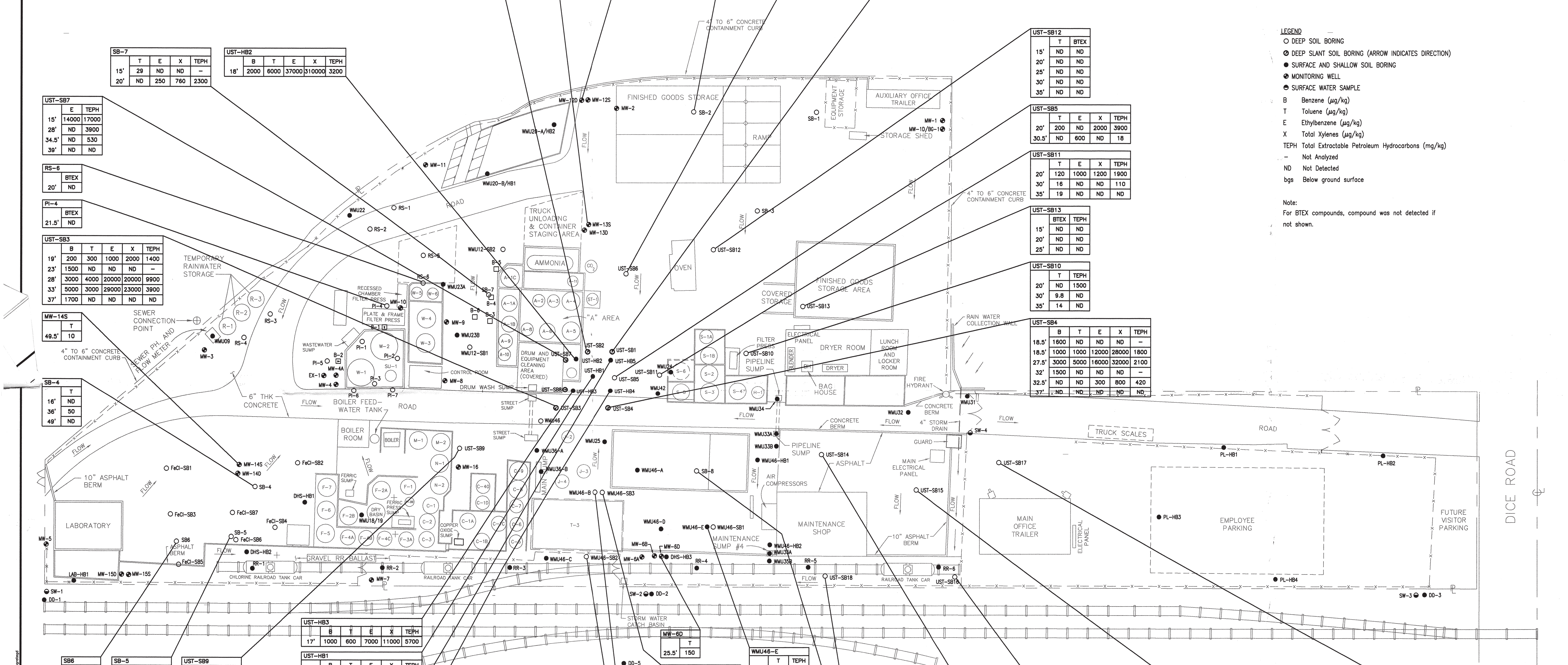
CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Shallow Soil
Aromatic VOCs and TEPH Results
(0 to 14 Feet bgs)

Plate 4



LEGEND
- ○ DEEP SOIL BORING
- ⊘ DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- ● SURFACE AND SHALLOW SOIL BORING
- ⊕ MONITORING WELL
- ⊖ SURFACE WATER SAMPLE
- B Benzene (μg/kg)
- T Toluene (μg/kg)
- E Ethylbenzene (μg/kg)
- X Total Xylenes (μg/kg)
- TEPH Total Extractable Petroleum Hydrocarbons (mg/kg)
- – Not Analyzed
- ND Not Detected
- bgs Below ground surface

Note:
For BTEX compounds, compound was not detected if not shown.

UST-SB2

	B	E	X	TEPH
15'	1900	ND	ND	ND
18'	ND	13000	21000	1900
27'	300	–	2000	3500
31.5'	ND	ND	ND	24
36'	ND	ND	ND	9

MW-13S

	BTEX
20'	ND

MW-12D

	BTEX
45'	ND

SB-2

	T
15.5'	12
20'	19
30.5'	7
40'	11

UST-SB6

	T	TEPH
20'	ND	2000
30'	ND	ND
35'	24	ND

UST-SB1

	E	X	TEPH
19'	4000	10000	2100
28'	ND	ND	28
32'	100	200	93
37'	ND	ND	17

SB-7

	T	E	X	TEPH
15'	29	ND	ND	–
20'	ND	250	760	2300

UST-HB2

	B	T	E	X	TEPH
18'	2000	6000	37000	310000	3200

UST-SB7

	E	TEPH
15'	14000	17000
28'	ND	3900
34.5'	ND	530
39'	ND	ND

RS-6

	BTEX
20'	ND

PI-4

	BTEX
21.5'	ND

UST-SB3

	B	T	E	X	TEPH
19'	200	300	1000	2000	1400
23'	1500	ND	ND	ND	–
28'	3000	4000	20000	20000	9900
33'	5000	3000	29000	23000	3900
37'	1700	ND	ND	ND	ND

MW-14S

	T
49.5'	10

SB-4

	T
16'	ND
36'	50
49'	ND

UST-SB12

	T	BTEX
15'	ND	ND
20'	ND	ND
25'	ND	ND
30'	ND	ND
35'	ND	ND

UST-SB5

	T	E	X	TEPH
20'	200	ND	2000	3900
30.5'	ND	600	ND	18

UST-SB11

	T	E	X	TEPH
20'	120	1000	1200	1900
30'	16	ND	ND	110
35'	19	ND	ND	ND

UST-SB13

	BTEX	TEPH
15'	ND	ND
20'	ND	ND
25'	ND	ND

UST-SB10

	T	TEPH
20'	ND	1500
30'	9.8	ND
35'	14	ND

UST-SB4

	B	T	E	X	TEPH
18.5'	1600	ND	ND	ND	–
18.5'	1000	1000	12000	28000	1800
27.5'	3000	5000	16000	32000	2100
32'	1500	ND	ND	ND	–
32.5'	ND	ND	300	800	420
37'	ND	ND	ND	ND	ND

SB6

	BTEX
31'	ND
37'	ND
46'	ND

SB-5

	B	T
15.5'	700	ND
35.5'	ND	50
45.5'	ND	ND

UST-SB9

	T	TEPH
20'	ND	ND
30'	16	ND
35'	ND	ND

UST-HB3

	B	T	E	X	TEPH
17'	1000	600	7000	11000	5700

UST-HB1

	B	T	E	X	TEPH
17'	1000	400	3000	6000	16000

UST-HB5

	B	T	E	X	TEPH
18'	5000	1000	17000	45000	5300

UST-HB4

	B	T	E	X	TEPH
16.5'	1000	ND	7000	13000	4100

WMU46-SB2

	B	T	E	X	TEPH
15'	ND	17	1600	2900	2100
20'	5	230	2000	4200	3500
25'	ND	240	2000	4400	3200
30'	ND	110	2500	6600	7700
35'	ND	12	69	990	1400
40'	ND	ND	34	520	470

MW-6D

	T
25.5'	150

WMU46-SB3

	E	X	TEPH
14'	990	3000	1200

WMU46-B

	T	TEPH
20'	ND	3100
30'	ND	520
35'	26	ND

WMU46-E

	T	TEPH
15'	9.8	ND
25'	28	ND

SB-8

	T	E	TEPH
15'	90	ND	–
20'	54	74	1500
30'	ND	ND	10
40'	11	ND	ND

UST-SB18

	T	E	X	TEPH
15'	ND	280	520	850
20'	17	610	1100	2700
25'	260	640	1900	5100
30'	ND	ND	ND	57
35'	ND	ND	ND	41

UST-SB14

	BTEX	TEPH
15'	ND	2900
20'	ND	ND
25'	ND	ND
30'	ND	ND

UST-SB16

	B	T	E	X	TEPH
15'	6	13	150	840	770
20'	10	18	160	1800	1600
25'	ND	ND	6	49	80
30'	ND	ND	ND	ND	ND
35'	ND	ND	ND	ND	ND

UST-SB15

	E	X	TEPH
15'	1100	5700	3600
20'	560	1900	3500
25'	250	1100	480
30'	17	40	ND
35'	8	50	ND

UST-SB17

	T	E	X	TEPH
15'	1800	660	7000	4300
20'	1900	540	6900	4400
25'	ND	89	260	300
30'	ND	ND	ND	ND
35'	ND	ND	ND	ND

DATE: Mar 08, 2005 4:23pm XREFS: xr-PibroTch-Base USER: negretegd
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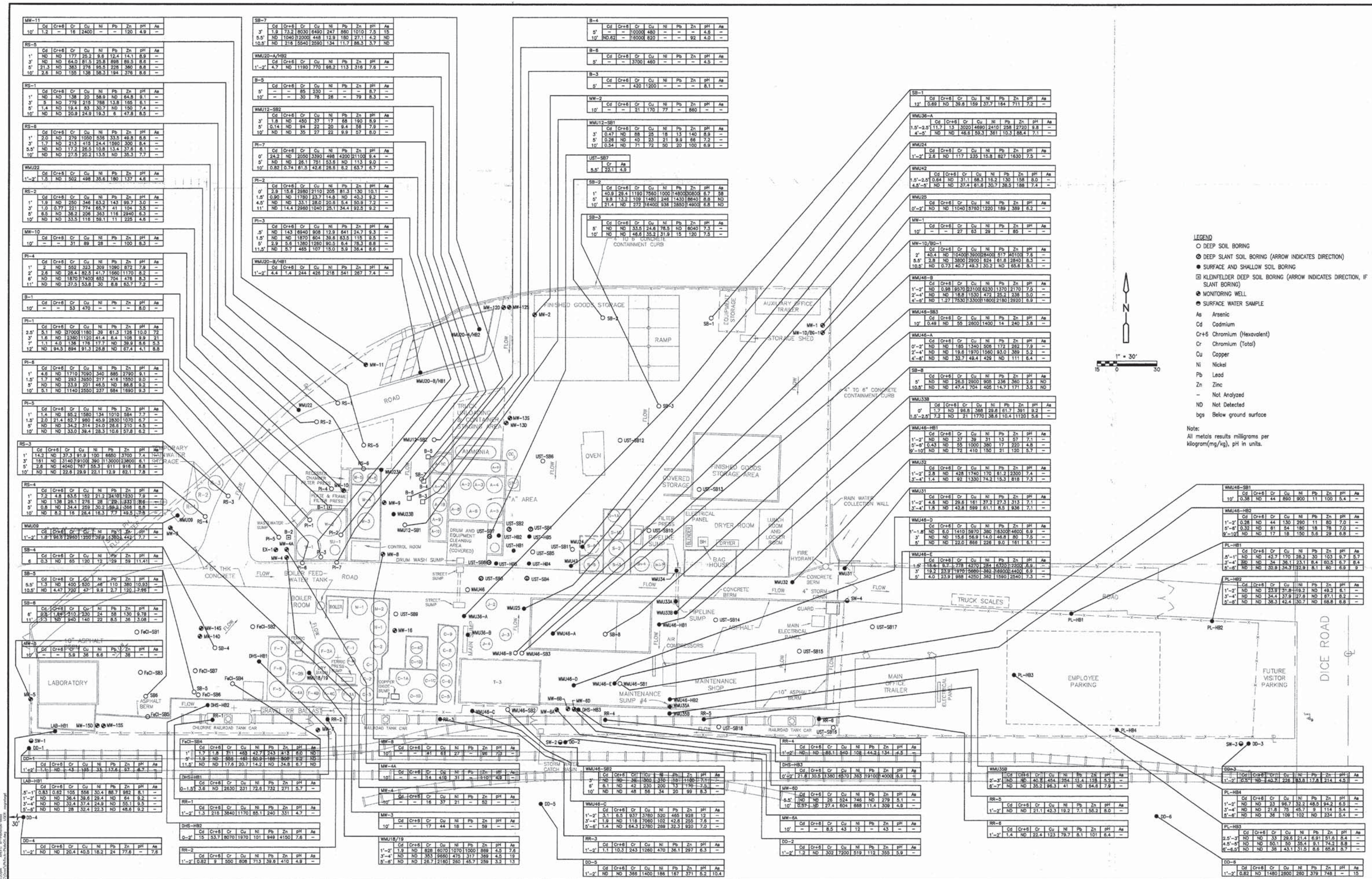
CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Deep Soil
Aromatic VOCs and TEPH Results
(14 to 50 Feet bgs)

Plate 5



LEGEND

- DEEP SOIL BORING
- DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- SURFACE AND SHALLOW SOIL BORING
- KLEINFELDER DEEP SOIL BORING (ARROW INDICATES DIRECTION, IF SLANT BORING)
- MONITORING WELL
- SURFACE WATER SAMPLE

As Arsenic
Cd Cadmium
Cr+6 Chromium (Hexavalent)
Cr Chromium (Total)
Cu Copper
Ni Nickel
Pb Lead
Zn Zinc
– Not Analyzed
ND Not Detected
bgs Below ground surface

Note:
All metals results milligrams per kilogram(mg/kg), pH in units.

MW-11

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	1.2	–	16	2400	–	–	120	4.9	–

RS-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	ND	ND	177	25.2	9.6	12.4	14.1	8.9	–
3'	ND	ND	64.0	81.5	25.8	898	89.5	8.6	–
5'	21.3	ND	363	276	95.5	226	360	8.6	–
10'	2.6	ND	155	138	56.3	194	376	8.6	–

RS-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	ND	ND	138	20	58.9	ND	64.8	9.1	–
3'	5	ND	779	215	768	13.8	165	6.1	–
5'	1.4	ND	19.4	83	30.7	ND	150	7.4	–
10'	ND	ND	20.9	24.9	19.3	6	47.8	8.5	–

RS-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	2.0	ND	279	1050	535	33.5	49.8	8.6	–
3'	1.7	ND	213	415	24.4	1590	300	8.4	–
5.5'	ND	ND	17.2	26.5	10.8	13.4	37.6	8.1	–
10'	ND	ND	27.5	20.2	13.5	ND	35.3	7.7	–

WMU22

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.5	ND	502	498	35.6	180	137	4.6	–

RS-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	1.9	ND	250	346	63.2	143	99.7	5.0	–
3'	1.0	0.77	221	774	65.7	41	104	3.5	–
5'	8.5	ND	38.2	206	363	116	2940	6.3	–
10'	ND	ND	33.5	118	59.1	11	225	4.6	–

MW-10

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	31	89	28	–	100	8.3	–

PI-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	2	ND	552	323	309	1090	872	7.9	–
2'	2.6	ND	28.4	82.5	41.7	1660	1170	8.2	–
6'	ND	ND	1870	17400	652	704	478	8.3	–
11'	ND	ND	37.5	53.8	30	8.8	63.7	7.2	–

B-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	53	470	–	–	–	8.0	–

PI-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
2.5'	5.1	ND	37000	1180	39	61.3	126	10.0	72
5'	1.6	ND	2360	1120	41.4	6.4	108	9.9	21
7'	1.1	4.0	136	176	17.7	ND	39.9	8.6	5.3
12'	ND	94.5	894	91.3	26.8	ND	67.4	4.1	8.8

PI-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	4.6	ND	1710	7090	340	885	2790	9.1	–
1.5'	1.7	ND	293	3950	217	416	1550	9.0	–
5'	ND	ND	23.9	201	46.5	ND	86.6	9.2	–
10'	5.1	ND	1140	2550	237	684	1690	9.3	–

PI-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	1.4	ND	85.2	1580	134	1010	584	7.7	–
1.5'	2.0	21.4	62.7	980	45.9	2830	1070	6.7	–
5'	ND	ND	34.2	314	24.0	26.6	210	4.5	–
10'	ND	ND	33.0	39.4	28.3	10.6	57.8	6.2	–

RS-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	14.2	ND	37.3	91.9	100	8650	3700	7.4	–
3'	181	ND	3140	19100	390	113000	23800	6.1	–
5'	2.8	ND	4040	767	55.3	911	916	6.8	–
10'	ND	ND	22.6	29.9	22.1	12.9	62.1	7.8	–

RS-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	7.2	4.8	63.5	152	21.2	2410	1230	7.9	–
3'	ND	136	26.1	276	28	29	333	8.6	–
5'	0.8	ND	34.4	259	30.2	59.3	366	8.8	–
10'	ND	8.2	16	26.4	16.3	7.7	49.5	7.6	–

WMU09

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.8	96.6	2960	1250	39.9	1360	442	7.7	–

SB-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
6	0.3	ND	65	120	12	29	59	11.41	–

SB-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5.5'	1.3	ND	400	520	46	110	380	10.83	–
10.5'	ND	4.47	720	47	9.9	2.7	120	7.66	–

SB-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
6'	29	1.84	310	230	24	58	130	9.78	–
11'	23	ND	940	140	22	8.5	36	3.08	–

MW-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	5.9	36	6.6	–	38	–	–

SB-7

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
3'	1.9	73.2	8030	6490	247	860	1010	7.5	15
5.5'	ND	1040	12000	448	12.9	180	27.1	4.2	ND
10.5'	ND	216	5540	2590	134	11.7	86.3	3.7	ND

WMU20-A/HB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	4.7	ND	1190	770	98.2	113	316	7.6	–

B-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	–	–	85	230	–	–	–	8.7	–
10'	–	–	30	78	26	–	79	8.3	–

WMU12-SB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
3'	1.8	ND	450	37	17	68	190	8.9	–
5'	0.14	ND	94	22	20	9.4	58	7.9	–
10'	ND	ND	35	27	22	9.9	57	8.0	–

PI-7

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'	24.2	ND	2050	3390	498	4200	21100	9.4	–
5'	ND	ND	26.1	751	53.6	ND	113	9.0	–
10'	0.82	0.74	81.5	42.6	28.5	6.2	63.7	6.7	–

PI-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'	2.9	15.6	2980	2110	205	81.3	130	10.1	–
1.5'	0.90	ND	1780	23.7	14.8	ND	40.3	9.2	–
4.5'	ND	ND	33.1	28.0	20.5	5.4	50.9	7.2	–
11'	ND	14.4	2960	1040	25.1	34.4	92.5	9.2	–

PI-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
.5'	ND	143	6940	908	12.9	641	24.7	9.3	–
1.5'	ND	ND	1870	604	39.6	63.5	115	9.5	–
5'	2.9	5.6	1380	1260	90.5	6.4	78.3	8.8	–
11.5'	ND	5.7	465	107	15.0	5.9	36.4	8.6	–

WMU20-B/HB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	4.4	1.4	244	426	218	541	267	7.4	–

B-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	–	–	10000	480	–	–	–	4.8	–
10'	ND.62	–	16000	620	–	–	92	4.0	–

B-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	–	–	3700	460	–	–	–	4.5	–

B-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	–	–	420	1200	–	–	–	8.1	–

MW-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	21	170	77	–	860	–	–

WMU12-SB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
3'	0.47	ND	88	25	16	13	140	8.9	–
5'	0.26	ND	40	23	21	9.9	66	7.2	–
10'	0.54	ND	71	72	50	20	100	6.9	–

UST-SB7

	Cr	As
5.5'	22.1	4.9

SB-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	40.9	29.4	1190	7560	1000	14800	30800	6.7	38
5'	9.8	13.2	109	1480	246	1430	8640	8.6	ND
10'	21.4	ND	272	16400	936	2850	14900	6.8	ND

SB-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	ND	ND	33.5	24.6	78.5	ND	6040	7.3	–
10'	ND	ND	46.6	35.2	31.9	15	120	7.5	–

SB-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
12'	0.69	ND	39.6	159	37.7	164	711	7.2	–

WMU36-A

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1.5'-2.5'	11.7	13	3020	4690	2410	258	2720	9.8	–
4'-5'	ND	ND	46.6	59.3	361	10.3	88.4	7.1	–

WMU24

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	2.6	ND	117	235	15.8	827	1630	7.5	–

WMU42

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1.5'-2.5'	0.64	ND	31.1	68.3	16.2	130	158	8.0	–
4.5'-5'	ND	ND	37.4	61.6	30.7	38.5	188	7.4	–

WMU25

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'-2'	ND	ND	1040	5760	1220	189	389	6.2	–

MW-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	27	63	29	–	85	–	–

MW-1D/BG-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
2'	40.4	ND	10400	13900	28400	517	40100	7.6	–
5.5'	2.8	ND	3800	2900	624	61.8	2840	8.3	–
10.5'	ND	0.73	40.7	49.3	30.2	ND	65.6	8.1	–

WMU46-B

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	0.98	9570	23100	6230	1370	2170	7.5	–
2'-4'	ND	ND	18.8	1530	472	25.2	238	5.0	–
4'-6'	ND	1.27	7530	13300	11800	2180	2920	6.9	–

WMU46-SB3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	0.49	ND	55	2600	1400	14	240	3.8	–

WMU46-A

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'-2'	ND	ND	185	1340	506	172	262	7.9	–
2'-4'	ND	ND	19.6	1970	1560	93.0	389	5.2	–
4'-6'	ND	ND	32.7	49.4	429	ND	111	6.4	–

SB-8

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5'	ND	ND	26.5	2900	905	236	360	2.6	ND
10.5'	ND	ND	47.4	704	405	14.7	171	3.5	ND

WMU33B

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'	1.7	ND	96.8	368	29.8	61.7	391	9.2	–
1.5'-2.5'	7.2	ND	21	1770	38.6	10.4	1120	5.6	–

WMU46-HB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	37	39	31	13	57	7.1	–
5'-6'	0.43	ND	55	1000	380	17	220	4.8	–
9'-10'	ND	ND	72	410	150	21	120	5.7	–

WMU32

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	2.8	ND	428	1740	170	61.2	2300	7.4	–
3'-4'	1.4	ND	92	1330	74.2	15.3	818	7.3	–

WMU31

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	4.6	ND	29.6	161	37.2	27.3	313	7.1	–
3'-4'	1.8	ND	42.8	599	61.1	8.5	936	7.1	–

WMU46-D

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-1.8'	ND	6.0	1410	5970	380	18300	14600	6.9	–
3'	ND	ND	15.6	56.9	14.0	46.8	80	7.5	–
5'	ND	ND	22.0	866	226	9.0	161	6.1	–

WMU46-E

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1.5'	15.6	9.7	278	4270	284	6320	12200	6.9	–
3'	19.2	23.9	1970	5680	362	16900	14400	6.9	–
5'	4.0	23.9	988	4250	362	1590	2540	7.3	–

WMU46-SB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	0.38	ND	44	890	900	11	100	5.4	–

WMU46-HB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	0.28	ND	44	130	290	11	80	7.0	–
5'-6'	0.32	ND	61	54	180	18	78	7.0	–
9'-10'	ND	ND	17	18	150	5.6	29	6.8	–

PL-HB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
.5'-1'	ND	ND	42.7	170	28.2	30	103	9.7	5.7
3'-4'	ND	ND	34	36.1	23.1	8.4	60.5	6.7	8.4
5'-6'	ND	ND	32.9	34.3	22.9	8.1	60	6.9	9

PL-HB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	23.9	31.8	19.2	ND	49.2	6.1	–
3'-4'	ND	ND	34.4	37.9	27.6	ND	67.1	8.2	–
5'-6'	ND	ND	38.3	42.4	30.7	ND	68.8	8.8	–

DD-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.1	ND	43	135	33	17.6	97	6.7	–

LAB-HB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
.5'-1'	0.83	0.62	105	556	30.4	88.7	982	8.1	–
1'-2'	ND	ND	36.4	39.6	29.4	ND	64	9.2	–
3'-4'	ND	ND	32.4	37.4	24.9	ND	55.1	9.5	–
5'-6'	ND	ND	28	32.4	22.3	ND	48.6	9.2	–

DD-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	20.4	40.5	18.2	24	77.6	–	7.6

FeCl-SB4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'	1.7	1.8	711	463	42.7	243	413	8.0	ND
5'	1.9	ND	556	461	50.9	166	506	9.2	ND
11.5'	ND	ND	17.6	20.7	14.2	ND	34.8	6.7	ND

DHS-HB1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0-1.5'	3.6	ND	2630	231	72.6	732	271	5.7	–

RR-1

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.3	216	3840	1170	85.1	240	331	4.7	–

DHS-HB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0-2'	15	53.7	8070	1970	101	949	4150	7.6	–

RR-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	0.82	9	550	808	713	39.6	410	4.9	–

MW-8

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	41	61	27	–	96	7.3	–

MW-4A

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	14	410	31	–	110	4.9	–

MW-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	16	37	21	–	52	–	–

MW-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	17	44	18	–	59	–	–

WMU18/19

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.9	ND	828	6070	1070	1000	869	4.5	7.6
3'-4'	ND	ND	353	9660	475	317	369	4.5	19
5'-6'	ND	ND	26.7	2160	260	45.7	259	3.2	13

WMU46-SB2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
3'	ND	ND	39	300	310	18	1100	7.1	–
6'	6.1	ND	42	230	200	13	170	7.5	–
10'	ND	ND	48	56	34	20	99	8.3	–

WMU46-C

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	3.1	6.5	937	3780	520	465	928	12	–
3'-4'	1.9	ND	118	7060	102	42.6	255	7.6	–
5'-6'	1.4	ND	64.3	2780	269	32.3	920	7.0	–

RR-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.1	10.3	243	1260	470	36.1	297	6.3	–

DD-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	366	1400	186	167	371	5.2	10.4

RR-4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	86.1	540	108	44.2	134	4.5	–

DHS-HB3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
0'-2'	21.8	30.5	1380	6570	363	19100	14000	6.9	–

MW-6D

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
5.5'	ND	ND	26	524	746	ND	279	5.1	–
10'	0.57	ND	27.4	604	668	11.4	309	4.9	–

MW-6A

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
10'	–	–	8.5	43	12	–	43	–	–

DD-2

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.2	ND	302	7200	519	112	355	5.9	–

WMU35B

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
2'-3'	ND	ND	40.7	454	254	11.4	128	5.2	–
6'-7'	ND	ND	35.2	96.3	41	ND	64.6	7.9	–

RR-5

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	21.1	42.3	19.2	7.1	55.2	8.0	–

RR-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	1.4	ND	22.4	123	79.7	8.1	101	6.4	–

DD-3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	0.5	ND	40.7	226	83.8	17.8	214	4.5	–

PL-HB4

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	ND	ND	23	96.7	32.2	48.5	94.2	6.5	–
3'-4'	ND	ND	21.8	75	45.7	9	114	5.4	–
5'-6'	ND	ND	36	109	102	ND	234	5.4	–

PL-HB3

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
2.5'-3'	ND	ND	33	29.6	21.4	6.91	51.6	8.4	–
4.5'-5'	ND	ND	50.1	50	35.4	9.1	74.2	8.8	–
6'-6.5'	ND	ND	38	43.1	31.5	8.6	65.8	8.7	–

DD-6

	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
1'-2'	0.82	ND	1480	2600	260	379	748	–	15

CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Shallow Soil Metals and pH Results (0 to 14 Feet bgs)

Plate 6

RS-2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	3.1	ND	13.4	17.7	30.6	5.0	299	7.1	–
20'	1.0	ND	5.8	8.0	7.7	ND	65.2	6.8	–
30'	0.60	ND	5.2	6.6	7.1	ND	75.3	5.8	–
40'	ND	ND	32.6	48.7	32.6	15.2	81.0	8.7	–

PI-4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
17'	ND	ND	13.3	22.2	12.3	ND	35	7.3	–
21.5'	ND	ND	6.3	11.3	5.1	ND	16	7.0	–
26.5'	ND	ND	25.8	10.4	16.6	ND	26.1	6.7	–
36'	ND	ND	30.0	94.0	13.8	15.4	36.6	7.5	–

B-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	–	–	13	130	–	–	–	7.0	–
40'	1.5	–	600	400	–	–	180	3.9	–
50'	8.0	–	280	160	–	–	95	3.5	–

PI-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
17'	ND	1.8	91.6	19.0	7.1	ND	22.4	8.3	3.3
21.5'	ND	61.2	239	24.7	8.5	ND	22.2	4.1	3.7
27'	ND	5.9	1420	86.0	17.6	ND	47.4	8.4	7.4
37'	ND	ND	225	251	119	7.8	109	3.6	19.2

B-2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	–	–	54	390	–	–	–	3.9	–
20'	–	–	440	230	–	–	–	3.9	–
35'	1.2	–	2000	250	–	–	120	3.3	–
40'	1.4	–	150	550	–	–	170	3.3	–

RS-3	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	8.5	ND	26.5	45.6	21.8	47.6	61.9	7.1	–
20'	ND	4.0	7.3	17.6	7.5	9.8	26.8	7.3	–
30'	ND	ND	6.3	11.8	5.2	8.5	19.7	7.2	–
40'	ND	7.4	31	47.1	32.1	19.6	81.0	7.0	–

RS-4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	2.1	15.5	26.5	15.0	5.3	41.2	8.1	–
20'	ND	4.4	4.2	8.7	ND	ND	14.4	8.4	–
30'	ND	1.6	5.8	10.5	5.3	5.5	19.6	7.3	–
40'	ND	12.2	27.1	52.4	25.5	23.6	78.4	7.0	–

MW-14D	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	ND	24.5	268	39.9	4.9	ND	16.6	4.4	–
65'	ND	16.3	18.3	23.3	19.7	ND	58.6	6.8	–
110'	ND	0.30	133	66.6	16.0	ND	18.7	7.9	–

MW-3	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	–	–	4.2	19	ND	–	20	–	–

MW-15D	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
19.5'	ND	ND	5.2	7.0	4.6	ND	17.2	9.0	ND
62.5'	0.76	ND	12.0	57.4	9.6	6.3	107	8.2	ND
105.5'	ND	ND	5.8	29.8	5.6	ND	18.7	7.8	ND
125.5'	ND	ND	4.5	17.1	4.2	ND	25.6	8.4	ND

MW-5	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	–	–	5.5	17	5.1	–	22	–	–

RS-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	14.9	19.4	14.0	ND	37.9	8.2	–
20'	ND	ND	4.6	6.3	4.1	ND	14.4	8.4	–
30'	ND	ND	6.5	8.4	5.6	ND	18.7	8.2	–
40'	ND	1.2	26.4	38.2	24.3	5.7	61.9	8.7	–

MW-10	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	–	–	5.3	25	6.4	–	30	7.3	–

MW-11	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
35'	3.0	–	18	40	–	–	68	8.2	–

RS-5	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	20.1	22.1	17.3	ND	40.4	7.6	–
20'	ND	ND	8.1	9.3	7.7	ND	20	6.9	–
30'	ND	ND	12.8	14.0	9.3	ND	25.9	7.5	–
40'	ND	ND	31.4	45.8	33.7	13.0	74.1	8.3	–

MW-9	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	–	–	15	28	18	–	55	6.9	–
25'	–	–	4.3	18	4.6	–	29	7.4	–

B-5	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	–	–	3200	12000	–	–	–	4.8	–
25'	–	–	49	160	12	–	34	4.5	–

WMU12-SB2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	30	21	16	8.2	50	7.5	–
20'	ND	ND	16	8.5	7.4	4.4	34	7.8	–
30'	ND	ND	11	3.5	4.5	2.5	21	7.3	–
40'	ND	ND	41	35	29	9.7	76	6.5	–

RS-6	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	13.3	16.1	12.3	ND	29.8	7.8	–
20'	ND	ND	7.8	15.0	7.6	ND	20.4	8.0	2.8
30'	ND	ND	17.4	18.9	13.4	ND	38.8	7.4	–
40'	ND	ND	28.6	37.9	25.6	5.3	62.7	7.6	–

MW-2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	–	–	21	170	77	–	860	–	–

MW-12D	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	ND	ND	14.2	16.9	13.3	5.2	43.1	8.4	–
65'	ND	ND	5.8	6.4	4.2	ND	14.2	7.9	–
100'	ND	ND	21.4	26.8	21.6	ND	45.4	8.6	–

MW-13D	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	ND	ND	6.6	8.2	6.7	ND	21.9	8.1	–
65'	ND	0.74	94.4	33.8	14.5	ND	47.7	10.2	–
95'	ND	ND	20.0	29.9	19.4	ND	50.5	8.3	–

SB-7	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	ND	312	2200	2470	47.0	ND	62.6	3.9	ND
20.5'	ND	906	7130	1400	45.4	ND	45.8	3.9	ND
30.5'	ND	330	2700	1650	74.2	11.6	75.2	3.3	ND
40.5'	5.4	1160	979	65.6	25.7	7.1	60.3	6.5	31/ND*

*40'/40.5'

SB-2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	22.7	31.4	20.8	6.0	52.7	7.7	8.8
20.5'	ND	ND	9.0	11.2	6.9	8.2	30.9	7.6	ND
30'	ND	ND	20.0	29.3	19.6	ND	54.7	5.0	ND
40.5'	ND	ND	34.4	44.2	31.6	12.5	81.1	7.2	ND

B-4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	ND	–	580	1200	–	–	52	4.2	–

PI-2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
16.5'	ND	24.4	755	52.5	10.3	ND	29.1	4.2	–
23'	ND	30.9	600	33.4	5.4	ND	13.6	4.3	–
32'	1.2	199	2190	299	34.2	ND	75.3	3.2	–
36.5'	2.5	ND	50.2	59.4	35.2	10.4	77.7	5.9	–

B-6	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	–	–	5100	4100	240	–	430	3.6	–
25'	–	–	1500	1400	98	–	43	4.2	–

B-3	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	–	11	31	–	–	57	6.3	–

WMU12-SB1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	32	27	17	6.9	57	7.3	–
20'	1.6	ND	11	7.1	7.5	2.5	23	7.5	–
30'	0.19	ND	34	31	23	9.4	66	6.9	–
40'	ND	ND	51	62	35	23	92	6.9	–

MW-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	–	–	17	36	16	–	62	–	–

MW-10/BG-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	ND	ND	8.4	11.2	5	ND	13.9	8.1	–
20.5'	ND	ND	6.7	11.3	6.7	ND	20.5	8.0	–
25.5'	ND	ND	6.1	9.5	7.2	ND	17.9	7.7	–
30.5'	ND	ND	17.4	27.6	18.3	ND	50.5	7.7	–
40.5'	ND	ND	26.0	41.8	25.5	6.5	64.8	7.9	–
65.5'	ND	ND	28.4	49.6	27.4	6.2	64.8	8.1	–
97'	ND	ND	22.8	25.4	21.5	ND	50.5	8.3	–

SB-1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	23.0	37.9	21.6	5.7	53.6	7.5	–
20.5'	ND	ND	7.3	9.8	5.9	ND	18.7	7.9	–
30.5'	ND	ND	17.1	23.7	16.7	5.5	46.1	7.5	–
40'	ND	ND	24.6	41.2	23.3	10.8	65.4	8.4	–

SB-3	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	ND	ND	44.5	39.0	31.5	20.6	157	7.6	–
20'	ND	ND	7.8	8.5	16.7	ND	1480	5.3	–
30'	1.5	ND	20.3	31.5	49.0	9.0	4490	4.6	–
40'	ND	ND	22.1	29.1	20.5	6.2	69.0	7.8	–

PI-3	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
16'	ND	9.9	714	218	23.5	21.6	43.6	8.5	–
20.5'	ND	4.4	274	98.4	12.6	ND	27.6	8.7	–
25.5'	ND	17.1	216	64.3	10.8	ND	24.6	5.2	–
35.5'	ND	1.5	124	408	72.4	ND	120	3.7	–

PI-7	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	10.4	867	88.4	8.9	ND	24.6	4.5	–
20'	ND	8.9	429	50.1	8.7	ND	26.0	4.4	–
25'	ND	7.4	462	33.6	4.4	ND	13.8	4.6	–
35'	ND	61.8	720	409	70.4	5.6	106	3.4	–

UST-SB7	As
17'	4.1
40.5'	18

SB-8	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	ND	ND	5.9	782	44.7	ND	24.8	4.1	–
20.5'	ND	ND	7.5	152	118	ND	37.8	3.0	–
30.5'	ND	ND	18.0	38.8	19.2	ND	48.4	7.0	–
40.5'	ND	ND	37.2	66.9	35.4	21.0	83.3	8.6	–

MW-8	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	–	–	37	94	ND	–	54	8.5	–

WMU46-SB1	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	0.23	ND	11	5.8	190	2.2	28	6.0	–
20'	ND	ND	41	300	450	3.7	59	3.8	–
25'	0.17	ND	35	190	610	8.1	150	3.8	–

MW-6B	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	–	–	17	62	21	–	89	–	–

SB-6	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	0.3	ND	260	23	5.8	2.8	8.2	3.24	–
21'	0.18	ND	46	15	3.0	3.3	4.7	3.14	–
25.5'	0.30	ND	48	22	4.3	5.1	4.5	3.24	–
31'	0.37	ND	44	260	55	3.7	41	3.30	–
37'	0.12	ND	7.0	29	5.8	0.87	10	3.87	–
46'	0.13	ND	6.1	64	15	12	19	3.77	–

SB-5	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15.5'	ND	7.27	1200	57	12	3.1	190	4.69	–
20.5'	ND	2.68	410	57	11	2.0	240	4.61	–
25.5'	ND	3.65	920	160	20	3.0	260	4.21	–
30'	0.5	3.02	350	160	24	3.6	360	4.07	–
35.5'	0.1	ND	110	40	6.0	0.94	68	4.52	–
45.5'	ND	3.26	220	120	13	4.4	40	4.70	–

MW-7	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
35'	ND	–	35	46	–	–	77	6.9	–

FeCl-SB4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	8.5	12.2	7.7	ND	21.3	7.4	–
19'	ND	ND	8.6	15.0	9.9	ND	28.2	7.8	–

SB-4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
16'	0.10	12.2	160	33.0	8.1	2.0	25.0	5.34	–
21'	0.13	12.6	120	27.0	6.9	0.84	22.0	4.79	–
25.5'	0.07	51.1	400	32.0	6.2	1.0	16.0	4.32	–
31'	0.06	11.9	810	94.0	11.0	1.7	30.0	3.78	–
36'	0.07	11.8	80.0	90.0	7.2	0.66	16.0	4.76	–
49'	0.25	26.9	75.0	720	41.0	0.85	81.0	4.95	–

PI-5	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	13.6	14.3	11.6	ND	26.4	6.4	–
20'	ND	ND	6.4	21.2	12.1	ND	40.6	6.5	–
25'	ND	2.1	57.8	32.0	7.3	ND	24.9	6.9	–
35'	ND	7.9	42.9	29.0	68.3	ND	135	6.2	–

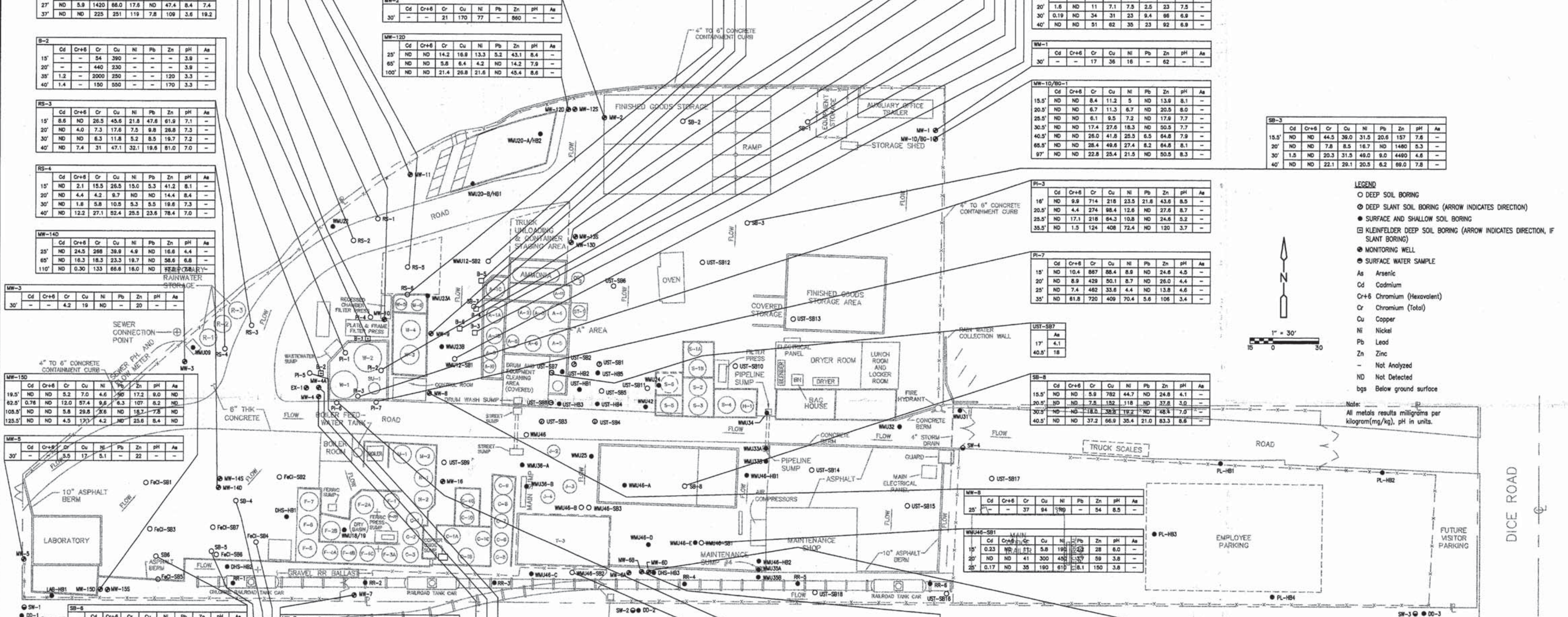
MW-4A	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
25'	–	–	19	50	25	–	72	–	–

MW-4	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
30'	ND	–	35	46	–	–	77	6.9	–

PI-6	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
16'	ND	7.9	76.5	63.5	15.6	ND	171	8.6	–
20'	ND	3.1	58.8	14.7	11.0	ND	101	8.2	–
25'	ND	7.5	70.3	56.7	13.7	ND	67.2	8.5	–
35'	9.0	143	138	34.7	23.1	6.1	63.2	6.3	–

WMU46-SB2	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	6.3	8.6	5.3	2.5	15	8.1	–
20'	ND	ND	10	10	7.2	4.2	20	7.1	–
25'	ND	ND	9.8	11	7.1	3.9	20	6.5	–
30'	ND	ND	17	15	9.8	5.4	26	6.8	–
35'	ND	ND	48	42	31	14	96	7.5	–
40'	ND	ND	37	45	30	15	91	8.0	–

MW-6D	Cd	Cr+6	Cr	Cu	Ni	Pb	Zn	pH	As
15'	ND	ND	6.4	17.9	7.8	ND	20.3	8.2	–
25'	ND	ND	18.2	28.1	17.9	ND	56.3	7.4	–
40'	ND	ND	27.1	43.7	24	5.4	60.2	7.2	–
60'	ND	ND	6.3	6.1	5.1	ND	13.7	7.9	–
95'	ND	ND	23.4	25.8	20.9	6.9	69.8	7.9	–



LEGEND
- ○ DEEP SOIL BORING
- ⊘ DEEP SLANT SOIL BORING (ARROW INDICATES DIRECTION)
- ● SURFACE AND SHALLOW SOIL BORING
- ⊟ KLEINFELDER DEEP SOIL BORING (ARROW INDICATES DIRECTION, IF SLANT BORING)
- MONITORING WELL
- SURFACE WATER SAMPLE
- As Arsenic
- Cd Cadmium
- Cr+6 Chromium (Hexavalent)
- Cr Chromium (Total)
- Cu Copper
- Ni Nickel
- Pb Lead
- Zn Zinc
- – Not Analyzed
- ND Not Detected
- bgs Below ground surface

1" = 30'

Note:
All metals results milligrams per kilogram(mg/kg), pH in units.

CDM

PHIBRO-TECH, INC
8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA

Deep Soil
Metals and pH Results
(14 to 125.5 Feet bgs)

Plate 7

APPENDIX B

HISTORICAL GROUNDWATER MONITORING DATA

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-01S	47-62.5	1/15/1989	2.0 / 0.0	62.5	61.67	152.60	55.86	0.8	96.74
		4/15/1989	-- / --	62.5	--	152.60	52.15	--	100.45
		7/17/1989	0.0 / 0.0	62.5	61.50	152.60	53.60	1.0	99.00
		10/23/1989	0.0 / 0.0	62.5	62.40	152.60	55.84	0.1	96.76
		1/22/1990	7.0 / 0.0	62.5	62.35	152.60	55.00	0.1	97.60
		4/9/1990	0.0 / 0.0	62.5	62.35	152.60	53.30	0.1	99.30
		7/10/1990	0.0 / 0.0	62.5	62.37	152.60	51.77	0.1	100.83
		10/15/1990	0.0 / 0.0	62.5	61.94	152.63	52.82	0.6	99.81
		1/7/1991	14.0 / 0.0	62.5	62.00	152.63	53.44	0.5	99.19
		4/8/1991	0.0 / 0.0	62.5	62.90	152.63	50.68	--	101.95
		7/8/1991	1.7 / 0.0	62.5	62.30	152.63	49.69	0.2	102.94
		10/21/1991	1.4 / 0.0	62.5	62.00	152.63	50.30	0.5	102.33
		3/30/1992	11.2 / 0.0	62.5	62.00	152.63	45.35	0.5	107.28
		1/13/1992	1.3 / 0.0	62.5	62.00	152.63	48.03	0.5	104.60
		7/13/1992	0.0 / 0.0	62.5	62.20	152.63	44.76	0.3	107.87
		10/13/1992	25.0 / 0.0	62.5	62.00	152.63	47.10	0.5	105.53
		1/19/1993	0.2 / 0.0	62.5	61.50	152.63	43.51	1.0	109.12
		4/19/1993	0.0 / 0.0	62.5	62.19	152.63	36.62	0.3	116.01
		7/12/1993	0.0 / 0.0	62.5	61.97	152.63	36.01	0.5	116.62
		10/12/1993	0.0 / 0.0	62.5	62.20	152.63	36.13	0.3	116.50
		1/10/1994	0.0 / 0.0	62.5	62.20	152.63	36.03	0.3	116.60
		4/11/1994	0.7 / 0.0	62.5	62.20	152.63	35.53	0.3	117.10
		7/18/1994	7.8 / 3.0	62.5	62.00	152.63	34.83	0.5	117.80
		10/10/1994	13.0 / 4.3	62.5	62.00	152.63	40.40	0.5	112.23
		1/16/1995	0.1 / 0.1	62.5	62.00	152.63	39.04	0.5	113.59
		4/17/1995	0.0 / 0.0	62.5	62.20	152.63	33.85	0.3	118.78
		7/10/1995	18.0 / 0.0	62.5	62.00	152.63	32.57	0.5	120.06
		10/9/1995	1.2 / 0.5	62.5	62.10	152.63	36.15	0.4	116.48
		1/29/1996	0.0 / 0.0	62.5	62.40	152.63	37.79	0.1	114.84
		4/15/1996	0.0 / 0.0	62.5	62.40	152.63	34.60	0.1	118.03
		7/15/1996	1.2 / 0.8	62.5	62.30	152.63	35.21	0.2	117.42
		10/7/1996	1.0 / 1.0	62.5	62.40	152.63	38.78	0.1	113.85
		1/13/1997	1.0 / 1.0	62.5	62.40	152.63	36.90	0.1	115.73
		4/15/1997	0.4 / 0.4	62.5	62.40	152.63	34.42	0.1	118.21
		7/8/1997	2.0 / 0.0	62.5	62.40	152.63	34.45	0.1	118.18
		10/14/1997	2.2 / 0.0	62.5	62.70	152.63	37.81	--	114.82
		1/13/1998	5.8 / 0.0	62.5	62.60	152.63	39.40	--	113.23
		4/21/1998	109.0 / 0.0	62.5	62.60	152.63	34.47	--	118.16
		7/14/1998	0.1 / 0.0	62.5	62.54	152.63	33.51	--	119.12
		10/19/1998	0.0 / 0.0	62.5	62.65	152.63	36.06	--	116.57
		1/19/1999	10.8 / 1.5	62.5	62.60	152.63	38.69	--	113.94
		4/20/1999	1.1 / 0.0	62.5	62.50	152.63	38.62	0.0	114.01
		7/20/1999	2.1 / 0.0	62.5	62.40	152.63	39.01	0.1	113.62
		10/22/1999	0.0 / 0.0	62.5	62.10	152.63	45.93	0.4	106.70
		1/25/2000	1.4 / 0.0	62.5	62.50	152.63	49.90	0.0	102.73
		4/24/2000	12.0 / 0.0	62.5	62.50	152.63	43.80	0.0	108.83
		10/25/2000	0.0 / 0.0	62.5	62.00	152.63	43.54	0.5	109.09
		10/17/2000	0.0 / 0.0	62.5	62.00	152.63	43.54	0.5	109.09
		4/17/2001	0.0 / 0.0	62.5	62.50	152.63	41.35	0.0	111.28
		7/17/2001	0.0 / 0.0	62.5	61.35	152.63	41.05	1.2	111.58
		10/16/2001	0.0 / 0.0	62.5	62.02	152.63	45.20	0.5	107.43

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-01S	47-62.5	1/15/2002	-- / --	62.5	62.32	152.63	43.59	0.2	109.04
		4/16/2002	0.0 / 0.0	62.5	62.13	152.63	43.62	0.4	109.01
		7/24/2002	1.1 / 0.0	62.5	62.29	152.63	47.79	0.2	104.84
		10/22/2002	53.6 / 0.0	62.5	62.29	152.63	51.08	0.2	101.55
		1/24/2003	0.1 / 0.1	62.5	62.29	152.63	49.10	0.2	103.53
		4/23/2003	0.1 / 0.1	62.5	62.22	152.63	45.29	0.3	107.34
		7/29/2003	0.3 / 0.0	62.5	62.21	152.63	48.48	0.3	104.15
		10/21/2003	1.0 / 0.0	62.5	62.24	152.63	54.03	0.3	98.60
		1/21/2004	0.7 / 0.0	62.5	62.34	152.63	55.49	0.2	97.14
		4/20/2004	-- / --	62.5	62.19	152.63	54.93	0.3	97.70
		7/20/2004	0.4 / 0.4	62.5	62.08	152.63	57.57	0.4	95.06
		10/11/2004	0.0 / 0.0	62.5	62.20	152.63	61.36	0.3	91.27
		1/26/2005	0.0 / 0.0	62.5	61.78	152.19	58.06	0.7	94.13
		4/26/2005	0.0 / 0.0	62.5	61.72	152.19	48.60	0.8	103.59
		7/26/2005	0.0 / 0.0	62.5	61.75	152.19	46.40	0.8	105.79
		10/18/2005	0.0 / 0.0	62.5	61.59	152.19	47.11	0.9	105.08
		1/25/2006	0.0 / 0.1	62.5	61.79	152.19	48.13	0.7	104.06
		4/25/2006	0.0 / 0.8	62.5	61.40	152.19	45.23	1.1	106.96
		7/25/2006	0.0 / 0.0	62.5	61.75	152.19	45.11	0.8	107.08
		10/24/2006	0.0 / 0.0	62.5	61.70	152.19	47.20	0.8	104.99
		1/17/2007	0.0 / 0.0	62.5	61.70	152.19	46.85	0.8	105.34
		4/17/2007	0.0 / 0.0	62.5	61.80	152.19	45.82	0.7	106.37
		7/24/2007	0.0 / 0.0	62.5	61.78	152.19	47.05	0.7	105.14
		10/23/2007	0.0 / 0.0	62.5	61.70	152.19	52.98	0.8	99.21
		1/29/2008	0.1 / 0.0	62.5	61.75	152.19	54.84	0.8	97.35
		4/22/2008	0.1 / 0.0	62.5	61.71	152.19	52.04	0.8	100.15
		7/28/2008	0.3 / 0.2	62.5	61.70	152.19	56.27	0.8	95.92
		10/28/2008	-- / --	62.5	61.71	152.19	61.43	0.8	90.76
		1/27/2009	0.0 / 0.0	62.5	61.98	152.19	DRY	0.5	--
		4/6/2009	0.1 / 0.0	62.5	61.97	152.19	DRY	0.5	--
		7/30/2009	0.0 / 0.0	62.5	61.94	152.19	DRY	0.6	--
		10/7/2009	0.0 / 0.0	62.5	62.00	152.19	DRY	0.5	--
		1/28/2010	0.0 / 0.0	62.5	62.02	152.19	DRY	0.5	--
		4/27/2010	0.0 / 0.0	62.5	61.95	152.19	DRY	0.5	--
		7/28/2010	0.0 / 0.0	62.5	62.00	152.19	DRY	0.5	--
		10/28/2010	-- / --	62.5	61.98	152.19	DRY	0.5	--
		1/19/2011	-- / --	62.5	61.96	152.19	DRY	0.5	--
		4/11/2011	-- / --	62.5	62.02	152.19	58.90	0.5	93.29
		7/26/2011	0.0 / 0.0	62.5	62.00	152.19	48.58	0.5	103.61
		10/18/2011	0.0 / 0.0	62.5	61.65	152.19	52.83	0.9	99.36
		3/20/2012	0.0 / 0.4	62.5	61.95	152.19	53.51	0.5	98.68
		1/17/2012	0.0 / 0.0	62.5	61.89	152.19	53.08	0.6	99.11
		7/23/2012	0.0 / 0.0	62.5	61.72	152.19	54.66	0.8	97.53
		10/29/2012	0.0 / 0.0	62.5	61.66	152.19	58.94	0.8	93.25
MW-01D	79.5-94.5	10/15/1990	0.0 / 0.0	98.0	53.04	152.60	52.80	45.0	99.80
		1/7/1991	0.0 / 0.0	98.0	56.62	152.60	53.40	41.4	99.20
		4/8/1991	0.0 / 0.0	98.0	54.26	152.60	50.56	43.7	102.04
		7/8/1991	1.3 / 0.0	98.0	53.62	152.60	49.68	44.4	102.92
		10/21/1991	9.1 / 0.0	98.0	56.04	152.60	50.14	42.0	102.46
		3/30/1992	250.0 / 0.0	98.0	51.37	152.60	45.28	46.6	107.32
		1/13/1992	1.3 / 0.0	98.0	--	152.60	47.92	--	104.68

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-01D	79.5-94.5	7/13/1992	0.0 / 0.0	98.0	51.92	152.60	44.70	46.1	107.90
		10/13/1992	25.0 / 0.0	98.0	51.70	152.60	47.09	46.3	105.51
		1/19/1993	0.0 / 0.0	98.0	51.74	152.60	43.40	46.3	109.20
		4/19/1993	0.0 / 0.0	98.0	54.35	152.60	36.61	43.7	115.99
		7/12/1993	0.0 / 0.0	98.0	55.46	152.60	36.02	42.5	116.58
		10/12/1993	0.0 / 0.0	98.0	57.06	152.60	36.04	40.9	116.56
		1/10/1994	0.0 / 0.0	98.0	56.18	152.60	35.95	41.8	116.65
		4/11/1994	0.0 / 0.0	98.0	56.40	152.60	35.21	41.6	117.39
		7/18/1994	27.0 / 21.0	98.0	52.80	152.60	34.77	45.2	117.83
		10/10/1994	4.9 / 4.0	98.0	52.82	152.60	40.35	45.2	112.25
		1/16/1995	1.8 / 0.0	98.0	52.57	152.60	39.02	45.4	113.58
		4/17/1995	0.0 / 0.0	98.0	52.84	152.60	33.83	45.2	118.77
		7/10/1995	23.0 / 0.0	98.0	53.60	152.60	32.52	44.4	120.08
		10/9/1995	0.0 / 0.0	98.0	53.71	152.60	36.07	44.3	116.53
		1/29/1996	0.0 / 0.0	98.0	50.28	152.60	37.73	47.7	114.87
		4/15/1996	0.0 / 0.0	98.0	51.71	152.60	34.56	46.3	118.04
		7/15/1996	0.0 / 0.0	98.0	52.67	152.60	35.16	45.3	117.44
		10/7/1996	1.0 / 1.0	98.0	53.38	152.60	38.72	44.6	113.88
		1/13/1997	0.0 / 0.0	98.0	51.08	152.60	36.86	46.9	115.74
		4/15/1997	2.0 / 1.5	98.0	50.79	152.60	34.37	47.2	118.23
		7/8/1997	0.0 / 0.0	98.0	50.87	152.60	34.37	47.1	118.23
		10/14/1997	1.0 / 0.0	98.0	49.36	152.60	37.75	48.6	114.85
		1/13/1998	0.0 / 0.0	98.0	49.55	152.60	39.31	48.5	113.29
		4/21/1998	105.0 / 0.0	98.0	48.75	152.60	34.43	49.3	118.17
		7/14/1998	0.0 / 0.0	98.0	48.66	152.60	33.40	49.3	119.20
		10/19/1998	0.0 / 0.0	98.0	95.95	152.60	35.95	2.1	116.65
		1/19/1999	7.1 / 0.4	98.0	95.95	152.60	38.60	2.1	114.00
		4/20/1999	1.1 / 0.0	98.0	95.90	152.60	38.59	2.1	114.01
		7/20/1999	1.2 / 0.0	98.0	95.85	152.60	38.93	2.2	113.67
		10/22/1999	0.0 / 0.0	98.0	95.70	152.60	46.05	2.3	106.55
		1/25/2000	2.0 / 0.0	98.0	94.80	152.60	49.84	3.2	102.76
		4/24/2000	0.0 / 0.0	98.0	96.30	152.60	43.76	1.7	108.84
		10/17/2000	0.0 / 0.0	98.0	95.70	152.60	43.61	2.3	108.99
		10/25/2000	0.0 / 0.0	98.0	95.70	152.60	43.61	2.3	108.99
		4/17/2001	0.0 / 0.0	98.0	94.80	152.60	41.28	3.2	111.32
		7/17/2001	0.0 / 0.0	98.0	94.80	152.60	40.99	3.2	111.61
		10/16/2001	0.0 / 0.0	98.0	96.04	152.60	45.21	2.0	107.39
		1/15/2002	-- / --	98.0	95.66	152.60	43.69	2.3	108.91
		4/16/2002	0.0 / 0.0	98.0	95.74	152.60	43.57	2.3	109.03
		7/24/2002	0.3 / 0.0	98.0	96.02	152.60	47.76	2.0	104.84
		10/22/2002	43.9 / 0.0	98.0	96.02	152.60	51.07	2.0	101.53
		1/24/2003	0.1 / 0.1	98.0	96.02	152.60	49.09	2.0	103.51
		4/23/2003	1.0 / 0.1	98.0	95.90	152.60	45.37	2.1	107.23
		7/29/2003	0.0 / 0.0	98.0	96.00	152.60	48.50	2.0	104.10
		10/21/2003	1.9 / 0.0	98.0	95.90	152.60	54.15	2.1	98.45
		1/21/2004	0.0 / 0.0	98.0	95.92	152.60	55.61	2.1	96.99
		4/20/2004	0.2 / 0.2	98.0	95.92	152.60	54.88	2.1	97.72
		7/20/2004	0.4 / 0.4	98.0	95.68	152.60	57.65	2.3	94.95
		10/11/2004	0.2 / 0.0	98.0	95.69	152.60	61.34	2.3	91.26
		1/26/2005	-- / --	98.0	95.51	152.36	58.26	2.5	94.10
		4/26/2005	2.0 / 0.0	98.0	95.35	152.36	48.90	2.7	103.46
		7/26/2005	1.5 / 0.0	98.0	95.55	152.36	46.33	2.5	106.03

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-01D	79.5-94.5	10/18/2005	0.0 / 0.0	98.0	95.15	152.36	47.21	2.8	105.15
		1/25/2006	0.0 / 0.2	98.0	95.48	152.36	48.40	2.5	103.96
		4/25/2006	1.6 / 0.0	98.0	95.45	152.36	45.45	2.6	106.91
		7/25/2006	1.7 / 0.0	98.0	95.47	152.36	45.22	2.5	107.14
		10/24/2006	0.0 / 0.0	98.0	95.45	152.36	47.32	2.6	105.04
		1/17/2007	0.0 / 0.0	98.0	95.43	152.36	47.10	2.6	105.26
		4/17/2007	1.7 / 0.0	98.0	95.48	152.36	46.00	2.5	106.36
		7/24/2007	0.0 / 0.0	98.0	95.53	152.36	47.20	2.5	105.16
		10/23/2007	97.3 / 4.1	98.0	95.44	152.36	53.10	2.6	99.26
		1/29/2008	0.0 / 0.0	98.0	95.37	152.36	55.09	2.6	97.27
		4/22/2008	1.0 / 0.8	98.0	95.46	152.36	52.26	2.5	100.10
		7/28/2008	0.0 / 0.2	98.0	95.40	152.36	56.42	2.6	95.94
		10/28/2008	-- / --	98.0	95.40	152.36	61.59	2.6	90.77
		1/27/2009	0.0 / 0.0	98.0	95.48	152.36	64.78	2.5	87.58
		4/6/2009	0.0 / 0.0	98.0	95.41	152.36	63.50	2.6	88.86
		7/30/2009	0.0 / 0.0	98.0	95.37	152.36	65.90	2.6	86.46
		10/7/2009	0.0 / 0.0	98.0	95.36	152.36	68.65	2.6	83.71
		1/28/2010	0.0 / 0.0	98.0	95.41	152.36	71.22	2.6	81.14
		4/27/2010	0.0 / 0.0	98.0	95.40	152.36	66.74	2.6	85.62
		7/28/2010	0.0 / 0.0	98.0	95.44	152.36	65.00	2.6	87.36
		10/27/2010	-- / --	98.0	95.38	152.36	67.49	2.6	84.87
		1/20/2011	-- / --	98.0	95.44	152.36	65.40	2.6	86.96
		4/11/2011	-- / --	98.0	95.32	152.36	59.11	2.7	93.25
		7/26/2011	0.0 / 4.8	98.0	95.34	152.36	52.03	2.7	100.33
		10/18/2011	0.0 / 0.0	98.0	95.22	152.36	53.04	2.8	99.32
		3/20/2012	0.0 / 0.5	98.0	95.28	152.36	53.70	2.7	98.66
		1/17/2012	0.0 / 0.0	98.0	95.38	152.36	53.21	2.6	99.15
		7/23/2012	0.0 / 0.0	98.0	95.02	152.36	54.67	3.0	97.69
		10/29/2012	0.0 / 0.0	98.0	95.06	152.36	58.93	2.9	93.43
MW-03	45-75	4/15/1989	5.0 / 0.0	75	68.80	151.62	52.33	6.2	99.29
		7/17/1989	36.0 / 0.0	75	71.00	151.62	53.41	4.0	98.21
		10/23/1989	60.0 / 0.0	75	70.50	151.62	56.87	4.5	94.75
		1/22/1990	90.0 / 0.0	75	71.71	151.62	55.77	3.3	95.85
		4/9/1990	53.0 / 0.0	75	71.36	151.62	53.90	3.6	97.72
		7/10/1990	15.0 / 0.0	75	71.67	151.62	52.35	3.3	99.27
		10/15/1990	22.0 / 0.0	75	72.40	151.71	54.42	2.6	97.29
		1/7/1991	49.0 / 0.0	75	71.28	151.71	54.02	3.7	97.69
		4/8/1991	-- / --	75	70.84	151.71	51.90	4.2	99.81
		7/8/1991	2.1 / 0.0	75	74.20	151.71	50.08	0.8	101.63
		10/21/1991	11.8 / 0.0	75	73.40	151.71	50.72	1.6	100.99
		3/30/1992	3.5 / 0.0	75	72.20	151.71	45.67	2.8	106.04
		1/13/1992	2.5 / 0.0	75	72.40	151.71	48.27	2.6	103.44
		7/13/1992	1.6 / 0.0	75	71.92	151.71	45.10	3.1	106.61
		10/13/1992	10.2 / 0.0	75	71.90	151.71	47.78	3.1	103.93
		1/19/1993	-- / --	75	71.40	151.71	44.43	3.6	107.28
		4/19/1993	0.0 / 0.0	75	71.30	151.71	36.54	3.7	115.17
		7/12/1993	0.0 / 0.0	75	71.02	151.71	35.99	4.0	115.72
		10/12/1993	0.5 / 0.0	75	71.20	151.71	36.04	3.8	115.67
		1/10/1994	4.0 / 0.0	75	71.20	151.71	36.12	3.8	115.59
		4/11/1994	5.0 / 0.0	75	71.30	151.71	35.38	3.7	116.33
		7/18/1994	0.0 / 0.0	75	70.80	151.71	34.80	4.2	116.91

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-03	45-75	10/10/1994	13.0 / 4.3	75	70.70	151.71	40.86	4.3	110.85
		1/16/1995	11.0 / 1.2	75	70.60	151.71	39.88	4.4	111.83
		4/17/1995	1.0 / 0.0	75	70.80	151.71	33.88	4.2	117.83
		7/10/1995	0.0 / 0.0	75	70.50	151.71	32.51	4.5	119.20
		10/9/1995	2.2 / 0.0	75	70.60	151.71	36.26	4.4	115.45
		1/29/1996	0.0 / 0.0	74.1	74.10	151.71	38.30	0.0	113.41
		4/15/1996	7.2 / 0.0	74.1	73.80	151.71	34.98	0.3	116.73
		7/15/1996	0.4 / 0.2	74.1	73.80	151.71	35.38	0.3	116.33
		10/7/1996	1.8 / 1.2	74.1	73.80	151.71	39.26	0.3	112.45
		1/13/1997	5.1 / 1.7	74.1	73.80	151.71	37.52	0.3	114.19
		4/15/1997	2.4 / 0.9	74.1	73.80	151.71	34.58	0.3	117.13
		7/8/1997	-- / --	74.1	73.80	151.71	34.53	0.3	117.18
		10/14/1997	2.4 / 0.0	74.1	73.50	151.71	38.11	0.6	113.60
		1/13/1998	8.7 / 0.0	74.1	73.30	151.71	40.03	0.8	111.68
		4/21/1998	3400.0 / 0.1	74.1	73.30	151.71	34.89	0.8	116.82
		7/14/1998	13.0 / 0.0	74.1	73.50	154.75	36.73	0.6	118.02
		10/19/1998	> 2000 / 0.0	74.1	73.40	154.75	39.35	0.7	115.40
		1/19/1999	69.0 / 3.8	74.1	73.40	154.75	42.27	0.7	112.48
		4/20/1999	8.1 / 0.0	74.1	73.40	154.75	42.26	0.7	112.49
		7/20/1999	7.3 / 1.7	74.1	73.40	154.75	42.44	0.7	112.31
		10/22/1999	3.3 / 0.0	74.1	73.40	154.75	50.33	0.7	104.42
		1/25/2000	12.0 / 0.0	74.1	73.40	154.75	54.25	0.7	100.50
		4/24/2000	24.2 / 0.0	74.1	73.40	154.75	47.55	0.7	107.20
		10/17/2000	21.8 / 0.0	74.1	73.40	154.75	47.29	0.7	107.46
		10/25/2000	21.8 / 0.0	74.1	73.40	154.75	47.29	0.7	107.46
		4/17/2001	14.2 / 0.2	74.1	73.40	154.75	44.90	0.7	109.85
		7/17/2001	14.2 / 0.2	74.1	73.30	154.75	44.40	0.8	110.35
		10/16/2001	0.0 / 0.0	75	76.29	154.75	48.94	--	105.81
		1/15/2002	0.0 / 0.0	75	75.98	154.75	47.61	--	107.14
		4/16/2002	15.5 / 0.0	75	73.07	154.75	47.20	1.9	107.55
		7/24/2002	6.1 / 0.1	75	73.30	154.75	51.67	1.7	103.08
		10/22/2002	19.6 / 0.6	75	73.30	154.75	55.20	1.7	99.55
		1/24/2003	3.9 / 0.1	75	73.30	154.75	53.09	1.7	101.66
		4/23/2003	9.7 / 0.0	75	76.15	154.75	49.05	--	105.70
		7/29/2003	6.3 / 0.0	75	76.10	154.75	52.31	--	102.44
		10/21/2003	5.7 / 0.0	75	76.16	154.75	58.33	--	96.42
		1/21/2004	22.0 / 0.0	75	76.33	154.75	59.87	--	94.88
		4/20/2004	12.2 / 0.2	75	76.15	154.75	58.90	--	95.85
		7/20/2004	0.0 / 0.0	75	76.05	154.75	62.00	--	92.75
		10/11/2004	0.0 / 0.0	75	75.99	154.75	66.33	--	88.42
		1/26/2005	0.4 / 0.0	75	75.58	154.36	62.41	--	91.95
		4/26/2005	1.2 / 0.0	75	75.60	154.36	52.35	--	102.01
		7/26/2005	3.1 / 0.0	75	75.41	154.36	49.87	--	104.49
		10/18/2005	-- / --	75	75.22	154.36	50.86	--	103.50
		1/25/2006	1.8 / 1.0	75	75.63	154.36	52.29	--	102.07
		4/25/2006	1.6 / 0.0	75	75.71	154.36	49.20	--	105.16
		7/25/2006	0.6 / 0.0	75	75.04	154.36	48.80	--	105.56
		10/24/2006	1.6 / 0.0	75	75.55	154.36	51.10	--	103.26
		1/17/2007	0.0 / 0.0	75	75.53	154.36	50.95	--	103.41
		4/17/2007	9.2 / 0.0	75	75.67	154.36	49.52	--	104.84
		7/24/2007	7.8 / 0.0	75	75.47	154.36	50.79	--	103.57
		10/23/2007	13.5 / 0.0	75	75.50	154.36	57.31	--	97.05

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-03	45-75	1/29/2008	1.4 / 0.0	75	75.48	154.36	59.57	--	94.79
		4/22/2008	1.0 / 0.0	75	75.68	154.36	56.03	--	98.33
		7/28/2008	0.3 / 0.0	75	75.71	154.36	60.76	--	93.60
		10/28/2008	-- / --	75	75.59	154.36	66.36	--	88.00
		1/27/2009	0.0 / 0.0	75	75.52	154.36	69.71	--	84.65
		4/6/2009	0.1 / 0.0	75	75.48	154.36	67.91	--	86.45
		7/29/2009	0.0 / 0.0	75	75.52	154.36	70.75	--	83.61
		10/7/2009	0.0 / 0.0	75	75.57	154.36	73.91	--	80.45
		1/28/2010	0.0 / 0.0	75	75.60	154.36	DRY	--	--
		4/27/2010	0.0 / 0.0	75	75.64	154.36	70.63	--	83.73
		7/28/2010	0.0 / 0.0	75	75.59	154.36	69.40	--	84.96
		10/28/2010	-- / --	75	75.63	154.36	72.30	--	82.06
		1/18/2011	0.0 / 0.0	75	75.58	154.36	69.80	--	84.56
		4/11/2011	0.0 / 0.0	75	75.50	154.36	62.74	--	91.62
		7/26/2011	0.0 / 0.0	75	75.55	154.36	55.10	--	99.26
		10/18/2011	1.1 / 0.8	75	75.45	154.36	56.62	--	97.74
		3/20/2012	0.0 / 0.0	75	75.56	154.36	57.52	--	96.84
		1/17/2012	0.0 / 0.0	75	75.53	154.36	57.80	--	96.56
		7/23/2012	0.0 / 0.0	75	75.32	154.36	58.69	--	95.67
		10/29/2012	0.0 / 0.0	75	75.21	154.36	63.32	--	91.04
MW-04	45-75	1/15/1989	-- / --	75	67.03	149.76	59.55	8.0	90.21
		4/25/1989	0.0 / 0.0	75	--	149.76	50.57	--	99.19
		7/17/1989	2.0 / 0.0	75	71.50	149.76	51.57	3.5	98.19
		10/23/1989	0.0 / 0.0	75	67.70	149.76	54.84	7.3	94.92
		1/22/1990	0.0 / 0.0	75	67.69	149.76	54.02	7.3	95.74
		4/9/1990	49.0 / 0.0	75	68.20	149.76	52.26	6.8	97.50
		7/10/1990	1.0 / 0.0	75	67.70	149.76	50.56	7.3	99.20
		10/15/1990	2.0 / 0.0	75	72.40	149.90	51.57	2.6	98.33
		1/7/1991	10.0 / 0.0	75	67.46	149.90	52.22	7.5	97.68
		4/8/1991	0.0 / 0.0	75	67.00	149.90	49.40	8.0	100.50
		7/8/1991	0.8 / 0.0	75	68.60	149.90	48.43	6.4	101.47
		10/21/1991	4.2 / 0.0	75	69.60	149.90	48.99	5.4	100.91
		1/13/1992	1.3 / 0.0	75	67.50	149.90	46.57	7.5	103.33
		3/30/1992	0.0 / 0.0	75	67.50	149.90	43.96	7.5	105.94
		7/13/1992	19.0 / 0.0	75	67.40	149.90	43.40	7.6	106.50
		10/13/1992	11.5 / 0.0	75	67.40	149.90	45.98	7.6	103.92
		1/19/1993	2.9 / 0.0	75	67.60	149.90	42.77	7.4	107.13
		4/19/1993	0.0 / 0.0	75	67.80	149.90	34.90	7.2	115.00
		7/12/1993	0.0 / 0.0	75	67.54	149.90	34.38	7.5	115.52
		10/12/1993	0.2 / 0.0	75	67.60	149.90	34.14	7.4	115.76
		1/10/1994	45.0 / 0.0	75	67.60	149.90	34.48	7.4	115.42
		4/11/1994	4.0 / 0.7	75	67.20	149.90	33.70	7.8	116.20
		7/18/1994	0.7 / 0.0	75	67.50	149.90	33.14	7.5	116.76
		10/10/1994	167.0 / 4.2	75	67.60	149.90	39.04	7.4	110.86
		1/16/1995	15.0 / 2.0	75	67.50	149.90	38.02	7.5	111.88
		4/17/1995	3.6 / 0.0	75	67.60	149.90	32.21	7.4	117.69
		7/10/1995	0.0 / 0.0	75	67.50	149.90	30.85	7.5	119.05
		10/9/1995	4.4 / 0.0	75	67.60	149.90	34.55	7.4	115.35
		1/29/1996	15.0 / 0.0	75	67.50	152.37	39.00	7.5	113.37
		4/15/1996	21.0 / 0.0	75	67.30	152.37	35.72	7.7	116.65
		7/15/1996	6.0 / 0.0	67.5	67.30	152.37	36.20	0.2	116.17

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Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-04	45-75	10/7/1996	4.1 / 0.7	67.5	67.30	152.37	39.99	0.2	112.38
		1/13/1997	11.0 / 3.1	67.5	67.20	152.37	38.30	0.3	114.07
		4/15/1997	3.5 / 0.6	67.5	67.20	152.37	35.41	0.3	116.96
		7/8/1997	-- / --	67.5	67.10	152.37	35.33	0.4	117.04
		10/14/1997	20.0 / 0.0	67.5	70.30	152.37	38.91	--	113.46
		1/13/1998	48.0 / 0.0	67.5	70.15	152.37	40.71	--	111.66
		4/21/1998	261.0 / 0.1	67.5	67.71	152.37	35.68	--	116.69
		7/14/1998	0.9 / 0.0	67.5	67.78	152.37	34.42	--	117.95
		10/19/1998	8.0 / 0.0	67.5	67.60	152.37	37.06	--	115.31
		1/19/1999	79.5 / 2.0	67.5	67.70	152.37	39.96	--	112.41
		4/20/1999	17.5 / 0.0	67.5	67.80	152.37	39.94	--	112.43
		7/20/1999	16.8 / 1.4	67.5	67.30	152.37	40.04	0.2	112.33
		10/22/1999	0.0 / 0.0	67.5	67.80	152.37	47.88	--	104.49
		1/25/2000	1.0 / 0.0	67.5	67.50	152.37	51.71	0.0	100.66
		4/24/2000	14.2 / 0.0	67.5	67.98	152.37	45.36	--	107.01
		10/25/2000	27.0 / 0.0	67.5	66.98	152.37	44.95	0.5	107.42
		4/17/2001	20.1 / 0.0	67.5	67.00	152.37	42.61	0.5	109.76
		7/17/2001	20.1 / 0.0	67.5	67.30	152.37	42.09	0.2	110.28
		10/16/2001	0.0 / 0.0	67.5	70.39	152.37	46.68	--	105.69
		1/15/2002	2.3 / 0.0	67.5	70.25	152.37	45.35	--	107.02
		4/16/2002	16.4 / 0.0	67.5	67.56	152.37	44.88	--	107.49
		7/24/2002	0.8 / 0.0	67.5	70.45	152.37	49.27	--	103.10
		10/22/2002	3.8 / 0.1	67.5	70.45	152.37	52.75	--	99.62
		1/24/2003	0.1 / 0.1	67.5	70.45	152.37	50.81	--	101.56
		4/23/2003	1.1 / 0.0	67.5	70.33	152.37	46.77	--	105.60
		7/29/2003	6.4 / 0.1	67.5	70.38	152.37	49.77	--	102.60
		10/21/2003	1.0 / 0.0	67.5	70.30	152.37	55.72	--	96.65
		1/21/2004	2.2 / 0.0	67.5	70.14	152.37	57.31	--	95.06
		4/20/2004	1.4 / 1.0	67.5	70.31	152.37	56.54	--	95.83
		7/20/2004	0.0 / 0.0	67.5	70.20	152.37	59.50	--	92.87
		10/11/2004	0.0 / 0.0	67.5	70.04	152.37	63.60	--	88.77
		1/26/2005	23.9 / 20.0	67.5	69.86	152.11	60.20	--	91.91
		4/26/2005	5.8 / 0.0	67.5	69.99	152.11	50.25	--	101.86
		7/26/2005	6.0 / 0.0	67.5	69.90	152.11	47.65	--	104.46
		10/18/2005	7.3 / 0.0	67.5	69.71	152.11	48.82	--	103.29
		1/25/2006	1.2 / 0.8	67.5	69.89	152.11	50.05	--	102.06
		4/25/2006	0.0 / 0.8	67.5	70.05	152.11	47.07	--	105.04
		7/25/2006	4.0 / 0.0	67.5	69.93	152.11	46.56	--	105.55
		10/24/2006	3.0 / 0.0	67.5	69.92	152.11	48.76	--	103.35
		1/17/2007	0.3 / 0.0	67.5	69.85	152.11	48.63	--	103.48
		4/17/2007	1.3 / 0.0	67.5	69.95	152.11	47.43	--	104.68
		7/24/2007	1.1 / 0.0	67.5	69.85	152.11	48.43	--	103.68
		10/23/2007	0.0 / 0.0	67.5	69.73	152.11	54.78	--	97.33
		1/29/2008	0.0 / 0.0	67.5	65.36	152.11	56.92	2.1	95.19
		4/22/2008	11.0 / 0.0	67.5	69.65	152.11	53.56	--	98.55
		7/28/2008	0.3 / 0.2	67.5	69.74	152.11	58.16	--	93.95
		10/28/2008	-- / --	67.5	69.66	152.11	63.77	--	88.34
		1/27/2009	0.1 / 0.4	67.5	70.02	152.11	67.19	--	84.92
		4/6/2009	2.0 / 0.0	67.5	69.84	152.11	65.55	--	86.56
		7/29/2009	0.0 / 0.0	67.5	70.00	152.11	68.24	--	83.87
		10/7/2009	0.0 / 0.0	67.5	70.02	152.11	DRY	--	--
		1/28/2010	0.0 / 0.0	67.5	70.00	152.11	DRY	--	--

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-04	45-75	4/27/2010	0.0 / 0.0	67.5	69.87	152.11	68.43	--	83.68
		7/28/2010	0.0 / 0.0	67.5	69.92	152.11	66.94	--	85.17
		10/27/2010	0.0 / 0.0	67.5	69.89	152.11	69.51	--	82.60
		1/18/2011	0.0 / 0.0	67.5	69.93	152.11	67.67	--	84.44
		4/11/2011	0.0 / 0.0	67.5	69.95	152.11	60.49	--	91.62
		7/26/2011	0.0 / 0.0	67.5	69.82	152.11	52.83	--	99.28
		10/18/2011	1.4 / 1.1	67.5	69.80	152.11	54.26	--	97.85
		1/17/2012	0.0 / 0.0	67.5	69.91	152.11	54.75	--	97.36
		3/20/2012	0.0 / 0.0	67.5	69.63	152.11	55.10	--	97.01
		7/23/2012	0.0 / 0.0	67.5	69.46	152.11	56.63	--	95.48
		10/29/2012	0.0 / 0.0	67.5	69.63	152.11	60.92	--	91.19
MW-04A	87-107	1/15/1989	75.0 / 0.0	107.0	108.37	152.49	57.36	--	95.13
		4/25/1989	0.0 / 0.0	107.0	107.70	152.49	54.21	--	98.28
		7/17/1989	0.0 / 0.0	107.0	107.00	152.49	54.19	0.0	98.30
		10/23/1989	0.0 / 0.0	107.0	107.50	152.49	57.41	--	95.08
		1/22/1990	1.2 / 0.0	107.0	108.30	152.49	56.55	--	95.94
		4/9/1990	8.0 / 0.0	107.0	108.70	152.49	54.62	--	97.87
		7/10/1990	3.0 / 0.0	107.0	108.70	152.49	53.06	--	99.43
		10/15/1990	1.0 / 0.0	107.0	108.44	152.46	54.05	--	98.41
		1/7/1991	6.0 / 0.0	107.0	108.47	152.46	54.71	--	97.75
		4/8/1991	0.0 / 0.0	107.0	105.98	152.46	51.90	1.0	100.56
		7/8/1991	0.8 / 0.0	107.0	106.80	152.46	50.89	0.2	101.57
		10/21/1991	4.3 / 0.0	107.0	106.80	152.46	51.46	0.2	101.00
		1/13/1992	6.1 / 0.0	107.0	108.40	152.46	49.70	--	102.76
		3/30/1992	0.0 / 0.0	107.0	110.00	152.46	46.48	--	105.98
		7/13/1992	0.3 / 0.0	107.0	111.80	152.46	45.82	--	106.64
		10/13/1992	5.1 / 0.0	107.0	106.80	152.46	46.78	0.2	105.68
		1/19/1993	-- / --	107.0	104.30	152.46	45.00	2.7	107.46
		4/19/1993	0.0 / 0.0	107.0	108.70	152.46	37.44	--	115.02
		7/12/1993	0.0 / 0.0	107.0	108.45	152.46	36.88	--	115.58
		10/12/1993	0.5 / 0.0	107.0	108.60	152.46	36.85	--	115.61
		1/10/1994	0.5 / 0.0	107.0	108.60	152.46	36.92	--	115.54
		4/11/1994	0.2 / 0.2	107.0	108.20	152.46	36.15	--	116.31
		7/18/1994	0.0 / 0.0	107.0	108.50	152.46	35.62	--	116.84
		10/10/1994	4.5 / 0.0	107.0	108.50	152.46	41.52	--	110.94
		1/16/1995	3.6 / 1.2	107.0	108.50	152.46	40.50	--	111.96
		4/17/1995	0.5 / 0.0	107.0	108.60	152.46	34.71	--	117.75
		7/10/1995	0.0 / 0.0	107.0	108.50	152.46	33.33	--	119.13
		10/9/1995	0.0 / 0.0	107.0	108.50	152.46	37.05	--	115.41
		1/29/1996	2.6 / 0.0	107.0	108.80	152.46	39.00	--	113.46
		4/15/1996	0.0 / 0.0	107.0	108.80	152.46	35.66	--	116.80
		7/15/1996	0.0 / 0.0	107.0	108.80	152.46	36.17	--	116.29
		10/7/1996	0.4 / 0.4	107.0	106.90	152.46	39.95	0.1	112.51
		1/13/1997	1.7 / 1.0	107.0	106.90	152.46	38.26	0.1	114.20
		4/15/1997	0.4 / 0.4	107.0	106.90	152.46	35.39	0.1	117.07
		7/8/1997	-- / --	107.0	107.00	152.46	35.30	0.0	117.16
		10/14/1997	0.0 / 0.0	107.0	108.60	152.46	38.85	--	113.61
		1/13/1998	0.0 / 0.0	107.0	108.40	152.46	40.66	--	111.80
		4/21/1998	0.0 / 0.0	107.0	106.62	152.46	35.63	0.4	116.83
		7/14/1998	0.0 / 0.0	107.0	105.66	152.46	34.42	1.3	118.04
		10/19/1998	0.0 / 0.0	107.0	106.79	152.46	37.03	0.2	115.43

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-04A	87-107	1/19/1999	36.1 / 4.1	107.0	106.65	152.46	39.83	0.3	112.63
		4/20/1999	0.0 / 0.0	107.0	106.60	152.46	39.88	0.4	112.58
		7/20/1999	1.7 / 1.4	107.0	106.60	152.46	40.00	0.4	112.46
		10/22/1999	0.0 / 0.0	107.0	106.60	152.46	47.82	0.4	104.64
		1/25/2000	0.0 / 0.0	107.0	107.00	152.46	51.64	0.0	100.82
		4/24/2000	0.0 / 0.0	107.0	106.65	152.46	45.16	0.3	107.30
		10/25/2000	1.1 / 0.0	107.0	106.65	152.46	44.98	0.3	107.48
		4/17/2001	2.0 / 0.5	107.0	107.00	152.46	42.13	0.0	110.33
		7/17/2001	2.0 / 0.5	107.0	105.70	152.46	42.08	1.3	110.38
		10/16/2001	0.0 / 0.0	107.0	108.75	152.46	46.55	--	105.91
		1/15/2002	2.5 / 0.0	107.0	108.19	152.46	45.35	--	107.11
		4/16/2002	5.4 / 0.0	107.0	105.54	152.46	44.84	1.5	107.62
		7/24/2002	0.0 / 0.0	107.0	106.80	152.46	49.27	0.2	103.19
		10/22/2002	3.4 / 0.1	107.0	106.80	152.46	52.72	0.2	99.74
		1/24/2003	5.8 / 0.1	107.0	106.80	152.46	50.78	0.2	101.68
		4/23/2003	1.1 / 0.0	107.0	108.65	152.46	46.76	--	105.70
		7/29/2003	8.2 / 0.1	107.0	108.54	152.46	49.89	--	102.57
		10/21/2003	1.9 / 0.1	107.0	108.56	152.46	55.81	--	96.65
		1/21/2004	0.0 / 0.0	107.0	108.62	152.46	57.49	--	94.97
		4/20/2004	1.0 / 1.0	107.0	108.60	152.46	56.59	--	95.87
		7/20/2004	0.0 / 0.0	107.0	108.42	152.46	59.61	--	92.85
		10/11/2004	0.0 / 0.0	107.0	108.40	152.46	63.70	--	88.76
		1/26/2005	0.0 / 0.0	107.0	107.43	151.34	59.33	--	92.01
		4/26/2005	0.0 / 0.0	107.0	107.32	151.34	49.43	--	101.91
		7/26/2005	0.1 / 0.0	107.0	107.05	151.34	46.87	--	104.47
		10/18/2005	0.0 / 0.0	107.0	107.10	151.34	47.82	--	103.52
		1/25/2006	1.3 / 1.1	107.0	107.40	151.34	49.20	--	102.14
		4/25/2006	0.0 / 0.8	107.0	107.50	151.34	46.15	--	105.19
		7/25/2006	6.5 / 0.0	107.0	107.40	151.34	45.75	--	105.59
		10/24/2006	0.8 / 0.0	107.0	107.34	151.34	47.98	--	103.36
		1/17/2007	0.0 / 0.0	107.0	107.40	151.34	47.85	--	103.49
		4/17/2007	0.6 / 0.0	107.0	107.40	151.34	46.49	--	104.85
		7/24/2007	0.4 / 0.0	107.0	107.40	151.34	47.64	--	103.70
		10/23/2007	11.6 / 0.0	107.0	107.40	151.34	54.07	--	97.27
		1/29/2008	1.1 / 0.0	107.0	107.03	151.34	56.30	--	95.04
		4/22/2008	2.2 / 0.0	107.0	107.40	151.34	53.03	--	98.31
		7/28/2008	0.1 / 0.0	107.0	107.39	151.34	57.58	--	93.76
		10/28/2008	-- / --	107.0	107.35	151.34	63.10	--	88.24
		1/27/2009	0.0 / 0.0	107.0	107.55	151.34	66.46	--	84.88
		4/6/2009	0.0 / 0.0	107.0	107.29	151.34	64.80	--	86.54
		7/29/2009	0.0 / 0.0	107.0	107.43	151.34	67.44	--	83.90
		10/7/2009	0.0 / 0.0	107.0	107.54	151.34	70.60	--	80.74
		1/28/2010	0.0 / 0.0	107.0	107.40	151.34	73.14	--	78.20
		4/27/2010	0.0 / 0.0	107.0	107.47	151.34	67.70	--	83.64
		7/28/2010	0.0 / 0.0	107.0	107.31	151.34	66.27	--	85.07
		10/27/2010	0.0 / 0.0	107.0	107.46	151.34	69.25	--	82.09
		1/18/2011	0.0 / 0.0	107.0	106.92	151.34	66.94	0.1	84.40
		4/11/2011	0.0 / 0.0	107.0	107.30	151.34	59.89	--	91.45
		7/26/2011	0.0 / 0.0	107.0	107.85	151.34	52.30	--	99.04
		10/18/2011	12.8 / 0.4	107.0	107.16	151.34	53.62	--	97.72
		1/17/2012	0.0 / 0.0	107.0	107.35	151.34	54.10	--	97.24
		3/20/2012	0.0 / 0.0	107.0	107.13	151.34	54.55	--	96.79

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Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-04A	87-107	7/23/2012	0.0 / 0.0	107.0	107.01	151.34	55.62	--	95.72
		10/29/2012	0.0 / 0.0	107.0	107.12	151.34	60.22	--	91.12
MW-05	45-75	1/15/1989	11.3 / 0.0	75.0	72.14	153.21	59.07	2.9	94.14
		4/25/1989	0.0 / 0.0	75.0	73.90	153.21	54.90	1.1	98.31
		7/17/1989	0.0 / 0.0	75.0	73.30	153.21	54.78	1.7	98.43
		10/23/1989	0.0 / 0.0	75.0	73.70	153.21	59.02	1.3	94.19
		1/22/1990	0.0 / 0.0	75.0	73.40	153.21	58.18	1.6	95.03
		4/9/1990	13.0 / 0.0	75.0	73.30	153.21	56.14	1.7	97.07
		7/10/1990	7.0 / 0.0	75.0	73.32	153.21	54.53	1.7	98.68
		10/15/1990	11.0 / 0.0	75.0	72.83	153.26	55.43	2.2	97.83
		1/7/1991	2.0 / 0.0	75.0	73.05	153.26	56.29	2.0	96.97
		4/19/1993	0.0 / 0.0	75.0	--	153.26	38.90	--	114.36
		7/12/1993	0.0 / 0.0	75.0	--	153.26	38.28	--	114.98
		10/12/1993	0.1 / 0.0	75.0	--	153.26	38.06	--	115.20
		1/10/1994	0.5 / 0.0	75.0	--	153.26	38.45	--	114.81
		4/11/1994	0.7 / 0.2	75.0	--	153.26	37.64	--	115.62
		7/18/1994	0.0 / 0.0	75.0	--	153.26	37.03	--	116.23
		10/10/1994	3.2 / 3.0	75.0	--	153.26	42.94	--	110.32
		1/16/1995	2.9 / 0.5	75.0	73.00	153.26	42.23	2.0	111.03
		4/17/1995	0.0 / 0.0	75.0	73.20	153.26	36.17	1.8	117.09
		7/10/1995	0.0 / 0.0	75.0	73.00	153.26	34.75	2.0	118.51
		10/9/1995	0.0 / 0.0	75.0	73.10	153.26	38.36	1.9	114.90
		1/29/1996	0.0 / 0.0	75.0	73.30	153.26	40.69	1.7	112.57
		4/15/1996	0.0 / 0.0	75.0	73.30	153.26	37.24	1.7	116.02
		7/15/1996	1.0 / 0.0	75.0	73.30	153.26	37.65	1.7	115.61
		10/7/1996	0.7 / 0.4	75.0	--	153.26	41.50	--	111.76
		1/13/1997	0.3 / 0.3	75.0	--	153.26	39.96	--	113.30
		4/15/1997	0.4 / 0.4	75.0	--	153.26	36.85	--	116.41
		7/8/1997	-- / --	75.0	--	153.26	36.76	--	116.50
		10/14/1997	1.3 / 0.0	75.0	--	153.26	40.30	--	112.96
		1/13/1998	0.9 / 0.0	75.0	--	153.26	42.33	--	110.93
		4/21/1998	4435.0 / 0.1	75.0	--	153.26	37.32	--	115.94
		7/14/1998	0.0 / 0.0	75.0	--	153.26	35.90	--	117.36
		10/19/1998	220.0 / 0.0	75.0	--	153.26	38.46	--	114.80
		1/19/1999	54.6 / 6.0	75.0	--	153.26	41.39	--	111.87
		4/20/1999	1.1 / 0.0	75.0	--	153.26	41.56	--	111.70
		7/20/1999	1.7 / 1.4	75.0	--	153.26	41.31	--	111.95
		10/22/1999	0.0 / 0.0	75.0	--	153.26	49.31	--	103.95
		1/25/2000	0.0 / 0.0	75.0	--	153.26	53.32	--	99.94
		4/24/2000	0.0 / 0.0	75.0	--	153.26	46.85	--	106.41
		10/17/2000	1.0 / 0.0	75.0	--	153.26	46.50	--	106.76
		10/25/2000	1.0 / 0.0	75.0	--	153.26	46.50	--	106.76
		4/17/2001	0.0 / 0.0	75.0	--	153.26	44.18	--	109.08
		7/17/2001	0.0 / 0.0	75.0	--	153.26	43.50	--	109.76
		10/16/2001	0.0 / 0.0	75.0	--	153.26	48.05	--	105.21
		1/15/2002	-- / --	75.0	73.03	153.26	46.93	2.0	106.33
		4/16/2002	0.1 / 0.1	75.0	70.04	153.26	46.34	5.0	106.92
		7/24/2002	0.1 / 0.1	75.0	73.30	153.26	50.77	1.7	102.49
		10/22/2002	0.1 / 0.1	75.0	73.30	153.26	54.38	1.7	98.88
		1/24/2003	0.1 / 0.1	75.0	73.30	153.26	52.42	1.7	100.84
		4/23/2003	0.5 / 0.1	75.0	73.16	153.26	48.31	1.8	104.95

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-05	45-75	7/29/2003	0.0 / 0.0	75.0	73.20	153.26	51.37	1.8	101.89
		10/21/2003	1.9 / 0.0	75.0	73.16	153.26	57.46	1.8	95.80
		1/21/2004	0.0 / 0.0	75.0	73.30	153.26	59.23	1.7	94.03
		4/20/2004	1.0 / 1.0	75.0	73.20	153.26	58.30	1.8	94.96
		7/20/2004	0.0 / 0.0	75.0	73.06	153.26	61.39	1.9	91.87
		10/11/2004	0.0 / 0.0	75.0	73.09	153.26	65.34	1.9	87.92
		1/26/2005	0.0 / 0.0	75.0	73.03	153.11	62.02	2.0	91.09
		4/26/2005	0.0 / 0.0	75.0	72.94	153.11	51.98	2.1	101.13
		7/26/2005	0.0 / 0.0	75.0	72.88	153.11	49.34	2.1	103.77
		10/18/2005	0.0 / 0.0	75.0	72.78	153.11	50.25	2.2	102.86
		1/25/2006	1.0 / 1.0	75.0	73.00	153.11	51.74	2.0	101.37
		4/25/2006	0.0 / 0.8	75.0	73.00	153.11	48.77	2.0	104.34
		7/25/2006	0.0 / 0.0	75.0	72.87	153.11	48.20	2.1	104.91
		10/24/2006	0.0 / 0.0	75.0	72.90	153.11	50.47	2.1	102.64
		1/17/2007	0.0 / 0.0	75.0	73.00	153.11	50.50	2.0	102.61
		4/17/2007	0.0 / 0.0	75.0	73.00	153.11	49.02	2.0	104.09
		7/24/2007	0.0 / 0.0	75.0	73.00	153.11	50.08	2.0	103.03
		10/23/2007	0.0 / 0.0	75.0	72.99	153.11	56.68	2.0	96.43
		1/29/2008	0.0 / 0.0	75.0	72.98	153.11	58.93	2.0	94.18
		4/22/2008	3.3 / 0.0	75.0	72.98	153.11	55.54	2.0	97.57
		7/28/2008	0.2 / 0.1	75.0	73.00	153.11	60.25	2.0	92.86
		10/28/2008	-- / --	75.0	72.93	153.11	65.84	2.1	87.27
		1/27/2009	0.0 / 0.0	75.0	72.89	153.11	69.18	2.1	83.93
		4/6/2009	0.4 / 0.0	75.0	72.90	153.11	68.50	2.1	84.61
		7/29/2009	0.0 / 0.0	75.0	72.86	153.11	70.25	2.1	82.86
		10/7/2009	0.0 / 0.0	75.0	72.95	153.11	DRY	2.1	--
		1/28/2010	0.0 / 0.0	75.0	72.91	153.11	DRY	2.1	--
		4/27/2010	0.0 / 0.0	75.0	72.95	153.11	70.25	2.1	82.86
		7/28/2010	0.0 / 0.0	75.0	72.95	153.11	68.95	2.1	84.16
		10/27/2010	0.0 / 0.0	75.0	72.95	153.11	71.90	2.1	81.21
		1/18/2011	0.0 / 0.0	75.0	72.92	153.11	69.55	2.1	83.56
		4/11/2011	0.0 / 0.0	75.0	72.93	153.11	62.44	2.1	90.67
		7/26/2011	0.0 / 0.3	75.0	72.87	153.11	54.62	2.1	98.49
		10/18/2011	13.6 / 0.8	75.0	72.76	153.11	56.04	2.2	97.07
		1/17/2012	0.0 / 0.0	75.0	72.95	153.11	56.60	2.1	96.51
		3/20/2012	0.0 / 0.0	75.0	72.80	153.11	57.00	2.2	96.11
		7/23/2012	0.0 / 0.0	75.0	72.74	153.11	58.14	2.3	94.97
		10/29/2012	0.0 / 0.0	75.0	72.72	153.11	62.83	2.3	90.28
MW-06A	10-30	1/15/1989	6.0 / 0.0	30.5	28.49	149.31	DRY	2.0	--
		4/25/1989	-- / --	30	28.60	149.31	DRY	1.4	--
		7/17/1989	0.0 / 0.0	30	29.00	149.31	DRY	1.0	--
		10/23/1989	0.0 / 0.0	30	29.20	149.31	DRY	0.8	--
		1/22/1990	119.0 / 0.0	30	29.47	149.31	DRY	0.5	--
		4/9/1990	0.0 / 0.0	30	29.10	149.31	DRY	0.9	--
		7/10/1990	0.0 / 0.0	30	30.10	149.31	DRY	--	--
		10/15/1990	-- / --	30	--	149.31	DRY	--	--
		1/7/1991	7.0 / 0.0	30	28.62	149.31	DRY	1.4	--
		7/12/1993	0.0 / 0.0	30	--	--	DRY	--	--
		1/10/1994	501.0 / 0.5	30	--	--	DRY	--	--
		4/11/1994	0.2 / 0.2	30	--	--	DRY	--	--
		7/18/1994	6.8 / 0.0	30	--	--	DRY	--	--

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-06A	10-30	10/10/1994	4.2 / 3.0	30	--	--	DRY	--	--
		1/16/1995	51.0 / 0.1	30	--	--	DRY	--	--
		4/17/1995	0.0 / 0.0	30	--	--	DRY	--	--
		7/10/1995	0.0 / 0.0	30	--	--	DRY	--	--
		10/9/1995	0.0 / 0.0	30	--	--	DRY	--	--
		1/29/1996	66.0 / 0.0	30	--	--	DRY	--	--
		4/15/1996	14.0 / 0.0	30	--	--	DRY	--	--
		7/15/1996	6.1 / 0.0	30	--	--	DRY	--	--
		10/7/1996	1.8 / 0.0	30	--	--	DRY	--	--
		1/13/1997	0.3 / 0.3	30	--	--	DRY	--	--
		4/15/1997	11.0 / 0.9	30	--	--	DRY	--	--
		7/8/1997	-- / --	30	--	--	DRY	--	--
		10/14/1997	130.7 / 0.0	30	29.20	--	DRY	0.8	--
		1/13/1998	218.0 / 0.0	30	--	--	DRY	--	--
		4/21/1998	134.0 / 0.1	30	--	--	DRY	--	--
		7/14/1998	51.0 / 0.0	30	--	--	DRY	--	--
		10/19/1998	151.0 / 0.0	30	--	--	DRY	--	--
		1/19/1999	0.0 / 0.0	30	--	--	DRY	--	--
		4/20/1999	117.0 / 0.0	30	--	--	DRY	--	--
		7/20/1999	128.6 / 1.4	30	--	--	DRY	--	--
		10/22/1999	13.3 / 0.0	30	--	--	DRY	--	--
		1/25/2000	183.0 / 0.0	30	--	--	DRY	--	--
		4/24/2000	-- / --	30	--	--	DRY	--	--
		10/17/2000	-- / --	30	--	--	DRY	--	--
		10/25/2000	-- / --	30	--	--	DRY	--	--
		4/17/2001	-- / --	30	--	--	DRY	--	--
		7/17/2001	-- / --	30	--	--	DRY	--	--
		10/16/2001	41.0 / 0.0	30	--	--	DRY	--	--
		1/15/2002	-- / --	30	--	--	DRY	--	--
		4/16/2002	0.0 / 0.0	30	28.87	--	DRY	1.1	--
		7/24/2002	116.0 / 0.0	30	29.20	--	DRY	0.8	--
		10/22/2002	0.1 / 0.1	30	29.20	--	DRY	0.8	--
		1/24/2003	0.1 / 0.1	30	29.20	--	DRY	0.8	--
		4/23/2003	1.5 / 0.0	30	29.08	--	DRY	0.9	--
		7/29/2003	117.0 / 0.0	30	29.04	--	DRY	1.0	--
		10/21/2003	44.0 / 0.0	30	29.05	--	DRY	0.9	--
		1/21/2004	0.0 / 0.0	30	29.01	--	DRY	1.0	--
		4/20/2004	3.1 / 0.2	30	29.03	--	DRY	1.0	--
		7/20/2004	1.4 / 0.4	30	29.00	--	DRY	1.0	--
		10/11/2004	-- / 0.0	30	29.05	--	DRY	0.9	--
		1/26/2005	0.0 / 0.0	30	28.72	--	DRY	1.3	--
		4/26/2005	6.3 / 0.0	30	28.73	--	DRY	1.3	--
		7/26/2005	0.0 / 0.0	30	28.70	--	DRY	1.3	--
		10/18/2005	117.8 / 0.2	30	28.60	--	DRY	1.4	--
		1/25/2006	1.6 / 1.0	30	29.76	--	DRY	0.2	--
		4/25/2006	0.0 / 0.8	30	28.71	--	DRY	1.3	--
		7/25/2006	0.6 / 0.0	30	28.75	--	DRY	1.3	--
		10/24/2006	1.4 / 0.0	30	28.64	--	DRY	1.4	--
		1/17/2007	0.1 / 0.0	30	28.70	--	DRY	1.3	--
		4/17/2007	0.5 / 0.0	30	28.70	--	DRY	1.3	--
		7/24/2007	0.6 / 0.0	30	28.72	--	DRY	1.3	--
		10/23/2007	0.0 / 0.0	30	28.71	--	DRY	1.3	--

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-06A	10-30	1/29/2008	0.2 / 0.0	30	28.72	--	DRY	1.3	--
		4/22/2008	6.15 / 0.0	30	28.72	--	DRY	1.3	--
		7/28/2008	8.1 / 0.2	30	28.70	--	DRY	1.3	--
		10/28/2008	-- / --	30	28.66	--	DRY	1.3	--
		1/27/2009	0.1 / 0.0	30	28.73	--	DRY	1.3	--
		4/6/2009	0.1 / 0.0	30	28.68	--	DRY	1.3	--
		7/29/2009	0.0 / 0.0	30	28.70	--	DRY	1.3	--
		10/7/2009	0.0 / 0.0	30	28.69	--	DRY	1.3	--
		1/29/2010	0.4 / 0.4	30	28.70	--	DRY	1.3	--
		4/27/2010	0.0 / 0.0	30	28.68	--	DRY	1.3	--
		7/28/2010	0.0 / 0.0	30	28.70	--	DRY	1.3	--
		10/27/2010	0.0 / 0.0	30	28.73	--	DRY	1.3	--
		1/18/2011	0.0 / 0.0	30	28.69	--	DRY	1.3	--
		4/11/2011	0.0 / 0.0	30	28.69	--	DRY	1.3	--
		7/26/2011	0.2 / 0.2	30	28.68	--	DRY	1.3	--
		10/18/2011	0.0 / 0.0	30	28.61	--	DRY	1.4	--
		3/20/2012	0.0 / 0.0	30	28.75	--	DRY	1.3	--
		1/17/2012	0.0 / 0.0	30	28.70	--	DRY	1.3	--
		7/23/2012	5.3 / 0.0	30	28.64	--	DRY	1.4	--
		10/29/2012	0.0 / 0.0	30	28.52	--	DRY	1.5	--
MW-06B	45-75	1/15/1989	6.0 / 0.0	77.5	74.87	149.46	54.34	2.6	95.12
		4/25/1989	-- / --	77.0	74.20	149.46	50.35	2.8	99.11
		7/17/1989	0.0 / 0.0	77.0	75.00	149.46	51.07	2.0	98.39
		10/23/1989	0.0 / 0.0	77.0	70.20	149.46	54.11	6.8	95.35
		1/22/1990	0.0 / 0.0	77.0	74.89	149.46	53.49	2.1	95.97
		4/9/1990	-- / --	77.0	74.90	149.46	51.70	2.1	97.76
		7/10/1990	1.0 / 0.0	77.0	74.91	149.46	50.18	2.1	99.28
		10/15/1990	3.0 / 0.0	77.0	76.60	149.53	51.08	0.4	98.45
		1/7/1991	8.0 / 0.0	77.0	74.64	149.53	51.66	2.4	97.87
		3/30/1992	0.0 / 0.0	77.0	74.70	149.53	43.67	2.3	105.86
		1/13/1992	14.7 / 0.0	77.0	--	149.53	46.30	--	103.23
		7/13/1992	0.0 / 0.0	77.0	74.40	149.53	42.96	2.6	106.57
		10/13/1992	6.8 / 0.0	77.0	74.60	149.53	45.41	2.4	104.12
		1/19/1993	-- / --	74.7	74.70	149.53	42.30	0.0	107.23
		4/19/1993	0.0 / 0.0	74.7	74.85	149.53	34.89	--	114.64
		7/12/1993	0.0 / 0.0	74.7	74.54	149.53	34.19	0.2	115.34
		10/12/1993	0.2 / 0.0	74.7	74.70	149.53	34.07	0.0	115.46
		1/10/1994	0.5 / 0.0	77.0	76.70	149.53	34.16	0.3	115.37
		4/11/1994	0.7 / 0.0	77.0	74.20	149.53	33.38	2.8	116.15
		7/18/1994	16.5 / 0.0	77.0	74.40	149.53	32.86	2.6	116.67
		10/10/1994	4.2 / 3.8	77.0	74.30	149.53	38.40	2.7	111.13
		1/16/1995	0.9 / 0.9	77.0	74.10	149.53	37.34	2.9	112.19
		4/17/1995	0.0 / 0.0	77.0	74.30	149.53	32.11	2.7	117.42
		7/10/1995	0.0 / 0.0	77.0	74.10	149.53	30.60	2.9	118.93
		10/9/1995	0.0 / 0.0	77.0	74.10	149.53	34.08	2.9	115.45
		1/29/1996	0.0 / 0.0	77.6	77.60	149.53	36.06	0.0	113.47
		4/15/1996	1.3 / 0.0	77.6	77.50	149.53	32.88	0.1	116.65
		7/15/1996	0.0 / 0.0	77.6	77.50	149.53	33.35	0.1	116.18
		10/7/1996	47.0 / 4.1	77.6	77.40	149.53	36.87	0.2	112.66
		1/13/1997	1.0 / 0.3	77.6	77.50	149.53	35.33	0.1	114.20
		4/15/1997	0.6 / 0.1	77.6	77.50	149.53	32.58	0.1	116.95

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-06B	45-75	7/8/1997	-- / --	77.6	77.50	149.53	32.52	0.1	117.01
		10/14/1997	38.0 / 0.5	77.6	77.20	149.53	35.82	0.4	113.71
		1/13/1998	0.9 / 0.0	77.6	77.10	149.53	37.47	0.5	112.06
		4/21/1998	0.1 / 0.1	77.6	77.00	149.53	32.77	0.6	116.76
		7/14/1998	0.0 / 0.0	77.6	77.08	149.53	31.58	0.5	117.95
		10/19/1998	2.9 / 1.4	77.6	77.05	149.53	34.70	0.5	114.83
		1/19/1999	0.0 / 0.0	77.6	77.00	149.53	36.79	0.6	112.74
		4/20/1999	1.1 / 0.0	77.6	76.90	149.53	36.97	0.7	112.56
		7/20/1999	1.4 / 1.4	77.6	76.90	149.53	37.10	0.7	112.43
		10/22/1999	0.0 / 0.0	77.6	77.00	149.53	44.49	0.6	105.04
		1/25/2000	39.0 / 0.0	77.6	77.29	149.53	48.27	0.3	101.26
		4/24/2000	-- / --	77.6	76.87	149.53	42.32	0.7	107.21
		10/25/2000	0.5 / 0.5	77.6	76.64	149.53	41.98	1.0	107.55
		10/17/2000	0.5 / 0.5	77	76.64	149.53	41.98	0.4	107.55
		4/17/2001	0.0 / 0.0	77	77.50	149.53	39.72	--	109.81
		7/17/2001	0.0 / 0.0	77.6	76.50	149.53	39.24	1.1	110.29
		10/16/2001	0.0 / 0.0	77	76.60	149.53	43.47	0.4	106.06
		1/15/2002	0.2 / 0.0	77	76.26	149.53	42.52	0.7	107.01
		4/16/2002	0.0 / 0.0	77	76.23	149.53	41.95	0.8	107.58
		7/24/2002	0.0 / 0.0	77	76.39	149.53	46.09	0.6	103.44
		10/22/2002	0.1 / 0.1	77	76.39	149.53	49.50	0.6	100.03
		1/24/2003	0.1 / 0.1	77	76.39	149.53	47.83	0.6	101.70
		4/23/2003	0.0 / 0.0	77	76.05	149.53	43.98	1.0	105.55
		7/29/2003	0.2 / 0.0	77	75.88	149.53	46.75	1.1	102.78
		10/21/2003	1.0 / 0.0	77	75.93	149.53	52.29	1.1	97.24
		1/21/2004	0.0 / 0.0	77	76.00	149.53	54.05	1.0	95.48
		4/20/2004	0.2 / 0.2	77	75.86	149.53	53.45	1.1	96.08
		7/20/2004	0.4 / 0.4	77	75.73	149.53	56.15	1.3	93.38
		10/11/2004	0.0 / 0.0	77	75.75	149.53	59.91	1.3	89.62
		1/26/2005	10.3 / 10.0	77	75.31	149.35	57.39	1.7	91.96
		4/26/2005	0.7 / 0.0	77	75.42	149.35	47.80	1.6	101.55
		7/26/2005	3.2 / 0.0	77	75.34	149.35	45.00	1.7	104.35
		10/18/2005	2.5 / 0.0	77	75.12	149.35	45.82	1.9	103.53
		1/25/2006	1.4 / 1.0	77	75.30	149.35	47.10	1.7	102.25
		4/25/2006	1.6 / 0.0	77	75.35	149.35	44.25	1.7	105.10
		7/25/2006	1.5 / 0.0	77	75.20	149.35	43.70	1.8	105.65
		10/24/2006	1.9 / 0.0	77	75.35	149.35	45.84	1.7	103.51
		1/17/2007	0.0 / 0.0	77	75.16	149.35	45.78	1.8	103.57
		4/17/2007	4.0 / 0.0	77	75.30	149.35	44.58	1.7	104.77
		7/24/2007	2.8 / 0.0	77	75.23	149.35	45.58	1.8	103.77
		10/23/2007	0.4 / 0.0	77	75.15	149.35	51.51	1.8	97.84
		1/29/2008	0.0 / 0.0	77	75.04	149.35	53.82	2.0	95.53
		4/22/2008	16.4 / 0.0	77	75.11	149.35	50.77	1.9	98.58
		7/28/2008	0.0 / 0.0	77	75.18	149.35	54.91	1.8	94.44
		10/28/2008	-- / --	77	75.10	149.35	60.25	1.9	89.10
		1/27/2009	0.1 / 0.0	77	75.07	149.35	63.58	1.9	85.77
		4/6/2009	1.0 / 0.0	77	75.19	149.35	62.38	1.8	86.97
		7/29/2009	0.0 / 0.0	77	75.04	149.35	64.71	2.0	84.64
		10/7/2009	0.0 / 0.0	77	75.00	149.35	67.61	2.0	81.74
		1/29/2010	0.4 / 0.4	77	74.90	149.35	70.45	2.1	78.90
		4/27/2010	0.0 / 0.0	77	74.95	149.35	65.50	2.1	83.85
		7/28/2010	0.0 / 0.0	77	75.04	149.35	63.89	2.0	85.46

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-06B	45-75	10/27/2010	0.0 / 0.0	77	74.94	149.35	66.52	2.1	82.83
		1/18/2011	0.0 / 0.0	77	74.91	149.35	64.80	2.1	84.55
		4/11/2011	0.0 / 0.0	77	74.82	149.35	58.38	2.2	90.97
		7/26/2011	0.2 / 0.3	77	74.83	149.35	50.70	2.2	98.65
		10/18/2011	0.0 / 0.0	77	76.35	149.35	51.37	0.7	97.98
		1/17/2012	0.0 / 0.0	77	74.91	149.35	51.92	2.1	97.43
		3/20/2012	0.0 / 0.0	77	74.77	149.35	52.36	2.2	96.99
		7/23/2012	0.8 / 0.3	77	74.39	149.35	53.34	2.6	96.01
		10/29/2012	0.0 / 0.0	77	74.28	149.35	57.72	2.7	91.63
MW-06D	79-94	10/15/1990	3.0 / 0.0	95.5	96.91	150.16	51.64	--	98.52
		1/7/1991	5.0 / 0.0	95.5	94.52	150.16	52.25	1.0	97.91
		3/30/1992	0.0 / 0.0	95.5	94.60	150.16	44.26	0.9	105.90
		1/13/1992	10.0 / 0.0	95.5	--	150.16	46.87	--	103.29
		7/13/1992	0.2 / 0.0	95.5	94.60	150.16	43.60	0.9	106.56
		10/13/1992	71.1 / 0.0	95.5	94.30	150.16	45.99	1.2	104.17
		1/19/1993	-- / --	95.5	94.30	150.16	42.83	1.2	107.33
		4/19/1993	0.0 / 0.0	95.5	94.54	150.16	35.48	1.0	114.68
		7/12/1993	0.0 / 0.0	95.5	94.30	150.16	34.81	1.2	115.35
		10/12/1993	0.5 / 0.0	95.5	94.50	150.16	34.68	1.0	115.48
		1/10/1994	0.0 / 0.0	95.5	94.40	150.16	34.73	1.1	115.43
		4/11/1994	0.7 / 0.0	95.5	93.90	150.16	33.99	1.6	116.17
		7/18/1994	10.5 / 0.0	95.5	93.80	150.16	33.46	1.7	116.70
		10/10/1994	12.0 / 6.0	95.5	93.80	150.16	39.00	1.7	111.16
		1/16/1995	7.6 / 0.8	95.5	93.80	150.16	37.96	1.7	112.20
		4/17/1995	8.7 / 0.0	95.5	93.90	150.16	32.71	1.6	117.45
		7/10/1995	0.0 / 0.0	95.5	93.70	150.16	31.20	1.8	118.96
		10/9/1995	0.7 / 0.0	95.5	93.60	150.16	34.66	1.9	115.50
		1/29/1996	0.0 / 0.0	95.5	94.00	150.16	36.65	1.5	113.51
		4/15/1996	9.0 / 0.0	95.5	94.00	150.16	33.46	1.5	116.70
		7/15/1996	2.1 / 0.0	95.5	94.00	150.16	33.92	1.5	116.24
		10/7/1996	1.0 / 0.7	95.5	94.00	150.16	37.46	1.5	112.70
		1/13/1997	1.0 / 0.3	95.5	93.90	150.16	35.92	1.6	114.24
		4/15/1997	0.4 / 0.4	95.5	93.90	150.16	33.14	1.6	117.02
		7/8/1997	-- / --	95.5	93.90	150.16	33.06	1.6	117.10
		10/14/1997	0.0 / 0.0	95.5	93.90	150.16	36.40	1.6	113.76
		1/13/1998	4.9 / 0.0	95.5	93.90	150.16	38.04	1.6	112.12
		4/21/1998	3.9 / 0.1	95.5	93.90	150.16	33.36	1.6	116.80
		7/14/1998	0.0 / 0.0	95.5	93.90	150.13	32.16	1.6	117.97
		10/19/1998	837.0 / 0.0	95.5	93.90	150.13	34.61	1.6	115.52
		1/19/1999	41.5 / 5.2	95.5	93.40	150.13	37.35	2.1	112.78
		4/20/1999	5.8 / 0.0	95.5	90.30	150.13	37.51	5.2	112.62
		7/20/1999	17.0 / 0.4	95.5	93.50	150.13	37.70	2.0	112.43
		10/22/1999	0.0 / 0.0	95.5	93.40	150.13	45.03	2.1	105.10
		1/25/2000	0.0 / 0.0	95.5	90.70	150.13	48.81	4.8	101.32
		4/24/2000	-- / --	95.5	90.47	150.13	42.88	5.0	107.25
		10/17/2000	0.0 / 0.0	95.5	90.25	150.13	42.54	5.3	107.59
		10/25/2000	0.0 / 0.0	95.5	90.25	150.13	42.54	5.3	107.59
		4/17/2001	0.0 / 0.0	95.5	92.50	150.13	40.26	3.0	109.87
		7/17/2001	0.0 / 0.0	95.5	90.55	150.13	39.82	5.0	110.31
		10/16/2001	0.0 / 0.0	95.5	92.92	150.13	44.04	2.6	106.09
		1/15/2002	0.0 / 0.0	95.5	92.29	150.13	43.12	3.2	107.01

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-06D	79-94	4/16/2002	0.0 / 0.0	95.5	90.36	150.13	42.52	5.1	107.61
		7/24/2002	0.0 / 0.0	95.5	92.90	150.13	46.65	2.6	103.48
		10/22/2002	13.7 / 0.0	95.5	92.90	150.13	50.05	2.6	100.08
		1/24/2003	0.1 / 0.1	95.5	92.90	150.13	48.40	2.6	101.73
		4/23/2003	0.5 / 0.5	95.5	92.74	150.13	44.52	2.8	105.61
		7/29/2003	0.3 / 0.1	95.5	92.57	150.13	47.27	2.9	102.86
		10/21/2003	1.9 / 0.1	95.5	90.60	150.13	52.82	4.9	97.31
		1/21/2004	0.0 / 0.0	95.5	90.76	150.13	54.63	4.7	95.50
		4/20/2004	0.2 / 0.2	95.5	90.67	150.13	54.04	4.8	96.09
		7/20/2004	0.4 / 0.4	95.5	90.57	150.13	56.65	4.9	93.48
		10/11/2004	0.0 / 0.0	95.5	90.62	150.13	60.40	4.9	89.73
		1/26/2005	0.0 / 0.0	95.5	90.23	149.85	57.84	5.3	92.01
		4/26/2005	1.1 / 0.0	95.5	89.97	149.85	48.26	5.5	101.59
		7/26/2005	0.6 / 0.0	95.5	89.96	149.85	45.50	5.5	104.35
		10/18/2005	0.2 / 0.0	95.5	90.07	149.85	46.28	5.4	103.57
		1/25/2006	1.1 / 1.0	95.5	90.41	149.85	47.49	5.1	102.36
		4/25/2006	1.6 / 0.0	95.5	90.42	149.85	44.67	5.1	105.18
		7/25/2006	1.2 / 0.0	95.5	90.35	149.85	44.16	5.2	105.69
		10/24/2006	1.3 / 0.0	95.5	90.14	149.85	46.32	5.4	103.53
		1/17/2007	0.0 / 0.0	95.5	90.24	149.85	46.30	5.3	103.55
		4/17/2007	1.3 / 0.0	95.5	90.24	149.85	45.10	5.3	104.75
		7/24/2007	1.2 / 0.0	95.5	90.20	149.85	46.02	5.3	103.83
		10/23/2007	0.4 / 0.0	95.5	90.17	149.85	51.96	5.3	97.89
		1/29/2008	0.0 / 0.0	95.5	90.03	149.85	54.31	5.5	95.54
		4/22/2008	0.0 / 0.0	95.5	90.23	149.85	51.36	5.3	98.49
		7/28/2008	0.4 / 0.1	95.5	90.11	149.85	55.37	5.4	94.48
		10/28/2008	-- / --	95.5	90.24	149.85	60.69	5.3	89.16
		1/27/2009	0.1 / 0.0	95.5	90.34	149.85	64.07	5.2	85.78
		4/6/2009	0.0 / 0.0	95.5	90.28	149.85	62.82	5.2	87.03
		7/29/2009	0.0 / 0.0	95.5	90.08	149.85	65.14	5.4	84.71
		10/7/2009	0.0 / 0.0	95.5	90.20	149.85	68.09	5.3	81.76
		1/29/2010	0.3 / 0.3	95.5	90.77	149.85	70.87	4.7	78.98
		4/27/2010	0.0 / 0.0	95.5	90.26	149.85	66.08	5.2	83.77
		7/28/2010	0.0 / 0.0	95.5	90.25	149.85	64.36	5.3	85.49
		10/27/2010	0.0 / 0.0	95.5	90.38	149.85	67.04	5.1	82.81
		1/18/2011	0.0 / 0.0	95.5	90.30	149.85	65.26	5.2	84.59
		4/11/2011	0.0 / 0.0	95.5	90.28	149.85	58.84	5.2	91.01
		7/26/2011	0.2 / 11.9	95.5	90.24	149.85	51.24	5.3	98.61
		10/18/2011	0.0 / 0.0	95.5	90.82	149.85	51.92	4.7	97.93
		3/20/2012	12.6 / 0.0	95.5	90.10	149.85	52.69	5.4	97.16
		1/17/2012	0.3 / 0.0	95.5	89.92	149.85	52.38	5.6	97.47
		7/23/2012	8.8 / 0.2	95.5	89.71	149.85	53.73	5.8	96.12
		10/29/2012	0.0 / 0.0	95.5	89.68	149.85	58.02	5.8	91.83
MW-07	45-75	1/15/1989	6.0 / 5.0	75.5	74.39	149.27	59.80	1.1	89.47
		4/25/1989	-- / 0.0	75	74.80	149.27	50.44	0.2	98.83
		7/17/1989	11.0 / 0.0	75	74.50	149.27	51.37	0.5	97.90
		10/23/1989	29.0 / 0.0	75	74.90	149.27	54.55	0.1	94.72
		1/22/1990	6.0 / 0.0	75	74.60	149.27	53.82	0.4	95.45
		4/9/1990	35.0 / 0.0	75	74.50	149.27	51.95	0.5	97.32
		7/10/1990	0.0 / 0.0	75	74.64	149.27	50.42	0.4	98.85
		10/15/1990	13.0 / 0.0	75	76.50	149.42	51.40	--	98.02

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-07	45-75	1/7/1991	13.0 / 0.0	75	74.30	149.42	52.01	0.7	97.41
		4/8/1991	0.0 / 0.0	75	73.84	149.42	49.36	1.2	100.06
		7/8/1991	3.0 / 0.0	75	74.40	149.42	48.22	0.6	101.20
		10/21/1991	10.6 / 0.0	75	74.30	149.42	48.80	0.7	100.62
		3/30/1992	3.2 / 0.0	75	74.20	149.42	43.88	0.8	105.54
		1/13/1992	6.7 / 0.0	75	74.30	149.42	46.52	0.7	102.90
		7/13/1992	0.7 / 0.0	75	74.40	149.42	43.26	0.6	106.16
		10/13/1992	18.3 / 0.0	75	74.50	149.42	45.74	0.5	103.68
		1/19/1993	-- / 0.0	75	70.90	149.42	42.60	4.1	106.82
		4/19/1993	0.0 / 0.0	75	71.50	149.42	34.88	3.5	114.54
		7/12/1993	0.0 / 0.0	75	71.18	149.42	34.28	3.8	115.14
		10/12/1993	5.0 / 0.0	75	71.40	149.42	34.19	3.6	115.23
		1/10/1994	1.1 / 0.0	75	71.40	149.42	34.34	3.6	115.08
		4/11/1994	0.7 / 0.2	75	71.20	149.42	33.54	3.8	115.88
		7/18/1994	11.1 / 0.0	75	71.20	149.42	32.98	3.8	116.44
		10/10/1994	41.0 / 9.3	75	71.10	149.42	38.73	3.9	110.69
		1/16/1995	5.5 / 0.2	75	71.30	149.42	37.83	3.7	111.59
		4/17/1995	1.0 / 0.0	75	71.60	149.42	32.18	3.4	117.24
		7/10/1995	0.0 / 0.0	75	71.40	149.42	30.79	3.6	118.63
		10/9/1995	0.2 / 0.0	75	71.50	149.42	34.34	3.5	115.08
		1/29/1996	0.0 / 0.0	75	71.60	149.42	36.44	3.4	112.98
		4/15/1996	2.5 / 0.0	71.6	71.60	149.42	33.03	0.0	116.39
		7/15/1996	0.6 / 0.0	71.6	71.60	149.42	33.59	0.0	115.83
		10/7/1996	1.0 / 0.7	71.6	71.60	149.42	37.25	0.0	112.17
		1/13/1997	4.4 / 0.3	71.6	71.60	149.42	35.66	0.0	113.76
		4/15/1997	0.1 / 0.1	71.6	71.60	149.42	32.80	0.0	116.62
		7/8/1997	-- / --	71.6	71.60	149.42	32.68	0.0	116.74
		10/14/1997	6.0 / 0.0	71.6	71.50	149.42	38.15	0.1	111.27
		1/13/1998	56.0 / 1.9	71.6	71.50	149.42	37.95	0.1	111.47
		4/21/1998	1.3 / 0.1	71.5	71.50	149.42	33.04	0.0	116.38
		7/14/1998	0.0 / 0.0	71.5	71.40	149.42	31.80	0.1	117.62
		10/19/1998	2.9 / 1.4	71.5	71.50	149.42	34.36	0.0	115.06
		1/19/1999	0.0 / 0.0	71.5	71.55	149.42	37.14	--	112.28
		4/20/1999	3.5 / 0.0	71.5	71.50	149.42	37.31	0.0	112.11
		7/20/1999	4.3 / 1.4	71.5	71.50	149.42	37.33	0.0	112.09
		10/22/1999	13.2 / 0.0	71.5	71.45	149.42	44.92	0.0	104.50
		1/25/2000	7.0 / 0.0	71.5	71.48	149.42	48.75	0.0	100.67
		4/24/2000	-- / --	71.5	71.38	149.42	42.58	0.1	106.84
		10/17/2000	0.5 / 0.5	75	71.20	149.42	42.18	3.8	107.24
		10/25/2000	0.5 / 0.5	71.5	71.20	149.42	42.18	0.3	107.24
		4/17/2001	0.0 / 0.0	75	71.20	149.42	39.95	3.8	109.47
		7/17/2001	0.0 / 0.0	71.5	71.40	149.42	39.44	0.1	109.98
		10/16/2001	0.0 / 0.0	75	71.75	149.42	43.78	3.3	105.64
		1/15/2002	0.7 / 0.0	75	71.04	149.42	42.72	4.0	106.70
		4/16/2002	0.0 / 0.0	75	71.03	149.42	42.20	4.0	107.22
		7/24/2002	0.8 / 0.0	75	71.16	149.42	46.46	3.8	102.96
		10/22/2002	0.1 / 0.1	75	71.16	149.42	49.92	3.8	99.50
		1/24/2003	4.7 / 0.1	75	71.16	149.42	48.14	3.8	101.28
		4/23/2003	1.7 / 0.1	75	71.10	149.42	44.15	3.9	105.27
		7/29/2003	0.8 / 0.0	75	71.05	149.42	46.98	4.0	102.44
		10/21/2003	2.9 / 0.0	75	70.98	149.42	52.81	4.0	96.61
		1/21/2004	0.0 / 0.0	75	71.24	149.42	54.59	3.8	94.83

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Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-07	45-75	4/20/2004	0.2 / 0.2	75	71.00	149.42	53.82	4.0	95.60
		7/20/2004	0.4 / 0.4	75	70.95	149.42	56.56	4.1	92.86
		10/11/2004	0.0 / 0.0	75	71.29	149.42	60.69	3.7	88.73
		1/26/2005	0.0 / 0.0	75	70.77	149.18	57.65	4.2	91.53
		4/26/2005	5.2 / 0.0	75	70.66	149.18	47.90	4.3	101.28
		7/26/2005	0.5 / 0.0	75	70.54	149.18	45.17	4.5	104.01
		10/18/2005	0.0 / 0.0	75	70.37	149.18	45.98	4.6	103.20
		1/25/2006	1.0 / 1.0	75	70.80	149.18	47.29	4.2	101.89
		4/25/2006	0.8 / 0.0	75	70.50	149.18	44.47	4.5	104.71
		7/25/2006	0.0 / 0.0	75	70.53	149.18	43.96	4.5	105.22
		10/24/2006	0.0 / 0.0	75	69.90	149.18	46.10	5.1	103.08
		1/17/2007	0.0 / 0.0	75	69.80	149.18	46.15	5.2	103.03
		4/17/2007	4.6 / 0.0	75	69.84	149.18	44.80	5.2	104.38
		7/24/2007	5.7 / 0.0	75	69.75	149.18	45.73	5.3	103.45
		10/23/2007	0.0 / 0.0	75	69.47	149.18	51.96	5.5	97.22
		1/29/2008	0.0 / 0.0	75	69.10	149.18	54.21	5.9	94.97
		4/22/2008	0.0 / 0.0	75	69.52	149.18	51.13	5.5	98.05
		7/28/2008	0.2 / 0.1	75	69.45	149.18	55.36	5.6	93.82
		10/28/2008	-- / --	75	69.41	149.18	61.02	5.6	88.16
		1/27/2009	0.0 / 0.1	75	69.05	149.18	64.30	6.0	84.88
		4/6/2009	0.1 / 0.0	75	69.25	149.18	63.00	5.8	86.18
		7/29/2009	0.0 / 0.0	75	69.10	149.18	65.45	5.9	83.73
		10/7/2009	0.0 / 0.0	75	69.17	149.18	68.47	5.8	80.71
		1/29/2010	0.4 / 0.4	75	69.20	149.18	DRY	5.8	--
		4/27/2010	0.0 / 0.0	75	69.14	149.18	65.91	5.9	83.27
		7/28/2010	0.0 / 0.0	75	69.59	149.18	64.37	5.4	84.81
		10/27/2010	0.0 / 0.0	75	69.48	149.18	67.15	5.5	82.03
		1/18/2011	0.0 / 0.0	75	69.42	149.18	65.16	5.6	84.02
		4/11/2011	0.0 / 0.0	75	69.44	149.18	58.30	5.6	90.88
		7/26/2011	0.3 / 0.4	75	69.47	149.18	50.46	5.5	98.72
		10/18/2011	3.0 / 0.0	75	69.38	149.18	51.70	5.6	97.48
		3/20/2012	0.0 / 0.0	75	69.40	149.18	52.56	5.6	96.62
		1/17/2012	0.0 / 0.0	75	69.35	149.18	52.25	5.7	96.93
		7/23/2012	0.0 / 0.0	75	68.97	149.18	53.72	6.0	95.46
		10/29/2012	0.0 / 0.0	75	69.01	149.18	58.14	6.0	91.04
MW-08	41-41	1/15/1989	25.0 / 6.0	76	69.57	149.53	54.69	6.4	94.84
		4/25/1989	23.0 / 0.0	71.0	69.90	149.53	50.47	1.1	99.06
		7/17/1989	0.0 / 0.0	71.0	71.00	149.53	51.40	0.0	98.13
		10/23/1989	55.0 / 0.0	71.0	70.30	149.53	54.63	0.7	94.90
		1/22/1990	11.0 / 0.0	71.0	70.06	149.53	53.91	0.9	95.62
		4/9/1990	4.9 / 0.0	71.0	69.70	149.53	52.02	1.3	97.51
		7/10/1990	-- / --	71.0	70.05	149.53	50.45	1.0	99.08
		10/15/1990	52.0 / 0.0	71.0	69.80	149.98	51.47	1.2	98.51
		1/7/1991	12.0 / 0.0	71.0	69.82	149.98	52.05	1.2	97.93
		1/19/1993	-- / --	71.0	--	149.98	42.58	--	107.40
		4/19/1993	52.0 / 0.0	71.0	--	149.98	34.92	--	115.06
		7/12/1993	0.0 / 0.0	71.0	--	149.98	34.34	--	115.64
		10/12/1993	0.2 / 0.0	71.0	--	149.98	34.33	--	115.65
		1/10/1994	10.2 / 0.0	71.0	--	149.98	34.39	--	115.59
		4/11/1994	7.0 / 5.0	71.0	--	149.98	33.63	--	116.35
		7/18/1994	22.0 / 2.0	71.0	--	149.98	33.10	--	116.88

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-08	41-41	10/10/1994	720.0 / 8.0	71.0	--	149.98	38.92	--	111.06
		1/16/1995	232.0 / 10.0	71.0	69.80	149.98	37.84	1.2	112.14
		4/17/1995	5.7 / 0.0	71.0	69.90	149.98	32.22	1.1	117.76
		7/10/1995	3.7 / 0.0	71.0	69.80	149.98	30.81	1.2	119.17
		10/9/1995	47.0 / 0.2	71.0	69.80	149.98	34.45	1.2	115.53
		1/29/1996	151.0 / 1.3	71.0	70.10	149.98	36.40	0.9	113.58
		4/15/1996	144.0 / 1.1	71.0	70.30	149.98	33.10	0.7	116.88
		7/15/1996	3.9 / 1.4	71.0	70.30	149.98	33.59	0.7	116.39
		10/7/1996	63.0 / 6.5	71.0	--	149.98	37.31	--	112.67
		1/13/1997	223.0 / 1.7	71.0	--	149.98	35.66	--	114.32
		4/15/1997	3.5 / 0.4	71.0	--	149.98	32.80	--	117.18
		7/8/1997	-- / --	71.0	--	149.98	32.73	--	117.25
		10/14/1997	28.1 / 0.0	71.0	--	149.98	36.24	--	113.74
		1/13/1998	227.0 / 0.0	71.0	--	149.98	38.02	--	111.96
		4/21/1998	8748.0 / 0.1	71.0	--	149.98	33.03	--	116.95
		7/14/1998	20.3 / 0.0	71.0	--	150.17	32.05	--	118.12
		10/19/1998	142.0 / 0.0	71.0	--	150.17	34.61	--	115.56
		1/19/1999	252.0 / 2.3	71.0	--	150.17	37.40	--	112.77
		4/20/1999	37.2 / 0.0	71.0	--	150.17	37.50	--	112.67
		7/20/1999	38.0 / 0.8	71.0	--	150.17	37.63	--	112.54
		10/22/1999	20.1 / 0.0	71.0	--	150.17	45.29	--	104.88
		1/25/2000	28.0 / 0.0	71.0	--	150.17	49.05	--	101.12
		4/24/2000	32.0 / 0.0	71.0	--	150.17	42.73	--	107.44
		10/17/2000	39.0 / 0.0	71	--	150.17	42.25	--	107.92
		10/25/2000	39.0 / 0.0	71.0	--	150.17	42.25	--	107.92
		4/17/2001	35.0 / 0.0	71	--	150.17	40.23	--	109.94
		7/17/2001	35.0 / 0.0	71.0	--	150.17	39.70	--	110.47
		10/16/2001	10.0 / 0.0	71	--	150.17	44.08	--	106.09
		1/15/2002	-- / --	71	70.07	150.17	42.92	0.9	107.25
		4/16/2002	0.8 / 0.0	71	69.91	150.17	42.42	1.1	107.75
		7/24/2002	0.6 / 0.0	71	70.25	150.17	46.73	0.8	103.44
		10/22/2002	4.8 / 0.0	71	70.25	150.17	50.20	0.8	99.97
		1/24/2003	1.1 / 0.1	71	70.25	150.17	48.28	0.8	101.89
		4/23/2003	1.1 / 0.1	71	70.25	150.17	48.28	0.8	101.89
		7/29/2003	5.1 / 0.1	71	70.17	150.17	47.38	0.8	102.79
		10/21/2003	1.9 / 0.1	71	70.10	150.17	53.17	0.9	97.00
		1/21/2004	2.2 / 0.0	71	70.20	150.17	54.75	0.8	95.42
		4/20/2004	1.4 / 0.2	71	70.18	150.17	54.10	0.8	96.07
		7/20/2004	0.9 / 0.4	71	70.02	150.17	57.00	1.0	93.17
		10/11/2004	0.0 / 0.0	71	70.03	150.17	60.77	1.0	89.40
		1/26/2005	0.0 / 0.0	71	69.59	149.70	57.50	1.4	92.20
		4/26/2005	1.1 / 0.0	71	69.59	149.70	47.57	1.4	102.13
		7/26/2005	1.9 / 0.0	71	69.58	149.70	45.05	1.4	104.65
		10/18/2005	1.9 / 0.0	71	69.35	149.70	46.20	1.7	103.50
		1/25/2006	6.3 / 1.3	71	69.65	149.70	47.21	1.3	102.49
		4/25/2006	1.6 / 0.0	71	69.60	149.70	44.35	1.4	105.35
		7/25/2006	0.7 / 0.0	71	69.65	149.70	43.90	1.3	105.80
		10/24/2006	337.0 / 3.4	71	69.54	149.70	46.12	1.5	103.58
		1/17/2007	1.5 / 0.0	71	69.60	149.70	46.04	1.4	103.66
		4/17/2007	0.0 / 0.0	71	69.64	149.70	44.70	1.4	105.00
		7/24/2007	3.1 / 0.0	71	69.70	149.70	45.84	1.3	103.86
		10/23/2007	7.3 / 0.0	71	69.58	149.70	52.02	1.4	97.68

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-08	41-41	1/29/2008	1.1 / 0.0	71	69.54	149.70	54.21	1.5	95.49
		4/22/2008	0.0 / 0.0	71	69.53	149.70	51.07	1.5	98.63
		7/28/2008	0.2 / 0.2	71	69.68	149.70	55.42	1.3	94.28
		10/28/2008	-- / --	71	69.60	149.70	60.85	1.4	88.85
		1/27/2009	0.0 / 0.1	71	69.55	149.70	64.29	1.5	85.41
		4/6/2009	2.3 / 0.1	71	69.52	149.70	62.91	1.5	86.79
		7/29/2009	0.0 / 0.0	71	69.54	149.70	65.37	1.5	84.33
		10/7/2009	0.0 / 0.0	71	69.50	149.70	68.42	1.5	81.28
		1/28/2010	0.0 / 0.0	71	69.30	149.70	DRY	1.7	--
		4/27/2010	0.0 / 0.0	71	69.57	149.70	65.62	1.4	84.08
		7/28/2010	0.0 / 0.0	71	69.59	149.70	64.27	1.4	85.43
		10/27/2010	0.0 / 0.0	71	69.55	149.70	67.00	1.5	82.70
		1/18/2011	0.0 / 0.0	71	69.54	149.70	64.94	1.5	84.76
		4/11/2011	0.0 / 0.0	71	69.38	149.70	58.18	1.6	91.52
		7/26/2011	0.0 / 0.0	71	69.55	149.70	50.44	1.5	99.26
		10/18/2011	0.0 / 0.0	71	69.37	149.70	51.74	1.6	97.96
		3/20/2012	0.1 / 0.1	71	69.40	149.70	52.38	1.6	97.32
		1/17/2012	0.0 / 0.0	71	69.45	149.70	52.29	1.6	97.41
		7/23/2012	0.8 / 0.2	71	69.28	149.70	53.33	1.7	96.37
		10/29/2012	0.0 / 0.0	71	69.31	149.70	58.12	1.7	91.58
MW-09	44-77	1/15/1989	22.0 / 2.0	78.0	73.08	151.14	55.59	4.9	95.55
		4/25/1989	56.0 / 0.0	77.0	78.50	151.14	51.47	--	99.67
		7/17/1989	42.0 / 0.0	77.0	74.00	151.14	52.37	3.0	98.77
		10/23/1989	34.0 / 0.0	77.0	74.60	151.14	55.52	2.4	95.62
		1/22/1990	86.0 / 0.0	77.0	73.65	151.14	54.83	3.3	96.31
		4/9/1990	45.0 / 0.0	77.0	73.60	151.14	52.88	3.4	98.26
		7/10/1990	11.0 / 0.0	77.0	73.68	151.14	51.36	3.3	99.78
		10/15/1990	34.0 / 0.0	77.0	73.31	151.03	52.34	3.7	98.69
		1/7/1991	92.0 / 0.0	77.0	73.28	151.03	52.99	3.7	98.04
		4/8/1991	-- / --	77.0	76.90	151.03	50.20	0.1	100.83
		7/8/1991	17.9 / 0.0	77.0	73.40	151.03	49.15	3.6	101.88
		10/21/1991	57.8 / 0.0	77.0	74.20	151.03	49.73	2.8	101.30
		1/13/1992	240.0 / 0.0	77.0	73.40	151.03	47.41	3.6	103.62
		3/30/1992	52.5 / 0.0	77.0	73.40	151.03	44.76	3.6	106.27
		7/13/1992	105.0 / 0.0	77.0	73.30	151.03	44.10	3.7	106.93
		10/13/1992	75.4 / 0.0	77.0	73.40	151.03	46.73	3.6	104.30
		1/19/1993	-- / 0.0	77.0	73.00	151.03	43.48	4.0	107.55
		4/19/1993	48.0 / 0.0	77.0	73.54	151.03	35.77	3.5	115.26
		7/12/1993	0.0 / 0.0	77.0	73.30	151.03	35.22	3.7	115.81
		10/12/1993	0.4 / 0.0	77.0	73.40	151.03	35.24	3.6	115.79
		1/10/1994	79.0 / 11.0	77.0	73.40	151.03	35.27	3.6	115.76
		4/11/1994	47.0 / 13.0	77.0	73.40	151.03	34.52	3.6	116.51
		7/18/1994	10.3 / 8.4	77.0	73.20	151.03	34.00	3.8	117.03
		10/10/1994	199.0 / 43.0	77.0	73.30	151.03	39.86	3.7	111.17
		1/16/1995	49.0 / 4.1	77.0	73.40	151.03	38.78	3.6	112.25
		4/17/1995	125.0 / 4.1	77.0	73.40	151.03	33.11	3.6	117.92
		7/10/1995	116.0 / 10.6	77.0	73.30	151.03	31.72	3.7	119.31
		10/9/1995	63.0 / 24.0	77.0	73.30	151.03	35.36	3.7	115.67
		1/29/1996	345.0 / 0.0	73.5	73.50	152.96	39.23	0.0	113.73
		4/15/1996	21.0 / 0.0	73.5	73.50	152.96	35.96	0.0	117.00
		7/15/1996	32.0 / 25.0	73.5	73.50	152.96	36.47	0.0	116.49

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-09	44-77	10/7/1996	130.0 / 96.0	73.5	73.50	152.96	40.23	0.0	112.73
		1/13/1997	129.0 / 52.0	73.5	73.50	152.96	38.50	0.0	114.46
		4/15/1997	3.9 / 3.4	73.5	73.50	152.96	35.67	0.0	117.29
		7/8/1997	-- / --	73.5	73.50	152.96	35.62	0.0	117.34
		10/14/1997	56.0 / 2.0	73.5	75.60	152.96	39.21	--	113.75
		1/13/1998	23.4 / 0.0	73.5	75.47	152.96	40.90	--	112.06
		4/21/1998	169.0 / 0.1	73.5	73.51	152.96	35.89	--	117.07
		7/14/1998	27.5 / 0.0	73.5	73.55	152.96	34.70	--	118.26
		10/19/1998	49.0 / 0.0	73.5	73.50	152.96	37.47	0.0	115.49
		1/19/1999	45.9 / 1.0	73.5	73.40	152.96	40.28	0.1	112.68
		4/20/1999	86.5 / 0.0	73.5	73.50	152.96	40.19	0.0	112.77
		7/20/1999	15.1 / 0.8	73.5	73.50	152.96	40.39	0.0	112.57
		10/22/1999	0.0 / 0.0	73.5	73.50	152.96	48.05	0.0	104.91
		1/25/2000	29.0 / 0.0	73.5	73.50	152.96	51.81	0.0	101.15
		4/24/2000	54.0 / 0.0	73.5	73.69	152.96	45.40	--	107.56
		10/17/2000	11.0 / 0.0	77	73.70	152.96	45.15	3.3	107.81
		10/25/2000	11.0 / 0.0	73.5	73.70	152.96	45.15	--	107.81
		4/17/2001	9.1 / 0.0	77	73.50	152.96	42.81	3.5	110.15
		7/17/2001	9.1 / 0.0	73.5	72.70	152.96	42.33	0.8	110.63
		10/16/2001	7.0 / 0.0	77	75.62	152.96	46.75	1.4	106.21
		1/15/2002	0.6 / 0.0	77	75.28	152.96	45.57	1.7	107.39
		4/16/2002	2.8 / 0.0	77	72.54	152.96	45.07	4.5	107.89
		7/24/2002	6.1 / 0.0	77	72.80	152.96	49.45	4.2	103.51
		10/22/2002	12.0 / 0.1	77	72.80	152.96	52.86	4.2	100.10
		1/24/2003	4.2 / 0.1	77	72.80	152.96	50.94	4.2	102.02
		4/23/2003	4.0 / 0.5	77	75.64	152.96	46.83	1.4	106.13
		7/29/2003	32.8 / 0.0	77	75.51	152.96	50.07	1.5	102.89
		10/21/2003	21.1 / 0.0	77	75.62	152.96	55.90	1.4	97.06
		1/21/2004	5.8 / 0.0	77	75.70	152.96	57.56	1.3	95.40
		4/20/2004	2.2 / 0.2	77	75.63	152.96	56.72	1.4	96.24
		7/20/2004	1.9 / 0.0	77	75.50	152.96	59.67	1.5	93.29
		10/11/2004	0.0 / 0.0	77	75.48	152.96	63.61	1.5	89.35
		1/26/2005	50.2 / 34.1	77	74.92	152.41	60.03	2.1	92.38
		4/26/2005	19.6 / 1.0	77	74.97	152.41	50.06	2.0	102.35
		7/26/2005	6.0 / 1.0	77	74.97	152.41	47.61	2.0	104.80
		10/18/2005	21.7 / 0.0	77	74.70	152.41	48.54	2.3	103.87
		1/25/2006	4.5 / 1.4	77	75.01	152.41	49.89	2.0	102.52
		4/25/2006	4.9 / 0.0	77	75.05	152.41	46.90	2.0	105.51
		7/25/2006	16.0 / 0.0	77	74.80	152.41	46.47	2.2	105.94
		10/24/2006	17.1 / 0.5	77	75.13	152.41	48.70	1.9	103.71
		1/17/2007	18.2 / 0.0	77	75.00	152.41	48.60	2.0	103.81
		4/17/2007	7.1 / 0.0	77	75.05	152.41	47.27	2.0	105.14
		7/24/2007	6.5 / 0.0	77	75.08	152.41	48.43	1.9	103.98
		10/23/2007	49.1 / 0.4	77	74.99	152.41	54.69	2.0	97.72
		1/29/2008	0.0 / 0.0	77	74.86	152.41	57.03	2.1	95.38
		4/22/2008	128.0 / 0.0	77	74.94	152.41	53.68	2.1	98.73
		7/28/2008	0.4 / 0.1	77	75.02	152.41	58.17	2.0	94.24
		10/28/2008	-- / --	77	--	152.41	63.69	--	88.72
		1/27/2009	0.1 / 0.0	77	75.04	152.41	66.97	2.0	85.44
		4/6/2009	2.6 / 0.1	77	74.92	152.41	65.60	2.1	86.81
		7/29/2009	0.0 / 0.0	77	74.94	152.41	68.00	2.1	84.41
		10/7/2009	0.0 / 0.0	77	74.95	152.41	71.11	2.1	81.30

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-09	44-77	1/28/2010	0.0 / 0.0	77	75.00	152.41	73.73	2.0	78.68
		4/27/2010	0.0 / 0.0	77	75.00	152.41	68.36	2.0	84.05
		7/28/2010	0.0 / 0.0	77	75.01	152.41	66.98	2.0	85.43
		10/27/2010	0.0 / 0.0	77	75.05	152.41	69.79	2.0	82.62
		1/18/2011	0.0 / 0.0	77	75.00	152.41	67.59	2.0	84.82
		4/11/2011	0.0 / 0.0	77	74.97	152.41	60.70	2.0	91.71
		7/26/2011	0.0 / 0.2	77	75.03	152.41	53.05	2.0	99.36
		10/18/2011	0.0 / 0.0	77	74.73	152.41	54.35	2.3	98.06
		1/17/2012	0.0 / 0.0	77	74.98	152.41	54.84	2.0	97.57
		3/20/2012	0.0 / 0.2	77	75.08	152.41	55.15	1.9	97.26
		7/23/2012	4.5 / 0.0	77	74.66	152.41	56.25	2.3	96.16
		10/29/2012	0.8 / 0.1	77	74.72	152.41	60.74	2.3	91.67
MW-10	45-75	1/15/1989	135.0 / 1.0	75.0	73.92	151.60	55.89	1.1	95.71
		4/25/1989	-- / --	75.0	--	151.60	52.06	--	99.54
		7/17/1989	107.0 / 0.0	75.0	75.00	151.60	52.94	0.0	98.66
		10/23/1989	0.0 / 0.0	75.0	74.60	151.60	56.26	0.4	95.34
		1/22/1990	153.0 / 0.0	75.0	74.38	151.60	55.35	0.6	96.25
		4/9/1990	76.0 / 0.0	75.0	74.10	151.60	53.50	0.9	98.10
		7/10/1990	127.0 / 0.0	75.0	74.38	151.60	51.86	0.6	99.74
		10/15/1990	192.0 / 0.0	75.0	74.20	151.62	53.00	0.8	98.62
		1/7/1991	185.0 / 0.0	75.0	74.05	151.62	53.64	1.0	97.98
		1/19/1993	-- / --	75.0	--	151.62	44.06	--	107.56
		4/19/1993	8.0 / 0.0	75.0	--	151.62	36.34	--	115.28
		7/12/1993	0.0 / 0.0	75.0	--	151.62	35.80	--	115.82
		10/12/1993	2.5 / 0.0	75.0	--	151.62	35.79	--	115.83
		1/10/1994	137.0 / 0.0	75.0	--	151.62	35.88	--	115.74
		4/11/1994	157.0 / 0.2	75.0	--	151.62	35.12	--	116.50
		7/18/1994	61.3 / 0.6	75.0	--	151.62	34.60	--	117.02
		10/10/1994	687.0 / 6.0	75.0	--	151.62	40.47	--	111.15
		1/16/1995	85.0 / 8.8	75.0	73.90	151.62	39.39	1.1	112.23
		4/17/1995	0.5 / 0.0	75.0	74.20	151.62	33.73	0.8	117.89
		7/10/1995	83.0 / 0.0	75.0	74.00	151.62	32.33	1.0	119.29
		10/9/1995	56.0 / 0.2	75.0	74.10	151.62	35.99	0.9	115.63
		1/29/1996	0.0 / 0.0	75.0	74.50	153.89	40.19	0.5	113.70
		4/15/1996	154.0 / 0.0	75.0	74.50	153.89	36.86	0.5	117.03
		7/15/1996	98.0 / 1.0	75.0	74.50	153.89	37.43	0.5	116.46
		10/7/1996	7.3 / 1.0	75.0	--	153.89	41.16	--	112.73
		1/13/1997	9.3 / 1.7	75.0	--	153.89	39.47	--	114.42
		4/15/1997	10.0 / 0.9	75.0	--	153.89	36.62	--	117.27
		7/8/1997	-- / --	75.0	--	153.89	36.54	--	117.35
		10/14/1997	41.1 / 0.0	75.0	--	153.89	40.10	--	113.79
		1/13/1998	4.8 / 0.0	75.0	--	153.89	41.89	--	112.00
		4/21/1998	107.0 / 0.1	75.0	--	153.89	36.84	--	117.05
		7/14/1998	66.0 / 0.0	75.0	--	153.89	35.65	--	118.24
		10/19/1998	43.0 / 0.0	75.0	--	153.89	38.26	--	115.63
		1/19/1999	23.7 / 3.5	75.0	--	153.89	41.09	--	112.80
		4/20/1999	71.8 / 0.0	75.0	--	153.89	41.08	--	112.81
		7/20/1999	29.3 / 1.4	75.0	--	153.89	41.24	--	112.65
		10/22/1999	16.7 / 0.0	75.0	--	153.89	49.01	--	104.88
		1/25/2000	2.0 / 0.0	75.0	--	153.89	52.76	--	101.13
		4/24/2000	8.2 / 0.0	75.0	--	153.89	46.41	--	107.48

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-10	45-75	10/17/2000	11.0 / 0.0	75	--	153.89	46.09	--	107.80
		10/25/2000	11.0 / 0.0	75.0	--	153.89	46.09	--	107.80
		4/17/2001	8.3 / 0.0	75	--	153.89	43.76	--	110.13
		7/17/2001	8.3 / 0.0	75.0	--	153.89	43.30	--	110.59
		1/15/2002	-- / --	75	76.11	153.89	46.40	--	107.49
		4/16/2002	4.6 / 0.0	75	74.02	153.89	46.02	1.0	107.87
		7/24/2002	0.0 / 0.0	75	76.40	153.89	50.38	--	103.51
		10/22/2002	1.0 / 0.0	75	76.40	153.89	53.84	--	100.05
		1/24/2003	2.8 / 0.1	75	76.40	153.89	51.88	--	102.01
		4/23/2003	1.0 / 0.5	75	76.17	153.89	47.77	--	106.12
		7/29/2003	0.8 / 0.0	75	76.20	153.89	51.04	--	102.85
		10/21/2003	1.8 / 0.0	75	76.15	153.89	56.88	--	97.01
		1/21/2004	0.7 / 0.0	75	76.32	153.89	58.40	--	95.49
		4/20/2004	1.4 / 1.0	75	76.26	153.89	57.58	--	96.31
		7/20/2004	1.4 / 0.0	75	76.25	153.89	60.55	--	93.34
		10/11/2004	0.0 / 0.0	75	76.20	153.89	64.57	--	89.32
		1/26/2005	5.5 / 0.9	75	76.04	153.64	61.19	--	92.45
		4/26/2005	0.6 / 0.0	75	75.88	153.64	51.30	--	102.34
		7/26/2005	0.4 / 0.0	75	75.75	153.64	48.79	--	104.85
		10/18/2005	5.7 / 0.2	75	75.71	153.64	50.35	--	103.29
		1/25/2006	0.8 / 0.8	75	75.94	153.64	51.04	--	102.60
		4/25/2006	0.8 / 0.0	75	76.01	153.64	48.13	--	105.51
		7/25/2006	0.0 / 0.0	75	76.00	153.64	47.77	--	105.87
		10/24/2006	1.0 / 0.2	75	75.98	153.64	50.00	--	103.64
		1/17/2007	2.4 / 0.0	75	76.05	153.64	49.85	--	103.79
		4/17/2007	0.0 / 0.0	75	76.00	153.64	48.48	--	105.16
		7/24/2007	0.0 / 0.0	75	76.05	153.64	49.68	--	103.96
		10/24/2007	10.8 / 0.2	75	73.00	153.64	56.11	2.0	97.53
		1/29/2008	0.4 / 0.4	75	73.52	153.64	58.18	1.5	95.46
		4/22/2008	11.9 / 0.0	75	75.90	153.64	54.46	--	99.18
		7/28/2008	0.2 / 0.2	75	75.90	153.64	59.36	--	94.28
		10/28/2008	-- / --	75	75.86	153.64	64.87	--	88.77
		1/27/2009	0.0 / 0.0	75	75.93	153.64	68.17	--	85.47
		4/6/2009	19.0 / 0.0	75	75.90	153.64	66.71	--	86.93
		7/29/2009	0.0 / 0.0	75	75.94	153.64	69.24	--	84.40
		10/7/2009	0.0 / 0.0	75	75.93	153.64	72.42	--	81.22
		1/28/2010	0.0 / 0.0	75	75.95	153.64	74.90	--	78.74
		4/27/2010	0.0 / 0.0	75	76.02	153.64	69.45	--	84.19
		7/28/2010	0.0 / 0.0	75	75.99	153.64	68.22	--	85.42
		10/27/2010	0.0 / 0.0	75	75.96	153.64	70.98	--	82.66
		1/18/2011	0.0 / 0.0	75	75.87	153.64	68.72	--	84.92
		4/11/2011	0.0 / 0.0	75	75.95	153.64	61.90	--	91.74
		7/26/2011	0.0 / 0.0	75	75.89	153.64	54.14	--	99.50
		10/18/2011	0.0 / 0.0	75	75.87	153.64	55.46	--	98.18
		1/17/2012	0.0 / 0.0	75	75.90	153.64	55.94	--	97.70
		3/20/2012	0.0 / 0.2	75	75.72	153.64	56.35	--	97.29
		7/23/2012	0.0 / 0.0	75	75.56	153.64	57.53	--	96.11
		10/29/2012	0.0 / 0.0	75	75.74	153.64	62.02	--	91.62
MW-11	55-75	1/15/1989	337.0 / 2.0	76.0	75.65	152.80	56.83	0.3	95.97
		4/25/1989	63.0 / 0.0	75.5	73.00	152.80	52.95	2.5	99.85
		7/17/1989	0.0 / 0.0	75.5	74.20	152.80	53.85	1.3	98.95

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-11	55-75	10/23/1989	218.0 / 0.0	75.5	75.20	152.80	57.03	0.3	95.77
		1/22/1990	125.0 / 0.0	75.5	74.96	152.80	56.21	0.5	96.59
		4/9/1990	56.0 / 0.0	75.5	74.68	152.80	54.36	0.8	98.44
		7/10/1990	28.0 / 0.0	75.5	74.92	152.80	52.80	0.6	100.00
		10/15/1990	49.0 / 0.0	75.5	74.73	152.81	53.84	0.8	98.97
		1/7/1991	52.0 / 0.0	75.5	74.70	152.81	54.52	0.8	98.29
		4/8/1991	-- / --	75.5	76.40	152.81	51.64	--	101.17
		7/8/1991	35.8 / 0.0	75.5	74.50	152.81	50.62	1.0	102.19
		10/21/1991	45.5 / 0.0	75.5	75.00	152.81	51.20	0.5	101.61
		3/30/1992	3.9 / 0.0	75.5	74.80	152.81	46.20	0.7	106.61
		1/13/1992	1.8 / 0.0	75.5	74.50	152.81	48.72	1.0	104.09
		7/13/1992	2.4 / 0.0	75.5	74.26	152.81	45.69	1.2	107.12
		10/13/1992	34.2 / 0.0	75.5	72.40	152.81	48.26	3.1	104.55
		1/19/1993	-- / 0.0	75.5	74.50	152.81	44.54	1.0	108.27
		4/19/1993	0.0 / 0.0	75.5	74.60	152.81	37.21	0.9	115.60
		7/12/1993	0.0 / 0.0	75.5	74.08	152.81	36.74	1.4	116.07
		10/12/1993	0.2 / 0.0	75.5	74.30	152.81	36.80	1.2	116.01
		1/10/1994	0.2 / 0.0	75.5	74.30	152.81	36.78	1.2	116.03
		4/11/1994	0.2 / 0.0	75.5	74.10	152.81	35.98	1.4	116.83
		7/18/1994	12.0 / 3.9	75.5	74.20	152.81	35.58	1.3	117.23
		10/10/1994	8.8 / 4.1	75.5	74.10	152.81	41.51	1.4	111.30
		1/16/1995	13.0 / 0.7	75.5	74.00	152.81	40.28	1.5	112.53
		4/17/1995	18.2 / 0.0	75.5	74.20	152.81	34.55	1.3	118.26
		7/10/1995	0.0 / 0.0	75.5	73.97	152.81	33.30	1.5	119.51
		10/9/1995	2.0 / 0.0	75.5	73.97	152.81	37.01	1.5	115.80
		1/29/1996	104.0 / 0.0	75.5	74.10	152.81	38.83	1.4	113.98
		4/15/1996	25.0 / 0.0	75.5	74.20	152.81	35.44	1.3	117.37
		7/15/1996	1355.0 / 1255.0	75.5	74.30	152.81	36.06	1.2	116.75
		10/7/1996	35.0 / 2.7	75.5	74.20	152.81	39.86	1.3	112.95
		1/13/1997	3.1 / 1.3	75.5	74.30	152.81	38.03	1.2	114.78
		4/15/1997	2.6 / 1.7	75.5	74.30	152.81	35.21	1.2	117.60
		7/8/1997	-- / --	75.5	74.10	152.81	35.20	1.4	117.61
		10/14/1997	48.0 / 0.0	75.5	73.97	152.81	38.79	1.5	114.02
		1/13/1998	56.5 / 0.0	75.5	73.97	152.81	40.58	1.5	112.23
		4/21/1998	3.5 / 0.0	75.5	73.97	152.81	35.45	1.5	117.36
		7/14/1998	4.0 / 0.0	75.5	74.05	155.76	37.19	1.5	118.57
		10/19/1998	2.9 / 1.4	75.5	74.11	155.76	39.85	1.4	115.91
		1/19/1999	45.5 / 2.7	75.5	74.05	155.76	42.71	1.5	113.05
		4/20/1999	79.2 / 1.1	75.5	73.80	155.76	42.62	1.7	113.14
		7/20/1999	6.4 / 2.4	75.5	73.80	155.76	42.88	1.7	112.88
		10/22/1999	3.8 / 0.0	75.5	74.20	155.76	50.71	1.3	105.05
		1/25/2000	0.0 / 0.0	75.5	74.44	155.76	54.45	1.1	101.31
		4/24/2000	2.0 / 0.0	75.5	74.05	155.76	47.85	1.5	107.91
		10/25/2000	2.1 / 0.0	75.5	74.05	155.76	47.70	1.5	108.06
		10/17/2000	2.1 / 0.0	75.5	74.05	155.76	47.70	1.5	108.06
		4/17/2001	1.4 / 0.5	75.5	74.10	155.76	45.29	1.4	110.47
		7/17/2001	1.4 / 0.5	75.5	73.80	155.76	44.90	1.7	110.86
		10/16/2001	0.0 / 0.0	75.5	76.98	155.76	49.34	--	106.42
		1/15/2002	0.0 / 0.0	75.5	76.81	155.76	48.00	--	107.76
		4/16/2002	0.3 / 0.0	75.5	73.91	155.76	47.56	1.6	108.20
		7/24/2002	3.2 / 0.0	75.5	75.10	155.76	52.00	0.4	103.76
		10/22/2002	3.4 / 0.1	75.5	75.10	155.76	55.44	0.4	100.32

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-11	55-75	1/24/2003	22.8 / 0.1	75.5	75.10	155.76	53.28	0.4	102.48
		4/23/2003	1.7 / 0.0	75.5	76.93	155.76	49.35	--	106.41
		7/29/2003	5.6 / 0.0	75.5	77.08	155.76	52.68	--	103.08
		10/21/2003	1.9 / 0.0	75.5	76.90	155.76	58.53	--	97.23
		1/21/2004	0.0 / 0.0	75.5	76.93	155.76	59.97	--	95.79
		4/20/2004	2.6 / 0.2	75.5	76.90	155.76	59.11	--	96.65
		7/20/2004	6.7 / 0.0	75.5	76.80	155.76	62.30	--	93.46
		10/11/2004	2.0 / 0.0	75.5	76.71	155.76	66.32	--	89.44
		1/26/2005	0.9 / 0.0	75.5	76.55	155.45	62.60	--	92.85
		4/26/2005	20.1 / 0.0	75.5	76.45	155.45	52.75	--	102.70
		7/26/2005	3.7 / 0.0	75.5	76.38	155.45	50.26	--	105.19
		10/18/2005	27.4 / 0.0	75.5	76.14	155.45	51.35	--	104.10
		1/25/2006	1.3 / 1.0	75.5	76.54	155.45	52.62	--	102.83
		4/25/2006	2.4 / 0.0	75.5	76.50	155.45	49.50	--	105.95
		7/25/2006	6.5 / 0.0	75.5	76.43	155.45	49.25	--	106.20
		10/24/2006	181.0 / 26.0	75.5	76.42	155.45	51.51	--	103.94
		1/17/2007	5.1 / 0.0	75.5	76.40	155.45	51.32	--	104.13
		4/17/2007	5.1 / 0.0	75.5	76.40	155.45	49.97	--	105.48
		7/24/2007	9.4 / 0.0	75.5	76.38	155.45	51.20	--	104.25
		10/23/2007	17.3 / 0.8	75.5	76.34	155.45	57.58	--	97.87
		1/29/2008	2.1 / 0.1	75.5	76.00	155.45	59.50	--	95.95
		4/22/2008	2.2 / 0.0	75.5	76.28	155.45	56.40	--	99.05
		7/28/2008	0.8 / 0.2	75.5	76.29	155.45	60.90	--	94.55
		10/28/2008	-- / --	75.5	76.25	155.45	66.41	--	89.04
		1/27/2009	0.0 / 0.0	75.5	76.15	155.45	69.70	--	85.75
		4/6/2009	0.1 / 0.0	75.5	76.07	155.45	68.22	--	87.23
		7/29/2009	0.0 / 0.0	75.5	75.86	155.45	70.88	--	84.57
		10/7/2009	0.0 / 0.0	75.5	75.83	155.45	74.02	--	81.43
		1/28/2010	0.0 / 0.0	75.5	75.90	155.45	DRY	--	--
		4/27/2010	0.0 / 0.0	75.5	75.93	155.45	70.97	--	84.48
		7/28/2010	0.0 / 0.0	75.5	76.11	155.45	69.54	--	85.91
		10/27/2010	0.0 / 0.0	75.5	76.03	155.45	72.45	--	83.00
		1/18/2011	0.0 / 0.0	75.5	76.04	155.45	69.74	--	85.71
		4/11/2011	0.0 / 0.0	75.5	75.97	155.45	63.04	--	92.41
		7/26/2011	0.2 / 0.4	75.5	76.00	155.45	55.53	--	99.92
		10/18/2011	0.0 / 0.0	75.5	75.92	155.45	57.06	--	98.39
		1/17/2012	0.0 / 0.0	75.5	75.90	155.45	57.40	--	98.05
		3/20/2012	0.0 / 0.1	75.5	75.95	155.45	58.00	--	97.45
		7/23/2012	0.0 / 0.0	75.5	75.76	155.45	59.03	--	96.42
		10/29/2012	0.0 / 0.0	75.5	75.68	155.45	63.64	--	91.81
MW-12S	51-72	10/15/1990	7.0 / 0.0	72.0	73.20	152.64	53.36	--	99.28
		1/7/1991	10.0 / 0.0	72.0	71.81	152.64	53.80	0.2	98.84
		3/30/1992	205.0 / 0.0	72.0	--	152.64	45.64	--	107.00
		1/13/1992	11.3 / 0.0	72.0	--	152.64	48.24	--	104.40
		7/13/1992	6.9 / 0.0	72.0	--	152.64	45.10	--	107.54
		10/13/1992	42.0 / 0.0	72.0	--	152.64	47.68	--	104.96
		1/19/1993	3.1 / 0.0	72.0	--	152.64	44.30	--	108.34
		4/19/1993	0.0 / 0.0	72.0	--	152.64	36.73	--	115.91
		7/12/1993	0.0 / 0.0	72.0	--	152.64	36.30	--	116.34
		10/12/1993	0.4 / 0.0	72.0	--	152.64	30.27*	--	#Error
		1/10/1994	0.0 / 0.0	72.0	--	152.64	36.24	--	116.40

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-12S	51-72	4/11/1994	1.0 / 1.0	72.0	--	152.64	35.53	--	117.11
		7/18/1994	11.7 / 8.5	72.0	--	152.64	35.08	--	117.56
		10/10/1994	8.3 / 4.0	72.0	--	152.64	40.94	--	111.70
		1/16/1995	54.0 / 6.7	72.0	71.50	152.64	39.70	0.5	112.94
		4/17/1995	1.9 / 0.0	72.0	72.00	152.64	34.06	0.0	118.58
		7/10/1995	73.0 / 49.0	72.0	71.80	152.64	32.80	0.2	119.84
		10/9/1995	7.2 / 0.0	72.0	71.90	152.64	36.55	0.1	116.09
		1/29/1996	17.0 / 0.0	72.0	72.20	152.64	38.21	--	114.43
		4/15/1996	15.0 / 0.0	72.0	72.20	152.64	34.91	--	117.73
		7/15/1996	1.0 / 0.0	72.0	72.20	152.64	35.53	--	117.11
		10/7/1996	0.7 / 0.7	72.0	--	152.64	39.28	--	113.36
		1/13/1997	62.0 / 47.0	72.0	--	152.64	37.38	--	115.26
		4/15/1997	1.7 / 0.4	72.0	--	152.64	34.70	--	117.94
		7/8/1997	-- / --	72.0	--	152.64	34.68	--	117.96
		10/14/1997	1.3 / 0.0	72.0	--	152.64	38.22	--	114.42
		1/13/1998	75.0 / 0.0	72.0	--	152.64	39.96	--	112.68
		4/21/1998	21.0 / 0.0	72.0	--	152.64	34.83	--	117.81
		7/14/1998	0.0 / 0.0	72.0	--	155.79	36.96	--	118.83
		10/19/1998	2.9 / 1.4	72.0	--	155.79	39.53	--	116.26
		1/19/1999	0.0 / 0.0	72.0	--	155.79	42.29	--	113.50
		4/20/1999	0.0 / 0.0	72.0	--	155.79	42.29	--	113.50
		7/20/1999	7.3 / 1.4	72.0	--	155.79	42.55	--	113.24
		10/22/1999	31.0 / 0.0	72.0	--	155.79	50.27	--	105.52
		1/25/2000	69.0 / 0.0	72.0	--	155.79	53.89	--	101.90
		4/24/2000	1.2 / 0.0	72.0	--	155.79	47.44	--	108.35
		10/17/2000	0.0 / 0.0	72.0	--	155.79	47.27	--	108.52
		10/25/2000	0.0 / 0.0	72.0	--	155.79	47.27	--	108.52
		4/17/2001	0.0 / 0.0	72.0	--	155.79	44.92	--	110.87
		7/17/2001	0.0 / 0.0	72.0	--	155.79	44.49	--	111.30
		10/16/2001	0.0 / 0.0	72.0	--	155.79	48.25	--	107.54
		1/15/2002	-- / --	72.0	74.44	155.79	47.60	--	108.19
		4/16/2002	1.7 / 0.0	72.0	71.69	155.79	47.19	0.3	108.60
		7/24/2002	42.7 / 0.0	72.0	74.75	155.79	51.59	--	104.20
		10/22/2002	33.3 / 0.0	72.0	74.75	155.79	55.01	--	100.78
		1/24/2003	5.8 / 0.1	72.0	74.75	155.79	52.84	--	102.95
		4/23/2003	1.1 / 0.1	72.0	74.60	155.79	49.00	--	106.79
		7/29/2003	35.8 / 0.1	72.0	74.75	155.79	52.27	--	103.52
		10/21/2003	1.8 / 0.1	72.0	74.65	155.79	58.10	--	97.69
		1/21/2004	1.9 / 0.0	72.0	74.93	155.79	59.53	--	96.26
		4/20/2004	0.2 / 0.2	72.0	74.83	155.79	58.80	--	96.99
		7/20/2004	0.0 / 0.0	72.0	74.77	155.79	61.83	--	93.96
		10/11/2004	0.0 / 0.0	72.0	74.65	155.79	65.64	--	90.15
		1/26/2005	56.4 / 0.0	72.0	74.19	155.16	61.71	--	93.45
		4/26/2005	16.4 / 0.0	72.0	74.09	155.16	51.95	--	103.21
		7/26/2005	0.8 / 0.0	72.0	73.90	155.16	49.50	--	105.66
		10/18/2005	0.0 / 0.0	72.0	73.75	155.16	50.65	--	104.51
		1/25/2006	0.9 / 0.9	72.0	74.30	155.16	51.75	--	103.41
		4/25/2006	0.0 / 0.8	72.0	74.10	155.16	48.75	--	106.41
		7/25/2006	2.2 / 0.0	72.0	73.98	155.16	48.52	--	106.64
		10/24/2006	33.6 / 0.0	72.0	74.18	155.16	50.80	--	104.36
		1/17/2007	4.7 / 0.0	72.0	74.15	155.16	50.45	--	104.71
		4/17/2007	0.0 / 0.0	72.0	74.31	155.16	49.17	--	105.99

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-12S	51-72	7/25/2007	3.2 / 0.0	72.0	74.31	155.16	49.90	--	105.26
		10/23/2007	14.1 / 0.0	72.0	73.92	155.16	56.81	--	98.35
		1/29/2008	0.0 / 0.0	72.0	73.75	155.16	58.74	--	96.42
		4/22/2008	1.0 / 0.0	72.0	74.06	155.16	55.65	--	99.51
		7/28/2008	0.5 / 0.2	72.0	74.25	155.16	60.08	--	95.08
		10/28/2008	-- / --	72.0	74.26	155.16	65.62	--	89.54
		1/27/2009	0.0 / 0.0	72.0	74.33	155.16	68.80	--	86.36
		4/6/2009	1.7 / 0.0	72.0	74.00	155.16	67.30	--	87.86
		7/29/2009	0.0 / 0.0	72.0	74.03	155.16	69.74	--	85.42
		10/7/2009	0.0 / 0.0	72.0	73.84	155.16	72.91	--	82.25
		1/28/2010	0.0 / 0.0	72.0	73.57	155.16	DRY	--	--
		4/27/2010	0.0 / 0.0	72.0	73.88	155.16	70.05	--	85.11
		7/28/2010	0.0 / 0.0	72.0	74.15	155.16	68.71	--	86.45
		10/27/2010	0.0 / 0.0	72.0	74.46	155.16	71.18	--	83.98
		1/18/2011	0.0 / 0.0	72.0	74.00	155.16	69.30	--	85.86
		4/11/2011	0.0 / 0.0	72.0	73.98	155.16	62.35	--	92.81
		7/26/2011	0.2 / 0.2	72.0	73.99	155.16	53.76	--	101.40
		10/18/2011	0.0 / 0.0	72.0	73.76	155.16	56.18	--	98.98
		3/20/2012	0.0 / 0.0	72.0	74.12	155.16	57.13	--	98.03
		1/17/2012	0.0 / 0.0	72.0	74.16	155.16	56.57	--	98.59
		7/23/2012	0.8 / 0.0	72.0	74.03	155.16	58.19	--	96.97
		10/29/2012	0.0 / 0.0	72.0	74.04	155.16	62.63	--	92.53
MW-12D	84.5-100	10/15/1990	1.0 / 0.0	101.0	101.93	152.63	53.33	--	99.30
		1/7/1991	0.0 / 0.0	101.0	99.50	152.63	53.93	1.5	98.70
		3/30/1992	222.0 / 0.0	101.0	--	152.63	45.65	--	106.98
		1/13/1992	20.0 / 0.0	101.0	--	152.63	48.22	--	104.41
		7/13/1992	2.4 / 0.0	101.0	--	152.63	45.04	--	107.59
		10/13/1992	32.5 / 0.0	101.0	--	152.63	47.67	--	104.96
		1/19/1993	-- / 0.0	101.0	--	152.63	44.30	--	108.33
		4/19/1993	0.0 / 0.0	101.0	--	152.63	36.73	--	115.90
		7/12/1993	0.0 / 0.0	101.0	--	152.63	36.35	--	116.28
		10/12/1993	1.0 / 0.0	101.0	--	152.63	36.32	--	116.31
		1/10/1994	1.0 / 0.0	101.0	--	152.63	36.31	--	116.32
		4/11/1994	0.7 / 0.2	101.0	--	152.63	35.60	--	117.03
		7/18/1994	38.0 / 4.0	101.0	--	152.63	35.15	--	117.48
		10/10/1994	695.0 / 495.0	101.0	--	152.63	41.04	--	111.59
		1/16/1995	1.2 / 0.0	101.0	99.60	152.63	39.66	1.4	112.97
		4/17/1995	0.0 / 0.0	101.0	99.80	152.63	34.07	1.2	118.56
		7/10/1995	1.1 / 1.0	101.0	99.50	152.63	32.77	1.5	119.86
		10/9/1995	0.5 / 0.0	101.0	99.60	152.63	36.46	1.4	116.17
		1/29/1996	0.0 / 0.0	101.0	99.80	152.63	38.22	1.2	114.41
		4/15/1996	1.6 / 0.0	101.0	99.90	152.63	34.94	1.1	117.69
		7/15/1996	7.4 / 0.4	101.0	99.80	152.63	35.56	1.2	117.07
		10/7/1996	271.0 / 2.4	101.0	--	152.63	39.33	--	113.30
		1/13/1997	29.0 / 18.0	101.0	--	152.63	37.42	--	115.21
		4/15/1997	2.6 / 1.5	101.0	--	152.63	34.68	--	117.95
		7/8/1997	-- / --	101.0	--	152.63	34.69	--	117.94
		10/14/1997	1.3 / 0.0	101.0	--	152.63	38.18	--	114.45
		1/13/1998	0.0 / 0.0	101.0	--	152.63	39.94	--	112.69
		4/21/1998	1.3 / 0.0	101.0	--	152.63	34.85	--	117.78
		7/14/1998	0.4 / 0.0	101.0	--	155.72	36.93	--	118.79

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-12D	84.5-100	10/19/1998	2.9 / 1.4	101.0	--	155.72	39.59	--	116.13
		1/19/1999	0.0 / 0.0	101.0	--	155.72	42.35	--	113.37
		4/20/1999	1.0 / 0.0	101.0	--	155.72	42.22	--	113.50
		7/20/1999	1.7 / 1.4	101.0	--	155.72	42.58	--	113.14
		10/22/1999	0.0 / 0.0	101.0	--	155.72	50.32	--	105.40
		1/25/2000	0.0 / 0.0	101.0	--	155.72	53.93	--	101.79
		4/24/2000	0.0 / 0.0	101.0	--	155.72	47.49	--	108.23
		10/17/2000	0.0 / 0.0	101.0	--	155.72	47.34	--	108.38
		10/25/2000	0.0 / 0.0	101.0	--	155.72	47.34	--	108.38
		4/17/2001	0.0 / 0.0	101.0	--	155.72	44.95	--	110.77
		7/17/2001	0.0 / 0.0	101.0	--	155.72	44.95	--	110.77
		10/16/2001	0.0 / 0.0	101.0	--	155.72	48.33	--	107.39
		1/15/2002	-- / --	101.0	102.63	155.72	47.67	--	108.05
		4/16/2002	0.0 / 0.0	101.0	99.56	155.72	47.27	1.4	108.45
		7/24/2002	0.6 / 0.0	101.0	99.68	155.72	51.65	1.3	104.07
		10/22/2002	10.2 / 0.0	101.0	99.68	155.72	55.08	1.3	100.64
		1/24/2003	0.1 / 0.1	101.0	99.68	155.72	52.91	1.3	102.81
		4/23/2003	1.1 / 0.1	101.0	102.85	155.72	49.07	--	106.65
		7/29/2003	0.0 / 0.0	101.0	102.87	155.72	52.35	--	103.37
		10/21/2003	0.0 / 0.0	101.0	102.75	155.72	58.20	--	97.52
		1/21/2004	0.0 / 0.0	101.0	102.83	155.72	59.69	--	96.03
		4/20/2004	0.2 / 0.2	101.0	102.88	155.72	58.88	--	96.84
		7/20/2004	0.0 / 0.0	101.0	102.75	155.72	61.98	--	93.74
		10/11/2004	0.0 / 0.0	101.0	107.72	155.72	65.79	--	89.93
		1/26/2005	1.4 / 0.0	101.0	102.20	155.09	61.89	--	93.20
		4/26/2005	0.0 / 0.0	101.0	102.13	155.09	52.10	--	102.99
		7/26/2005	0.0 / 0.0	101.0	102.03	155.09	49.64	--	105.45
		10/18/2005	0.0 / 0.0	101.0	102.02	155.09	50.61	--	104.48
		1/25/2006	0.9 / 0.9	101.0	102.23	155.09	51.92	--	103.17
		4/25/2006	0.0 / 0.8	101.0	102.25	155.09	48.85	--	106.24
		7/25/2006	0.0 / 0.0	101.0	102.11	155.09	48.60	--	106.49
		10/24/2006	0.0 / 0.0	101.0	102.03	155.09	50.85	--	104.24
		1/17/2007	1.1 / 0.0	101.0	102.14	155.09	50.58	--	104.51
		4/17/2007	0.0 / 0.0	101.0	102.19	155.09	49.30	--	105.79
		7/24/2007	0.0 / 0.0	101.0	102.20	155.09	50.60	--	104.49
		10/23/2007	20.1 / 2.1	101.0	102.16	155.09	56.91	--	98.18
		1/29/2008	0.2 / 0.0	101.0	101.93	155.09	58.92	--	96.17
		4/22/2008	0.0 / 0.0	101.0	102.04	155.09	55.72	--	99.37
		7/28/2008	0.2 / 0.2	101.0	102.03	155.09	60.27	--	94.82
		10/28/2008	-- / --	101.0	102.05	155.09	65.69	--	89.40
		1/27/2009	0.0 / 0.0	101.0	102.18	155.09	68.90	--	86.19
		4/6/2009	0.0 / 0.1	101.0	102.10	155.09	67.50	--	87.59
		7/29/2009	0.0 / 0.0	101.0	102.10	155.09	69.95	--	85.14
		10/7/2009	0.0 / 0.0	101.0	102.03	155.09	73.02	--	82.07
		1/28/2010	0.0 / 0.0	101.0	102.11	155.09	75.55	--	79.54
		4/27/2010	0.0 / 0.0	101.0	102.12	155.09	70.21	--	84.88
		7/28/2010	0.0 / 0.0	101.0	102.04	155.09	68.86	--	86.23
		10/27/2010	0.0 / 0.0	101.0	102.02	155.09	71.67	--	83.42
		1/18/2011	0.0 / 0.0	101.0	101.92	155.09	69.36	--	85.73
		4/11/2011	0.0 / 0.0	101.0	102.00	155.09	62.48	--	92.61
		7/26/2011	0.0 / 0.6	101.0	101.98	155.09	55.00	--	100.09
		10/18/2011	0.0 / 0.0	101.0	101.80	155.09	56.40	--	98.69

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-12D	84.5-100	3/20/2012	0.1 / 0.0	101.0	101.90	155.09	57.24	--	97.85
		1/17/2012	0.2 / 0.0	101.0	101.84	155.09	56.70	--	98.39
		7/23/2012	1.1 / 0.0	101.0	101.83	155.09	58.33	--	96.76
		10/29/2012	0.0 / 0.0	101.0	101.72	155.09	62.74	--	92.35
MW-13S	50.3-70.3	10/15/1990	8.0 / 0.0	72.0	70.70	151.51	52.40	1.3	99.11
		1/7/1991	32.0 / 0.0	72.0	69.11	151.51	53.01	2.9	98.50
		1/19/1993	5.2 / 0.0	70.3	--	151.51	43.50	--	108.01
		4/19/1993	0.0 / 0.0	70.3	--	151.51	35.96	--	115.55
		7/12/1993	0.0 / 0.0	70.3	69.10	151.51	35.39	1.2	116.12
		10/12/1993	0.4 / 0.0	70.3	--	151.51	35.42	--	116.09
		1/10/1994	0.0 / 0.0	70.3	--	151.51	35.40	--	116.11
		4/11/1994	1.0 / 1.0	70.3	--	151.51	34.67	--	116.84
		7/18/1994	23.4 / 16.1	70.3	--	151.51	34.18	--	117.33
		10/10/1994	183.0 / 38.0	70.3	--	151.51	39.95	--	111.56
		1/16/1995	53.0 / 6.2	70.3	69.10	151.51	38.77	1.2	112.74
		4/17/1995	6.2 / 3.9	70.3	69.30	151.51	33.25	1.0	118.26
		7/10/1995	73.0 / 49.0	70.3	69.00	151.51	31.90	1.3	119.61
		10/9/1995	12.3 / 0.0	70.3	69.00	151.51	35.56	1.3	115.95
		1/29/1996	40.0 / 0.0	70.3	69.40	151.51	37.36	0.9	114.15
		4/15/1996	4.1 / 0.0	70.3	69.40	151.51	34.08	0.9	117.43
		7/15/1996	132.0 / 24.0	70.3	69.40	151.51	34.66	0.9	116.85
		10/7/1996	13.0 / 12.0	70.3	--	151.51	38.32	--	113.19
		1/13/1997	5.8 / 3.1	70.3	--	151.51	36.58	--	114.93
		4/15/1997	7.5 / 4.5	70.3	--	151.51	33.82	--	117.69
		7/8/1997	-- / --	70.3	--	151.51	33.79	--	117.72
		10/14/1997	3.2 / 0.0	70.3	--	151.51	37.28	--	114.23
		1/13/1998	26.0 / 0.0	70.3	--	151.51	39.10	--	112.41
		4/21/1998	6.5 / 0.1	70.3	--	151.51	34.03	--	117.48
		7/14/1998	2.4 / 0.0	70.3	--	151.72	33.16	--	118.56
		10/19/1998	17.0 / 0.0	70.3	--	151.72	35.44	--	116.28
		1/19/1999	65.1 / 0.8	70.3	--	151.72	38.51	--	113.21
		4/20/1999	2.3 / 1.1	70.3	--	151.72	38.46	--	113.26
		7/20/1999	5.2 / 2.1	70.3	--	151.72	38.71	--	113.01
		10/22/1999	13.6 / 0.0	70.3	--	151.72	46.37	--	105.35
		1/25/2000	7.0 / 0.0	70.3	--	151.72	50.04	--	101.68
		4/24/2000	0.0 / 0.0	70.3	--	151.72	43.70	--	108.02
		10/17/2000	3.8 / 0.0	70.3	--	151.72	43.52	--	108.20
		10/25/2000	3.8 / 0.0	70.3	--	151.72	43.52	--	108.20
		4/17/2001	2.1 / 0.0	70.3	--	151.72	41.09	--	110.63
		7/17/2001	2.1 / 0.0	70.3	--	151.72	40.76	--	110.96
		10/16/2001	0.9 / 0.0	70.3	--	151.72	45.11	--	106.61
		1/15/2002	-- / --	70.3	68.96	151.72	43.89	1.3	107.83
		4/16/2002	0.8 / 0.0	70.3	69.06	151.72	43.44	1.2	108.28
		7/24/2002	3.4 / 0.0	70.3	69.32	151.72	47.78	1.0	103.94
		10/22/2002	29.3 / 0.0	70.3	69.32	151.72	51.20	1.0	100.52
		1/24/2003	3.6 / 0.0	70.3	69.32	151.72	49.16	1.0	102.56
		4/23/2003	3.8 / 0.1	70.3	69.38	151.72	45.30	0.9	106.42
		7/29/2003	4.6 / 0.1	70.3	69.24	151.72	48.44	1.1	103.28
		10/21/2003	1.9 / 0.1	70.3	69.25	151.72	54.26	1.1	97.46
		1/21/2004	2.9 / 0.0	70.3	69.47	151.72	55.70	0.8	96.02
		4/20/2004	2.2 / 0.2	70.3	69.44	151.72	55.02	0.9	96.70

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-13S	50.3-70.3	7/20/2004	1.9 / 0.0	70.3	69.25	151.72	57.90	1.1	93.82
		10/11/2004	0.0 / 0.0	70.3	69.37	151.72	61.70	0.9	90.02
		1/26/2005	16.3 / 9.3	70.3	68.89	151.27	58.41	1.4	92.86
		4/26/2005	56.6 / 0.0	70.3	68.83	151.27	48.56	1.5	102.71
		7/26/2005	14.0 / 0.1	70.3	68.77	151.27	45.93	1.5	105.34
		10/18/2005	0.2 / 0.0	70.3	68.77	151.27	47.10	1.5	104.17
		1/25/2006	5.9 / 0.8	70.3	68.75	151.27	48.29	1.6	102.98
		4/25/2006	2.4 / 0.0	70.3	68.77	151.27	45.25	1.5	106.02
		7/25/2006	1.8 / 0.0	70.3	68.86	151.27	45.05	1.4	106.22
		10/24/2006	0.0 / 0.0	70.3	68.82	151.27	47.08	1.5	104.19
		1/17/2007	15.3 / 0.0	70.3	68.84	151.27	46.95	1.5	104.32
		4/17/2007	7.9 / 0.0	70.3	68.90	151.27	45.71	1.4	105.56
		7/24/2007	8.2 / 0.0	70.3	68.95	151.27	46.82	1.3	104.45
		10/23/2007	4.3 / 0.0	70.3	68.58	151.27	53.08	1.7	98.19
		1/29/2008	3.9 / 0.0	70.3	68.67	151.27	55.11	1.6	96.16
		4/22/2008	6.5 / 0.0	70.3	68.65	151.27	52.06	1.6	99.21
		7/28/2008	0.2 / 0.2	70.3	68.84	151.27	56.37	1.5	94.90
		10/28/2008	-- / --	70.3	68.83	151.27	61.87	1.5	89.40
		1/27/2009	0.0 / 0.0	70.3	68.66	151.27	64.97	1.6	86.30
		4/6/2009	0.9 / 0.0	70.3	68.80	151.27	63.68	1.5	87.59
		7/29/2009	0.0 / 0.0	70.3	68.72	151.27	66.03	1.6	85.24
		10/7/2009	0.0 / 0.0	70.3	68.56	151.27	DRY	1.7	--
		1/28/2010	0.0 / 0.0	70.3	68.52	151.27	DRY	1.8	--
		4/27/2010	0.0 / 0.0	70.3	68.70	151.27	66.50	1.6	84.77
		7/28/2010	0.0 / 0.0	70.3	68.82	151.27	65.01	1.5	86.26
		10/27/2010	0.0 / 0.0	70.3	68.79	151.27	67.80	1.5	83.47
		1/18/2011	0.0 / 0.0	70.3	68.74	151.27	65.75	1.6	85.52
		4/11/2011	0.0 / 0.0	70.3	68.65	151.27	59.04	1.6	92.23
		7/26/2011	0.6 / 0.9	70.3	68.74	151.27	51.50	1.6	99.77
		10/18/2011	0.0 / 0.0	70.3	68.55	151.27	52.80	1.8	98.47
		1/17/2012	0.0 / 0.0	70.3	68.80	151.27	53.10	1.5	98.17
		3/20/2012	0.4 / 0.0	70.3	68.71	151.27	53.48	1.6	97.79
		7/23/2012	3.1 / 0.0	70.3	68.72	151.27	54.58	1.6	96.69
		10/29/2012	0.0 / 0.0	70.3	68.72	151.27	59.18	1.6	92.09
MW-13D	78.3-93.3	10/15/1990	2.0 / 0.0	98.0	95.20	151.52	52.44	2.8	99.08
		1/7/1991	1.0 / 0.0	98.0	93.36	151.52	53.05	4.6	98.47
		4/19/1993	0.0 / 0.0	93.3	--	151.52	35.98	--	115.54
		7/12/1993	0.0 / 0.0	93.3	--	151.52	35.38	--	116.14
		10/12/1993	0.0 / 0.0	93.3	--	151.52	35.42	--	116.10
		1/10/1994	0.2 / 0.0	93.3	--	151.52	35.40	--	116.12
		4/11/1994	0.2 / 0.2	93.3	--	151.52	34.68	--	116.84
		7/18/1994	10.2 / 2.2	93.3	--	151.52	34.19	--	117.33
		10/10/1994	9.1 / 6.0	93.3	--	151.52	39.96	--	111.56
		1/16/1995	1.9 / 1.0	93.3	93.30	151.52	38.77	0.0	112.75
		4/17/1995	0.0 / 0.0	93.3	93.50	151.52	33.26	--	118.26
		7/10/1995	176.0 / 115.0	93.3	93.30	151.52	31.91	0.0	119.61
		10/9/1995	0.0 / 0.0	93.3	93.30	151.52	35.55	0.0	115.97
		1/29/1996	0.0 / 0.0	93.3	93.60	151.52	37.40	--	114.12
		4/15/1996	0.9 / 0.0	93.3	93.60	151.52	34.11	--	117.41
		7/15/1996	111.0 / 15.0	93.3	93.60	151.52	34.63	--	116.89
		10/7/1996	5.0 / 3.8	93.3	--	151.52	38.35	--	113.17

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-13D	78.3-93.3	1/13/1997	1.7 / 1.0	93.3	--	151.52	36.56	--	114.96
		4/15/1997	14.0 / 3.6	93.3	--	151.52	33.85	--	117.67
		7/8/1997	-- / --	93.3	--	151.52	33.80	--	117.72
		10/14/1997	1.0 / 0.0	93.3	--	151.52	37.29	--	114.23
		1/13/1998	0.0 / 0.0	93.3	--	151.52	39.01	--	112.51
		4/21/1998	2.0 / 0.1	93.3	--	151.52	34.04	--	117.48
		7/14/1998	0.8 / 0.0	93.3	--	151.68	33.14	--	118.54
		10/19/1998	0.0 / 0.0	93.3	--	151.68	35.47	--	116.21
		1/19/1999	11.2 / 3.0	93.3	--	151.68	38.47	--	113.21
		4/20/1999	1.1 / 0.0	93.3	--	151.68	38.45	--	113.23
		7/20/1999	2.4 / 2.4	93.3	--	151.68	38.68	--	113.00
		10/22/1999	3.0 / 0.0	93.3	--	151.68	46.38	--	105.30
		1/25/2000	0.0 / 0.0	93.3	--	151.68	50.02	--	101.66
		4/24/2000	1.2 / 0.0	93.3	--	151.68	43.70	--	107.98
		10/25/2000	0.0 / 0.0	93.3	--	151.68	43.53	--	108.15
		10/17/2000	0.0 / 0.0	93.3	--	151.68	43.53	--	108.15
		4/17/2001	0.0 / 0.0	93.3	--	151.68	41.07	--	110.61
		7/17/2001	0.0 / 0.0	93.3	--	151.68	40.75	--	110.93
		10/16/2001	0.0 / 0.0	93.3	--	151.68	45.10	--	106.58
		1/15/2002	-- / --	93.3	93.43	151.68	43.78	--	107.90
		4/16/2002	2.1 / 0.0	93.3	93.41	151.68	43.43	--	108.25
		7/24/2002	0.3 / 0.1	93.3	93.79	151.68	47.76	--	103.92
		10/22/2002	29.3 / 0.1	93.3	93.79	151.68	51.18	--	100.50
		1/24/2003	5.8 / 0.1	93.3	93.79	151.68	49.17	--	102.51
		4/23/2003	9.2 / 0.1	93.3	93.61	151.68	45.28	--	106.40
		7/29/2003	4.2 / 0.0	93.3	93.60	151.68	48.43	--	103.25
		10/21/2003	1.0 / 0.0	93.3	93.60	151.68	54.20	--	97.48
		1/21/2004	0.0 / 0.0	93.3	93.70	151.68	55.72	--	95.96
		4/20/2004	1.6 / 0.2	93.3	93.60	151.68	55.05	--	96.63
		7/20/2004	0.0 / 0.0	93.3	93.50	151.68	57.94	--	93.74
		10/11/2004	0.0 / 0.0	93.3	93.50	151.68	61.82	--	89.86
		1/26/2005	0.9 / 0.4	93.3	93.20	151.29	58.40	0.1	92.89
		4/26/2005	18.7 / 0.0	93.3	93.13	151.29	48.64	0.2	102.65
		7/26/2005	5.7 / 0.0	93.3	93.02	151.29	46.11	0.3	105.18
		10/18/2005	2.4 / 0.0	93.3	48.55	151.29	46.95	44.8	104.34
		1/25/2006	1.0 / 1.0	93.3	49.20	151.29	48.37	44.1	102.92
		4/25/2006	5.8 / 1.6	93.3	49.74	151.29	45.25	43.6	106.04
		7/25/2006	2.0 / 0.0	93.3	49.85	151.29	44.95	43.5	106.34
		10/24/2006	0.0 / 0.0	93.3	50.07	151.29	47.20	43.2	104.09
		1/17/2007	0.0 / 0.0	93.3	93.10	151.29	47.00	0.2	104.29
		4/17/2007	4.9 / 0.0	93.3	93.16	151.29	45.77	0.1	105.52
		7/24/2007	3.6 / 0.0	93.3	93.18	151.29	46.97	0.1	104.32
		10/23/2007	0.0 / 0.0	93.3	92.95	151.29	53.18	0.3	98.11
		1/29/2008	0.6 / 0.0	93.3	92.84	151.29	55.00	0.5	96.29
		4/22/2008	0.5 / 0.0	93.3	93.10	151.29	52.13	0.2	99.16
		7/28/2008	0.1 / 0.2	93.3	92.93	151.29	56.43	0.4	94.86
		10/28/2008	-- / --	93.3	93.14	151.29	61.99	0.2	89.30
		1/27/2009	0.0 / 0.1	93.3	92.95	151.29	65.21	0.3	86.08
		4/6/2009	0.2 / 0.0	93.3	93.08	151.29	63.76	0.2	87.53
		7/29/2009	0.0 / 0.0	93.3	92.90	151.29	66.23	0.4	85.06
		10/7/2009	0.0 / 0.0	93.3	92.90	151.29	69.30	0.4	81.99
		1/28/2010	0.0 / 0.0	93.3	93.17	151.29	71.91	0.1	79.38

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-13D	78.3-93.3	4/27/2010	0.0 / 0.0	93.3	93.07	151.29	66.71	0.2	84.58
		7/28/2010	0.0 / 0.0	93.3	93.12	151.29	65.23	0.2	86.06
		10/27/2010	0.0 / 0.0	93.3	92.99	151.29	67.96	0.3	83.33
		1/18/2011	0.0 / 0.0	93.3	93.11	151.29	65.81	0.2	85.48
		4/11/2011	0.0 / 0.0	93.3	93.00	151.29	59.11	0.3	92.18
		7/26/2011	0.0 / 5.3	93.3	92.92	151.29	51.54	0.4	99.75
		10/18/2011	0.9 / 0.0	93.3	92.97	151.29	52.82	0.3	98.47
		3/20/2012	0.9 / 0.0	93.3	92.92	151.29	53.60	0.4	97.69
		1/17/2012	1.4 / 0.0	93.3	92.92	151.29	53.03	0.4	98.26
		7/23/2012	2.5 / 0.0	93.3	92.53	151.29	54.63	0.8	96.66
		10/29/2012	0.6 / 0.0	93.3	92.54	151.29	59.12	0.8	92.17
MW-14S	46-72	10/15/1990	2.0 / 0.0	72.0	72.42	150.50	52.43	--	98.07
		1/7/1991	10.0 / 0.0	72.0	70.75	150.50	53.12	1.3	97.38
		4/8/1991	-- / --	72.0	70.44	150.50	51.24	1.6	99.26
		7/8/1991	9.2 / 0.0	71.5	70.80	150.50	49.23	0.7	101.27
		10/21/1991	6.3 / 0.0	71.5	71.40	150.50	49.84	0.1	100.66
		3/30/1992	1.2 / 0.0	71.5	71.00	150.50	44.80	0.5	105.70
		1/13/1992	21.5 / 0.0	71.5	71.00	150.50	47.42	0.5	103.08
		7/13/1992	8.1 / 0.0	71.5	71.20	150.50	44.12	0.3	106.38
		10/13/1992	21.3 / 0.0	71.5	70.80	150.50	46.78	0.7	103.72
		1/19/1993	-- / 0.0	71.5	70.80	150.50	43.50	0.7	107.00
		4/19/1993	0.0 / 0.0	71.5	71.10	150.50	35.70	0.4	114.80
		7/12/1993	0.0 / 0.0	71.5	70.80	150.50	35.14	0.7	115.36
		10/12/1993	0.2 / 0.0	71.5	71.00	150.50	35.08	0.5	115.42
		1/10/1994	0.0 / 0.0	71.5	69.10	150.50	35.22	2.4	115.28
		4/11/1994	1.2 / 0.2	71.5	69.00	150.50	34.44	2.5	116.06
		7/18/1994	3.7 / 0.0	71.5	70.80	150.50	33.86	0.7	116.64
		10/10/1994	22.0 / 4.2	71.5	70.70	150.50	39.80	0.8	110.70
		2/8/1995	5.3 / 0.0	71.5	70.70	150.50	37.40	0.8	113.10
		4/17/1995	2.4 / 0.0	71.5	70.90	150.50	33.00	0.6	117.50
		7/10/1995	0.0 / 0.0	71.5	70.70	150.50	31.57	0.8	118.93
		10/9/1995	6.9 / 0.0	71.5	70.80	150.50	35.25	0.7	115.25
		1/29/1996	2.5 / 0.0	71.5	71.00	150.50	37.37	0.5	113.13
		4/15/1996	14.0 / 0.0	71.5	71.00	150.50	33.98	0.5	116.52
		7/15/1996	4.7 / 0.2	71.5	71.00	150.50	34.46	0.5	116.04
		10/7/1996	0.7 / 0.7	71.5	71.00	150.50	38.28	0.5	112.22
		1/13/1997	3.1 / 0.0	71.5	71.00	150.50	36.65	0.5	113.85
		4/15/1997	1.7 / 0.1	71.5	71.00	150.50	33.68	0.5	116.82
		7/8/1997	-- / --	71.5	71.00	150.50	33.29	0.5	117.21
		10/14/1997	6.5 / 0.0	71.5	79.00	150.50	37.11	--	113.39
		1/13/1998	15.6 / 0.0	71.5	70.75	150.50	39.07	0.8	111.43
		4/21/1998	1.0 / 0.1	71.5	70.73	150.50	34.03	0.8	116.47
		7/14/1998	0.1 / 0.0	71.5	70.80	150.50	32.71	0.7	117.79
		10/19/1998	2.0 / 0.0	71.5	70.75	150.50	35.31	0.8	115.19
		1/19/1999	28.6 / 13.5	71.5	70.75	150.50	38.19	0.8	112.31
		4/20/1999	7.0 / 1.0	71.5	70.70	150.50	38.29	0.8	112.21
		7/20/1999	17.2 / 1.4	71.5	70.70	150.50	38.31	0.8	112.19
		10/22/1999	53.0 / 0.0	71.5	70.80	150.50	46.19	0.7	104.31
		1/25/2000	71.0 / 0.0	71.5	71.00	150.50	50.07	0.5	100.43
		4/24/2000	23.0 / 0.0	71.5	70.88	150.50	43.59	0.6	106.91
		10/17/2000	19.0 / 0.0	71.5	70.38	150.50	43.44	1.1	107.06

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-14S	46-72	10/25/2000	19.0 / 0.0	71.5	70.38	150.50	43.44	1.1	107.06
		4/17/2001	15.2 / 0.1	71.5	70.40	150.50	41.08	1.1	109.42
		7/17/2001	15.2 / 0.1	71.5	70.90	150.54	40.47	0.6	110.07
		10/16/2001	4.0 / 0.0	71.5	70.90	150.54	45.00	0.6	105.54
		1/15/2002	2.6 / 0.0	71.5	70.57	150.54	43.80	0.9	106.74
		4/16/2002	9.6 / 0.0	71.5	70.62	150.54	43.27	0.9	107.27
		7/24/2002	19.0 / 0.0	71.5	70.95	150.54	47.70	0.5	102.84
		10/22/2002	31.7 / 0.2	71.5	70.95	150.54	51.24	0.5	99.30
		1/24/2003	22.7 / 0.1	71.5	70.95	150.54	49.27	0.5	101.27
		4/23/2003	45.8 / 0.0	71.5	70.76	150.54	45.19	0.7	105.35
		7/29/2003	18.4 / 0.0	71.5	70.82	150.54	48.30	0.7	102.24
		10/21/2003	5.7 / 0.0	71.5	70.75	150.54	54.18	0.8	96.36
		1/21/2004	2.2 / 0.0	71.5	70.87	150.54	55.89	0.6	94.65
		4/20/2004	15.0 / 1.0	71.5	70.77	150.54	55.08	0.7	95.46
		7/20/2004	2.8 / 0.0	71.5	70.60	150.54	58.00	0.9	92.54
		10/11/2004	0.0 / 0.0	71.5	70.49	150.54	62.20	1.0	88.34
		1/26/2005	0.0 / 0.0	71.5	70.64	150.11	58.86	0.9	91.25
		4/26/2005	0.0 / 0.0	71.5	70.22	150.11	48.51	1.3	101.60
		7/26/2005	6.0 / 0.0	71.5	70.06	150.11	46.01	1.4	104.10
		10/18/2005	1.7 / 0.0	71.5	69.88	150.11	47.00	1.6	103.11
		1/25/2006	> 7.0 / 1.0	71.5	70.28	150.11	48.40	1.2	101.71
		4/25/2006	3.3 / 0.0	71.5	70.20	150.11	45.64	1.3	104.47
		7/25/2006	1.5 / 0.0	71.5	70.12	150.11	44.85	1.4	105.26
		10/24/2006	10.9 / 0.0	71.5	70.15	150.11	47.05	1.3	103.06
		1/17/2007	6.2 / 0.0	71.5	70.13	150.11	47.10	1.4	103.01
		4/17/2007	29.6 / 0.0	71.5	70.27	150.11	45.60	1.2	104.51
		7/24/2007	18.1 / 0.0	71.5	70.20	150.11	46.80	1.3	103.31
		10/23/2007	27.5 / 0.0	71.5	70.08	150.11	53.09	1.4	97.02
		1/29/2008	0.0 / 0.0	71.5	70.08	150.11	55.41	1.4	94.70
		4/22/2008	20.4 / 0.0	71.5	70.04	150.11	51.91	1.5	98.20
		7/28/2008	0.5 / 0.0	71.5	70.06	150.11	56.67	1.4	93.44
		10/28/2008	-- / --	71.5	70.11	150.11	62.34	1.4	87.77
		1/27/2009	-- / --	71.5	69.98	150.11	65.60	1.5	84.51
		4/6/2009	0.0 / 0.0	71.5	69.90	150.11	63.95	1.6	86.16
		7/29/2009	0.0 / 0.0	71.5	69.94	150.11	66.69	1.6	83.42
		10/7/2009	0.0 / 0.0	71.5	69.94	150.11	DRY	1.6	--
		1/28/2010	0.0 / 0.0	71.5	62.92	150.11	DRY	8.6	--
		4/27/2010	0.0 / 0.0	71.5	70.00	150.11	66.80	1.5	83.31
		7/29/2010	0.0 / 0.0	71.5	70.07	150.11	65.45	1.4	84.66
		10/29/2010	-- / --	71.5	69.98	150.11	68.38	1.5	81.73
		1/18/2011	-- / --	71.5	70.04	150.11	65.84	1.5	84.27
		4/13/2011	-- / --	71.5	70.00	150.11	58.91	1.5	91.20
		7/26/2011	0.0 / 0.3	71.5	69.97	150.11	51.33	1.5	98.78
		10/18/2011	6.1 / 1.6	71.5	69.88	150.11	52.57	1.6	97.54
		3/20/2012	0.0 / 0.0	71.5	69.95	150.11	53.62	1.6	96.49
		1/17/2012	0.0 / 0.0	71.5	69.90	150.11	53.10	1.6	97.01
		7/23/2012	0.0 / 0.0	71.5	69.72	150.11	54.72	1.8	95.39
		10/29/2012	0.0 / 0.0	71.5	69.72	150.11	59.38	1.8	90.73
MW-14D	88-103	10/15/1990	1.0 / 0.0	109.0	105.98	150.56	52.54	3.0	98.02
		1/7/1991	0.0 / 0.0	109.0	104.70	150.56	53.15	4.3	97.41
		1/13/1992	3.6 / 0.0	109.0	--	150.56	47.51	--	103.05

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-14D	88-103	3/30/1992	0.0 / 0.0	109.0	--	150.56	44.89	--	105.67
		7/13/1992	0.3 / 0.0	109.0	--	150.56	44.24	--	106.32
		10/13/1992	26.4 / 0.0	109.0	--	150.56	46.87	--	103.69
		1/19/1993	-- / 0.0	109.0	--	150.56	43.61	--	106.95
		4/19/1993	0.0 / 0.0	109.0	--	150.56	35.81	--	114.75
		7/12/1993	0.0 / 0.0	109.0	--	150.56	35.26	--	115.30
		10/12/1993	0.2 / 0.0	109.0	--	150.56	35.20	--	115.36
		1/10/1994	0.0 / 0.0	109.0	--	150.56	35.32	--	115.24
		4/11/1994	0.2 / 0.2	109.0	--	150.56	35.54	--	115.02
		7/18/1994	10.2 / 0.0	109.0	--	150.56	33.98	--	116.58
		10/10/1994	3.4 / 3.4	109.0	--	150.56	39.87	--	110.69
		2/8/1995	0.0 / 0.0	109.0	103.80	150.56	37.50	5.2	113.06
		4/17/1995	0.0 / 0.0	109.0	104.00	150.56	33.10	5.0	117.46
		7/10/1995	0.0 / 0.0	109.0	103.70	150.56	31.69	5.3	118.87
		10/9/1995	0.0 / 0.0	109.0	103.80	150.56	35.35	5.2	115.21
		1/29/1996	0.0 / 0.0	109.0	104.10	150.56	37.47	4.9	113.09
		4/15/1996	0.0 / 0.0	109.0	104.20	150.56	34.08	4.8	116.48
		7/15/1996	0.0 / 0.0	109.0	104.30	150.56	34.55	4.7	116.01
		10/7/1996	1.0 / 0.7	109.0	--	150.56	38.34	--	112.22
		1/13/1997	0.3 / 0.3	109.0	--	150.56	36.71	--	113.85
		4/15/1997	0.1 / 0.1	109.0	--	150.56	33.77	--	116.79
		7/8/1997	-- / --	109.0	--	150.56	33.65	--	116.91
		10/14/1997	0.3 / 0.0	109.0	--	150.56	37.19	--	113.37
		1/13/1998	0.0 / 0.0	109.0	--	150.56	39.12	--	111.44
		4/21/1998	0.1 / 0.1	109.0	--	150.56	34.09	--	116.47
		7/14/1998	0.0 / 0.0	109.0	--	150.56	32.78	--	117.78
		10/19/1998	7.0 / 0.0	109.0	--	150.56	35.38	--	115.18
		1/19/1999	21.2 / 4.3	109.0	--	150.56	38.24	--	112.32
		4/20/1999	0.0 / 0.0	109.0	--	150.56	38.35	--	112.21
		7/20/1999	1.4 / 1.4	109.0	--	150.56	38.37	--	112.19
		10/22/1999	0.0 / 0.0	109.0	--	150.56	46.21	--	104.35
		1/25/2000	0.0 / 0.0	109.0	--	150.56	50.10	--	100.46
		4/24/2000	0.0 / 0.0	109.0	--	150.56	43.65	--	106.91
		10/25/2000	1.4 / 0.0	109.0	--	150.56	43.51	--	107.05
		10/17/2000	1.4 / 0.0	103.3	--	150.56	43.51	--	107.05
		4/17/2001	1.4 / 0.0	103.3	--	150.56	41.16	--	109.40
		7/17/2001	1.4 / 0.0	109.0	--	150.60	40.53	--	110.07
		10/16/2001	0.0 / 0.0	103.3	--	150.60	45.07	--	105.53
		1/15/2002	-- / --	103.3	--	150.60	43.90	--	106.70
		4/16/2002	0.0 / 0.0	103.3	103.76	150.60	43.35	--	107.25
		7/24/2002	0.0 / 0.0	103.3	104.03	150.60	47.88	--	102.72
		10/22/2002	35.8 / 0.0	103.3	104.03	150.60	51.30	--	99.30
		1/24/2003	0.1 / 0.1	103.3	103.00	150.60	49.35	0.3	101.25
		4/23/2003	1.7 / 0.0	103.3	103.91	150.60	45.28	--	105.32
		7/29/2003	0.0 / 0.0	103.3	104.56	150.60	48.36	--	102.24
		10/21/2003	1.7 / 0.0	103.3	103.86	150.60	54.36	--	96.24
		1/21/2004	0.7 / 0.0	103.3	104.02	150.60	56.03	--	94.57
		4/20/2004	1.0 / 1.0	103.3	104.00	150.60	55.18	--	95.42
		7/20/2004	0.0 / 0.0	103.3	103.82	150.60	58.20	--	92.40
		10/11/2004	0.0 / 0.0	103.3	103.67	150.60	62.27	--	88.33
		1/26/2005	0.0 / 0.0	103.3	103.81	150.23	59.01	--	91.22
		4/26/2005	0.0 / 0.0	103.3	103.50	150.23	48.75	--	101.48

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-14D	88-103	7/26/2005	0.0 / 0.0	103.3	103.51	150.23	46.15	--	104.08
		10/18/2005	0.5 / 0.2	103.3	103.29	150.23	47.08	0.0	103.15
		1/25/2006	1.0 / 0.9	103.3	103.59	150.23	48.50	--	101.73
		4/25/2006	0.0 / 0.8	103.3	103.55	150.23	45.52	--	104.71
		7/25/2006	0.0 / 0.0	103.3	103.48	150.23	45.00	--	105.23
		10/24/2006	0.0 / 0.0	103.3	103.50	150.23	47.30	--	102.93
		1/17/2007	0.0 / 0.0	103.3	103.53	150.23	47.23	--	103.00
		4/17/2007	0.0 / 0.0	103.3	103.40	150.23	45.80	--	104.43
		7/24/2007	0.1 / 0.0	103.3	103.54	150.23	46.92	--	103.31
		10/23/2007	0.0 / 0.0	103.3	103.29	150.23	53.31	0.0	96.92
		1/29/2008	0.0 / 0.0	103.3	103.27	150.23	55.61	0.0	94.62
		4/22/2008	0.0 / 0.0	103.3	103.38	150.23	52.23	--	98.00
		7/28/2008	0.0 / 0.0	103.3	103.43	150.23	56.84	--	93.39
		10/28/2008	-- / --	103.3	103.39	150.23	62.52	--	87.71
		1/27/2009	-- / --	103.3	103.31	150.23	65.76	--	84.47
		4/6/2009	0.0 / 0.0	103.3	103.35	150.23	64.10	--	86.13
		7/29/2009	0.0 / 0.0	103.3	103.39	150.23	66.86	--	83.37
		10/7/2009	0.0 / 0.0	103.3	103.32	150.23	69.96	--	80.27
		1/28/2010	0.0 / 0.0	103.3	103.40	150.23	72.50	--	77.73
		4/27/2010	0.0 / 0.0	103.3	103.37	150.23	66.99	--	83.24
		7/29/2010	0.0 / 0.0	103.3	103.38	150.23	65.66	--	84.57
		10/29/2010	-- / --	103.3	103.59	150.23	68.55	--	81.68
		1/18/2011	-- / --	103.3	103.33	150.23	66.16	--	84.07
		4/13/2011	-- / --	103.3	103.50	150.23	59.12	--	91.11
		7/26/2011	0.0 / 0.1	103.3	103.50	150.23	51.53	--	98.70
		10/18/2011	4.8 / 2.1	103.3	103.27	150.23	52.84	0.0	97.39
		1/17/2012	0.0 / 0.0	103.3	103.20	150.23	53.38	0.1	96.85
		3/20/2012	0.0 / 0.0	103.3	103.50	150.23	53.78	--	96.45
		7/23/2012	0.0 / 0.0	103.3	103.04	150.23	54.92	0.3	95.31
		10/29/2012	0.0 / 0.0	103.3	103.28	150.23	59.59	0.0	90.64
MW-15S	51.5-71.5	10/15/1990	0.0 / 0.0	72.0	72.98	151.01	53.30	--	97.71
		1/7/1991	3.0 / 0.0	72.0	71.46	151.01	53.91	0.5	97.10
		4/8/1991	-- / 0.0	72.0	70.96	151.01	51.13	1.0	99.88
		7/8/1991	5.9 / 0.0	71.5	71.20	151.01	50.07	0.3	100.94
		10/21/1991	6.7 / 0.0	71.5	71.20	151.01	50.66	0.3	100.35
		1/13/1992	1.2 / 0.0	71.5	71.40	151.01	48.26	0.1	102.75
		3/30/1992	8.4 / 0.0	71.5	71.20	151.01	45.72	0.3	105.29
		7/13/1992	0.2 / 0.0	71.5	71.90	151.01	45.06	--	105.95
		10/13/1992	19.0 / 0.0	71.5	71.90	151.01	42.64	--	108.37
		1/19/1993	-- / 0.0	71.5	70.40	151.01	44.43	1.1	106.58
		4/19/1993	0.0 / 0.0	71.5	71.70	151.01	36.60	--	114.41
		7/12/1993	0.0 / 0.0	71.5	71.40	151.01	36.00	0.1	115.01
		10/12/1993	0.4 / 0.0	71.5	71.50	151.01	35.94	0.0	115.07
		1/10/1994	0.0 / 0.0	71.5	71.60	151.01	36.11	--	114.90
		4/11/1994	0.2 / 0.2	71.5	71.60	151.01	35.29	--	115.72
		7/18/1994	4.5 / 0.0	71.5	71.50	151.01	34.70	0.0	116.31
		10/10/1994	8.9 / 4.4	71.5	71.50	151.01	40.59	0.0	110.42
		2/8/1995	1.5 / 0.4	71.5	71.40	151.01	39.84	0.1	111.17
		4/17/1995	0.0 / 0.0	71.5	71.60	151.01	33.86	--	117.15
		7/10/1995	0.0 / 0.0	71.5	71.40	151.01	32.40	0.1	118.61
		10/9/1995	0.7 / 0.0	71.5	71.40	151.01	36.06	0.1	114.95

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-15S	51.5-71.5	1/29/1996	0.0 / 0.0	71.5	71.70	151.01	38.32	--	112.69
		4/15/1996	0.9 / 0.0	71.5	71.70	151.01	34.92	--	116.09
		7/15/1996	14.0 / 0.8	71.5	71.70	151.01	35.32	--	115.69
		10/7/1996	0.7 / 0.4	71.5	71.70	151.01	39.20	--	111.81
		1/13/1997	0.3 / 0.3	71.5	71.80	151.01	37.59	--	113.42
		4/15/1997	0.1 / 0.1	71.5	71.80	151.01	34.66	--	116.35
		7/8/1997	-- / --	71.5	71.80	151.01	34.41	--	116.60
		10/14/1997	0.5 / 0.0	71.5	70.60	151.01	37.93	0.9	113.08
		1/13/1998	0.9 / 0.0	71.5	71.45	151.01	39.95	0.0	111.06
		4/21/1998	237.0 / 0.1	71.5	71.42	151.01	34.96	0.1	116.05
		7/14/1998	0.0 / 0.0	71.5	71.40	151.01	33.54	0.1	117.47
		10/19/1998	2.0 / 0.0	71.5	71.40	151.01	36.14	0.1	114.87
		1/19/1999	31.4 / 1.9	71.5	71.50	151.01	39.03	0.0	111.98
		4/20/1999	2.3 / 1.1	71.5	71.40	151.01	39.16	0.1	111.85
		7/20/1999	1.7 / 1.4	71.5	71.40	151.01	39.12	0.1	111.89
		10/22/1999	0.0 / 0.0	71.5	71.40	151.01	46.94	0.1	104.07
		1/25/2000	4.0 / 0.0	71.5	71.50	151.01	50.92	0.0	100.09
		4/24/2000	1.2 / 0.0	71.5	71.40	151.01	44.45	0.1	106.56
		10/25/2000	0.0 / 0.0	71.5	71.20	151.01	44.19	0.3	106.82
		10/17/2000	0.0 / 0.0	71.5	71.20	151.01	44.19	0.3	106.82
		4/17/2001	0.0 / 0.0	71.5	71.42	151.01	41.88	0.1	109.13
		7/17/2001	0.0 / 0.0	71.5	71.42	151.01	41.17	0.1	109.84
		10/16/2001	0.0 / 0.0	71.5	71.56	151.01	45.74	--	105.27
		1/15/2002	0.0 / 0.0	71.5	71.24	151.01	44.64	0.3	106.37
		4/16/2002	0.0 / 0.0	71.5	71.26	151.01	44.02	0.2	106.99
		7/24/2002	0.1 / 0.1	71.5	70.97	151.01	48.44	0.5	102.57
		10/22/2002	30.8 / 0.1	71.5	70.97	151.01	51.98	0.5	99.03
		1/24/2003	0.4 / 0.1	71.5	70.97	151.01	50.10	0.5	100.91
		4/23/2003	4.0 / 0.1	71.5	71.46	151.01	46.02	0.0	104.99
		7/29/2003	0.6 / 0.0	71.5	71.40	151.01	49.02	0.1	101.99
		10/21/2003	0.0 / 0.0	71.5	71.43	151.01	55.02	0.1	95.99
		1/21/2004	0.0 / 0.0	71.5	71.49	151.01	56.77	0.0	94.24
		4/20/2004	0.4 / 0.4	71.5	71.47	151.01	55.88	0.0	95.13
		7/20/2004	0.9 / 0.0	71.5	71.25	151.01	58.85	0.3	92.16
		10/11/2004	0.0 / 0.0	71.5	71.45	151.01	63.02	0.0	87.99
		1/26/2005	0.0 / 0.0	71.5	71.26	150.74	59.66	0.2	91.08
		4/26/2005	0.5 / 0.0	71.5	71.12	150.74	49.63	0.4	101.11
		7/26/2005	0.3 / 0.0	71.5	71.12	150.74	46.96	0.4	103.78
		10/18/2005	0.2 / 0.0	71.5	70.97	150.74	47.85	0.5	102.89
		1/25/2006	1.1 / 1.0	71.5	71.21	150.74	49.32	0.3	101.42
		4/25/2006	0.0 / 0.8	71.5	71.10	150.74	46.37	0.4	104.37
		7/25/2006	0.0 / 0.0	71.5	71.10	150.74	45.86	0.4	104.88
		10/24/2006	0.0 / 0.0	71.5	71.10	150.74	48.50	0.4	102.24
		1/17/2007	0.0 / 0.0	71.5	71.11	150.74	48.10	0.4	102.64
		4/17/2007	0.0 / 0.0	71.5	71.05	150.74	46.63	0.5	104.11
		7/24/2007	0.0 / 0.0	71.5	71.16	150.74	47.66	0.3	103.08
		10/23/2007	0.0 / 0.0	71.5	71.05	150.74	54.08	0.5	96.66
		1/29/2008	0.0 / 0.0	71.5	70.79	150.74	56.40	0.7	94.34
		4/22/2008	1.9 / 0.0	71.5	71.17	150.74	53.07	0.3	97.67
		7/28/2008	0.0 / 0.0	71.5	71.04	150.74	57.68	0.5	93.06
		10/28/2008	-- / --	71.5	71.08	150.74	63.34	0.4	87.40
		1/27/2009	0.0 / 0.0	71.5	71.14	150.74	66.55	0.4	84.19

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-15S	51.5-71.5	4/6/2009	0.0 / 0.1	71.5	71.02	150.74	64.90	0.5	85.84
		7/29/2009	0.0 / 0.0	71.5	70.98	150.74	67.72	0.5	83.02
		10/7/2009	0.0 / 0.0	71.5	70.90	150.74	DRY	0.6	--
		1/28/2010	0.0 / 0.0	71.5	70.96	150.74	DRY	0.5	--
		4/27/2010	0.0 / 0.0	71.5	71.00	150.74	67.79	0.5	82.95
		7/28/2010	0.0 / 0.0	71.5	71.04	150.74	66.43	0.5	84.31
		10/27/2010	0.0 / 0.0	71.5	71.07	150.74	69.30	0.4	81.44
		1/18/2011	0.0 / 0.0	71.5	71.02	150.74	67.14	0.5	83.60
		4/11/2011	0.0 / 0.0	71.5	71.03	150.74	60.04	0.5	90.70
		7/26/2011	0.0 / 1.4	71.5	70.95	150.74	52.24	0.5	98.50
		10/18/2011	10.1 / 1.2	71.5	70.92	150.74	53.60	0.6	97.14
		1/17/2012	0.0 / 0.0	71.5	70.95	150.74	54.15	0.5	96.59
		3/20/2012	0.0 / 0.0	71.5	71.15	150.74	54.58	0.3	96.16
		7/23/2012	0.0 / 0.0	71.5	70.39	150.74	55.66	1.1	95.08
		10/29/2012	0.0 / 0.0	71.5	70.69	150.74	60.22	0.8	90.52
MW-15D	108.5-123.5	10/15/1990	0.0 / 0.0	125.0	123.76	150.96	53.37	1.2	97.59
		1/7/1991	0.0 / 0.0	125.0	123.70	150.96	54.06	1.3	96.90
		4/8/1991	-- / 0.0	125.0	125.70	150.96	51.16	--	99.80
		7/8/1991	0.8 / 0.0	123.8	125.00	150.96	50.23	--	100.73
		10/21/1991	1.2 / 0.0	123.8	125.00	150.96	50.76	--	100.20
		1/13/1992	1.2 / 0.0	123.8	123.80	150.96	48.26	0.0	102.70
		3/30/1992	0.0 / 0.0	123.8	123.80	150.96	45.67	0.0	105.29
		7/13/1992	1.3 / 0.0	123.8	123.80	150.96	45.00	0.0	105.96
		10/13/1992	8.1 / 0.0	123.8	122.80	150.96	47.78	1.0	103.18
		1/19/1993	-- / 0.0	123.8	123.40	150.96	44.42	0.4	106.54
		4/19/1993	0.0 / 0.0	123.8	124.10	150.96	36.54	--	114.42
		7/12/1993	0.0 / 0.0	123.8	123.50	150.96	35.98	0.3	114.98
		10/12/1993	0.2 / 0.0	123.8	124.00	150.96	36.04	--	114.92
		1/10/1994	0.0 / 0.0	123.8	124.00	150.96	36.02	--	114.94
		4/11/1994	0.2 / 0.2	123.8	123.90	150.96	35.19	--	115.77
		7/18/1994	1.8 / 0.0	123.8	123.80	150.96	34.77	0.0	116.19
		10/10/1994	3.1 / 3.0	123.8	124.10	150.96	40.72	--	110.24
		2/8/1995	1.6 / 1.3	123.8	123.90	150.96	39.87	--	111.09
		4/17/1995	0.0 / 0.0	123.8	124.00	150.96	33.88	--	117.08
		7/10/1995	0.0 / 0.0	123.8	123.90	150.96	32.52	--	118.44
		10/9/1995	0.0 / 0.0	123.8	123.90	150.96	36.27	--	114.69
		1/29/1996	0.0 / 0.0	123.8	124.20	150.96	38.27	--	112.69
		4/15/1996	0.0 / 0.0	123.8	124.20	150.96	34.80	--	116.16
		7/15/1996	0.6 / 0.2	123.8	124.20	150.96	35.40	--	115.56
		10/7/1996	-- / --	123.8	124.20	150.96	39.22	--	111.74
		1/13/1997	0.0 / 0.0	123.8	124.30	150.96	37.50	--	113.46
		4/15/1997	0.6 / 0.2	123.8	124.30	150.96	34.60	--	116.36
		7/8/1997	-- / --	123.8	124.30	150.96	34.51	--	116.45
		10/14/1997	0.3 / 0.0	123.8	124.00	150.96	38.03	--	112.93
		1/13/1998	0.0 / 0.0	123.8	123.60	150.96	39.99	0.2	110.97
		4/21/1998	11.7 / 0.1	123.8	123.80	150.96	34.92	0.0	116.04
		7/14/1998	0.0 / 0.0	123.8	123.80	150.96	33.63	0.0	117.33
		10/19/1998	1.4 / 1.4	123.8	124.05	150.96	36.24	--	114.72
		1/19/1999	28.4 / 2.5	123.8	124.00	150.96	39.04	--	111.92
		4/20/1999	1.1 / 0.0	123.8	123.90	150.96	39.15	--	111.81
		7/20/1999	1.4 / 1.4	123.8	123.90	150.96	39.22	--	111.74

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-15D	108.5-123.5	10/22/1999	0.0 / 0.0	123.8	123.95	150.96	47.08	--	103.88
		1/25/2000	0.0 / 0.0	123.8	124.30	150.96	50.95	--	100.01
		4/24/2000	0.0 / 0.0	123.8	123.95	150.96	44.42	--	106.54
		10/25/2000	1.8 / 0.0	123.8	123.70	150.96	44.27	0.1	106.69
		10/17/2000	1.8 / 0.0	123.8	123.70	150.96	44.27	0.1	106.69
		4/17/2001	0.0 / 0.0	123.8	123.40	150.96	41.92	0.4	109.04
		7/17/2001	0.0 / 0.0	123.8	123.80	150.96	41.34	0.0	109.62
		10/16/2001	0.0 / 0.0	123.8	123.88	150.96	45.88	--	105.08
		1/15/2002	0.0 / 0.0	123.8	124.46	150.96	44.64	--	106.32
		4/16/2002	0.0 / 0.0	123.8	123.81	150.96	44.13	--	106.83
		7/24/2002	0.0 / 0.0	123.8	123.81	150.96	48.60	--	102.36
		10/22/2002	38.1 / 0.0	123.8	123.81	150.96	51.95	--	99.01
		1/24/2003	0.1 / 0.1	123.8	123.81	150.96	50.11	--	100.85
		4/23/2003	0.0 / 0.0	123.8	124.05	150.96	46.10	--	104.86
		7/29/2003	0.2 / 0.0	123.8	124.92	150.96	49.24	--	101.72
		10/21/2003	1.1 / 0.0	123.8	124.10	150.96	55.27	--	95.69
		1/21/2004	0.7 / 0.0	123.8	124.05	150.96	56.87	--	94.09
		4/20/2004	0.4 / 0.4	123.8	124.06	150.96	55.98	--	94.98
		7/20/2004	0.9 / 0.0	123.8	123.77	150.96	59.14	0.0	91.82
		10/11/2004	0.0 / 0.0	123.8	123.92	150.96	63.31	--	87.65
		1/26/2005	0.0 / 0.0	123.8	123.57	150.62	59.29	0.2	91.33
		4/26/2005	0.6 / 0.1	123.8	123.60	150.62	49.45	0.2	101.17
		7/26/2005	0.0 / 0.0	123.8	123.63	150.62	47.09	0.2	103.53
		10/18/2005	0.2 / 0.0	123.8	123.40	150.62	48.00	0.4	102.62
		1/25/2006	1.1 / 1.0	123.8	123.65	150.62	49.33	0.1	101.29
		4/25/2006	0.0 / 0.8	123.8	123.52	150.62	46.45	0.3	104.17
		7/25/2006	0.0 / 0.0	123.8	123.40	150.62	45.83	0.4	104.79
		10/24/2006	0.0 / 0.0	123.8	123.48	150.62	48.13	0.3	102.49
		1/17/2007	0.0 / 0.0	123.8	123.45	150.62	48.04	0.3	102.58
		4/17/2007	0.0 / 0.0	123.8	123.60	150.62	46.55	0.2	104.07
		7/24/2007	0.0 / 0.0	123.8	123.50	150.62	48.10	0.3	102.52
		10/23/2007	0.0 / 0.0	123.8	123.54	150.62	54.28	0.3	96.34
		1/29/2008	0.2 / 0.0	123.8	123.34	150.62	56.37	0.5	94.25
		4/22/2008	0.0 / 0.2	123.8	123.57	150.62	53.11	0.2	97.51
		7/28/2008	0.0 / 0.0	123.8	123.51	150.62	57.80	0.3	92.82
		10/28/2008	-- / --	123.8	123.49	150.62	63.56	0.3	87.06
		1/27/2009	0.0 / 0.0	123.8	123.46	150.62	66.70	0.3	83.92
		4/6/2009	0.0 / 0.0	123.8	123.58	150.62	66.96	0.2	83.66
		7/29/2009	0.0 / 0.0	123.8	123.37	150.62	67.87	0.4	82.75
		10/7/2009	0.0 / 0.0	123.8	123.51	150.62	71.03	0.3	79.59
		1/28/2010	0.0 / 0.0	123.8	123.53	150.62	73.28	0.3	77.34
		4/27/2010	0.0 / 0.0	123.8	123.48	150.62	67.57	0.3	83.05
		7/28/2010	0.0 / 0.0	123.8	123.48	150.62	66.58	0.3	84.04
		10/27/2010	0.0 / 0.0	123.8	123.52	150.62	69.53	0.3	81.09
		1/18/2011	0.0 / 0.0	123.8	123.60	150.62	66.89	0.2	83.73
		4/11/2011	0.0 / 0.0	123.8	123.44	150.62	59.75	0.4	90.87
		7/26/2011	0.0 / 5.4	123.8	123.58	150.62	52.36	0.2	98.26
		10/18/2011	11.9 / 1.0	123.8	123.22	150.62	53.71	0.6	96.91
		3/20/2012	0.0 / 0.0	123.8	123.20	150.62	54.68	0.6	95.94
		1/17/2012	0.0 / 0.0	123.8	123.30	150.62	54.16	0.5	96.46
		7/23/2012	0.0 / 0.0	123.8	123.34	150.62	55.86	0.5	94.76
		10/29/2012	0.0 / 0.0	123.8	123.18	150.62	60.62	0.6	90.00

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-16	42-62	3/30/1992	0.0 / 0.0	62.5	62.50	150.22	44.23	0.0	105.99
		7/13/1992	3.0 / 0.0	62.5	62.50	150.22	43.52	0.0	106.70
		10/13/1992	30.0 / 0.0	62.5	61.60	150.22	46.15	0.9	104.07
		1/19/1993	-- / 0.0	62.5	61.80	150.22	42.92	0.7	107.30
		4/19/1993	155.0 / 0.0	62.5	71.70	150.22	35.32	--	114.90
		7/12/1993	0.0 / 0.0	62.5	61.80	150.22	34.68	0.7	115.54
		10/12/1993	0.5 / 0.0	62.5	62.00	150.22	34.71	0.5	115.51
		1/10/1994	13.0 / 0.0	62.5	62.00	150.22	34.76	0.5	115.46
		4/11/1994	1.0 / 0.7	62.5	62.00	150.22	33.97	0.5	116.25
		7/18/1994	15.0 / 0.1	62.5	61.90	150.22	33.44	0.6	116.78
		10/10/1994	143.0 / 44.0	62.5	61.90	150.22	39.20	0.6	111.02
		2/8/1995	70.0 / 11.0	62.5	61.90	150.22	38.14	0.6	112.08
		4/17/1995	1.0 / 0.0	62.5	62.00	150.22	32.62	0.5	117.60
		7/10/1995	0.0 / 0.0	62.5	61.90	150.22	31.23	0.6	118.99
		10/9/1995	7.4 / 1.0	62.5	61.90	150.22	34.77	0.6	115.45
		1/29/1996	68.0 / 0.0	62.5	62.20	150.22	36.73	0.3	113.49
		4/15/1996	31.0 / 0.0	62.5	62.20	150.22	33.50	0.3	116.72
		7/15/1996	18.0 / 2.1	62.5	62.20	150.22	33.98	0.3	116.24
		10/7/1996	15.0 / 12.0	62.5	62.20	150.22	37.63	0.3	112.59
		1/13/1997	8.6 / 0.3	62.5	62.30	150.22	36.04	0.2	114.18
		4/15/1997	6.7 / 1.5	62.5	62.30	150.22	33.21	0.2	117.01
		7/8/1997	-- / --	62.5	62.30	150.22	33.10	0.2	117.12
		10/14/1997	25.8 / 0.0	62.5	62.10	150.22	36.56	0.4	113.66
		1/13/1998	33.1 / 0.0	62.5	61.88	150.22	38.30	0.6	111.92
		4/21/1998	9.1 / 0.1	62.5	61.88	150.22	33.43	0.6	116.79
		7/14/1998	5.0 / 0.4	62.5	61.95	150.27	32.27	0.5	118.00
		10/19/1998	16.0 / 0.0	62.5	62.03	150.27	34.85	0.5	115.42
		1/19/1999	51.0 / 3.4	62.5	62.00	150.27	37.59	0.5	112.68
		4/20/1999	14.0 / 1.1	62.5	62.00	150.27	37.68	0.5	112.59
		7/20/1999	10.2 / 1.4	62.5	62.00	150.27	37.84	0.5	112.43
		10/22/1999	35.7 / 0.0	62.5	62.00	150.27	45.46	0.5	104.81
		1/25/2000	9.0 / 0.0	62.5	62.38	150.27	49.24	0.1	101.03
		4/24/2000	-- / --	62.5	62.04	150.27	43.02	0.5	107.25
		10/25/2000	6.3 / 0.0	62.5	61.75	150.27	42.76	0.8	107.51
		10/17/2000	6.3 / 0.0	62.5	61.75	150.27	42.76	0.8	107.51
		4/17/2001	3.2 / 0.0	62.5	62.00	150.27	40.40	0.5	109.87
		7/17/2001	3.2 / 0.0	62.5	61.80	150.27	39.93	0.7	110.34
		10/16/2001	0.0 / 0.0	62.5	62.17	150.27	44.29	0.3	105.98
		1/15/2002	0.6 / 0.0	62.5	62.17	150.27	43.10	0.3	107.17
		4/16/2002	7.7 / 0.1	62.5	61.90	150.27	42.67	0.6	107.60
		7/24/2002	0.8 / 0.0	62.5	62.23	150.27	46.96	0.3	103.31
		10/22/2002	2.8 / 0.0	62.5	62.23	150.27	50.43	0.3	99.84
		1/24/2003	2.1 / 0.1	62.5	62.23	150.27	48.50	0.3	101.77
		4/23/2003	2.8 / 0.1	62.5	62.13	150.27	44.62	0.4	105.65
		7/29/2003	3.7 / 0.0	62.5	62.12	150.27	44.49	0.4	105.78
		10/21/2003	-- / 0.0	62.5	62.11	150.27	53.32	0.4	96.95
		1/21/2004	1.4 / 0.0	62.5	62.11	150.27	54.94	0.4	95.33
		4/20/2004	36.0 / 0.2	62.5	62.10	150.27	54.30	0.4	95.97
		7/20/2004	1.4 / 0.4	62.5	62.00	150.27	57.15	0.5	93.12
		10/11/2004	0.0 / 0.0	62.5	62.00	150.27	61.15	0.5	89.12
		1/26/2005	14.9 / 5.5	62.5	61.65	149.98	58.17	0.9	91.81

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-16	42-62	4/26/2005	19.3 / 0.0	62.5	61.74	149.98	48.22	0.8	101.76
		7/26/2005	6.7 / 0.0	62.5	61.61	149.98	45.56	0.9	104.42
		10/18/2005	1.0 / 0.0	62.5	61.48	149.98	46.65	1.0	103.33
		1/25/2006	11.2 / 1.1	62.5	61.74	149.98	47.65	0.8	102.33
		4/25/2006	19.0 / 0.0	62.5	60.43	149.98	44.89	2.1	105.09
		7/25/2006	5.6 / 0.1	62.5	61.73	149.98	44.33	0.8	105.65
		10/24/2006	16.9 / 0.0	62.5	61.70	149.98	46.60	0.8	103.38
		1/17/2007	8.0 / 0.0	62.5	61.73	149.98	46.44	0.8	103.54
		4/17/2007	24.5 / 0.0	62.5	61.73	149.98	45.08	0.8	104.90
		7/24/2007	9.7 / 0.0	62.5	61.63	149.98	46.19	0.9	103.79
		10/23/2007	32.2 / 0.3	62.5	61.69	149.98	52.28	0.8	97.70
		1/29/2008	0.0 / 0.0	62.5	61.58	149.98	54.61	0.9	95.37
		4/22/2008	1.1 / 0.0	62.5	61.70	149.98	51.52	0.8	98.46
		7/28/2008	0.3 / 0.1	62.5	61.68	149.98	55.76	0.8	94.22
		10/28/2008	-- / --	62.5	61.72	149.98	61.28	0.8	88.70
		1/27/2009	0.0 / 0.0	62.5	61.71	149.98	61.68	0.8	88.30
		4/6/2009	64.7 / 0.0	62.5	61.72	149.98	DRY	0.8	--
		7/29/2009	0.0 / 0.0	62.5	61.72	149.98	DRY	0.8	--
		10/7/2009	0.0 / 0.0	62.5	61.75	149.98	DRY	0.8	--
		1/29/2010	0.1 / 0.1	62.5	61.74	149.98	DRY	0.8	--
		4/27/2010	0.0 / 0.0	62.5	61.76	149.98	61.72	0.7	88.26
		7/28/2010	0.0 / 0.0	62.5	71.78	149.98	DRY	--	--
		10/27/2010	0.0 / 0.0	62.5	61.76	149.98	DRY	0.7	--
		1/18/2011	0.0 / 0.0	62.5	61.75	149.98	DRY	0.8	--
		4/11/2011	0.0 / 0.0	62.5	61.70	149.98	58.73	0.8	91.25
		7/26/2011	0.0 / 8.3	62.5	61.71	149.98	51.00	0.8	98.98
		10/18/2011	0.0 / 0.0	62.5	62.90	149.98	50.28	--	99.70
		3/20/2012	0.0 / 0.0	62.5	61.70	149.98	52.95	0.8	97.03
		1/17/2012	7.2 / 0.0	62.5	61.84	149.98	52.71	0.7	97.27
		7/23/2012	6.5 / 0.0	62.5	61.46	149.98	54.04	1.0	95.94
		10/29/2012	1.0 / 0.0	62.5	61.52	149.98	58.83	1.0	91.15
MW-17S	64-74	7/28/2008	0.0 / 0.0	74.5	74.48	149.58	55.84	0.0	93.74
		10/28/2008	-- / --	74.5	74.35	149.58	61.43	0.2	88.15
		1/27/2009	0.0 / 0.0	74.5	74.40	149.58	64.73	0.1	84.85
		4/6/2009	0.0 / 0.0	74.5	74.32	149.58	63.10	0.2	86.48
		7/29/2009	0.0 / 0.0	74.5	74.71	149.58	65.58	--	84.00
		10/7/2009	0.0 / 0.0	74.5	74.33	149.58	68.70	0.2	80.88
		1/28/2010	0.0 / 0.0	74.5	74.31	149.58	71.43	0.2	78.15
		4/27/2010	0.0 / 0.0	74.5	74.37	149.58	65.89	0.1	83.69
		7/28/2010	0.0 / 0.0	74.5	74.34	149.58	64.54	0.2	85.04
		10/27/2010	0.0 / 0.0	74.5	74.34	149.58	67.42	0.2	82.16
		1/18/2011	0.0 / 0.0	74.5	74.25	149.58	65.44	0.3	84.14
		4/11/2011	0.0 / 0.0	74.5	74.37	149.58	58.21	0.1	91.37
		7/26/2011	0.0 / 0.0	74.5	74.44	149.58	50.58	0.1	99.00
		10/18/2011	11.4 / 0.6	74.5	74.33	149.58	51.71	0.2	97.87
		1/17/2012	0.5 / 0.0	74.5	74.25	149.58	52.35	0.3	97.23
		3/20/2012	5.4 / 0.0	74.5	74.50	149.58	52.79	0.0	96.79
		7/23/2012	0.0 / 0.0	74.5	74.13	149.58	53.89	0.4	95.69
		10/29/2012	0.0 / 0.0	74.5	74.02	149.58	58.52	0.5	91.06
MW-18S	57-67	7/28/2008	0.2 / 0.1	67.5	66.67	150.86	56.38	0.8	94.48
		10/28/2008	-- / --	67.5	66.58	150.86	61.88	0.9	88.98

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-18S	57-67	1/27/2009	0.1 / 0.0	67.5	66.67	150.86	65.13	0.8	85.73
		4/6/2009	0.1 / 0.2	67.5	66.54	150.86	63.83	1.0	87.03
		7/29/2009	0.0 / 0.0	67.5	66.56	150.86	66.11	0.9	84.75
		10/7/2009	0.0 / 0.0	67.5	66.52	150.86	66.27	1.0	84.59
		1/28/2010	0.0 / 0.0	67.5	66.34	150.86	66.00	1.2	84.86
		4/27/2010	0.0 / 0.0	67.5	66.64	150.86	66.32	0.9	84.54
		7/28/2010	0.0 / 0.0	67.5	66.62	150.86	65.13	0.9	85.73
		10/27/2010	0.0 / 0.0	67.5	66.71	150.86	66.33	0.8	84.53
		1/18/2011	0.0 / 0.0	67.5	67.00	150.86	65.90	0.5	84.96
		4/11/2011	0.0 / 0.0	67.5	66.61	150.86	59.01	0.9	91.85
		7/26/2011	0.2 / 2.4	67.5	66.61	150.86	51.43	0.9	99.43
		10/18/2011	1.6 / 0.0	67.5	66.53	150.86	52.67	1.0	98.19
		1/17/2012	2.0 / 0.0	67.5	66.72	150.86	53.07	0.8	97.79
		3/20/2012	1.1 / 0.0	67.5	66.65	150.86	53.45	0.8	97.41
		7/23/2012	4.3 / 0.0	67.5	66.32	150.86	54.59	1.2	96.27
		10/29/2012	0.0 / 0.0	67.5	66.28	150.86	59.12	1.2	91.74
MW-19S	63.5-73.5	7/28/2008	0.1 / 0.1	74.0	73.60	151.14	57.38	0.4	93.76
		10/28/2008	-- / --	74.0	73.54	151.14	63.00	0.5	88.14
		1/27/2009	0.0 / 0.1	74.0	73.70	151.14	66.19	0.3	84.95
		4/6/2009	0.0 / 0.0	74.0	73.52	151.14	64.63	0.5	86.51
		7/29/2009	0.0 / 0.0	74.0	73.47	151.14	67.34	0.5	83.80
		10/7/2009	0.0 / 0.0	74.0	73.52	151.14	70.43	0.5	80.71
		1/28/2010	0.0 / 0.0	74.0	73.40	151.14	72.80	0.6	78.34
		4/27/2010	0.0 / 0.0	74.0	73.57	151.14	67.38	0.4	83.76
		7/28/2010	0.0 / 0.0	74.0	73.57	151.14	66.03	0.4	85.11
		10/27/2010	0.0 / 0.0	74.0	73.57	151.14	68.98	0.4	82.16
		1/18/2011	0.0 / 0.0	74.0	73.54	151.14	66.70	0.5	84.44
		4/11/2011	0.0 / 0.0	74.0	73.58	151.14	59.64	0.4	91.50
		7/26/2011	0.0 / 0.0	74.0	73.57	151.14	51.93	0.4	99.21
		10/18/2011	5.3 / 0.0	74.0	73.42	151.14	53.38	0.6	97.76
		3/20/2012	4.1 / 0.0	74.0	73.62	151.14	54.31	0.4	96.83
		1/17/2012	4.8 / 0.0	74.0	73.66	151.14	53.95	0.3	97.19
		7/23/2012	0.7 / 0.0	74.0	73.03	151.14	55.49	1.0	95.65
		10/29/2012	0.0 / 0.0	74.0	73.14	151.14	60.14	0.9	91.00
MW-20S	58-68	7/28/2008	0.0 / 0.0	68.5	69.20	149.00	55.06	--	93.94
		10/28/2008	-- / --	68.5	69.07	149.00	60.57	--	88.43
		1/27/2009	0.1 / 0.0	68.5	69.17	149.00	63.87	--	85.13
		4/6/2009	0.0 / 0.0	68.5	69.10	149.00	62.30	--	86.70
		7/29/2009	0.0 / 0.0	68.5	69.15	149.00	64.93	--	84.07
		10/7/2009	0.0 / 0.0	68.5	69.12	149.00	68.00	--	81.00
		1/28/2010	0.0 / 0.0	68.5	69.00	149.00	68.95	--	80.05
		4/27/2010	0.0 / 0.0	68.5	69.10	149.00	65.13	--	83.87
		7/28/2010	0.0 / 0.0	68.5	69.13	149.00	63.80	--	85.20
		10/27/2010	0.0 / 0.0	68.5	69.11	149.00	66.64	--	82.36
		1/18/2011	0.0 / 0.0	68.5	69.09	149.00	64.50	--	84.50
		4/11/2011	0.0 / 0.0	68.5	69.12	149.00	57.48	--	91.52
		7/26/2011	0.0 / 2.2	68.5	69.15	149.00	50.03	--	98.97
		10/18/2011	3.3 / 0.0	68.5	69.42	149.00	51.08	--	97.92
		3/20/2012	0.6 / 0.0	68.5	69.25	149.00	52.08	--	96.92
		1/17/2012	1.0 / 0.0	68.5	69.04	149.00	51.70	--	97.30
		7/23/2012	5.6 / 0.0	68.5	68.85	149.00	53.22	--	95.78

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-20S	58-68	10/29/2012	0.0 / 0.0	68.5	68.82	149.00	57.72	--	91.28
MW-21S	67-77	7/28/2010	0.0 / 0.0	77	77.20	149.46	62.74	--	86.72
		10/27/2010	0.0 / 0.0	77	77.24	149.46	65.25	--	84.21
		1/18/2011	0.0 / 0.0	77	77.20	149.46	63.61	--	85.85
		4/11/2011	0.0 / 0.0	77	77.14	149.46	57.48	--	91.98
		7/26/2011	0.0 / 0.0	77	77.28	149.46	50.00	--	99.46
		10/18/2011	7.8 / 0.0	77	77.00	149.46	50.79	0.0	98.67
		1/17/2012	10.6 / 0.0	77	77.08	149.46	51.13	--	98.33
		3/20/2012	1.0 / 0.3	77	77.12	149.46	51.43	--	98.03
		7/23/2012	3.2 / 0.1	77	76.72	149.46	52.37	0.3	97.09
		10/29/2012	0.0 / 0.0	77	76.82	149.46	56.58	0.2	92.88
MW-21D	85-95	7/28/2010	0.0 / 0.0	95	95.15	149.36	62.71	--	86.65
		10/27/2010	0.0 / 0.0	95	95.20	149.36	65.23	--	84.13
		1/18/2011	0.0 / 0.0	95	95.13	149.36	63.48	--	85.88
		4/11/2011	0.0 / 0.0	95	95.10	149.36	57.33	--	92.03
		7/26/2011	0.0 / 0.0	95	95.29	149.36	50.00	--	99.36
		10/18/2011	9.8 / 0.0	95	94.93	149.36	50.87	0.1	98.49
		1/17/2012	6.9 / 0.0	95	95.06	149.36	51.05	--	98.31
		3/20/2012	6.9 / 0.5	95	95.04	149.36	51.33	--	98.03
		7/23/2012	3.5 / 0.3	95	94.93	149.36	52.32	0.1	97.04
		10/29/2012	0.0 / 0.0	95	94.82	149.36	56.38	0.2	92.98
MW-22S	65-75	7/28/2010	0.0 / 0.0	75	75.11	149.50	60.86	--	88.64
		10/27/2010	0.0 / 0.0	75	75.16	149.50	63.03	--	86.47
		1/18/2011	0.0 / 0.0	75	75.12	149.50	61.33	--	88.17
		4/11/2011	0.0 / 0.0	75	75.10	149.50	55.62	--	93.88
		7/26/2011	0.0 / 0.0	75	75.15	149.50	48.60	--	100.90
		10/18/2011	0.0 / 0.0	75	74.99	149.50	49.36	0.0	100.14
		1/17/2012	2.4 / 0.0	75	75.10	149.50	49.48	--	100.02
		3/20/2012	8.8 / 0.0	75	75.19	149.50	49.90	--	99.60
		7/23/2012	15.2 / 0.5	75	74.87	149.50	50.81	0.1	98.69
		10/29/2012	0.0 / 0.0	75	74.72	149.50	54.64	0.3	94.86
MW-22D	80-90	7/28/2010	0.0 / 0.0	90	90.18	149.56	60.98	--	88.58
		10/27/2010	0.0 / 0.0	90	90.18	149.56	63.24	--	86.32
		1/18/2011	0.0 / 0.0	90	90.10	149.56	61.43	--	88.13
		4/11/2011	0.0 / 0.0	90	90.07	149.56	55.65	--	93.91
		7/26/2011	0.0 / 0.0	90	90.19	149.56	48.73	--	100.83
		10/18/2011	12.1 / 0.0	90	89.86	149.56	49.55	0.1	100.01
		3/20/2012	15.8 / 0.0	90	90.20	149.56	49.98	--	99.58
		1/17/2012	22.0 / 0.0	90	90.04	149.56	49.55	--	100.01
		7/23/2012	16.8 / 1.2	90	89.56	149.56	50.92	0.4	98.64
		10/29/2012	0.0 / 0.0	90	89.69	149.56	54.88	0.3	94.68
MW-23S	65-75	7/28/2010	0.0 / 0.0	75	75.09	149.99	60.30	--	89.69
		10/27/2010	0.0 / 0.0	75	75.15	149.99	62.57	--	87.42
		1/18/2011	0.0 / 0.0	75	75.20	149.99	60.05	--	89.94
		4/11/2011	0.0 / 0.0	75	75.18	149.99	53.90	--	96.09
		7/26/2011	0.2 / 10.9	75	75.11	149.99	47.50	--	102.49
		10/18/2011	0.0 / 0.0	75	74.78	149.99	48.75	0.2	101.24
		1/17/2012	1.2 / 0.0	75	75.00	149.99	48.61	0.0	101.38

Table C-1
Phibro-Tech, Inc.
Groundwater Elevations

Well ID	Perforated Intervals (feet bgs)	Date	Well Headspace* (ppm)	Total Depth Constructed (feet bgs)	Total Depth Measured (feet below MP)	MP Elevation (feet MSL)	Depth to Water (feet below MP)	Calculated Casing Fill (feet)	Groundwater Elevation (feet MSL)
MW-23S	65-75	3/20/2012	3.6 / 0.0	75	75.13	149.99	49.23	--	100.76
		7/23/2012	14.3 / 0.1	75	74.77	149.99	50.22	0.2	99.77
		10/29/2012	1.0 / 0.0	75	74.62	149.99	54.52	0.4	95.47
MW-23D	80-90	7/28/2010	0.0 / 0.0	90	89.78	150.00	60.31	0.2	89.69
		10/27/2010	0.0 / 0.0	90	89.91	150.00	62.56	0.1	87.44
		1/18/2011	0.0 / 0.0	90	89.89	150.00	60.06	0.1	89.94
		4/11/2011	0.0 / 0.0	90	89.61	150.00	54.00	0.4	96.00
		7/26/2011	0.8 / 2.5	90	89.80	150.00	47.57	0.2	102.43
		10/18/2011	0.0 / 0.0	90	89.52	150.00	48.66	0.5	101.34
		3/20/2012	0.1 / 0.0	90	89.62	150.00	49.20	0.4	100.80
		1/17/2012	2.2 / 0.0	90	89.82	150.00	48.60	0.2	101.40
		7/23/2012	15.6 / 0.2	90	89.43	150.00	50.32	0.6	99.68
		10/29/2012	0.0 / 0.0	90	89.32	150.00	55.53	0.7	94.47

Notes:

MP = Measuring point (top of casing)
-- = Not measured or not calculated.
bgs = below ground surface
ppm = parts per million
MSL = mean sea level
*** Measured with PID prior to sampling (casing / background).**
(1) The depth to water calculation for well MW-15D on 4/6/2009 is believed to be based on an inaccurate field measurement.

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-01D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	6.3	5 U	5 U	--	--	--	26	5 U	5 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.6	1 U	1 U	--	--	--	40	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.1	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	10/23/1991		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	1 U	0.2 U	0.2 U	0.54	0.2 U	0.2 U	--	--	--	10	2 U	0.2 U
	1/15/1992		1 U	1 U	1 U	3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2	1 U	--	--	--	3.6	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.6	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.2	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.2	1 U	1 U
	1/15/1993		0.5 U	7.4	11	25	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	4/19/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.5 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	7/12/1993		0.5 U	3.5	3	7.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.8 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U	1 U	1 U
	10/12/1993		0.5 U	1 U	2.1	4.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U	1 U	1 U
	1/10/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.4	1 U	1 U
	4/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.6	1 U	1 U
	7/18/1994		0.5 U	1.5	1 U	3.7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.3	1 U	1 U
	10/10/1994		0.5 U	1 U	1 U	5.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	1/17/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.5	1 U	1 U	--	--	--	1 U	1 U	1 U
	4/17/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	6.1 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.6	1 U	1 U	--	--	--	1.3	1 U	1 U
	7/10/1995		0.5 U	2.4	6	9.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4.7	1 U	1 U	--	--	--	1.2	1 U	1 U
	10/9/1995		0.5 U	1 U	1 U	2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	1.4	1 U	1 U
	1/30/1996		0.5 U	1 U	1 U	1.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	1.2	1 U	1 U
	4/15/1996		0.5 U	1 U	4.1	5.7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.4	1 U	1 U
	7/15/1996		0.5 U	1 U	3.5	5.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.4	1 U	1 U
	10/7/1996		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	1/13/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	4/15/1997		0.5 U	2.3	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4.4	1 U	1 U	--	--	--	2.7	1 U	1 U
	7/8/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.9	1 U	1 U	--	--	--	2.1	1 U	1 U
	10/14/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2	1 U	1 U	--	--	--	3.2	1 U	1 U
	1/13/1998		0.5 U	1 U	1.1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.8	1 U	1 U	--	--	--	3	1 U	1 U
	4/21/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.2	1 U	1 U
	7/15/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	10/20/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	2.4	1 U	1 U
	1/15/1999		0.5 U	1 U	1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	4/15/1999		1 U	1 U	1.6	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.1	2 U	2 U
	7/15/1999		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	24	1 U	1 U	--	--	--	2.7	2 U	2 U
	10/15/1999		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4.9	1 U	1 U	--	--	--	2	2 U	2 U
	1/25/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	21	1 U	1 U	--	--	--	7.1	2 U	2 U
	4/15/2000		1 U	1.7	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	6	1 U	1 U	--	--	--	3.3	2 U	2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro- ethane	Chloro- methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-01D	10/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	7.6	1 U	1 U	--	--	--	3.1	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	5.6	1 U	1 U	--	--	--	2.7	2 U	2 U
	7/17/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.1	2 U	2 U
	10/16/2001		1.5	1 U	1 U	1.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	5.3	1 U	1 U	--	--	--	3.5	2 U	2 U
	1/15/2002		1.6	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.5	1 U	1 U	--	--	--	1.8	2 U	2 U
	4/16/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.9	1 U	1 U	--	--	--	3.3	2 U	2 U
	7/24/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.7	1 U	1 U	--	--	--	2.8	2 U	2 U
	10/22/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.5	1 U	1 U	--	--	--	1.8	2 U	2 U
	1/8/2003		0.67	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.8	1 U	1 U	1 U	1 U	1 U	2.2	1 U	0.5 U
	4/23/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.8	1 U	1 U	1 U	1 U	1 U	1.9	1 U	0.5 U
	7/30/2003		0.98	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	1.6	1 U	0.5 U
	10/21/2003		1.2	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.4	1 U	1 U	1 U	1 U	1 U	2.4	1 U	0.5 U
	1/21/2004		4	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5.7	1 U	1 U	1 U	1 U	1 U	10	1 U	0.5 U
	4/20/2004		0.58	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3	1 U	1 U	1 U	1 U	1 U	6.9	1 U	0.5 U
	7/20/2004		0.98	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	3	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	66	12	0.5 U
	10/11/2004		1.1	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.6	5 U	1 U	1 U	8.6	1 U	1 U	1 U	1 U	1 U	34	5.7	0.5 U
	1/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.5	1 U	1 U	0.5 U	1 U	1 U	1 U	4	5 U	1 U	1 U	24	1 U	1 U	1 U	1 U	1 U	53	13	0.5 U
	4/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	0.5 U	1 U	1 U	1 U	5.6	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	82	18	0.5 U
	7/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1.2	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	1 U	0.5 U	1 U	1 U	1 U	4.2	5 U	1 U	1 U	9.8	1 U	1 U	1 U	1 U	1 U	58	13	0.5 U
	10/18/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	3.5	5 U	1 U	1 U	7.5	1 U	1 U	1 U	1 U	1 U	47	12	0.5 U
	1/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.4	1 U	5 U	1 U	1 U	1.2	1 U	1 U	0.5 U	1 U	1 U	1 U	4.1	5 U	1 U	1 U	9.9	1 U	1 U	1 U	1 U	1 U	61	13	0.5 U
	4/25/2006		0.63	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	3.4	5 U	1 U	1 U	8.2	1 U	1 U	1 U	1 U	1 U	48	10	0.5 U
	7/26/2006		1.3	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.3	5 U	1 U	1 U	7	1 U	1 U	1 U	1 U	1 U	43	7.6	0.5 U
	10/24/2006		1.2	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.4	5 U	1 U	1 U	8.1	1 U	1 U	1 U	1 U	1 U	47	9.2	0.5 U
	1/17/2007		0.89	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.2	5 U	1 U	1 U	11	1 U	1 U	1 U	1 U	1 U	42	8.6	0.5 U
	4/17/2007		0.8	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2	5 U	1 U	1 U	9.9	1 U	1 U	1 U	1 U	1 U	45	7.1	0.5 U
	7/24/2007		0.88	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.1	5 U	1 U	1 U	9	1 U	1 U	1 U	1 U	1 U	37	6.9	0.5 U
	10/23/2007		0.81	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 L,U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	8.6	1 U	1 U	1 U	1 U	1 U	17	2.4	0.5 U
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	21	1.6	0.5 U
	4/22/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U	19	1.3	0.5 U
	7/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.4	5 U	1 U	1 U	16	1 U	1 U	1 U	1 U	1 U	34	3.7	0.5 U
	10/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1	1 U	1 U	0.5 U	1 U	1 U	1 U	2.5	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	36	4.1	0.5 U
	1/27/2009		0.64	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	3.3	5 U	1 U	1 U	24	1 U	1 U	1 U	1 U	1 U	38	3.5	0.5 U
	4/7/2009		0.92	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	1.5	1 U	1 U	0.5 U	1 U	1 U	1 U	4.9	5 M2,U	1 U	1 U	27	1 U	1 U	1 U	1 U	1 U	49	5.8	0.5 U
	7/30/2009		1.5	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	1.7	1 U	1 U	0.5 U	1 U	1 U	1 U	9.4	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	54	7.9	0.5 U
	10/8/2009		0.77	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.8	5 U	1 U	1 U	3.3	1 U	1 U	0.55	1 U	1 U	1 U	20	5 U	1 U	1 U	48	1 U	1 U	1 U	1 U	1 U	72	15	0.5 U
	1/28/2010		0.52	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.2	5 U	1 U	1 U	3.8	1 U	1 U	0.56	1 U	1 U	1 U	26	5 C,U	1 U	1 U	70	1 U	1 U	1 U	1 U	1 U	100	22	0.5 U
	4/27/2010		1.5	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.7	5 U	1 U	1 U	3.1	1 U	1 U	0.73	1 U	1 U	1 U	13	5 U	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	50	9.4	0.5 U
	7/28/2010		0.85	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	27	5 U	1 U	1 U	7.3	1 U	1 U	2.6	1 U	1 U	1 U	96	5 U	1 U	1 U	110 MHA	1 U	1 U	1 U	1 U	1 U	150 MHA	48	0.5 U

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Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-01D	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	38	5 U	1 U	1 U	9.3	1 U	1 U	3.4	1 U	1 U	1 U	110	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	180	75	0.5 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	35	5 U	1 U	1 U	8.8	1 U	1 U	3.1	1 U	1 U	1 U	100	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	170	60	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	43	5 U	1 U	1 U	12	1 U	1 U	3.3	1 U	1 U	1 U	160 MHA	5 U	1 U	1 U	180 MHA	1 U	1 U	1 U	1 U	1 U	250 MHA	85	0.5 U
	7/27/2011		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 L, C,U	32	20 U	4 U	4 U	8	4 U	4 U	2.2	4 U	4 U	4 U	120	20 U	4 U	4 U	91	4 U	4 U	4 U	4 U	4 U	170	72	2 U
	10/19/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	11	10 U	2 U	2 U	3.8	2 U	2 U	1 U	2 U	2 U	2 U	50	10 U	2 U	2 U	76	2 U	2 U	2 U	2 U	2 U	110	28	1 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.9	5 U	1 U	1 U	2.5	1 U	1 U	0.5 U	1 U	1 U	1 U	25	5 U	1 U	1 U	81	1 U	1 U	1 U	1 U	1 U	86	20	0.5 U
	3/20/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.5	5 U	1 U	1 U	2	1 U	1 U	0.5 U	1 U	1 U	1 U	22	5 U	1 U	1 U	71	1 U	1 U	1 U	1 U	1 U	64	15	0.5 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	3.8	10 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	17	10 U	2 U	2 U	72	2 U	2 U	2 U	2 U	2 U	61	11	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.5	5 U	1 U	1 U	1.7	1 U	1 U	0.5 U	1 U	1 U	1 U	26	5 U	1 U	1 U	78	1 U	1 U	1 U	1 U	1 U	56	19	0.5 U
	10/29/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.4	5 U	1 U	1 U	1.7	1 U	1 U	0.5 U	1 U	1 U	1 U	22	5 U	1 U	1 U	75	1 U	1 U	1 U	1 U	1 U	55	18	0.5 U
MW-01S	1/15/1989		0.1 U	0.1 U	0.1 U	0.2 U	--	--	--	--	--	--	0.1 U	0.1 U	0.1 U	0.2	1 U	0.1 U	0.2 U	--	--	0.1 U	0.7	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	2.8	0.1 U	0.1 U	--	--	--	19	0.5 U	0.1 U
	4/15/1989		0.7 U	1 U	1 U	3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4	1 U	1 U	--	--	--	23	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	1 U	--	--	--	13	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	--	3	1 U	1 U	--	--	--	12	1 U	1 U
	1/22/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	--	--	0.2 U	0.3	0.5 U	0.5 U	0.5 U	0.73	0.2 U	--	0.2 U	3.1	0.2 U	0.2 U	--	--	--	16	2 U	0.2 U
	4/10/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	1 U	1 U	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	3.8	1 U	1 U	--	--	--	20	10 U	1 U
	7/15/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.3	2 U	0.2 U	0.2 U	0.73	--	0.2 U	1.1	0.5 U	0.5 U	0.5 U	0.8	0.2 U	0.2 U	0.2 U	4	0.2 U	0.2 U	--	--	--	18	2 U	0.2 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	5	1 U	1 U	--	--	--	18	1 U	1 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1	--	--	--	1 U	--	--	1 U	6.8	--	--	--	--	--	26	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.6 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.6	1 U	1 U	--	--	--	22	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.8	1 U	1 U	--	--	--	17	1 U	1 U
	10/21/1991		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.4 U	4 U	0.4 U	0.4 U	1.8	--	0.4 U	0.7	1 U	1 U	1 U	0.4 U	2 U	0.4 U	0.4 U	1.9	0.4 U	0.4 U	--	--	--	14	4 U	0.4 U
	1/15/1992		1 U	1.5	1.2	4.3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	13	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.87	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.9	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	10	1 U	1 U
	10/15/1992		0.95	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	11	1 U	1 U
	1/15/1993		0.5 U	2.2	1.3	5.6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.1	--	--	--	9.2	1 U	1 U
	4/19/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.2 B	1 U	1 U	--	--	1 U	1.4	1 U	1 U	1 U	1 U	--	1 U	1.6	1 U	1 U	1 U	--	--	--	5.7	1 U	1 U
	7/12/1993		0.5 U	1.7	1.7	4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.8 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	11	1 U	1 U
	10/12/1993		0.5 U	1 U	2.2	4.3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	1/10/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.3	1 U	1 U
	4/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	7/18/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	7.9	1 U	1 U
	10/10/1994		0.5 U	1 U	1 U	5.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	13	1 U	1 U
	1/16/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.2	1 U	1 U
	4/17/1995		0.5 U	1 U	1.3	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	4.4	1 U	1 U
	7/10/1995		0.5 U	1.2	3.5	6.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1.3	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	6.2	1 U	1 U
	10/9/1995		0.5 U	1 U	1.7	3.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.4	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	1/30/1996		0.5 U	1 U	1.7	5.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	8.4	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-01S	4/15/1996		0.5 U	1 U	3.4	4.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.9	1 U	1 U
	7/15/1996		0.5 U	1 U	2.2	3.7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.7	1 U	1 U
	10/7/1996		0.5 U	1 U	2.1	2.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.6	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	16	1 U	1 U
	1/13/1997		0.5 U	1 U	1 U	2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	6	1 U	1 U
	4/15/1997		0.5 U	1 U	1.4	1.2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.4	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	5.4	1 U	1 U	--	--	--	15	1 U	1 U
	7/8/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.4	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	3.5	1 U	1 U	--	--	--	14	1 U	1 U
	10/14/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.5	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	12	1 U	1 U
	1/13/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	12	1 U	1 U
	4/21/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.8	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	7/14/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.7	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	10/19/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1	1.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	7.8	1 U	1 U
	1/15/1999		0.5 U	1 U	2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.2	1.5	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	10	1 U	1 U
	4/15/1999		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2.5	--	1 U	1.6	1 U	1 U	1 U	1	--	1 U	1 U	1.8	1 U	1 U	--	--	--	7.2	2 U	2 U
	7/15/1999		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	5.3	--	1.6	1 U	1 U	1 U	1 U	1	--	1 U	1 U	16	1 U	1 U	--	--	--	9.1	2 U	2 U
	10/15/1999		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	3.9	--	1.1	1.5	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.1	2 U	2 U
	1/25/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2.8	--	1.9	1.5	1 U	1 U	1 U	1 U	--	1 U	1 U	31	1 U	1 U	--	--	--	9.9	2 U	2 U
	4/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	7.6	--	2.5	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	16	2 U	2 U
	10/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	3.5	--	1.3	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	8.9	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	8.8	--	1.8	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	13	2 U	2 U
	7/17/2001		1 U	1 U	1 U	1 U	--	--	--	130	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	5.6	--	1.5	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	10	2 U	2 U
	10/16/2001		1 U	1 U	1 U	1 U	--	--	--	140	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	6.7	--	1.9	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	13	2 U	2 U
	1/15/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1.2	--	1 U	1.3	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	7	2 U	2 U
	4/16/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	5.3	2 U	2 U
	7/24/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1.8	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	6.2	2 U	2 U
	10/22/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2.2	--	1 U	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	8.3	2 U	2 U
	1/8/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.5	1 U	1 U	1.3	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	4/23/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	8	1 U	1.8	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	7/29/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.5	1 U	1.8	0.67	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	10/21/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.6	1 U	1 U	1.1	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.5	1 U	1 U	1 U	1 U	1 U	12	1 U	0.5 U
	1/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	1.4	0.68	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5.2	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	4/20/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.3	0.67	1 U	1 U	1 U	1	5 U	1 U	1 U	7.3	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	7/20/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	2.1	0.74	1 U	1 U	1 U	1.5	5 U	1 U	1 U	9.5	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	1/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.1	0.5 U	1 U	1 U	1 U	1.1	5 U	1 U	1 U	24	1 U	1 U	1 U	1 U	1 U	10	1 U	0.5 U
	4/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.5	1 U	1.8	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.1	1 U	1 U	1 U	1 U	1 U	9.6	1 U	0.5 U
	7/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.6	1 U	1.4	0.51	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.8	1 U	1 U	1 U	1 U	1 U	12	1 U	0.5 U
	10/18/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.7	1 U	1.2	0.69	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.8	1 U	1 U	1 U	1 U	1 U	8.2	1 U	0.5 U
	1/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.4	1 U	1.2	0.65	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.5	1 U	1 U	1 U	1 U	1 U	7.8	1 U	0.5 U
	4/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2	1 U	1 U	0.81	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.2	1 U	1 U	1 U	1 U	1 U	7.1	1 U	0.5 U
	7/26/2006		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.3	1 U	1.5	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	7.4	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-01S	10/24/2006		0.5 U	1 U	1 U	1 U	1 R,U	1 R,U	1 U	--	1 R,U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.6	1 U	1.2	0.5 U	1 R,U	1 R,U	1 U	1 U	5 U	1 U	1 U	1.5	1 U	1 U	1 U	1 R,U	1 U	6.2	1 U	0.5 U
	1/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 A-01,U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.4	1 U	1.2	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	6.5	1 U	0.5 U
	4/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.2	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	6.2	1 U	0.5 U
	7/24/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.8	1 U	1.2	0.53	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	6	1 U	0.5 U
	10/23/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 L,U	1 U	2	1 U	1 U	0.52	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.5	1 U	1 U	1 U	1 U	1 U	5.7	1 U	0.5 U
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	5.9	1 U	0.5 U
	4/22/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.7	1 U	1 U	1 U	1 U	1 U	5.9	1 U	0.5 U
	7/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.2	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.5	1 U	1 U	1 U	1 U	1 U	6.7	1 U	0.5 U
	10/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1	5 U	1 U	1 U	4.8	1 U	1 U	1 U	1 U	1 U	4.4	1 U	0.5 U
	1/27/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	2.3	5 U	1 U	1 U	1.9	1 U	2.6	0.5 U	1 U	1 U	1 U	12	5 U	1 U	1 U	43	1 U	1 U	1 U	1 U	1 U	26	3.3	0.5 U
	10/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	1.7	0.5 U	1 U	1 U	1 U	5.9	5 U	1 U	1 U	26	1 U	1 U	1 U	1 U	1 U	13	1.6	0.5 U
	10/19/2011	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.5	1 U	1.8	0.5 U	1 U	1 U	1 U	6.7	5 U	1 U	1 U	28	1 U	1 U	1 U	1 U	1 U	14	1.8	0.5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	1.9	1 U	1.4	0.5 U	1 U	1 U	1 U	6.3	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	23	4.2	0.5 U
	1/19/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	2	1 U	1.4	0.5 U	1 U	1 U	1 U	6.4	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	23	4.2	0.5 U
	3/20/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1.8	1 U	1.2	0.5 U	1 U	1 U	1 U	7.5	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	20	3.2	0.5 U
	3/20/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1.8	1 U	1.2	0.5 U	1 U	1 U	1 U	7.8	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	20	3.4	0.5 U
	7/23/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.7	1 U	1.3	0.5 U	1 U	1 U	1 U	4.4	5 U	1 U	1 U	26	1 U	1 U	1 U	1 U	1 U	16	1.3	0.5 U
	7/23/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.8	1 U	1.4	0.5 U	1 U	1 U	1 U	4.5	5 U	1 U	1 U	28	1 U	1 U	1 U	1 U	1 U	17	1.5	0.5 U
MW-02	1/15/1989		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.8	0.2 U	0.2 U	--	--	--	60	0.2 U	0.2 U
	1/15/1989	K	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	0.5 U	0.5 U	--	--	--	82	0.5 U	0.5 U
	4/15/1989		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	45	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	1 U	--	--	--	67	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	--	2	1 U	1 U	--	--	--	35	1 U	1 U
	1/23/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.4 U	4 U	0.4 U	0.4 U	--	--	0.4 U	0.4 U	1 U	1 U	1 U	0.4 U	0.4 U	--	0.4 U	0.54	0.4 U	0.4 U	--	--	--	27	4 U	0.4 U
	4/10/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	36	2 U	0.2 U
	7/15/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.65	4 U	0.4 U	0.4 U	0.4 U	--	1.6	4.3	1 U	1 U	1 U	0.72	0.4 U	0.4 U	0.4 U	1	0.4 U	0.4 U	--	--	--	30	4 U	0.4 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	24	5 U	5 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	15	--	--

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-03	1/15/1989		7.4	17	4900	--	--	--	--	--	--	--	0.2 U	0.2 U	15	13	3.2	0.2 U	0.2 U	--	--	4.4	240	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4.6	0.2 U	0.2 U	--	--	--	74	0.2 U	0.2 U
	1/15/1989	K	50 U	50	3700	1100	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	50 U	210	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	110	50 U	50 U
	4/15/1989		50 U	50 U	1200	60	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	120	50 U	50 U
	4/15/1989	K	5 U	5 U	670	71	--	--	--	--	--	--	5 U	5 U	47	35	5 U	5 U	5 U	--	5 U	11	36	5 U	5 U	5 U	23	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	110	5 U	5 U
	7/15/1989		7 U	10 U	10 U	10 U	--	--	--	--	--	--	10 U	10 U	60	33	20	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	120	10 U	10 U
	10/15/1989		50 U	100 U	1600	150	--	--	--	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U	--	--	100 U	100 U	100 U	100 U	100 U	100 U	--	100 U	100 U	100 U	100 U	100 U	--	--	--	100 U	100 U	100 U
	10/15/1989	K	50 U	100 U	1700	160	--	--	--	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U	--	--	100 U	100 U	100 U	100 U	100 U	100 U	--	100 U	100 U	100 U	100 U	100 U	--	--	--	100 U	100 U	100 U
	1/22/1990		5 U	5 U	110	10 U	--	--	--	--	--	--	2 U	2 U	28	23	20 U	5 U	2 U	--	--	2 U	20	5 U	5 U	5 U	4	2 U	--	2 U	5 U	2 U	2 U	--	--	--	65	20 U	2 U
	1/22/1990	K	5 U	0.17 U	140	10 U	--	--	--	--	--	--	2 U	2 U	34	25	20 U	5 U	2 U	--	--	2 U	21	5 U	5 U	5 U	4.9	2 U	--	2 U	5 U	2 U	2 U	--	--	--	74	20 U	2 U
	4/11/1990		50 U	50 U	2100	720	--	--	--	--	--	--	20 U	50 U	87	20 U	200 U	20 U	20 U	--	--	20 U	20 U	50 U	50 U	50 U	20 U	20 U	--	20 U	20 U	20 U	20 U	--	--	--	74	200 U	20 U
	7/15/1990		5 U	5 U	5 U	10 U	--	--	--	--	--	--	2 U	5 U	130	46	20 U	2 U	2 U	2 U	--	8.5	3.7	5 U	5 U	5 U	14	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--	130	20 U	2 U
	10/15/1990		9	2	1 U	1 U	--	--	--	--	--	--	10 U	10 U	150	56	10 U	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10	--	10 U	10 U	10 U	10 U	10 U	--	--	--	130	10 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	74	1 U	1 U	--	--	--	--	1 U	26	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	38	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	63	17	8.5	2 U	2 U	--	--	1 U	1 U	2 U	2 U	2 U	1 U	--	2 U	2 U	1 U	1 U	2 U	--	--	--	27	2 U	2 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	38	47	6	2 U	2 U	--	--	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	--	--	--	28	2 U	2 U
	10/23/1991		5 U	5 U	5 U	10 U	--	--	--	--	--	--	2 U	5 U	82	4.2	20 U	2 U	2 U	2 U	--	5.3	2 U	5 U	5 U	5 U	6.7	10 U	2 U	2 U	2 U	2 U	2 U	--	--	--	71	20 U	2 U
	1/15/1992		1 U	1 U	1 U	4	--	--	--	--	--	--	1 U	1 U	202	91	1 U	1 U	1 U	1 U	--	5.7	1 U	1 U	1 U	1 U	7.6	--	1 U	1 U	1 U	3	1 U	--	--	--	76	1 U	1 U
	4/15/1992		0.5 U	0.76	1.6	3	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	120	43	1.3	0.5 U	0.5 U	0.5 U	0.5 U	1.6	0.5 U	0.5 U	0.5 U	0.5 U	2.5	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	110	39	3.1	2 U	2 U	--	--	5.4	1 U	2 U	2 U	2 U	3.8	--	2 U	2 U	1 U	2 U	2 U	--	--	--	76	2 U	2 U
	10/15/1992		0.52	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	160	60	6.9	5 U	5 U	--	--	8.1	1 U	5 U	5 U	5 U	8.7	--	1 U	5 U	1 U	1 U	5 U	--	--	--	130	5 U	5 U
	1/15/1993		2.5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	120	57	5 U	5 U	5 U	--	--	6.7	5 U	5 U	5 U	5 U	6.5	--	5 U	5 U	5 U	5 U	5 U	--	--	--	84	5 U	5 U
	4/20/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	100	29	11 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	12	1 U	1 U
	7/12/1993		0.5 U	3.3	2.6	5.9	--	--	--	--	--	--	2.5 U	2.5 U	110	37	4.5 B	2.5 U	2.5 U	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	16	2.5 U	2.5 U
	10/12/1993		0.5 U	1 U	2.6	4.8	--	--	--	--	--	--	5 U	5 U	110	30	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	17	5 U	5 U
	1/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	120	28	2 U	2 U	2 U	--	--	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	--	--	--	10	2 U	2 U
	4/12/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	68	26	2 U	2 U	2 U	--	--	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	--	--	--	15	2 U	2 U
	7/18/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2.5 U	2.5 U	180	82	2.5 U	2.5 U	2.5 U	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	26	2.5 U	2.5 U
	10/11/1994		1.2	3.5	1.5	12	--	--	--	--	--	--	2.5 U	2.5 U	120	60	2.5 U	2.5 U	2.5 U	--	--	5.8	2.5 U	2.5 U	2.5 U	2.5 U	7.5	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	76	2.5 U	2.5 U
	1/17/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	4 U	4 U	140	53	4 U	4 U	4 U	--	--	5.1	4 U	4 U	4 U	4 U	6	--	4 U	4 U	4 U	4 U	4 U	--	--	--	72	4 U	4 U
	4/17/1995		0.5 U	1 U	1.3	1 U	--	--	--	--	--	--	10 U	10 U	180	72	65 B	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	57	10 U	10 U
	7/11/1995		0.5 U	2	5.2	8.8	--	--	--	--	--	--	5 U	5 U	91	35	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	9.5	5 U	5 U
	10/10/1995		0.5 U	1 U	1.7	3.3	--	--	--	--	--	--	10 U	10 U	110	56	10 U	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	30	10 U	10 U
	1/30/1996		0.5 U	1 U	1.8	5.2	--	--	--	--	--	--	2 U	2 U	56	27	2.5	2 U	2 U	--	--	3.3	2 U	2 U	2 U	2 U	3.3	--	2 U	2 U	2 U	2 U	2 U	--	--	--	26	2 U	2 U
	4/15/1996		0.5 U	1 U	2.6	3.6	--	--	--	--	--	--	5 U	5 U	100	46	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	5 U	7	--	5 U	5 U	5 U	5 U	5 U	--	--	--	46	5 U	5 U
	7/16/1996		0.5 U	1.8	9	12	--	--	--	--	--	--	2.5 U	2.5 U	50	23	2.5 U	2.5 U	2.5 U	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	17	2.5 U	2.5 U
	10/8/1996		0.5 U	1 U	5.4	6.2	--	--	--	--	--	--	2 U	2 U	46	31	2 U	2 U	2 U	--	--	2.3	2 U	2 U	2 U	2 U	2.4	--	2 U	2 U	2 U	2 U	2 U	--	--	--	21	2 U	2 U
	1/14/1997		0.5 U	2.6	1.1	4.2	--	--	--	--	--	--	1 U	1 U	68	29	1 U	1 U	1 U	--	--	2.1	1 U	1 U	1 U	1 U	3.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	28	1 U	1 U
	4/15/1997		0.5 U	4.3	2.1	3	--	--	--	--	--	--	1 U	1 U	40	22	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1.7	--	1 U	1 U	7.1	1 U	1 U	--	--	--	13	1 U	1 U
	7/9/1997		0.5 U	1 U	2.5	3.7	--	--	--	--	--	--	1 U	1 U	27	14	1 U	1 U	1 U	--	--	1.8	2.3	1 U	1 U	1 U	1.8	--	1 U	1 U	8.7	1 U	1 U	--	--	--	13	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-03	10/15/1997		0.57	1 U	1.7	1.2	--	--	--	--	--	--	1 U	1 U	34	21	1 U	1 U	1 U	--	--	2.6	1.3	1 U	1 U	1 U	3	--	1 U	1 U	3.6	1 U	1 U	--	--	--	24	1 U	1 U
	1/13/1998		0.5 U	1 U	1.3	1 U	--	--	--	--	--	--	1 U	1 U	27	19	1 U	1 U	1 U	--	--	2	1 U	1 U	1 U	1 U	3.2	--	1 U	1 U	1.6	1 U	1 U	--	--	--	25	1 U	1 U
	4/22/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	30	22	1 U	1 U	1 U	--	--	1.8	1 U	1 U	1 U	1 U	2.9	--	1 U	1 U	1 U	1 U	1 U	--	--	--	18	1 U	1 U
	7/15/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	42	36	1 U	1 U	1 U	--	--	2.8	1 U	1 U	1 U	1 U	3.6	--	1 U	1 U	2.2	1 U	1 U	--	--	--	25	1 U	1 U
	10/20/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	52	40	1 U	1 U	1 U	--	--	2.4	1 U	1 U	1 U	1 U	3.4	--	1 U	1 U	2.6	1 U	1 U	--	--	--	24	1 U	1 U
	1/15/1999		0.5 U	1 U	2.3	1 U	--	--	--	--	--	--	1 U	1 U	23	16	1 U	1 U	1 U	--	--	2.4	1 U	1 U	1 U	1 U	3.9	--	1 U	1 U	1.9	1 U	1 U	--	--	--	26	1 U	1 U
	4/15/1999		1 U	1 U	1.1	2 U	--	--	--	--	--	--	1 U	1 U	38	24	1 U	2 U	2 U	1 U	--	1.4	1 U	1 U	1 U	1 U	2.7	--	1 U	1 U	1.6	1 U	1 U	--	--	--	21	2 U	2 U
	7/15/1999		1 U	1 U	1.3	1 U	--	--	--	--	--	--	1 U	1 U	41	30	1 U	2 U	2 U	1 U	--	3.6	1 U	1 U	1 U	1 U	9	--	1 U	1 U	37	1.8	1 U	--	--	--	43	2 U	2 U
	10/15/1999		5 U	5 U	200	10 U	--	--	--	--	--	--	5 U	5 U	61	39	5 U	10 U	10 U	5 U	--	15	14	5 U	5 U	5 U	23	--	5 U	5 U	5 U	5 U	5 U	--	--	--	170	10 U	10 U
	1/25/2000		2.5 U	2.5 U	54	70	--	--	--	--	--	--	2.5 U	2.5 U	40	27	2.5 U	5 U	5 U	8	--	18	2.5 U	2.5 U	2.5 U	2.5 U	30	--	2.5 U	2.5 U	19	2.5 U	2.5 U	--	--	--	170	5 U	5 U
	4/15/2000		2.5 U	2.5 U	65	2.5	--	--	--	--	--	--	2.5 U	2.5 U	65	41	2.5 U	5 U	5 U	2.5 U	--	18	6	2.5 U	2.5 U	2.5 U	30	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	170	5 U	5 U
	10/15/2000		1 U	1 U	2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.3	1 U	2 U	2 U	1.1	--	9.5	1 U	1 U	1 U	1 U	3.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	43	2 U	2 U
	4/15/2001		2 U	2 U	12	3.1	--	--	--	--	--	--	2 U	2 U	48	42	2 U	4 U	4 U	2 U	--	17	6	2 U	2 U	2 U	24	--	2 U	2 U	5.4	2 U	2 U	--	--	--	150	4 U	4 U
	7/17/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	29	20	1 U	2 U	2 U	1 U	--	5.1	1 U	1 U	1 U	1 U	6	--	1 U	1 U	2.3	1 U	1 U	--	--	--	41	2 U	2 U
	10/17/2001		5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	39	35	5 U	10 U	10 U	5 U	--	35	5 U	5 U	5 U	5 U	35	--	5 U	5 U	5.1	5 U	5 U	--	--	--	290	10 U	10 U
	1/16/2002		2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	33	30	2.5 U	5 U	5 U	2.5 U	--	30	2.5 U	2.5 U	2.5 U	2.5 U	28	--	2.5 U	2.5 U	5.6	2.5 U	2.5 U	--	--	--	220	5 U	5 U
	4/16/2002		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	36	38	5 U	10 U	10 U	5 U	--	44	5 U	5 U	5 U	5 U	35	--	5 U	5 U	5 U	5 U	5 U	--	--	--	280	10 U	10 U
	7/24/2002		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	28	31	5 U	10 U	10 U	5 U	--	34	5 U	5 U	5 U	5 U	36	--	5 U	5 U	5.5	5 U	5 U	--	--	--	260	10 U	10 U
	10/22/2002		10 U	10 U	63	700	--	--	--	--	--	--	10 U	10 U	10 U	13	10 U	20 U	20 U	10 U	--	17	25	10 U	10 U	10 U	30	--	10 U	10 U	10 U	10 U	10 U	--	--	--	190	20 U	20 U
	1/8/2003		1.6	2 U	2 U	2.3	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	22	27	10 U	2 U	2 U	2 U	2 U	32	15	2 U	2 U	2 U	48	10 U	2 U	2 U	5.6	2 U	2 U	2 U	2 U	2 U	250	2 U	1 U
	4/23/2003		1 U	2 U	2 U	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	46	47	10 U	2 U	2 U	2 U	2 U	34	3.8	2 U	2 U	2 U	34	10 U	2 U	2 U	8.3	2 U	2 U	2 U	2 U	2 U	190	2 U	1 U
	7/29/2003		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	70	72	25 U	5 U	5 U	5 U	5 U	37	6	5 U	5 U	5 U	34	25 U	5 U	5 U	11	5 U	5 U	5 U	5 U	5 U	280	5 U	2.5 U
	10/21/2003		2.5	1 U	1600	209	2.4	11	1 U	--	1 U	1 U	1 U	1 U	17	18	5 U	1 U	1 U	12	1 U	19	9	1 U	1 U	1 U	18	5 U	1 U	1 U	4	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	1/21/2004		1.8	1 U	60	2 U	1 U	1.4	1 U	--	1 U	1 U	1 U	1 U	25	24	5 U	1 U	1 U	18	1 U	34	76	1 U	1 U	1 U	33	5 U	1 U	1 U	4.1	1 U	1 U	1 U	1 U	1 U	200	1 U	0.5 U
	4/20/2004		1.2	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	49	32	5 U	1 U	1 U	9.6	1 U	29	40	1 U	1 U	1 U	31	5 U	1 U	1 U	5.1	1 U	1 U	1 U	1 U	1 U	180	1 U	0.5 U
	7/20/2004		0.74	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	47	39	5 U	1 U	1 U	6.5	1 U	35	45	1 U	1 U	1 U	30	5 U	1 U	1 U	4.9	1 U	1 U	1 U	1 U	1 U	200	1 U	0.5 U
	10/12/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.7	48	54	5 U	1 U	1 U	6	1 U	39	16	1 U	1 U	1 U	24	5 U	1 U	1 U	6.6	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	1/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	3.9	4.3	5 U	1 U	1 U	1.7	1 U	7.6	19	1 U	1 U	1 U	6	5 U	1 U	1 U	3.8	1 U	1 U	1 U	1 U	1 U	60	1 U	0.5 U
	4/26/2005		0.66	1 U	1 U	2	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	27	28	5 U	1 U	1 U	1 U	1 U	7.8	120	1 U	1 U	1 U	7.6	5 U	1 U	1 U	4.1	1 U	1 U	1 U	1 U	1 U	61	1 U	0.5 U
	7/26/2005		0.56	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	72	66	5 U	1 U	1 U	1	1 U	15	46	1 U	1 U	1 U	11	5 U	1 U	1 U	8.6	1 U	1 U	1 U	1 U	1 U	100	1 U	0.5 U
	10/18/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	66	55	5 U	1 U	1 U	1.3	1 U	30	27	1 U	1 U	1 U	22	5 U	1 U	1 U	6.4	1 U	1 U	1 U	1 U	1 U	160	1 U	0.5 U
	1/25/2006		2 U	4 U	4 U	5 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	52	48	20 U	4 U	4 U	4 U	4 U	26	18	4 U	4 U	4 U	22	20 U	4 U	4 U	7.1	4 U	4 U	4 U	4 U	4 U	170	4 U	2 U
	4/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	60	54	5 U	1 U	1 U	1	1 U	26	20	1 U	1 U	1 U	20	5 U	1 U	1 U	6.7	1 U	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	7/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	34	43	5 U	1 U	1 U	1.4	1 U	39	14	1 U	1 U	1 U	25	5 U	1 U	1 U	6.6	1 U	1 U	1 U	1 U	1 U	150	1 U	0.5 U
	10/24/2006		0.59	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	37	39	5 U	1 U	1 U	1.3	1 U	30	19	1 U	1 U	1 U	20	5 U	1 U	1 U	6.7	1 U	1 U	1 U	1 U	1 U	160	1 U	0.5 U
	1/17/2007		0.66	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	34	33	5 U	1 U	1 U	1 U	1 U	18	27	1 U	1 U	1 U	15	5 U	1 U	1 U	6.3	1 U	1 U	1 U	1 U	1 U	97	1 U	0.5 U
	4/17/2007		0.62	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	26	29	5 U	1 U	1 U	1 U	1 U	19	42	1 U	1 U	1 U	14	5 U	1 U	1 U	7.1	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	7/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	28	32	5 U	1 U	1 U	1.2	1 U	28	23	1 U	1 U	1 U	16	5 U	1 U	1 U	7.7	1 U	1 U	1 U	1 U	1 U	140 MHA	1 U	0.5 U
	10/23/2007		1.3	1 U	40	24	1 U	1 U	1 U	--	1.1 U B	1 U	1 U	1 U	17	20	5 U	1 L,U	1 U	1.5	1 U	27	58	1 U	1 U	1 U	23	5 U	1 U	1 U	5.7	1 U	1 U	1 U	1 U	1 U	150	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Non-chlorinated VOCs and Chlorinated VOCs (part 1)

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)
MW-03	1/29/2008		2.5 U	5 U	160	7.1	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	4.6	14	25 U	5 U	5 U	10
	4/24/2008		1.1	1 U	42	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	33	61	5 U	1 U	1 U	1 U
	7/30/2008		5 U	10 U	730	88	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	16	34	50 U	10 U	10 U	10 U
	10/28/2008		0.57	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.2	11	33	5 U	1 U	1 U	4
	1/28/2009		0.64	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.2	5.4	26	5 U	1 U	1 U	11
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.2	3.7	5 U	1 U	1 U	3.1
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.8	4.9	5 U	1 U	1 U	6.6
	10/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.8 M1
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	12	5 U	1 U	1 U	1.6
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.2	4.9	5 U	1 U	1 U	1.6
	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	5.1
	1/20/2011		0.77	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.3	9.4	5 U	1 U	1 U	2.9
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.4	14	5 U	1 U	1 U	1.6
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	3.6	22	5 U	1 U	1 U	1 U
	10/21/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	4.5	18	5 U	1 U	1 U	1 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.5	11	5 U	1 U	1 U	1.1
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.78	11	5 U	1 U	1 U	1.3
	7/24/2012		0.5 U	1 U	4.5	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.2	9.9	5 U	1 U	1 U	1.2
	10/30/2012		1.8	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.1	16	5 U	1 U	1 U	3.5
MW-04	1/15/1989		0.5 U	10	15	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	3.7	14	0.2 U	0.2 U	--
	1/15/1989	K	5 U	12	90	55	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--
	4/15/1989		5 U	23	15	50	--	--	--	--	--	--	5 U	5 U	5 U	12	94	5 U	5 U	--
	4/15/1989	K	5 U	14	9	43	--	--	--	--	--	--	5 U	5 U	5 U	25	5 U	5 U	5 U	--
	7/15/1989		14 U	20 U	140	40	--	--	--	--	--	--	20 U	20 U	20 U	20 U	170	20 U	20 U	--
	7/15/1989	K	14 U	20	130	45	--	--	--	--	--	--	20 U	20 U	20 U	20 U	170	20 U	20 U	--
	10/15/1989		5 U	10 U	10 U	10 U	--	--	--	--	--	--	10 U	10 U	10 U	10	30	10 U	10 U	--
	10/15/1989	K	6	20	10 U	20	--	--	--	--	--	--	10 U	10 U	10 U	10	30	10 U	10 U	--
	1/24/1990		12 U	12 U	12 U	25 U	--	--	--	--	--	--	5 U	12 U	5 U	5.1	74	5 U	5 U	--
	1/24/1990	K	12 U	1.1 U	12 U	25 U	--	--	--	--	--	--	5 U	12 U	5 U	5.2	74	5 U	5 U	--
	4/11/1990		10 U	10 U	10 U	20 U	--	--	--	--	--	--	4 U	10 U	4 U	6	54	4 U	4 U	--
	4/11/1990	K	10 U	10 U	10 U	20 U	--	--	--	--	--	--	4 U	10 U	4 U	6.4	58	4 U	4 U	--
	7/15/1990		50 U	50 U	1600	170	--	--	--	--	--	--	20 U	50 U	20 U	20 U	200 U	20 U	20 U	20 U
	7/15/1990	K	25 U	25 U	740	250	--	--	--	--	--	--	10 U	25 U	10 U	12	100 U	10 U	10 U	10 U
	10/15/1990		0.5 U	17	230	650	--	--	10 U	1250 U	--	13 U	13 U	13 U	13 U	13 U	38	25 U	25 U	--
	10/15/1990	K	13 U	17	220	640	--	--	10 U	1250 U	--	13 U	13 U	13 U	13 U	13 U	39	25 U	25 U	--
	1/15/1991		0.5 U	1 U	1 U	1	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--
	4/15/1991		10 U	20 U	730	880	--	--	--	--	--	--	10 U	10 U	10 U	10 U	43	10 U	10 U	--
	7/15/1991		0.5 U	16000	6700	18000	--	--	--	--	--	--	10 U	10 U	10 U	12	94	10 U	10 U	--

Chlorinated VOCs (part 2)

Well Number	Sample Date	Sample Type	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-03	1/29/2008		5 U	40	62	5 U	5 U	5 U	28	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	230	5 U	2.5 U
	4/24/2008		1 U	21	100	1 U	1 U	1 U	18	5 U	1 U	1 U	7.2	1 U	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	7/30/2008		10 U	35	62	10 U	10 U	10 U	26	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	180	10 U	5 U
	10/28/2008		1 U	39	58	1 U	1 U	1 U	23	5 L,U	1 U	1 U	5.8	1 U	1 U	1 L,U	1 U	1 U	170	1 U	0.5 U
	1/28/2009		1 U	62	41	1 U	1 U	1 U	14	5 U	1 U	1 U	6.5	1 U	1 U	1 U	1 U	1 U	200	1 U	0.5 U
	4/7/2009		1 U	15	16	1 U	1 U	1 U	4.8	5 U	1 U	1 U	5.1	1 U	1 U	1 U	1 U	1 U	57	1 U	0.5 U
	7/30/2009		1 U	22	19	1 U	1 U	1 U	4.6	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	70	1 U	0.5 U
	10/8/2009		1 U	25 M1	16	1 U	1 U	1 U	3.4	5 U	1 U	1 M1,U	21	1 U	1 U	1 U	1 U	1 U	51	1 U	0.5 U
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		1 U	8.5	15	1 U	1 U	1 U	2.6	5 U	1 U	1 U	47	1 U	1 U	1 U	1 U	1 U	45	1 U	0.5 U
	7/29/2010		1 U	5.7	7.9	1 U	1 U	1 U	9.1	5 U	1 U	1 U	85	1 U	1 U	1 U	1 U	1 U	70	1 U	0.5 U
	10/28/2010		1 U	18	28	1 U	1 U	1 U	8.2	5 U	1 U	1 U	47	1 U	1 U	1 U	1 U	1 U	82	1.6	0.5 U
	1/20/2011		1 U	14	110	1 U	1 U	1 U	5	5 U	1 U	1 U	50	1 U	1 U	1 U	1 U	1 U	88	1 U	0.5 U
	4/13/2011		1 U	2.7	120	1 U	1 U	1 U	6	5 U	1 U	1 U	67	1 U	1 U	1 U	1 U	1 U	56	4.2	0.5 U
	7/28/2011		1 U	1.9	37	1 U	1 U	1 U	2.5	5 U	1 U	1 U	28	1 C, L,U	1 U	1 U	1 U	1 U	27	1 U	0.5 U
	10/21/2011		1 U	4.3	44	1 U	1 U	1 U	2.1	5 U	1 U	1 U	27	1 U	1 U	1 U	1 U	1 U	38	1 U	0.5 U
	1/18/2012		1 U	8.3	61	1 U	1 U	1 U	3.4	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	52	1 U	0.5 U
	3/22/2012		1 U	10	58	1 U	1 U	1 U	3.9	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	49	1 U	0.5 U
	7/24/2012		1 U	15	42	1 U	1 U	1 U	4.1	5 U	1 U	1 U	28	1 U	1 U	1 U	1 U	1 U	67	1 U	0.5 U
	10/30/2012		1 U	36	84	1 U	1 U	1 U	5.5	5 U	1 U	1 U	28	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
MW-04	1/15/1989		--	36	20	0.2 U	0.2 U	0.2 U	22	0.2 U	0.2 U	0.2 U	1.6	0.68	0.2 U	--	--	--	120	0.2 U	0.2 U
	1/15/1989	K	--	49	18	5 U	5 U	5 U	18	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	5 U	5 U	5 U
	4/15/1989		--	92	5 U	5 U	5 U	5 U	55	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	28	5 U	5 U
	4/15/1989	K	5 U	74	58	5 U	5 U	5 U	54	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	210	5 U	5 U
	7/15/1989		--	80	120	20 U	20 U	20 U	50	--	20 U	20 U	20 U	20 U	20 U	--	--	--	290	20 U	20 U
	7/15/1989	K	--	80	120	20 U	20 U	20 U	50	--	20 U	20 U	20 U	20 U	20 U	--	--	--	290	20 U	20 U
	10/15/1989		--	100	70	10 U	10 U	10 U	60	--	20	10 U	10 U	10	10 U	--	--	--	250	10 U	10 U
	10/15/1989	K	--	100	80	10 U	10 U	10 U	60	--	20	10 U	10 U	10	10 U	--	--	--	250	10 U	10 U
	1/24/1990		--	72	100	12 U	12 U	12 U	33	5 U	--	5 U	5 U	5 U	5 U	--	--	--	220	50 U	5 U
	1/24/1990	K	--	74	100	12 U	12 U	12 U	40	5 U	--	5 U	5 U	5 U	5 U	--	--	--	240	50 U	5 U
	4/11/1990		--	67	140	10 U	10 U	10 U	35	4 U	--	4 U	4 U	4 U	4 U	--	--	--	280	40 U	4 U
	4/11/1990	K	--	78	160	10 U	10 U	10 U	45	4 U	--	4 U	4 U	4 U	4 U	--	--	--	320	40 U	4 U
	7/15/1990		--	65	260	50 U	50 U	50 U	43	20 U	20 U	20 U	20 U	20 U	20 U	--	--	--	320	200 U	20 U
	7/15/1990	K	--	110	260	25 U	25 U	25 U	76	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	400	100 U	10 U
	10/15/1990		25 U	80	360	10 U	10 U	10 U	54	50 U	13 U	13 U	13 U	13 U	13 U	--	10 U	--	250	13 U	25 U
	10/15/1990	K	25 U	76	350	10 U	10 U	10 U	51	50 U	13 U	13 U	13 U	13 U	13 U	--	10 U	--	250	13 U	25 U
	1/15/1991		--	57	190	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	180	--	--
	4/15/1991		--	40	180	10 U	10 U	10 U	21	--	10 U	10 U	10 U	10 U	10 U	--	--	--	170	10 U	10 U
	7/15/1991		--	66	95	10 U	10 U	10 U	40	--	10 U	10 U	10 U	10 U	10 U	--	--	--	190	10 U	10 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-04	7/15/1991	K	250 U	6800	16000	19000	--	--	--	--	--	--	10 U	10 U	10 U	13	10 U	10 U	10 U	--	--	70	98	10 U	10 U	10 U	39	--	10 U	10 U	10 U	10 U	10 U	--	--	--	200	10 U	10 U
	10/21/1991		1000 U	6900	4100	10000	--	--	--	--	--	--	400 U	1000 U	400 U	400 U	4000 U	400 U	400 U	400 U	--	400 U	400 U	1000 U	1000 U	1000 U	400 U	2000 U	400 U	400 U	400 U	400 U	400 U	--	--	--	400 U	4000 U	400 U
	1/15/1992		250 U	18000	10000	17200	250 U	250 U	250 U	--	--	250 U	250 U	250 U	250 U	250 U	1300 U	500 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	500 U	500 U
	1/15/1992	K	250 U	18000	10000	16200	250 U	250 U	250 U	--	--	250 U	250 U	250 U	250 U	250 U	1300 U	500 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	500 U	500 U
	4/15/1992		6.7	7.2	960	1010	5 U	5 U	5 U	--	--	5 U	5 U	5 U	5 U	15	18	5 U	5 U	24	5 U	120	49	5 U	5 U	5 U	57	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	280	5 U	5 U
	4/15/1992	K	12 U	12 U	1100	1010	12 U	21	12 U	--	--	12 U	12 U	12 U	12 U	17	56	12 U	12 U	25	12 U	140	57	12 U	12 U	12 U	77	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	350	12 U	12 U
	7/15/1992		5 U	10 U	200	280	--	--	--	--	--	--	10 U	10 U	10 U	12	61	10 U	10 U	--	--	74	32	10 U	10 U	10 U	53	--	10 U	10 U	10 U	10 U	10 U	--	--	--	280	10 U	10 U
	7/15/1992	K	5 U	10 U	200	260	--	--	--	--	--	--	10 U	10 U	10 U	12	57	10 U	10 U	--	--	74	30	10 U	10 U	10 U	51	--	10 U	10 U	10 U	10 U	10 U	--	--	--	250	10 U	10 U
	10/15/1992		71	1 U	1300	230	--	--	--	--	--	--	10 U	10 U	1 U	1 U	26	10 U	10 U	--	--	48	18	10 U	10 U	10 U	32	--	1 U	10 U	1 U	1 U	10 U	--	--	--	230	10 U	10 U
	10/15/1992	K	71	1 U	1200	200	--	--	--	--	--	--	10 U	10 U	1 U	1 U	28	10 U	10 U	--	--	53	18	10 U	10 U	10 U	37	--	1 U	10 U	1 U	1 U	10 U	--	--	--	260	10 U	10 U
	1/15/1993		130 U	10000	10000	19000	--	--	--	--	--	--	250 U	250 U	250 U	250 U	250 U	250 U	250 U	--	--	250 U	250 U	250 U	250 U	250 U	250 U	--	250 U	250 U	250 U	250 U	250 U	--	--	--	250 U	250 U	250 U
	1/15/1993	K	130 U	11000	11000	20000	--	--	--	--	--	--	250 U	250 U	250 U	250 U	250 U	250 U	250 U	--	--	250 U	250 U	250 U	250 U	250 U	250 U	--	250 U	250 U	250 U	250 U	250 U	--	--	--	250 U	250 U	250 U
	4/20/1993		0.5 U	1 U	88	13	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.8 B	1 U	1 U	--	--	4.2	11	1 U	1 U	1 U	3.9	--	1 U	1 U	1 U	1 U	1 U	--	--	--	25	1 U	1 U
	4/20/1993	K	0.5 U	1 U	85	15	--	--	--	--	--	--	1 U	1 U	1 U	1 U	8.4 B	1 U	1 U	--	--	4	11	1 U	1 U	1 U	3.4	--	1 U	1 U	1 U	1 U	1 U	--	--	--	21	1 U	1 U
	7/13/1993		0.6	2	1.8	11	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.6	17 B	2.5 U	2.5 U	--	--	29	9	2.5 U	2.5 U	2.5 U	23	--	3.3	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	100	2.5 U	2.5 U
	7/13/1993	K	0.55	1.7	1.5	9.9	--	--	--	--	--	--	2 U	2 U	2 U	3	20 B	2 U	2 U	--	--	29	9.6	2 U	2 U	2 U	24	--	4	2 U	2 U	2 U	2 U	--	--	--	100	2 U	2 U
	10/13/1993		1.3	1 U	1 U	40	--	--	--	--	--	--	10 U	10 U	10 U	11	59	10 U	10 U	--	--	65	13	10 U	10 U	10 U	55	--	10 U	10 U	10 U	10 U	10 U	--	--	--	290	10 U	10 U
	10/14/1993	K	5 U	10 U	320	10 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	24	8	1 U	1 U	1 U	4.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	21	1 U	1 U
	1/11/1994		0.81	1 U	8.3	14	--	--	--	--	--	--	5 U	5 U	5 U	5 U	23 B	5 U	5 U	--	--	42	5 U	5 U	5 U	5 U	43	--	5 U	5 U	5 U	5 U	5 U	--	--	--	130	5 U	5 U
	1/11/1994	K	1	1 U	7.2	20	--	--	--	--	--	--	5 U	5 U	5 U	5 U	30	5 U	5 U	--	--	52	5 U	5 U	5 U	5 U	56	--	5 U	5 U	5 U	5 U	5 U	--	--	--	180	5 U	5 U
	4/13/1994		0.5 U	1 U	4	6.5	--	--	--	--	--	--	5 U	5 U	5 U	5 U	19	5 U	5 U	--	--	42	5 U	5 U	5 U	5 U	33	--	5 U	5 U	5 U	5 U	5 U	--	--	--	190	5 U	5 U
	4/13/1994	K	0.5 U	1 U	3.2	6.4	--	--	--	--	--	--	5 U	5 U	5 U	5 U	20	5 U	5 U	--	--	42	5 U	5 U	5 U	5 U	32	--	5 U	5 U	5 U	5 U	5 U	--	--	--	190	5 U	5 U
	7/19/1994		0.58	1 U	1 U	4.2	--	--	--	--	--	--	10 U	10 U	10 U	10 U	33 B	10 U	10 U	--	--	68	10 U	10 U	10 U	10 U	59	--	10 U	10 U	10 U	10 U	10 U	--	--	--	340	10 U	10 U
	7/19/1994	K	0.59	1 U	1 U	3.6	--	--	--	--	--	--	10 U	10 U	10 U	10 U	34	10 U	10 U	--	--	67	10 U	10 U	10 U	10 U	60	--	10 U	10 U	10 U	10 U	10 U	--	--	--	340	10 U	10 U
	10/11/1994		5 U	10 U	270	39	--	--	--	--	--	--	10 U	10 U	10 U	21	97	10 U	10 U	--	--	110	10 U	10 U	10 U	10 U	78	--	10 U	10 U	10 U	10 U	10 U	--	--	--	390	10 U	10 U
	10/11/1994	K	5 U	10 U	320	46	--	--	--	--	--	--	10 U	10 U	10 U	20	100	10 U	10 U	--	--	120	10 U	10 U	10 U	10 U	86	--	10 U	10 U	10 U	10 U	10 U	--	--	--	420	10 U	10 U
	1/18/1995		5 U	10 U	350	130	--	--	--	--	--	--	10 U	10 U	10 U	10 U	21 B	10 U	10 U	--	--	51	10 U	10 U	10 U	10 U	37	--	10 U	10 U	10 U	10 U	10 U	--	--	--	190	10 U	10 U
	1/18/1995	K	5 U	10 U	360	120	--	--	--	--	--	--	10 U	10 U	10 U	10 U	20 B	10 U	10 U	--	--	51	10 U	10 U	10 U	10 U	37	--	10 U	10 U	10 U	10 U	10 U	--	--	--	190	10 U	10 U
	4/18/1995		100 U	1600	1700	2900	--	--	--	--	--	--	10 U	10 U	10 U	10 U	34 B	10 U	10 U	--	--	32	10 U	10 U	10 U	10 U	15	--	10 U	10 U	10 U	10 U	10 U	--	--	--	67	10 U	10 U
	4/18/1995	K	100 U	1400	1500	2600	--	--	--	--	--	--	10 U	10 U	10 U	10 U	41 B	10 U	10 U	--	--	31	10 U	10 U	10 U	10 U	15	--	10 U	10 U	10 U	10 U	10 U	--	--	--	61	10 U	10 U
	7/12/1995		10 U	270	260	890	--	--	--	--	--	--	5 U	5 U	5 U	5 U	19 B	5 U	5 U	--	--	27	6.3	5 U	5 U	5 U	17	--	5 U	5 U	5 U	5 U	5 U	--	--	--	90	5 U	5 U
	7/12/1995	K	10 U	410	380	1300	--	--	--	--	--	--	10 U	10 U	10 U	10 U	20 B	10 U	10 U	--	--	27	10 U	10 U	10 U	10 U	17	--	10 U	10 U	10 U	10 U	10 U	--	--	--	94	10 U	10 U
	10/10/1995		2.5 U	5 U	75	21	--	--	--	--	--	--	10 U	10 U	10 U	10 U	42	10 U	10 U	--	--	59	10 U	10 U	10 U	10 U	34	--	10 U	10 U	10 U	10 U	10 U	--	--	--	150	10 U	10 U
	10/10/1995	K	2.5 U	5 U	79	23	--	--	--	--	--	--	10 U	10 U	10 U	10 U	42	10 U	10 U	--	--	61	10 U	10 U	10 U	10 U	36	--	10 U	10 U	10 U	10 U	10 U	--	--	--	160	10 U	10 U
	1/31/1996		50 U	100 U	2100	1400	--	--	--	--	--	--	10 U	10 U	10 U	10 U	26	10 U	10 U	--	--	46	14	10 U	10 U	10 U	25	--	10 U	10 U	10 U	10 U	10 U	--	--	--	160	10 U	10 U
	1/31/1996	K	50 U	120	2800	1800	--	--	--	--	--	--	10 U	10 U	10 U	10 U	30	10 U	10 U	--	--	52	19	10 U	10 U	10 U	28	--	10 U	10 U	10 U	10 U	10 U	--	--	--	150	10 U	10 U
	4/16/1996		25 U	680	1300	1400	--	--	--	--	--	--	10 U	10 U	10 U	10 U	31	10 U	10 U	--	--	52	15	10 U	10 U	10 U	39	--	10 U	10 U	10 U	10 U	10 U	--	--	--	130	10 U	10 U
	4/16/1996	K	25 U	600	1100	1200	--	--	--	--	--	--	10 U	10 U	10 U	10 U	35	10 U	10 U	--	--	86	16	10 U	10 U	10 U	46	--	10 U	10 U	10 U	10 U	10 U	--	--	--	150	10 U	10 U
	7/16/1996		50 U	100 U	1000	270	--	--	--	--	--	--	10 U	10 U	10 U	10 U	31	10 U	10 U	--	--	46	10 U	10 U	10 U	10 U	32	--	10 U	10 U	10 U	10 U	10 U	--	--	--	140	10 U	10 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-04	7/16/1996	K	0.5 U	1 U	1000	250	--	--	--	--	--	--	10 U	10 U	10 U	10 U	29	10 U	10 U	--	--	44	10 U	10 U	10 U	10 U	30	--	10 U	10 U	10 U	10 U	10 U	--	--	--	130	10 U	10 U
	10/9/1996		50 U	380	1100	1900	--	--	--	--	--	--	20 U	20 U	20 U	22	110	20 U	20 U	--	--	100	20 U	20 U	20 U	20 U	48	--	20 U	20 U	20 U	20 U	20 U	--	--	--	310	20 U	20 U
	10/9/1996	K	50 U	370	1100	1900	--	--	--	--	--	--	20 U	20 U	20 U	24	110	20 U	20 U	--	--	110	20 U	20 U	20 U	20 U	27	--	20 U	20 U	20 U	20 U	20 U	--	--	--	330	20 U	20 U
	1/14/1997		6.2 U	12 U	1100	12 U	--	--	--	--	--	--	12 U	12 U	12 U	12 U	56	12 U	12 U	--	--	130	36	12 U	12 U	12 U	76	--	12 U	12 U	12 U	12 U	12 U	--	--	--	330	12 U	12 U
	1/14/1997	K	6.2 U	12 U	970	12 U	--	--	--	--	--	--	12 U	12 U	12 U	12 U	56	12 U	12 U	--	--	130	34	12 U	12 U	12 U	69	--	12 U	12 U	12 U	12 U	12 U	--	--	--	290	12 U	12 U
	4/16/1997		12 U	35	1300	620	--	--	--	--	--	--	25 U	25 U	25 U	25 U	31	25 U	25 U	--	--	67	25 U	25 U	25 U	25 U	32	--	25 U	25 U	25 U	25 U	25 U	--	--	--	150	25 U	25 U
	4/16/1997	K	12 U	34	1300	580	--	--	--	--	--	--	25 U	25 U	25 U	25 U	29	25 U	25 U	--	--	62	25 U	25 U	25 U	25 U	30	--	25 U	25 U	25 U	25 U	25 U	--	--	--	150	25 U	25 U
	7/9/1997		5 U	10 U	810	110	--	--	--	--	--	--	10 U	10 U	10 U	10 U	35	10 U	10 U	--	--	42	10 U	10 U	10 U	10 U	32	--	10 U	10 U	10 U	10 U	10 U	--	--	--	150	10 U	10 U
	7/9/1997	K	5 U	10 U	860	120	--	--	--	--	--	--	10 U	10 U	10 U	10 U	36	10 U	10 U	--	--	42	10 U	10 U	10 U	10 U	33	--	10 U	10 U	10 U	10 U	10 U	--	--	--	160	10 U	10 U
	10/16/1997		5 U	10 U	460	31	--	--	--	--	--	--	10 U	10 U	10 U	27	140	10 U	10 U	--	--	140	12	10 U	10 U	10 U	69	--	10 U	10 U	10 U	10 U	10 U	--	--	--	230	10 U	10 U
	10/16/1997	K	5 U	10 U	430	76	--	--	--	--	--	--	10 U	10 U	10 U	26	140	10 U	10 U	--	--	140	12	10 U	10 U	10 U	64	--	10 U	10 U	10 U	10 U	10 U	--	--	--	220	10 U	10 U
	1/14/1998		5 U	10 U	530	420	--	--	--	--	--	--	10 U	10 U	10 U	10 U	46	10 U	10 U	--	--	72	61	10 U	10 U	10 U	42	--	10 U	10 U	10 U	10 U	10 U	--	--	--	180	10 U	10 U
	1/14/1998	K	2.5 U	5 U	480	390	--	--	--	--	--	--	5 U	5 U	5 U	9.2	44	5 U	5 U	--	--	67	58	5 U	5 U	5 U	43	--	5 U	5 U	5 U	5 U	5 U	--	--	--	170	5 U	5 U
	4/22/1998		2.9	5 U	320	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	17	5 U	5 U	--	--	37	110	5 U	5 U	5 U	25	--	5 U	5 U	5 U	5 U	5 U	--	--	--	92	5 U	5 U
	4/22/1998	K	2.8	5 U	300	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	16	5 U	5 U	--	--	35	100	5 U	5 U	5 U	24	--	5 U	5 U	5 U	5 U	5 U	--	--	--	88	5 U	5 U
	7/15/1998		12 U	25 U	1200	300	--	--	--	--	--	--	25 U	25 U	25 U	25 U	28	25 U	25 U	--	--	28	25 U	25 U	25 U	25 U	25 U	--	25 U	25 U	25 U	25 U	25 U	--	--	--	120	25 U	25 U
	7/15/1998	K	12 U	25 U	1300	320	--	--	--	--	--	--	25 U	25 U	25 U	25 U	29	25 U	25 U	--	--	31	25 U	25 U	25 U	25 U	27	--	25 U	25 U	25 U	25 U	25 U	--	--	--	120	25 U	25 U
	10/21/1998		6.2 U	12 U	740	240	--	--	--	--	--	--	12 U	12 U	12 U	12	52	12 U	12 U	--	--	64	22	12 U	12 U	12 U	29	--	12 U	12 U	12 U	12 U	12 U	--	--	--	120	12 U	12 U
	10/21/1998	K	6.2 U	12 U	740	240	--	--	--	--	--	--	12 U	12 U	12 U	13	56	12 U	12 U	--	--	66	23	12 U	12 U	12 U	29	--	12 U	12 U	12 U	12 U	12 U	--	--	--	130	12 U	12 U
	1/15/1999		5 U	10 U	520	31	--	--	--	--	--	--	10 U	10 U	10 U	35	140	10 U	10 U	--	--	140	33	10 U	10 U	10 U	60	--	10 U	10 U	10 U	10 U	10 U	--	--	--	260	10 U	10 U
	1/15/1999	K	3.5 U	2.5 U	520 U	9.9 U	--	--	--	--	--	--	10 U	10 U	10 U	42	200	10 U	10 U	--	--	170	40	10 U	10 U	10 U	71	--	10 U	10 U	10 U	10 U	10 U	--	--	--	260 U	10 U	10 U
	4/15/1999		3.5	2.5 U	220	9.9	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	10	36	5 U	5 U	68	--	64	66	2.5 U	2.5 U	2.5 U	40	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	190	5 U	5 U
	4/15/1999	K	3.6	2.5 U	230	7.5	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	10	37	5 U	5 U	68	--	66	68	2.5 U	2.5 U	2.5 U	43	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	190	5 U	5 U
	7/15/1999		10 U	10 U	670	67	--	--	--	--	--	--	10 U	10 U	10 U	10 U	38	20 U	20 U	100	--	58	87	10 U	10 U	10 U	36	--	10 U	10 U	10 U	10 U	10 U	--	--	--	140	20 U	20 U
	7/15/1999	K	10 U	10 U	500	60	--	--	--	--	--	--	10 U	10 U	10 U	11	46	20 U	20 U	120	--	68	77	10 U	10 U	10 U	42	--	10 U	10 U	12	10 U	10 U	--	--	--	150	20 U	20 U
	10/15/1999		5 U	5 U	92	11	--	--	--	--	--	--	5 U	5 U	5 U	25	130	10 U	10 U	160	--	170	85	5 U	5 U	5 U	82	--	5 U	5 U	5 U	5 U	5 U	--	--	--	210	10 U	10 U
	10/15/1999	K	5 U	5 U	80	13	--	--	--	--	--	--	5 U	5 U	5 U	30	150	10 U	10 U	170	--	190	74	5 U	5 U	5 U	88	--	5.4	5 U	5 U	5 U	5 U	--	--	--	220	10 U	10 U
	1/27/2000		5.1	2.5 U	2.5 U	6	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	18	100	5 U	5 U	170	--	160	18	2.5 U	2.5 U	2.5 U	85	--	4.9	2.5 U	8.8	2.5 U	2.5 U	--	--	--	160	5 U	5 U
	1/27/2000	K	5	2.5 U	2.5 U	6	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	18	100	5 U	5 U	170	--	160	18	2.5 U	2.5 U	2.5 U	84	--	4.7	2.5 U	8.7	2.5 U	2.5 U	--	--	--	160	5 U	5 U
	4/15/2000		5 U	5 U	46	8.6	--	--	--	--	--	--	5 U	5 U	5 U	13	53	10 U	10 U	130	--	170	94	5 U	5 U	5 U	98	--	5 U	5 U	5 U	5 U	5 U	--	--	--	240	10 U	10 U
	4/15/2000	K	5 U	5 U	43	9.5	--	--	--	--	--	--	5 U	5 U	5 U	15	60	10 U	10 U	140	--	190	100	5 U	5 U	5 U	110	--	5 U	5 U	5 U	5 U	5 U	--	--	--	270	10 U	10 U
	10/15/2000		50 U	50 U	2500	50 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	130	--	74	99	50 U	50 U	50 U	1 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	170	100 U	100 U
	10/15/2000	K	50 U	50 U	2400	50 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	130	--	80	100	50 U	50 U	50 U	1 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	180	100 U	100 U
	4/15/2001		50 U	120	3100	830	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	100	--	58	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	150	100 U	100 U
	4/15/2001	K	50 U	120	3000	830	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	110	--	57	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	150	100 U	100 U
	7/18/2001		50 U	50 U	2400	50 U	--	--	--	16	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	50 U	--	50 U	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	74	100 U	100 U
	7/18/2001	K	50 U	50 U	2400	50 U	--	--	--	16	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	50 U	--	50 U	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	76	100 U	100 U
	10/18/2001		50 U	50 U	3700	50 U	--	--	--	37	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	65	--	73	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	170	100 U	100 U
	10/18/2001	K	50 U	50 U	2800	50 U	--	--	--	36	--	--	50 U	50 U	50 U	50 U	59	100 U	100 U	81	--	90	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	220	100 U	100 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-04	1/17/2002		10 U	10 U	680	10 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	20	20 U	20 U	63	--	55	160	10 U	10 U	10 U	31	--	10 U	10 U	10 U	10 U	10 U	--	--	--	130	20 U	20 U
	1/17/2002	K	10 U	10 U	720	10 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	24	20 U	20 U	70	--	58	160	10 U	10 U	10 U	32	--	10 U	10 U	10 U	10 U	10 U	--	--	--	140	20 U	20 U
	4/18/2002		50 U	50 U	2200	170	--	--	--	--	--	--	50 U	50 U	50 U	50 U	58	100 U	100 U	86	--	100	50 U	50 U	50 U	50 U	57	--	50 U	50 U	50 U	50 U	50 U	--	--	--	260	100 U	100 U
	4/18/2002	K	50 U	50 U	1900	160	--	--	--	--	--	--	50 U	50 U	50 U	50 U	60	100 U	100 U	84	--	100	50 U	50 U	50 U	50 U	65	--	50 U	50 U	50 U	50 U	50 U	--	--	--	260	100 U	100 U
	7/25/2002		7.7	5 U	220	328	--	--	--	--	--	--	5 U	5 U	5 U	18	85	10 U	10 U	210	--	180	32	5 U	5 U	5 U	110	--	5 U	5 U	5 U	5 U	5 U	--	--	--	210	10 U	10 U
	7/25/2002	K	7.6	5 U	200	317	--	--	--	--	--	--	5 U	5 U	5 U	18	84	10 U	10 U	200	--	170	32	5 U	5 U	5 U	110	--	5 U	5 U	5 U	5 U	5 U	--	--	--	210	10 U	10 U
	10/23/2002		12 U	12 U	820	1650	--	--	10 U	--	--	--	12 U	12 U	12 U	20	87	25 U	25 U	240	--	200	31	12 U	12 U	12 U	76	--	12 U	12 U	12 U	12 U	12 U	--	10 U	--	130	25 U	25 U
	10/23/2002	K	12 U	12 U	880	1760	--	--	10 U	--	--	--	12 U	12 U	12 U	21	90	25 U	25 U	250	--	210	28	12 U	12 U	12 U	82	--	12 U	12 U	12 U	12 U	12 U	--	10 U	--	140	25 U	25 U
	12/30/2002		3.8	0.37 J	51	81	--	--	--	--	--	2.5 U	2.5 U	1.5 J	2.5 U	8.1	30	0.47 J	2.5 U	130 E	2.5 U	110	67	2.5 U	2.5 U	2.5 U	45	2.5 U	2.3 J	2.5 U	1.9 J	2.5 U	2.5 U	--	--	--	85	2.5 U	0.39 J
	12/30/2002	K	3.8 J	0.4 J	49	78	--	--	--	--	--	5 U	5 U	1.6 J	5 U	9.7	36	5 U	5 U	140	5 U	120	64	5 U	5 U	5 U	48	5 U	2.8 J	5 U	2.1 J	5 U	5 U	--	--	--	99	5 U	0.34 J
	4/25/2003		5.6	5 U	540	31	5 U	6.4	5 U	--	5 U	5 U	5 U	5 U	2.5 U	17	68	5 U	5 U	210	5 U	150	150	5 U	5 U	5 U	83	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	130	5 U	2.5 U
	4/25/2003	K	5.6	5 U	500	28.4	5 U	5.8	5 U	--	5 U	5 U	5 U	5 U	2.5 U	18	75	5 U	5 U	220	5 U	150	160	5 U	5 U	5 U	83	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	140	5 U	2.5 U
	7/30/2003		5.8	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	25	96	5 U	5 U	230	5 U	160	56	5 U	5 U	5 U	78	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	140	5 U	2.5 U
	7/30/2003	K	7	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	25	100	10 U	10 U	250	10 U	170	59	10 U	10 U	10 U	80	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	150	10 U	5 U
	10/23/2003		20 U	20 U	410	40 U	--	--	10 U	--	--	20 U	20 U	20 U	50 U	20 U	61	50 U	50 U	160	--	150	53	20 U	20 U	20 U	65	50 U	20 U	20 U	20 U	20 U	20 U	--	10 U	--	140	50 U	50 U
	10/23/2003	K	8 U	8 U	390	16 U	--	--	10 U	--	--	8 U	8 U	8 U	20 U	13	58	20 U	20 U	180	--	160	55	8 U	8 U	8 U	73	20 U	8 U	8 U	8 U	8 U	8 U	--	10 U	--	150	20 U	20 U
	1/23/2004		5.7	4 U	200	9.6	4 U	21	4 U	--	4 U	4 U	4 U	4 U	2 U	16	73	4 U	4 U	170	4 U	200	120	4 U	4 U	4 U	74	20 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	190	4 U	2 U
	1/23/2004	K	6.3	2.5 U	210	13	2.5 U	25	2.5 U	--	2.5 U	2.5 U	2.5 U	3.2	1.2 U	16	67	2.5 U	2.5 U	150	2.5 U	190	140	2.5 U	2.5 U	2.5 U	76	12 U	3.4	2.5 U	3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	200	2.5 U	1.2 U
	4/21/2004		3.3	4 U	4 U	8 U	4 U	4.3	4 U	--	4 U	4 U	4 U	4 U	2 U	14	70	4 U	4 U	110	4 U	180	140	4 U	4 U	4 U	99	20 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	330	4 U	2 U
	4/21/2004	K	3.3	2.5 U	2.5 U	5 U	2.5 U	4.4	2.5 U	--	2.5 U	2.5 U	2.5 U	3.1	1.2 U	14	70	2.5 U	2.5 U	110	2.5 U	180	160	2.5 U	2.5 U	2.5 U	99	12 U	3	2.5 U	3.9	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	330	2.5 U	1.2 U
	7/21/2004		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	14	61	5 U	5 U	83	5 U	190	100	5 U	5 U	5 U	91	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	310	5 U	2.5 U
	7/21/2004	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	14	63	5 U	5 U	82	5 U	190	100	5 U	5 U	5 U	93	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	310	5 U	2.5 U
	10/12/2004		2 U	2 U	2 U	4 U	--	--	9.7 U	--	--	2 U	2 U	2 U	5 U	2	5 U	5 U	5 U	51	--	150	46	2 U	2 U	2 U	48	5 U	2 U	2 U	3.2	2 U	2 U	--	9.7 U	--	160	5 U	5 U
	10/12/2004	K	1.3	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.8	0.5 U	2	5 U	1 U	1 U	51	1 U	170	48	1 U	1 U	1 U	52	5 U	2	1 U	3.5	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.2	1 U	24	3.7	1 U	1 U	1 U	5.9	5 U	1 U	1 U	5.1	1 U	1 U	1 U	1 U	1 U	36	1 U	0.5 U
	1/27/2005	K	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.3	1 U	26	3.9	1 U	1 U	1 U	6.5	5 U	1 U	1 U	5.1	1 U	1 U	1 U	1 U	1 U	39	1 U	0.5 U
	4/27/2005		5 U	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	13	51	10 U	10 U	63	10 U	340	40	10 U	10 U	10 U	120	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	370	10 U	5 U
	4/27/2005	K	5 U	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	14	55	10 U	10 U	64	10 U	350	40	10 U	10 U	10 U	120	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	370	10 U	5 U
	7/27/2005		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	11	43	5 U	5 U	55	5 U	190	37	5 U	5 U	5 U	94	25 U	5 U	5 U	7.4	5 U	5 U	5 U	5 U	5 U	370	5 U	2.5 U
	7/27/2005	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	9.4	38	5 U	5 U	46	5 U	160	32	5 U	5 U	5 U	74	25 U	5 U	5 U	6.1	5 U	5 U	5 U	5 U	5 U	310	5 U	2.5 U
	10/20/2005		8 U	8 U	97	16 U	--	--	10 U	--	--	8 U	8 U	8 U	20 U	14	58	20 U	20 U	51	--	160	41	8 U	8 U	8 U	81	20 U	8 U	8 U	8 U	8 U	8 U	--	10 U	--	390	20 U	20 U
	10/20/2005	K	5 U	10 U	91	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	14	63	10 U	10 U	50	10 U	160	42	10 U	10 U	10 U	81	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	390	10 U	5 U
	1/26/2006		5 U	10 U	34	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	14	52	10 U	10 U	42	10 U	190	96	10 U	10 U	10 U	82	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	540	10 U	5 U
	1/26/2006	K	5 U	10 U	32	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	14	55	10 U	10 U	42	10 U	180	110	10 U	10 U	10 U	82	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	520	10 U	5 U
	4/26/2006		5	5 U	17	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	17	63	5 U	5 U	44	5 U	190	110	5 U	5 U	5 U	87	25 U	5 U	5 U	7.2	5 U	5 U	5 U	5 U	5 U	430	5 U	2.5 U
	4/26/2006	K	4.6	5 U	17	17 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	17	62	5 U	5 U	43	5 U	190	100	5 U	5 U	5 U	82	25 U	5 U	5 U	6.9	5 U	5 U	5 U	5 U	5 U	420	5 U	2.5 U
	7/27/2006		5.5	10 U	14	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	25	56	10 U	10 U	49	10 U	240	71	10 U	10 U	10 U	93	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	470	10 U	5 L,U
	7/27/2006	K	5.2	10 U	14	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	24	51	10 U	10 U	47	10 U	230	66	10 U	10 U	10 U	86	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	430	10 U	5 L,U
	10/26/2006		10	2 U	170	36.3	--	--	9.52 U	33	--	2 U	2.4	2.9	5 U	14	61	5 U	5 U	77	--	120	41	2 U	2 U	2 U	63	5 U	3.6	2 U	4.7	2 U	2 U	--	9.52 U	--	250	5 U	5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro- ethane	Chloro- methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-04	10/26/2006	K	9.4	1 U	280	32.3	1.4	23	1 U	--	1 U	1 U	1 U	2.5	0.5 U	16	61	1 U	1 U	75	1 U	140	56	1 U	1 U	1 U	61	5 U	3.8	1 U	4.2	1 U	1 U	1 U	1 U	1 U	280	1 U	0.5 U
	1/18/2007		13	20 U	1500	46	20 U	31	20 U	--	20 U	20 U	20 U	20 U	10 U	20 U	100 U	20 U	20 U	120	20 U	190	49	20 U	20 U	20 U	51	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	260	20 U	10 U
	1/18/2007	K	13	20 U	1500	46	20 U	32	20 U	--	20 U	20 U	20 U	20 U	10 U	20 U	100 U	20 U	20 U	120	20 U	190	49	20 U	20 U	20 U	38	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	260	20 U	10 U
	4/18/2007		12	20 U	1400	29	20 U	27	20 U	--	20 U	20 U	20 U	20 U	10 U	20 U	100 U	20 U	20 U	170	20 U	230	48	20 U	20 U	20 U	74	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	250	20 U	10 U
	4/18/2007	K	12	20 U	1400	28	20 U	28	20 U	--	20 U	20 U	20 U	20 U	10 U	20 U	100 U	20 U	20 U	170	20 U	230	46	20 U	20 U	20 U	72	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	240	20 U	10 U
	7/27/2007		20 U	40 U	2100	2400	40 U	40 U	40 U	--	40 U	40 U	40 U	40 U	20 U	40 U	200 U	40 U	40 U	150	40 U	170	29	40 U	40 U	40 U	46	200 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	180	40 U	20 U
	7/27/2007	K	20 U	40 U	2100	2410	40 U	40 U	40 U	--	40 U	40 U	40 U	40 U	20 U	40 U	200 U	40 U	40 U	140	40 U	180	27	40 U	40 U	40 U	50	200 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	180	40 U	20 U
	10/25/2007		20 U	20 U	3000	373	--	--	9.43 U	--	--	20 U	20 U	20 U	50 U	20 U	50 U	50 U	50 U	180	--	140	41	20 U	20 U	20 U	50 U	50 U	20 U	20 U	20 U	20 U	20 U	--	9.43 U	--	78	50 U	50 U
	10/25/2007	K	20 U	40 U	3800	340	40 U	52	40 U	--	40 U	40 U	40 U	40 U	20 U	40 U	200 U	40 U	40 U	200	40 U	160	48	40 U	40 U	40 U	53	200 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	83	40 U	20 U
	1/31/2008		3.8	5 U	27	5 U	5 U	8.6	5 U	63	5 U	5 U	5 U	5 U	2.5 U	6	32	5 U	5 U	110	5 U	220	180	5 U	5 U	5 U	71	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	350	5 U	2.5 U
	1/31/2008	K	3.8	5 U	26	5 U	5 U	7.8	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5.6	31	5 U	5 U	110	5 U	210	170	5 U	5 U	5 U	68	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	340	5 U	2.5 U
	4/24/2008		1.8	1 U	4.6	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.7	0.5 U	5	13	1 U	1 U	66	1 U	120	170	1 U	1 U	1 U	52	5 U	2.3	1 U	3.4	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	4/24/2008	K	1.7	1 U	4.5	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.6	0.5 U	5	13	1 U	1 U	65	1 U	120 MHA	160	1 U	1 U	1 U	51	5 U	2.4	1 U	3.4	1 U	1 U	1 U	1 U	1 U	180 MHA	1 U	0.5 U
	7/31/2008		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5.2	28	5 U	5 U	69	5 U	150	190	5 U	5 U	5 U	68	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	310	5 U	2.5 U
	7/31/2008	K	2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	5.5	29	4 U	4 U	68	4 U	150	180	4 U	4 U	4 U	66	20 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	310	4 U	2 U
	10/30/2008		2 U	2 U	2 U	2 U	--	--	10.5 U	36	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	20	--	53	31	2 U	2 U	2 U	10	5 U	2 U	2 U	2.5	2 U	2 U	--	10.5 U	--	61	5 U	5 U
	10/30/2008	K	0.56 M1	1 U	1 U	1 U	1 M1,U	1 M1,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	21	1 U	53	32	1 U	1 U	1 U	11	5 U	1 U	1 M1,U	2.8	1 U	1 U	1 U	1 U	1 U	64	1 R,U	0.5 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	3.1	1 U	22	2.9	1 U	1 U	1 U	3	5 U	1 U	1 U	7.7	1 U	1 U	1 U	1 U	1 U	26	1 U	0.5 U
	1/28/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	3.2	1 U	23	3.5	1 U	1 U	1 U	2.9	5 U	1 U	1 U	7.6	1 U	1 U	1 U	1 U	1 U	29	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.1	1 U	21	2.2	1 U	1 U	1 U	2.5	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U
	4/8/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.9	1 U	21	1.9	1 U	1 U	1 U	2.4	5 U	1 U	1 U	15	1 U	1 U	1 U	1 U	1 U	24	1 U	0.5 U
	7/31/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	5.7	0.57	1 U	1 U	1 U	1.6	5 U	1 U	1 U	39	1 U	1 U	1 U	1 U	1 U	17	1 U	0.5 U
	7/31/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	6	0.72	1 U	1 U	1 U	1.6	5 U	1 U	1 U	39	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.6	5 U	1 U	1 U	43	1 U	6.4	24	1 U	1 U	1 U	16	5 U	1 U	1 U	83	1 U	1 U	1 U	1 U	1 U	56	9.8	0.5 U
	7/28/2011		0.6	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.4	5 U	1 U	1 U	42	1 U	78	52	1 U	1 U	1 U	14	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	140	1.3	0.5 U
	7/28/2011	K	0.58	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.3	5 U	1 U	1 U	43	1 U	75	47	1 U	1 U	1 U	15	5 U	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	10/21/2011		2 U	2 U	2 U	2 U	1 U	1 U	1 U	41	1 U	2 U	2 U	2.9	5 C,U	2.8	5 U	5 U	5 U	30	2 U	100	46	2 U	2 U	2 U	18	5 U	2 U	2 U	21	2 U	2 U	1 U	1 U	1 U	210	5 U	5 U
	10/21/2011	K	2 U	2 U	2 U	2 U	1 U	1 U	1 U	36	1 U	2 U	2 U	3	5 C,U	2.8	5 U	5 U	5 U	30	2 U	100	45	2 U	2 U	2 U	18	5 U	2 U	2 U	20	2 U	2 U	1 U	1 U	1 U	210	5 U	5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.9	0.5 U	1.3	5 U	1 U	1 U	25	1 U	73	50	1 U	1 U	1 U	12	5 U	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	1/19/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.5	0.5 U	1.5	5 U	1 U	1 U	23	1 U	71	59	1 U	1 U	1 U	13	5 U	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	200	1 U	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	2.6	0.5 U	2	5.4	1 U	1 U	23	1 U	74	65	1 U	1 U	1 U	15	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	160	1 U	0.5 U
	3/21/2012	K	1.3 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.8	1.3 U	2.5 U	13 U	2.5 U	2.5 U	25	2.5 U	85	64	2.5 U	2.5 U	2.5 U	16	13 U	2.5 U	2.5 U	17	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	190	2.5 U	1.3 U
	7/26/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	3.7	0.5 U	2.4	8.8	1 U	1 U	27	1 U	81	42	1 U	1 U	1 U	15	5 U	1 U	1 U	15	1 U	1 U	1 U	1 U	1 U	180	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																											
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-04	7/26/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	3.7	0.5 U	2.3	8.5	1 U	1 U	28	1 U	81	43	1 U	1 U	1 U	15	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	170	1 U	0.5 U
	11/1/2012		0.96	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	92	0.5 U	0.5 U	0.5 U	2.7	0.5 U	1.3	3.9	0.5 U	0.5 U	13	0.5 U	63	73	0.52	0.5 U	0.5 U	9.7	0.5 U	0.5 U	0.5 U	14	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	140	0.5 U	0.5 U
	11/1/2012	K	0.78	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	69	0.5 U	0.5 U	0.5 U	2.2	0.5 U	1	3	0.5 U	0.5 U	12	0.5 U	46	64	0.5 U	0.5 U	0.5 U	7.6	0.5 U	0.5 U	0.5 U	12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	100	0.5 U	0.5 U
MW-04A	1/15/1989		0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	6.7	0.2 U	0.2 U
	4/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	7	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.7	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3	1 U	1 U
	1/24/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	8	2 U	0.2 U
	4/12/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	2.7	2 U	0.2 U
	7/15/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	0.2 U	--	1.7	0.2 U	0.5 U	0.5 U	0.5 U	0.42	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	6.1	2 U	0.2 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	10 U	500 U	--	5 U	5 U	5 U	1 U	1 U	1 U	10 U	10 U	--	10 U	1 U	1 U	10 U	10 U	10 U	1 U	20 U	1 U	5 U	1 U	1 U	5 U	--	10 U	--	1 U	5 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.6 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	4/15/1991	K	0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	4.1 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	4.3	1 U	1 U	--	--	5	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.2	1 U	1 U
	10/23/1991		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.23	2 U	0.2 U	0.2 U	0.2 U	--	1.3	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	2.2	2 U	0.2 U
	1/15/1992		1	1	2	2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.1	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	4.2	4.7	1 U	1 U	--	--	49	1 U	1 U	1 U	1 U	12	--	1.4	1 U	1 U	1.2	1 U	--	--	--	45	1 U	1 U
	1/15/1993		0.5 U	3	3.5	8.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1	1 U	1 U	--	--	1.9	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.1	1 U	1 U
	4/20/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.7 B	1 U	1 U	--	--	1.2	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.7	1 U	1 U
	7/13/1993		0.5 U	2.7	1.8	4.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.9 B	1 U	1 U	--	--	13	1 U	1 U	1 U	1 U	3	--	1.2	1 U	1 U	1 U	1 U	--	--	--	16	1 U	1 U
	10/13/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2 B	1 U	1 U	--	--	6.5	1 U	1 U	1 U	1 U	1.6	--	1 U	1 U	1.1	1 U	1 U	--	--	--	7.8	1 U	1 U
	1/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	9.6	1 U	1 U	1 U	1 U	3.4	--	1 U	1 U	1 U	1 U	1 U	--	--	--	12	1 U	1 U
	4/13/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	4.2	1 U	1 U	1 U	1 U	1.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.2	1 U	1 U
	7/19/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	6.8	1 U	1 U	1 U	1 U	2.4	--	1 U	1 U	1 U	1 U	1 U	--	--	--	11	1 U	1 U
	10/12/1994		0.5 U	1 U	1 U	2.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.2 B	1 U	1 U	--	--	7.5	1 U	1 U	1 U	1 U	2.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	13	1 U	1 U
	1/18/1995		0.5 U	1.5	2.7	2.9	--	--	--	--	--	--	1 U	1 U	1 U	1.7	2.4 B	1 U	1 U	--	--	35	1 U	1 U	1 U	1 U	11	--	1 U	1 U	1.9	1 U	1 U	--	--	--	30	1 U	1 U
	4/18/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.5 B	1 U	1 U	--	--	13	1 U	1 U	1 U	1 U	2.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	10	1 U	1 U
	7/12/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.3	1.3 B	1 U	1 U	--	--	20	1 U	1 U	1 U	1 U	5	--	1 U	1 U	1.6	1 U	1 U	--	--	--	19	1 U	1 U
	10/10/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.6	1.4	1 U	1 U	--	--	28	1 U	1 U	1 U	1 U	5.9	--	1 U	1 U	1.4	1 U	1 U	--	--	--	21	1 U	1 U
	1/31/1996		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.5	1.4	1 U	1 U	--	--	25	1 U	1 U	1 U	1 U	5.6	--	1 U	1 U	1.3	1 U	1 U	--	--	--	19	1 U	1 U
	4/16/1996		0.5 U	1 U	2.9	3.8	--	--	--	--	--	--	1 U	1 U	1 U	1.2	1 U	1 U	1 U	--	--	19	1 U	1 U	1 U	1 U	4.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	7/16/1996		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.1	1.2	1 U	1 U	--	--	24	1 U	1 U	1 U	1 U	3.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	16	1 U	1 U
	10/9/1996		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.7	1 U	1 U	1 U	--	--	26	1 U	1 U	1 U	1 U	3.9	--	1 U	1 U	1.2	1 U	1 U	--	--	--	19	1 U	1 U
	1/14/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.1	1 U	1 U	1 U	--	--	23	1 U	1 U	1 U	1 U	5.1	--	1 U	1 U	1 U	1 U	1 U	--	--	--	20	1 U	1 U
	4/16/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	17	1 U	1 U	1 U	1 U	3.3	--	1 U	1 U	1.1	1 U	1 U	--	--	--	14	1 U	1 U
	7/9/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	9.8	1.2	1 U	1 U	1 U	2.4	--	1 U	1 U	2.7	1 U	1 U	--	--	--	11	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-04A	10/16/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	19	1 U	1 U	1 U	1 U	3.6	--	1 U	1 U	1.6	1 U	1 U	--	--	--	13	1 U	1 U
	1/14/1998		0.5 U	1 U	1.8	1.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	11	1 U	1 U	1 U	1 U	2.9	--	1 U	1 U	1.8	1 U	1 U	--	--	--	14	1 U	1 U
	4/22/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	9.1	1 U	1 U	1 U	1 U	2.3	--	1 U	1 U	1.2	1 U	1 U	--	--	--	11	1 U	1 U
	7/15/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	5.8	1 U	1 U	1 U	1 U	1.8	--	1 U	1 U	1.2	1 U	1 U	--	--	--	9.2	1 U	1 U
	10/20/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	9.3	1 U	1 U	1 U	1 U	1.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	8.8	1 U	1 U
	1/15/1999		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	7.3	1 U	1 U	1 U	1 U	1.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	10	1 U	1 U
	4/15/1999		1 U	1 U	2.9	1.7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	2.7	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	7	2 U	2 U
	7/15/1999		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	2	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	6.3	1 U	1 U	--	--	--	5.2	2 U	2 U
	10/15/1999		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1.4	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2	1 U	1 U	--	--	--	4.5	2 U	2 U
	1/27/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.8	1 U	1 U	--	--	--	4.2	2 U	2 U
	4/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	8	1 U	1 U	1 U	1 U	1.7	--	1 U	1 U	2.5	1 U	1 U	--	--	--	8.6	2 U	2 U
	10/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	6.8	1 U	1 U	1 U	1 U	1.7	--	1 U	1 U	1.6	1 U	1 U	--	--	--	7.4	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1.6	--	20	1 U	1 U	1 U	1 U	4.5	--	1 U	1 U	1.8	1 U	1 U	--	--	--	19	2 U	2 U
	7/18/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	2.4	1 U	2 U	2 U	4.4	--	56	1 U	1 U	1 U	1 U	13	--	1.1	1 U	2.7	1 U	1 U	--	--	--	44	2 U	2 U
	10/17/2001		1 U	1 U	1 U	1 U	--	--	--	0.95 U	--	--	1 U	1 U	1 U	1.1	1 U	2 U	2 U	1.7	--	25	1 U	1 U	1 U	1 U	6.2	--	1 U	1 U	2	1 U	1 U	--	--	--	22	2 U	2 U
	1/16/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.7	1 U	1 U	--	--	--	3.5	2 U	2 U
	4/17/2002		2 U	2 U	2 U	4 U	--	--	--	--	--	--	2 U	2 U	2 U	4.4	2 U	4 U	4 U	7.3	--	93	2 U	2 U	2 U	2 U	18	--	2 U	2 U	3.6	2 U	2 U	--	--	--	71	4 U	4 U
	7/25/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	6.1	1 U	1 U	1 U	1 U	1.8	--	1 U	1 U	1.3	1 U	1 U	--	--	--	7.1	2 U	2 U
	10/23/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1.3	1 U	2 U	2 U	1.9	--	33	1 U	1 U	1 U	1 U	11	--	1 U	1 U	2.6	1 U	1 U	--	--	--	36	2 U	2 U
	1/9/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	2.8	1 U	40	0.5 U	1 U	1 U	1 U	11	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	42	1 U	0.5 U
	4/24/2003		1.7	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7	5 U	1 U	1 U	13	1 U	150	0.5 U	1 U	1 U	1 U	37	5 U	2.2	1 U	5.3	2.9	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	7/30/2003		2.2	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	9.2	20 U	4 U	4 U	16	4 U	230	2 U	4 U	4 U	4 U	47	20 U	4 U	4 U	6.8	4	4 U	4 U	4 U	4 U	150	4 U	2 U
	10/21/2003		17	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	8.9	20 U	4 U	5.3	13	4 U	210	2 U	4 U	4 U	4 U	26	20 U	4 U	4 U	5.3	4 U	4 U	4 U	4 U	4 U	130	4 U	2 U
	1/22/2004		3.3	2 U	2 U	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	4	10 U	2 U	2 U	7.7	2 U	99	1 U	2 U	2 U	2 U	17	10 U	2 U	2 U	2.9	2 U	2 U	2 U	2 U	2 U	63	2 U	1 U
	4/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	16	0.5 U	1 U	1 U	1 U	2	5 U	1 U	1 U	1.8	1 U	1 U	1 U	1 U	1 U	20	1 U	0.5 U
	7/21/2004		5.2	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.4	5 U	1 U	1 U	15	1 U	180	0.5 U	1 U	1 U	1 U	34	5 U	3.1	1 U	6	3.4	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	10/12/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	7.4	0.5 U	1 U	1 U	1 U	4.4	5 U	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	58	7.3	0.5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.1	1 U	5.2	0.5 U	1 U	1 U	1 U	6.2	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	95	15	0.5 U
	4/27/2005		0.59	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.2	5 U	1 U	1 U	7.5	1 U	87	0.5 U	1 U	1 U	1 U	20	5 U	1.5	1 U	22	1 U	1 U	1 U	1 U	1 U	120	8.3	0.5 U
	7/27/2005		0.56	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.7	5 U	1 U	1 U	9.5	1 U	130	0.5 U	1 U	1 U	1 U	25	5 U	1.4	1 U	13	1 U	1 U	1 U	1 U	1 U	130	2.6	0.5 U
	10/20/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.2	5 U	1 U	1 U	10	1 U	160	0.5 U	1 U	1 U	1 U	26	5 U	1.1	1 U	9.6	2.4	1 U	1 U	1 U	1 U	130	1.4	0.5 U
	1/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	2.8	1 U	38	0.5 U	1 U	1 U	1 U	7.4	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	35	1 U	0.5 U
	4/26/2006		1.1	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.3	5 U	1 U	1 U	13	1 U	160	0.5 U	1 U	1 U	1 U	33	5 U	3.4	1 U	3.3	2.4	1 U	1 U	1 U	1 U	87	1.6	0.5 U
	7/27/2006		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	13	25 U	5 U	5 U	17	5 U	310	2.5 U	5 U	5 U	5 U	42	25 U	5 U	5 U	10	5 U	5 U	5 U	5 U	5 U	220	5 U	2.5 U
	10/26/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.3	5 U	1 U	1 U	14	1 U	210	0.5 U	1 U	1 U	1 U	30	5 U	2.5	1 U	5.8	2.2	1 U	1 U	1 U	1 U	150	1 U	0.5 U
	1/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.2	5 U	1 U	1 U	9.1	1 U	130	0.5 U	1 U	1 U	1 U	12	5 U	1.5	1 U	3.4	1.2	1 U	1 U	1 U	1 U	83	1 U	0.5 U
	4/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.2	5 U	1 U	1 U	7.3	1 U	140	0.5 U	1 U	1 U	1 U	14	5 U	1.4	1 U	1 U	1.2	1 U	1 U	1 U	1 U	60	1 U	0.5 U
	7/27/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.1	5 U	1 U	1 U	7.7	1 U	150	0.5 U	1 U	1 U	1 U	17	5 U	1.2	1 U	1.1	1.4	1 U	1 U	1 U	1 U	78	1 U	0.5 U
	10/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	1.6	1 U	32	0.5 U	1 U	1 U	1 U	3.6	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-04A	1/31/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.1	5 U	1 U	1 U	2	1 U	40	0.5 U	1 U	1 U	1 U	4	5 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U	1 U	40	1 U	0.5 U
	4/24/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 M2,U	1 U	1 U	0.5 U	4.3	5 U	1 U	1 U	4.2	1 U	100	0.5 U	1 U	1 U	1 U	9.4	5 U	1 U	1 U	1.4	1 U	1 U	1 U	1 U	1 M2,U	57	1 U	0.5 U
	7/31/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.5	5 U	1 U	1 U	4	1 U	110 MHA	0.5 U	1 U	1 U	1 U	9.7	5 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	68 M1	1 U	0.5 U
	10/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	12	0.5 U	1 U	1 U	1 U	2.4	5 U	1 U	1 U	13	1 U	1 U	1 U	1 U	1 U	39	1.5	0.5 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.6	1 U	6	0.5 U	1 U	1 U	1 U	3.2	5 U	1 U	1 U	15	1 U	1 U	1 U	1 U	1 U	49	2.8	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.7	1 U	5.4	0.5 U	1 U	1 U	1 U	3.7	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	49	3.2	0.5 U
	7/31/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1	5 U	1 U	1 U	1.8	1 U	5	0.5 U	1 U	1 U	1 U	4.5	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	60	5.9	0.5 U
	10/8/2009		2 U	2 U	2 U	2 U	--	--	9.8 U	1.5	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	2 U	--	4	2 U	2 U	2 U	2 U	5 U	5 U	2 U	2 U	20	2 U	2 U	--	9.8 U	--	47	5 U	5 U
	1/29/2010		0.85	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	2	1 U	4.2	0.5 U	1 U	1 U	1 U	6	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	53	5.6	0.5 U
	1/29/2010	K	0.83	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	2	1 U	4.1	0.5 U	1 U	1 U	1 U	5.7	5 U	1 U	1 U	21	1 U	1 U	1 U	1 U	1 U	51	5.5	0.5 U
	4/28/2010		2.1	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	1.8	1 U	3.2	0.5 U	1 U	1 U	1 U	6.3	5 U	1 U	1 U	19	1 U	1 U	1 U	1 U	1 U	44	5.3	0.5 U
	4/28/2010	K	2	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	1.7	1 U	3.4	0.5 U	1 U	1 U	1 U	6.3	5 U	1 U	1 U	19	1 U	1 U	1 U	1 U	1 U	45	5.4	0.5 U
	7/30/2010		1.4	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.4	5 U	1 U	1 U	1.7	1 U	2.4	0.5 U	1 U	1 U	1 U	8.2	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	40	5.8	0.5 U
	7/30/2010	K	1.4	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.5	5 U	1 U	1 U	1.8	1 U	2.5	0.5 U	1 U	1 U	1 U	8.3	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	42	6	0.5 U
	10/29/2010		2 U	2 U	2 U	2 U	--	--	9.4 U	1.2	--	2 U	2 U	2 U	5 U	4.8	5 U	5 U	5 U	--	2 U	2 U	2 U	2 U	2 U	2 U	15	5 U	2 U	2 U	34	2 U	2 U	--	9.4 U	--	52	10	5 U
	10/29/2010	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.5	5 U	1 U	1 U	2.7	1 U	1 U	0.5 U	1 U	1 U	1 U	13	5 U	1 U	1 U	42	1 U	1 U	1 U	1 U	1 U	61	13	0.5 U
	1/20/2011		0.96	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.2	5 U	1 U	1 U	2.5	1 U	1 U	0.61	1 U	1 U	1 U	19	5 U	1 U	1 U	42	1 U	1 U	1 U	1 U	1 U	63	14	0.5 U
	1/20/2011	K	0.96	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.3	5 U	1 U	1 U	2.6	1 U	1 U	0.57	1 U	1 U	1 U	19	5 U	1 U	1 U	41	1 U	1 U	1 U	1 U	1 U	61	14	0.5 U
	4/13/2011		1.1	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	11	5 U	1 U	1 U	3.3	1 U	1	0.9	1 U	1 U	1 U	26	5 U	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	64	19	0.5 U
	4/13/2011	K	1	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.7	5 U	1 U	1 U	2.9	1 U	1 U	0.78	1 U	1 U	1 U	24	5 U	1 U	1 U	32	1 U	1 U	1 U	1 U	1 U	60	17	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.9	5 U	1 U	1 U	3.5	1 U	1 U	0.73	1 U	1 U	1 U	42 M2	5 U	1 U	1 U	46	1 U	1 U	1 U	1 U	1 U	88	24	0.5 U
	7/28/2011	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	11	5 U	1 U	1 U	3.7	1 U	1 U	0.83	1 U	1 U	1 U	47	5 U	1 U	1 U	50	1 U	1 U	1 U	1 U	1 U	94	28	0.5 U
	10/21/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.51	11	5 U	1 U	1 U	3.2	1 U	1 U	0.77	1 U	1 U	1 U	43	5 U	1 U	1 U	47	1 U	1 U	1 U	1 U	1 U	95	25	0.5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.7	5 U	1 U	1 U	2.6	1 U	1 U	0.76	1 U	1 U	1 U	24	5 U	1 U	1 U	53	1 U	1 U	1 U	1 U	1 U	85	24	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.5	5 U	1 U	1 U	2.8	1 U	1 U	0.65	1 U	1 U	1 U	32	5 U	1 U	1 U	62	1 U	1 U	1 U	1 U	1 U	82	25	0.5 U
	7/26/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.7	5 U	1 U	1 U	2.3	1 U	1 U	0.61	1 U	1 U	1 U	28	5 U	1 U	1 U	46	1 U	1 U	1 U	1 U	1 U	64	19	0.5 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3	1 U	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	11	0.5 U	0.5 U	0.5 U	53	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	41	10	0.5 U
MW-05	1/15/1989		0.9	0.5 U	0.5 U	--	--	--	--	--	--	--	0.2 U	0.2 U	5.6	7.4	2.1	0.2 U	0.2 U	--	--	0.2 U	29	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	5.9	0.2 U	0.2 U
	4/15/1989		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	140	73	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	35	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	97	57	1 U	1 U	1 U	--	--	4	1 U	1 U	1 U	1 U	2	--	1 U	1 U	2	1 U	1 U	--	--	--	46	1 U	1 U
	7/15/1989	K	7 U	10 U	10 U	10 U	--	--	--	--	--	--	10 U	10 U	160	70	20	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	50	10 U	10 U
	10/15/1989		0.6	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	39	31	1 U	1 U	1 U	--	--	10	10	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	1/25/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	52	42	4 U	0.4 U	0.4 U	--	--	0.42	2.2	1 U	1 U	1 U	0.4 U	0.4 U	--	0.4 U	0.4 U	0.41	0.4 U	--	--	--	16	4 U	0.4 U
	4/10/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	120	76	10 U	1 U	1 U	--	--	1 U	1 U	2.5 U	2.5 U	2.5 U	4.7	1 U	--	1 U	1 U	1 U	1 U	--	--	--	24	10 U	1 U
	7/15/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	120	41	10 U	1 U	1 U	1 U	--	3.2	1 U	2.5 U	2.5 U	2.5 U	2.1	1 U	1 U	1 U	1.4	1.9	1 U	--	--	--	51	10 U	1 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	10 U	10 U	70	33	10 U	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	14	10 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	140	49	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	22	--	--
MW-06B	1/15/1989		0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	7	0.2 U	0.2 U	--	--	--	57	0.2 U	0.2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-06B	4/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1	1 U	1 U	1 U	3	1 U	1 U	--	--	--	37	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	6	1 U	1 U	--	--	--	29	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	29	1 U	1 U
	1/24/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	1 U	1 U	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	6.4	1 U	1 U	--	--	--	46	10 U	1 U
	4/12/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	1 U	1 U	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	5	1 U	1 U	--	--	--	61	10 U	1 U
	7/15/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	1 U	--	1 U	1 U	2.5 U	2.5 U	2.5 U	1.5	1 U	1 U	1 U	7.9	1 U	1 U	--	--	--	51	10 U	1 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	10 U	500 U	--	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	--	10 U	5 U	5 U	10 U	10 U	10 U	5 U	20 U	5 U	5 U	10	5 U	5 U	--	10 U	--	52	5 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	13	--	--	--	--	--	59	--	--
	4/15/1992		0.5 U	0.5 U	1.1	0.82	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	19	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	10	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.3	1 U	1 U
	1/15/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	6.9	1 U	1 U
	4/21/1993		0.5 U	64	26	88	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.6	1 U	1 U
	7/13/1993		0.5 U	2.2	2	5.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.1 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.7	1 U	1 U
	10/13/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.5 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.9	1 U	1 U
	1/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1.2	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.7	1 U	1 U
	4/12/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	7/19/1994		0.5 U	1.1	1 U	1.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.9	1 U	1 U
	10/12/1994		0.5 U	1.5	1 U	8.2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	1/17/1995		1 U	110	89	110	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4.7	1 U	1 U	--	--	--	8.6	1 U	1 U
	4/18/1995		0.5 U	1.6	9.1	6.2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.2 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.3	1 U	1 U	--	--	--	2.3	1 U	1 U
	7/11/1995		0.5 U	1.1	4	5.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.8	1 U	1 U	--	--	--	8.8	1 U	1 U
	10/10/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.6	1 U	1 U
	1/30/1996		1 U	28	27	53	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.6	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	14	1 U	1 U
	4/16/1996		1 U	4.2	37	50	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.9	1 U	1 U
	7/16/1996		0.5 U	1 U	2.3	3.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.3	1 U	1 U
	10/8/1996		0.5 U	1 U	2.1	2.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	6.1	1 U	1 U
	1/14/1997		0.5 U	4.3	4.3	6.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5	1 U	1 U
	4/16/1997		0.5 U	3.6	1.7	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.3	1 U	1 U	--	--	--	5.2	1 U	1 U
	7/9/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.9	1 U	1 U	--	--	--	6.6	1 U	1 U
	10/15/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	6.4	1 U	1 U
	1/14/1998		0.5 U	15	32	39	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.7	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	17	1 U	1 U
	4/22/1998		0.5 U	1.6	4.2	6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	7.7	1 U	1 U
	7/15/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.3	1 U	1 U
	10/20/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.1	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9.9	1 U	1 U
	1/15/1999		0.5 U	5	24	29	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.3	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	17	1 U	1 U
	4/15/1999		1 U	19	42	33.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	2.3	1 U	1 U	1 U	1 U	1.5	--	1 U	1 U	1.6	1 U	1 U	--	--	--	31	2 U	2 U
	7/15/1999		1 U	1 U	1.2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	8.1	1 U	1 U	--	--	--	8.2	2 U	2 U
	10/15/1999		1 U	1 U	4.8	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1.5	1 U	1 U	1 U	1 U	1.6	--	1 U	1 U	1.8	1 U	1 U	--	--	--	12	2 U	2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-06B	1/25/2000		1 U	1 U	2	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	2	1 U	1 U	1 U	1 U	2.4	--	1 U	1 U	17	1 U	1 U	--	--	--	13	2 U	2 U
	4/15/2000		1 U	1 U	1.1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1.1	--	1 U	1 U	1	1 U	1 U	--	--	--	7	2 U	2 U
	10/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.3	1 U	1 U	--	--	--	9.2	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.9	2 U	2 U
	7/18/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.7	2 U	2 U
	10/17/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.6	2 U	2 U
	1/16/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.1	2 U	2 U
	4/17/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.1	2 U	2 U
	7/25/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5	2 U	2 U
	10/23/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	3.4	--	11	1.8	1 U	1 U	1 U	1.1	--	1 U	1 U	1 U	1 U	1 U	--	--	--	12	2 U	2 U
	1/9/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.5	0.5 U	1 U	1 U	1 U	2	5 U	1 U	1 U	5.9	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	4/24/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U
	7/30/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	10/22/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.4	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	1/22/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	5.9	0.5 U	1 U	1 U	1 U	7.6	5 U	1 U	1 U	3.5	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	4/20/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.8	0.5 U	1 U	1 U	1 U	2.1	5 U	1 U	1 U	21	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U
	7/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	11	0.65	1 U	1 U	1 U	13	5 U	1 U	1 U	75	1 U	1 U	1 U	1 U	1 U	28	1.5	0.5 U
	10/12/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	4.5	1.7	1 U	1 U	1 U	6.2	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	53	4.7	0.5 U
	1/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	8.5	4.6	1 U	1 U	1 U	8	5 U	1 U	1 U	93	1 U	1 U	1 U	1 U	1 U	38	2.7	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	3.6	1 U	1.2	0.5 U	1 U	1 U	1 U	4.6	5 U	1 U	1 U	56	1 U	1 U	1 U	1 U	1 U	23	1	0.5 U
	7/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.8	1 U	1 U	0.5 U	1 U	1 U	1 U	2	5 U	1 U	1 U	29	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	10/19/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1.3	0.5 U	1 U	1 U	1 U	1.9	5 U	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	1/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	7.7	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	4/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	8	1 U	1 U	1 U	1 U	1 U	14	1.5	0.5 U
	7/26/2006		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.1	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.8	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	10/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.6	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	1/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.9	1 U	1 U	1 U	1 U	1 U	9.7	1 U	0.5 U
	4/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.2	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	7/26/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	7.3	1 U	0.5 U
	10/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.5	1 U	1 U	1 U	1 U	1 U	9.8	1 U	0.5 U
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.2	0.5 U	1 U	1 U	1 U	1.4	5 U	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	4/24/2008		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	7/31/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1.3	0.5 U	1 U	1 U	1 U	1.3	5 U	1 U	1 U	11	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	10/28/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 M1,U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	5.3	1.6 M1	1 U	1 U	1 U	9.2	5 L, M7,U	1 U	1 U	150	1 U	1 U	1 L, M7,U	1 M1,U	1 U	47	5.3	0.5 U
	1/27/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	13	8.3	1 U	1 U	1 U	17	5 U	1 U	1 U	95	1 U	1 U	1 U	1 U	1 U	26	1.4	0.5 U
	4/7/2009		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	2 U	10 U	2 U	2 U	2 U	2 U	5.9	3.8	2 U	2 U	2 U	13	10 U	2 U	2 U	100	2 U	2 U	2 U	2 U	2 U	34	3.3	1 U
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	2.2	1 U	7.8	5.6	1 U	1 U	1 U	13	5 U	1 U	1 U	70	1 U	1 U	1 U	1 U	1 U	28	2.4	0.5 U
	10/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	4.9	1 U	3.7	2.3	1 U	1 U	1 U	15	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	52	6.2	0.5 U
	1/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2	5 U	1 U	1 U	5.2	1 U	1 U	0.5 U	1 U	1 U	1 U	8	5 C,U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	82	11	0.5 U

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-06B	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.51	1 U	5 U	1 U	1 U	4.4	1 U	1.1	0.97	1 U	1 U	1 U	4.4	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	31	1.9	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	3.7	1.7	1 U	1 U	1 U	7.7	5 U	1 U	1 U	40	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	10/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	5.8	1 U	2.7	1.6	1 U	1 U	1 U	17	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	40	3.6	0.5 U
	1/20/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.5	1 U	6.7	3.6	1 U	1 U	1 U	22	5 U	1 U	1 U	66	1 U	1 U	1 U	1 U	1 U	20	1.3	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.5	5 U	1 U	1 U	3.9	1 U	4.4	0.8	1 U	1 U	1 U	30	5 U	1 U	1 U	170	1 U	1 U	1 U	1 U	1 U	65	7.1	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	8.3	5 U	1 U	1 U	2.7	1 U	1 U	1.8	1 U	1 U	1 U	30	5 U	1 U	1 U	150	1 C, L,U	1 U	1 U	1 U	1 U	82	24	0.5 U
	10/21/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.8	5 U	1 U	1 U	2.3	1 U	1 U	0.72	1 U	1 U	1 U	25	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	92	9.6	0.5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.4	5 U	1 U	1 U	2.4	1 U	1 U	0.73	1 U	1 U	1 U	23	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	82	23	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.5	5 U	1 U	1 U	2.4	1 U	1.1	0.93	1 U	1 U	1 U	18	5 U	1 U	1 U	80	1 U	1 U	1 U	1 U	1 U	58	9.6	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.1	5 U	1 U	1 U	1.3	1 U	1 U	0.5 U	1 U	1 U	1 U	18	5 U	1 U	1 U	60	1 U	1 U	1 U	1 U	1 U	45	15	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.2	5 U	1 U	1 U	2.1	1 U	1.8	0.5 U	1 U	1 U	1 U	20	5 U	1 U	1 U	71	1 U	1 U	1 U	1 U	1 U	56	17	0.5 U
MW-06D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	10 U	500 U	--	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	--	10 U	5 U	5 U	10 U	10 U	10 U	5 U	20 U	5 U	5 U	14	5 U	5 U	--	10 U	--	100	5 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	20	--	--	--	--	--	78	--	--
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.4	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	10/15/1992		0.5 U	12	2.9	13	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.4	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.1	1 U	1 U
	1/15/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.7	1 U	1 U
	4/21/1993		0.5 U	24	13	32	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.9 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.6	1 U	1 U
	7/13/1993		0.5 U	2.2	2	5.2	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.8 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.6	1 U	1 U
	10/13/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.6 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	9.4	1 U	1 U
	1/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	4/12/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	7/19/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	10/12/1994		0.5 U	1.6	1 U	11	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.1	1 U	1 U
	1/18/1995		0.5 U	18	22	28	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	6.5	1 U	1 U	--	--	--	1.8	1 U	1 U
	4/18/1995		0.5 U	1 U	3.4	2.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	3.4 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.2	1 U	1 U	--	--	--	1.6	1 U	1 U
	7/11/1995		0.5 U	1.1	3.4	5.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	4.3	1 U	1 U
	10/10/1995		0.5 U	1 U	1.3	2.6	--	--	--	--	--	--	1 U	1 U	3.1	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	5.2	1 U	1 U
	1/30/1996		0.5 U	9.3	13	26	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	6.3	1 U	1 U
	4/16/1996		2.5 U	9.7	67	88	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1.4	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.9	1 U	1 U
	7/16/1996		0.5 U	1 U	3.1	4.6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.9	1 U	1 U
	10/8/1996		0.5 U	1.7	4.3	3.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	2.6	1 U	1 U	1 U	1 U	1.2	--	1 U	1 U	1 U	1 U	1 U	--	--	--	32	1 U	1 U
	1/14/1997		0.5 U	6.4	16	19	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	17	1 U	1 U
	4/16/1997		0.5 U	3.5	3.7	1.3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.7	1 U	1 U	--	--	--	14	1 U	1 U
	7/9/1997		0.5 U	1 U	1.1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.7	1 U	1 U	--	--	--	14	1 U	1 U
	10/15/1997		0.5 U	1 U	1.1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.1	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.1	1 U	1 U	--	--	--	14	1 U	1 U
	1/14/1998		0.5 U	3.9	12	15	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	8.7	1 U	1 U
	4/22/1998		0.5 U	1 U	2.4	4.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	6.2	1 U	1 U
	7/15/1998		0.5 U	1 U	1.2	1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	8.1	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-06D	10/20/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.4	1 U	1 U
	1/15/1999		0.5 U	1.2	5.8	6.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	7.1	1 U	1 U
	4/15/1999		1 U	4	14	11.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	10	2 U	2 U
	7/15/1999		1 U	1 U	4.4	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	2.6	1 U	1 U	1 U	1 U	1.6	--	1 U	1 U	16	1 U	1 U	--	--	--	23	2 U	2 U
	10/15/1999		1 U	1 U	2.9	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	8.8	2 U	2 U
	1/25/2000		1 U	1 U	1.8	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	16	1 U	1 U	--	--	--	9.2	2 U	2 U
	4/15/2000		1 U	1 U	1	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	1 U	--	--	--	4.3	2 U	2 U
	10/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	1 U	--	--	--	10	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	10	2 U	2 U
	7/18/2001		1 U	1 U	1 U	1 U	--	--	--	0.96 U	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.4	2 U	2 U
	10/17/2001		1 U	1 U	1 U	1 U	--	--	--	0.95 U	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	4.6	2 U	2 U
	1/16/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	6.6	2 U	2 U
	4/17/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.5	2 U	2 U
	7/25/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.9	2 U	2 U
	10/23/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.5	2 U	2 U
	1/8/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1	1 U	1 U	1 U	1 U	1 U	6.3	1 U	0.5 U
	4/24/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	8.8	1 U	0.5 U
	7/30/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.1	1 U	0.5 U
	10/22/2003		0.5 U	1 U	1.6	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	7	1 U	0.5 U
	1/22/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	4/20/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	6.1	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	7/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	26	1.4	0.5 U
	10/12/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.1	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	53	5.4	0.5 U
	1/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1	1 U	1 U	0.5 U	1 U	1 U	1 U	2.2	5 U	1 U	1 U	40	1 U	1 U	1 U	1 U	1 U	62	7.8	0.5 U
	4/27/2005		0.5 U	1.8	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	0.5 U	1 U	5 U	1 U	1 U	1.9	1 U	1 U	0.5 U	1 U	1 U	1 U	5.9	5 U	1 U	1 U	65	1 U	1 U	1 U	1 U	1 U	84	18	0.5 U
	7/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.7	1 U	1 U	0.5 U	1 U	1 U	1 U	6.1	5 U	1 U	1 U	55	1 U	1 U	1 U	1 U	1 U	97	23	0.5 U
	10/19/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1	1 U	1 U	0.5 U	1 U	1 U	1 U	3.4	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	62	14	0.5 U
	1/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	2.6	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	73	14	0.5 U
	4/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.93	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	3.4	5 U	1 U	1 U	27	1 U	1 U	1 U	1 U	1 U	63	13	0.5 U
	7/26/2006		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	3.2	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	54	8	0.5 U
	10/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.8	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	62	9.6	0.5 U
	1/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.6	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	47	8.7	0.5 U
	4/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.1	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	32	3.4	0.5 U
	7/26/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	9	1 U	1 U	1 U	1 U	1 U	16	1.5	0.5 U
	10/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 M2,U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 M1,U	1 U	1 U	5.9	1 U	1 U	1 U	1 U	1 U	14	1.1 M1	0.5 M1,U
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	6.8	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	4/24/2008		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	8.6	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	7/31/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.4	5 U	1 U	1 U	13	1 U	1 U	1 U	1 U	1 U	28	2	0.5 U
	10/28/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	1 U	0.5 U	1 U	1 U	1 U	3.4	5 L,U	1 U	1 U	26	1 U	1 U	1 L,U	1 U	1 U	48	6.5	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-06D	1/27/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	0.5 U	1 U	1 U	1 U	4.9	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	58	5.2	0.5 U
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	2.4	1 U	1 U	0.5 U	1 U	1 U	1 U	6.1	5 U	1 U	1 U	68	1 U	1 U	1 U	1 U	1 U	95	14	0.5 U
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	3.4	1 U	1 U	0.5 U	1 U	1 U	1 U	13	5 U	1 U	1 U	79	1 U	1 U	1 U	1 U	1 U	98	16	0.5 U
	10/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.3	5 U	1 U	1 U	4.8	1 U	1 U	0.5 U	1 U	1 U	1 U	15	5 U	1 U	1 U	91	1 U	1 U	1 U	1 U	1 U	100	20	0.5 U
	1/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.3	5 U	1 U	1 U	4	1 U	1 U	0.5 U	1 U	1 U	1 U	11	5 C,U	1 U	1 U	96	1 U	1 U	1 U	1 U	1 U	100	18	0.5 U
	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5	2	5 U	1 U	1 U	2.9	1 U	1 U	0.5 U	1 U	1 U	1 U	6.4	5 U	1 U	1 U	49	1 U	1 U	1 U	1 U	1 U	46	7.5	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5	5 U	1 U	1 U	5.4	1 U	1 U	0.54	1 U	1 U	1 U	20	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	90	17	0.5 U
	10/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.2	5 U	1 U	1 U	7.6	1 U	1 U	0.81	1 U	1 U	1 U	26	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	97	18	0.5 U
	1/20/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	11	10 U	2 U	2 U	6.1	2 U	2 U	1	2 U	2 U	2 U	28	10 U	2 U	2 U	130	2 U	2 U	2 U	2 U	2 U	97	21	1 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	34	5 U	1 U	1 U	9.5	1 U	1 U	3.1	1 U	1 U	1 U	89	5 U	1 U	1 U	170	1 U	1 U	1 U	1 U	1 U	170	53	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	14	5 U	1 U	1 U	5	1 U	1 U	1	1 U	1 U	1 U	62	5 U	1 U	1 U	130	1 C, L,U	1 U	1 U	1 U	1 U	130	52	0.5 U
	10/21/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9	5 U	1 U	1 U	3.6	1 U	1 U	0.69	1 U	1 U	1 U	45	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	140	30	0.5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	14	5 U	1 U	1 U	4.2	1 U	1 U	1.1	1 U	1 U	1 U	42	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	120	34	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	15	5 U	1 U	1 U	5	1 U	1 U	1	1 U	1 U	1 U	54	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	120	39	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	14	5 U	1 U	1 U	5.4	1 U	1 U	0.95	1 U	1 U	1 U	63	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	130	34	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	10	5 U	1 U	1 U	3.5	1 U	1 U	0.9	1 U	1 U	1 U	40	5 U	1 U	1 U	98	1 U	1 U	1 U	1 U	1 U	89	31	0.5 U
MW-07	1/15/1989		--	--	--	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	2.2	0.2 U	0.2 U	--	--	2.9	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.1	0.2 U	0.2 U	--	--	--	35	0.2 U	0.2 U
	4/15/1989		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	4	1 U	1 U	1 U	1 U	1 U	1 U	2	1 U	2	1 U	1 U	--	--	--	47	1 U	1 U
	4/15/1989	K	5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	13 U	5 U	5 U	5 U	--	5 U	6.3 U	5 U	5 U	5 U	5 U	15 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	41 U	5 U	5 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	15	1 U	1 U	1 U	1 U	1 U	--	3	1 U	1 U	1 U	1 U	--	--	--	25	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	4	1 U	1 U	1 U	1 U	1 U	--	2	--	3	1 U	1 U	--	--	--	44	1 U	1 U
	1/24/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	2.4	1 U	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	1 U	1 U	1 U	--	--	--	39	10 U	1 U
	4/12/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	3.7	1 U	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	1 U	1 U	1 U	--	--	--	45	10 U	1 U
	7/15/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.73	4 U	0.4 U	0.4 U	2.4	--	29	3.4	1 U	1 U	1 U	3.5	0.4 U	0.4 U	0.4 U	1.1	0.4 U	0.4 U	--	--	--	34	4 U	0.4 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	9	5	1 U	1 U	1 U	1.3	--	3.5	1 U	1.4	1 U	1 U	--	--	--	19	1 U	1 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	20	1 U	--	--	--	3	--	--	1 U	1 U	--	--	--	--	--	1.8	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	5.5	1 U	1 U	--	--	29	1 U	1 U	1 U	1 U	2	--	1 U	1 U	1 U	1 U	1 U	--	--	--	30	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	18	5 U	5 U	--	--	30	31	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	53	5 U	5 U
	10/23/1991		5 U	5 U	5 U	10 U	--	--	--	--	--	--	2 U	5 U	2 U	2 U	20 U	2 U	2 U	4	--	18	16	5 U	5 U	5 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	--	--	--	54	20 U	2 U
	1/15/1992		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	9	--	49	56	1 U	1 U	1 U	9.9	--	1 U	1 U	1 U	1 U	1 U	--	--	--	120	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.97	0.5 U	0.5 U	0.5 U	4.4	0.5 U	32	73	0.5 U	0.5 U	0.5 U	5.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	55	0.5 U	0.5 U
	7/15/1992		1 U	2 U	2 U	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	12	17	2 U	2 U	2 U	2.3	--	2 U	2 U	2 U	2 U	2 U	--	--	--	53	2 U	2 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	1 U	2.2	7	2 U	2 U	--	--	22	48	2 U	2 U	2 U	4.5	--	1 U	2 U	1 U	1 U	2 U	--	--	--	98	2 U	2 U
	1/15/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	28	67	2 U	2 U	2 U	4.9	--	2 U	2 U	2 U	2 U	2 U	--	--	--	73	2 U	2 U
	4/22/1993		1.2 U	2.5 U	90	5.6	--	--	--	--	--	--	1 U	1.1	1 U	1 U	1.3 B	1 U	1 U	--	--	9	17	1 U	1 U	1 U	2.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	23	1 U	1 U
	7/13/1993		5 U	10 U	210	10 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.2 B	1 U	1 U	--	--	23	7.9	1 U	1 U	1 U	6.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	43	1 U	1 U
	10/13/1993		0.82	1 U	7.2	1 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	19	4.8	2 U	2 U	2 U	5.5	--	2 U	2 U	2 U	2 U	2 U	--	--	--	44	2 U	2 U
	1/11/1994		1.4	1 U	33	1 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	39	9.8	2 U	2 U	2 U	6.7	--	2 U	2 U	2 U	2 U	2 U	--	--	--	53	2 U	2 U
	4/12/1994		2.5 U	5 U	200	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	67	20	5 U	5 U	5 U	15	--	5 U	5 U	5 U	5 U	5 U	--	--	--	96	5 U	5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-07	7/19/1994		0.88	1 U	7.7	1.2	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	57	7	5 U	5 U	5 U	8.5	--	5 U	5 U	5 U	5 U	5 U	--	--	--	140	5 U	5 U
	10/12/1994		0.5 U	1 U	5.1	5.5	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	28	7.8	2 U	2 U	2 U	4.5	--	2 U	2 U	2 U	2 U	2 U	--	--	--	98	2 U	2 U
	1/18/1995		0.5 U	7	8.7	10	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	43	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	170	10 U	10 U
	4/18/1995		0.5 U	1 U	1.3	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.1	3.2 B	1 U	1 U	--	--	19	29	1 U	1 U	1 U	1.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	26	1 U	1 U
	7/11/1995		0.5 U	1 U	2.1	3.4	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	55	24	2 U	2 U	2 U	5.7	--	2.3	2 U	2 U	2 U	2 U	--	--	--	53	2 U	2 U
	10/10/1995		0.74	1 U	3.8	1.4	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	76	22	10 U	10 U	10 U	11	--	10 U	10 U	10 U	10 U	10 U	--	--	--	98	10 U	10 U
	1/31/1996		1	4.2	4.9	10	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	47	13	5 U	5 U	5 U	6.8	--	5 U	5 U	5 U	5 U	5 U	--	--	--	85	5 U	5 U
	4/16/1996		0.5 U	1.3	11	14	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	24	41	2 U	2 U	2 U	3.4	--	2 U	2 U	2 U	2 U	2 U	--	--	--	37	2 U	2 U
	7/16/1996		1	1 U	1.6	2.7	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	93	35	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	87	10 U	10 U
	10/8/1996		0.96	1 U	1.4	1.5	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	74	32	5 U	5 U	5 U	9.9	--	5.1	5 U	5 U	5 U	5 U	--	--	--	150	5 U	5 U
	1/14/1997		0.5 U	1 U	1.7	2.8	--	--	--	--	--	--	1 U	1 U	1 U	1.2	1 U	1 U	1 U	--	--	31	30	1 U	1 U	1 U	7.5	--	2.6	1 U	1 U	1 U	1 U	--	--	--	95	1 U	1 U
	4/16/1997		0.5 U	1.1	1.2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.7	1 U	1 U	1 U	--	--	64	65	1 U	1 U	1 U	8.5	--	2.6	1 U	2.6	1 U	1 U	--	--	--	63	1 U	1 U
	7/9/1997		0.56	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	61	79	1 U	1 U	1 U	9.1	--	1.7	1 U	2.3	1 U	1 U	--	--	--	54	1 U	1 U
	10/15/1997		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.4	1 U	1 U	1 U	--	--	57	65	1 U	1 U	1 U	12	--	3.3	1 U	1.4	1 U	1 U	--	--	--	85	1 U	1 U
	1/14/1998		0.5 U	2.2	5.2	6.8	--	--	--	--	--	--	1 U	1 U	1 U	1.6	1 U	1 U	1 U	--	--	38	24	1 U	1 U	1 U	10	--	1 U	1 U	1 U	1 U	1 U	--	--	--	97	1 U	1 U
	4/22/1998		0.5 U	1 U	1.6	1.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	21	18	1 U	1 U	1 U	3.6	--	1 U	1 U	1.2	1 U	1 U	--	--	--	23	1 U	1 U
	7/15/1998		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1	1 U	1 U	1 U	--	--	41	32	1 U	1 U	1 U	5.9	--	1.8	1 U	1 U	1 U	1 U	--	--	--	53	1 U	1 U
	10/20/1998		0.68	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	3	1.4	1 U	1 U	1 U	--	--	70	41	1 U	1 U	1 U	13	--	4.3	1 U	1 U	1 U	1 U	--	--	--	88	1 U	1 U
	1/15/1999		1.2 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	3	2.5 U	2.5 U	2.5 U	--	--	74	24	2.5 U	2.5 U	2.5 U	16	--	5.3	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	160	2.5 U	2.5 U
	4/15/1999		2 U	3	11	6.8	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	22	--	33	9.7	2 U	2 U	2 U	8.4	--	2.7	2 U	2 U	2 U	2 U	--	--	--	80	4 U	4 U
	7/15/1999		1 U	1 U	1.3	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.4	1 U	2 U	2 U	21	--	53	16	1 U	1 U	1 U	9.4	--	2.8	1 U	14	1 U	1 U	--	--	--	65	2 U	2 U
	10/15/1999		2 U	2 U	2 U	4 U	--	--	--	--	--	--	2 U	2 U	2 U	2.7	2 U	4 U	4 U	35	--	71	7	2 U	2 U	2 U	18	--	5.7	2 U	2 U	2 U	2 U	--	--	--	130	4 U	4 U
	1/25/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1.1	1 U	2 U	2 U	13	--	29	2.2	1 U	1 U	1 U	9.1	--	2.3	1 U	9.8	1 U	1 U	--	--	--	47	2 U	2 U
	4/15/2000		1 U	1 U	1.2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.1	1 U	2 U	2 U	13	--	41	5.8	1 U	1 U	1 U	6.2	--	1.6	1 U	1.4	1 U	1 U	--	--	--	48	2 U	2 U
	10/15/2000		2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	27	--	64	29	2.5 U	2.5 U	2.5 U	13	--	3.8	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	110	5 U	5 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.2	1 U	2 U	2 U	23	--	53	41	1 U	1 U	1 U	8.9	--	2.9	1 U	1 U	1 U	1 U	--	--	--	78	2 U	2 U
	7/18/2001		2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	21	--	76	140	2.5 U	2.5 U	2.5 U	13	--	2.7	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	84	5 U	5 U
	10/18/2001		2 U	2 U	2 U	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2.8	2 U	4 U	4 U	36	--	78	27	2 U	2 U	2 U	16	--	4.8	2 U	2 U	2 U	2 U	--	--	--	160	4 U	4 U
	1/17/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2.1	--	8.7	15	1 U	1 U	1 U	1.2	--	1 U	1 U	1.4	1 U	1 U	--	--	--	15	2 U	2 U
	4/18/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	7.9	--	34	52	1 U	1 U	1 U	4.1	--	1.1	1 U	1 U	1 U	1 U	--	--	--	38	2 U	2 U
	7/26/2002		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	24	--	58	15	2.5 U	2.5 U	2.5 U	11	--	3.4	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	100	5 U	5 U
	10/23/2002		1 U	1 U	1 U	2 U	--	--	10 U	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.8	1 U	1 U	--	10 U	--	21	2 U	2 U
	12/30/2002		0.057 J	1 U	1 U	2 U	--	--	--	--	--	1 U	1 U	1 U	1 U	0.29 J	0.6 J	1 U	1 U	3	1 U	13	1.8	1 U	1 U	1 U	1.8	0.09 J	0.38 J	1 U	1	1 U	1 U	--	--	--	13	1 U	0.12 J
	4/24/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	13	1 U	48	18	1 U	1 U	1 U	7.4	5 U	1.1	1 U	1.7	1 U	1 U	1 U	1 U	1 U	59	1 U	0.5 U
	7/30/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	16	1 U	52	20	1 U	1 U	1 U	8.5	5 U	1.7	1 U	1.7	1 U	1 U	1 U	1 U	1 U	60	1 U	0.5 U
	10/23/2003		2 U	2 U	2 U	4 U	--	--	9.9 U	--	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	2 U	--	5.8	3.3	2 U	2 U	2 U	5 U	5 U	2 U	2 U	2 U	2 U	2 U	--	9.9 U	--	11	5 U	5 U
	1/22/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.2	1 U	24	5.3	1 U	1 U	1 U	2.3	5 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U	1 U	32	1 U	0.5 U
	4/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.4	1 U	14	3.4	1 U	1 U	1 U	1.4	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	28	1 U	0.5 U
	7/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	5	0.63	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.5	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																											
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-07	10/12/2004		2 U	2 U	2 U	4 U	--	--	9.5 U	--	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	2 U	--	6.5	2 U	2 U	2 U	2 U	5 U	5 U	2 U	2 U	13	2 U	2 U	--	9.5 U	--	12	5 U	5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	9.8	0.62	1 U	1 U	1 U	4.8	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	5	1 U	21	1.4	1 U	1 U	1 U	4.2	5 U	1 U	1 U	11	1 U	1 U	1 U	1 U	1 U	39	1 U	0.5 U
	7/27/2005		0.98	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	31	1 U	100	45	1 U	1 U	1 U	14	5 U	2.7	1 U	4	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	10/19/2005		2 U	2 U	2 U	4 U	--	--	10 U	--	--	2 U	2 U	2 U	5 U	2.1	5 U	5 U	5 U	31	--	93	80	2 U	2 U	2 U	14	5 U	3.3	2 U	2.8	2 U	4 U	--	10 U	--	89	5 U	5 U
	1/26/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 R,U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	16	1 U	51	17	1 U	1 U	1 U	7.5	5 U	1.7	1 U	2.6	1 U	1 U	1 U	1 U	1 U	56	1 U	0.5 U
	4/26/2006		0.57	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	22	1 U	69	23	1 U	1 U	1 U	10	5 U	2.3	1 U	2.7	1 U	1 U	1 U	1 U	1 U	68	1 U	0.5 U
	7/26/2006		0.55	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	19	1 U	49	34	1 U	1 U	1 U	6.3	5 U	1.9	1 U	1.4	1 U	1 U	1 U	1 U	1 U	55	1 U	0.5 U
	10/25/2006		2 U	2 U	2 U	2 U	--	--	9.43 U	16	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	24	--	95	31	2 U	2 U	2 U	9.9	5 La,U	3.3	2 U	2.3	2 U	2 U	--	9.43 U	--	88	5 U	5 U
	1/18/2007		0.56	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	17	1 U	52	5.3	1 U	1 U	1 U	5.8	5 U	2	1 U	1.7	1 U	1 U	1 U	1 U	1 U	59	1 U	0.5 U
	4/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	14	1 U	45	15	1 U	1 U	1 U	7.4	5 U	1.7	1 U	2	1 U	1 U	1 U	1 U	1 U	60	1 U	0.5 U
	7/26/2007		0.78	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.9	5 U	1 U	1 U	24	1 U	72	34	1 U	1 U	1 U	10	5 U	3	1 U	1.7	1 U	1 U	1 U	1 U	1 U	84	1 U	0.5 U
	10/25/2007		2 U	2 U	2 U	2 U	--	--	9.43 U	--	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	2 U	--	6.8	2 U	2 U	2 U	2 U	5 U	5 U	2 U	2 U	2 U	2 U	2 U	--	9.43 U	--	7.9	5 U	5 U
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	24	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	5.7	1 U	25	2.2	1 U	1 U	1 U	2.5	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U
	4/24/2008		0.5 U	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.2	1 U	29	2	1 U	1 U	1 U	3	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	31	1 U	0.5 U
	7/31/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	6.6	0.53	1 U	1 U	1 U	1.1	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	10	1 U	0.5 U
	10/28/2008		2 U	2 U	2 U	2 U	--	--	9.52 U	22	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	2 U	--	2	2 U	2 U	2 U	2 U	5 U	5 U	2 U	2 U	7.5	2 U	2 U	--	9.52 U	--	11	5 U	5 U
	1/27/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	11	1.2	1 U	1 U	1 U	12	5 U	1 U	1 U	59	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	16	3.3	1 U	1 U	1 U	20	5 U	1 U	1 U	78	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 M1,U	1 U	5 U	1 U	1 U	1 U	1 U	3.9	0.5 U	1 U	1 U	1 U	7.6 M1	5 A-01,U	1 U	1 U	130 MHA	1 U	1 U	1 U	1 U	1 U	42	2.5	0.5 U
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	2.7	1 U	2.6	0.66	1 U	1 U	1 U	5.3	5 U	1 U	1 U	70	1 U	1 U	1 U	1 U	1 U	32	2	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	1.9	1 U	6.2	0.9	1 U	1 U	1 U	4.3	5 U	1 U	1 U	43	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/20/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1.5	1 U	3.8	0.5 U	1 U	1 U	1 U	5.2	5 U	1 U	1 U	47	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.3	5 U	1 U	1 U	1.6	1 U	5.9	1.3	1 U	1 U	1 U	9.6	5 U	1 U	1 U	36	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	6.8	5 U	1 U	1 U	3	1 U	2.2	18	1 U	1 U	1 U	28	5 U	1 U	1 U	140	1 C, L,U	1 U	1 U	1 U	1 U	88	18	0.5 U
	10/21/2011		2 U	2 U	2 U	2 U	1 U	1 U	1 U	51	1 U	2 U	2 M1,U	2 U	5 C,U	4.1	5 U	5 U	5 U	1.9	2 U	3.2	74	2 U	2 U	2 U	15	5 U	2 U	2 U	95	2 U	2 U	1 U	1 U	1 U	59	11	5 U
	1/19/2012		0.78	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.5	5 U	1 U	1 U	1.7	1 U	1.7	200	1 U	1 U	1 U	2.2	5 U	1 U	1 U	54	1 U	1 U	1 U	1 U	1 U	37	1 U	0.5 U
	3/22/2012		0.53	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.3	5 U	1 U	1 U	1.8	1 U	3.1	190	1 U	1 U	1 U	1 U	5 U	1 U	1 U	51	1 U	1 U	1 U	1 U	1 U	30	1 U	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.9	5 U	1 U	1 U	1.7	1 U	3	52	1 U	1 U	1 U	1.9	5 U	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	23	1 U	0.5 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.9	1 U	0.5 U	0.5 U	1.3	0.5 U	1.6	4.7	0.5 U	0.5 U	0.5 U	10	0.5 U	0.5 U	0.5 U	44	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	33	3.4	0.5 U
MW-08	1/15/1989		--	--	--	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	30	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4.3	0.2 U	0.2 U	--	--	--	69	0.2 U	0.2 U
	4/15/1989		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	36	1 U	1 U	1 U	1 U	6	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	23	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	3	1 U	1 U	1 U	--	--	74	10	1 U	1 U	1 U	14	--	15	1 U	2	1 U	1 U	--	--	--	43	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	40	1 U	1 U	1 U	1 U	4	--	8	--	1	1 U	1 U	--	--	--	22	1 U	1 U
	1/23/1990		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.49	2 U	0.2 U	0.2 U	--	--	29	0.83	0.5 U	0.5 U	0.5 U	6.6	0.2 U	--	0.2 U	1.4	0.2 U	0.2 U	--	--	--	28	2 U	0.2 U
	4/13/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.4 U	4 U	0.4 U	0.4 U	--	--	28	0.8	1 U	1 U	1 U	2.7	0.4 U	--	0.4 U	1	0.4 U	0.4 U	--	--	--	17	4 U	0.4 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																												
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chlorobenzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloroethane	Chloromethane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-08	7/15/1990		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	1	4 U	0.4 U	0.4 U	5.9	--	42	17	1 U	1 U	1 U	7.7	0.4 U	0.92	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--	20	4 U	0.4 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	34	14	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	14	10 U	10 U
	1/15/1991		0.5 U	3	1.7	4.4	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	59	30	--	--	--	6	--	--	1 U	1 U	--	--	--	--	--	26	--	--
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1.1	1 U	8.5	0.79	1 U	1 U	1 U	4.4	5 U	1 U	1 U	80	1 U	1 U	1 U	1 U	1 U	30	1.8	0.5 U
	7/26/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.4	5 U	1 U	1 U	1.3	1 U	3.9	110	1 U	1 U	1 U	1 U	5 U	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5	1 U	0.5 U	0.5 U	0.76	0.5 U	0.99	6.4	0.5 U	0.5 U	0.5 U	3.6	0.5 U	0.5 U	0.5 U	12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	17	0.5 U	0.5 U
MW-09	1/15/1989		0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	8.9	16	0.2 U	0.2 U	--	--	34	4.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3.1	2.9	0.2 U	--	--	--	55	0.2 U	0.2 U
	4/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	5	8	1 U	1 U	1 U	4	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	24	1 U	1 U
	7/15/1989		0.7 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	4	3	1 U	1 U	--	--	28	37	1 U	1 U	1 U	14	--	3	1 U	2	4	1 U	--	--	--	57	1 U	1 U
	10/15/1989		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	15	10 U	10 U	--	--	90	10 U	10 U	10 U	10 U	40	--	10 U	10 U	10 U	10 U	10 U	--	--	--	110	10 U	10 U
	1/23/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	8.1	--	--	50	3.9	2.5 U	2.5 U	2.5 U	36	1 U	--	1 U	2.2	1 U	1 U	--	--	--	100	10 U	1 U
	4/13/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	13	10 U	1 U	1 U	--	--	89	15	2.5 U	2.5 U	2.5 U	48	1 U	--	1 U	2	4	1 U	--	--	--	150	10 U	1 U
	7/15/1990		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	3.7	10 U	1 U	1 U	1 U	--	23	50	2.5 U	2.5 U	2.5 U	12	1 U	1 U	1 U	1 U	4	1 U	--	--	--	64	10 U	1 U
	7/15/1990	K	2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	5.4	10 U	1 U	1 U	1 U	--	35	61	2.5 U	2.5 U	2.5 U	17	1 U	1 U	1 U	1 U	5	1 U	--	--	--	84	10 U	1 U
	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	6.5	7.8	1 U	1 U	1 U	4.4	--	1 U	1 U	1 U	1 U	1 U	--	--	--	17	1 U	1 U
	1/15/1991		0.5 U	6.6	1.4	9	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	14	30	--	--	--	7	--	--	1 U	1 U	--	--	--	--	--	26	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.8	2.1 B	1 U	1 U	--	--	9.4	34	1 U	1 U	1 U	3.7	--	1 U	1 U	1 U	1.8	1 U	--	--	--	26	1 U	1 U
	7/15/1991		0.5 U	1 U	99	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	15	5 U	5 U	--	--	17	120	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	41	5 U	5 U
	10/22/1991		10 U	10 U	94	20 U	--	--	--	--	--	--	4 U	10 U	4 U	10	40 U	4 U	4 U	4 U	--	51	100	10 U	10 U	10 U	20	20 U	4 U	4 U	4 U	4 U	4 U	--	--	--	120	40 U	4 U
	1/15/1992		50 U	50 U	1220	92	--	--	--	--	--	--	5 U	5 U	1 U	1 U	1 U	5 U	5 U	1 U	--	16	79	5 U	5 U	5 U	6	--	5 U	5 U	1 U	1 U	5 U	--	--	--	45	5 U	5 U
	4/15/1992		25 U	2800	3600	6190	25 U	31	25 U	--	--	25 U	25 U	25 U	25 U	25 U	48	25 U	25 U	25 U	25 U	31	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	52	25 U	25 U
	7/15/1992		500 U	33000	7900	25000	--	--	--	--	--	--	1000 U	1000 U	1000 U	1000 U	1900	1000 U	1000 U	--	--	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	--	1000 U	1000 U	1000 U	1000 U	1000 U	--	--	--	1000 U	1000 U	1000 U
	10/15/1992		0.5 U	83000	13000	58000	--	--	--	--	--	--	1000 U	1000 U	1 U	1 U	1400	1000 U	1000 U	--	--	1 U	1 U	1000 U	1000 U	1000 U	1 U	--	1 U	1000 U	1 U	1 U	1000 U	--	--	--	1 U	1000 U	1000 U
	1/15/1993		50 U	400	3900	5300	--	--	--	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U	--	--	100 U	100 U	100 U	100 U	100 U	100 U	--	100 U	100 U	100 U	100 U	100 U	--	--	--	100 U	100 U	100 U
	1/15/1993	K	50 U	400	3900	5300	--	--	--	--	--	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U	--	--	100 U	100 U	100 U	100 U	100 U	100 U	--	100 U	100 U	100 U	100 U	100 U	--	--	--	100 U	100 U	100 U
	4/20/1993		50 U	5100	4000	9200	--	--	--	--	--	--	1 U	1 U	1 U	21	29 B	1 U	1 U	--	--	110	17	1 U	1 U	1 U	34	--	2.2	1 U	2.7	26	1 U	--	--	--	110	1 U	1 U
	7/14/1993		16 U	33 U	160	74	--	--	--	--	--	--	33 U	33 U	33 U	170	200 B	33 U	33 U	--	--	1200	33 U	33 U	33 U	33 U	300	--	93	33 U	33 U	310	33 U	--	--	--	1100	33 U	33 U
	10/14/1993		2.5 U	5 U	120	45	--	--	--	--	--	--	10 U	10 U	10 U	65	41 B	10 U	10 U	--	--	400	10 U	10 U	10 U	10 U	120	--	10 U	10 U	10 U	110	10 U	--	--	--	390	10 U	10 U
	1/12/1994		10 U	48	290	220	--	--	--	--	--	--	10 U	10 U	10 U	46	20 B	10 U	10 U	--	--	330	10 U	10 U	10 U	10 U	91	--	10 U	10 U	10 U	99	10 U	--	--	--	230	10 U	10 U
	4/13/1994		500 U	17000	12000	32000	--	--	--	--	--	--	5 U	5 U	5 U	69	20 B	5 U	5 U	--	--	220	21	5 U	5 U	5 U	71	--	5 U	5 U	5 U	53	5 U	--	--	--	270	5 U	5 U
	7/20/1994		1000 U	56000	15000	40000	--	--	--	--	--	--	10 U	10 U	10 U	52	10 B	10 U	10 U	--	--	150	13	10 U	10 U	10 U	56	--	10 U	10 U	10 U	34	10 U	--	--	--	200	10 U	10 U
	10/13/1994		500 U	57000	11000	34000	--	--	--	--	--	--	10 U	10 U	10 U	170	25 B	10 U	10 U	--	--	340	30	10 U	10 U	10 U	130	--	10 U	10 U	10 U	99	10 U	--	--	--	350	10 U	10 U
	1/18/1995		250 U	8200	9800	20000	--	--	--	--	--	--	10 U	10 U	10 U	82	25 B	10 U	10 U	--	--	350	30	10 U	10 U	10 U	110	--	10 U	10 U	10 U	95	10 U	--	--	--	310	10 U	10 U
	4/19/1995		50 U	100 U	650	480	--	--	--	--	--	--	100 U	100 U	100 U	130	3000 B	100 U	100 U	--	--	850	100 U	100 U	100 U	100 U	170	--	100 U	100 U	100 U	200	100 U	--	--	--	670	100 U	100 U
	7/13/1995		10 U	69	780	340	--	--	--	--	--	--	50 U	50 U	50 U	100	50 U	50 U	50 U	--	--	410	50 U	50 U	50 U	50 U	200	--	50 U	50 U	50 U	150	50 U	--	--	--	540	50 U	50 U
	10/11/1995		25 U	110	670	1900	--	--	--	--	--	--	25 U	25 U	25 U	250	47	25 U	25 U	--	--	410	25 U	25 U	25 U	25 U	120	--	25 U	25 U	25 U	74	25 U	--	--	--	320	25 U	25 U
	2/1/1996		50 U	100 U	4300	6100	--	--	--	--	--	--	25 U	25 U	25 U	120	44	25 U	25 U	--	--	430	76	25 U	25 U	25 U	130	--	25 U	25 U	25 U	94	25 U	--	--	--	500	25 U	25 U
	4/17/1996		3.3	5.5	24	22	--	--	--	--	--	--	20 U	20 U	20 U	83	23	20 U	20 U	--	--	620	23	20 U	20 U	20 U	170	--	20 U	20 U	20 U	160	20 U	--	--	--	580	20 U	20 U
	7/17/1996		4.6	2 U	42	4.3	--	--	--	--	--	--	50 U	50 U	50 U	94	50 U	50 U	50 U	--	--	590	50 U	50 U	50 U	50 U	150	--	50 U	50 U	50 U	160	50 U	--	--	--	570	50 U	50 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro- ethane	Chloro- methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-09	10/9/1996		50 U	100 U	2900	350	--	--	--	--	--	--	20 U	20 U	20 U	210	69	20 U	20 U	--	--	400	96	20 U	20 U	20 U	87	--	20 U	20 U	20 U	55	20 U	--	--	--	470	20 U	20 U
	1/15/1997		2.5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	50	5.6	5 U	5 U	--	--	260	250	5 U	5 U	5 U	120	--	5 U	5 U	6.8	54	5 U	--	--	--	400	5 U	5 U
	4/17/1997		5 U	10 U	18	10 U	--	--	--	--	--	--	10 U	10 U	10 U	94	18	15	10 U	--	--	740	34	10 U	10 U	10 U	200	--	11	10 U	18	180	10 U	--	--	--	770	10 U	10 U
	7/10/1997		25 U	50 U	2500	860	--	--	--	--	--	--	50 U	50 U	50 U	110	50 U	50 U	50 U	--	--	840	50 U	50 U	50 U	50 U	240	--	50 U	50 U	50 U	210	50 U	--	--	--	850	50 U	50 U
	10/16/1997		25 U	150	1900	4800	--	--	--	--	--	--	50 U	50 U	50 U	470	550	50 U	50 U	--	--	740	57	50 U	50 U	50 U	160	--	50 U	50 U	50 U	57	50 U	--	--	--	600	50 U	50 U
	10/16/1997	K	25 U	170	2000	5000	--	--	--	--	--	--	50 U	50 U	50 U	540	610	50 U	50 U	--	--	820	56	50 U	50 U	50 U	170	--	50 U	50 U	50 U	57	50 U	--	--	--	620	50 U	50 U
	1/15/1998		5 U	10 U	690	260	--	--	--	--	--	--	10 U	10 U	10 U	99	20	10 U	10 U	--	--	240	200	10 U	10 U	10 U	67	--	10 U	10 U	10 U	37	10 U	--	--	--	270	10 U	10 U
	1/15/1998	K	5 U	10 U	660	260	--	--	--	--	--	--	10 U	10 U	10 U	95	20	10 U	10 U	--	--	230	210	10 U	10 U	10 U	65	--	10 U	10 U	10 U	34	10 U	--	--	--	260	10 U	10 U
	4/23/1998		5 U	10 U	23	10 U	--	--	--	--	--	--	10 U	10 U	10 U	52	10 U	14	10 U	--	--	460	190	10 U	10 U	10 U	160	--	10 U	10 U	15	90	10 U	--	--	--	390	10 U	10 U
	4/23/1998	K	5 U	10 U	23	10 U	--	--	--	--	--	--	10 U	10 U	10 U	52	10 U	15	10 U	--	--	450	190	10 U	10 U	10 U	160	--	10 U	10 U	15	91	10 U	--	--	--	390	10 U	10 U
	7/15/1998		12 U	25 U	73	25 U	--	--	--	--	--	--	25 U	25 U	25 U	150	86	36	25 U	--	--	1200	60	25 U	25 U	25 U	380	--	26	25 U	30	220	25 U	--	--	--	1300	25 U	25 U
	7/15/1998	K	12 U	25 U	70	25 U	--	--	--	--	--	--	25 U	25 U	25 U	150	84	38	25 U	--	--	1100	56	25 U	25 U	25 U	360	--	25 U	25 U	27	220	25 U	--	--	--	1300	25 U	25 U
	10/21/1998		7.4	12 U	390	12 U	--	--	--	--	--	--	12 U	12 U	12 U	530	920	16	12 U	--	--	1200	96	12 U	12 U	12 U	270	--	12	12 U	26	160	18	--	--	--	1200	12 U	12 U
	1/15/1999		6.2 U	12 U	100	83	--	--	--	--	--	--	12 U	12 U	12 U	400	940	12 U	12 U	--	--	490	230	12 U	12 U	12 U	100	--	12 U	12 U	12 U	12 U	12 U	--	--	--	550	12 U	12 U
	4/15/1999		5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	160	200	10 U	10 U	16	--	250	180	5 U	5 U	5 U	68	--	5 U	5 U	7	16	5	--	--	--	350	10 U	10 U
	4/15/1999	K	5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	110	130	10 U	10 U	10 U	--	170	170	5 U	5 U	5 U	47	--	5 U	5 U	5 U	9.8	5	--	--	--	250	10 U	10 U
	7/15/1999		25 U	25 U	25 U	25 U	--	--	--	--	--	--	25 U	25 U	25 U	440	1400	50 U	50 U	50	--	780	140	25 U	25 U	25 U	190	--	25 U	25 U	25 U	25 U	25 U	--	--	--	810	50 U	50 U
	7/15/1999	K	25 U	25 U	25 U	25 U	--	--	--	--	--	--	25 U	25 U	25 U	490	1500	50 U	50 U	51	--	770	120	25 U	25 U	25 U	200	--	25 U	25 U	25 U	45	25 U	--	--	--	860	50 U	50 U
	10/15/1999		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	92	250	10 U	10 U	7.4	--	160	85	5 U	5 U	5 U	86	--	5 U	5 U	5 U	5 U	5 U	--	--	--	280	10 U	10 U
	10/15/1999	K	5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	94	250	10 U	10 U	8	--	180	88	5 U	5 U	5 U	92	--	5 U	5 U	5 U	5 U	5 U	--	--	--	290	10 U	10 U
	1/28/2000		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	150	300	10 U	10 U	7	--	170	38	5 U	5 U	5 U	52	--	5 U	5 U	5 U	5 U	5 U	--	--	--	170	10 U	10 U
	1/28/2000	K	5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	110	270	10 U	10 U	5 U	--	130	31	5 U	5 U	5 U	36	--	5 U	5 U	5 U	5 U	5 U	--	--	--	120	10 U	10 U
	4/15/2000		5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	57	30	10 U	10 U	15	--	240	57	5 U	5 U	5 U	110	--	5 U	5 U	7	5 U	5 U	--	--	--	370	10 U	10 U
	4/15/2000	K	5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	60	31	10 U	10 U	17	--	250	58	5 U	5 U	5 U	110	--	5 U	5 U	7.1	5 U	5 U	--	--	--	380	10 U	10 U
	10/15/2000		5 U	5 U	29	5 U	--	--	--	--	--	--	5 U	5 U	5 U	22	5 U	10 U	10 U	11	--	130	96	5 U	5 U	5 U	37	--	5 U	5 U	5 U	15	5 U	--	--	--	160	10 U	10 U
	10/15/2000	K	5 U	5 U	28	5 U	--	--	--	--	--	--	5 U	5 U	5 U	23	5 U	10 U	10 U	11	--	130	89	5 U	5 U	5 U	39	--	5 U	5 U	5.1	15	5 U	--	--	--	170	10 U	10 U
	4/15/2001		5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	29	5.1	10 U	10 U	21	--	150	130	5 U	5 U	5 U	52	--	5 U	5 U	8.1	19	5 U	--	--	--	200	10 U	10 U
	4/15/2001	K	5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	24	5 U	10 U	10 U	15	--	130	110	5 U	5 U	5 U	40	--	5 U	5 U	6.8	15	5 U	--	--	--	160	10 U	10 U
	7/19/2001		5 U	5 U	440	25	--	--	--	18	--	--	5 U	5 U	5 U	16	6.8	10 U	10 U	11	--	88	68	5 U	5 U	5 U	26	--	5 U	5 U	5 U	5 U	5 U	--	--	--	110	10 U	10 U
	7/19/2001	K	5 U	5 U	390	22	--	--	--	13	--	--	5 U	5 U	5 U	19	8.2	10 U	10 U	13	--	110	64	5 U	5 U	5 U	33	--	5 U	5 U	5 U	9.8	5 U	--	--	--	130	10 U	10 U
	10/18/2001		5 U	5 U	8.1	5 U	--	--	--	75	--	--	5 U	5 U	5 U	110	69	10 U	10 U	15	--	260	240	5 U	5 U	5 U	89	--	5 U	5 U	6.5	8.8	5 U	--	--	--	440	10 U	10 U
	10/18/2001	K	5 U	5 U	33	5 U	--	--	--	88	--	--	5 U	5 U	5 U	65	68	10 U	10 U	7.6	--	160	250	5 U	5 U	5 U	64	--	5 U	5 U	5 U	5 U	5 U	--	--	--	340	10 U	10 U
	1/17/2002		2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	35	14	5 U	5 U	5.3	--	89	140	2.5 U	2.5 U	2.5 U	43	--	2.5 U	2.5 U	4.4	3.6	2.5 U	--	--	--	200	5 U	5 U
	1/17/2002	K	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	36	15	5 U	5 U	5.3	--	91	150	2.5 U	2.5 U	2.5 U	44	--	2.5 U	2.5 U	4.2	3.8	2.5 U	--	--	--	200	5 U	5 U
	4/18/2002		2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	26	6.9	5 U	5 U	11	--	110	64	2.5 U	2.5 U	2.5 U	33	--	2.5 U	2.5 U	4.2	12	2.5 U	--	--	--	140	5 U	5 U
	4/18/2002	K	2.5 U	2.5 U	2.5 U	5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	36	10	5 U	5 U	16	--	160	56	2.5 U	2.5 U	2.5 U	48	--	2.5 U	2.5 U	6	20	2.5 U	--	--	--	190	5 U	5 U
	7/26/2002		25 U	25 U	25 U	50 U	--	--	--	--	--	--	25 U	25 U	25 U	150	280	50 U	50 U	25 U	--	320	340	25 U	25 U	25 U	89	--	25 U	25 U	25 U	25 U	25 U	--	--	--	480	50 U	50 U
	7/26/2002	K	10 U	10 U	10 U	20 U	--	--	--	--	--	--	10 U	10 U	10 U	170	320	20 U	20 U	13	--	360	380	10 U	10 U	10 U	130	--	10 U	10 U	10 U	10 U	10 U	--	--	--	570	20 U	20 U
	10/24/2002		10 U	10 U	10 U	20 U	--	--	--	--	--	--	10 U	10 U	10 U	300	230	20 U	20 U	23	--	530	190	10 U	10 U	10 U	140	--	10 U	10 U	10 U	10 U	10 U	--	--	--	530	20 U	20 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-09	10/24/2002	K	10 U	10 U	10 U	20 U	--	--	--	--	--	--	10 U	10 U	10 U	360	270	20 U	20 U	28	--	630	210	10 U	10 U	10 U	160	--	10 U	10 U	12	10 U	10 U	--	--	--	640	20 U	20 U
	1/9/2003		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	150	160	5 U	5 U	12	5 U	290	100	5 U	5 U	5 U	100	25 U	5 U	5 U	9.6	5 U	5 U	5 U	5 U	5 U	390	5 U	2.5 U
	1/9/2003	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	150	170	5 U	5 U	11	5 U	290	110	5 U	5 U	5 U	100	25 U	5 U	5 U	9	5 U	5 U	5 U	5 U	5 U	390	5 U	2.5 U
	4/25/2003		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	80	25 U	5 U	5 U	12	5 U	180	180	5 U	5 U	5 U	55	25 U	5 U	5 U	6	5.6	5 U	5 U	5 U	5 U	240	5 U	2.5 U
	4/25/2003	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	86	25 U	5 U	5 U	13	5 U	200	170	5 U	5 U	5 U	58	25 U	5 U	5 U	5.5	5.8	5 U	5 U	5 U	5 U	250	5 U	2.5 U
	7/31/2003		5 U	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	160	84	10 U	10 U	20	10 U	370	330	10 U	10 U	10 U	120	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	480	10 U	5 U
	7/31/2003	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	170	81	5 U	5 U	22	5 U	390	310	5 U	5 U	5 U	120	25 U	5 U	5 U	9	7.2	5 U	5 U	5 U	5 U	460	5 U	2.5 U
	10/22/2003		5 U	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	74	190	10 U	10 U	10 U	10 U	130	140	10 U	10 U	10 U	38	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	150	10 U	5 U
	10/22/2003	K	1 U	2 U	2 U	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	66	140	2 U	2 U	4.3	2 U	120	140	2 U	2 U	2 U	32	10 U	2 U	2 U	4.1	2 U	2 U	2 U	2 U	2 U	130	2 U	1 U
	1/23/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.6	0.5 U	38	14	1 U	1 U	4.9	1 U	94	26	1 U	1 U	1 U	27	5 U	1 U	1 U	5.6	1.4	1 U	1 U	1 U	1 U	95	1 U	0.5 U
	1/23/2004	K	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.7	0.5 U	41	12	1 U	1 U	5.5	1 U	99	26	1 U	1 U	1 U	28	5 U	1 U	1 U	5.9	1.7	1 U	1 U	1 U	1 U	100	1 U	0.5 U
	4/21/2004		1 U	2 U	2 U	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2.1	1 U	73	71	2 U	2 U	7.7	2 U	200	30	2 U	2 U	2 U	62	10 U	2 U	2 U	5.4	2 U	2 U	2 U	2 U	2 U	190	2 U	1 U
	4/21/2004	K	1 U	2 U	2 U	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2.2	1 U	76	70	2 U	2 U	7.8	2 U	190	28	2 U	2 U	2 U	68	10 U	2 U	2 U	6.8	2 U	2 U	2 U	2 U	2 U	220	2 U	1 U
	7/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.8	0.5 U	24	78	1 U	1 U	3.8	1 U	110	18	1 U	1 U	1 U	53	5 U	1 U	1 U	5	1	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	7/21/2004	K	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.8	0.5 U	24	76	1 U	1 U	4	1 U	120	20	1 U	1 U	1 U	55	5 U	1	1 U	5	1.1	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	10/12/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3	5 U	1 U	1 U	3	1 U	69	3.6	1 U	1 U	1 U	15	5 U	1 U	1 U	3.5	1.2	1 U	1 U	1 U	1 U	57	1 U	0.5 U
	10/12/2004	K	0.5	1 M1,U	1 M1,U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	3.5	5 U	1 U	1 U	3.4	1 U	69	3.9	1 U	1 U	1 M1,U	17	5 U	1 U	1 U	4.2	1.3	1 U	1 U	1 M1,U	1 U	61	1 U	0.5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.2	5 U	1 U	1 U	1.1	1 U	44	0.78	1 U	1 U	1 U	6.4	5 U	1 U	1 U	7.5	1 U	1 U	1 U	1 U	1 U	41	1 U	0.5 U
	1/27/2005	K	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.4	5 U	1 U	1 U	1.1	1 U	44	0.87	1 U	1 U	1 U	6.6	5 U	1 U	1 U	7.1	1 U	1 U	1 U	1 U	1 U	41	1 U	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	22	5.4	1 U	1 U	2.6	1 U	79	24	1 U	1 U	1 U	26	5 U	1 U	1 U	4.6	1 U	1 U	1 U	1 U	1 U	96	1 U	0.5 U
	4/27/2005	K	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	22	5.4	1 U	1 U	2.6	1 U	78	24	1 U	1 U	1 U	26	5 U	1 U	1 U	4.6	1 U	1 U	1 U	1 U	1 U	94	1 U	0.5 U
	7/27/2005		1.1	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	2.2	1 U	0.5 U	64	12	1.1	1 U	11	1 U	170	43	1 U	1 U	1 U	52	5 U	1.8	1 U	6.8	2.8	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	7/27/2005	K	2 U	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	85	20 U	4 U	4 U	13	4 U	260	59	4 U	4 U	4 U	69	20 U	4 U	4 U	7.6	4 U	4 U	4 U	4 U	4 U	290	4 U	2 U
	10/20/2005		3.5	4 U	4 U	8 U	4 U	8.4	4 U	--	4 U	4 U	4 U	4 U	2 U	110	32	4 U	4 U	21	4 U	330	290	4 U	4 U	4 U	80	20 U	4 U	4 U	9.2	10	4 U	4 U	4 U	4 U	380	4 U	2 U
	10/20/2005	K	3.3	4 U	4.1	8 U	4 U	9.8	4 U	--	4 U	4 U	4 U	4 U	2 U	94	28	4 U	4 U	17	4 U	290	290	4 U	4 U	4 U	72	20 U	4 U	4 U	8.4	7.4	4 U	4 U	4 U	4 U	350	4 U	2 U
	1/27/2006		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	90	120	5 U	5 U	14	5 U	320	280	5 U	5 U	5 U	100	25 U	5 U	5 U	8.9	5 U	5 U	5 U	5 U	5 U	450	5 U	2.5 U
	1/27/2006	K	2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	89	120	5 U	5 U	13	5 U	320	280	5 U	5 U	5 U	98	25 U	5 U	5 U	8.4	5 U	5 U	5 U	5 U	5 U	430	5 U	2.5 U
	4/26/2006		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	86	56	5 U	5 U	10	5 U	330	360	5 U	5 U	5 U	81	25 U	5 U	5 U	11	5 U	5 U	5 U	5 U	5 U	470	5 U	2.5 U
	4/26/2006	K	1.2	1 U	1 U	2 U	1 M1,U	1 U	1 R,U	--	1 M1,U	1 U	1 M1,U	1.6	0.5 U	77	60	1	1 U	11	1 U	390	410	1 U	1 U	1 U	82 M1	5 U	1.6	1 U	10	2.7 M1	1.2	1 U	1 U	1 U	520	1 U	0.5 U
	7/27/2006		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	57	25 U	5 U	5 U	9.8	5 U	180	630	5 U	5 U	5 U	44	25 U	5 U	5 U	8.2	5 U	5 U	5 U	5 U	5 U	260	5 U	2.5 U
	7/27/2006	K	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	58	25 U	5 U	5 U	10	5 U	180	710	5 U	5 U	5 U	45	25 U	5 U	5 U	9.2	5 U	5 U	5 U	5 U	5 U	280	5 U	2.5 U
	10/26/2006		1	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	68	79	1 U	1 U	9.3	1 U	190	260	1 U	1 U	1 U	52	5 U	1.4	1 U	5.5	1.4	1 U	1 U	1 U	1 U	430	1 U	0.5 U
	10/26/2006	K	1.2	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.1	0.5 U	74	79	1 U	1 U	11	1 U	210	270	1 U	1 U	1 U	58	5 U	1.9	1 U	6.7	2	1.2	1 U	1 U	1 U	420	1 U	0.5 U
	1/18/2007		0.97	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.1	0.5 U	67	58	1 U	1 U	9.8	1 U	190	230	1 U	1 U	1 U	35	5 U	1.7	1 U	6.8	1.3	1.1	1 U	1 U	1 U	230	1 U	0.5 U
	1/18/2007	K	0.95	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	63	54	1 U	1 U	9.1	1 U	180	220	1 U	1 U	1 U	33	5 U	1.6	1 U	6.6	1.3	1.1	1 U	1 U	1 U	230	1 U	0.5 U
	4/18/2007		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	68	25 U	5 U	5 U	9.8	5 U	200	470	5 U	5 U	5 U	46	25 U	5 U	5 U	8.7	5 U	5 U	5 U	5 U	5 U	290	5 U	2.5 U
	4/18/2007	K	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	65	25 U	5 U	5 U	9.2	5 U	190	440	5 U	5 U	5 U	43	25 U	5 U	5 U	7.2	5 U	5 U	5 U	5 U	5 U	260	5 U	2.5 U
	7/27/2007		1.7	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.3	0.5 U	99	23	1.1	1 U	19	1 U	260 MHA	450	1 U	1 U	1 U	49	5 U	3.6	1 U	8	4.1	1.8	1 U	1 U	1 U	330	1 U	0.5 U
	7/27/2007	K	1.7	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.4	0.5 U	110	25	1.4	1 U	22	1 U	280	450	1 U	1 U	1 U	53	5 U	3.9	1 U	8.4	4.5	1.7	1 U	1 U	1 U	320	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-09	10/25/2007		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	120	290	5 U	5 U	7.1	5 U	220	330	5 U	5 U	5 U	50	25 U	5 U	5 U	7.6	5 U	5 U	5 U	5 U	5 U	270	5 U	2.5 U
	10/25/2007	K	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	130	320	5 U	5 U	7.8	5 U	240	370	5 U	5 U	5 U	52	25 U	5 U	5 U	7.5	5 U	5 U	5 U	5 U	5 U	280	5 U	2.5 U
	1/31/2008		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	81	34	4 U	4 U	9.6	4 U	180	35	4 U	4 U	4 U	39	20 U	4 U	4 U	7.2	4 U	4 U	4 U	4 U	4 U	200	4 U	2 U
	1/31/2008	K	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	89	25 U	5 U	5 U	8.1	5 U	170	50	5 U	5 U	5 U	32	25 U	5 U	5 U	6.8	5 U	5 U	5 U	5 U	5 U	180	5 U	2.5 U
	4/24/2008		1.4	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1.5	0.5 U	150	30	1 U	1 U	17	1 U	300	60	1 U	1 U	1 U	61	5 U	1.9	1 U	10	2.9	2.2	1 U	1 U	1 U	470	1 U	0.5 U
	4/24/2008	K	5 U	10 U	10 U	10 U	10 U	10 L,U	10 U	--	10 U	10 U	10 U	10 U	5 U	150	50 U	10 U	10 U	16	10 U	330	58	10 U	10 U	10 U	57	50 U	10 U	10 U	10	10 U	10 U	10 U	10 U	10 U	360	10 U	5 U
	7/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	36	6	1 U	1 U	3.6	1 U	81	21	1 U	1 U	1 U	23	5 U	1 U	1 U	6.6	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	7/29/2008	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	35	5.9	1 U	1 U	3.3	1 U	78	21	1 U	1 U	1 U	24	5 U	1 U	1 U	6.5	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	10/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.2	1 U	35	3	1 U	1 U	1 U	2.9	5 U	1 U	1 U	5.6	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U
	10/30/2008	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	33	2.8	1 U	1 U	1 U	2.7	5 U	1 U	1 U	5.4	1 U	1 U	1 U	1 U	1 U	24	1 U	0.5 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.9	5 U	1 U	1 U	1.8	1 U	9.8	0.5 U	1 U	1 U	1 U	1.6	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	1/28/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.1	5 U	1 U	1 U	2	1 U	12	0.5 U	1 U	1 U	1 U	1.6	5 U	1 U	1 U	11	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	4.8	0.5 U	1 U	1 U	1 U	1.4	5 U	1 U	1 U	26	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U
	4/8/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	4.4	0.5 U	1 U	1 U	1 U	1.1	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	7/31/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.3	5 U	1 U	1 U	1.1	1 U	18	0.66	1 U	1 U	1 U	2.4	5 U	1 U	1 U	100	1 U	1 U	1 U	1 U	1 U	35	1.4	0.5 U
	7/31/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	1.3	1 U	20	0.73	1 U	1 U	1 U	2.1	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	37	1.4	0.5 U
	10/9/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.6	1 U	5	0.5 U	1 U	1 U	1 U	4.2	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	36	1.9	0.5 U
	10/9/2009	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.5	1 U	4.8	0.5 U	1 U	1 U	1 U	4.2	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	36	1.9	0.5 U
	1/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.2	1 U	2.3	0.5 U	1 U	1 U	1 U	3.3	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	35	2.1	0.5 U
	4/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	1 U	1 U	7	0.5 U	1 U	1 U	1 U	4.1	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	39	1.4	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	1 U	1 U	8	2.5	1 U	1 U	1 U	3.4	5 U	1 U	1 U	75	1 U	1 U	1 U	1 U	1 U	35	2.4	0.5 U
	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	1.6	1 U	1.7	1.4	1 U	1 U	1 U	11	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	56	4.6	0.5 U
	10/28/2010	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	1.5	1 U	1.7	1.3	1 U	1 U	1 U	10	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	55	4.5	0.5 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.1	5 U	1 U	1 U	2.5	1 U	2.3	1.5	1 U	1 U	1 U	17	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	79	16	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.8	5 U	1 U	1 U	1.9	1 U	1 U	20	1 U	1 U	1 U	14	5 U	1 U	1 U	170	1 U	1 U	1 U	1 U	1 U	75	15	0.5 U
	7/27/2011		0.62	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	3.1	5 U	1 U	1 U	1.3	1 U	7	87	1 U	1 U	1 U	3.2	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	38	1.1	0.5 U
	7/27/2011	K	0.66	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	3.5	5 U	1 U	1 U	1.5	1 U	7.5	89	1 U	1 U	1 U	3.5	5 U	1 U	1 U	38	1 U	1 U	1 U	1 U	1 U	42	1.2	0.5 U
	10/20/2011		0.7	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.2	5 U	1 U	1 U	1.5	1 U	6.1	54	1 U	1 U	1 U	3.4	5 U	1 U	1 U	37	1 U	1 U	1 U	1 U	1 U	35	1.3	0.5 U
	10/20/2011	K	0.73	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.9	5 U	1 U	1 U	1.8	1 U	6.3	60	1 U	1 U	1 U	3.3	5 U	1 U	1 U	38	1 U	1 U	1 U	1 U	1 U	38	1.4	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.2	5 U	1 U	1 U	1.1	1 U	2.4	110	1 U	1 U	1 U	1.6	5 U	1 U	1 U	30	1 U	1 U	1 U	1 U	1 U	24	1.8	0.5 U
	1/18/2012	K	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.6	5 U	1 U	1 U	1.2	1 U	2.6	120	1 U	1 U	1 U	1.7	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	26	1.9	0.5 U
	3/21/2012		0.53	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	13	5 U	1 U	1 U	1.2	1 U	5.8	210	1 U	1 U	1 U	1.4	5 U	1 U	1 U	29	1 U	1 U	1 U	1 U	1 U	29	1 U	0.5 U
	3/21/2012	K	0.53	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	12	5 U	1 U	1 U	1.1	1 U	5.7	180	1 U	1 U	1 U	1.3	5 U	1 U	1 U	26	1 U	1 U	1 U	1 U	1 U	27	1 U	0.5 U
	7/25/2012		0.51	1 U	2.4	4.2	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	110	190	1 U	1 U	5.8	1 U	98	90	1 U	1 U	1 U	5.2	5 U	1 U	1 U	17	1 U	2.6	1 U	1 U	1 U	130	1 U	0.5 U
	7/25/2012	K	0.5	1 U	2.3	4	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	110	190	1 U	1 U	5.7	1 U	97	86	1 U	1 U	1 U	5	5 U	1 U	1 U	16	1 U	2.7	1 U	1 U	1 U	130	1 U	0.5 U
	10/31/2012		0.5 U	0.53	2.7	5.76	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	26	41	0.5 U	0.5 U	3	0.5 U	74	59	0.5 U	0.5 U	0.5 U	3.3	0.5 U	0.5 U	0.5 U	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	57	0.5 U	0.5 U
	10/31/2012	K	1 U	2 U	3.1	5.5	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	30	48	2 U	2 U	3.3	2 U	80	66	2 U	2 U	2 U	3.3	10 U	2 U	2 U	17	2 U	2 U	2 U	2 U	2 U	65	2 U	1 U
MW-10	1/15/1989		0.5 U	0.5 U	0.54	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	2.8	3.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.2	0.2 U	0.2 U	--	--	--	32	0.2 U	0.2 U
	4/25/1989		0.7 U	1 U	1 U	7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5	1 U	1 U	--	--	--	23	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-10	7/15/1989		7 U	10 U	10 U	30	--	--	--	--	--	--	10 U	10 U	10 U	10 U	38	10 U	10 U	--	--	12	150	10 U	10 U	10 U	15	--	10 U	10 U	10 U	10 U	10 U	--	--	--	180	10 U	10 U
	10/15/1989		5 U	10 U	190	10 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	10 U	50	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10	10 U	--	--	--	70	10 U	10 U
	1/22/1990		5 U	5 U	210	10 U	--	--	--	--	--	--	2 U	5 U	2 U	2 U	20 U	2 U	2 U	--	--	9.9	80	5 U	5 U	5 U	8.4	2 U	--	2 U	2 U	2 U	2 U	--	--	--	84	20 U	2 U
	4/12/1990		2.5 U	2.5 U	200	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	4.9	90	2.5 U	2.5 U	2.5 U	5.6	1 U	--	1 U	1 U	1 U	1 U	--	--	--	93	10 U	1 U
	4/12/1990	K	2.5 U	2.5 U	700	5 U	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	10	120	2.5 U	2.5 U	2.5 U	5	1 U	--	1 U	1 U	1 U	1 U	--	--	--	87	10 U	1 U
	7/15/1990		125 U	200	6500	1500	--	--	--	--	--	--	50 U	125 U	50 U	50 U	500 U	50 U	50 U	50 U	--	50 U	310	125 U	125 U	125 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	240	500 U	50 U
	10/15/1990		0.5 U	330	1330	980	--	--	--	--	--	--	250 U	250 U	250 U	250 U	250 U	250 U	250 U	--	--	250 U	250 U	250 U	250 U	250 U	250 U	--	250 U	250 U	250 U	250 U	250 U	--	--	--	250 U	250 U	250 U
	10/15/1990	K	100 U	480	1500	1600	--	--	--	--	--	--	200 U	200 U	200 U	200 U	200 U	200 U	200 U	--	--	200 U	200 U	200 U	200 U	200 U	200 U	--	200 U	200 U	200 U	200 U	200 U	--	--	--	200 U	200 U	200 U
	1/15/1991		0.5 U	1 U	1 U	4	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	220	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	10/9/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.6	1 U	4.3	0.5 U	1 U	1 U	1 U	2.9	5 U	1 U	1 U	110 MHA	1 U	1 U	1 U	1 U	1 U	32	1.7	0.5 U
	7/26/2012		2.7	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	13 U	2.5 U	2.5 U	3.9	2.5 U	27	190	2.5 U	2.5 U	2.5 U	6.5	13 U	2.5 U	2.5 U	12	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	96	2.5 U	1.3 U
	10/30/2012		0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	1.5	0.5 U	4.6	1.1	0.5 U	0.5 U	3.3	0.5 U	36	200	0.5 U	0.5 U	0.5 U	8.9	0.5 U	0.5 U	0.5 U	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	110	0.5 U	0.5 U
MW-11	1/15/1989		0.5 U	0.5 U	43	--	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	0.88	1	0.2 U	0.2 U	--	--	3.2	21	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--	34	0.2 U	0.2 U
	1/15/1989	K	0.5 U	0.5 U	17	1.8	--	--	--	--	--	--	--	0.5 U	--	--	--	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/15/1989		800	7500	2600	11000	--	--	--	--	--	--	500 U	500 U	500 U	500 U	500 U	500 U	500 U	--	--	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	--	--	--	500 U	500 U	500 U
	4/15/1989	K	5 U	1400	660	740	--	--	--	--	--	--	5 U	5 U	5 U	15	5 U	5 U	5 U	--	5 U	8.8	15	5 U	5 U	5 U	20	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	39	5 U	5 U
	7/15/1989		7 U	10 U	10 U	90	--	--	--	--	--	--	1 U	1 U	1 U	1	1	1 U	1 U	--	--	4	7	1 U	1 U	1 U	2	--	1 U	1 U	1	1 U	1 U	--	--	--	29	1 U	1 U
	10/15/1989		5 U	10 U	200	10 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	10 U	70	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	35	10 U	10 U
	1/23/1990		5 U	5 U	83	10 U	--	--	--	--	--	--	2 U	5 U	2 U	2 U	20 U	2 U	2 U	--	--	5.5	28	5 U	5 U	5 U	2 U	2 U	--	2 U	2 U	2 U	2 U	--	--	--	46	20 U	2 U
	4/10/1990		2.5 U	2.6	370	150	--	--	--	--	--	--	1 U	2.5 U	1 U	1 U	10 U	1 U	1 U	--	--	1 U	23	2.5 U	2.5 U	2.5 U	1 U	1 U	--	1 U	1 U	1 U	1 U	--	--	--	33	10 U	1 U
	7/15/1990		25 U	440	1000	760	--	--	--	--	--	--	10 U	25 U	10 U	10 U	100 U	10 U	10 U	10 U	--	10 U	10 U	25 U	25 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	65	100 U	10 U
	10/15/1990		500 U	15000	3000	10000	--	--	--	--	--	--	500 U	500 U	500 U	500 U	500 U	500 U	500 U	--	--	500 U	500 U	500 U	500 U	500 U	500 U	--	500 U	500 U	500 U	500 U	500 U	--	--	--	500 U	500 U	500 U
	1/15/1991		0.5 U	15	4	12	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	4/15/1991		100 U	8500	3300	7500	--	--	--	--	--	--	10 U	10 U	10 U	10 U	25 B	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	63	10 U	10 U
	7/15/1991		0.5 U	57	520	22	--	--	--	--	--	--	10 U	10 U	10 U	10 U	22	10 U	10 U	--	--	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	61	10 U	10 U
	10/22/1991		100 U	140	2000	660	--	--	--	--	--	--	40 U	100 U	40 U	40 U	400 U	40 U	40 U	40 U	--	40 U	40 U	100 U	100 U	100 U	40 U	200 U	40 U	40 U	40 U	40 U	40 U	--	--	--	110	400 U	40 U
	1/15/1992		1 U	7.3	230	26	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	8.7	1 U	1 U	1 U	1 U	7.9	--	1 U	1 U	1 U	3.4	1 U	--	--	--	85	1 U	1 U
	4/15/1992		0.5 U	1.7	130	2.3	0.5 U	1.2	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.77	0.5 U	8.1	0.8	0.58	0.5 U	0.5 U	4.7	0.5 U	0.5 U	0.5 U	0.78	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	70	0.5 U	0.5 U
	7/15/1992		2.5 U	5 U	17	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	19	5 U	5 U	5 U	5 U	6.1	--	5 U	5 U	5 U	5 U	5 U	--	--	--	160	5 U	5 U
	10/15/1992		0.5 U	1 U	11	1 U	--	--	--	--	--	--	5 U	5 U	1 U	1 U	5	5 U	5 U	--	--	18	1 U	5 U	5 U	5 U	7.9	--	1 U	5 U	1 U	1 U	5 U	--	--	--	160	5 U	5 U
	1/15/1993		1.2 U	2.4 U	110	2.4 U	--	--	--	--	--	--	2 U	2 U	2 U	2.1	2 U	2 U	2 U	--	--	8.5	2 U	2 U	2 U	2 U	4.6	--	2 U	2 U	2 U	2 U	2 U	--	--	--	86	2 U	2 U
	4/19/1993		0.5 U	1 U	2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.9	1.3 B	1 U	1 U	--	--	8.1	1 U	1 U	1 U	1 U	4.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	59	1 U	1 U
	7/12/1993		0.5 U	1.8	2.5	6.4	--	--	--	--	--	--	10 U	10 U	10 U	10 U	19 B	10 U	10 U	--	--	37	10 U	10 U	10 U	10 U	11	--	10 U	10 U	10 U	10 U	10 U	--	--	--	230	10 U	10 U
	10/13/1993		0.5 U	1 U	2.1	3.1	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	27	5 U	5 U	5 U	5 U	7.9	--	5 U	5 U	5 U	5 U	5 U	--	--	--	150	5 U	5 U
	1/10/1994		0.5 U	1 U	2.5	2.8	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	25	5 U	5 U	5 U	5 U	12	--	5 U	5 U	5 U	5 U	5 U	--	--	--	190	5 U	5 U
	4/12/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	2 U	2.2	2 U	2 U	2 U	--	--	17	2 U	2 U	2 U	2 U	4.9	--	2 U	2 U	2 U	2 U	2 U	--	--	--	80	2 U	2 U
	7/18/1994		0.5 U	1 U	1 U	1.6	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	4.4	2.5 U	2.5 U	2.5 U	--	--	32	2.5 U	2.5 U	2.5 U	2.5 U	12	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	180	2.5 U	2.5 U
	10/11/1994		0.5 U	1 U	4.5	1 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	56	10 U	10 U	10 U	10 U	22	--	10 U	10 U	10 U	10 U	10 U	--	--	--	360	10 U	10 U
	1/17/1995		10 U	660	850	1100	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--	130	20 U	20 U	20 U	20 U	37	--	20 U	20 U	20 U	20 U	20 U	--	--	--	660	20 U	20 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-11	4/17/1995		50 U	100 U	1900	1000	--	--	--	--	--	--	10 U	10 U	10 U	10 U	67 B	10 U	10 U	--	--	16	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	74	10 U	10 U
	7/11/1995		2.5 U	5 U	160	37	--	--	--	--	--	--	5 U	5 U	5 U	6	5 U	5 U	5 U	--	--	33	5 U	5 U	5 U	5 U	9.2	--	5 U	5 U	5 U	5 U	5 U	--	--	--	140	5 U	5 U
	10/9/1995		0.5 U	1 U	5.8	2.2	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	44	10 U	10 U	10 U	10 U	13	--	10 U	10 U	10 U	10 U	10 U	--	--	--	180	10 U	10 U
	1/30/1996		25 U	520	460	1000	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	250	50 U	50 U	50 U	50 U	60	--	50 U	50 U	50 U	50 U	50 U	--	--	--	620	50 U	50 U
	4/16/1996		25 U	160	1100	1400	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--	87	71	20 U	20 U	20 U	31	--	20 U	20 U	20 U	20 U	20 U	--	--	--	240	20 U	20 U
	7/15/1996		10 U	20 U	460	290	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	50	81	10 U	10 U	10 U	17	--	10 U	10 U	10 U	10 U	10 U	--	--	--	220	10 U	10 U
	10/8/1996		0.5 U	1.9	20	8	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	53	33	10 U	10 U	10 U	13	--	10 U	10 U	10 U	10 U	10 U	--	--	--	250	10 U	10 U
	1/14/1997		0.5 U	9.4	84	88	--	--	--	--	--	--	1 U	1 U	1 U	4.4	1 U	1 U	1 U	--	--	27	4.3	1 U	1 U	1 U	16	--	1 U	1 U	1 U	1 U	1 U	--	--	--	160	1 U	1 U
	4/16/1997		2.5 U	5 U	120	8.2	--	--	--	--	--	--	5 U	5 U	5 U	9.6	5 U	5 U	5 U	--	--	73	12	5 U	5 U	5 U	26	--	5 U	5 U	5 U	5 U	5 U	--	--	--	370	5 U	5 U
	7/9/1997		2.5 U	5 U	8.3	5 U	--	--	--	--	--	--	5 U	5 U	5 U	8.3	5 U	5 U	5 U	--	--	56	6	5 U	5 U	5 U	18	--	5 U	5 U	5 U	5 U	5 U	--	--	--	240	5 U	5 U
	10/15/1997		2.5 U	5 U	5 U	5 U	--	--	--	--	--	--	5 U	5 U	5 U	12	5 U	5 U	5 U	--	--	100	5 U	5 U	5 U	5 U	40	--	5 U	5 U	5 U	5 U	5 U	--	--	--	350	5 U	5 U
	1/14/1998		12 U	770	1800	2200	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U	25 U	--	--	56	25 U	25 U	25 U	25 U	28	--	25 U	25 U	25 U	25 U	25 U	--	--	--	390	25 U	25 U
	4/22/1998		1.2 U	63	150	210	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	5.2	2.5 U	2.5 U	2.5 U	--	--	34	19	2.5 U	2.5 U	2.5 U	19	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	180	2.5 U	2.5 U
	7/15/1998		1.2 U	2.5 U	41	4.8	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	5.8	2.5 U	2.5 U	2.5 U	--	--	29	4.2	2.5 U	2.5 U	2.5 U	12	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	150	2.5 U	2.5 U
	10/20/1998		5 U	10 U	10 U	10 U	--	--	--	--	--	--	10 U	10 U	10 U	16	10 U	10 U	10 U	--	--	100	10 U	10 U	10 U	10 U	33	--	10 U	10 U	10 U	10 U	10 U	--	--	--	430	10 U	10 U
	1/15/1999		6.2 U	260	750	970	--	--	--	--	--	--	12 U	12 U	12 U	26	12 U	12 U	12 U	--	--	190	17	12 U	12 U	12 U	59	--	12 U	12 U	12 U	12 U	12 U	--	--	--	690	12 U	12 U
	1/15/1999	K	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/15/1999		25 U	670	1600	1270	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	50 U	50 U	25 U	--	70	28	25 U	25 U	25 U	29	--	25 U	25 U	25 U	25 U	25 U	--	--	--	480	50 U	50 U
	7/15/1999		10 U	10 U	85	10 U	--	--	--	--	--	--	10 U	10 U	10 U	30	10 U	20 U	20 U	28	--	250	12	10 U	10 U	10 U	69	--	10 U	10 U	25	17	10 U	--	--	--	740	20 U	20 U
	10/15/1999		10 U	10 U	480	52	--	--	--	--	--	--	10 U	10 U	10 U	18	10 U	20 U	20 U	21	--	110	110	10 U	10 U	10 U	56	--	10 U	10 U	10 U	10 U	10 U	--	--	--	650	20 U	20 U
	1/25/2000		12 U	12 U	12 U	24 U	--	--	--	--	--	--	12 U	12 U	12 U	29	12 U	25 U	25 U	50	--	230	22	12 U	12 U	12 U	100	--	12 U	12 U	22	12 U	12 U	--	--	--	820	25 U	25 U
	4/15/2000		12 U	12 U	55	17	--	--	--	--	--	--	12 U	12 U	12 U	30	12 U	25 U	25 U	54	--	220	65	12 U	12 U	12 U	98	--	12 U	12 U	12 U	12 U	12 U	--	--	--	1100	25 U	25 U
	10/15/2000		50 U	50 U	50 U	50 U	--	--	--	--	--	--	50 U	50 U	980	910	50 U	100 U	100 U	50 U	--	360	220	50 U	50 U	50 U	480	--	50 U	50 U	69	50 U	50 U	--	--	--	2900	100 U	100 U
	4/15/2001		25 U	25 U	48	25 U	--	--	--	--	--	--	25 U	25 U	25 U	54	25 U	50 U	50 U	51	--	370	25 U	25 U	25 U	25 U	140	--	25 U	25 U	25 U	25 U	25 U	--	--	--	1700	50 U	50 U
	7/17/2001		5 U	5 U	5 U	5 U	--	--	--	5.1	--	--	5 U	5 U	5 U	9.9	5 U	10 U	10 U	9	--	67	5 U	5.7	5 U	5 U	30	--	5 U	5 U	5 U	5 U	5 U	--	--	--	400	10 U	10 U
	10/18/2001		25 U	25 U	90	122	--	--	--	12	--	--	25 U	25 U	25 U	50	25 U	50 U	50 U	51	--	410	25 U	25 U	25 U	25 U	98	--	25 U	25 U	25 U	27	25 U	--	--	--	1500	50 U	50 U
	1/17/2002		25 U	31	1900	530	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	50 U	50 U	54	--	120	25 U	25 U	25 U	25 U	44	--	25 U	25 U	25 U	25 U	25 U	--	--	--	630	50 U	50 U
	4/18/2002		25 U	25 U	300	50 U	--	--	--	--	--	--	25 U	25 U	25 U	44	25 U	50 U	50 U	66	--	360	25 U	25 U	25 U	25 U	89	--	25 U	25 U	25 U	27	25 U	--	--	--	1300	50 U	50 U
	7/26/2002		50 U	50 U	50 U	100 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	58	--	410	50 U	50 U	50 U	50 U	110	--	50 U	50 U	50 U	50 U	50 U	--	--	--	1500	100 U	100 U
	10/24/2002		10 U	10 U	390	20 U	--	--	10 U	--	--	--	10 U	10 U	10 U	24	10 U	20 U	20 U	39	--	140	130	10 U	10 U	10 U	59	--	10 U	10 U	10 U	10 U	10 U	--	10 U	--	700	20 U	20 U
	12/30/2002		1.4 J	20 U	31	40 U	--	--	--	--	--	20 U	20 U	3.5 J	20 U	15 J	20 U	20 U	20 U	22	20 U	110	100	3.2 J	20 U	20 U	42	20 U	20 U	20 U	3.4 J	20 U	20 U	--	--	--	550	20 U	20 U
	4/25/2003		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	13	25 U	5 U	5 U	29	5 U	120	16	5 U	5 U	5 U	40	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	410	5 U	2.5 U
	7/31/2003		5 U	10 U	210	94	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	50	50 U	10 U	10 U	44	10 U	370	5.4	10 U	10 U	10 U	96	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1100	10 U	5 U
	10/23/2003		20 U	20 U	710	40 U	--	--	9.9 U	--	--	20 U	20 U	20 U	50 U	20 U	50 U	50 U	50 U	46	--	56	300	20 U	20 U	20 U	50 U	50 U	20 U	20 U	20 U	20 U	20 U	--	9.9 U	--	380	50 U	50 U
	1/23/2004		1 U	2 U	24	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	4.7	10 U	2 U	2 U	24	2 U	37	22	2 U	2 U	2 U	15	10 U	2 U	2 U	2.6	2 U	2 U	2 U	2 U	2 U	190	2 U	1 U
	4/21/2004		1 U	2 U	3.6	4 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	6.2	10 U	2 U	2 U	8.2	2 U	40	24	2 U	2 U	2 U	16	10 U	2 U	2 U	3.3	2 U	2 U	2 U	2 U	2 U	250	2 U	1 U
	7/21/2004		0.5	1 U	84	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.4	5 U	1 U	1 U	15	1 U	29	60	1 U	1 U	1 U	16	5 U	1 U	1 U	3.4	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	10/12/2004		2 U	2 U	29	4 U	--	--	9.6 U	--	--	2 U	2 U	2 U	5 U	3.5	5 U	5 U	5 U	13	--	40	21	2 U	2 U	2 U	13	5 U	2 U	2 U	4.2	2 U	2 U	--	9.6 U	--	180	5 U	5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	4.6	1 U	16	3	1 U	1 U	1 U	7.7	5 U	1 U	1 U	5.2	1 U	1 U	1 U	1 U	1 U	130	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																											
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-11	4/27/2005		5 U	10 U	10 U	20 U	10 U	10 U	10 U	--	10 U	10 U	10 U	13	5 U	41	50 U	10 U	10 U	34	10 U	290	30	10 U	10 U	10 U	93	50 U	10 U	10 U	12	10 U	10 U	10 U	10 U	10 U	1200	10 U	5 U
	7/27/2005		10 U	20 U	20 U	40 U	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U	10 U	40	100 U	20 U	20 U	30	20 U	300	20	20 U	20 U	20 U	87	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	1300	20 U	10 U
	10/20/2005		20 U	20 U	20 U	40 U	--	--	10 U	--	--	20 U	20 U	20 U	50 U	39	50 U	50 U	50 U	34	--	240	20 U	20 U	20 U	20 U	70	50 U	20 U	20 U	20 U	20 U	20 U	--	10 U	--	810	50 U	50 U
	1/27/2006		5 U	10 U	490	287	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	36	50 U	10 U	10 U	52	10 U	280	13	10 U	10 U	10 U	71	50 U	10 U	10 U	12	10 U	10 U	10 U	10 U	10 U	1000	10 U	5 U
	4/26/2006		10 U	20 U	1300	670	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U	10 U	22	100 U	20 U	20 U	35	20 U	160	19	20 U	20 U	20 U	40	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	690	20 U	10 U
	7/27/2006		1.4	1 U	78	16.1	1 U	1	1 U	--	1 U	1 U	1 U	4.2	0.5 U	39	5 U	1 U	1 U	68	1 U	310	4.2	5.5	1 U	1.4	59	5 U	1 U	1 U	13	7.3	1 U	1 U	1 U	1 U	930	1 U	0.5 L,U
	10/25/2006		20 U	54	300	430	--	--	9.43 U	38	--	20 U	20 U	20 U	50 U	42	50 U	50 U	50 U	69	--	320	20 U	20 U	20 U	20 U	54	50 La,U	20 U	20 U	20 U	20 U	20 U	--	9.43 U	--	1100	50 U	50 U
	1/17/2007		2.7	1.2	82	23.1	1 U	2.3	1 U	--	1 U	1 U	1 U	7.1	0.5 U	37	5 U	1 U	1 U	160	1 U	310	18	6.4	1 U	1.6	77	5 U	1 U	1 U	11	4.3	1 U	1 U	1 U	1 U	1100	1 U	0.5 U
	4/18/2007		2.5	12	120	56	1 U	1.3	1 U	--	1 U	1 U	1 U	4	0.5 U	45	5 U	1 U	1 U	110	1 U	360	19	5.4	1 U	1.4	62	5 U	1 U	1 U	12	8.4	1 U	1 U	1 U	1 U	1200	1 U	0.5 U
	7/25/2007		5 U	17	74	67	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	33	50 U	10 U	10 U	190	10 U	270	5	10 U	10 U	10 U	56	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	840	10 U	5 U
	10/24/2007		2.9	4.8	240	48	--	--	9.52 U	--	--	2 U	2 U	2.9	5 U	6.2	5 U	5 U	5 U	140	--	54	230	2.9	2 U	2 U	15	5 U	2 U	2 U	3.3	2 U	2 U	--	9.52 U	--	140	5 U	5 U
	1/30/2008		1.2 U	2.5 U	64	2.5 U	2.5 U	2.5 U	2.5 U	8.2	2.5 U	2.5 U	2.5 U	2.5 U	1.2 U	5.9	12 U	2.5 U	2.5 U	26	2.5 U	44	100	2.5 U	2.5 U	2.5 U	13	12 U	2.5 U	2.5 U	5.3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	240	2.5 U	1.2 U
	4/23/2008		2 U	4 U	4 U	4 U	4 U	4 L,U	4 U	--	4 U	4 U	4 U	4 U	2 U	7.8	20 U	4 U	4 U	30	4 U	73	100	4 U	4 U	4 U	24	20 U	4 U	4 U	5.4	4 U	4 U	4 U	4 U	4 U	330	4 U	2 U
	7/30/2008		2.5 U	5 U	500	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5 U	25 U	5 U	5 U	30	5 U	41	220	5 U	5 U	5 U	14	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	220	5 U	2.5 U
	10/29/2008		2 U	2 U	2 U	2 U	--	--	10 U	33	--	2 U	2 U	2 U	5 U	2 U	5 U	5 U	5 U	17	--	11	16	2 U	2 U	2 U	5 U	5 U	2 U	2 U	2.3	2 U	2 U	--	10 U	--	40	5 U	5 U
	1/27/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	8.1	1 U	12	2.9	1 U	1 U	1 U	2.5	5 U	1 U	1 U	4.7	1 U	1 U	1 U	1 U	1 U	45	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.5	1 U	19	9.1	1 U	1 U	1 U	3.8	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	63	1 U	0.5 U
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.6	1 U	11	6.8	1 U	1 U	1 U	2.1	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	41	1 U	0.5 U
	10/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.9	1 U	6	0.71	1 U	1 U	1 U	3.6	5 U	1 U	1 U	57	1 U	1 U	1 U	1 U	1 U	28	2.4	0.5 U
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.2	1 U	14	13	1 U	1 U	1 U	2.9	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	39	1.2	0.5 U
	7/30/2010		0.69	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	2.1	1 U	5.5	77	1 U	1 U	1 U	7	5 U	1 U	1 U	52 M2	1 U	1 U	1 U	1 U	1 U	55	3.2	0.5 U
	10/28/2010		2 P1,U	2 P1,U	2 P1,U	2 P1,U	--	--	9.4 U	17	--	2 P1,U	2 P1,U	2 P1,U	5 P1,U	2.1	5 P1,U	5 P1,U	5 P1,U	--	2 P1,U	2	170	2 P1,U	2 P1,U	2 P1,U	5 P1,U	5 P1,U	2 P1,U	2 P1,U	43	2 P1,U	2 P1,U	--	9.4 U	--	27	5 P1,U	5 P1,U
	1/18/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	1.8	1 U	1.5	41	1 U	1 U	1 U	8.6	5 U	1 U	1 U	120 MHA	1 U	1 U	1 U	1 U	1 U	56	6	0.5 U
	4/13/2011		0.77	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1	1 U	2.4	86	1 U	1 U	1 U	3.4	5 U	1 U	1 U	44	1 U	1 U	1 U	1 U	1 U	50	1.7	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	5.2	5 U	1 U	1 U	1.9	1 U	8.7	23	1 U	1 U	1 U	3.7	5 U	1 U	1 U	22	1 L, C,U	1 U	1 U	1 U	1 U	44	1 U	0.5 U
	10/20/2011		2 U	2 U	2 U	2 U	1 U	1 U	1 U	6	1 U	2 U	2 U	2 U	5 C,U	2 U	5 U	5 U	5 U	1.5	2 U	5.4	17	2 U	2 U	2 U	5 U	5 U	2 U	2 U	19	2 U	2 U	1 U	1 U	1 U	39	5 U	5 U
	1/18/2012		0.5 U	1 U	3.5	1.2	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	3.1	21	1 U	1 U	1 U	2.6	5 U	1 U	1 U	16	1 U	1 U	1 U	1 U	1 U	31	1 U	0.5 U
	3/22/2012		5.4	1 U	87	1 U	1 U	3.5	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.5	1 U	5.4	90	1 U	1 U	1 U	2.9	5 U	1 U	1 U	15	1 U	1 U	1 U	1 U	1 U	36	1 U	0.5 U
	7/24/2012		24	1 U	6900	15	11	80	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.9	1 U	2.3	210	1 U	1 U	1 U	1.3	5 U	1 U	1 U	7.8	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	10/31/2012		0.6	0.5 U	4	0.5 U	0.5 U	0.5 U	0.5 U	0.94 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	1.5	0.5 U	5.1	290	0.5 U	0.5 U	0.5 U	2.8	0.5 U	0.5 U	0.5 U	14	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	35	0.5 U	0.5 U
MW-12D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	10 U	500 U	--	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	--	10 U	5 U	5 U	10 U	10 U	10 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U	--	10 U	--	5 U	5 U	10 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	1/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.6	5 U	1 U	1 U	4.1	1 U	1 U	0.58	1 U	1 U	1 U	36	5 C,U	1 U	1 U	110 MHA	1 U	1 U	1 U	1 U	1 U	120 MHA	29	0.5 U
	4/28/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	17	10 U	2 U	2 U	6.4	2 U	2 U	1.4	2 U	2 U	2 U	62	10 U	2 U	2 U	150	2 U	2 U	2 U	2 U	2 U	130	35	1 U
	7/28/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	29	10 U	2 U	2 U	8.2	2 U	2 U	2	2 U	2 U	2 U	120	10 U	2 U	2 U	180	2 U	2 U	2 U	2 U	2 U	230	78	1 U
	10/28/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	30	10 U	2 U	2 U	9.4	2 U	2 U	2.3	2 U	2 U	2 U	110	10 U	2 U	2 U	190	2 U	2 U	2 U	2 U	2 U	230	78	1 U
	1/19/2011		1.2 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	1.2 U	31	12 U	2.5 U	2.5 U	8.7	2.5 U	2.5 U	2.3	2.5 U	2.5 U	2.5 U	110	12 U	2.5 U	2.5 U	210	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	240	84	1.2 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	19	5 U	1 U	1 U	6.7	1 U	1 U	1.2	1 U	1 U	1 U	74	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	180	52	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-12D	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	6.3	5 U	1 U	1 U	2.4	1 U	1 U	0.5 U	1 U	1 U	1 U	25	5 U	1 U	1 U	59	1 U	1 U	1 U	1 U	1 U	67	22	0.5 U
	10/20/2011		0.5 U	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.3	5 U	1 U	1 U	1.3	1 U	1 U	0.5 U	1 U	1 U	1 U	16	5 U	1 U	1 U	51	1 U	1 U	1 U	1 U	1 U	49	12	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	8.8	5 U	1 U	1 U	30	1 U	1 U	1 U	1 U	1 U	29	5.8	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	5.9	5 U	1 U	1 U	25	1 U	1 U	1 U	1 U	1 U	26	5	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	4.4	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	23	4.5	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	5.9	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	20	3.9	0.5 U
MW-12S	10/15/1990		0.5 U	1 U	11	1 U	--	--	13 U	500 U	--	11	5 U	5 U	5 U	5 U	5 U	10 U	10 U	--	10 U	5 U	35	13 U	13 U	13 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U	--	13 U	--	8.6	5 U	10 U
	1/15/1991		0.5 U	1 U	4.5	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	27	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	10	--	--
	4/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	1.1	1 U	1.8	3.2	1 U	1 U	1 U	4.1	5 U	1 U	1 U	70	1 U	1 U	1 U	1 U	1 U	40	3.6	0.5 U
	7/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.9	5 U	1 U	1 U	2.2	1 U	1 U	43	1 U	1 U	1 U	23	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	97	20	0.5 U
	4/12/2011		3	1 U	2.8	7.1	1 U	4.5	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.8	5 U	1 U	1 U	1.7	1 U	1 U	120	1 U	1 U	1 U	13	5 U	1 U	1 U	71	1 U	1 U	1 U	1 U	1 U	47	10	0.5 U
	7/27/2011		0.5 U	1 U	95	66.3	1 U	2.6	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	3.2	5 U	1 U	1 U	2.2	1 U	1 U	63	1 U	1 U	1 U	15	5 U	1 U	1 U	61	1 U	1 U	1 U	1 U	1 U	53	12	0.5 U
	10/20/2011		0.5 U	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.4	5 U	1 U	1 U	1.1	1 U	1 U	190	1 U	1 U	1 U	4.9	5 U	1 U	1 U	30	1 U	1 U	1 U	1 U	1 U	25	2.1	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.8	5 U	1 U	1 U	1 U	1 U	1 U	150	1 U	1 U	1 U	3.2	5 U	1 U	1 U	21	1 U	1 U	1 U	1 U	1 U	21	1.5	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.3	5 U	1 U	1 U	1 U	1 U	1 U	94	1 U	1 U	1 U	5.2	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	25	2.1	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.4	5 U	1 U	1 U	1 U	1 U	1 U	13	1 U	1 U	1 U	3.3	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	17	2.4	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.2	5 U	1 U	1 U	1 U	1 U	1 U	44	1 U	1 U	1 U	1.8	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	11	1.2	0.5 U
MW-13D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.6	1 U	1 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1.5	--	--
	1/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	12	6.3	1 U	1 U	6.8	1 U	1 U	1	1 U	1 U	1 U	32	5 C,U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	120	27	0.5 U
	4/28/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	22	10 U	2 U	2 U	8.3	2 U	2 U	1.7	2 U	2 U	2 U	76	10 U	2 U	2 U	140 M2	2 U	2 U	2 U	2 U	2 U	130 M2	37	1 U
	7/28/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	34	10 U	2 U	2 U	9.3	2 U	2 U	2.5	2 U	2 U	2 U	140	10 U	2 U	2 U	220	2 U	2 U	2 U	2 U	2 U	240	85	1 U
	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	38	5 U	1 U	1 U	10	1 U	1.1	3	1 U	1 U	1 U	150	5 U	1 U	1 U	220	1 U	1 U	1 U	1 U	1 U	220	96	0.5 U
	1/19/2011		1.2 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	1.2 U	35	12 U	2.5 U	2.5 U	9.1	2.5 U	2.5 U	3	2.5 U	2.5 U	2.5 U	110	12 U	2.5 U	2.5 U	220	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	250	91	1.2 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	17	5 U	1 U	1 U	6.6	1 U	1 U	1.1	1 U	1 U	1 U	76	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	170	50	0.5 U
	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	2.3	5 U	1 U	1 U	1.1	1 U	1 U	0.5 U	1 U	1 U	1 U	10	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	33	8.5	0.5 U
	10/20/2011		0.5 U	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.1	5 U	1 U	1 U	1.2	1 U	1 U	0.5 U	1 U	1 U	1 U	9.9	5 U	1 U	1 U	35	1 U	1 U	1 U	1 U	1 U	31	5.8	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	8.4	5 U	1 U	1 U	25	1 U	1 U	1 U	1 U	1 U	26	5.3	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	7.4	5 U	1 U	1 U	19	1 U	1 U	1 U	1 U	1 U	20	4.3	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	4.1	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	14	3	0.5 U
	10/30/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6	1 U	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	12	0.5 U	0.5 U	0.5 U	33	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	39	10	0.5 U
MW-13S	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1.5	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	23	1 U	1 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1.6	1 U	--	--	--	1 U	--	--	3	1 U	--	--	--	--	--	7.8 U	--	--
	7/14/1993		0.5 U	4	16	27	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2.3 B	1 U	1 U	--	--	35	19	1 U	1 U	1 U	3.3	--	3.9	1 U	1 U	1 U	1 U	--	--	--	30	1 U	1 U
	10/15/1993		0.5 U	1 U	13	3	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	9.7	71	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	--	--	--	18	2 U	2 U
	7/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.1	5 U	1 U	1 U	1 U	1 U	1.3	1.8	1 U	1 U	1 U	6.6	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	44	4.8	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4	5 U	1 U	1 U	1.8	1 U	1 U	18	1 U	1 U	1 U	13	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	55	8.1	0.5 U
	7/27/2011		0.5	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	8.3	5 U	1 U	1 U	2.9	1 U	1 U	110	1 U	1 U	1 U	32	5 U	1 U	1 U	89	1 U	1 U	1 U	1 U	1 U	76	26	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																											
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-13S	10/20/2011		0.5 U	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6	5 U	1 U	1 U	2.7	1 U	1 U	79	1 U	1 U	1 U	22	5 U	1 U	1 U	81 M1	1 U	1 U	1 U	1 U	1 U	73	18	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.1	5 U	1 U	1 U	2.1	1 U	1 U	28	1 U	1 U	1 U	17	5 U	1 U	1 U	61	1 U	1 U	1 U	1 U	1 U	61	13	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.6	5 U	1 U	1 U	2.1	1 U	1 U	20	1 U	1 U	1 U	14	5 U	1 U	1 U	45	1 U	1 U	1 U	1 U	1 U	45	9	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.8	5 U	1 U	1 U	1.1	1 U	1 U	6.8	1 U	1 U	1 U	9.1	5 U	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	33	6.1	0.5 U
	10/30/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2	1 U	0.5 U	0.5 U	0.63	0.5 U	0.69	2.4	0.5 U	0.5 U	0.5 U	5	0.5 U	0.5 U	0.5 U	16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	19	4.3	0.5 U
MW-14D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	1/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1.6	--	--
	10/8/2009		2	2 PHS,U	2 PHS,U	2 PHS,U	--	--	9.6 U	1	--	2 PHS,U	2 PHS,U	2 PHS,U	5 PHS,U	2 PHS,U	5 PHS,U	5 PHS,U	5 PHS,U	2 PHS,U	--	2 PHS,U	2 PHS,U	2 PHS,U	2 PHS,U	2 PHS,U	5 PHS,U	5 PHS,U	2 PHS,U	2 PHS,U	7.5 PHS	2 PHS,U	2 PHS,U	--	9.6 U	--	11 PHS	5 PHS,U	5 PHS,U
	1/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.5	5 U	1 U	1 U	2.8	1 U	1 U	0.5 U	1 U	1 U	1 U	21	5 C,U	1 U	1 U	75	1 U	1 U	1 U	1 U	1 U	85	18	0.5 U
	4/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	11	5 U	1 U	1 U	4.3	1 U	1 U	0.86	1 U	1 U	1 U	39	5 U	1 U	1 U	52	1 U	1 U	1 U	1 U	1 U	83	25	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	12	5 U	1 U	1 U	4	1 U	1 U	0.88	1 U	1 U	1 U	54	5 U	1 U	1 U	53	1 U	1 U	1 U	1 U	1 U	120	36	0.5 U
	10/29/2010		2 U	2 U	2 U	2 U	--	--	9.4 U	2.9	--	2 U	2 U	2 U	5 U	12	5 U	5 U	5 U	--	2 U	2 U	2 U	2 U	2 U	2 U	49	5 U	2 U	2 U	46	2 U	2 U	--	9.4 U	--	110	27	5 U
	1/18/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	24	5 U	1 U	1 U	7.9	1 U	1 U	1.7	1 U	1 U	1 U	82	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	170	69	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.5	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	2.5	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	25	5.9	0.5 U
	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.8	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	14	2.8	0.5 U
	10/18/2011		0.5 U	1 U	1 U	1 M1,U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.5	5 U	1 U	1 U	2.8 M1	1 U	1 U	0.59	1 U	1 U	1 U	30 M1	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	59 M1	17	0.5 U
	1/17/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.5	5 U	1 U	1 U	2.4	1 U	1 U	0.69	1 U	1 U	1 U	26	5 U	1 U	1 U	19	1 U	1 U	1 U	1 U	1 U	59	16	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.8	5 U	1 U	1 U	1.9	1 U	1 U	0.5 U	1 U	1 U	1 U	25	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	63	17	0.5 U
	7/26/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	4.2	5 U	1 U	1 U	30	1 U	1 U	1 U	1 U	1 U	26	4.6	0.5 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.6	0.5 U	0.5 U	0.5 U	34	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	19	3.6	0.5 U
MW-14S	10/15/1990		0.5 U	1 U	1750	1 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	40	10 U	10 U	--	--	20	48	10 U	10 U	10 U	28	--	10 U	10 U	10 U	10 U	10 U	--	--	--	180	10 U	10 U
	1/15/1991		0.5 U	1 U	2	1 U	--	--	--	--	--	--	--	--	1 U	1 U	13	--	--	--	--	13	38	--	--	--	15	--	--	1 U	1 U	--	--	--	--	--	108	--	--
	4/15/1991		50 U	100 U	3300	100 U	--	--	--	--	--	--	10 U	10 U	10 U	10 U	31 B	10 U	10 U	--	--	10 U	24	10 U	10 U	10 U	22	--	10 U	10 U	10 U	10 U	10 U	--	--	--	84	10 U	10 U
	7/15/1991		0.5 U	1 U	31	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	26	5 U	5 U	--	--	5 U	12	5 U	5 U	5 U	7.2	--	5 U	5 U	5 U	5 U	5 U	--	--	--	55	5 U	5 U
	10/23/1991		20 U	20 U	410	40 U	--	--	--	--	--	--	8 U	20 U	8 U	8 U	80 U	8 U	8 U	8 U	--	11	19	20 U	20 U	20 U	15	40 U	8 U	8 U	8 U	8 U	8 U	--	--	--	81	80 U	8 U
	10/23/1991	K	25 U	25 U	370	50 U	--	--	--	--	--	--	10 U	25 U	10 U	10 U	100 U	10 U	10 U	10 U	--	11	24	25 U	25 U	25 U	14	50 U	10 U	10 U	10 U	10 U	10 U	--	--	--	81	100 U	10 U
	1/15/1992		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	8.9	9.4	1 U	1 U	1 U	20	--	1 U	1 U	1 U	1 U	1 U	--	--	--	59	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	1.6	1	0.5 U	0.5 U	0.86	0.5 U	7	5.6	0.5 U	0.5 U	0.5 U	11	0.5 U	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	56	0.5 U	0.5 U
	7/15/1992		0.6	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.4	2.6	1 U	1 U	--	--	4.4	1.2	1 U	1 U	1 U	5.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	44	1 U	1 U
	7/15/1992	K	0.6	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.4	2.6	1 U	1 U	--	--	4.2	1.2	1 U	1 U	1 U	5.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	43	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	1 U	2.3	3.5	2 U	2 U	--	--	8.1	3.9	2 U	2 U	2 U	9.4	--	1 U	2 U	1 U	1 U	2 U	--	--	--	71	2 U	2 U
	1/15/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	5.1	2.1	1 U	1 U	--	--	5.3	1.8	1 U	1 U	1 U	7.4	--	1 U	1 U	1 U	1 U	1 U	--	--	--	56	1 U	1 U
	4/22/1993		0.5 U	24	40	55	--	--	--	--	--	--	1 U	1 U	2.3	3.8	1 U	1 U	1 U	--	--	1.4	1 U	1 U	1 U	1 U	2.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	18	1 U	1 U
	4/22/1993	K	0.5 U	22	39	57	--	--	--	--	--	--	1 U	1 U	2.3	3.7	1.6 B	1 U	1 U	--	--	1.5	1 U	1 U	1 U	1 U	2.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	7/13/1993		0.5 U	1.3	1.2	3.8	--	--	--	--	--	--	1 U	1 U	2.1	5.4	1.7 B	1 U	1 U	--	--	1.9	1 U	1 U	1 U	1 U	2.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	25	1 U	1 U
	10/14/1993		0.5 U	1 U	2.1	3.7	--	--	--	--	--	--	1 U	1 U	4.4	6.2	1.4 B	1 U	1 U	--	--	2.6	1 U	1 U	1 U	1 U	3.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	25	1 U	1 U
	1/12/1994		0.5 U	1 U	3.2	1.4	--	--	--	--	--	--	1 U	1 U	4.3	6.7	1.2 B	1 U	1 U	--	--	2.2	1 U	1 U	1 U	1 U	3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	21	1 U	1 U
	4/13/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	11	16	1.2 B	1 U	1 U	--	--	2.7	1 U	1 U	1 U	1 U	3.1	--	1 U	1 U	1 U	1 U	1 U	--	--	--	29	1 U	1 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-14S	7/20/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	11	8.6	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	10/11/1994		0.53	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	12	17	2 U	2 U	2 U	--	--	8	2 U	2 U	2 U	2 U	9.2	--	2 U	2 U	2 U	2 U	2 U	--	--	--	58	2 U	2 U
	2/8/1995		50 U	100 U	3000	690	--	--	--	--	--	--	1 U	1 U	10	11	1 U	1 U	1 U	--	--	7.8	3.3	1 U	1 U	1 U	6.2	--	1 U	1 U	1 U	1 U	1 U	--	--	--	50	1 U	1 U
	4/18/1995		2.5 U	76	120	190	--	--	--	--	--	--	1 U	1 U	17	16	4.2 B	1 U	1 U	--	--	2.5	1 U	1 U	1 U	1 U	2.9	--	1 U	1 U	1.3	1 U	1 U	--	--	--	20	1 U	1 U
	7/12/1995		0.5 U	2.8	26	12	--	--	--	--	--	--	1 U	1 U	14	14	1.5 B	1 U	1 U	--	--	2.6	1 U	1 U	1 U	1 U	3	--	1 U	1 U	1.5	1 U	1 U	--	--	--	22	1 U	1 U
	10/11/1995		0.5 U	1 U	2.1	2	--	--	--	--	--	--	2 U	2 U	28	27	2.4	2 U	2 U	--	--	4.8	2 U	2 U	2 U	2 U	5.7	--	2 U	2 U	2 U	2 U	2 U	--	--	--	35	2 U	2 U
	2/1/1996		1 U	4.7	87	58	--	--	--	--	--	--	2 U	2 U	12	11	2 U	2 U	2 U	--	--	8.8	2 U	2 U	2 U	2 U	6.5	--	2 U	2 U	2 U	2 U	2 U	--	--	--	42	2 U	2 U
	4/17/1996		2.5 U	54	120	110	--	--	--	--	--	--	2 U	2 U	32	27	3.1	2 U	2 U	--	--	7.7	6.7	2 U	2 U	2 U	7.7	--	2 U	2 U	2 U	2 U	2 U	--	--	--	51	2 U	2 U
	7/17/1996		0.58	1 U	20	10	--	--	--	--	--	--	2 U	2 U	26	22	2 U	2 U	2 U	--	--	5.3	4.9	2 U	2 U	2 U	5.8	--	2 U	2 U	2 U	2 U	2 U	--	--	--	37	2 U	2 U
	10/8/1996		0.5 U	1 U	13	2.9	--	--	--	--	--	--	2 U	2 U	29	20	2 U	2 U	2 U	--	--	11	3.1	2 U	2 U	2 U	9.6	--	2 U	2 U	2 U	2 U	2 U	--	--	--	61	2 U	2 U
	1/15/1997		2.5 U	5 U	470	5 U	--	--	--	--	--	--	5 U	5 U	42	24	5 U	5 U	5 U	--	--	19	19	5 U	5 U	5 U	20	--	5 U	5 U	5 U	5 U	5 U	--	--	--	90	5 U	5 U
	4/16/1997		0.58	2.9	91	36	--	--	--	--	--	--	1 U	1 U	26	21	1.6	1 U	1 U	--	--	9.6	9	1 U	1 U	1 U	8.3	--	1 U	1 U	2.2	1 U	1 U	--	--	--	45	1 U	1 U
	7/10/1997		0.5 U	1 U	14	1 U	--	--	--	--	--	--	1 U	1 U	19	17	1.4	1 U	1 U	--	--	7.1	4.2	1 U	1 U	1 U	6.7	--	1 U	1 U	4.4	1 U	1 U	--	--	--	35	1 U	1 U
	10/16/1997		0.5 U	1 U	20	1.8	--	--	--	--	--	--	1 U	1 U	34	25	2.3	1 U	1 U	--	--	20	1.2	1 U	1 U	1 U	17	--	1 U	1 U	1 U	1 U	1 U	--	--	--	57	1 U	1 U
	1/15/1998		0.5 U	1.1	19	5	--	--	--	--	--	--	1 U	1 U	21	11	1 U	1 U	1 U	--	--	13	4.7	1 U	1 U	1 U	11	--	1 U	1 U	1.2	1 U	1 U	--	--	--	50	1 U	1 U
	4/23/1998		12 U	25 U	1500	150	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U	25 U	--	--	25 U	25 U	25 U	25 U	25 U	25 U	--	25 U	25 U	25 U	25 U	25 U	--	--	--	38	25 U	25 U
	7/15/1998		0.51	1 U	18	8.4	--	--	--	--	--	--	1 U	1 U	3.7	9.2	1.4	1 U	1 U	--	--	5.5	12	1 U	1 U	1 U	5.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	18	1 U	1 U
	10/21/1998		1.2 U	2.5 U	120	29	--	--	--	--	--	--	2.5 U	2.5 U	25	20	2.5 U	2.5 U	2.5 U	--	--	17	6	2.5 U	2.5 U	2.5 U	13	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	62	2.5 U	2.5 U
	1/15/1999		1.1	2 U	77	64	--	--	--	--	--	--	2 U	2 U	31	23	2.6	2 U	2 U	--	--	27	5.6	2 U	2 U	2 U	21	--	2 U	2 U	2 U	2 U	2 U	--	--	--	98	2 U	2 U
	1/15/1999	K	--	--	--	47 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/15/1999		12 U	12 U	820	47	--	--	--	--	--	--	12 U	12 U	25	18	12 U	25 U	25 U	12 U	--	30	20	12 U	12 U	12 U	22	--	12 U	12 U	12 U	12 U	12 U	--	--	--	84	25 U	25 U
	7/15/1999		50 U	50 U	3000	50 U	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	50 U	--	50 U	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	74	100 U	100 U
	10/15/1999		5 U	5 U	120	10 U	--	--	--	--	--	--	5 U	5 U	37	32	5 U	10 U	10 U	12	--	67	22	5 U	5 U	5 U	56	--	5 U	5 U	5 U	5 U	5 U	--	--	--	180	10 U	10 U
	1/27/2000		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	35	29	5.7	10 U	10 U	14	--	81	31	5 U	5 U	5 U	69	--	5 U	5 U	5 U	5 U	5 U	--	--	--	230	10 U	10 U
	4/15/2000		3.2	2 U	110	2 U	--	--	--	--	--	--	2 U	2 U	6.1	5	2 U	4 U	4 U	13	--	19	96	2 U	2 U	2 U	13	--	2 U	2 U	2 U	2 U	2 U	--	--	--	60	4 U	4 U
	10/15/2000		5 U	5 U	230	5 U	--	--	--	--	--	--	5 U	5 U	25	25	5 U	10 U	10 U	11	--	49	37	5 U	5 U	5 U	39	--	5 U	5 U	5 U	5 U	5 U	--	--	--	170	10 U	10 U
	4/15/2001		2.1	2 U	8.6	2 U	--	--	--	--	--	--	2 U	2 U	28	23	2 U	4 U	4 U	6.7	--	36	12	2 U	2 U	2 U	27	--	2 U	2 U	2 U	2 U	2 U	--	--	--	130	4 U	4 U
	7/19/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	2.2	2.2	1 U	2 U	2 U	2.1	--	7.4	3.5	1 U	1 U	1 U	5.5	--	1 U	1 U	1.2	1 U	1 U	--	--	--	35	2 U	2 U
	10/17/2001		2 U	2 U	2.4	2 U	--	--	--	--	--	--	2 U	2.3	22	23	2 U	4 U	4 U	5.2	--	56	6.4	2 U	2 U	2 U	39	--	2 U	2 U	2.4	2 U	2 U	--	--	--	170	4 U	4 U
	1/16/2002		50 U	50 U	2700	1100	--	--	--	--	--	--	50 U	50 U	50 U	50 U	50 U	100 U	100 U	50 U	--	50 U	50 U	50 U	50 U	50 U	50 U	--	50 U	50 U	50 U	50 U	50 U	--	--	--	91	100 U	100 U
	4/17/2002		2 U	2 U	2 U	3.8	--	--	--	--	--	--	2 U	2 U	18	18	2 U	4 U	4 U	5.3	--	41	13	2 U	2 U	2 U	30	--	2 U	2 U	2 U	2 U	2 U	--	--	--	130	4 U	4 U
	7/25/2002		25 U	25 U	860	50 U	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	50 U	50 U	25 U	--	43	25 U	25 U	25 U	25 U	39	--	25 U	25 U	25 U	25 U	25 U	--	--	--	150	50 U	50 U
	10/23/2002		5 U	5 U	14	10 U	--	--	10 U	--	--	--	5 U	5 U	15	28	5 U	10 U	10 U	9	--	85	6.9	5 U	5 U	5 U	71	--	5 U	5 U	5 U	5 U	5 U	--	10 U	--	360	10 U	10 U
	12/30/2002		1.2 J	10 U	130	110 U	--	--	--	--	--	10 U	10 U	1.8 J	7.2 J	13	2.7 J	10 U	10 U	12	10 U	50	56	10 U	10 U	10 U	35	10 U	10 U	10 U	1.7 J	10 U	10 U	--	--	--	190	10 U	10 U
	4/24/2003		2.6	4 U	240	15.4	4 U	6	4 U	--	4 U	4 U	4 U	4 U	6.6	12	20 U	4 U	4 U	10	4 U	47	36	4 U	4 U	4 U	37	20 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	160	4 U	2 U
	7/30/2003		1.4	1 U	49	2 U	1 U	1.6	1 U	--	1 U	1 U	1 U	3.1	11	26	5 U	1 U	1 U	8.5	1 U	79	19	1 U	1 U	1 U	59	5 U	1 U	1 U	3.3	1 U	1 U	1 U	1 U	1 U	200	1 U	0.5 U
	10/23/2003		20 U	20 U	80	40 U	--	--	9.6 U	--	--	20 U	20 U	20 U	50 U	37	50 U	50 U	50 U	20 U	--	110	46	20 U	20 U	20 U	90	50 U	20 U	20 U	20 U	20 U	20 U	--	9.6 U	--	490	50 U	50 U
	1/22/2004		2 U	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4.5	16	34	20 U	4 U	4 U	13	4 U	100	36	4 U	4 U	4 U	76	20 U	4 U	4 U	5.4	4 U	4 U	4 U	4 U	4 U	480	4 U	2 U
	4/21/2004		2.2	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4.3	17	33	20 U	4 U	4 U	13	4 U	87	26	4 U	4 U	4 U	77	20 U	4 U	4 U	4.9	4 U	4 U	4 U	4.6	4 U	570	4 U	2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-14S	7/21/2004		2.9	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	11	28	25 U	5 U	5 U	33	5 U	97	29	5 U	5 U	5 U	79	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	500	5 U	2.5 U
	10/12/2004		2 U	2 U	2 U	4 U	--	--	9.5 U	--	--	2 U	2 U	2	5 U	8.7	13	5 U	5 U	48	--	83	23	2 U	2 U	2 U	40	5 U	2 U	2 U	2.9	2 U	2 U	--	9.5 U	--	160	5 U	5 U
	1/27/2005		0.7	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.1	0.5 U	1.8	5 U	1 U	1 U	21	1 U	38	9.2	1 U	1 U	1 U	16	5 U	1 U	1 U	3.4	1 U	1 U	1 U	1.5	1 U	98	1 U	0.5 U
	4/27/2005		1.1	1 U	13	6.8	1 U	2.5	1 U	--	1 U	1 U	1 U	1.3	2.5	9.2	5 U	1 U	1 U	9.6	1 U	37	49	1 U	1 U	1 U	21	5 U	1 U	1 U	3.8	1 U	1 U	1.6	7.2	1 U	150	1 U	0.5 U
	7/26/2005		1.1	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.4	4.2	20	5 U	1 U	1 U	9.1	1 U	33	38	1 U	1 U	1 U	20	5 U	1 U	1 U	4.3	1 U	1 U	1 U	3.6	1 U	160	1 U	0.5 U
	10/20/2005		2 U	2 U	2 U	4 U	--	--	10 U	--	--	2 U	2 U	2.3	7.7	28	5.2	5 U	5 U	14	--	50	35	2 U	2 U	2 U	31	5 U	2 U	2 U	6.5	2 U	2 U	--	10 U	--	180	5 U	5 U
	1/26/2006		1.7	1 U	40	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.7	4.7	15	5 U	1 U	1 U	23	1 U	47	31	1 U	1 U	1 U	32	5 U	1 U	1 U	3.4	1 U	1 U	1 U	1.7	1 U	190	1 U	0.5 U
	4/25/2006		3.4	5 U	320	37	5 U	6.6	5 U	--	5 U	5 U	5 U	5 U	4.4	14	25 U	5 U	5 U	21	5 U	45	25	5 U	5 U	5 U	30	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	180	5 U	2.5 U
	7/26/2006		1.6	1 U	15	1	1 U	2	1 U	--	1 U	1 U	1 U	1.8	6.2	19	5 U	1 U	1 U	18	1 U	51	30	1 U	1 U	1 U	35	5 U	1 U	1 U	3.6	1 U	1 U	1 U	1.1	1 U	170	1 U	0.5 U
	10/25/2006		2 U	2 U	2 U	2 U	--	--	9.43 U	20	--	2 U	2 U	2.4	5 U	18	5 U	5 U	5 U	35	--	75	34	2 U	2 U	2 U	36	5 La,U	2 U	2 U	3.5	2 U	2 U	--	9.43 U	--	280	5 U	5 U
	1/17/2007		2.4	1 U	290	3.3	1 U	5.8	1 U	--	1 U	1 U	1 U	1.7	1.4	7.3	5 U	1 U	1 U	27	1 U	41	22	1 U	1 U	1 U	23	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	140	1 U	0.5 U
	4/18/2007		3.6	1 U	1000	11.8	2.5	18	1 U	--	1 U	1 U	1 U	1.5	1.6	8.7	5 U	1 U	1 U	29	1 U	53	25	1 U	1 U	1 U	20	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	170	1 U	0.5 U
	7/25/2007		1.5	2 U	64	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	8.6	10 U	2 U	2 U	21	2 U	48	29	2 U	2 U	2 U	20	10 U	2 U	2 U	2.5	2 U	2 U	2 U	2 U	2 U	180	2 U	1 U
	10/23/2007		20 U	20 U	42	20 U	--	--	9.43 U	--	--	20 U	20 U	20 U	50 U	30	50 U	50 U	50 U	52	--	130	28	20 U	20 U	20 U	50 U	50 U	20 U	20 U	20 U	20 U	20 U	--	9.43 U	--	540	50 U	50 U
	1/30/2008		2.5	1 U	1 U	1 U	1 U	1 U	1 U	21	1 U	1 U	1 U	5.2	3.7	26	11	1 U	1 U	47	1 U	120	46	1	1 U	1 U	61	5 U	1.1	1 U	5	1 U	1 U	2.2	8.4	1 U	550	1 U	0.5 U
	4/22/2008		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	20	27	5 U	5 U	33	5 U	85	42	5 U	5 U	5 U	41	25 U	5 U	5 U	5 U	5 U	5 U	5 U	8.9	5 U	390	5 U	2.5 U
	7/30/2008		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	4	30	25 U	5 U	5 U	33	5 U	120	65	5 U	5 U	5 U	65	25 U	5 U	5 U	5 U	5 U	5 U	5 U	12	5 U	640	5 U	2.5 U
	10/29/2008		10 U	10 U	10 U	10 U	--	--	10.5 U	30	--	10 U	10 U	10 U	25 U	10 U	25 U	25 U	25 U	39	--	110	49	10 U	10 U	10 U	27	25 U	10 U	10 U	10 U	10 U	10 U	--	10.5 U	--	220	25 U	25 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	8.6	1 U	69	10	1 U	1 U	1 U	5.9	5 U	1 U	1 U	6.6	1 U	1 U	1 U	1 U	1 U	42	1 U	0.5 U
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	11	1 U	21	8.3	1 U	1 U	1 U	5	5 U	1 U	1 U	8.2	1 U	1 U	1 U	1 U	1 U	41	1 U	0.5 U
	7/31/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	9.8	1 U	37	10	1 U	1 U	1 U	4.9	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	40	1 U	0.5 U
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.6	5 U	1 U	1 U	7.5	1 U	24	9.2	1 U	1 U	1 U	3.2	5 U	1 U	1 U	41	1 U	1 U	1 U	1 U	1 U	62	1 U	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	5.2	1 U	13	6.2	1 U	1 U	1 U	5.2	5 U	1 U	1 U	75	1 U	1 U	1 U	1 U	1 U	60	1 U	0.5 U
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.3	5 U	1 U	1 U	7.6	1 U	17	18	1 U	1 U	1 U	6.3	5 U	1 U	1 U	55	1 U	1 U	1 U	1 U	1 U	56	3.5	0.5 U
	4/13/2011		0.65	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.2	5 U	1 U	1 U	3.2	1 U	5.9	180	1 U	1 U	1 U	5.9	5 U	1 U	1 U	91	1 U	1 U	1 U	1.8	1 U	67	1.2	0.5 U
	7/27/2011		0.58	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	15	5 U	1 U	1 U	4.1	1 U	9.9	180	1 U	1 U	1 U	4	5 U	1 U	1 U	59	1 U	1 U	4	13	1 U	67	1 U	0.5 U
	10/18/2011		2 U	2 U	2 U	2 U	1 U	1 U	1 U	14	1 U	2 U	2 U	2 U	5 U	18	7	5 U	5 U	8.2	2 U	17	120	3.4	2 U	2 U	5 U	5 U	2 U	2 U	45	2 U	2 U	7.8	20	1 U	110	5 U	5 U
	1/17/2012		0.5	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.58	14	6.3	1 U	1 U	8.1	1 U	17	120	3.4	1.1	1.7	3.9	5 U	1 U	1 U	61	1 U	1 U	6.2	18	1 U	110	1 U	0.5 U
	3/22/2012		0.52	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.75	15	7.4	1 U	1 U	9	1 U	20	99	4	1.1	1.7	3.8	5 U	1 U	1 U	58	1 U	1 U	7.7	22	1 U	130	1 U	0.5 U
	7/26/2012		0.53	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.1	18	6.7	1 U	1 U	12	1 U	29	75	4.4	1.3	1.9	4.6	5 U	1 U	1 U	48	1 U	1 U	9.3	23	1 U	130	1 U	0.5 U
	10/31/2012		0.63	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.6	1.3	0.5 U	0.5 U	18	0.5 U	23	89	0.5 U	0.5 U	0.5 U	4.3	0.5 U	0.5 U	0.5 U	35	0.5 U	0.5 U	2.3	4.5	0.5 U	84	0.5 U	0.5 U
MW-15D	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	0.02 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U	1 U	1 U
	1/15/1991		0.5 U	1.3	1 U	1 U	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	1 U	--	--	--	1 U	--	--	1 U	1 U	--	--	--	--	--	1 U	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	4.1 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.2	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.7	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.3	1 U	1 U
	10/22/1991		0.5 U	0.5 U	0.5 U	1 U	--	--	--	--	--	--	0.2 U	0.5 U	0.2 U	0.2 U	2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U	1 U	0.2 U	0.2 U	7	0.2 U	0.2 U	--	--	--	1.8	2 U	0.2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-15D	1/15/1992		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.6	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.5	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.3	1 U	1 U	--	--	--	2.8	1 U	1 U
	1/15/1993		0.5 U	13	18	38	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	2.5	1 U	1 U
	4/21/1993		0.5 U	42	29	71	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.6 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.8	1 U	1 U
	7/14/1993		1.1	5.3	2.4	8.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	4.1	1 U	1 U
	10/14/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.8	1 U	1 U
	1/12/1994		0.88	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.3	1 U	1 U
	4/13/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	1.7	1 U	1 U
	7/20/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2	1 U	1 U
	10/12/1994		0.5 U	1.4	1.1	8.3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.5	1 U	1 U
	1/18/1995		1.1	1 U	15	6.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.3	1 U	1 U	--	--	--	1.5	1 U	1 U
	4/19/1995		2.5 U	14	32	50	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.2	1 U	1 U	--	--	--	1.4	1 U	1 U
	7/12/1995		0.5 U	1 U	6.3	5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.7	1 U	1 U	--	--	--	2.6	1 U	1 U
	10/11/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.8	1 U	1 U	--	--	--	2.3	1 U	1 U
	2/1/1996		0.5 U	1.2	16	14	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.2	1 U	1 U
	4/17/1996		1 U	10	32	36	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2	1 U	1 U	--	--	--	3.8	1 U	1 U
	7/17/1996		0.5 U	1 U	6.8	3.6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3	1 U	1 U	--	--	--	3.7	1 U	1 U
	10/9/1996		0.5 U	1 U	5.4	5.5	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5	1 U	1 U
	1/15/1997		0.5 U	7.2	35	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	4.1	1 U	1 U
	4/17/1997		0.5 U	1 U	5	1.6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2	1 U	1 U	--	--	--	3.9	1 U	1 U
	7/10/1997		0.5 U	1 U	6.2	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.9	1 U	1 U	--	--	--	3.4	1 U	1 U
	10/16/1997		0.5 U	1 U	14	1.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	3.8	1 U	1 U
	1/15/1998		0.5 U	1 U	7.6	2.3	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	3.9	1 U	1 U
	4/23/1998		0.5 U	1 U	44	4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	5.1	1 U	1 U
	7/16/1998		0.5 U	1 U	7.8	2.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.7	1 U	1 U
	10/21/1998		0.5 U	1 U	26	6.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.8	1 U	1 U
	1/15/1999		0.5 U	1 U	15	2.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1	1 U	1 U	--	--	--	5.4	1 U	1 U
	4/15/1999		1 U	1 U	12	1.6	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	2.3	--	1 U	1 U	13	1 U	1 U	--	--	--	25	2 U	2 U
	7/15/1999		1 U	1 U	34	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1.1	--	1 U	1 U	13	1 U	1 U	--	--	--	9	2 U	2 U
	10/15/1999		1 U	1 U	6	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.5	1 U	1 U	--	--	--	5.1	2 U	2 U
	1/28/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	5.3	1 U	1 U	--	--	--	9.7	2 U	2 U
	4/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1.1	--	1 U	1 U	7.4	1 U	1 U	--	--	--	13	2 U	2 U
	10/15/2000		1.8	1 U	2.9	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4	1 U	1 U	--	--	--	8.7	2 U	2 U
	4/15/2001		1 U	1 U	11	2.1	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	5.4	1 U	1 U	--	--	--	12	2 U	2 U
	7/19/2001		1 U	1 U	2.5	1 U	--	--	--	0.95 U	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.8	1 U	1 U	--	--	--	2.8	2 U	2 U
	10/17/2001		2.2	1 U	1 U	1 U	--	--	--	0.95 U	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.4	1 U	1 U	--	--	--	6.7	2 U	2 U
	1/16/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	8	1 U	1 U	--	--	--	6.4	2 U	2 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-15D	4/17/2002		1.1	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.6	1 U	1 U	--	--	--	6.1	2 U	2 U
	7/25/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.9	1 U	1 U	--	--	--	3.4	2 U	2 U
	10/22/2002		1.2	1 U	3.8	4.9	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.4	1 U	1 U	--	--	--	6.2	2 U	2 U
	1/8/2003		1.3	1 U	7.7	2.3	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.52	1.1	5 U	1 U	1 U	1 U	1 U	1	2	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	4/23/2003		2.3	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2	1 U	1 U	1 U	1 U	1 U	7.6	1 U	0.5 U
	7/30/2003		1.4	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.77	1 U	1 U	1 U	1 U	5 U	1 U	1 U	4.1	1 U	1 U	1 U	1 U	1 U	8.1	1 U	0.5 U
	10/21/2003		1.9	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.6	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U	1 U	5.3	1 U	0.5 U
	1/22/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U	1 U	3	1 U	0.5 U
	4/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.6	1 U	0.5 U
	7/20/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U	1 U	2.6	1 U	0.5 U
	10/11/2004		0.63	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.8	1 U	0.5 U
	1/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	1 U	1 U	1 U	2.8	1 U	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.1	1 U	0.5 U
	7/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.2	1 U	0.5 U
	10/19/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.6	1 U	0.5 U
	1/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.2	1 U	0.5 U
	4/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5	1 U	0.5 U
	7/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2	1 U	0.5 U
	10/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5	1 U	0.5 U
	1/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2	1 U	0.5 U
	4/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 M1,U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 M1,U	1 U	1 U	1 U	2	1 U	0.5 U
	7/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.3	1 U	0.5 U
	10/24/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2	1 M1,U	0.5 U
	1/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	0.5 U
	4/23/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.6	1 U	0.5 U
	7/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.6	1 U	0.5 U
	10/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.4	1 U	0.5 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.9	1 U	0.5 U
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.9	1 U	0.5 U
	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	4.5	1 U	0.5 U
	10/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U	1 U	4	1 U	0.5 U
	1/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	5.8	1 U	0.5 U
	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	6.3	1 U	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	8	1 U	0.5 U
	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1.4	5 U	1 U	1 U	3.8	1 U	1 U	1 U	1 U	1 U	9.2	1	0.5 U
	1/18/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.8	1 U	1 U	1 U	1 U	1 U	8.2	1 U	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.1	1 U	1 U	1 U	1 U	1 U	6.2	1 U	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.8	1 C, L,U	1 U	1 U	1 U	1 U	5	1 U	0.5 U
	10/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U	1 U	5.6	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-15D	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	4.6	1 U	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.1	1 U	1 U	1 U	1 U	1 U	5.4	1 U	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.1	1 U	1 U	1 U	1 U	1 U	5	1 U	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U	1 U	5.1	1 U	0.5 U
MW-15S	10/15/1990		0.5 U	1 U	1 U	1 U	--	--	--	500 U	--	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	--	10 U	5 U	16	--	--	--	5 U	20 U	5 U	5 U	5 U	51 U	5 U	--	--	--	21	5 U	10 U
	1/15/1991		0.5 U	4	1.6	4	--	--	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	1 U	9.6	--	--	--	1	--	--	1 U	1 U	--	--	--	--	--	13	--	--
	4/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	7.1	1 U	1 U	--	--	1 U	12	1 U	1 U	1 U	1.5	--	1 U	1 U	1 U	1 U	1 U	--	--	--	28	1 U	1 U
	7/15/1991		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	2	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	17	1 U	1 U
	10/22/1991		1 U	1 U	1 U	2 U	--	--	--	--	--	--	0.4 U	1 U	0.4 U	0.4 U	4 U	0.4 U	0.4 U	0.4 U	--	0.71	0.4 U	1 U	1 U	1 U	1.1	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--	13	4 U	0.4 U
	1/15/1992		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1	2	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	15	1 U	1 U
	4/15/1992		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.61	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.1	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.1	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.9	1 U	1 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	7.7	1 U	1 U
	1/15/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	2.1	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	9	1 U	1 U
	4/21/1993		0.5 U	14	10	22	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1.2 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	7.4	1 U	1 U	--	--	--	4.6	1 U	1 U
	7/14/1993		0.5 U	1.2	1 U	2.4	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 B	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.4	1 U	1 U
	10/14/1993		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.2	1 U	1 U
	1/12/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	1.9	1 U	1 U
	4/13/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.1	1 U	1 U
	7/20/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.1	1 U	1 U
	10/11/1994		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	6	1 U	1 U
	1/18/1995		1 U	4	64	27	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	6.3	1 U	1 U	--	--	--	3.7	1 U	1 U
	4/19/1995		2.5 U	60	82	130	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2.8	1 U	1 U	--	--	--	2.8	1 U	1 U
	7/12/1995		0.5 U	2.5	18	12	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	2	1 U	1 U	--	--	--	5.2	1 U	1 U
	10/11/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	3.9	1 U	1 U
	2/1/1996		0.5 U	1.8	25	22	--	--	--	--	--	--	1 U	1 U	1.9	1.5	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.8	1 U	1 U
	4/17/1996		0.5 U	13	40	45	--	--	--	--	--	--	1 U	1 U	2.5	1.4	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	2.8	1 U	1 U
	7/17/1996		0.5 U	1 U	9.7	5.4	--	--	--	--	--	--	1 U	1 U	2	1.1	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.2	1 U	1 U
	10/8/1996		0.5 U	1 U	2.9	2.6	--	--	--	--	--	--	1 U	1 U	3.8	2.2	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.3	1 U	1 U
	1/15/1997		0.5 U	5.5	69	1 U	--	--	--	--	--	--	1 U	1 U	3.3	2.1	1 U	1 U	1 U	--	--	1 U	4.7	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.1	1 U	1 U
	4/17/1997		0.5 U	9.3	21	8.5	--	--	--	--	--	--	1 U	1 U	2	1.3	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	4.1	1 U	1 U	--	--	--	3.3	1 U	1 U
	7/10/1997		0.5 U	1 U	8.2	1.3	--	--	--	--	--	--	1 U	1 U	2.6	2.2	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	3.4	1 U	1 U	--	--	--	4.1	1 U	1 U
	10/16/1997		0.5 U	1 U	17	1.7	--	--	--	--	--	--	1 U	1 U	2.2	3.9	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	5.2	1 U	1 U
	1/15/1998		0.5 U	1 U	12	3.7	--	--	--	--	--	--	1 U	1 U	4.2	2.9	1 U	1 U	1 U	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	5	1 U	1 U
	4/23/1998		0.5 U	1 U	60	7.2	--	--	--	--	--	--	1 U	1 U	1.4	1.8	1 U	1 U	1 U	--	--	1 U	25	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.1	1 U	1 U
	7/15/1998		0.5 U	1 U	10	2.9	--	--	--	--	--	--	1 U	1 U	1 U	2.6	1 U	1 U	1 U	--	--	1 U	8.6	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.4	1 U	1 U
	10/21/1998		0.5 U	1 U	45	12	--	--	--	--	--	--	1 U	1 U	3	3.2	1 U	1 U	1 U	--	--	1 U	4.5	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1 U	--	--	--	3.9	1 U	1 U
	1/15/1999		0.5 U	1 U	19	2.2	--	--	--	--	--	--	1 U	1 U	4.4	4.4	1 U	1 U	1 U	--	--	1 U	1.7	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	7	1 U	1 U
	1/15/1999	K	1 U	1 U	19 U	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2 U	--	--

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-15S	4/15/1999		1 U	1 U	23	2.2	--	--	--	--	--	--	1 U	1 U	1.7	2.9	1 U	2 U	2 U	1 U	--	1 U	75	1 U	1 U	1 U	1 U	--	1 U	1 U	1.3	1 U	1 U	--	--	--	4.2	2 U	2 U
	7/15/1999		1 U	1 U	29	23	--	--	--	--	--	--	1 U	1 U	2.5	4.2	1 U	2 U	2 U	1 U	--	1 U	34	1 U	1 U	1 U	1 U	--	1 U	1 U	6.1	1 U	1 U	--	--	--	3.9	2 U	2 U
	10/15/1999		2 U	2 U	12	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2.1	2 U	4 U	4 U	2 U	--	2 U	110	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	2 U	--	--	--	6.7	4 U	4 U
	1/28/2000		1 U	1 U	9.3	2 U	--	--	--	--	--	--	1 U	1 U	1 U	2.9	1 U	2 U	2 U	13	--	10	23	1 U	1 U	1 U	5.3	--	1 U	1 U	1 U	1 U	1 U	--	--	--	25	2 U	2 U
	4/15/2000		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1 U	1.8	1 U	2 U	2 U	9.8	--	6.2	78	1 U	1 U	1 U	2.5	--	1 U	1 U	1.3	1 U	1 U	--	--	--	17	2 U	2 U
	10/15/2000		1 U	1 U	17	1 U	--	--	--	--	--	--	1 U	1 U	3.9	6.8	1 U	2 U	2 U	2.3	--	1 U	37	1 U	1 U	1 U	1 U	--	1 U	1 U	1.3	1 U	1 U	--	--	--	6.7	2 U	2 U
	4/15/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	2.2	4.3	1 U	2 U	2 U	1 U	--	1 U	16	1 U	1 U	1 U	1 U	--	1 U	1 U	1.3	1 U	1 U	--	--	--	3	2 U	2 U
	7/19/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	2.1	4	1 U	2 U	2 U	1 U	--	1 U	11	1 U	1 U	1 U	1 U	--	1 U	1 U	1.4	1 U	1 U	--	--	--	5.1	2 U	2 U
	10/17/2001		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	2	3.5	1 U	2 U	2 U	1 U	--	1 U	8.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	2.8	2 U	2 U
	1/16/2002		1 U	1 U	1 U	1 U	--	--	--	--	--	--	1 U	1 U	1.4	2.9	1 U	2 U	2 U	1 U	--	1 U	8.6	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	2.7	2 U	2 U
	4/17/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	2.9	4	12	2 U	2 U	1 U	--	1 U	3	1 U	1 U	1 U	1 U	--	1 U	1 U	1.1	1 U	1 U	--	--	--	2.9	2 U	2 U
	7/24/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1.3	2.8	1 U	2 U	2 U	1 U	--	1 U	3	1 U	1 U	1 U	1 U	--	1 U	1 U	1.2	1 U	1 U	--	--	--	4.4	2 U	2 U
	10/23/2002		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	3.6	9.7	1 U	2 U	2 U	1 U	--	2.5	2.8	1 U	1 U	1 U	1.3	--	1 U	1 U	1.5	1 U	1 U	--	--	--	13	2 U	2 U
	1/8/2003		0.53	1 U	6	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.9	1 U	6.3	14	1 U	1 U	1 U	2.9	5 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	4/24/2003		0.5	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2	5 U	1 U	1 U	1 U	1 U	1 U	12	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.2	1 U	0.5 U
	7/30/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	4.5	21	5 U	1 U	1 U	1 U	1 U	1 U	13	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U	1 U	5.1	1 U	0.5 U
	10/22/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2	11	5 U	1 U	1 U	1 U	1 U	2.7	22	1 U	1 U	1 U	2.4	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	1/22/2004		0.61	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.4	5 U	1 U	1 U	10	1 U	26	79	1 U	1 U	1 U	15	5 U	1 U	1 U	2.5	1 U	1 U	1 U	1 U	1 U	85	1 U	0.5 U
	4/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.63	4.3	5 U	1 U	1 U	7.6	1 U	18	40	1 U	1 U	1 U	8.6	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	73	1 U	0.5 U
	7/20/2004		0.79	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.1	2.9	15	5 U	1 U	1 U	8.1	1 U	29	33	1 U	1 U	1 U	18	5 U	1 U	1 U	3.6	1 U	1 U	1 U	1 U	1 U	120	1 U	0.5 U
	10/11/2004		0.59	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	. M2, R-3,U	1 U	1.1	0.5 U	3.7	5 U	1 U	1 U	17	1 U	38	24	1 U	1 U	1 U	19	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	96	1 U	0.5 U
	1/27/2005		0.52	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.3	0.5 U	1.7	5 U	1 U	1 U	14	1 U	45	14	1 U	1 U	1 U	18	5 U	1 U	1 U	3.7	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1	1 U	2.8	42	1 U	1 U	1 U	1.7	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	21	1 U	0.5 U
	7/26/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.3	5 U	1 U	1 U	1 U	1 U	1 U	35	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	8.3	1 U	0.5 U
	10/19/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.55	5.6	5 U	1 U	1 U	1 U	1 U	1 U	18	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	5.8	1 U	0.5 U
	1/25/2006		0.64	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.3	5 U	1 U	1 U	1 U	1 U	1 U	33	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.2	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	4/25/2006		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	10	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.8	1 U	1 U	1 U	1 U	1 U	6	1 U	0.5 U
	7/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.4	5 U	1 U	1 U	1 U	1 U	1 U	6.9	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.5	1 U	1 U	1 U	1 U	1 U	6.6	1 U	0.5 U
	10/25/2006		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	1 U	1 U	1 U	5.1	1 U	1 U	1 U	1 U	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	4.5	1 U	0.5 U
	1/18/2007		0.5 U	1 U	1	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1	11	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U	1 U	7.6	1 U	0.5 U
	4/18/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	6.7	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.1	1 U	1 U	1 U	1 U	1 U	3.9	1 U	0.5 U
	7/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.79	10	5 U	1 U	1 U	1 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.2	1 U	1 U	1 U	1 U	1 U	7.1	1 U	0.5 U
	10/24/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.2	5 U	1 U	1 L, M7,U	1 U	1 U	4.5	11	1 U	1 U	1 U	2	5 L, M7,U	1 U	1 U	4	1 U	1 U	1 U	1 U	1 U	22	1 L, M7,U	0.5 L, M7,U
	1/30/2008		0.5 U	1 U	2.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.2	5 U	1 U	1 U	14	1 U	28	110 MHA	1 U	1 U	1 U	9.4	5 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	79 M2	1 U	0.5 U
	4/23/2008		0.52	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.8	5 U	1 U	1 U	4.5	1 U	8	65	1 U	1 U	1 U	2.2	5 U	1 U	1 U	1.8	1 U	1 U	1 U	1 U	1 U	29	1 U	0.5 U
	7/30/2008		0.51	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.4	5 U	1 U	1 U	6	1 U	18	110	1 U	1 U	1 U	5.9	5 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U	1 U	73	1 U	0.5 U
	10/29/2008		0.77	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	4.1	5 U	1 U	1 U	17	1 U	41	53	1 U	1 U	1 U	16	5 U	1 U	1 U	2.5	1 U	1 U	1 U	2.2	1 U	120	1 U	0.5 U
	1/28/2009		0.62	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.3	5 U	1 U	1 U	22	1 U	54	24	1.8	1 U	1 U	14	5 U	1.1	1 U	3	1 U	1 U	1.2	4.8	1 U	100	1 U	0.5 U
	4/7/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	12	1 U	29	13	1 U	1 U	1 U	6.7	5 U	1 U	1 U	5.4	1 U	1 U	1 U	1 U	1 U	49	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																											
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-15S	7/30/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	8.3	1 U	22	8.2	1 U	1 U	1 U	4.5	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	37	1 U	0.5 U
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.65	3.2	5 U	1 U	1 U	1.2	1 U	6.6	4.9	1 U	1 U	1 U	1 U	5 U	1 U	1 U	34	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	7/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7	5 U	1 U	1 U	2.4	1 U	10	7.7	1 U	1 U	1 U	2.9	5 U	1 U	1 U	49	1 U	1 U	1 U	1 U	1 U	46	1.2	0.5 U
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	6.8	1 U	19	11	1 U	1 U	1 U	5.6	5 U	1 U	1 U	45	1 U	1 U	1 U	1 U	1 U	52	1	0.5 U
	4/12/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	7.6	5 U	1 U	1 U	4.2	1 U	16	66	1 U	1 U	1 U	3.9	5 U	1 U	1 U	39	1 U	1 U	1 U	1 U	1 U	62	1 U	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 M1,U	1 U	2	17	5 U	1 U	1 U	1 U	1 U	1.1	36	1 U	1 U	1 U	1.7	5 U	1 U	1 U	39	l C, L, M7,U	1 U	1 U	1 U	1 U	25	1 M1,U	0.5 U
	10/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.7	15	5 U	1 U	1 U	1 U	1 U	1 U	12	1 U	1 U	1 U	1	5 U	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	16	1 U	0.5 U
	1/18/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.4	12	5 U	1 U	1 U	1 U	1 U	1 U	12	1 U	1 U	1 U	1.3	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	17	1 U	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.1	15	5 U	1 U	1 U	1 U	1 U	1 U	20	1 U	1 U	1 U	2.5	5 U	1 U	1 U	32	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U
	7/24/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.69	7.2	5 U	1 U	1 U	1 U	1 U	1 U	27	1 U	1 U	1 U	3.3	5 U	1 U	1 U	38	1 U	1 U	1 U	1 U	1 U	27	1	0.5 U
	10/30/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.3	5 U	1 U	1 U	2.4	1 U	3.4	32	1 U	1 U	1 U	1.3	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	20	1 U	0.5 U
MW-16	4/15/1992		0.5 U	0.69	0.5	1.6	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.88	0.5 U	0.5 U	0.5 U	13	0.5 U	140	120	0.5 U	0.5 U	0.5 U	15	0.5 U	2.4	0.5 U	0.86	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	52	0.5 U	0.5 U
	4/15/1992	K	0.5 U	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.87	0.5 U	0.5 U	0.5 U	13	0.5 U	150	130	0.5 U	0.5 U	0.5 U	14	0.5 U	2.4	0.5 U	0.83	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	50	0.5 U	0.5 U
	7/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2 U	2 U	2 U	2.4	3.3	2 U	2 U	--	--	59	81	2 U	2 U	2 U	5	--	2 U	2 U	2 U	2 U	2 U	--	--	--	35	2 U	2 U
	10/15/1992		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2.5 U	2.5 U	1 U	3.3	4.6	2.5 U	2.5 U	--	--	130	92	2.5 U	2.5 U	2.5 U	10	--	1 U	2.5 U	1 U	1 U	2.5 U	--	--	--	72	2.5 U	2.5 U
	10/15/1992	K	0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	2.5 U	2.5 U	1 U	3.3	4.3	2.5 U	2.5 U	--	--	130	90	2.5 U	2.5 U	2.5 U	10	--	1 U	2.5 U	1 U	1 U	2.5 U	--	--	--	71	2.5 U	2.5 U
	1/15/1993		1.2 U	2.4 U	2.4 U	2.4 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	120	79	2.5 U	2.5 U	2.5 U	11	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	51	2.5 U	2.5 U
	4/22/1993		25 U	55	2300	1200	--	--	--	--	--	--	1 U	8.1	1 U	1 U	2.3 B	1 U	1 U	--	--	28	33	1 U	1 U	1 U	4.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	42	1 U	1 U
	7/14/1993		50 U	100 U	3100	2000	--	--	--	--	--	--	20 U	100 U	20 U	20 U	20 U	20 U	20 U	--	--	21	17 J	20 U	100 U	20 U	20 U	--	17 J	20 U	20 U	20 U	20 U	--	--	--	15 J	20 U	20 U
	7/14/1993	K	50 U	100 U	3100	2000	--	--	--	--	--	--	20 U	20 U	20 U	20 U	43 B	20 U	20 U	--	--	20 U	17 J	20 U	20 U	20 U	20 U	--	16 J	20 U	20 U	20 U	20 U	--	--	--	17 J	20 U	20 U
	10/14/1993		5 U	10 U	340	10 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	33	11	1 U	1 U	1 U	5.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	24	1 U	1 U
	1/12/1994		10 U	20 U	1000	20 U	--	--	--	--	--	--	1 U	20 U	1 U	1 U	1 U	1 U	1 U	--	--	56	15	20 U	20 U	1 U	6.7	--	1 U	1 U	1 U	1 U	1 U	--	--	--	22	1 U	1 U
	1/12/1994	K	10 U	20 U	1000	20 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	53	14	2 U	2 U	2 U	5	--	2 U	2 U	2 U	2 U	2 U	--	--	--	19	2 U	2 U
	4/13/1994		10 U	20 U	820	20 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	71	19	5 U	5 U	5 U	7.9	--	5 U	5 U	5 U	5 U	5 U	--	--	--	37	5 U	5 U
	4/13/1994	K	10 U	20 U	1000	20 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	83	20	5 U	5 U	5 U	7.4	--	5 U	5 U	5 U	5 U	5 U	--	--	--	40	5 U	5 U
	7/20/1994		25 U	50 U	1300	730	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	140	23	5 U	5 U	5 U	19	--	5 U	5 U	5 U	5 U	5 U	--	--	--	76	5 U	5 U
	7/20/1994	K	25 U	50 U	1300	710	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	130	23	5 U	5 U	5 U	17	--	5 U	5 U	5 U	5 U	5 U	--	--	--	70	5 U	5 U
	10/13/1994		0.5 U	1.5	2.4	9.7	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	260	71	10 U	10 U	10 U	29	--	10 U	10 U	10 U	10 U	10 U	--	--	--	91	10 U	10 U
	10/13/1994	K	0.53	1.6	2.4	10	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	260	72	10 U	10 U	10 U	29	--	10 U	10 U	10 U	10 U	10 U	--	--	--	92	10 U	10 U
	1/16/1995		0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	56	54	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	17	5 U	5 U
	1/16/1995	K	0.5 U	1 U	1 U	1 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	60	57	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	5 U	--	--	--	19	5 U	5 U
	4/19/1995		5 U	16	36	55	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	110	65	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	34	10 U	10 U
	4/19/1995	K	2.5 U	15	33	51	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 B	5 U	5 U	--	--	110	68	5 U	5 U	5 U	7.6	--	5 U	5 U	5 U	5 U	5 U	--	--	--	34	5 U	5 U
	7/13/1995		10 U	20 U	540	20 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	97	99	5 U	5 U	5 U	13	--	5 U	5 U	5 U	5 U	5 U	--	--	--	67	5 U	5 U
	7/13/1995	K	10 U	20 U	370	20 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	93	81	5 U	5 U	5 U	13	--	5 U	5 U	5 U	5 U	5 U	--	--	--	65	5 U	5 U
	10/11/1995		0.5 U	1 U	1.8	1.3	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	230	74	10 U	10 U	10 U	22	--	10 U	10 U	10 U	10 U	10 U	--	--	--	60	10 U	10 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-16	10/11/1995	K	0.5 U	1 U	2	1.5	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	220	73	10 U	10 U	10 U	21	--	10 U	10 U	10 U	10 U	10 U	--	--	--	58	10 U	10 U
	2/1/1996		0.5 U	1 U	11	9.7	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	130	140	10 U	10 U	10 U	14	--	10 U	10 U	10 U	10 U	10 U	--	--	--	26	10 U	10 U
	2/1/1996	K	0.5 U	1 U	13	11	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	130	140	10 U	10 U	10 U	14	--	10 U	10 U	10 U	10 U	10 U	--	--	--	26	10 U	10 U
	4/17/1996		0.5 U	9.8	30	33	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	120	97	5 U	5 U	5 U	7.3	--	5 U	5 U	5 U	5 U	5 U	--	--	--	36	5 U	5 U
	4/17/1996	K	0.5 U	10	32	35	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	120	95	5 U	5 U	5 U	7.3	--	5 U	5 U	5 U	5 U	5 U	--	--	--	34	5 U	5 U
	7/17/1996		0.5 U	1 U	6.6	3.6	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U	25 U	--	--	230	100	25 U	25 U	25 U	25 U	--	25 U	25 U	25 U	25 U	25 U	--	--	--	110	25 U	25 U
	7/17/1996	K	0.5 U	1 U	7.5	4.1	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--	230	110	20 U	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U	20 U	--	--	--	87	20 U	20 U
	10/9/1996		5 U	49	130	230	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	340	98	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	--	--	--	73	10 U	10 U
	10/9/1996	K	5 U	47	120	210	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	330	96	10 U	10 U	10 U	11	--	10 U	10 U	10 U	10 U	10 U	--	--	--	71	10 U	10 U
	1/15/1997		1 U	4.6	23	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	150	82	2 U	2 U	2 U	16	--	2.4	2 U	2 U	2 U	2 U	--	--	--	32	2 U	2 U
	1/15/1997	K	1 U	4.9	24	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	170	87	2 U	2 U	2 U	21	--	2.8	2 U	2 U	2 U	2 U	--	--	--	39	2 U	2 U
	4/17/1997		1 U	2 U	7.2	2.4	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	81	110	2 U	2 U	2 U	6.8	--	2 U	2 U	2.4	2 U	2 U	--	--	--	31	2 U	2 U
	4/17/1997	K	1 U	2 U	6.9	2.3	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	75	97	2 U	2 U	2 U	6.1	--	2 U	2 U	2.2	2 U	2 U	--	--	--	30	2 U	2 U
	7/10/1997		1.2 U	2.5 U	6.5	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	82	150	2.5 U	2.5 U	2.5 U	7.4	--	2.5 U	2.5 U	3.1	2.5 U	2.5 U	--	--	--	30	2.5 U	2.5 U
	7/10/1997	K	1.2 U	2.5 U	6.8	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	79	150	2.5 U	2.5 U	2.5 U	7.3	--	2.5 U	2.5 U	3.1	2.5 U	2.5 U	--	--	--	31	2.5 U	2.5 U
	10/16/1997		2.5 U	5 U	8.2	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	260	110	5 U	5 U	5 U	24	--	5 U	5 U	5 U	5 U	5 U	--	--	--	53	5 U	5 U
	1/15/1998		0.5 U	1 U	12	3.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	92	57	1 U	1 U	1 U	13	--	2.4	1 U	1.8	1 U	1 U	--	--	--	29	1 U	1 U
	4/23/1998		0.5 U	1 U	28	2.7	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	98	44	1 U	1 U	1 U	11	--	1 U	1 U	1.2	1 U	1 U	--	--	--	29	1 U	1 U
	7/15/1998		0.5 U	1 U	6	1.8	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	61	57	1 U	1 U	1 U	6.8	--	1 U	1 U	1 U	1 U	1 U	--	--	--	28	1 U	1 U
	10/21/1998		2.5 U	5 U	16	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	270	100	5 U	5 U	5 U	19	--	5.1	5 U	5 U	5 U	5 U	--	--	--	58	5 U	5 U
	10/21/1998	K	2.5 U	5 U	16	5 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	230	100	5 U	5 U	5 U	17	--	5 U	5 U	5 U	5 U	5 U	--	--	--	52	5 U	5 U
	1/15/1999		1 U	2 U	11	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	170	41	2 U	2 U	2 U	17	--	4.6	2 U	2 U	2 U	2 U	--	--	--	36	2 U	2 U
	1/15/1999	K	2 U	2 U	11 U	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	180	42	2 U	2 U	2 U	17	--	4.7	2 U	2 U	2 U	2 U	--	--	--	39 U	2 U	2 U
	4/15/1999		2 U	2 U	6.1	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	13	--	180	41	2 U	2 U	2 U	20	--	3.4	2 U	2 U	2 U	2 U	--	--	--	39	4 U	4 U
	7/15/1999		2 U	2 U	33	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	12	--	130	26	2 U	2 U	2 U	13	--	3.2	2 U	22	2 U	2 U	--	--	--	29	4 U	4 U
	10/15/1999		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	10 U	10 U	41	--	220	26	5 U	5 U	5 U	30	--	8.4	5 U	5 U	5 U	5 U	--	--	--	42	10 U	10 U
	1/28/2000		1 U	1 U	1 U	2 U	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U	2 U	2 U	15	--	69	7.5	1 U	1 U	1 U	14	--	3.4	1 U	1 U	1 U	1 U	--	--	--	18	2 U	2 U
	4/15/2000		2 U	2 U	2 U	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	7.6	--	97	7.4	2 U	2 U	2 U	11	--	2 U	2 U	2 U	2 U	2 U	--	--	--	26	4 U	4 U
	10/15/2000		2.5 U	2.5 U	7	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	14	--	130	43	2.5 U	2.5 U	2.5 U	10	--	2.6	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	36	5 U	5 U
	4/15/2001		2 U	2 U	39	11.6	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	8	--	97	75	2 U	2 U	2 U	11	--	2 U	2 U	2 U	2 U	2 U	--	--	--	36	4 U	4 U
	7/19/2001		2.5 U	2.5 U	2.7	2.5 U	--	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	7.2	--	72	160	2.5 U	2.5 U	2.5 U	7.3	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--	--	26	5 U	5 U
	10/18/2001		2 U	2 U	41	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	14	--	130	49	2 U	2 U	2 U	13	--	2.8	2 U	2 U	2 U	2 U	--	--	--	34	4 U	4 U
	1/17/2002		2 U	2 U	2 U	2 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	8.3	--	100	39	2 U	2 U	2 U	11	--	2 U	2 U	2 U	2 U	2 U	--	--	--	31	4 U	4 U
	4/18/2002		2 U	2 U	2 U	4 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	6.5	--	110	90	2 U	2 U	2 U	10	--	2 U	2 U	2 U	2 U	2 U	--	--	--	37	4 U	4 U
	7/26/2002		5 U	5 U	5 U	10 U	--	--	--	--	--	--	5 U	5 U	5 U	5 U	5 U	10 U	10 U	27	--	220	35	5 U	5 U	5 U	22	--	5.5	5 U	5 U	5 U	5 U	--	--	--	47	10 U	10 U
	10/24/2002		2 U	2 U	2 U	4 U	--	--	--	--	--	--	2 U	2 U	2 U	2 U	2 U	4 U	4 U	20	--	120	13	2 U	2 U	2 U	16	--	4.2	2 U	2 U	2 U	2 U	--	--	--	25	4 U	4 U
	1/9/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	14	1 U	75	8.1	1 U	1 U	1 U	11	5 U	2.7	1 U	1.8	1 U	1 U	1 U	1 U	1 U	20	1 U	0.59
	4/24/2003		0.5 U	1 U	8.3	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	6.1	1 U	63	14	1 U	1 U	1 U	7	5 U	1.3	1 U	2.2	1 U	1 U	1 U	1 U	1 U	20	1 U	0.5 U
	7/31/2003		0.51	1 U	1.5	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1	5 U	1 U	1 U	29	1 U	180	25	1 U	1 U	1 U	19	5 U	6.1	1 U	2.3	1 U	1 U	1 U	1 U	1 U	38	1 U	0.69

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-16	10/22/2003		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	25	1 U	100	10	1 U	1 U	1 U	11	5 U	4.2	1 U	1.5	1 U	1 U	1 U	1 U	1 U	22	1 U	0.67
	1/23/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	15	1 U	63	8.1	1 U	1 U	1 U	7.1	5 U	3.2	1 U	1.8	1 U	1 U	1 U	1 U	1 U	17	1 U	0.58
	4/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	10	1 U	39	5.6	1 U	1 U	1 U	4.9	5 U	2.2	1 U	2	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	7/21/2004		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.4	1 U	12	3.2	1 U	1 U	1 U	2	5 U	1	1 U	2	1 U	1 U	1 U	1 U	1 U	12	1 U	0.5 U
	1/27/2005		0.61	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	5.6	1 U	84	1.5	1 U	1 U	1 U	15	5 U	1 U	1 U	12	1 U	1 U	1 U	1 U	1 U	33	1 U	0.5 U
	4/27/2005		0.5 U	1 U	1 U	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.9	5 U	1 U	1 U	11	1 U	190	4.3	1 U	1 U	1 U	26	5 U	2.2	1 U	8.8	1 U	1 U	1 U	1 U	1 U	65	1 U	0.5 U
	7/27/2005		2 U	4 U	4 U	8 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	4 U	20 U	4 U	4 U	34	4 U	200	36	4 U	4 U	4 U	20	20 U	6.2	4 U	6.2	4 U	4 U	4 U	4 U	4 U	57	4 U	2 U
	10/20/2005		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5 U	25 U	5 U	5 U	51	5 U	350	58	5 U	5 U	5 U	42	25 U	9.9	5 U	7.8	5 U	5 U	5 U	5 U	5 U	120	5 U	2.5 U
	1/27/2006		2.5 U	5 U	5 U	10 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5 U	25 U	5 U	5 U	24	5 U	270	30	5 U	5 U	5 U	30	25 U	5 U	5 U	5.4	5 U	5 U	5 U	5 U	5 U	90	5 U	2.5 U
	4/26/2006		0.58	1 U	2.3	2 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	10	1 U	140	33	1 U	1 U	1 U	16	5 U	1.9	1 U	4.5	1 U	1 U	1 U	1 U	1 U	61	1 U	0.5 U
	7/26/2006		0.64	1 U	1 U	1 U	1 U	1 L,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	34	1 U	230	76	1 U	1 U	1 U	23	5 U	6.4	1 U	3.7	1 U	1 U	1 U	1 U	1 U	68	1 U	0.59
	10/24/2006		0.68	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	37	1 U	210	35	1 U	1 U	1 U	24	5 U	6.7	1 U	3.5	1 U	1 U	1 U	1 U	1 U	68	1 U	0.5 U
	1/17/2007		0.58	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	10	1 U	110	11	1 U	1 U	1 U	15	5 U	1.7	1 U	3.4	1 U	1 U	1 U	1 U	1 U	40	1 U	0.5 U
	4/17/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	10	1 U	100	22	1 U	1 U	1 U	11	5 U	2.1	1 U	3.1	1 U	1 U	1 U	1 U	1 U	44	1 U	0.5 U
	7/26/2007		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	2 U	10 U	2 U	2 U	34	2 U	200	41	2 U	2 U	2 U	20	10 U	6.1	2 U	3.4	2 U	2 U	2 U	2 U	2 U	62	2 U	1 U
	10/25/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	74	1 U	290	9.8	1 U	1 U	1 U	30	5 U	12	1 U	2.6	1 U	1 U	1 U	1 U	1 U	65	1 U	1
	1/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	9.9	1 U	40	2.2	1 U	1 U	1 U	6.6	5 U	2.8	1 U	2.6	1 U	1 U	1 U	1 U	1 U	22	1 U	0.5 U
	4/22/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	15	1 U	89	2.4	1 U	1 U	1 U	12	5 U	3.4	1 U	2.4	1 U	1 U	1 U	1 U	1 U	27	1 U	0.5 U
	7/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	20	1 U	88	3.6	1 U	1 U	1 U	12	5 U	5.4	1 U	2.4	1 U	1 U	1 U	1 U	1 U	26	1 U	0.57
	10/28/2008		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/8/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	3.3	5 U	1 U	1 U	2.9	1 U	11	49	1 U	1 U	1 U	12	5 U	1 U	1 U	78	1 C, L,U	1 U	1 U	1 U	1 U	44	6.8	0.5 U
	10/20/2011		0.59	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2	5 U	1 U	1 U	10	1 U	50	78	1 U	1 U	1 U	8.7	5 U	1 U	1 U	53	1 U	1 U	1 U	1 U	1 U	37	1	0.5 U
	1/18/2012		0.68	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.7	5 U	1 U	1 U	3.4	1 U	14	180	1 U	1 U	1 U	5.3	5 U	1 U	1 U	43	1 U	1 U	1 U	1 U	1 U	29	1 U	0.5 U
	3/22/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	14	1 U	67	110	1 U	1 U	1 U	7	5 U	1 U	1 U	35	1 U	1 U	1 U*	1 U	1 U	22	1 U	0.5 U
	7/25/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.1	5 U	1 U*	1 U*	5.2	1 U	19	52	1 U	1 U	1 U	3.5	5 U*	1 U	1 U	32	1 U	1 U	1 U	1 U	1 U	25	1 U	0.5 U*
MW-17S	7/3/2007		2.4	1 U	1900	32.3	3	15	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	8.6	1 U	5.4	40	1 U	1 U	1 U	2.1	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10	1 U	0.5 U
	7/26/2007		2.2	13	1900	620 MHA	3.5	16	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	5.7	1 U	3.3	38	1 U	1 U	1 U	1	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5.8	1 U	0.5 U
	10/24/2007		0.5 U	1 U	12	2.4	1 U	1 U	1.8	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	12	140	1 U	1 U	1 U	2.2	5 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	1/30/2008		0.5 U	1 U	31	1	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	4.9	33	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U	1 U	9.3	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-17S	4/23/2008		5 U	10 U	16	10 U	10 U	10 L,U	10 U	--	10 U	10 U	10 U	10 U	5 U	10 U	50 U	10 U	10 U	21	10 U	32	360	10 U	10 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	130	10 U	5 U
	7/29/2008		0.5 U	1 U	32	1.6	1 U	1 U	1.4	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	2.2	29	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5.2	1 U	0.5 U
	10/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4.8	1 U	86	37	1 U	1 U	1 U	9.5	5 U	1 U	1 U	2.8	1 U	1 U	1 L,U	1 U	1 U	69	1 U	0.5 U
	1/28/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.4	1 U	5	0.59	1 U	1 U	1 U	1.3	5 U	1 U	1 U	6.8	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.1	1 U	6.2	1.2	1 U	1 U	1 U	1.4	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	7/31/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	2.7	1 U	8.8	0.79	1 U	1 U	1 U	1.6	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	10/9/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	3.4	1 U	8.3	2.2	1 U	1 U	1 U	2.8	5 U	1 U	1 U	76	1 U	1 U	1 U	1 U	1 U	39	1.1	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	5.2	1 U	23	4.7	1 U	1 U	1 U	5.4	5 U	1 U	1 U	55	1 U	1 U	1 U	1 U	1 U	54	1.2	0.5 U
	10/29/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	4	1 U	12	6.3	1 U	1 U	1 U	4	5 U	1 U	1 U	41	1 U	1 U	1 U	1 U	1 U	38	1.8	0.5 U
	1/20/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.8	5 U	1 U	1 U	3.6	1 U	2.4	4.5	1 U	1 U	1 U	11	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	59	7.9	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	6.7	5 U	1 U	1 U	4.6	1 U	1 U	13	1 U	1 U	1 U	26	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	110	24	0.5 U
	7/28/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	5.1	10 U	2 U	2 U	2.8	2 U	2 U	33	2 U	2 U	2 U	7.7	10 U	2 U	2 U	84	2 U	2 U	2 U	2 U	2 U	57	4.9	1 U
	10/21/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	24	1 U	2.3	46	1 U	1 U	1 U	5.9	5 U	1 U	1 U	39	1 U	1 U	1 U	1 U	1 U	30	2	0.5 U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.6	5 U	1 U	1 U	13	1 U	2.7	21	1 U	1 U	1 U	3.5	5 U	1 U	1 U	23	1 U	1 U	1 U	1 U	1 U	26	1 U	0.5 U
	3/21/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	20	1 U	5.2	32	1 U	1 U	1 U	4.2	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	24	1 U	0.5 U
	7/26/2012		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	4 U	20 U	4 U	4 U	14	4 U	11	210	4 U	4 U	4 U	5	20 U	4 U	4 U	20	4 U	4 U	4 U	4 U	4 U	38	4 U	2 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.52	1 U	0.5 U	0.5 U	11	0.5 U	2.9	65	0.5 U	0.5 U	0.5 U	2.1	0.5 U	0.5 U	0.5 U	12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13	0.5 U	0.5 U
MW-18S	7/3/2007		0.5 U	1 U	4.2	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.9	6.8	1 U	1 U	1 U	1 U	11	280	1 U	1 U	1 U	1.9	5 U	1 U	1 U	1.5	1 U	1 U	1 U	1 U	1 U	14	1 U	0.5 U
	7/24/2007		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2	5 U	1 U	1 U	1 U	1 U	9.8	260 MHA	1 U	1 U	1 U	2.1	5 U	1 U	1 U	2.1	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	10/24/2007		0.5 U	1 U	1.9	2.7	1 U	1 U	1.4	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	5.3	30	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	8.4	1 U	0.5 U
	1/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	12	5.3	1 U	1 U	1 U	1.6	5 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	11	1 U	0.5 U
	4/23/2008		0.5 U	1 U	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	8.1	29	1 U	1 U	1 U	1.4	5 U	1 U	1 U	3.8	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	7/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	9.5	3.6	1 U	1 U	1 U	1.8	5 U	1 U	1 U	3.1	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U
	10/30/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1 U	1 U	3.8	0.65	1 U	1 U	1 U	1 U	5 U	1 U	1 U	6.7	1 U	1 U	1 C, L,U	1 U	1 U	12	1 U	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.2	5 U	1 U	1 U	1 U	1 U	3.9	110	1 U	1 U	1 U	1 U	5 U	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U	18	1 U	0.5 U
	7/27/2011		1.6	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	2.4	5 U	1 U	1 U	1.3	1 U	1.7	100	1 U	1 U	1 U	4.8	5 U	1 U	1 U	41	1 U	1 U	1 U	1 U	1 U	35	1.5	0.5 U
	10/20/2011		1.7	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	1.7	1 U	3.2	140	1 U	1 U	1 U	2.9	5 U	1 U	1 U	37	1 U	1 U	1 U	1 U	1 U	37	1 U	0.5 U
	1/18/2012		0.83	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.5	5 U	1 U	1 U	1.2	1 U	3	650	1 U	1 U	1 U	1.2	5 U	1 U	1 U	35	1.6	1 U	1 U	1 U	1 U	32	1 U	0.5 U
	3/21/2012		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5 U	25 U	5 U	5 U	5 U	5 U	6	410	5 U	5 U	5 U	5 U	25 U	5 U	5 U	27	5 U	5 U	5 U	5 U	5 U	30	5 U	2.5 U
	7/25/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	1	1 U	27	130	1 U	1 U	1 U	1.7	5 U	1 U	1 U	20	1 U	1 U	1 U	1 U	1 U	41	1 U	0.5 U
	10/31/2012		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8	3.7	0.5 U	0.5 U	0.99	0.5 U	12	32	0.5 U	0.5 U	0.5 U	3.1	0.5 U	0.5 U	0.5 U	18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	22	0.5 U	0.5 U
MW-19S	7/3/2007		3.2	1 U	800	70	2.2	14	1 U	--	1 U	1 U	1 U	2.1	0.5 U	9.7	5 U	1 U	1 U	8.8	1 U	84	46	1 U	1 U	1 U	8.4	5 U	1 U	1 U	2.5	1 U	1 U	1 U	1 U	1 U	140	1 U	0.5 U
	7/26/2007		1.8	1 U	220	8.4	1 U	3.1	1 U	--	1 U	1 U	1 U	3.1	0.5 U	13	5 U	1 U	1 U	7.5	1 U	120	64	1 U	1 U	1 U	7.7	5 U	1 U	1 U	3.3	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	10/24/2007		1.2	1 U	84 M2	2.8	1 U	1 U	1.3	--	1 U	1 U	1 U	5.1	0.5 U	14	5 U	1 U	1 U	14	1 U	140 MHA	110	1 U	1 U	1 U	16	5 U	1 U	1 U	5.5	1 U	1 U	1 U	1 U	1.1	260 MHA	1 U	0.5 U
	1/30/2008		5 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	5 U	10 U	50 U	10 U	10 U	12	10 U	170	120	10 U	10 U	10 U	51	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	490	10 U	5 U
	4/23/2008		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	6.5	2 U	11	20 U	4 U	4 U	14	4 U	160	91	4 U	4 U	4 U	44	20 U	4 U	4 U	4	4 U	4 U	4 U	4 U	4 U	410	4 U	2 U
	7/29/2008		1.8	1 U	1 U	1.2	1 U	1 U	1 U	--	1 U	1 U	1 U	6.2	0.5 U	3.1	5 U	1 U	1 U	71	1 U	110	79	1 U	1 U	1 U	36	5 U	1 U	1 U	3.3	1 U	1 U	1 U	1 U	1 U	280	1 U	0.5 U
	10/30/2008		4.8	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	4	0.5 U	2	5 U	1 U	1 U	89	1 U	73	70	1 U	1 U	1 U	26	5 U	1 U	1 U	2.1	1 U	1 U	1 L,U	1 U	1 U	160	1 U	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
			Non-chlorinated VOCs										Chlorinated VOCs																										
MW-19S	1/29/2009		0.76	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.5	0.5 U	4.1	5 U	1 U	1 U	110 MHA	1 U	61	52	1 U	1 U	1 U	19	5 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U	1 U	72	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	99	1 U	42	24	1 U	1 U	1 U	17	5 U	1 U	1 U	2.6	1 U	1 U	1 U	1 U	1 U	52	1 U	0.5 U
	7/31/2009		0.5 U	1 M1,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 A-01,U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	48	1 U	32	13	1 U	1 U	1 U	5.5	5 U	1 U	1 U	4.9	1 U	1 U	1 U	1 U	1 A-01,U	26	1 U	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 M1,U	1 U	5 U	1 U	1 U	50	1 U	40	20	1 U	1 U	1 U	8.5	5 U	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	90 M2,A01	1 U	0.5 U
	10/28/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	1.1	7.2	5 U	1 U	1 U	33	1 U	29	13	1 U	1 U	1 U	6.1	5 U	1 U	1 U	11	1 U	1 U	1 U	1 U	1 U	61	1 U	0.5 U
	1/20/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	2.4	15	5 U	1 U	1 U	10	1 U	44	29	1 U	1 U	1 U	11	5 U	1 U	1 U	21	1 U	1 U	1 U	1 U	1 U	150	1 U	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.89	5.3	5 U	1 U	1 U	7.4	1 U	21	52	1 U	1 U	1 U	9.3	5 U	1 U	1 U	63	1 U	1 U	1 U	1 U	1 U	110	1 U	0.5 U
	7/26/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 L,U	--	1 L,U	1 U	1 U	1 U	2.2	19	5 U	1 U	1 U	8.9	1 U	48	57	1 U	1 U	1 U	12	5 U	1 U	1 U	70	1 U	1 U	1 L,U	1 U	1 U	160	1 U	0.5 U
	10/20/2011		0.63	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	8.1	38	5 U	1 U	1 U	13	1 U	120	68	1 U	1 U	1 U	23	5 U	1 U	1 U	52	1 U	1 U	1 U	1 U	1 U	290	1 U	0.5 U
	1/18/2012		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	10	44	20 U	4 U	4 U	19	4 U	180	25	4 U	4 U	4 U	27	20 U	4 U	4 U	22	4 U	4 U	4 U	4 U	4 U	410	4 U	2 U
	3/21/2012		1.3 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	7.2	42	13 U	2.5 U	2.5 U	22	2.5 U	190	21	2.5 U	2.5 U	2.5 U	25	13 U	2.5 U	2.5 U	18	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	340	2.5 U	1.3 U
	7/26/2012		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	8.6	45	20 U	4 U	4 U	20	4 U	230	19	4 U	4 U	4 U	30	20 U	4 U	4 U	15	4 U	4 U	4 U	4 U	4 U	450	4 U	2 U
	10/30/2012		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	4.2	32	6.1	2.5 U	2.5 U	16	2.5 U	170	32	2.5 U	2.5 U	2.5 U	19	2.5 U	2.5 U	2.5 U	11	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	370	2.5 U	2.5 U
MW-20S	7/3/2007		2.2	1 U	17	1 U	1 U	4.9	1 U	--	1 U	1 U	1 U	1.5	0.5 U	1 U	5 U	1 U	1 U	47	1 U	93	340	1 U	1 U	1 U	31	5 U	1.4	1 U	1.7	1 U	1 U	1 U	1 U	1 U	140 MHA	1 U	0.5 U
	7/26/2007		2.4	1 U	91	1.1	1 U	5	1 U	--	1 U	1 U	1 U	1.4	0.5 U	1 U	5 U	1 U	1 U	64	1 U	99	290	1 U	1 U	1 U	26	5 U	1.6	1 U	1.2	1 U	1 U	1 U	1 U	1 U	130	1 U	0.5 U
	10/24/2007		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	5 U	25 U	5 U	5 U	21	5 U	190	420	5 U	5 U	5 U	36	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	170	5 U	2.5 U
	1/30/2008		0.5 U	1 U	1.1	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.3	1 U	12	14	1 U	1 U	1 U	3	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	13	1 U	0.5 U
	4/23/2008		1 U	2 U	2 U	2 U	2 U	2 L,U	2 U	--	2 U	2 U	2 U	2 U	1 U	2 U	10 U	2 U	2 U	7.9	2 U	140	150	2 U	2 U	2 U	26	10 U	2 U	2 U	2.3	2 U	2 U	2 U	2 U	2 U	160	2 U	1 U
	7/29/2008		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.3	0.5 U	1.2	5 U	1 U	1 U	9.9	1 U	150	75	1 U	1 U	1 U	38	5 U	1.6	1 U	4.2	1 U	1 U	1 U	1 U	1 U	190	1 U	0.5 U
	10/29/2008		0.52 M1	1 U	1 U	1 U	1 U	1 M1,U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 M1,U	1 U	5.6	1 U	120 M1	8.3	1 U	1 U	1 U	12 M1	5 U	1 M1	1 M1,U	2.4	1 U	1 M1,U	1 U	1 U	1 U	45	1 U	0.5 U
	1/29/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	1.6	1 U	36	1.2	1 U	1 U	1 U	2.7	5 U	1 U	1 U	5.2	1 U	1 U	1 U	1 U	1 U	15	1 U	0.5 U
	4/8/2009		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.1	5 U	1 U	1 U	2.5	1 U	28	1	1 U	1 U	1 U	3	5 U	1 U	1 U	17	1 U	1 U	1 U	1 U	1 U	19	1 U	0.5 U
	1/20/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1.4	5 U	1 U	1 U	2.2	1 U	11	2	1 U	1 U	1 U	4.4	5 U	1 U	1 U	46	1 U	1 U	1 U	1 U	1 U	23	1 U	0.5 U
	4/13/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.7	5 U	1 U	1 U	2.1	1 U	3.5	3.2	1 U	1 U	1 U	12	5 U	1 U	1 U	100	1 U	1 U	1 U	1 U	1 U	71	2.5	0.5 U
	7/28/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 C, L,U	1 U	5 U	1 U	1 U	49	1 U	4.8	67	1 U	1 U	1 U	11	5 U	1 U	1 U	55	1 L, C,U	1 U	1 U	1 U	1 U	41	1.5	0.5 U
	10/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	23	1 U	16	53	1 U	1 U	1 U	8	5 U	1 U	1 U	43	1 U	1 U	1 U	1 U	1 U	55	1 U	0.5 U
	1/17/2012		0.75	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1	0.5 U	1 U	5 U	1 U	1 U	8.2	1 U	27	76	1 U	1 U	1 U	6.9	5 U	1 U	1 U	31	1 U	1 U	1 U	1 U	1 U	94	1 U	0.5 U
	3/21/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	2 U	10 U	2 U	2 U	6.9	2 U	31	83	2 U	2 U	2 U	6.1	10 U	2 U	2 U	28	2 U	2 U	2 U	2 U	2 U	85	2 U	1 U
	7/26/2012		0.55	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1.2	0.5 U	1 U	5 U	1 U	1 U	7.8	1 U	59	74	1 U	1 U	1 U	7.1	5 U	1 U	1 U	25	1 U	1 U	1 U	1 U	1 U	87	1 U	0.5 U
	10/31/2012		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	--	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	1.3 U	8.4	1.3 U	81	180	1.3 U	1.3 U	1.3 U	7.2	1.3 U	1.3 U	1.3 U	19	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	76	1.3 U	1.3 U
MW-21D	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.57	1 U	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	3.1	1 U	1 U	1 U	1 U	1 U	24	1 U	0.5 U
	5/21/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	8.6	5 U	1 U	1 U	6.9	1 U	1 U	0.88	1 U	1 U	1 U	26	5 U	1 U	1 U	85	1 U	1 U	1 U	1 U	1 U	77	18	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	18	5 U	1 U	1 U	9.4	1 U	1 U	1.8	1 U	1 U	1 U	55	5 U	1 U	1 U	160	1 U	1 U	1 U	1 U	1 U	120	35	0.5 U
	10/27/2010		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	21	20 U	4 U	4 U	7.7	4 U	4 U	2 U	4 U	4 U	4 U	65	20 U	4 U	4 U	150	4 U	4 U	4 U	4 U	4 U	110	35	2 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	26	5 U	1 U	1 U	8.9	1 U	1 U	2.3	1 U	1 U	1 U	75	5 U	1 U	1 U	190	1 U	1 U	1 U	1 U	1 U	130	44	0.5 U
	4/11/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.2	5 U	1 U	1 U	1.4	1 U	1 U	0.5 U	1 U	1 U	1 U	8.9	5 U	1 U	1 U	39	1 U	1 U	1 U	1 U	1 U	43	7.2	0.5 U
	7/26/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 L,U	--	1 L,U	1 U	1 U	1 U	0.5 U	28	5 U	1 U	1 U	8.2	1 U	1 U	2.2	1 U	1 U	1 U	110	5 U	1 U	1 U	210	1 U	1 U	1 L,U	1 U	1 U	220	75	0.5 U
	10/20/2011		2.5 U	5 L,U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	19	25 U	5 U	5 U	6.2	5 U	5 U	2.5 U	5 U	5 U	5 U	87	25 U	5 U	5 U	150	5 U	5 U	5 U	5 U	5 U	170	48	2.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

Well Number	Sample Date	Sample Type	Non-chlorinated VOCs: Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	Chlorinated VOCs: BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-21D	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	11	5 U	1 U	1 U	4.6	1 U	1 U	0.9	1 U	1 U	1 U	45	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	120	34	0.5 U
	3/20/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	10	10 U	2 U	2 U	4.5	2 U	2 U	1 U	2 U	2 U	2 U	54	10 U	2 U	2 U	110	2 U	2 U	2 U	2 U	2 U	110	29	1 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	8.8	10 U	2 U	2 U	3.6	2 U	2 U	1 U	2 U	2 U	2 U	40	10 U	2 U	2 U	100	2 U	2 U	2 U	2 U	2 U	110	23	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	12	5 U	1 U	1 U	4.1	1 U	1 U	0.88	1 U	1 U	1 U	62	5 U	1 U	1 U	110	1 U	1 U	1 U	1 U	1 U	110	41	0.5 U
MW-21S	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.8	5 U	1 U	1 U	6.5	1 U	1 U	0.79	1 U	1 U	1 U	11	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	50	6.1	0.5 U
	5/21/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.1	5 U	1 U	1 U	9.3	1 U	1 U	0.87	1 U	1 U	1 U	15	5 U	1 U	1 U	120	1 U	1 U	1 U	1 U	1 U	58	9.6	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1.9	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	11	5 U	1 U	1 U	8	1 U	1 U	1.8	1 U	1 U	1 U	38	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	83	19	0.5 U
	10/27/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	3.9	10 U	2 U	2 U	4.9	2 U	2.3	1 U	2 U	2 U	2 U	19	10 U	2 U	2 U	130	2 U	2 U	2 U	2 U	2 U	50	6.7	1 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	18	5 U	1 U	1 U	7.2	1 U	1 U	1.7	1 U	1 U	1 U	53	5 U	1 U	1 U	180	1 U	1 U	1 U	1 U	1 U	100	32	0.5 U
	4/11/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	19	5 U	1 U	1 U	6.3	1 U	1 U	1.9	1 U	1 U	1 U	51	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	91	29	0.5 U
	7/26/2011		2.5 U	5 U	5 U	5 U	5 U	5 U	5 L,U	--	5 L,U	5 U	5 U	5 U	2.5 U	19	25 U	5 U	5 U	5.1	5 U	5 U	2.5 U	5 U	5 U	5 U	73	25 U	5 U	5 U	240	5 U	5 U	5 L,U	5 U	5 U	160	45	2.5 U
	10/20/2011		0.5 U	1 L, M7,U	1 U	1 M1,U	1 U	1 U	1 U	--	1 U	1 U	1.3 M1	1 U	0.5 M1,U	16	5 A-01,U	1 A-01,U	1 A-01,U	4.9	1 U	1 A-01,U	1.3	1 U	1 U	1 U	61 M1, R-3	5 U	1 A-01,U	1 U	210	1 U	1 U	1 U	1 U	1 U	140 MHA	32 R-3, M1	0.5 A-01,U
	1/19/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	16	5 U	1 U	1 U	5.2	1 U	1 U	1.3	1 U	1 U	1 U	55 M2	5 U	1 U	1 U	150 M2	1 U	1 U	1 U	1 U	1 U	140 M2	43	0.5 U
	3/20/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	19	10 U	2 U	2 U	6.9	2 U	2 U	1.3	2 U	2 U	2 U	85	10 U	2 U	2 U	180	2 U	2 U	2 U	2 U	2 U	170	57	1 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	11	10 U	2 U	2 U	4	2 U	2 U	1 U	2 U	2 U	2 U	44	10 U	2 U	2 U	120	2 U	2 U	2 U	2 U	2 U	120	29	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	14	5 U	1 U	1 U	5.2	1 U	1 U	1.1	1 U	1 U	1 U	61	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	120	46	0.5 U
MW-22D	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.52	1.2	5 U	1 U	1 U	8.8	1 U	1 U	0.74	1 U	1 U	1 U	4.7	5 U	1 U	1 U	150 MHA	1 U	1 U	1 U	1 U	1 U	49	4.7	0.5 U
	5/21/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	2.8	5 U	1 U	1 U	9.4	1 U	1 U	0.83	1 U	1 U	1 U	9.8	5 U	1 U	1 U	120 MHA	1 U	1 U	1 U	1 U	1 U	53	6.9	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.8	5 U	1 U	1 U	13	1 U	1 U	1.6	1 U	1 U	1 U	29	5 U	1 U	1 U	210	1 U	1 U	1 U	1 U	1 U	84	17	0.5 U
	10/27/2010		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	4 U	20 U	4 U	4 U	11	4 U	4 U	2 U	4 U	4 U	4 U	8.8	20 U	4 U	4 U	180	4 U	4 U	4 U	4 U	4 U	48	4.3	2 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.4	5 U	1 U	1 U	10	1 U	1 U	1.6	1 U	1 U	1 U	25	5 U	1 U	1 U	180	1 U	1 U	1 U	1 U	1 U	67	14	0.5 U
	4/11/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	37	10 U	2 U	2 U	9.8	2 U	2 U	3.5	2 U	2 U	2 U	140	10 U	2 U	2 U	230	2 U	2 U	2 U	2 U	2 U	180	72	1 U
	7/26/2011		2.5 U	5 U	5 U	5 U	5 U	5 U	5 L,U	--	5 L,U	5 U	5 U	5 U	2.5 U	30	25 U	5 U	5 U	7.5	5 U	5 U	2.5 U	5 U	5 U	5 U	150	25 U	5 U	5 U	270	5 U	5 U	5 L,U	5 U	5 U	250	85	2.5 U
	10/19/2011		2.5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	5 U	5 U	2.5 U	22	25 U	5 U	5 U	6.6	5 U	5 U	2.5 U	5 U	5 U	5 U	130	25 U	5 U	5 U	210	5 U	5 U	5 U	5 U	5 U	220	55	2.5 U
	1/17/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	19	5 U	1 U	1 U	5.9	1 U	1 U	1.4	1 U	1 U	1 U	100	5 U	1 U	1 U	170	1 U	1 U	1 U	1 U	1 U	170	58	0.5 U
	3/20/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	28	10 U	2 U	2 U	7.9	2 U	2 U	2.1	2 U	2 U	2 U	150	10 U	2 U	2 U	230	2 U	2 U	2 U	2 U	2 U	210	81	1 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	36	10 U	2 U	2 U	7.9	2 U	2 U	3.1	2 U	2 U	2 U	180	10 U	2 U	2 U	390	2 U	2 U	2 U	2 U	2 U	320	93	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	46	5 U	1 U	1 U	9	1 U	1.1	4.4	1 U	1 U	1 U	200	5 U	1 U	1 U	290	1 U	1 U	1 U	1 U	1 U	220	120	0.5 U
MW-22S	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.52	1 U	5 U	1 U	1 U	2	1 U	2.6	0.5 U	1 U	1 U	1 U	19	5 U	1 U	1 U	60	1 U	1 U	1 U	1 U	1 U	12	1 U	0.5 U
	5/21/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.53	1 U	5 U	1 U	1 U	1.8	1 U	3.8	0.5 U	1 U	1 U	1 U	26	5 U	1 U	1 U	51	1 U	1 U	1 U	1 U	1 U	12	1 U	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	7.8	1 U	1 U	0.69	1 U	1 U	1 U	16	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	27	1 U	0.5 U
	10/27/2010		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	4 U	20 U	4 U	4 U	8.3	4 U	4 U	2 U	4 U	4 U	4 U	10	20 U	4 U	4 U	160	4 U	4 U	4 U	4 U	4 U	29	4 U	2 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	1 U	1 U	7.2	1 U	1.9	0.67	1 U	1 U	1 U	19	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	28	1 U	0.5 U
	4/11/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	9.5	5 U	1 U	1 U	9.6	1 U	1 U	1.6	1 U	1 U	1 U	26	5 U	1 U	1 U	160	1 U	1 U	1 U	1 U	1 U	60	4.5	0.5 U
	7/26/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 L,U	--	1 L,U	1 U	1 U	1 U	0.5 U	10	5 U	1 U	1 U	4.1	1 U	1 U	0.99	1 U	1 U	1 U	43	5 U	1 U	1 U	190 MHA	1 U	1 U	1 L,U	1 U	1 U	87	26	0.5 U
	10/19/2011		1.2 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	1.2 U	6.6	12 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.2 U	2.5 U	2.5 U	2.5 U	30	12 U	2.5 U	2.5 U	120	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	64	15	1.2 U
	1/17/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.9	5 U	1 U	1 U	2.9	1 U	1 U	0.5 U	1 U	1 U	1 U	16	5 U	1 U	1 U	120 MHA	1 U	1 U	1 U	1 U	1 U	45	8.2	0.5 U
	3/20/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	4.7	5 U	1 U	1 U	4	1 U	1 U	0.58	1 U	1 U	1 U	23	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	53	16	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chlorobenzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)
MW-22S	7/23/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	26	5 U	1 U	1 U	6	1 U	1 U	2.2	1 U	1 U	1 U	110	5 U	1 U	1 U	270	1 U	1 U	1 U	1 U	1 U	190	44	0.5 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	30	5 U	1 U	1 U	6.2	1 U	1 U	2.6	1 U	1 U	1 U	130	5 U	1 U	1 U	230	1 U	1 U	1 U	1 U	1 U	150	62	0.5 U
MW-23D	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	35	5 U	1 U	1 U	8.8	1 U	1 U	3	1 U	1 U	1 U	110	5 U	1 U	1 U	230	1 U	1 U	1 U	1 U	1 U	210	68	0.5 U
	5/21/2010		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	46	10 U	2 U	2 U	11	2 U	2 U	3.7	2 U	2 U	2 U	100	10 U	2 U	2 U	190	2 U	2 U	2 U	2 U	2 U	210	86	1 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	54	5 U	1 U	1 U	12	1 U	1 U	4.5	1 U	1 U	1 U	180	5 U	1 U	1 U	250	1 U	1 U	1 U	1 U	1 U	260	110	0.5 U
	10/27/2010		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	23	20 U	4 U	4 U	5.8	4 U	4 U	2.2	4 U	4 U	4 U	77	20 U	4 U	4 U	160	4 U	4 U	4 U	4 U	4 U	130	40	2 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	48	5 U	1 U	1 U	11	1 U	1.1	4.6	1 U	1 U	1 U	160 MHA	5 U	1 U	1 U	250 MHA	1 U	1 U	1 U	1 U	1 U	240	95	0.5 U
	4/12/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	54	10 U	2 U	2 U	13	2 U	2 U	3.8	2 U	2 U	2 U	240	10 U	2 U	2 U	300	2 U	2 U	2 U	2 U	2 U	320	130	1 U
	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	.5 L, M7, C,	22	5 U	1 U	1 U	7	1 U	1 U	1.5	1 U	1 U	1 U	110 MHA	5 U	1 U	1 U	160 MHA	1 U	1 U	1 U	1 U	1 U	160 MHA	79	0.5 U
	10/19/2011		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	17	10 U	2 U	2 U	5.5	2 U	2 U	1.2	2 U	2 U	2 U	110	10 U	2 U	2 U	170	2 U	2 U	2 U	2 U	2 U	170	54	1 U
	1/17/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	13	5 U	1 U	1 U	4.4	1 U	1 U	0.99	1 U	1 U	1 U	76	5 U	1 U	1 U	130	1 U	1 U	1 U	1 U	1 U	130	43	0.5 U
	3/20/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	19	10 U	2 U	2 U	6.7	2 U	2 U	1.3	2 U	2 U	2 U	99	10 U	2 U	2 U	160	2 U	2 U	2 U	2 U	2 U	160	54	1 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	17	10 U	2 U	2 U	5.8	2 U	2 U	1.4	2 U	2 U	2 U	85	10 U	2 U	2 U	190	2 U	2 U	2 U	2 U	2 U	180	44	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	23	5 U	1 U	1 U	6.3	1 U	1 U	2	1 U	1 U	1 U	110	5 U	1 U	1 U	180	1 U	1 U	1 U	1 U	1 U	150	66	0.5 U
MW-23S	5/3/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5.5	5 U	1 U	1 U	3.5	1 U	1 U	0.64	1 U	1 U	1 U	16	5 U	1 U	1 U	170	1 U	1 U	1 U	1 U	1 U	50	8.7	0.5 U
	5/21/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	5	5 U	1 U	1 U	3.5	1 U	1 U	0.58	1 U	1 U	1 U	13	5 U	1 U	1 U	160	1 U	1 U	1 U	1 U	1 U	49	7.8	0.5 U
	7/30/2010		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.7	5 U	1 U	1 U	1.6	1 U	1 U	0.5 U	1 U	1 U	1 U	13	5 U	1 U	1 U	150	1 U	1 U	1 U	1 U	1 U	47	7.1	0.5 U
	10/27/2010		2 U	4 U	4 U	4 U	4 U	4 U	4 U	--	4 U	4 U	4 U	4 U	2 U	5.1	20 U	4 U	4 U	4 U	4 U	4 U	2 U	4 U	4 U	4 U	18	20 U	4 U	4 U	160	4 U	4 U	4 U	4 U	4 U	49	8.2	2 U
	1/19/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	21	5 U	1 U	1 U	5.7	1 U	1 U	2	1 U	1 U	1 U	59	5 U	1 U	1 U	160	1 U	1 U	1 U	1 U	1 U	110	36	0.5 U
	4/11/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	24	5 U	1 U	1 U	7.1	1 U	1 U	2.1	1 U	1 U	1 U	81	5 U	1 U	1 U	130 MHA	1 U	1 U	1 U	1 U	1 U	130 MHA	45	0.5 U
	7/27/2011		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 L, C,U	19	5 U	1 U	1 U	6.2	1 U	1 U	1.4	1 U	1 U	1 U	89	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	150	63	0.5 U
	10/19/2011		0.5 U	1 L,U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	14	5 U	1 U	1 U	7	1 U	1 U	1.1	1 U	1 U	1 U	62	5 U	1 U	1 U	140	1 U	1 U	1 U	1 U	1 U	130	39	0.5 U
	1/17/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	17	5 U	1 U	1 U	7.4	1 U	1 U	1.5	1 U	1 U	1 U	94	5 U	1 U	1 U	180	1 U	1 U	1 U	1 U	1 U	160	55	0.5 U
	3/20/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	22	10 U	2 U	2 U	8.6	2 U	2 U	1.6	2 U	2 U	2 U	110	10 U	2 U	2 U	180	2 U	2 U	2 U	2 U	2 U	180	64	1 U
	7/23/2012		1 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U	2 U	2 U	2 U	1 U	11	10 U	2 U	2 U	5.4	2 U	2 U	1.1	2 U	2 U	2 U	59	10 U	2 U	2 U	160	2 U	2 U	2 U	2 U	2 U	140	31	1 U
	10/29/2012		0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U	1 U	1 U	1 U	0.5 U	3.5	5 U	1 U	1 U	3	1 U	1 U	0.55	1 U	1 U	1 U	16	5 U	1 U	1 U	82	1 U	1 U	1 U	1 U	1 U	43	11	0.5 U

Table C-2
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Volatile Organic Compounds (VOCs) Analytical Summary

			Non-chlorinated VOCs										Chlorinated VOCs																										
Well Number	Sample Date	Sample Type	Ben (1)	Tol (150)	e-Ben (300)	T-Xyl (1,750)	N-P Ben	ISB	NAP	1,4-Diox	PIPT	STY (100)	BDCM	Chloro benzene (70)	CCl4 (0.5)	CFM (80)	MCL (5)	Chloro-ethane	Chloro-methane	cis-1,2-DCE (6)	1,2-DBE (0.05)	1,1-DCA (5)	1,2-DCA (0.5)	1,2-DCB (600)	1,3-DCB	1,4-DCB (5)	1,1-DCE (6)	DCFM	trans-1,2-DCE (10)	1,1,2,2-PCA (1)	PCE (5)	1,1,1-TCA (200)	1,1,2-TCA (5)	1,2,3-TCB	1,2,4-TCB (5)	1,2,4-TMB	TCE (5)	TFM (150)	Vinyl chloride (0.5)

Notes:

Ben = benzene; Tol = toluene; e-Ben = ethylbenzene; T-Xyl = total xylenes; N-P Ben = N-propyl benzene; ISB = Isopropylbenzene; NAP = Naphthalene; 1,4-Diox = 1,4-Dioxane; PIPT = P-Isopropyl toluene; STY = Styrene; BDCM = Bromodichloromethane; CCl4 = Carbon tetrachloride; CFM = Chloroform; DBE = Dibromoethane; DCA = Dichloroethane; DCB = Dichlorobenzene; DCE = Dichloroethene; DCFM = Dichlorodifluoromethane; MCL = Methylene chloride; PCA = Tetrachloroethane; PCE = Tetrachloroethene; TCA = Trichloroethane; TCB = Trichlorobenzene; TCE = Trichloroethene; TFM = Trichlorofluoromethane

California Maximum Contaminant Levels (MCLs) are shown in parenthesis. MCL shown for chloroform is the sum of trihalomethane isomers.

All concentrations are reported in micrograms per liter (ug/L).
U = Not detected at a concentration greater than the reporting limit shown.
C = Calibration vertification recovery was above the method control limit.
R = The Relative Percent Difference (RPD) was above the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries were within acceptance limits.
L = The Laboratory Control Sample recovery was above the method control limits.
M1 = The MS and/or MSD were above the acceptance limits due to sample matrix interference.
P1 = Sample recieved and analyzed without chemical preservation.
B = Analyte was detected in the associated Method Blank or Trip Blank.
E = Indicates that the reported concentration is above the calibration range for the instrument, and concentration reported is an estimate only.
J = Indicates detected concentration is below analytical calibration curve, and is below the official reporting limit, and concentration reported is an estimate only.
La = Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.
R-3 = The RPD exceeded the method control limit due to sample matrix effects.
MHA = Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.
M7 = The MS or MSD were above acceptance limits.
M2 = The MS or MSD were below the acceptance limits due to sample matrix effects.
A-01 = The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
A01 = The RPD exceeded the acceptance limit due to sample matrix effects.
P-HS/PHS = Sample container contained headspace. Estimated result.
RL1 = Reporting limit raised due to sample matrix effects.
-- = Sample not analyzed for this constituent.

Sample Type:
K = Duplicate sample

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-01D	10/15/1990		--	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	2.3	0.04 U	--	--	--	--	--	0.044
	1/15/1991		--	--	--	--	--	0.005 U	--	0.025	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	4/15/1991		7.1	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/23/1991		7.45	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.6	--	--	--	--	0.0027 U	--	0.0081 U	0.08	0.02	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1993		7.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.021	--	--	--	--	--	--	--	--	--	--
	7/12/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/10/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/11/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/18/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/17/1995		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1995		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1996		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/7/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/13/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1997		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/8/1997		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-01D	10/14/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/13/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/21/1998		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.4	--	--	--	--	0.005 U	--	0.01 U	0.025 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.014	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7.3	--	--	--	--	0.005 U	--	0.01	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.5	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.3	--	--	--	--	0.005 U	--	0.01 U	0.00066 J	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/17/2001		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0055	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/16/2001		7.4	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/15/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/16/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/24/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.005	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/22/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/8/2003		7.29	--	--	--	--	0.005 U	--	0.0015 J	0.001 U	0.022	--	--	--	--	--	--	--	--	--	--
	4/23/2003		7.14	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		7.55	--	--	--	--	0.005 U	--	0.024	0.001 U	0.013	--	--	--	--	--	--	--	--	--	--
	10/21/2003		7.44	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.021	--	--	--	--	--	--	--	--	--	--
	1/21/2004		7.39	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/20/2004		7.23	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.041	--	--	--	--	--	--	--	--	--	--
	7/20/2004		7.49	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/11/2004		7.45	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2005		7.29	--	--	--	--	0.005 U	--	0.0053	0.0026	0.013	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-01D	4/26/2005		7.46	--	--	--	--	0.005 U	--	0.011	0.01	0.015	--	--	--	--	--	--	--	--	--	--
	7/26/2005		7.37	--	--	--	--	0.005 U	--	0.005 U	0.0011	0.02	--	--	--	--	--	--	--	--	--	--
	10/18/2005		7.4	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.019	--	--	--	--	--	--	--	--	--	--
	1/25/2006		7.32	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.022	--	--	--	--	--	--	--	--	--	--
	4/25/2006		7.4	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.019	--	--	--	--	--	--	--	--	--	--
	7/26/2006		7.5	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.019	--	--	--	--	--	--	--	--	--	--
	10/24/2006		7.63	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.031	--	--	--	--	--	--	--	--	--	--
	1/17/2007		7.68	--	--	--	--	0.005 U	--	0.005 U	0.0012	0.04	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.64 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.041	--	--	--	--	--	--	--	--	--	--
	7/24/2007		7.7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0011	0.045	--	--	--	--	--	--	--	--	--	--
	10/23/2007		7.7 HFT	--	--	--	--	0.005 U	--	0.012	0.009	0.034	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.63 HFT	--	--	--	--	0.005 U	--	0.0073	0.0062	0.016	--	--	--	--	--	--	--	--	--	--
	4/22/2008		7.73 HFT	--	--	--	--	0.005 U	--	0.0078	0.0066	0.024	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.8 HFT	--	--	--	--	0.005 U	--	0.0093	0.0088	0.047	--	--	--	--	--	--	--	--	--	--
	10/29/2008		7.77 HFT	--	--	--	--	0.005 U	--	0.0093	0.011	0.058	--	--	--	--	--	--	--	--	--	--
	1/27/2009		7.58 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0035	0.071	--	--	--	--	--	--	--	--	--	--
	4/7/2009		8.06 HFT	--	--	--	--	0.005 U	--	0.0092	0.0019	0.15	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.49 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0042	0.21	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.72 HFT	--	--	--	--	0.005 U	--	0.0093	0.0064	0.13	--	--	--	--	--	--	--	--	--	--
	1/28/2010		7.72 HFT	--	--	--	--	0.005 U	--	0.008	0.0089	0.11	--	--	--	--	--	--	--	--	--	--
	4/27/2010		7.74 HFT	--	--	--	--	0.005 U	--	0.0068	0.0054	0.1	--	--	--	--	--	--	--	--	--	--
	7/28/2010		7.81 HFT	--	--	--	--	0.005 U	--	0.023	0.022	0.031	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.85 HFT	--	--	--	--	0.005 U	--	0.027	0.023	0.018	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.42 HFT	--	--	--	--	0.005 U	--	0.0076	0.0072	0.033	--	--	--	--	--	--	--	--	--	--
	4/12/2011		8 HFT	--	--	--	--	0.005 U	--	0.025	0.023	0.036	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.023	0.02	0.036	--	--	--	--	--	--	--	--	--	--
	10/19/2011		8 HFT	--	--	--	--	0.005 U	--	0.015	0.013	0.015	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.012	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-01D	3/20/2012		7.73 HF	--	--	--	--	0.005 U	--	0.011	0.01	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.83 HF	--	--	--	--	0.005 U	--	0.0059	0.0026	0.024	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.3 HF	--	--	--	--	0.005 U	--	0.012	0.0095	0.02	--	--	--	--	--	--	--	--	--	--
	10/29/2012	K	7.29 HF	--	--	--	--	0.005 U	--	0.013	0.0099	0.024	--	--	--	--	--	--	--	--	--	--
MW-01S	1/15/1989		7.1	--	--	--	--	0.003 U	--	0.014	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.015
	4/15/1989		--	--	--	--	--	0.01 U	--	0.1	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.11	--	--	--	--	0.01 U	--	0.06	0.05 U	0.03	--	--	--	--	--	--	--	--	--	0.06
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.11
	1/22/1990		7.03	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	4/10/1990		6.96	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	7/15/1990		7.25	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	0.03
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.023	--	--	0.1 U	0.04 U	--	--	--	--	--	0.023
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.051
	4/15/1991		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1991		7.01	--	--	--	--	0.005 U	--	0.01	0.02 U	0.02	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.2	--	--	--	--	0.0027 U	--	0.0081 U	0.1	0.04	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.035	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1993		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1993		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1993		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/10/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/11/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/18/1994		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-01S	1/16/1995		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1995		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1995		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1995		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1996		6.8	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/7/1996		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/13/1997		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.022	--	--	--	--	--	--	--	--	--	--
	4/15/1997		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/8/1997		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/14/1997		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	1/13/1998		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/21/1998		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.021	--	--	--	--	--	--	--	--	--	--
	7/14/1998		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/19/1998		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.7	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.9	--	--	--	--	0.005 U	--	0.01 U	0.025 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.052	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.8	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		6.9	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		6.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/17/2001		6.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/16/2001		6.8	--	--	--	--	0.005 U	--	0.01 U	0.0062	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/15/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/16/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-01S	7/24/2002		7	--	--	--	--	0.005 U	--	0.01 U	0.0018	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/22/2002		6.9	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/8/2003		6.78	--	--	--	--	0.005 U	--	0.0024 J	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/23/2003		6.86	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/29/2003		6.76	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.03	--	--	--	--	--	--	--	--	--	--
	10/21/2003		6.94	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/21/2004		6.91	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/20/2004		7.11	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/20/2004		6.84	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2005		6.92	--	--	--	--	0.005 U	--	0.005 U	0.0018	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2005		7.12	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2005		6.76	--	--	--	--	0.005 U	--	0.005 U	0.001 M2,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/18/2005		6.76	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/25/2006		6.81	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/25/2006		6.91	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2006		6.81	--	--	--	--	0.01 RL-1,U	--	0.01 RL-1,U	0.001 U	0.02 RL-1,U	--	--	--	--	--	--	--	--	--	--
	10/24/2006		7.03	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2007		7.18	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.012	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.05 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2007		7.02 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/23/2007		7.16 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.13 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/22/2008		7.26 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.35 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0017	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2008		7.86 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0027	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-01S	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.0082	0.004	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0023	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011	K	7.8 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0021	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0028	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2012	K	7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0033	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.5 HF	--	--	--	--	0.005 U	--	0.005 U	0.0033	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012	K	7.52 HF	--	--	--	--	0.005 U	--	0.005 U	0.0032	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.45 HF	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.011	--	--	--	--	--	--	--	--	--	--
	7/23/2012	K	7.47 HF	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.011	--	--	--	--	--	--	--	--	--	--
MW-02	1/15/1989		7.5	--	--	--	--	0.003 U	--	0.022	0.017 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/15/1989		--	--	--	--	--	0.01 U	--	0.05	0.5	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.32	--	--	--	--	0.01 U	--	0.06	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.04
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/23/1990		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/10/1990		7.33	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01
	7/15/1990		7.58	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	0.04
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.055
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01	0.02 U	0.02 U	--	--	0.67	0.04 U	--	--	--	--	--	0.02 U
MW-03	1/15/1989		7.1	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/15/1989		--	--	--	--	--	0.01 U	--	0.07	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-03	4/15/1989	K	--	--	--	--	--	0.01 U	--	0.01 U	0.0035	0.05 U	--	--	--	--	--	--	--	--	--	0.05 U
	7/15/1989		7.05	--	--	--	--	0.01 U	--	0.06	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.2
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	10/15/1989	K	--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/22/1990		7.41	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	1/22/1990	K	7.46	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01
	4/11/1990		6.7	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.14	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.03
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	5.3	0.04 U	--	--	--	--	--	0.02 U
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.18	0.04 U	--	--	--	--	--	0.02 U
	4/15/1991		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/23/1991		7.19	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.6	--	--	--	--	0.0027 U	--	0.0081 U	0.05 U	0.02	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.2	--	--	--	--	0.005 U	--	0.023	0.02 U	0.13	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.038	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.096	--	--	--	--	--	--	--	--	--	--
	4/20/1993		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1993		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1993		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		6.6	--	--	--	--	0.005 U	--	0.01 U	0.4	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/12/1994		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/18/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/17/1995		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1995		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/11/1995		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

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Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-03	10/10/1995		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1996		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/13/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.025 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.1	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.2	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.1	--	--	--	--	0.005 U	--	0.017	0.00069 J	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/17/2001		7	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.1	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.2	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/16/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/24/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/22/2002		7.2	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/8/2003		6.98	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-03	4/23/2003		7.08	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2003		7.09	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2003		7.3	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/21/2004		7.12	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/20/2004		7.24	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/20/2004		6.88	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2005		7.25	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2005		7.14	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2005		7.01	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/18/2005		6.98	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.017	--	--	--	--	--	--	--	--	--	--
	1/25/2006		7	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/25/2006		7.08	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2006		7.01	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/24/2006		7.23	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2007		7.39	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2007		7.21 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 C,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/23/2007		7.38 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.17 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.71 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.035	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.33 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2008		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.36 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.81 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.26 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.62 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-03	4/27/2010		7.44 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.22 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.69 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.26 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.6 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.3 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.85 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.012	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.52 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-04	1/15/1989		7.1	--	--	--	--	0.028	--	400	33	0.009 U	--	--	--	--	--	--	--	--	--	0.007
	4/15/1989		--	--	--	--	--	0.05	--	100	43	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	4/15/1989	K	--	--	--	--	--	0.08	--	932	90	0.05 U	--	--	--	--	--	--	--	--	--	0.05 U
	7/15/1989		6.67	--	--	--	--	0.08	--	98	120	0.06	--	--	--	--	--	--	--	--	--	0.09
	7/15/1989	K	6.66	--	--	--	--	0.12	--	98	110	0.08	--	--	--	--	--	--	--	--	--	0.09
	10/15/1989		--	--	--	--	--	0.07	--	120	110	0.05 U	--	--	--	--	--	--	--	--	--	0.04
	10/15/1989	K	--	--	--	--	--	0.07	--	120	110	0.05 U	--	--	--	--	--	--	--	--	--	0.04
	1/24/1990		6.7	--	--	--	--	0.12	--	95.1	109	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	1/24/1990	K	6.48	--	--	--	--	0.12	--	97.1	108	0.02	--	--	--	--	--	--	--	--	--	0.01
	4/11/1990		6.59	--	--	--	--	0.13	--	80.7	81.7	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/11/1990	K	6.59	--	--	--	--	0.13	--	77.6	82.3	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		6.68	--	--	--	--	0.35	--	101	100	0.02 U	--	--	--	--	--	--	--	--	--	0.04
	7/15/1990	K	6.69	--	--	--	--	0.37	--	106	110	0.02 U	--	--	--	--	--	--	--	--	--	0.03
	10/15/1990		--	0.06 U	0.005 U	0.049	0.002 U	0.023	0.01 U	48.4	58.9	0.022	0.05 U	0.001 U	--	0.04 U	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.051
	10/15/1990	K	--	0.06 U	0.005 U	0.052	0.002 U	0.24	0.01 U	50.7	63	--	0.05 U	0.001 U	--	--	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.19
	1/15/1991		--	--	--	--	--	0.26	--	65.3	49.4	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.098
	4/15/1991		7	--	--	--	--	0.076	--	18.4	23.8	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04	7/15/1991		6.7	--	--	--	--	0.61	--	78.5	39.1	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991	K	6.6	--	--	--	--	0.57	--	75	9.6	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1991		6.91	--	--	--	--	0.21	--	40.8	42	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		6.8	--	--	--	--	0.47	--	34	41	0.045	--	--	--	--	--	--	--	--	--	--
	1/15/1992	K	6.8	--	--	--	--	0.47	--	35	42	0.063	--	--	--	--	--	--	--	--	--	--
	4/15/1992		6.8	--	--	--	--	0.84	--	29.2	32.2	0.053	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	4/15/1992	K	6.7	--	--	--	--	0.38	--	40.3	36.1	0.51	0.053	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		6.6	--	--	--	--	0.86	--	59.7	79.9	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992	K	6.7	--	--	--	--	0.78	--	53.8	76.8	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		6.8	--	--	--	--	0.32	--	27.1	21.6	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992	K	6.8	--	--	--	--	0.32	--	23.9	18	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7	--	--	--	--	0.28	--	27.4	16.4	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993	K	7.1	--	--	--	--	0.28	--	27.6	14.2	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/20/1993		7.3	--	--	--	--	0.005 U	--	2.2	1.8	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/20/1993	K	7.3	--	--	--	--	0.005 U	--	2.4	2.1	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1993		6.9	--	--	--	--	0.2	--	23.2	21	0.056	--	--	--	--	--	--	--	--	--	--
	7/13/1993	K	7	--	--	--	--	0.19	--	23.3	18.7	0.053	--	--	--	--	--	--	--	--	--	--
	10/13/1993		6.9	--	--	--	--	0.71	--	80.3	35.5	0.2 U	--	--	--	--	--	--	--	--	--	--
	10/14/1993	K	7.1	--	--	--	--	0.005 U	--	0.01 U	0.04 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		6.7	--	--	--	--	0.23	--	36	0.36	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994	K	7.2	--	--	--	--	0.26	--	35.7	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		6.8	--	--	--	--	0.33	--	26.4	26.9	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994	K	6.8	--	--	--	--	0.31	--	25.5	25.5	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/19/1994		6.8	--	--	--	--	0.2	--	41.4	59	0.038	--	--	--	--	--	--	--	--	--	--
	7/19/1994	K	6.8	--	--	--	--	0.2	--	41	63.8	0.04 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994		6.5	--	--	--	--	0.45	--	52.8	60.7	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994	K	6.6	--	--	--	--	0.43	--	51.7	59.8	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		6.7	--	--	--	--	0.13	--	34.3	28.8	0.026	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04	1/18/1995	K	6.7	--	--	--	--	0.12	--	33.5	29	0.026	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7	--	--	--	--	0.21	--	9.1	8.6	0.052	--	--	--	--	--	--	--	--	--	--
	4/18/1995	K	7	--	--	--	--	0.22	--	9	9.6	0.051	--	--	--	--	--	--	--	--	--	--
	7/12/1995		6.7	--	--	--	--	0.27	--	29.6	28.1	0.1	--	--	--	--	--	--	--	--	--	--
	7/12/1995	K	6.9	--	--	--	--	0.26	--	29.1	20.8	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995		6.7	--	--	--	--	0.38	--	28.9	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995	K	6.7	--	--	--	--	0.38	--	28.1	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/31/1996		7.1	--	--	--	--	0.19	--	32.4	25.7	0.02 U	--	--	8.3	--	--	--	--	--	--	--
	1/31/1996	K	7.1	--	--	--	--	0.19	--	26.9	27.2	0.025	--	--	--	--	--	--	--	--	--	--
	4/16/1996		6.9	--	--	--	--	0.6	--	38	32.2	0.02 U	--	--	2.5	--	--	--	--	--	--	--
	4/16/1996	K	6.9	--	--	--	--	0.63	--	39.6	24.6	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		7	--	--	--	--	0.28	--	58.9	50	0.02 U	--	--	0.1 U	--	--	--	--	--	--	--
	7/16/1996	K	6.9	--	--	--	--	0.28	--	58.5	59	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1996		6.8	--	--	--	--	0.46	--	75.7	63.8	0.04 U	--	--	0.1 U	--	--	--	--	--	--	--
	10/9/1996	K	6.8	--	--	--	--	0.46	--	74.7	53.4	0.04 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		6.8	--	--	--	--	0.54	--	34.5	45.9	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997	K	6.7	--	--	--	--	0.52	--	33.9	34.9	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997		6.9	--	--	--	--	0.53	--	18.8	27.3	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997	K	6.9	--	--	--	--	0.54	--	18.8	24.9	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		6.8	--	--	--	--	0.62	--	35.2	36	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997	K	6.8	--	--	--	--	0.63	--	35.4	36	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		6.6	--	--	--	--	0.64	--	85.3	73.8	0.08 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997	K	6.7	--	--	--	--	0.63	--	81.6	72.7	0.04 U	--	--	--	--	--	--	--	--	--	--
	1/14/1998		6.9	--	--	--	--	0.53	--	44	39.2	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1998	K	6.9	--	--	--	--	0.5	--	42.8	43.6	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.3	--	--	--	--	0.43	--	14.1	7.2	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998	K	7.3	--	--	--	--	0.42	--	14.1	7.8	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7	--	--	--	--	0.32	--	18.9	16.3	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-04	7/15/1998	K	7	--	--	--	--	0.32	--	19	16.3	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998		6.8	--	--	--	--	0.44	--	36.2	34.1	0.03	--	--	--	--	--	--	--	--	--	--
	10/21/1998	K	6.8	--	--	--	--	0.45	--	36.2	34.7	0.025	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.4	--	--	--	--	0.58	--	85.2	78.6	0.04 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999	K	6.4	--	--	--	--	0.58 U	--	87.3	124	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.7	--	--	--	--	0.41	--	42.8	0.57	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999	K	6.61	--	--	--	--	0.42	--	43.4	4.6	0.05 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		6.9	--	--	--	--	0.42	--	49.7	41.1	0.05 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999	K	6.9	--	--	--	--	0.42	--	50.6	48.5	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.5	--	--	--	--	0.59	--	105	58.2	0.075 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999	K	6.6	--	--	--	--	0.58	--	102	60.5	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/27/2000		6.7	--	--	--	--	0.32	--	60	76.3	0.05 U	--	--	--	--	--	--	--	--	--	--
	1/27/2000	K	6.8	--	--	--	--	0.32	--	58.5	69.9	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		6.9	--	--	--	--	0.55	--	39.3	32.9	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000	K	7	--	--	--	--	0.54	--	38.7	33.9	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7	--	--	--	--	0.52	--	42.1	45.6	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000	K	7	--	--	--	--	0.52	--	36	36.2	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		6.8	--	--	--	--	0.38	--	16.8	11	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001	K	6.8	--	--	--	--	0.4	--	17.3	12	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001		6.9	--	--	--	--	0.32	--	12.6	15	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001	K	6.8	--	--	--	--	0.31	--	11.9	14	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001		6.9	--	--	--	--	0.44	--	39.8	32	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001	K	6.8	--	--	--	--	0.4	--	28.9	33	0.05 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002		6.7	--	--	--	--	0.41	--	24.4	18	0.05 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002	K	6.9	--	--	--	--	0.35	--	18.9	18	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002		6.8	--	--	--	--	0.44	--	27.4	31	0.05 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002	K	6.8	--	--	--	--	0.43	--	26.3	31	0.05 U	--	--	--	--	--	--	--	--	--	--
	7/25/2002		6.7	--	--	--	--	0.5	--	32.7	25.1	0.12 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04	7/25/2002	K	6.7	--	--	--	--	0.49	--	29.8	30.5	0.12 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		6.7	--	--	--	--	0.6	--	29	32.6	0.12 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002	K	6.7	--	--	--	--	0.63	--	30.6	30.3	0.12 U	--	--	--	--	--	--	--	--	--	--
	12/30/2002		7.39	0.02 U	0.01 U	0.34	0.008 U	0.26	0.02 U	9.2	11	0.02 U	0.01 U	0.0012	--	0.02 U	0.016	0.02 U	0.01 U	--	0.02 U	0.04 U
	12/30/2002	K	6.71	0.02 U	0.01 U	0.66	0.008 U	0.25	0.02 U	9.4	9.4	0.02 U	0.01 U	0.0014	--	0.02 U	0.01 U	0.02 U	0.01 U	--	0.02 U	0.16
	4/25/2003		6.92	--	--	--	--	0.29	--	16	14	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/25/2003	K	6.99	--	--	--	--	0.29	--	16	20	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		6.88	--	--	--	--	0.41	--	30	29	0.03 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003	K	6.83	--	--	--	--	0.47	--	37	33	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/23/2003		6.85	0.02 U	0.015	0.44	0.008 U	0.24	0.02 U	21	20	0.02 U	0.01 U	0.0014	--	0.02 U	0.01 U	0.02 U	0.01 U	0.2 U	0.02 U	0.046
	10/23/2003	K	6.74	0.02 U	0.01 U	0.26	0.008 U	0.21	0.02 U	18	21	0.02 U	0.01 U	0.00095	--	0.02 U	0.01 U	0.02 U	0.023	0.2 U	0.02 U	0.04 U
	1/23/2004		6.71	--	--	--	--	0.32	--	22	28	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/23/2004	K	6.78	--	--	--	--	0.27	--	16	29	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		6.88	--	--	--	--	0.29	--	20	24	0.03 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004	K	6.83	--	--	--	--	0.34	--	23	28	0.04 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		6.58	--	--	--	--	0.32	--	26	32	0.03 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004	K	6.65	--	--	--	--	0.32	--	25	32	0.03 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		6.8	0.01 U	0.005 U	0.5	0.004 U	0.14	0.01 U	2.5	3.7	0.01 U	0.005 U	0.00098	--	0.01 U	0.01 U	0.01 U	0.005 U	0.1 U	0.01 U	0.14
	10/12/2004	K	6.84	--	--	--	--	0.13	--	2.2	3.5	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		7.08	--	--	--	--	0.02	--	0.044	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005	K	7.08	--	--	--	--	0.02	--	0.052	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		6.89	--	--	--	--	0.42	--	23	23	0.03 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005	K	6.8	--	--	--	--	0.39	--	23	24	0.03 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.58	--	--	--	--	0.46	--	18	20	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005	K	6.56	--	--	--	--	0.46	--	18	20	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		6.72	0.048	0.01 U	0.39	0.008 U	0.41	0.02 U	13	15	0.02 U	0.01 U	0.0017	--	0.02 U	0.02 U	0.02 U	0.02 U	0.2 U	0.02 U	0.079
	10/20/2005	K	6.75	--	--	--	--	0.41	--	13	15	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/26/2006		6.55	--	--	--	--	0.6	--	25	25	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04	1/26/2006	K	6.55	--	--	--	--	0.61	--	25	28	0.03 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		6.63	--	--	--	--	0.56	--	15	16	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006	K	6.62	--	--	--	--	0.57	--	15	16	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/27/2006		6.44	--	--	--	--	0.62	--	27	26	0.04 RL-1,U	--	--	--	--	--	--	--	--	--	--
	7/27/2006	K	6.47	--	--	--	--	0.62	--	26	29	0.04 RL-1,U	--	--	--	--	--	--	--	--	--	--
	10/26/2006		6.89	0.05 RL-1,U	0.052	0.11	0.02 RL-1,U	0.51	0.05 RL-1,U	15	18	0.05 RL-1,U	0.025 RL-1,U	0.0016	--	0.05 RL-1,U	0.05 RL-1,U	0.05 RL-1,U	0.06	0.5 RL-1,U	0.05 RL-1,U	0.1 RL-1,U
	10/26/2006	K	6.82	--	--	--	--	0.56	--	16	19	0.1 RL-1,U	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.09	--	--	--	--	0.63	--	5.8	6.9	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/18/2007	K	7.04	--	--	--	--	0.63	--	5.6	6.6	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	4/18/2007		6.84 HFT	--	--	--	--	0.72	--	4.8	4.5	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	4/18/2007	K	6.8 HFT	--	--	--	--	0.73	--	4.4	5	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/27/2007		6.78 HFT	--	--	--	--	0.42	--	10	7.7	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/27/2007	K	6.79 HFT	--	--	--	--	0.42	--	10	7.5	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.42 HFT	0.03 RL1,U	0.03 RL1,U	0.31	0.012 RL1,U	0.37	0.03 RL1,U	4.2	4.5	0.03 RL1,U	0.015 RL1,U	0.00063	--	0.03 RL1,U	0.03 RL1,U	0.03 RL1,U	0.03 RL1,U	0.3 RL1,U	0.03 RL1,U	0.06 RL1,U
	10/25/2007	K	7.41 HFT	--	--	--	--	0.41	--	4.7	4.2	0.1 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/31/2008		6.96 HFT	--	--	--	--	0.6	--	15	17	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/31/2008	K	6.94 HFT	--	--	--	--	0.62	--	17	14 H,J	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.45 HFT	--	--	--	--	0.45	--	6.6	5.2	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008	K	7.42 HFT	--	--	--	--	0.45	--	6.7	5	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/31/2008		7.15 HFT	--	--	--	--	0.44	--	11	10	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/31/2008	K	7.04 HFT	--	--	--	--	0.44	--	11	11	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.45 HFT	0.01 U	0.01 U	0.077	0.004 U	0.068	0.01 U	0.21	0.042	0.01 U	0.005 U	0.00098	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	10/30/2008	K	7.42 HFT	--	--	--	--	0.071	--	0.19	0.03	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.55 HFT	--	--	--	--	0.028	--	0.18	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009	K	7.55 HFT	--	--	--	--	0.028	--	0.12	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.68 HFT	--	--	--	--	0.02	--	0.025	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009	K	7.74 HFT	--	--	--	--	0.019	--	0.022	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2009		7.76 HFT	--	--	--	--	0.017	--	0.3	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04	7/31/2009	K	7.76 HFT	--	--	--	--	0.017	--	0.23	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.5 HFT	--	--	--	--	0.042	--	0.05	0.0069	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.3 HFT	--	--	--	--	0.5	--	6.4	4.6	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/28/2011	K	7.3 HFT	--	--	--	--	0.51	--	6.1	4.5	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.2 HFT	0.027	0.02 RL1,U	0.13	0.008 RL1,U	0.51	0.02 RL1,U	9.6	9.7	0.02 RL1,U	0.01 RL1,U	0.0002 U	--	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.02	0.2 RL1,U	0.02 RL1,U	0.04 RL1,U
	10/21/2011	K	7.2 HFT	0.02 RL1,U	0.028	0.14	0.008 RL1,U	0.53	0.02 RL1,U	11	10	0.02 RL1,U	0.01 RL1,U	0.0002 U	--	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.2 RL1,U	0.02 RL1,U	0.04 RL1,U
	1/19/2012		6.7 HFT	--	--	--	--	0.61	--	13	12	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/19/2012	K	6.7 HFT	--	--	--	--	0.6	--	13	12	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.3 HF	0.02 U	0.01 U	0.1	0.02 U	0.52	0.05 U	16	14	0.05 U	0.0057	--	--	0.05 U	0.022	0.05 U	0.05 U	--	0.05 U	0.1 U
	3/21/2012	K	7.34 HF	--	--	--	--	0.57	--	17	15	0.05 U	--	--	--	--	--	--	--	--	--	--
	7/26/2012		--	0.21	0.059	0.1	0.008 U	0.61	0.02 U	17	18	0.02 U	0.025 U	--	0.2 U	0.02 U	0.02 U	0.02 U	0.055	--	0.02 U	0.04 U
	7/26/2012	K	--	0.22	0.037	0.1	0.008 U	0.6	0.02 U	18	19	0.02 U	0.025 U	--	0.2 U	0.02 U	0.02 U	0.02 U	0.05 U	--	0.02 U	0.04 U
	11/1/2012		6.85 HF	0.02 U	0.026	0.088	0.008 U	0.5	0.02 U	5.6	5.2	0.02 U	0.01 U	--	0.08 U	0.02 U	0.02 U	0.02 U	0.02 U	0.2 U	0.02 U	0.04 U
	11/1/2012	K	6.84 HF	0.02 U	0.02 U	0.069	0.008 U	0.34	0.02 U	4.4	4.5	0.02 U	0.01 U	--	--	0.02 U	0.038	0.02 U	0.02 U	0.2 U	0.02 U	0.095
MW-04A	1/15/1989		--	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.008
	4/15/1989		--	--	--	--	--	0.01 U	--	0.05	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.44	--	--	--	--	0.01 U	--	0.13	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.08
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/24/1990		7.41	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/12/1990		7.38	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.77	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	0.04
	10/15/1990		--	0.06 U	0.005 U	0.033	0.002 U	0.005 U	0.01 U	0.038	0.02 U	0.02 U	0.05 U	0.001 U	--	0.04 U	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.7

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-04A	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	4/15/1991		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1991	K	7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/23/1991		7.33	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.6	--	--	--	--	0.0027 U	--	0.0081 U	0.05 U	0.02	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.4	--	--	--	--	0.03	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.7	--	--	--	--	0.005 U	--	0.011	0.02 U	0.031	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/20/1993		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1993		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	--
	10/13/1993		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		7.4	--	--	--	--	0.005 U	--	0.12	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/19/1994		7.5	--	--	--	--	0.005 U	--	0.053	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	10/12/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.022	--	--	--	--	--	--	--	--	--	--
	1/18/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/31/1996		7.5	--	--	--	--	0.005 U	--	0.021	0.02 U	0.021	--	--	--	--	--	--	--	--	--	--
	4/16/1996		7.4	--	--	--	--	0.005 U	--	0.027	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		7.6	--	--	--	--	0.005 U	--	0.018	0.016	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1996		7.6	--	--	--	--	0.005 U	--	0.024	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		7.5	--	--	--	--	0.005 U	--	0.018	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997		7.5	--	--	--	--	0.005 U	--	0.016	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		7.6	--	--	--	--	0.005 U	--	0.013	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04A	10/16/1997		7.4	--	--	--	--	0.005 U	--	0.015	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1998		7.7	--	--	--	--	0.005 U	--	0.02	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.8	--	--	--	--	0.005 U	--	0.018	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.5	--	--	--	--	0.005 U	--	0.01	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		7.6	--	--	--	--	0.005 U	--	0.022	0.021	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.8	--	--	--	--	0.005 U	--	0.025	0.02	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.54	--	--	--	--	0.005 U	--	0.012	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.1	--	--	--	--	0.005 U	--	0.01 U	0.017	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/27/2000		7.8	--	--	--	--	0.005 U	--	0.015	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.6	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0056	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001		7.2	--	--	--	--	0.005 U	--	0.01 U	0.0055	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.5	--	--	--	--	0.005 U	--	0.01 U	0.0077	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		5.9	--	--	--	--	0.005 U	--	0.01 U	0.0052	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0068	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/25/2002		7.6	--	--	--	--	0.005 U	--	0.01 U	0.0062	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0061	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/9/2003		7.29	--	--	--	--	0.005 U	--	0.0089	0.0058	0.023	--	--	--	--	--	--	--	--	--	--
	4/24/2003		7.17	--	--	--	--	0.005 U	--	0.0077	0.0055	0.035	--	--	--	--	--	--	--	--	--	--
	7/30/2003		6.92	--	--	--	--	0.005 U	--	0.005 U	0.0029	0.024	--	--	--	--	--	--	--	--	--	--
	10/21/2003		7.02	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.025	--	--	--	--	--	--	--	--	--	--
	1/22/2004		7.3	--	--	--	--	0.005 U	--	0.005 U	0.0027	0.03	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.59	--	--	--	--	0.005 U	--	0.005 U	0.0056	0.045	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.04	--	--	--	--	0.005 U	--	0.005 U	0.0023	0.032	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.22	--	--	--	--	0.005 U	--	0.0081	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		7.32	--	--	--	--	0.005	--	0.012	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-04A	4/27/2005		7.96	--	--	--	--	0.005 U	--	0.0083	0.009	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.89	--	--	--	--	0.005 U	--	0.0078	0.0054	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		7	--	--	--	--	0.005 U	--	0.0081	0.0085	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2006		7.23	--	--	--	--	0.005 U	--	0.0088	0.0073	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		6.88	--	--	--	--	0.005 U	--	0.0074	0.0068	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2006		6.63	--	--	--	--	0.005 U	--	0.0064	0.0057	0.014	--	--	--	--	--	--	--	--	--	--
	10/26/2006		6.88	--	--	--	--	0.005 U	--	0.0065	0.0038	0.017	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.4	--	--	--	--	0.005 U	--	0.0079	0.0062	0.016	--	--	--	--	--	--	--	--	--	--
	4/18/2007		7.17 HFT	--	--	--	--	0.005 U	--	0.0079	0.0067	0.019	--	--	--	--	--	--	--	--	--	--
	7/27/2007		7.06 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0043	0.032	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.91 HFT	--	--	--	--	0.005 U	--	0.011	0.0043	0.011	--	--	--	--	--	--	--	--	--	--
	1/31/2008		7.6 HFT	--	--	--	--	0.005 U	--	0.0092	0.0072 H,J	0.017	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.67 HFT	--	--	--	--	0.005 U	--	0.0081	0.0061	0.024	--	--	--	--	--	--	--	--	--	--
	7/31/2008		7.22 HFT	--	--	--	--	0.005 U	--	0.0074	0.0064	0.025	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.66 HFT	--	--	--	--	0.005 U	--	0.0074	0.0087	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.65 HFT	--	--	--	--	0.005 U	--	0.011	0.01	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.84 HFT	--	--	--	--	0.005 U	--	0.0074	0.0055	0.018	--	--	--	--	--	--	--	--	--	--
	7/31/2009		7.92 HFT	--	--	--	--	0.005 U	--	0.0063	0.0038	0.014	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.74 HFT	0.01 U	0.01	0.028	0.004 U	0.005 U	0.01 U	0.015	0.014	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/29/2010		7.69 HFT	--	--	--	--	0.005 U	--	0.005 U	0.002	0.015	--	--	--	--	--	--	--	--	--	--
	1/29/2010	K	7.75 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.014	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.71 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0015	0.011	--	--	--	--	--	--	--	--	--	--
	4/28/2010	K	7.71 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.012	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.52 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0025	0.012	--	--	--	--	--	--	--	--	--	--
	7/30/2010	K	7.56 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0027	0.012	--	--	--	--	--	--	--	--	--	--
	10/29/2010		7.79 HFT	0.01 U	0.01 U	0.031	0.004 U	0.005 U	0.01 U	0.013	0.01	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	10/29/2010	K	7.68 HFT	--	--	--	--	0.005 U	--	0.015	0.01	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.56 HFT	--	--	--	--	0.005 U	--	0.009	0.0088	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-04A	1/20/2011	K	7.58 HFT	--	--	--	--	0.005 U	--	0.0094	0.0087	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.0076	0.0098	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011	K	7.9 HFT	--	--	--	--	0.005 U	--	0.0082	0.0095	0.013	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.015	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011	K	7.9 HFT	--	--	--	--	0.005 U	--	0.011	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.02	0.019	0.015	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7.4 HFT	--	--	--	--	0.005 U	--	0.015	0.015	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		8 HF	0.01 U	0.01 U	0.029	0.004 U	0.005 U	0.01 U	0.016	0.014	0.012	0.005 U	--	--	0.01 U	0.025	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/26/2012		--	0.01 U	0.01 U	0.032	0.004 U	0.005 U	0.01 U	0.013	0.012	0.022	0.005 U	--	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.035
	10/31/2012		7.53 HF	0.01 U	0.01 U	0.032	0.004 U	0.005 U	0.01 U	0.0061	0.0025	0.01 U	0.005 U	--	0.04 U	0.01 U	0.016	0.01 U	0.01 U	--	0.01 U	0.032
MW-05	1/15/1989		7.4	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/15/1989		--	--	--	--	--	0.01 U	--	0.04	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		6.83	--	--	--	--	0.01 U	--	0.04	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.09
	7/15/1989	K	6.8	--	--	--	--	0.01 U	--	0.04	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.04 U
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/25/1990		7.03	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/10/1990		7.12	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	7/15/1990		7.08	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.2
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.35	0.04 U	--	--	--	--	--	2.7
MW-06B	1/15/1989		--	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.021
	4/15/1989		--	--	--	--	--	0.01 U	--	0.06	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.3	--	--	--	--	0.01 U	--	0.04	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.09
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/24/1990		7.36	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	4/12/1990		7.65	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.57	--	--	--	--	0.01 U	--	0.02	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-06B	10/15/1990		--	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	--	0.04 U	--	--	--	--	--	0.058
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.19	0.04 U	--	--	--	--	--	0.024
	4/15/1992		7.4	--	--	--	--	0.005 U	--	0.014	0.02 U	0.02 U	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		7.4	--	--	--	--	0.005 U	--	0.019	0.02 U	0.054	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.5	--	--	--	--	0.005 U	--	0.011	0.02 U	0.038	--	--	--	--	--	--	--	--	--	--
	4/21/1993		6.9	--	--	--	--	0.005 U	--	0.014	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1993		7.4	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/12/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/19/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1994		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/17/1995		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/11/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1996		7.4	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		7.5	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1997		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1998		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-06B	10/20/1998		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.01	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.2	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.4	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.2	--	--	--	--	0.005 U	--	0.01 U	0.0051	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001		7.2	--	--	--	--	0.005 U	--	0.01 U	0.0053	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.5	--	--	--	--	0.005 U	--	0.01 U	0.0049	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0051	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0066	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/25/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0036	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7.3	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/9/2003		7.18	--	--	--	--	0.005 U	--	0.0097	0.0068	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2003		7.43	--	--	--	--	0.005 U	--	0.0078	0.0073	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		7.73	--	--	--	--	0.005 U	--	0.005 U	0.0043 O-09	0.01	--	--	--	--	--	--	--	--	--	--
	10/22/2003		7.63	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/22/2004		7.17	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/20/2004		7.4	--	--	--	--	0.005 U	--	0.005 U	0.0031	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.05	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.21	--	--	--	--	0.005 U	--	0.005 U	0.002	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2005		6.92	--	--	--	--	0.005 U	--	0.005 U	0.0038	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.81	--	--	--	--	0.005 U	--	0.005 U	0.0012	0.013	--	--	--	--	--	--	--	--	--	--
	10/19/2005		6.78	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2006		7.13	--	--	--	--	0.005 U	--	0.005 U	0.0034	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-06B	4/26/2006		7.11	--	--	--	--	0.005 U	--	0.008	0.0076	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2006		6.98	--	--	--	--	0.005 U	--	0.0054	0.0063	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.24	--	--	--	--	0.005 U	--	0.0051	0.0043	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.61	--	--	--	--	0.005 U	--	0.005 U	0.005	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.5 HFT	--	--	--	--	0.005 U	--	0.0084	0.0065	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2007		7.56 HFT	--	--	--	--	0.005 U	--	0.005 U	0.004	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.72 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.41 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.68 HFT	--	--	--	--	0.005 U	--	0.0069	0.004	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2008		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0012	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2008		7.45 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0031	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2009		7.31 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0027	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.75 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0021	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.13 HFT	--	--	--	--	0.005 U	--	0.005 U	0.002	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.53 HFT	--	--	--	--	0.005 U	--	0.0065	0.0066	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2010		7.54 HFT	--	--	--	--	0.005 U	--	0.005 U	0.005	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2010		7.46 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0012	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.16 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0011	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2010		7.38 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.25 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0014	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.015	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0077	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.007	0.0047	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0042	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.11 HF	--	--	--	--	0.005 U	--	0.0057	0.0023	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.79 HF	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.68 HF	--	--	--	--	0.005 U	--	0.005 U	0.0015	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-06D	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02	--	--	--	0.04 U	--	--	--	--	--	0.078

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-06D	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.13	0.04 U	--	--	--	--	--	0.022
	4/15/1992		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.4	--	--	--	--	0.005 U	--	0.012	0.02 U	0.095	--	--	--	--	--	--	--	--	--	--
	4/21/1993		6.9	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1993		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1993		7.4	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/12/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/19/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/11/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1996		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		7.5	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.031	--	--	--	--	--	--	--	--	--	--
	1/14/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.024	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-06D	1/15/1999		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.26	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.3	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.5	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0026	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001		7.3	--	--	--	--	0.005 U	--	0.01 U	0.0024	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.0027	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/25/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0015	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0025	0.043	--	--	--	--	--	--	--	--	--	--
	1/8/2003		7.41	--	--	--	--	0.005 U	--	0.002 J	0.0018	0.012	--	--	--	--	--	--	--	--	--	--
	4/24/2003		7.23	--	--	--	--	0.005 U	--	0.005 U	0.0021	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		7.28	--	--	--	--	0.005 U	--	0.005 U	0.0023 O-09	0.014	--	--	--	--	--	--	--	--	--	--
	10/22/2003		7.84	--	--	--	--	0.005 U	--	0.005 U	0.002	0.014	--	--	--	--	--	--	--	--	--	--
	1/22/2004		7.35	--	--	--	--	0.005 U	--	0.005 U	0.003	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/20/2004		7.56	--	--	--	--	0.005 U	--	0.005 U	0.0032	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.3	--	--	--	--	0.005 U	--	0.005 U	0.0055	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.4	--	--	--	--	0.005 U	--	0.006	0.0069	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/26/2005		7.31	--	--	--	--	0.005 U	--	0.005 U	0.0047	0.014	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.3	--	--	--	--	0.005 U	--	0.0087	0.0081	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		7.23	--	--	--	--	0.005 U	--	0.006	0.0056	0.021	--	--	--	--	--	--	--	--	--	--
	10/19/2005		7.25	--	--	--	--	0.005 U	--	0.005 U	0.003	0.01	--	--	--	--	--	--	--	--	--	--
	1/26/2006		7.46	--	--	--	--	0.005 U	--	0.005 U	0.0011	0.01	--	--	--	--	--	--	--	--	--	--
	4/26/2006		7.36	--	--	--	--	0.005 U	--	0.005	0.0035	0.016	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-06D	7/26/2006		7.45	--	--	--	--	0.005 U	--	0.005 U	0.0045	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.54	--	--	--	--	0.005 U	--	0.005 U	0.0022	0.01	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.71	--	--	--	--	0.005 U	--	0.005 U	0.0015	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.67 HFT	--	--	--	--	0.005 U	--	0.0057	0.0039	0.014	--	--	--	--	--	--	--	--	--	--
	7/26/2007		7.74 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0028 M2	0.028	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.92 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0019	0.015	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.62 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0035	0.013	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.94 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.016	--	--	--	--	--	--	--	--	--	--
	7/31/2008		7.68 HFT	--	--	--	--	0.005 U	--	0.0052	0.0041	0.014	--	--	--	--	--	--	--	--	--	--
	10/28/2008		7.66 HFT	--	--	--	--	0.005 U	--	0.0079	0.0078	0.028	--	--	--	--	--	--	--	--	--	--
	1/27/2009		7.43 HFT	--	--	--	--	0.005 U	--	0.011	0.0098	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.81 HFT	--	--	--	--	0.005 U	--	0.0083	0.0085	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.39 HFT	--	--	--	--	0.005 U	--	0.009	0.01	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.68 HFT	--	--	--	--	0.005 U	--	0.012	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2010		7.68 HFT	--	--	--	--	0.005 U	--	0.014	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2010		7.63 HFT	--	--	--	--	0.005 U	--	0.0076	0.0081	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.47 HFT	--	--	--	--	0.005 U	--	0.0075	0.0062	0.011	--	--	--	--	--	--	--	--	--	--
	10/29/2010		7.73 HFT	--	--	--	--	0.005 U	--	0.019	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.48 HFT	--	--	--	--	0.005 U	--	0.019	0.014	0.012	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.016	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.012	0.014	0.018	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.01	0.0087	0.014	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.0057	0.005	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.49 HF	--	--	--	--	0.005 U	--	0.0057	0.0035	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		8.06 HF	--	--	--	--	0.005 U	--	0.005 U	0.0028	0.049	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.9 HF	--	--	--	--	0.005 U	--	0.012	0.0085	0.021	--	--	--	--	--	--	--	--	--	--
MW-07	1/15/1989		--	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/15/1989		--	--	--	--	--	0.01 U	--	0.02	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-07	4/15/1989	K	--	--	--	--	--	0.01 U	--	0.01 U	0.0016	0.05 U	--	--	--	--	--	--	--	--	--	0.05 U
	7/15/1989		7.68	--	--	--	--	0.01 U	--	0.03	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.04 U
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/24/1990		7.69	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/12/1990		7.91	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.57	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.18	0.04 U	--	--	--	--	--	0.19
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.22	0.04 U	--	--	--	--	--	0.094
	4/15/1991		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/23/1991		7.22	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.01	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.2	--	--	--	--	0.0027 U	--	0.0081 U	0.07	0.14	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.2	--	--	--	--	0.005 U	--	0.013	0.02 U	0.032	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.1	--	--	--	--	0.005 U	--	0.095	0.02 U	0.21	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.1	--	--	--	--	0.005 U	--	0.063	0.02 U	0.65	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.1	--	--	--	--	0.005 U	--	0.033	0.02 U	0.19	--	--	--	--	--	--	--	--	--	--
	4/22/1993		7.1	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1993		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1993		6.6	--	--	--	--	0.005 U	--	0.01 U	0.2 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/11/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/12/1994		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/19/1994		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	10/12/1994		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		6.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.026	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/11/1995		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/10/1995		6.6	--	--	--	--	0.005 U	--	0.014	0.02 U	0.079	--	--	--	--	--	--	--	--	--	--
	1/31/1996		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.043	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-07	4/16/1996		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1996		6.9	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		6.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.036	--	--	--	--	--	--	--	--	--	--
	1/14/1997		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.029	--	--	--	--	--	--	--	--	--	--
	4/16/1997		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1997		6.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025	--	--	--	--	--	--	--	--	--	--
	1/14/1998		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.044	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.042	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.5	--	--	--	--	0.0056	--	0.01 U	0.02 U	0.05	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.81	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.042	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7	--	--	--	--	0.01 U	--	0.02 U	0.02 U	0.068	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.8	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.071	--	--	--	--	--	--	--	--	--	--
	1/25/2000		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.035	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.057	--	--	--	--	--	--	--	--	--	--
	4/15/2001		6.7	--	--	--	--	0.005 U	--	0.01 U	0.00098 J	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/18/2001		6.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.037	--	--	--	--	--	--	--	--	--	--
	10/18/2001		6.7	--	--	--	--	0.01 U	--	0.02 U	0.002 U	0.073	--	--	--	--	--	--	--	--	--	--
	1/17/2002		7.2	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.034	--	--	--	--	--	--	--	--	--	--
	4/18/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.057	--	--	--	--	--	--	--	--	--	--
	7/26/2002		6.9	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	12/30/2002		7.45	0.01 U	0.005 U	0.4	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.00039	--	0.01 U	0.0085	0.01 U	0.005 U	--	0.01 U	0.14
	4/24/2003		6.97	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.032	--	--	--	--	--	--	--	--	--	--
	7/30/2003		6.75	--	--	--	--	0.005 U	--	0.005 U	0.38 O-09	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-07	10/23/2003		7.31	0.01 U	0.005 U	0.11	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.0085	0.01 U	0.005 U	0.1 U	0.01 U	0.02 U
	1/22/2004		6.88	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.35	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.33	--	--	--	--	0.005 U	--	0.005 U	0.0018	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.18	0.01 U	0.005 U	0.38	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.005 U	0.01 U	0.005 U	0.1 U	0.01 U	0.13
	1/27/2005		6.85	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.45	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.71	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/19/2005		6.7	0.01 U	0.005 U	0.52	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.00078	--	0.017	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.14
	1/26/2006		6.81	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		6.71	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.031	--	--	--	--	--	--	--	--	--	--
	7/26/2006		6.75	--	--	--	--	0.01 RL-1,U	--	0.01 RL-1,U	0.001 M2,U	0.048	--	--	--	--	--	--	--	--	--	--
	10/25/2006		6.92	0.05 RL-1,U	0.053	0.057	0.02 RL-1,U	0.025 RL-1,U	0.05 RL-1,U	0.025 RL-1,U	0.001 U	0.05 RL-1,U	0.025 RL-1,U	0.0014	--	0.05 RL-1,U	0.05 RL-1,U	0.05 RL-1,U	0.077	0.5 RL-1,U	0.05 RL-1,U	0.1 RL-1,U
	1/18/2007		7.14	--	--	--	--	0.01 RL1,U	--	0.01 RL1,U	0.001 U	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	4/17/2007		6.98 HFT	--	--	--	--	0.005 U	--	0.0058	0.001 U	0.027	--	--	--	--	--	--	--	--	--	--
	7/26/2007		6.84 HFT	--	--	--	--	0.01 RL1,U	--	0.01 RL1,U	0.001 U	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.91 HFT	0.01 U	0.01 U	0.033	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.00029	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.066
	1/29/2008		7.21 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.69 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2008		7.66 HFT	--	--	--	--	0.005 U	--	0.0051	0.001 U	0.014	--	--	--	--	--	--	--	--	--	--
	10/28/2008		7.51 HFT	0.01 U	0.01 U	0.039	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.00062	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/27/2009		7.29 HFT	--	--	--	--	0.005 U	--	0.0051	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.82 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.11 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		7.25 HFT	--	--	--	--	0.005 U	--	0.0068	0.001 U	0.02	--	--	--	--	--	--	--	--	--	--
	7/29/2010		6.95 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.014	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-07	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.15 HFT	--	--	--	--	0.005 U	--	0.005 U	0.002 RL1,U	0.011	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.5 HFT	--	--	--	--	0.025 RL1,U	--	0.025 RL1,U	0.001 U	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.1 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.2 HFT	0.01 U	0.015	0.03	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.016	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/19/2012		6.9 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.05 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.79 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.016	--	--	--	--	--	--	--	--	--	--
	10/31/2012		7.17 HF	0.01 U	0.01 U	0.046	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	--	--	0.01 U	0.017	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
MW-08	1/15/1989		--	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.009
	4/15/1989		--	--	--	--	--	0.01 U	--	0.03	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.28	--	--	--	--	0.01 U	--	0.06	0.05 U	0.02	--	--	--	--	--	--	--	--	--	0.05
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/23/1990		7.63	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/13/1990		7.24	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	7/15/1990		7.43	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.03
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.028
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.78
	7/29/2010		7.05 HFT	--	--	--	--	0.005 U	--	0.049	0.04	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2012		--	0.02 U	0.18	0.042	0.008 U	0.01 U	0.02 U	0.01 U	0.005 U	0.02 U	0.01 U	--	0.22	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	0.04 U
	10/31/2012		--	0.01 U	0.01 U	0.028	0.004 U	0.005 U	0.01 U	0.005 U	0.002 U	0.01 U	0.005 U	--	1.1	0.01 U	0.021	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-09	1/15/1989		--	--	--	--	--	0.003 U	--	0.33	0.45	0.009 U	--	--	--	--	--	--	--	--	--	0.008
	4/15/1989		--	--	--	--	--	0.01 U	--	0.06	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.18	--	--	--	--	0.01 U	--	0.17	0.2	0.02	--	--	--	--	--	--	--	--	--	0.08
	10/15/1989		--	--	--	--	--	0.01 U	--	1.8	2.5	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/23/1990		7.41	--	--	--	--	0.005 U	--	2.2	2.28	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	4/13/1990		7.15	--	--	--	--	0.005 U	--	0.81	0.8	0.02 U	--	--	--	--	--	--	--	--	--	0.03

Table C-3
Phibro-Tech, Inc.
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Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-09	7/15/1990		7.32	--	--	--	--	0.01 U	--	0.04	0.03	0.02 U	--	--	--	--	--	--	--	--	--	0.03
	7/15/1990	K	7.31	--	--	--	--	0.005 U	--	0.03	0.03	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	10/15/1990		--	--	--	--	--	0.005 U	--	0.19	0.25	0.062	--	--	0.1 U	0.04 U	--	--	--	--	--	0.12
	1/15/1991		--	--	--	--	--	0.005 U	--	0.085	0.124	0.02 U	--	--	0.17	0.04 U	--	--	--	--	--	0.46
	4/15/1991		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.2	--	--	--	--	0.005 U	--	0.027	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/22/1991		7.04	--	--	--	--	0.005 U	--	0.07	0.05	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.5	--	--	--	--	0.0027 U	--	0.0081 U	0.05 U	0.031	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.4	--	--	--	--	0.005 U	--	0.057	0.02 U	0.053	--	--	--	--	--	--	--	--	--	--
	1/15/1993	K	7.4	--	--	--	--	0.005 U	--	0.067	0.02 U	0.083	--	--	--	--	--	--	--	--	--	--
	4/20/1993		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/14/1993		6.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/14/1993		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/12/1994		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1994		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1995		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1995		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995		6.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	4.1	--	--	--	--	--	--	--
	4/17/1996		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.24	--	--	--	--	--	--	--
	7/17/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	0.1 U	--	--	--	--	--	--	--
	10/9/1996		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	2	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-09	1/15/1997		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1997		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		6.7	--	--	--	--	0.005 U	--	0.048	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997	K	6.6	--	--	--	--	0.005 U	--	0.049	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998	K	6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998	K	7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998	K	6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998		6.4	--	--	--	--	0.0075	--	1.3	3.3	0.34	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.3	--	--	--	--	0.005 U	--	0.01 U	3.3	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.7	--	--	--	--	0.005 U	--	0.64	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999	K	6.91	--	--	--	--	0.005 U	--	0.6	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		6.6	--	--	--	--	0.01 U	--	5.6	5.8	0.05 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999	K	6.6	--	--	--	--	0.01 U	--	5.5	6	0.05 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.9	--	--	--	--	0.005 U	--	4.2	4	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999	K	6.4	--	--	--	--	0.005 U	--	4.2	3.6	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/28/2000		7	--	--	--	--	0.005 U	--	13.9	14.1	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/28/2000	K	6.9	--	--	--	--	0.005 U	--	13.2	13.5	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		6.8	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000	K	6.8	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.3	--	--	--	--	0.005 U	--	0.014	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000	K	7.4	--	--	--	--	0.005 U	--	0.02	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7	--	--	--	--	0.005 U	--	0.011	0.0043	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001	K	7	--	--	--	--	0.005 U	--	0.012	0.0046	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/19/2001		7	--	--	--	--	0.005 U	--	0.085	0.076	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-09	7/19/2001	K	7	--	--	--	--	0.005 U	--	0.082	0.085	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001		6.9	--	--	--	--	0.005 U	--	1.3	1.1	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001	K	6.9	--	--	--	--	0.005 U	--	1.4	1.1	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002		7.1	--	--	--	--	0.005 U	--	0.16	0.28	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002	K	7.1	--	--	--	--	0.005 U	--	0.15	0.23	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002		7.1	--	--	--	--	0.005 U	--	0.16	0.14	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002	K	7.1	--	--	--	--	0.005 U	--	0.15	0.14	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/26/2002		6.7	--	--	--	--	0.005 U	--	9.1	10	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/26/2002	K	6.7	--	--	--	--	0.005 U	--	9.3	10.2	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/24/2002		6.5	--	--	--	--	0.005 U	--	4.5	4.3	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/24/2002	K	6.5	--	--	--	--	0.005 U	--	4.8	4.4	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/9/2003		6.63	--	--	--	--	0.005 U	--	9.6	9.5	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/9/2003	K	6.65	--	--	--	--	0.005 U	--	9.7	9.5	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/25/2003		7.24	--	--	--	--	0.005 U	--	0.27	0.25	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/25/2003	K	6.83	--	--	--	--	0.005 U	--	0.28	0.26	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2003		6.69	--	--	--	--	0.005 U	--	2.2	2.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2003	K	6.66	--	--	--	--	0.005 U	--	2.2	2.2	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/22/2003		7.23	--	--	--	--	0.01 U	--	13	13	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/22/2003	K	7.26	--	--	--	--	0.01 U	--	13	13	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/23/2004		6.84	--	--	--	--	0.005 U	--	2.4	2.8	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/23/2004	K	6.85	--	--	--	--	0.005 U	--	2.4	2.7	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		6.87	--	--	--	--	0.005 U	--	3.4	2.9	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004	K	6.96	--	--	--	--	0.005 U	--	4.4	4.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		6.91	--	--	--	--	0.005 U	--	4.8	4.9	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004	K	6.87	--	--	--	--	0.005 U	--	4	3.2	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.08	--	--	--	--	0.005 U	--	0.045	0.052	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004	K	7.07	--	--	--	--	0.005 U	--	0.046	0.053	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		7.1	--	--	--	--	0.005 U	--	0.082	0.064	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-09	1/27/2005	K	7.12	--	--	--	--	0.005 U	--	0.061	0.06	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.08	--	--	--	--	0.005 U	--	0.043	0.035	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005	K	7.08	--	--	--	--	0.005 U	--	0.042	0.039	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.58	--	--	--	--	0.005 U	--	0.3	0.27	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005	K	6.6	--	--	--	--	0.005 U	--	0.3	0.28	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		6.68	--	--	--	--	0.005 U	--	1.3	1.3	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005	K	6.67	--	--	--	--	0.005 U	--	1.2	1.3	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2006		6.72	--	--	--	--	0.005 U	--	10	9.7	0.025	--	--	--	--	--	--	--	--	--	--
	1/27/2006	K	6.73	--	--	--	--	0.005 U	--	10	10	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		6.72	--	--	--	--	0.005 U	--	3.9	4	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006	K	6.73	--	--	--	--	0.005 U	--	3.8	4.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2006		6.57	--	--	--	--	0.005 U	--	1.7	1.6	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2006	K	6.6	--	--	--	--	0.005 U	--	1.7	1.6	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/26/2006		6.87	--	--	--	--	0.005 U	--	7.1	7.4	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/26/2006	K	6.92	--	--	--	--	0.005 U	--	7.5	7.8	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.17	--	--	--	--	0.005 U	--	6.6	7.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2007	K	7.03	--	--	--	--	0.005 U	--	6.7	7.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/18/2007		6.77 HFT	--	--	--	--	0.005 U	--	1.7	2	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/18/2007	K	6.95 HFT	--	--	--	--	0.005 U	--	1.7	2	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2007		6.85 HFT	--	--	--	--	0.005 U	--	1.7	1.8	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2007	K	6.74 HFT	--	--	--	--	0.005 U	--	1.7	2	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.39 HFT	--	--	--	--	0.005 U	--	21	25	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2007	K	7.56 HFT	--	--	--	--	0.005 U	--	21	25	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/31/2008		6.9 HFT	--	--	--	--	0.005 U	--	5.3 MHA	6.8 H,J	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/31/2008	K	6.85 HFT	--	--	--	--	0.005 U	--	5.3	7 H,J	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008		7.26 HFT	--	--	--	--	0.005 U	--	7.5	6.4	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2008	K	7.2 HFT	--	--	--	--	0.005 U	--	7.8	6.5	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2008		7.07 HFT	--	--	--	--	0.005 U	--	8	8.3	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-09	7/29/2008	K	7.04 HFT	--	--	--	--	0.005 U	--	8.2	8.3	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.57 HFT	--	--	--	--	0.005 U	--	0.011	0.0076	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2008	K	7.53 HFT	--	--	--	--	0.005 U	--	0.011	0.0068	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.52 HFT	--	--	--	--	0.005 U	--	0.013	0.0062	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009	K	7.54 HFT	--	--	--	--	0.005 U	--	0.015	0.0076	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.71 HFT	--	--	--	--	0.005 U	--	0.015	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009	K	7.73 HFT	--	--	--	--	0.005 U	--	0.015	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2009		7.68 HFT	--	--	--	--	0.005 U	--	0.054	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2009	K	7.66 HFT	--	--	--	--	0.005 U	--	0.027	0.003	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009		7.7 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009	K	7.75 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2010		7.54 HFT	--	--	--	--	0.005 U	--	0.03	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.42 HFT	--	--	--	--	0.005 U	--	0.014	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.17 HFT	--	--	--	--	0.005 U	--	0.014	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.73 HFT	--	--	--	--	0.005 U	--	0.017	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010	K	7.7 HFT	--	--	--	--	0.005 U	--	0.015	0.0099	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.26 HFT	--	--	--	--	0.005 U	--	0.018	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.013	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.1 HFT	--	--	--	--	0.01 RL1,U	--	2.7	2.3	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	7/27/2011	K	7.2 HFT	--	--	--	--	0.01 RL1,U	--	2.7	2.5	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.2 HFT	--	--	--	--	0.005 U	--	2.6	2.2	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011	K	7.3 HFT	--	--	--	--	0.005 U	--	2.1	2	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.29	0.24	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012	K	7.4 HFT	--	--	--	--	0.005 U	--	0.28	0.23	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.57 HF	0.01 U	0.01 U	0.038	0.004 U	0.005 U	0.01 U	0.93	0.86	0.01 U	0.005 U	--	--	0.01 U	0.013	0.01 U	0.01 U	--	0.01 U	0.25
	3/21/2012	K	7.47 HF	--	--	--	--	0.005 U	--	0.86	0.97	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2012		--	0.05 U	0.14	0.09	0.02 U	0.025 U	0.05 U	0.025 U	0.01 U	0.05 U	0.025 U	--	0.2 U	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	0.1 U
	7/25/2012	K	--	0.05 U	0.17	0.1	0.02 U	0.025 U	0.05 U	0.032	0.01 U	0.05 U	0.025 U	--	0.2 U	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	0.1 U

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-09	10/31/2012		8.75 HF	0.02 U	0.02 U	0.039	0.008 U	0.01 U	0.02 U	0.01 U	0.002 U	0.02 U	0.01 U	--	0.23	0.02 U	0.042	0.02 U	0.02 U	--	0.02 U	0.04 U
	10/31/2012	K	8.6 HF	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.02 U	--	--	--	--	--	--	--	--	--	--
MW-10	1/15/1989		--	--	--	--	--	0.003 U	--	0.029	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/25/1989		--	--	--	--	--	0.01 U	--	0.08	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	7/15/1989		7.3	--	--	--	--	0.01 U	--	0.11	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.15
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/22/1990		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02
	4/12/1990		7.48	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/12/1990	K	7.48	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.49	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.03
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.79	0.04 U	--	--	--	--	--	0.08
	10/15/1990	K	--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	0.88	0.04 U	--	--	--	--	--	0.44
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.87	0.04 U	--	--	--	--	--	0.15
	10/9/2009		7.77 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2012		--	0.01 U	0.01 U	0.028	0.004 U	0.005 U	0.019	0.005 U	0.001 U	0.01 U	0.005 U	--	1.6	0.016	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/30/2012		--	0.01 U	0.011	0.038	0.004 U	0.005 U	0.035	0.0079	0.0027	0.01 U	0.005 U	--	1	0.028	0.025	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-11	1/15/1989		--	--	--	--	--	0.003 U	--	0.014 U	0.01 U	0.009 U	--	--	--	--	--	--	--	--	--	0.006 U
	4/15/1989		--	--	--	--	--	0.01 U	--	0.04	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.02 U
	4/15/1989	K	--	--	--	--	--	0.01 U	--	0.01 U	0.0016	0.05 U	--	--	--	--	--	--	--	--	--	0.05 U
	7/15/1989		7.43	--	--	--	--	0.01 U	--	0.05	0.05 U	0.02 U	--	--	--	--	--	--	--	--	--	0.05
	10/15/1989		--	--	--	--	--	0.01 U	--	0.02 U	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	0.02 U
	1/23/1990		7.77	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	4/10/1990		7.56	--	--	--	--	0.005 U	--	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	0.01 U
	7/15/1990		7.62	--	--	--	--	0.01 U	--	0.01 U	0.02 U	0.03	--	--	--	--	--	--	--	--	--	0.04
	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.18	0.04 U	--	--	--	--	--	0.17
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.16	0.04 U	--	--	--	--	--	0.069
	4/15/1991		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-11	7/15/1991		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/22/1991		7.45	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.8	--	--	--	--	0.0027 U	--	0.0081 U	0.1	0.02	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.2	--	--	--	--	0.005 U	--	0.016	0.02 U	0.087	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.3	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.5	--	--	--	--	0.005 U	--	0.013	0.02 U	0.088	--	--	--	--	--	--	--	--	--	--
	4/19/1993		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1993		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1993		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/10/1994		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/12/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/18/1994		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994		7.1	--	--	--	--	0.005 U	--	0.011	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/17/1995		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1995		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/11/1995		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1995		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/30/1996		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1996		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	7/15/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/14/1997		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.029	--	--	--	--	--	--	--	--	--	--
	4/16/1997		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/9/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.15	--	--	--	--	--	--	--	--	--	--
	10/15/1997		6.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.1	--	--	--	--	--	--	--	--	--	--
	1/14/1998		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/22/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.077	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-11	7/15/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/20/1998		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.041	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.83	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7	--	--	--	--	0.005 U	--	0.02	0.057	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/25/2000		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		6.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/17/2001		6.8	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001		6.7	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002		6.8	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/26/2002		6.7	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/24/2002		7.1	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	12/30/2002		7.03	0.01 U	0.005 U	0.32	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.0078	0.01 U	0.005 U	--	0.01 U	0.16
	4/25/2003		7.29	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2003		6.73	--	--	--	--	0.005 U	--	0.005 U	0.0012	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/23/2003		7.23	0.01 U	0.005 U	0.22	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.005 U	0.01 U	0.005 U	0.1 U	0.01 U	0.13
	1/23/2004		7.21	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.29	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.16	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		7.16	0.01 U	0.005 U	0.43	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.005 U	0.01 U	0.005 U	0.1 U	0.01 U	0.11
	1/27/2005		6.71	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.05	--	--	--	--	0.005 U	--	0.005 U	0.0016	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.71	--	--	--	--	0.005 U	--	0.018	0.0066	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		6.88	0.01 U	0.005 U	0.3	0.004 U	0.005 U	0.01 U	0.0057	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.13

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-11	1/27/2006		6.83	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		7.1	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2006		6.59	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.14	0.01 U	0.01 U	0.08	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.016	0.1 U	0.01 U	0.02 U
	1/17/2007		7.28	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/18/2007		6.88 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2007		6.97 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 C,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/24/2007		7.38 HFT	0.01 U	0.01 U	0.099	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/30/2008		7.31 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.24 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.49 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2008		7.66 HFT	0.01 U	0.01 U	0.15	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.0062	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/27/2009		7.48 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.55 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/8/2009		7.69 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.05 HFT	--	--	--	--	0.0092	--	0.005 U	0.001 U	0.082	--	--	--	--	--	--	--	--	--	--
	7/30/2010		6.8 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.68 HFT	0.01 U	0.01 U	0.042	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/18/2011		6.76 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.035	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.1 HFT	--	--	--	--	0.005 U	--	0.0074	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.6 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0052	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.6 HFT	0.01 U	0.01 U	0.028	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/18/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		6.96 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.41 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/31/2012		6.68 HF	0.01 U	0.034	0.045	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	--	--	0.01 U	0.02	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U

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Phibro-Tech, Inc.
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Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-12D	10/15/1990		--	0.06 U	0.005 U	0.049	0.002 U	0.005 U	0.01 U	0.01 U	0.02 U	0.02 U	0.05 U	0.001 U	--	0.04 U	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.028
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	1/28/2010		7.58 HFT	--	--	--	--	0.005 U	--	0.021	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.53 HFT	--	--	--	--	0.005 U	--	0.019	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2010		7.7 HFT	--	--	--	--	0.005 U	--	0.022	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.89 HFT	--	--	--	--	0.005 U	--	0.031	0.0057	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.41 HFT	--	--	--	--	0.005 U	--	0.021	0.021	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		8 HFT	--	--	--	--	0.005 U	--	0.019	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.017	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.016	0.0046	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.5 HFT	--	--	--	--	0.005 U	--	0.0088	0.0066	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.87 HF	--	--	--	--	0.005 U	--	0.014	0.0053	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.95 HF	--	--	--	--	0.005 U	--	0.0097	0.0067	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.88 HF	--	--	--	--	0.005 U	--	0.0095	0.0058 H	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-12S	10/15/1990		--	0.06 U	0.005 U	0.071	0.002 U	0.005 U	0.01 U	0.01 U	0.02 U	0.02 U	0.05 U	0.001 U	--	0.04 U	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.02 U
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	4/28/2010		7.09 HFT	--	--	--	--	0.005 U	--	0.0057	0.005	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2010		7.55 HFT	--	--	--	--	0.005 U	--	0.01	0.0081	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.0091	0.0063	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.012	0.0078	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.4 HFT	--	--	--	--	0.005 U	--	0.0068	0.002	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.2 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0025	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.57 HF	--	--	--	--	0.005 U	--	0.0074	0.004	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.93 HF	--	--	--	--	0.005 U	--	0.0069	0.0045	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.58 HF	--	--	--	--	0.005 U	--	0.0068	0.0025 H	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-13D	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.091
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.61

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-13D	1/28/2010		7.55 HFT	--	--	--	--	0.005 U	--	0.027	0.021	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.55 HFT	--	--	--	--	0.005 U	--	0.022	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2010		7.69 HFT	--	--	--	--	0.005 U	--	0.025	0.021	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.81 HFT	--	--	--	--	0.005 U	--	0.033	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.46 HFT	--	--	--	--	0.005 U	--	0.022	0.022	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		8 HFT	--	--	--	--	0.005 U	--	0.019	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.015	0.0078	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.014	0.0064	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.6 HFT	--	--	--	--	0.005 U	--	0.0079	0.0069	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.94 HF	0.01 U	0.01 U	0.029	0.004 U	0.005 U	0.01 U	0.011	0.0069	0.01 U	0.005 U	--	--	0.01 U	0.019	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/24/2012		--	0.01 U	0.01 U	0.028	0.004 U	0.005 U	0.01 U	0.0076	0.0072	0.01 U	0.005 U	--	0.04 U	0.01 U	0.015	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/30/2012		7.6 HF	0.01 U	0.01 U	0.029	0.004 U	0.005 U	0.01 U	0.013	0.008	0.01 U	0.005 U	--	0.04 U	0.01 U	0.028	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-13S	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.04
	1/15/1991		--	--	--	--	--	0.005 U	--	0.014	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	7/14/1993		8.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/28/2010		7.48 HFT	--	--	--	--	0.005 U	--	0.0096	0.0084	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.011	0.0079	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.014	0.0093	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.01	0.0075	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.5 HFT	--	--	--	--	0.005 U	--	0.012	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.76 HF	0.01 U	0.01 U	0.029	0.004 U	0.005 U	0.01 U	0.016	0.0092	0.01 U	0.005 U	--	--	0.01 U	0.024	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/24/2012		--	0.01 U	0.01 U	0.027	0.004 U	0.005 U	0.01 U	0.0092	0.0083	0.01 U	0.005 U	--	0.04 U	0.01 U	0.01	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/30/2012		7.38 HF	0.01 U	0.013	0.038	0.004 U	0.005 U	0.01 U	0.0085	0.0033	0.01 U	0.005 U	--	0.041	0.01 U	0.026	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-14D	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.056
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.34	0.04 U	--	--	--	--	--	0.022
	10/8/2009		7.85 HFT	0.01 U	0.014	0.039	0.004 U	0.005 U	0.01 U	0.005 U	0.0021	0.043	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.082
	1/28/2010		7.71 HFT	--	--	--	--	0.005 U	--	0.018	0.012	0.012	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-14D	4/28/2010		7.62 HFT	--	--	--	--	0.005 U	--	0.016	0.014	0.011	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.58 HFT	--	--	--	--	0.005 U	--	0.02	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2010		7.77 HFT	0.01 U	0.01 U	0.029	0.004 U	0.005 U	0.01 U	0.0055	0.0026	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/18/2011		7.52 HFT	--	--	--	--	0.005 U	--	0.02	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.6 HFT	--	--	--	--	0.005 U	--	0.006	0.0067	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.0099	0.0054	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/18/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.014	0.012	0.013	--	--	--	--	--	--	--	--	--	--
	1/17/2012		7.6 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.015	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.58 HF	--	0.01 U	0.033	--	0.005 U	--	0.0061	0.0017	0.01 U	0.005 U	--	--	--	--	--	--	--	--	--
	7/26/2012		--	0.02 U	0.02 U	0.065	0.008 U	0.01 U	0.02 U	1	0.96	0.066	0.01 U	--	0.04 U	0.026	0.02 U	0.02 U	0.02 U^	--	0.02 U	0.04 U
	10/31/2012		7.5 HF	0.01 U	0.01 U	0.031	0.004 U	0.005 U	0.01 U	0.01	0.0072	0.01 U	0.005 U	--	0.04 U	0.01 U	0.052	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-14S	10/15/1990		--	--	--	--	--	0.018	--	2.2	3.2	5.3	--	--	0.1 U	0.82	--	--	--	--	--	1.4
	1/15/1991		--	--	--	--	--	0.007	--	0.94	0.4	1	--	--	0.1 U	0.26	--	--	--	--	--	0.38
	4/15/1991		7.2	--	--	--	--	0.005 U	--	0.41	0.39	0.15	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.3	--	--	--	--	0.005 U	--	0.31	0.02 U	0.11	--	--	--	--	--	--	--	--	--	--
	10/23/1991		7.4	--	--	--	--	0.005 U	--	0.23	0.13	0.05	--	--	--	--	--	--	--	--	--	--
	10/23/1991	K	7.36	--	--	--	--	0.005 U	--	0.16	0.14	0.06	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.7	--	--	--	--	0.0027 U	--	0.15	0.27	0.093	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.3	--	--	--	--	0.005 U	--	0.16	0.13	0.041	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		7.4	--	--	--	--	0.005 U	--	0.33	0.099	0.56	--	--	--	--	--	--	--	--	--	--
	7/15/1992	K	7.4	--	--	--	--	0.005 U	--	0.31	0.094	0.53	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.4	--	--	--	--	0.005 U	--	0.54	0.16	0.72	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.5	--	--	--	--	0.005 U	--	0.24	0.056	0.33	--	--	--	--	--	--	--	--	--	--
	4/22/1993		7.2	--	--	--	--	0.005 U	--	0.018	0.02 U	0.032	--	--	--	--	--	--	--	--	--	--
	4/22/1993	K	7.3	--	--	--	--	0.005 U	--	0.014	0.02 U	0.026	--	--	--	--	--	--	--	--	--	--
	7/13/1993		7.6	--	--	--	--	0.005 U	--	0.02	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	10/14/1993		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.021	--	--	--	--	--	--	--	--	--	--
	1/12/1994		7.2	--	--	--	--	0.005 U	--	0.015	0.02 U	0.022	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-14S	4/13/1994		7.3	--	--	--	--	0.005 U	--	0.022	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994		7.4	--	--	--	--	0.005 U	--	0.016	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994		7.3	--	--	--	--	0.005 U	--	0.064	0.035	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/8/1995		7.3	--	--	--	--	0.005 U	--	0.016	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/18/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1995		7.3	--	--	--	--	0.0055	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995		7.3	--	--	--	--	0.005 U	--	0.046	0.022	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996		7.3	--	--	--	--	0.005 U	--	0.034	0.02 U	0.024	--	--	4.7	--	--	--	--	--	--	--
	4/17/1996		7.4	--	--	--	--	0.005 U	--	0.028	0.021	0.02 U	--	--	0.89	--	--	--	--	--	--	--
	7/17/1996		7.3	--	--	--	--	0.005 U	--	0.069	0.01 U	0.02 U	--	--	0.1 U	--	--	--	--	--	--	--
	10/8/1996		7.1	--	--	--	--	0.005 U	--	0.082	0.052	0.02 U	--	--	0.1 U	--	--	--	--	--	--	--
	1/15/1997		7.2	--	--	--	--	0.005 U	--	0.031	0.024	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/16/1997		7.3	--	--	--	--	0.0053	--	0.032	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997		7.3	--	--	--	--	0.005 U	--	0.016	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		7.4	--	--	--	--	0.005 U	--	0.13	0.1	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998		7.3	--	--	--	--	0.005 U	--	0.018	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998		7.7	--	--	--	--	0.005 U	--	0.018	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998		7.3	--	--	--	--	0.005 U	--	0.044	0.032	0.027	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.1	--	--	--	--	0.005 U	--	0.032	0.058	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.11	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.4	--	--	--	--	0.005 U	--	0.038	0.02 U	0.037	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.8	--	--	--	--	0.006	--	0.15	0.035	0.044	--	--	--	--	--	--	--	--	--	--
	1/27/2000		7.2	--	--	--	--	0.0094	--	0.26	0.11	0.031	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.5	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.4	--	--	--	--	0.005 U	--	0.09	0.039	0.087	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.1	--	--	--	--	0.005 U	--	0.043	0.057	0.03	--	--	--	--	--	--	--	--	--	--
	7/19/2001		7.1	--	--	--	--	0.005 U	--	0.025	0.0046	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
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Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-14S	10/17/2001		7.2	--	--	--	--	0.005 U	--	0.14	0.002 U	0.042	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.2	--	--	--	--	0.005 U	--	0.043	0.035	0.029	--	--	--	--	--	--	--	--	--	--
	7/25/2002		7.3	--	--	--	--	0.005 U	--	0.065	0.017	0.031	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7	--	--	--	--	0.0074	--	0.42	0.42	0.04	--	--	--	--	--	--	--	--	--	--
	12/30/2002		7.09	0.01 U	0.011	0.42	0.004 U	0.005 U	0.01 U	0.014	0.0042	0.042	0.005 U	0.0002 U	--	0.01 U	0.005 U	0.01 U	0.0074	--	0.01 U	0.13
	4/24/2003		7.24	--	--	--	--	0.005 U	--	0.02	0.001 U	0.029	--	--	--	--	--	--	--	--	--	--
	7/30/2003		6.86	--	--	--	--	0.0066	--	0.15	0.12	0.052	--	--	--	--	--	--	--	--	--	--
	10/23/2003		6.71	0.01 U	0.005 U	0.3	0.004 U	0.005 U	0.01 U	0.33	0.99	0.03	0.005 U	0.0002 U	--	0.016	0.005 U	0.01 U	0.005 U	0.1 U	0.01 U	0.098
	1/22/2004		6.7	--	--	--	--	0.01 U	--	0.95	0.44	0.037	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.01	--	--	--	--	0.01 U	--	0.31	0.33	0.023	--	--	--	--	--	--	--	--	--	--
	7/21/2004		6.67	--	--	--	--	0.01 U	--	2.5	3.1	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/2004		6.71	0.01 U	0.0077	0.27	0.004 U	0.006	0.01 U	1.2	2.6	0.031	0.005 U	0.00068	--	0.01	0.01 U	0.01 U	0.005 U	0.1 U	0.01 U	0.23
	1/27/2005		6.98	--	--	--	--	0.005 U	--	0.53	0.08	0.018	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.26	--	--	--	--	0.005 U	--	0.083	0.066	0.012	--	--	--	--	--	--	--	--	--	--
	7/26/2005		6.94	--	--	--	--	0.005 U	--	0.19	0.31	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		7.03	0.01 U	0.005 U	0.55	0.004 U	0.005 U	0.01 U	0.18	0.21	0.01	0.005 U	0.00026	--	0.01 U	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.23
	1/26/2006		6.89	--	--	--	--	0.005 U	--	0.44	0.46	0.02	--	--	--	--	--	--	--	--	--	--
	4/25/2006		7.06	--	--	--	--	0.005 U	--	0.25	0.18	0.035	--	--	--	--	--	--	--	--	--	--
	7/26/2006		7.04	--	--	--	--	0.005 U	--	0.27	0.19	0.036	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.27	0.01 U	0.01 U	0.055	0.004 U	0.005 U	0.01 U	0.32	0.44	0.04	0.005 U	0.00057	--	0.01 U	0.01 U	0.01 U	0.016	0.1 U	0.01 U	0.02 U
	1/17/2007		7.41	--	--	--	--	0.005 U	--	0.2	0.17	0.038	--	--	--	--	--	--	--	--	--	--
	4/18/2007		7.14 HFT	--	--	--	--	0.005 U	--	0.11	0.057	0.032	--	--	--	--	--	--	--	--	--	--
	7/25/2007		7.4 HFT	--	--	--	--	0.005 U	--	0.2	0.18 C8	0.033	--	--	--	--	--	--	--	--	--	--
	10/23/2007		6.9 HFT	0.02 RL1,U	0.02 RL1,U	0.078	0.008 RL1,U	0.01 RL1,U	0.02 RL1,U	0.72	2	0.045	0.01 RL1,U	0.003	--	0.025	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.2 RL1,U	0.02 RL1,U	0.04 RL1,U
	1/30/2008		6.92 HFT	--	--	--	--	0.01 RL1,U	--	0.76	0.61	0.027	--	--	--	--	--	--	--	--	--	--
	4/22/2008		7.14 HFT	--	--	--	--	0.005 U	--	0.51	0.54	0.037	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.09 HFT	--	--	--	--	0.01 RL1,U	--	0.72	0.67	0.029	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-14S	10/29/2008		7.28 HFT	0.02 RL1,U	0.02 RL1,U	0.097	0.008 RL1,U	0.01 RL1,U	0.02 RL1,U	1.3	1.6	0.027	0.01 RL1,U	0.0031	--	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.02 RL1,U	0.2 RL1,U	0.02 RL1,U	0.04 RL1,U
	1/28/2009		7.35 HFT	--	--	--	--	0.005 U	--	0.014	0.001 U	0.041	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.83 HFT	--	--	--	--	0.005 U	--	0.0052	0.001 U	0.03	--	--	--	--	--	--	--	--	--	--
	7/31/2009		7.67 HFT	--	--	--	--	0.005 U	--	0.01	0.001 U	0.021	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/28/2010		7.3 HFT	--	--	--	--	0.005 U	--	0.013	0.001 U	0.038	--	--	--	--	--	--	--	--	--	--
	7/29/2010		6.99 HFT	--	--	--	--	0.005 U	--	0.006	0.001 U	0.049	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		7.14 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.035	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.2 HFT	--	--	--	--	0.005 U	--	0.014	0.0078	0.034	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.4 HFT	--	--	--	--	0.005 U	--	0.038	0.02	0.03	--	--	--	--	--	--	--	--	--	--
	10/18/2011		7.3 HFT	0.01 U	0.01 U	0.034	0.004 U	0.005 U	0.01 U	0.47	0.21 MHA	0.024	0.005 U	0.0042	--	0.01 U	0.01	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
	1/17/2012		6.9 HFT	--	--	--	--	0.005 U	--	0.94	1	0.034	--	--	--	--	--	--	--	--	--	--
	3/22/2012		6.86 HF	--	0.01	0.042	--	0.005 U	--	0.73	1.4	0.05	0.013	--	--	--	--	--	--	--	--	--
	7/26/2012		--	0.01 U	0.01 U	0.031	0.004 U	0.005 U	0.01 U	0.0082	0.013	0.044	0.005 U	--	0.04 U	0.021	0.016	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/31/2012		6.95 HF	0.01 U	0.01	0.064	0.004 U	0.005 U	0.01 U	0.2	0.22 H	0.025	0.005 U	--	0.04 U	0.01	0.01 U	0.01 U	0.01 U	0.1 U	0.01 U	0.02 U
MW-15D	10/15/1990		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.041
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	1.8
	4/15/1991		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/22/1991		7.45	--	--	--	--	0.005 U	--	0.01	0.02 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.7	--	--	--	--	0.0027 U	--	0.0081 U	0.05 U	0.013	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1992		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/21/1993		7	--	--	--	--	0.0058	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-15D	7/14/1993		7.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025	--	--	--	--	--	--	--	--	--	--
	10/14/1993		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/12/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/12/1994		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		7.5	--	--	--	--	0.005 U	--	0.018	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1995		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1996		7.5	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/17/1996		7.6	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1996		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1997		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		7.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998		7.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/16/1998		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.3	--	--	--	--	0.005 U	--	0.053	0.02 U	0.029	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.34	--	--	--	--	0.005 U	--	0.035	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.4	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/28/2000		8.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.5	--	--	--	--	0.005 U	--	0.013	0.016	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-15D	10/15/2000		7.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.5	--	--	--	--	0.005 U	--	0.025	0.014	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/19/2001		7.3	--	--	--	--	0.005 U	--	0.013	0.0081	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.6	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.6	--	--	--	--	0.005 U	--	0.01 U	0.0081	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/25/2002		7.6	--	--	--	--	0.005 U	--	0.01 U	0.0047	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/22/2002		7.5	--	--	--	--	0.005 U	--	0.01 U	0.0016	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/8/2003		7.52	--	--	--	--	0.005 U	--	0.0031 J	0.001 U	0.017	--	--	--	--	--	--	--	--	--	--
	4/23/2003		7.48	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		7.26	--	--	--	--	0.005 U	--	0.005 U	0.0003 O-09,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2003		7.72	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/22/2004		7.2	--	--	--	--	0.005 U	--	0.0056	0.0064	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.6	--	--	--	--	0.005 U	--	0.0067	0.007	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/20/2004		7.56	--	--	--	--	0.005 U	--	0.005 U	0.0046	0.013	--	--	--	--	--	--	--	--	--	--
	10/11/2004		7.5	--	--	--	--	0.005 U	--	0.005 U	0.001	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		7.17	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.15	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.25	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.1	--	--	--	--	--	--	--	--	--	--
	7/26/2005		7.5	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.028	--	--	--	--	--	--	--	--	--	--
	10/19/2005		7.39	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/25/2006		7.38	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.015	--	--	--	--	--	--	--	--	--	--
	4/25/2006		7.46	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.071	--	--	--	--	--	--	--	--	--	--
	7/25/2006		7.53	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.65	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2007		7.93	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01	--	--	--	--	--	--	--	--	--	--
	4/18/2007		7.36 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.014	--	--	--	--	--	--	--	--	--	--
	7/25/2007		7.65 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 C,U	0.025	--	--	--	--	--	--	--	--	--	--
	10/24/2007		7.76 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.024	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-15D	1/30/2008	HFT	7.7	--	--	--	--	0.005 U	--	0.0056	0.0012	0.25	--	--	--	--	--	--	--	--	--	--
	4/23/2008	HFT	7.34	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.25	--	--	--	--	--	--	--	--	--	--
	7/30/2008	HFT	7.78	--	--	--	--	0.005 U	--	0.0054	0.001 U	0.056	--	--	--	--	--	--	--	--	--	--
	10/29/2008	HFT	7.77	--	--	--	--	0.005 U	--	0.0053	0.001 U	0.15	--	--	--	--	--	--	--	--	--	--
	1/28/2009	HFT	7.71	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.031	--	--	--	--	--	--	--	--	--	--
	4/7/2009	HFT	8.14	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.072	--	--	--	--	--	--	--	--	--	--
	7/30/2009	HFT	7.52	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.069	--	--	--	--	--	--	--	--	--	--
	10/8/2009	HFT	7.77	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.074	--	--	--	--	--	--	--	--	--	--
	1/29/2010	HFT	7.59	--	--	--	--	0.005 U	--	0.0063	0.0016	0.14	--	--	--	--	--	--	--	--	--	--
	4/27/2010	HFT	7.64	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010	HFT	7.62	--	--	--	--	0.005 U	--	0.0052	0.001 U	0.08	--	--	--	--	--	--	--	--	--	--
	10/28/2010	HFT	8.07	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.018	--	--	--	--	--	--	--	--	--	--
	1/18/2011	HFT	7.48	--	--	--	--	0.005 U	--	0.005 U	0.0013	0.19	--	--	--	--	--	--	--	--	--	--
	4/12/2011	HFT	8	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.16	--	--	--	--	--	--	--	--	--	--
	7/28/2011	HFT	7.8	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.14	--	--	--	--	--	--	--	--	--	--
	10/19/2011	HFT	8.2	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.14	--	--	--	--	--	--	--	--	--	--
	1/18/2012	HFT	7.6	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.13	--	--	--	--	--	--	--	--	--	--
	3/22/2012	HF	7.53	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.08	--	--	--	--	--	--	--	--	--	--
	7/24/2012	HF	8.1	--	--	--	--	0.005 U	--	0.0057	0.0019	0.091	--	--	--	--	--	--	--	--	--	--
	10/30/2012	HF	7.89	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.019	--	--	--	--	--	--	--	--	--	--
MW-15S	10/15/1990		--	0.06 U	0.005 U	0.062	0.002 U	0.005 U	0.01 U	0.01 U	0.02 U	0.02 U	0.05 U	0.001 U	--	0.04 U	0.01 U	0.01 U	0.5 U	0.1 U	0.01 U	0.049
	1/15/1991		--	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	0.1 U	0.04 U	--	--	--	--	--	0.046
	4/15/1991		7.1	--	--	--	--	0.011	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1991		7.1	--	--	--	--	0.014	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/22/1991		7.12	--	--	--	--	0.02	--	0.01	0.02 U	0.06	--	--	--	--	--	--	--	--	--	--
	1/15/1992		7.3	--	--	--	--	0.008	--	0.0081 U	0.05 U	0.01	--	--	--	--	--	--	--	--	--	--
	4/15/1992		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	--	0.04 U	--	--	--	--	--	--
	7/15/1992		7.2	--	--	--	--	0.0093	--	0.039	0.02 U	0.27	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-15S	10/15/1992		7.2	--	--	--	--	0.0073	--	0.01 U	0.02 U	0.047	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.4	--	--	--	--	0.0085	--	0.014	0.02 U	0.1	--	--	--	--	--	--	--	--	--	--
	4/21/1993		6.8	--	--	--	--	0.005 U	--	0.013	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/14/1993		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/14/1993		7.3	--	--	--	--	0.005 U	--	0.01 U	0.04 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/12/1994		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1994		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/18/1995		7.3	--	--	--	--	0.005 U	--	0.044	0.048	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/12/1995		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996		7.4	--	--	--	--	0.005 U	--	0.012	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1996		7.5	--	--	--	--	0.005 U	--	0.015	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/17/1996		7.6	--	--	--	--	0.005 U	--	0.014	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/8/1996		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1997		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1997		7.6	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997		7.5	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998		7.4	--	--	--	--	0.005 U	--	0.021	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.5	--	--	--	--	0.005 U	--	0.014	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998		7.6	--	--	--	--	0.005 U	--	0.017	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		7.4	--	--	--	--	0.005 U	--	0.01 U	0.024	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999	K	--	--	--	--	--	0.005 U	--	0.013 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		7.2	--	--	--	--	0.005 U	--	0.013	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-15S	7/15/1999		7.6	--	--	--	--	0.005 U	--	0.01	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		7.2	--	--	--	--	0.005 U	--	0.015	0.014	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/28/2000		7.3	--	--	--	--	0.012	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7.2	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0053	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/19/2001		7.2	--	--	--	--	0.005 U	--	0.01 U	0.0074	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/17/2001		7.5	--	--	--	--	0.005 U	--	0.01 U	0.0088	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/16/2002		7.5	--	--	--	--	0.005 U	--	0.011	0.0091	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/17/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.01	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/24/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.006	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/23/2002		7.4	--	--	--	--	0.005 U	--	0.01 U	0.0035	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/8/2003		7.22	--	--	--	--	0.0053	--	0.0042 J	0.0042	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/24/2003		7.19	--	--	--	--	0.005 U	--	0.0064	0.0059	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2003		7.02	--	--	--	--	0.005 U	--	0.005 U	0.0022 O-09	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/22/2003		7.7	--	--	--	--	0.0057	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/22/2004		7.06	--	--	--	--	0.013	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.37	--	--	--	--	0.0077	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/20/2004		7.1	--	--	--	--	0.0067	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/11/2004		6.98	--	--	--	--	0.01	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		6.86	--	--	--	--	0.0055	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.36	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2005		7.27	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2005		7.26	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/25/2006		7.35	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/25/2006		7.46	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2006		7.42	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2006		7.71	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-15S	1/18/2007		7.76	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/18/2007		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/25/2007		7.62 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 C,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/24/2007		7.44 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/30/2008		7.35 HFT	--	--	--	--	0.0068	--	0.005 U	0.001 M2,U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.39 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.55 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2008		7.56 HFT	--	--	--	--	0.0065	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/7/2009		7.71 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2009		7.17 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		7.27 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2010		7.13 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		7.11 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		7.23 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/24/2012		7.82 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2012		7.58 HF	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-16	4/15/1992		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	4/15/1992	K	7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	0.05 U	--	0.1 U	0.04 U	--	--	--	--	--	0.02 U
	7/15/1992		7.3	--	--	--	--	0.005 U	--	0.027	0.02 U	0.35	--	--	--	--	--	--	--	--	--	--
	10/15/1992		7.1	--	--	--	--	0.005 U	--	0.011	0.02 U	0.15	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-16	10/15/1992	K	7.1	--	--	--	--	0.005 U	--	0.014	0.02 U	0.21	--	--	--	--	--	--	--	--	--	--
	1/15/1993		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.44	--	--	--	--	--	--	--	--	--	--
	4/22/1993		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/14/1993		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/14/1993	K	7.1	--	--	--	--	0.0054	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/14/1993		7.1	--	--	--	--	0.005 U	--	0.01 U	0.04 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/12/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/12/1994	K	6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/13/1994	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/20/1994	K	6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1994		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/13/1994	K	6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/16/1995		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/16/1995	K	6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1995		6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/19/1995	K	6.9	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1995		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/13/1995	K	6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/11/1995	K	6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	2/1/1996	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1996	K	7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/17/1996		7.1	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/17/1996	K	7.2	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.02 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-16	10/9/1996		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/9/1996	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1997		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1997	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1997		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/17/1997	K	7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/10/1997	K	7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/16/1997		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1998		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	4/23/1998		7.4	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.023	--	--	--	--	--	--	--	--	--	--
	7/15/1998		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.031	--	--	--	--	--	--	--	--	--	--
	10/21/1998		7.1	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	10/21/1998	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999		6.8	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	1/15/1999	K	7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/1999		6.9	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/15/1999		7	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/1999		6.7	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/28/2000		7.2	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/15/2000		7	--	--	--	--	0.005 U	--	0.01 U	0.01 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/15/2000		7.3	--	--	--	--	0.005 U	--	0.01 U	0.02 U	0.3	--	--	--	--	--	--	--	--	--	--
	4/15/2001		7.1	--	--	--	--	0.005 U	--	0.01 U	0.00033 J	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/19/2001		7	--	--	--	--	0.005 U	--	0.01 U	0.0031	0.025 U	--	--	--	--	--	--	--	--	--	--
	10/18/2001		7	--	--	--	--	0.005 U	--	0.01 U	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/17/2002		7.2	--	--	--	--	0.005 U	--	0.11	0.096	0.025 U	--	--	--	--	--	--	--	--	--	--
	4/18/2002		7.1	--	--	--	--	0.005 U	--	0.012	0.002 U	0.025 U	--	--	--	--	--	--	--	--	--	--
	7/26/2002		7	--	--	--	--	0.005 U	--	0.01 U	0.001 U	0.025 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-16	10/24/2002		6.9	--	--	--	--	0.005 U	--	0.01 U	0.0051	0.025 U	--	--	--	--	--	--	--	--	--	--
	1/9/2003		6.84	--	--	--	--	0.005 U	--	0.0057	0.0043	0.01	--	--	--	--	--	--	--	--	--	--
	4/24/2003		7.12	--	--	--	--	0.005 U	--	0.0051	0.0041	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2003		6.82	--	--	--	--	0.005 U	--	0.005 U	0.004	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/22/2003		7.34	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/23/2004		6.98	--	--	--	--	0.005 U	--	0.005 U	0.0026	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/21/2004		7.21	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/21/2004		7.08	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2005		6.88	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/27/2005		7.04	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2005		6.78	--	--	--	--	0.005 U	--	0.0088	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2005		6.79	--	--	--	--	0.005 U	--	0.012	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/27/2006		6.8	--	--	--	--	0.005 U	--	0.005 U	0.0019	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/26/2006		6.8	--	--	--	--	0.005 U	--	0.0095	0.0094	0.017	--	--	--	--	--	--	--	--	--	--
	7/26/2006		6.87	--	--	--	--	0.005 U	--	0.0083	0.013	0.015	--	--	--	--	--	--	--	--	--	--
	10/24/2006		7	--	--	--	--	0.005 U	--	0.013	0.019	0.017	--	--	--	--	--	--	--	--	--	--
	1/17/2007		7.17	--	--	--	--	0.005 U	--	0.0083	0.012	0.011	--	--	--	--	--	--	--	--	--	--
	4/17/2007		7.02 HFT	--	--	--	--	0.005 U	--	0.016	0.018	0.012	--	--	--	--	--	--	--	--	--	--
	7/26/2007		7.08 HFT	--	--	--	--	0.005 U	--	0.0071	0.0066	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/25/2007		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0033	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/29/2008		7.12 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/22/2008		7.17 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2008		7.22 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0061	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/28/2008		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/27/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/8/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/9/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-16	1/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/18/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/2011		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0034	0.019	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.0019	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.1 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/22/2012		6.93 HF	--	--	--	--	0.01 U	--	0.01 U	0.001 U	0.02 U	--	--	--	--	--	--	--	--	--	--
	7/25/2012		7.28 HF	--	--	--	--	0.005 U	--	0.012	0.0016	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-17S	7/3/2007		--	0.01 U	0.01 U	0.063	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.0074	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/26/2007		--	0.01 U	0.01 U	0.068	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/24/2007		7.55 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/30/2008		7.5 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.64 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2008		7.67 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.55 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/28/2009		7.54 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.79 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/31/2009		7.82 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/9/2009		7.71 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.03 HFT	--	--	--	--	0.042	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2010		7.46 HFT	--	--	--	--	0.03	--	0.0056	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		7.37 HFT	--	--	--	--	0.03	--	0.0079	0.0062	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.7 HFT	--	--	--	--	0.018	--	0.017	0.015	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.8 HFT	--	--	--	--	0.012	--	0.005 U	0.0026	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/21/2011		7.6 HFT	--	--	--	--	0.022	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-17S	1/19/2012		7.1 HFT	--	--	--	--	0.032	--	0.0061	0.001 U	0.014	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.64 HF	0.01 U	0.01 U	0.049	0.004 U	0.058	0.01 U	0.0073	0.001 U	0.025	0.005 U	--	--	0.022	0.022	0.01 U	0.01 U	--	0.01 U	0.087
	7/26/2012		--	0.01 U	0.01 U	0.043	0.004 U	0.18	0.01 U	0.0058	0.001 U	0.084	0.005 U	--	0.14	0.023	0.01 U	0.01 U	0.01 U	--	0.01 U	0.14
	10/31/2012		6.97 HF	0.01 U	0.01	0.031	0.004 U	0.063	0.01 U	0.005 U	0.002 U	0.12	0.005 U	--	0.04 U	0.11	0.024	0.01 U	0.01 U	--	0.01 U	0.68
MW-18S	7/3/2007		--	0.01 U	0.01 U	0.035	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.0076	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/24/2007		--	0.01 U	0.01 U	0.035	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/24/2007		7.47 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/30/2008		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.48 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2008		7.54 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.67 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.3 HFT	--	--	--	--	0.005 U	--	0.2	0.2	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.3 HFT	--	--	--	--	0.005 U	--	1.1	1.1	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.2 HFT	--	--	--	--	0.005 U	--	0.7	0.71	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7.1 HFT	--	--	--	--	0.005 U	--	0.4	0.37	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.45 HF	0.01 U	0.01 U	0.038	0.004 U	0.005 U	0.01 U	0.43	0.43	0.01 U	0.005 U	--	--	0.01 U	0.017	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/25/2012		--	0.01 U	0.01 U	0.041	0.004 U	0.005 U	0.01 U	0.011	0.01 U	0.01 U	0.005 U	--	0.31	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/31/2012		6.89 HF	0.01 U	0.01 U	0.034	0.004 U	0.005 U	0.01 U	0.011	0.002 U	0.01 U	0.005 U	--	0.45	0.01 U	0.014	0.01 U	0.01 U	--	0.01 U	0.02 U
MW-19S	7/3/2007		--	0.01 U	0.01 U	0.089	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.0071	0.0002 U	--	0.01 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/26/2007		--	0.01 U	0.01 U	0.083	0.004 U	0.005 U	0.01 U	0.005 U	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.012	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	10/24/2007		7.15 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/30/2008		6.99 HFT	--	--	--	--	0.01 RL1,U	--	0.01 RL1,U	0.001 U	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.18 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/29/2008		7.24 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/30/2008		7.23 HFT	--	--	--	--	0.015 RL1,U	--	0.015 RL1,U	0.001 U	0.03 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/29/2009		7.16 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/8/2009		7.58 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-19S	7/31/2009		7.76 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		6.82 HFT	--	--	--	--	0.01 RL1,U	--	0.01 RL1,U	0.001 U	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/28/2010		7.36 HFT	--	--	--	--	0.005 U	--	0.014	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/20/2011		6.95 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.3 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2011		7.1 HFT	--	--	--	--	0.01 RL1,U	--	0.04	0.001 U	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.2 HFT	--	--	--	--	0.01 RL1,U	--	0.27	0.24	0.02 RL1,U	--	--	--	--	--	--	--	--	--	--
	1/18/2012		7 HFT	--	--	--	--	0.025 RL1,U	--	0.33	0.33	0.05 RL1,U	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.4 HF	0.05 U	0.05 U	0.064	0.02 U	0.025 U	0.05 U	0.19	0.17	0.05 U	0.75	--	--	0.05 U	0.065	0.05 U	0.05 U	--	0.05 U	0.1 U
	7/26/2012		--	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U	0.05 U	0.093	0.093	0.05 U	0.025 U	--	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U^	--	0.05 U	0.1 U
	10/30/2012		6.97 HF	0.02 U	0.02 U	0.057	0.008 U	0.01 U	0.02 U	0.021	0.002 U	0.024	0.01 U	--	0.08 U	0.049	0.024	0.02 U	0.021	--	0.02 U	0.051
MW-20S	7/3/2007		--	0.01 U	0.01 U	0.13	0.004 U	0.028	0.01 U	0.0089	0.001 U	0.01 U	0.0071	0.0002 U	--	0.011	0.01 U	0.01 U	0.01 U	--	0.01 U	0.02 U
	7/26/2007		--	0.01 U	0.01 U	0.15	0.004 U	0.006	0.01 U	0.024	0.001 U	0.01 U	0.005 U	0.0002 U	--	0.012	0.01 U	0.01 U	0.013	--	0.01 U	0.02 U
	10/24/2007		7.09 HFT	--	--	--	--	0.28	--	4.6	6	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/30/2008		9.03 HFT	--	--	--	--	0.023	--	0.066	0.036	0.097	--	--	--	--	--	--	--	--	--	--
	4/23/2008		7.24 HFT	--	--	--	--	0.16	--	0.039	0.02	0.039	--	--	--	--	--	--	--	--	--	--
	7/29/2008		7.18 HFT	--	--	--	--	0.24	--	1.5	1.5	0.063	--	--	--	--	--	--	--	--	--	--
	10/29/2008		7.32 HFT	--	--	--	--	0.053	--	0.036	0.001 U	0.056	--	--	--	--	--	--	--	--	--	--
	1/29/2009		7.33 HFT	--	--	--	--	0.011	--	0.015	0.001 U	0.14	--	--	--	--	--	--	--	--	--	--
	4/8/2009		6.96 HFT	--	--	--	--	0.037	--	0.075	0.001 U	0.29	--	--	--	--	--	--	--	--	--	--
	1/20/2011		6.95 HFT	--	--	--	--	0.01	--	0.0063	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/13/2011		7.1 HFT	--	--	--	--	0.0088	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/28/2011		7.4 HFT	--	--	--	--	0.005 U	--	0.005 U	0.001 U	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.8 HFT	--	--	--	--	0.15	--	0.0074	0.001 U	0.017	--	--	--	--	--	--	--	--	--	--
	1/17/2012		6.7 HFT	--	--	--	--	0.51	--	0.01 RL1,U	0.001 U	0.021	--	--	--	--	--	--	--	--	--	--
	3/21/2012		7.14 HF	0.02 U	0.037	0.057	0.008 U	0.55	0.02 U	0.01	0.001 U	0.02 U	0.47	--	--	0.02 U	0.046	0.02 U	0.02 U	--	0.02 U	0.04 U
	7/26/2012		--	0.02 U	0.02 U	0.079	0.008 U	1.5	0.02 U	0.055	0.011	0.035	0.01 U	--	0.13	0.02 U	0.02 U	0.02 U	0.05 U	--	0.02 U	0.04 U
	10/31/2012		6.57 HF	0.02 U	0.02 U	0.08	0.008 U	1.5	0.02 U	0.042	0.002 U	0.02 U	0.01 U	--	0.12	0.029	0.05	0.02 U	0.02 U	--	0.02 U	0.04 U

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**
MW-21D	5/3/2010		7.49 HFT	--	--	--	--	0.005 U	--	0.0097	0.0088	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.92 HFT	--	--	--	--	0.005 U	--	0.025	0.02	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.55 HFT	--	--	--	--	0.005 U	--	0.029	0.026	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		7.71 HFT	--	--	--	--	0.005 U	--	0.022	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.35 HFT	--	--	--	--	0.005 U	--	0.025	0.022	0.032	--	--	--	--	--	--	--	--	--	--
	4/11/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.017	0.011	0.016	--	--	--	--	--	--	--	--	--	--
	7/26/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.028	0.019	0.013	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.021	0.015	0.011	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7.3 HFT	--	--	--	--	0.005 U	--	0.015	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.71 HF	--	--	--	--	0.005 U	--	0.017	0.012	0.06	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.65 HF	--	--	--	--	0.005 U	--	0.014	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.89 HF	--	--	--	--	0.005 U	--	0.017	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-21S	5/3/2010		7.39 HFT	--	--	--	--	0.005 U	--	0.025	0.025	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.94 HFT	--	--	--	--	0.005 U	--	0.03	0.025	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.47 HFT	--	--	--	--	0.005 U	--	0.03	0.024	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		7.67 HFT	--	--	--	--	0.005 U	--	0.019	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.35 HFT	--	--	--	--	0.005 U	--	0.023	0.021	0.018	--	--	--	--	--	--	--	--	--	--
	4/11/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.021	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.023	0.015	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/20/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.017	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2012		7.2 HFT	--	--	--	--	0.005 U	--	0.017	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.67 HF	--	--	--	--	0.005 U	--	0.025	0.015	0.044	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.75 HF	--	--	--	--	0.005 U	--	0.015	0.014	0.018	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.14 HF	--	--	--	--	0.005 U	--	0.022	0.015	0.02	--	--	--	--	--	--	--	--	--	--
MW-22D	5/3/2010		7.33 HFT	--	--	--	--	0.005 U	--	0.019	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.87 HFT	--	--	--	--	0.005 U	--	0.025	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.45 HFT	--	--	--	--	0.005 U	--	0.027	0.023	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony 0.006	Arsenic 0.01	Barium 1.0	Beryllium 0.004	Cadmium 0.005	Cobalt	Chromium 0.05	Cr+6	Copper 1.3*/1.0**	Lead 0.015*	Mercury 0.002	Iron	Nickel 0.1	Selenium 0.05	Silver 0.1**	Thallium 0.002	Tin	Vanadium	Zinc 5.0**
MW-22D	10/27/2010		7.62 HFT	--	--	--	--	0.005 U	--	0.022	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.31 HFT	--	--	--	--	0.005 U	--	0.027	0.028	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/11/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.028	0.021	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.033	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.024	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2012		--	--	--	--	--	0.005 U	--	0.02	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.69 HF	--	--	--	--	0.005 U	--	0.024	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.63 HF	--	--	--	--	0.005 U	--	0.023	0.023	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.17 HF	--	--	--	--	0.005 U	--	0.028	0.021	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-22S	5/3/2010		7.26 HFT	--	--	--	--	0.005 U	--	0.0083	0.0084	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.83 HFT	--	--	--	--	0.005 U	--	0.011	0.0063	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.35 HFT	--	--	--	--	0.005 U	--	0.014	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		7.6 HFT	--	--	--	--	0.005 U	--	0.016	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.24 HFT	--	--	--	--	0.005 U	--	0.021	0.02	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/11/2011		7.4 HFT	--	--	--	--	0.005 U	--	0.028	0.027	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/26/2011		7.6 HFT	--	--	--	--	0.005 U	--	0.022	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		8 HFT	--	--	--	--	0.005 U	--	0.016	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2012		--	--	--	--	--	0.005 U	--	0.013	0.011	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.63 HF	--	--	--	--	0.005 U	--	0.016	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.6 HF	--	--	--	--	0.005 U	--	0.016	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.08 HF	--	--	--	--	0.005 U	--	0.024	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-23D	5/3/2010		7.42 HFT	--	--	--	--	0.005 U	--	0.022	0.023	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.93 HFT	--	--	--	--	0.005 U	--	0.026	0.022	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.56 HFT	--	--	--	--	0.005 U	--	0.027	0.023	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		7.64 HFT	--	--	--	--	0.005 U	--	0.019	0.015	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.32 HFT	--	--	--	--	0.005 U	--	0.024	0.026	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/12/2011		8 HFT	--	--	--	--	0.005 U	--	0.027	0.022	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	**0.01**	**1.0**	**0.004**	**0.005**		**0.05**		**1.3*/1.0****	**0.015***	**0.002**		**0.1**	**0.05**	**0.1****	**0.002**			**5.0****
MW-23D	7/27/2011		7.8 HFT	--	--	--	--	0.005 U	--	0.026	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.017	0.015	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2012		--	--	--	--	--	0.005 U	--	0.016	0.014	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.73 HF	--	--	--	--	0.005 U	--	0.02	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.7 HF	--	--	--	--	0.005 U	--	0.019	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.82 HF	--	--	--	--	0.005 U	--	0.023	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
MW-23S	5/3/2010		7.42 HFT	--	--	--	--	0.005 U	--	0.012	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--
	5/21/2010		7.92 HFT	--	--	--	--	0.005 U	--	0.016	0.013	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/30/2010		7.47 HFT	--	--	--	--	0.005 U	--	0.011	0.0078	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/27/2010		7.68 HFT	--	--	--	--	0.005 U	--	0.013	0.01	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/19/2011		7.31 HFT	--	--	--	--	0.005 U	--	0.017	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	4/11/2011		7.5 HFT	--	--	--	--	0.005 U	--	0.024	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/27/2011		7.7 HFT	--	--	--	--	0.005 U	--	0.021	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/19/2011		7.9 HFT	--	--	--	--	0.005 U	--	0.019	0.016	0.01 U	--	--	--	--	--	--	--	--	--	--
	1/17/2012		--	--	--	--	--	0.005 U	--	0.02	0.018	0.01 U	--	--	--	--	--	--	--	--	--	--
	3/20/2012		7.65 HF	--	--	--	--	0.005 U	--	0.024	0.019	0.01 U	--	--	--	--	--	--	--	--	--	--
	7/23/2012		7.74 HF	--	--	--	--	0.005 U	--	0.016	0.017	0.01 U	--	--	--	--	--	--	--	--	--	--
	10/29/2012		7.78 HF	--	--	--	--	0.005 U	--	0.018	0.012	0.01 U	--	--	--	--	--	--	--	--	--	--

Table C-3
Phibro-Tech, Inc.
Historical Groundwater Analytical Results
Metals and pH Analytical Summary

Well Number	Sample Date	Sample Type	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Cr+6	Copper	Lead	Mercury	Iron	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
				0.006	0.01	1.0	0.004	0.005		0.05		1.3*/1.0**	0.015*	0.002		0.1	0.05	0.1**	0.002			5.0**

Notes:

All concentrations are reported in milligrams per liter (mg/l)
California Maximum Contaminant Levels (MCLs) shown in title line.
* Action Level
** Secondary MCL

U = Not detected at a concentration greater than the reporting limit shown.
J = Indicates detected concentration is below analytical calibration curve, and is below the official reporting limit. Concentration reported is an estimate only.
H = Sample analysis performed past the method-specific holding time.
MHA = Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information
M2 = The matrix spike and/or matrix spike duplicate were below acceptance limits due to sample matrix interference.
O-09 = This sample was received with the EPA recommended holding expired.
RL-1/RL1 = Reporting limit elevated due to matrix interference.
C = Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
C8 = Calibration verification recovery was above the method control limit for this analyte. A high bias may be indicated.
HFT = The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after reciept.
-- = Sample not analyzed for this analyte.

Sample Type:
K = Duplicate sample

APPENDIX C

SOIL GAS EXTRACTION REBOUND DATA

Table C-1. Soil Gas Analytical Results - Total Petroleum Hydrocarbons as Gasoline

Parameter	Lab	Samples						
Location	–	SVE-01A	SVE-01B	SVE-02A	SVE-02B	SVE-03A	SVE-03B	SVE-04A
10/06/2008	ATL	**4,600,000**	–	**1,400,000**	–	**6,300,000**	–	**3,800,000**
01/13/2010	TA	**2,900,000**	–	**2,100,000**	–	**5,700,000**	–	**700,000**
01/13/2011	ATL	**1,300,000**	**26,000**	**52,000**	**88,000**	**6,800,000**	**1,300,000**	**19,000**
07/18/2012	TA	**300,000 LW**	–	**8,500 J LW cn**	–	**1,300,000 LW**	–	–
11/14/2012 - 11/16/2012	TA	–	–	–	–	–	–	**55,000 LW**

Notes

(1) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

(3) Samples analyzed using USEPA Method TO-3.

Definitions

– Not available

< 7,400 Not detected at or above the method detection limit (MDL).

ATL Eurofins Air Toxics Ltd.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-1. Soil Gas Analytical Results - Total Petroleum Hydrocarbons as Gasoline

Parameter	Lab	Samples						
Location	–	SVE-05A	SVE-06A	SVE-07A	SMP-01A	SMP-02A	SMP-03A	SMP-04A
10/06/2008	ATL	**30,000**	**430**	**110,000**	**3,000**	**40,000**	–	**4,900**
01/13/2010	TA	**49,000**	**110,000**	**200,000**	–	–	–	–
01/13/2011	ATL	**790**	**3,500**	**830**	**700**	**18,000**	**14,000**	**710,000**
07/18/2012	TA	–	–	–	–	–	–	–
11/14/2012 - 11/16/2012	TA	< 7,400 LW	**1,200,000 LW**	**110,000 LW**	< 7,400 LW	**3,700 J LW**	**7,000 J LW**	**180,000 LW**

Notes

(1) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

(3) Samples analyzed using USEPA Method TO-3.

Definitions

– Not available

< 7,400 Not detected at or above the method detection limit (MDL).

ATL Eurofins Air Toxics Ltd.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-1. Soil Gas Analytical Results - Total Petroleum Hydrocarbons as Gasoline

Parameter	Lab	Samples						
Location	–	SMP-05A	SMP-06	SMP-07A	SMP-08A	SMP-09A	SMP-10A	SMP-11A
10/06/2008	ATL	**36,000**	**3,000,000**	**6,700**	**4,100,000**	**2,400**	**2,300**	**1,200**
01/13/2010	TA	–	–	–	–	–	–	–
01/13/2011	ATL	**1,200**	**670,000**	**9,600,000**	**2,800,000**	**470**	**250**	**940**
07/18/2012	TA	–	–	–	–	–	–	–
11/14/2012 - 11/16/2012	TA	< 7,400 LW	**150,000 LW**	**3,500,000 LW**	**630,000 LW**	< 7,400 LW	< 7,400 LW	**5,700 J LW**

Notes

(1) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

(3) Samples analyzed using USEPA Method TO-3.

Definitions

– Not available

< 7,400 Not detected at or above the method detection limit (MDL).

ATL Eurofins Air Toxics Ltd.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-1. Soil Gas Analytical Results - Total Petroleum Hydrocarbons as Gasoline

Parameter	Lab	Samples		
Location	–	PZ-01	PZ-02	PZ-03
10/06/2008	ATL	–	–	–
01/13/2010	TA	–	–	–
01/13/2011	ATL	–	**1,100**	**46,000**
07/18/2012	TA	–	–	–
11/14/2012 - 11/16/2012	TA	< 7,400 LW	**4,500 J LW**	< 7,400 LW

Notes

(1) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter (μg/m^3)

(3) Samples analyzed using USEPA Method TO-3.

Definitions

– Not available

< 7,400 Not detected at or above the method detection limit (MDL).

ATL Eurofins Air Toxics Ltd.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-2. Soil Gas Analytical Results - Aromatic and Aliphatic Hydrocarbons

Parameter	Analytical Method	Laboratory	Samples								
Location	–	–	SVE-01A	SVE-02A	SVE-03A	SVE-04A	SVE-04A Dup	SVE-05A	SVE-06A	SVE-07A	SVE-07A
Date	–	–	7/18/2012	7/18/2012	7/18/2012	11/15/2012	11/15/2012	11/14/2012	11/14/2012	11/15/2012	11/16/2012
TPH-g	TO-3	TA	**300,000 LW**	**8,500 J LW cn**	**1,300,000 LW**	**55,000 LW cn**	**53,000 LW cn**	< 3,300 LW	**1,200,000 LW cn**	–	**110,000 LW cn**
C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	Modified TO-15 APH	ATL	< 280	< 460	< 2,500	< 100	< 100	< 110	< 100,000	< 17,000	–
1,2,3-Trimethylbenzene	TO-15 Extended	TA	< 12.6	< 3.09	< 67.8	< 3.99	< 4.01	< 1.66	< 1,310	< 280	–
C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	Modified TO-15 APH	ATL	< 310	< 520	< 2,800	**300**	**350**	< 120	< 110,000	< 19,000	–
1,2,4,5-Tetramethylbenzene - Unavailable Analyte	–	–	–	–	–	–	–	–	–	–	–
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	Modified TO-15 APH	ATL	**1,900**	< 310	**3,200**	**330**	**350**	< 70	< 68,000	< 11,000	–
n-Pentane	TO-15 Extended	TA	**27.2 J**	**6.70 J**	**35.7 J**	**9.01 J**	**9.81 J**	**10.7**	< 404	< 86.1	–
Hexane	TO-15 Extended	TA	**9.82 J**	< 1.03	< 22.5	**1.76 J**	**2.21 J**	**0.764 J**	< 436	< 93.0	–
Hexane	TO-15	ATL	**23**	< 17	< 91	< 3.6	**5.1**	–	–	–	–
C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	Modified TO-15 APH	ATL	**58,000**	< 390	**320,000**	**3,900**	**4,800**	< 88	< 86,000	< 14,000	–
Heptane	TO-15 Extended	TA	**15.5 J**	< 0.910	< 20.0	< 1.17	< 1.18	< 0.489	< 387	< 82.5	–
C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	Modified TO-15 APH	ATL	**590,000**	< 550	**2,500,000**	**42,000**	**49,000**	< 120	< 120,000	< 20,000	–
n-Decane	TO-15 Extended	TA	**903**	< 1.87	**393 J**	< 2.41	< 2.43	< 1.01	< 797	< 170	–
C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	Modified TO-15 APH	ATL	**310,000**	< 660	**350,000**	**29,000**	**35,000**	< 150	< 140,000	< 24,000	–
Dodecane - Unavailable Analyte	–	–	–	–	–	–	–	–	–	–	–

Notes

(1) Laboratory data qualifers are as follows.

- LW — Quantitated against gasoline.
- J — Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.
- cn — The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

Definitions

–	Not available
< 280	Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.
1,2,3-TMB	1,2,3-Trimethylbenzene
1,2,4,5-TMB	1,2,4,5-Tetramethylbenzene
APH	Air-Phase Petroleum Hydrocarbons
ATL	Eurofins Air Toxics Ltd.
TA	TestAmerica Laboratories, Inc.
TPH-g	Total Petroleum Hydrocarbons as gasoline
USEPA	United States Environmental Protection Agency

Table C-2. Soil Gas Analytical Results - Aromatic and Aliphatic Hydrocarbons

Parameter	Analytical Method	Laboratory	Samples								
Location	–	–	SMP-01A	SMP-02A	SMP-03A	SMP-04A	SMP-05A	SMP-06	SMP-07A	SMP-08A	SMP-09A
Date	–	–	11/14/2012	11/15/2012	11/15/2012	11/15/2012	11/15/2012	11/14/2012	11/14/2012	11/14/2012	11/15/2012
TPH-g	TO-3	TA	< 3,300 LW	**3,700 J LW**	**7,000 J LW**	**180,000 LW cn**	< 3,300 LW	**150,000 LW cn**	**3,500,000 LW cn**	**630,000 LW cn**	< 3,300 LW
C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	Modified TO-15 APH	ATL	< 100	< 250	< 340	< 400	< 100	< 140	< 2,200	< 2,100	< 100
1,2,3-Trimethylbenzene	TO-15 Extended	TA	< 4.11	< 3.93	< 3.90	< 16.4	< 3.96	< 4.05	< 90.4	< 19.8	< 1.59
C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	Modified TO-15 APH	ATL	< 120	< 280	< 370	**1,000**	< 110	< 160	< 2,400	< 2,400	< 110
1,2,4,5-Tetramethylbenzene - Unavailable Analyte	–	–	–	–	–	–	–	–	–	–	–
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	Modified TO-15 APH	ATL	< 69	< 160	< 220	**1,500**	< 66	**1,400**	**4,700**	**4,400**	< 68
n-Pentane	TO-15 Extended	TA	< 1.26	**5.31 J**	**11.1 J**	**30.0 J**	< 1.22	**84.1**	**131 J**	**241**	**2.60 J**
Hexane	TO-15 Extended	TA	< 1.37	**6.10 J**	**4.62 J**	**7.61 J**	< 1.31	**88.2**	**35.8 J**	**139**	< 0.529
Hexane	TO-15	ATL	–	–	–	–	–	–	–	–	–
C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	Modified TO-15 APH	ATL	< 87	< 210	< 280	**5,600**	< 84	**47,000**	**1,000,000**	**100,000**	< 86
Heptane	TO-15 Extended	TA	< 1.21	< 1.16	< 1.15	< 4.84	< 1.17	**43.8**	< 26.6	**44.2 J**	< 0.469
C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	Modified TO-15 APH	ATL	< 120	< 300	**730**	**190,000**	< 120	**110,000**	**2,300,000**	**760,000**	< 120
n-Decane	TO-15 Extended	TA	< 2.49	< 2.38	< 2.37	< 9.97	< 2.40	**252**	< 54.8	< 12.0	< 0.966
C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	Modified TO-15 APH	ATL	< 150	< 360	< 480	**390,000**	< 140	**8,900**	**690,000**	**430,000**	< 140
Dodecane - Unavailable Analyte	–	–	–	–	–	–	–	–	–	–	–

Notes

(1) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

Definitions

– Not available

< 280 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

1,2,3-TMB 1,2,3-Trimethylbenzene

1,2,4,5-TMB 1,2,4,5-Tetramethylbenzene

APH Air-Phase Petroleum Hydrocarbons

ATL Eurofins Air Toxics Ltd.

TA TestAmerica Laboratories, Inc.

TPH-g Total Petroleum Hydrocarbons as gasoline

USEPA United States Environmental Protection Agency

Table C-2. Soil Gas Analytical Results - Aromatic and Aliphatic Hydrocarbons

Parameter	Analytical Method	Laboratory	Samples				
Location	–	–	SMP-10A	SMP-11A	PZ-01	PZ-02	PZ-03
Date	–	–	11/14/2012	11/14/2012	11/14/2012	11/15/2012	11/15/2012
TPH-g	TO-3	TA	< 3,300 LW	**5,700 J LW**	< 3,300 LW	**4,500 J LW**	< 3,300 LW
C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	Modified TO-15 APH	ATL	< 110	< 100	< 100	< 250	< 100
1,2,3-Trimethylbenzene	TO-15 Extended	TA	< 1.69	< 1.59	< 4.12	< 3.95	< 3.92
C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	Modified TO-15 APH	ATL	< 120	< 120	< 110	< 280	< 110
1,2,4,5-Tetramethylbenzene - Unavailable Analyte	–	–	–	–	–	–	–
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	Modified TO-15 APH	ATL	< 70	< 69	< 68	< 160	**420**
n-Pentane	TO-15 Extended	TA	**0.684 J**	**3.41 J**	**3.24 J**	**9.16 J**	**7.74 J**
Hexane	TO-15 Extended	TA	**0.960 J**	**0.646 J**	**4.85 J**	< 1.31	**1.37 J**
Hexane	TO-15	ATL	–	–	–	–	–
C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	Modified TO-15 APH	ATL	< 88	< 87	< 86	< 210	**1,400**
Heptane	TO-15 Extended	TA	**0.594 J**	< 0.469	< 1.21	< 1.16	< 1.15
C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	Modified TO-15 APH	ATL	< 120	< 120	< 120	< 300	**1,800**
n-Decane	TO-15 Extended	TA	**2.14 J**	< 0.965	< 2.50	< 2.39	**43.8**
C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	Modified TO-15 APH	ATL	< 150	< 150	< 140	< 360	**12,000**
Dodecane - Unavailable Analyte	–	–	–	–	–	–	–

Notes

(1) Laboratory data qualifers are as follows.
- LW Quantitated against gasoline.
- J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.
- cn The GRO result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

(2) All results in micrograms per cubic meter ($\mu g/m^3$)

Definitions

–	Not available
< 280	Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.
1,2,3-TMB	1,2,3-Trimethylbenzene
1,2,4,5-TMB	1,2,4,5-Tetramethylbenzene
APH	Air-Phase Petroleum Hydrocarbons
ATL	Eurofins Air Toxics Ltd.
TA	TestAmerica Laboratories, Inc.
TPH-g	Total Petroleum Hydrocarbons as gasoline
USEPA	United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]	Samples											
Location	SVE-01A					SVE-01B	SVE-02A					SVE-02B
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15
Acetone	< 940	< 120	< 260	**330**	**267 B**	< 96	< 1,500	< 240	< 200	< 110	**33.7 B**	< 510
Benzene	**3,200**	**110 J**	< 89	**16**	**8.31 J**	**45**	**700**	**120 J**	< 68	< 15	**8.18 J**	< 170
Benzyl chloride (alpha chlorotoluene)	< 510	< 130	< 140	< 15	< 24.2	< 52	< 840	< 260	< 110	< 24	< 5.95	< 280
Bromodichloromethane	< 660	< 80	< 190	< 19	< 9.02	**80**	< 1,100	< 170	< 140	< 32	< 2.22	< 360
Bromoform	< 1,000	< 64	< 290	< 29	< 13.9	< 100	< 1,700	< 120	< 220	< 49	< 3.42	< 560
Bromomethane (methyl bromide)	< 380	< 97	< 110	< 110	< 5.08	< 39	< 630	< 190	< 82	< 180	< 1.25	< 210
1,3-Butadiene	< 220	–	< 62	< 6.3	< 2.54	< 22	< 360	–	< 47	< 10	< 0.624	< 120
2-Butanone (methyl ethyl ketone)	**980**	< 110	< 82	**470**	**471**	< 30	< 480	< 220	< 62	< 14	**47.9**	< 160
Carbon disulfide	**4,200**	< 160	**260**	**1,600**	**1,100**	**55**	**1,600**	< 310	< 66	< 15	**26.8**	< 170
Carbon tetrachloride	< 620	< 76	< 180	< 18	< 8.23	< 64	< 1,000	< 160	< 130	< 30	**2.41 J**	< 340
Chlorobenzene	< 460	< 29	< 130	< 13	< 6.08	< 47	< 740	< 55	**140**	< 22	**25.0**	< 250
Chlorodibromomethane (dibromochloromethane)	< 840	< 100	< 240	< 24	< 11.5	< 86	< 1,400	< 210	< 180	< 40	< 2.82	< 460
Chloroethane (ethyl chloride)	**10,000**	< 50	**140**	**49**	**54.0**	< 27	**2,400**	< 100	**76**	**59**	**139**	< 140
Chloroform	**13,000**	< 58	**400**	**710**	**655**	**18,000**	**10,000**	< 120	**440**	**530**	**1,090 RA**	**10,000**
Chloromethane (methyl chloride)	**940**	< 52	< 230	< 58	**6.88 J**	< 84	< 1,300	< 100	< 180	< 98	**5.39 J**	< 450
3-Chloropropene	< 1,200	–	< 350	< 35	< 4.02	< 130	< 2,000	–	< 260	< 59	< 0.989	< 680
Cumene	**1,800**	–	**240**	**18**	**18.4 J**	< 50	< 790	–	< 100	< 23	< 3.06	< 260
Cyclohexane	**16,000**	–	**1,600**	**420**	**246**	< 35	**6,100**	–	< 73	< 16	**14.1 J**	< 180
1,2-Dibromoethane (ethylene dibromide)	< 760	< 92	< 210	< 22	< 10.0	< 78	< 1,200	< 190	< 160	< 36	< 2.47	< 410
1,2-Dichlorobenzene	< 600	< 66	< 170	< 17	< 7.79	< 61	< 970	< 130	< 130	< 28	**4.96 J**	< 320
1,3-Dichlorobenzene	< 600	< 60	< 170	< 17	< 7.79	< 61	< 970	< 120	< 130	< 28	**3.53 J**	< 320
1,4-Dichlorobenzene	< 600	< 72	< 170	< 17	< 7.86	< 61	< 970	< 150	< 130	< 28	< 1.93	< 320
Dichlorodifluoromethane (Freon 12)	< 490	< 59	< 140	< 14	< 6.41	< 50	< 800	< 120	< 100	< 23	**3.72 J**	< 270
1,1-Dichloroethane (1,1-DCA)	**150,000**	**1,500**	**1,000**	**420**	**368**	**14,000**	**94,000**	**4,500**	**1,700**	**240**	**607**	**79,000**
1,2-Dichloroethane (1,2-DCA)	< 400	< 77	< 110	< 11	< 5.29	**150**	< 650	< 150	< 86	**50**	**2.25 J**	< 220
1,1-Dichloroethene (1,1-DCE)	**130,000**	**560**	**380**	**2,600**	**2,170**	**790**	**100,000**	**1,500**	**420**	**1,500**	**3,690 RA**	**4,300**
cis-1,2-Dichloroethene (cis-1,2-DCE)	**16,000**	**990**	**950**	**890**	**669**	**710**	**10,000**	**2,700**	**2,200**	**330**	**948**	**2,100**
trans-1,2-Dichloroethene (trans-1,2-DCE)	**12,000**	**52 J**	< 110	**68**	**49.5 J**	**180**	**5,200**	**180 J**	**150**	**27**	**51.7**	**2,000**
1,2-Dichloropropane	< 460	< 88	< 130	< 13	< 6.04	< 47	< 750	< 180	< 98	< 22	< 1.49	< 250
cis-1,3-Dichloropropene	< 450	< 54	< 130	< 13	< 5.94	< 46	< 730	< 110	< 96	< 21	< 1.46	< 240

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]	Samples											
Location	SVE-01A					SVE-01B	SVE-02A					SVE-02B
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15
trans-1,3-Dichloropropene	< 450	< 54	< 130	< 13	< 5.94	< 46	< 730	< 110	< 96	< 21	< 1.46	< 240
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 690	< 84	< 190	< 20	< 9.06	< 71	< 1,100	< 170	< 150	< 33	< 2.23	< 380
1,4-Dioxane	< 1,400	–	< 400	< 41	< 12.6 RA	< 150	< 2,300	–	< 300	< 68	**4.83 RA,J**	< 780
Ethanol	< 750	–	< 210	**60**	**17.3 RA,J**	< 76	< 1,200	–	< 160	**57**	**21.2 RA**	< 410
Ethylbenzene	**660**	**320**	**190**	**17**	< 5.68	< 44	< 700	**120 J**	< 92	< 20	< 1.40	< 230
4-Ethyltoluene	**1,400**	< 59	< 140	< 14	< 6.37	< 50	< 790	< 120	< 100	< 23	< 1.57	< 260
Heptane	**1,200**	–	< 110	< 12	**15.5 J**	< 42	< 660	–	< 87	< 19	< 0.910	< 220
Hexachlorobutadiene	< 4,200	< 200	< 1,200	< 120	< 14.1	< 430	< 6,900	< 410	< 900	< 200	< 3.46	< 2,300
Hexane	**24,000**	–	< 98	**23**	**9.82 J**	< 36	**3,500**	–	< 75	< 17	< 1.03	< 190
2-Hexanone (methyl butyl ketone)	< 1,600	< 100	< 460	< 46	< 3.65	< 170	< 2,600	< 200	< 350	< 78	< 0.898	< 880
Methyl tert-butyl ether (MTBE)	< 360	–	< 100	< 10	< 8.70	< 36	< 580	–	< 76	< 17	< 2.14	< 190
Methylene chloride	**10,000**	**270 B1, B**	**430**	**130**	**138**	**3,200**	**7,200**	**690 B1, B**	< 74	< 160	**81.2**	**1,100**
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 400	< 100	< 110	< 12	< 10.5	< 42	< 660	< 200	< 87	< 19	< 2.57	< 220
Naphthalene	–	–	–	< 59	**17.2 J, B**	–	–	–	–	< 99	< 2.68	–
2-Propanol (isopropanol)	< 970	–	< 270	< 28	**5.07 RA,J**	< 100	< 1,600	–	< 210	< 46	**2.19 RA,J**	< 530
n-Propylbenzene	**1,600**	–	**390**	**68**	< 6.49	< 50	< 790	–	< 100	< 23	< 1.60	< 260
Styrene	< 420	< 51	< 120	< 12	< 5.57	< 43	< 690	< 110	< 90	< 20	< 1.37	< 230
1,1,2,2-Tetrachloroethane	< 680	< 82	< 190	< 19	< 8.98	< 70	< 1,100	< 170	< 140	< 32	< 2.21	< 370
Tetrachloroethene (PCE)	**28,000**	**600**	**470**	**420**	**418**	**170**	**23,000**	**1,400**	**3,000**	**390**	**1,150**	**890**
Tetrahydrofuran	< 290	–	< 82	**2,000**	–	< 30	**2,000**	–	**780**	**220**	–	< 160
Toluene	**780**	< 45	**220**	**24**	< 4.93	**160**	< 610	< 94	< 80	**180**	**2.65 J**	< 200
1,2,4-Trichlorobenzene	< 2,900	< 230	< 830	< 84	< 9.38	< 300	< 4,800	< 460	< 630	< 140	< 2.31	< 1,600
1,1,1-Trichloroethane (1,1,1-TCA)	**61,000**	**340**	**720**	**3,700**	**3,760**	< 55	**66,000**	**1,300**	**1,200**	**4,400**	**8,530 RA**	< 290
1,1,2-Trichloroethane (1,1,2-TCA)	< 540	< 65	< 150	< 15	< 7.07	**120**	< 880	< 140	< 120	< 26	**7.71 J**	< 290
Trichloroethene (TCE)	**390,000**	**12,000**	**2,600**	**3,600**	**2,330**	**10,000**	**260,000**	**33,000**	**30,000**	**4,400**	**9,560 RA**	**39,000**
Trichlorofluoromethane (Freon 11)	< 560	< 67	< 160	< 16	**8.57 J**	< 57	< 910	< 140	< 120	< 27	**3.02 J**	< 300
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 760	< 92	**280**	**34**	**49.3 J**	**96**	< 1,200	< 190	< 160	< 36	**25.2 J**	**1,200**
1,2,4-Trimethylbenzene	**2,800**	< 79	< 140	< 14 J	< 6.43	< 50	< 790	< 160	< 100	< 23 J	< 1.58	< 260
1,3,5-Trimethylbenzene	**840**	< 120	< 140	< 14	< 6.43	< 50	< 790	< 250	< 100	< 23	< 1.58	< 260
2,2,4-Trimethylpentane	< 460	–	< 130	< 13	**120**	< 47	< 750	–	< 99	< 22	< 1.50	< 250

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter (3)	Samples											
Location	SVE-01A					SVE-01B	SVE-02A					SVE-02B
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15
Vinyl acetate	–	< 420	–	–	< 19.5	–	–	< 880	–	–	< 4.80	–
Vinyl chloride	**3,600**	< 64	< 71	**81**	**94.5**	< 26	< 410	< 130	< 54	< 12	**8.96 J**	< 140
m-,p-Xylene	**2,400**	< 110	< 120	**28**	–	< 44	< 700	< 220	< 92	< 20	–	< 230
o-Xylene	**1,200**	< 52	< 120	**20**	**12.4 J**	< 44	< 700	< 110	< 92	< 20	< 1.40	< 230
Xylenes	–	< 52	–	–	**44.9 J**	–	–	< 110	–	–	< 2.07	–

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter (μg/m^3)

(4) Laboratory data qualifers are as follows.

- LW Quantitated against gasoline.
- J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.
- E Exceeds instrument calibration range.
- B Analyte was detected in the associated Method Blank.
- B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- S10 Insufficient sample available for reanalysis.
- RA Results are from a second analysis of the sample.
- U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]	Samples												
Location	SVE-03A					SVE-03B	SVE-04A						
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	11/15/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	ATL	TA	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15 Extended
Acetone	< 1,100	< 240	< 970	< 610	**470 B**	< 100	**2,700**	< 24	**57**	**26**	< 9.7	**12.0 J, B**	**12.1 J, B**
Benzene	**710**	**190 J**	< 330	< 82	< 17.0	**72**	**1,500**	< 12	**24**	**8.7**	**10**	**4.80 J**	**5.33 J**
Benzyl chloride (alpha chlorotoluene)	< 630	< 260	< 530	< 130	< 131	< 54	< 620	< 26	< 5.3	< 5.3	< 5.3	< 7.68	< 7.73
Bromodichloromethane	< 810	< 170	< 690	< 170	< 48.7	< 70	< 800	< 17	< 6.9	< 6.9	< 6.9	< 2.86	< 2.88
Bromoform	< 1,200	< 120	< 1,000	< 270	< 75.2	< 110	< 1,200	< 12	< 10	< 10	< 10	< 4.42	< 4.45
Bromomethane (methyl bromide)	< 470	< 190	< 400	< 1,000	< 27.4	< 41	< 460	< 19	**11**	< 4.0	< 4.0	< 1.61	< 1.62
1,3-Butadiene	< 270	–	< 230	< 57	< 13.7	< 23	< 260	–	< 2.3	< 2.3	< 2.3	**1.79 J**	< 0.811
2-Butanone (methyl ethyl ketone)	**970**	< 220	< 300	**1,600**	**1,690**	< 31	**1,600**	< 22	**41**	< 3.0	< 3.0	**6.95 J**	**7.52 J**
Carbon disulfide	**430**	< 310	< 320	< 80	< 74.9	**43**	**3,900**	< 31	**58**	**46**	**56**	**24.6**	**25.6**
Carbon tetrachloride	< 760	< 160	< 640	< 160	< 44.4	< 66	< 750	< 16	< 6.4	< 6.4	< 6.4	< 2.61	< 2.63
Chlorobenzene	< 560	< 55	< 470	< 120	< 32.9	< 48	< 550	< 5.5	< 4.7	< 4.7	< 4.7	< 1.93	< 1.94
Chlorodibromomethane (dibromochloromethane)	< 1,000	< 210	< 870	< 220	< 62.0	< 89	< 1,000	< 21	< 8.7	< 8.7	< 8.7	< 3.64	< 3.67
Chloroethane (ethyl chloride)	**6,200**	< 100	< 270	< 68	< 13.2	< 28	< 310	**29**	**12**	**38**	**48**	**36.9**	**44.5**
Chloroform	< 590	< 120	< 500	< 130	< 34.5	< 51	< 580	< 12	**25**	**9.3**	**11**	**7.54 J**	**7.51 J**
Chloromethane (methyl chloride)	< 1,000	< 100	< 850	< 530	**46.3 J**	< 87	< 980	**33**	**30**	**36**	**44**	**65.9**	**70.9**
3-Chloropropene	< 1,500	–	< 1,300	< 320	< 21.7	< 130	< 1,500	–	< 13	< 13	< 13	< 1.28	< 1.28
Cumene	< 590	–	**7,900**	< 130	**92.9 J**	< 52	**710**	–	**14**	**9.8**	**11**	**7.55 J**	< 3.97
Cyclohexane	**41,000**	–	< 350	**390**	**110 J**	< 36	**5,800**	–	< 3.5	< 3.5	< 3.5	**2.78 J**	**3.33 J**
1,2-Dibromoethane (ethylene dibromide)	< 930	< 190	< 790	< 200	< 54.3	< 81	< 910	< 19	< 7.9	< 7.9	< 7.9	< 3.19	< 3.21
1,2-Dichlorobenzene	< 730	< 130	< 620	< 160	< 42.1	< 63	< 720	< 13	< 6.2	< 6.2	< 6.2	< 2.47	< 2.49
1,3-Dichlorobenzene	< 730	< 120	< 620	< 160	< 42.1	< 63	< 720	< 12	< 6.2	< 6.2	< 6.2	< 2.47	< 2.49
1,4-Dichlorobenzene	< 730	< 150	< 620	< 160	< 42.5	< 63	< 720	< 15	< 6.2	< 6.2	< 6.2	< 2.50	< 2.51
Dichlorodifluoromethane (Freon 12)	< 600	< 120	< 510	< 130	< 34.6	< 52	< 590	< 12	< 5.1	< 5.1	< 5.1	**2.89 J**	**3.16 J**
1,1-Dichloroethane (1,1-DCA)	**1,800**	< 100	< 410	< 100	< 28.6	**410**	**42,000**	**530**	**180**	**70**	**88**	**57.4**	**60.6**
1,2-Dichloroethane (1,2-DCA)	< 490	< 150	< 410	< 100	< 28.6	**46**	< 480	< 15	< 4.1	< 4.1	< 4.1	**1.89 J**	**1.95 J**
1,1-Dichloroethene (1,1-DCE)	**21,000**	**170 J**	**2,600**	< 100	< 33.4	**3,400**	**14,000**	**25**	**24**	**26**	**31**	**19.3 J**	**22.3**
cis-1,2-Dichloroethene (cis-1,2-DCE)	**750**	< 79	< 410	< 100	< 28.0	< 42	**8,500**	**99**	**55**	**32**	**43**	**19.0 J**	**20.5 J**
trans-1,2-Dichloroethene (trans-1,2-DCE)	**1,500**	< 99	< 410	< 100	< 54.2	< 42	**3,200**	< 9.9	**8.3**	< 4.1	**4.2**	< 3.18	< 3.21
1,2-Dichloropropane	< 560	< 180	< 470	< 120	< 32.6	< 48	< 550	< 18	< 4.7	< 4.7	< 4.7	< 1.92	< 1.93
cis-1,3-Dichloropropene	< 550	< 110	< 460	< 120	< 32.1	< 48	< 540	< 11	< 4.6	< 4.6	< 4.6	< 1.88	< 1.90

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]	Samples												
Location	SVE-03A					SVE-03B	SVE-04A						
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	11/15/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	ATL	TA	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15 Extended
trans-1,3-Dichloropropene	< 550	< 110	< 460	< 120	< 32.1	< 48	< 540	< 11	< 4.6	< 4.6	< 4.6	< 1.88	< 1.90
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 840	< 170	< 720	< 180	< 48.9	< 73	< 830	< 17	< 7.2	< 7.2	< 7.2	< 2.87	< 2.89
1,4-Dioxane	< 1,700	–	< 1,500	< 370	< 68.1 RA	< 150	< 1,700	–	< 15	< 15	< 15	< 4.00 RA	< 4.03 RA
Ethanol	< 910	–	< 770	< 190	< 46.3 RA	< 79	< 900	–	**12**	**13**	**7.9**	**5.92 RA,J**	**5.84 RA,J**
Ethylbenzene	< 520	**420**	**900**	< 110	< 30.7	< 46	< 520	**130**	**10**	**4.5**	**4.9**	**2.19 J**	**2.68 J**
4-Ethyltoluene	< 590	< 120	< 500	< 130	< 34.4	< 52	< 580	< 12	**16**	< 5.0	< 5.0	< 2.02	< 2.03
Heptane	**8,400**	–	< 420	< 100	< 20.0	**110**	< 490	–	< 4.2	< 4.2	< 4.2	< 1.17	< 1.18
Hexachlorobutadiene	< 5,200	< 410	< 4,400	< 1,100	< 76.0	< 450	< 5,100	< 41	< 44	< 44	< 44	< 4.46	< 4.49
Hexane	**19,000**	–	< 360	< 91	< 22.5	**84**	**14,000**	–	< 3.6	< 3.6	**5.1**	**1.76 J**	**2.21 J**
2-Hexanone (methyl butyl ketone)	< 2,000	< 200	< 1,700	< 420	< 19.7	< 170	< 1,900	< 20	< 17	< 17	< 17	< 1.16	< 1.17
Methyl tert-butyl ether (MTBE)	< 440	–	< 370	< 93	< 47.0	< 38	< 430	–	< 3.7	< 3.7	< 3.7	< 2.76	< 2.78
Methylene chloride	< 420	< 87	< 360	< 900	**192 J**	< 36	< 410	**83 S10, B**	**170**	< 3.6	< 3.6	**22.7**	**23.3**
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 500	< 200	< 420	< 100	< 56.6	< 43	< 490	< 20	< 4.2	< 4.2	< 4.2	< 3.32	< 3.35
Naphthalene	–	–	–	< 540	< 58.8	–	–	–	–	**32**	**39**	**14.4 J, B**	**13.0 J, B**
2-Propanol (isopropanol)	< 1,200	–	< 1,000	< 250	< 19.0 RA	< 100	< 1,200	–	< 10	< 10	< 10	< 1.11 RA	< 1.12 RA
n-Propylbenzene	< 590	–	**5,700**	**150**	< 35.1	< 52	< 580	–	**11**	< 5.0	< 5.0	< 2.06	< 2.08
Styrene	< 520	< 110	< 440	< 110	< 30.1	< 45	< 510	< 11	**20**	< 4.4	< 4.4	**2.38 J**	**2.24 J**
1,1,2,2-Tetrachloroethane	< 830	< 170	< 700	< 180	< 48.5	< 72	< 820	< 17	< 7.0	< 7.0	< 7.0	< 2.85	< 2.87
Tetrachloroethene (PCE)	< 820	< 170	< 700	< 180	< 47.9	**4,600**	< 810	**81**	**140**	**66**	**80**	**54.7**	**57.5**
Tetrahydrofuran	< 360	–	< 300	**21,000**	–	< 31	< 350	–	**220**	**28**	**36**	–	–
Toluene	< 460	< 94	< 390	< 97	< 26.6	< 40	< 450	**9.8 J**	**40**	**15**	**13**	**7.07 J**	**7.52 J**
1,2,4-Trichlorobenzene	< 3,600	< 460	< 3,000	< 770	< 50.7	< 310	< 3,500	< 46	< 30	< 30	< 30	< 2.98	< 3.00
1,1,1-Trichloroethane (1,1,1-TCA)	< 660	< 140	< 560	< 140	< 38.2	< 57	< 650	< 14	< 5.6	< 5.6	< 5.6	< 2.24	< 2.26
1,1,2-Trichloroethane (1,1,2-TCA)	< 660	< 140	< 560	< 140	< 38.2	< 57	< 650	< 14	< 5.6	< 5.6	< 5.6	< 2.24	< 2.26
Trichloroethene (TCE)	**5,700**	**260 J**	< 550	< 140	**40.7 J**	**1,100**	**18,000**	**330**	**160**	**60**	**74**	**41.3**	**45.0**
Trichlorofluoromethane (Freon 11)	< 680	< 140	< 580	< 140	< 39.3	< 59	< 670	< 14	**12**	**6.2**	**7.5**	**9.10 J**	**8.86 J**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 930	< 190	< 780	< 200	< 54.1	**580**	< 910	< 19	**39**	**28**	**34**	**34.5 J**	**33.0 J**
1,2,4-Trimethylbenzene	< 590	< 160	< 500	< 130 J	< 34.7	< 52	< 580	< 16	**14**	**5.2**	**5.8**	< 2.04	< 2.05
1,3,5-Trimethylbenzene	< 590	< 250	< 500	< 130	< 34.7	< 52	< 580	< 25	**12**	< 5.0	< 5.0	< 2.04	< 2.05
2,2,4-Trimethylpentane	< 560	–	**8,700**	**820**	**127 J**	**2,900**	< 560	–	< 4.8	< 4.8	< 4.8	**3.59 J**	**4.42 J**

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]	Samples												
Location	SVE-03A					SVE-03B	SVE-04A						
Date	10/6/2008	1/13/2010	1/13/2011	7/18/2012	7/18/2012	1/13/2011	10/6/2008	1/13/2010	1/13/2011	11/15/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	ATL	TA	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15 Extended	TO-15 Extended
Vinyl acetate	–	< 880	–	–	< 105	–	–	< 88	–	–	–	< 6.20	< 6.24
Vinyl chloride	**610**	< 130	< 260	< 66	< 17.0	< 27	**1,600**	< 13	< 2.6	< 2.6	< 2.6	< 0.997	< 1.00
m-,p-Xylene	< 520	< 220	< 440	< 110	–	< 46	< 520	< 22	**34**	**7.1**	**7.1**	–	–
o-Xylene	< 520	< 110	< 440	< 110	< 30.7	< 46	< 520	< 11	**20**	< 4.4	**4.4**	< 1.80	< 1.81
Xylenes	–	< 110	–	–	< 45.6	–	–	< 11	–	–	–	**3.91 J**	**5.70 J**

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]												
Location	SVE-05A				SVE-06A				SVE-07A			
Date	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/15/2012
Analytical Laboratory	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15 Extended [2]	TO-15	TO-15	TO-15	TO-15 Extended [2]
Acetone	**480**	**20 J**	**14**	**28.5 B**	**39**	< 48	< 35	**125,000 B**	< 480	< 95	**22**	**12,800 B**
Benzene	< 93	< 4.8	< 3.4	**1.64 J**	< 3.3	< 24	< 12	ND U	**230**	< 48	< 3.2	ND U
Benzyl chloride (alpha chlorotoluene)	< 150	< 10	< 5.5	< 3.20	< 5.4	< 52	< 19	ND U	< 260	< 100	< 5.2	ND U
Bromodichloromethane	< 190	< 6.7	< 7.1	< 1.19	< 7.0	< 34	< 25	ND U	< 340	< 67	< 6.8	ND U
Bromoform	< 300	< 5.2	< 11	< 1.84	< 11	< 26	< 39	ND U	< 520	< 52	< 10	ND U
Bromomethane (methyl bromide)	< 110	< 7.8	< 4.1	< 0.672	< 4.0	< 39	< 14	ND U	< 200	< 78	< 3.9	ND U
1,3-Butadiene	< 64	–	< 2.4	< 0.336	< 2.3	–	< 8.3	ND U	< 110	–	< 2.2	ND U
2-Butanone (methyl ethyl ketone)	**98**	< 8.8	**4.6**	**6.34 J**	**17**	< 44	< 11	**303,000 RA**	**440**	< 88	**3.8**	**35,200**
Carbon disulfide	< 91	< 12	< 3.3	**1.84 J**	< 3.2	< 62	< 12	ND U	< 160	< 120	**3.6**	ND U
Carbon tetrachloride	**300**	< 6.3	**41**	**1.82 J**	< 6.6	< 31	< 24	ND U	< 320	< 63	< 6.4	ND U
Chlorobenzene	< 130	< 2.3	< 4.9	< 0.805	< 4.8	< 12	< 17	ND U	< 230	< 23	**6.0**	ND U
Chlorodibromomethane (dibromochloromethane)	< 250	< 8.5	< 9.1	< 1.52	< 8.9	< 43	< 32	ND U	< 430	< 85	< 8.6	ND U
Chloroethane (ethyl chloride)	< 77	< 4.0	< 2.8	**1.04 J**	< 2.8	< 20	< 9.8	ND U	< 130	< 40	< 2.7	ND U
Chloroform	**1,100**	**92**	**64**	**4.46 J**	< 5.1	**54**	**36**	ND U	**1,400**	< 49	**54**	ND U
Chloromethane (methyl chloride)	< 240	< 4.2	< 8.8	**0.888 J**	< 8.6	< 21	< 31	ND U	< 420	< 42	< 8.4	ND U
3-Chloropropene	< 360	–	< 13	< 0.532	< 13	–	< 47	ND U	< 630	–	< 13	ND U
Cumene	< 140	–	< 5.2	< 1.65	< 5.1	–	< 18	ND U	< 250	–	< 5.0	ND U
Cyclohexane	< 100	–	< 3.7	**1.16 J**	< 3.6	–	< 13	ND U	< 170	–	< 3.5	ND U
1,2-Dibromoethane (ethylene dibromide)	< 220	< 7.7	< 8.2	< 1.33	< 8.0	< 38	< 29	ND U	< 390	< 77	< 7.8	ND U
1,2-Dichlorobenzene	< 170	< 5.4	< 6.4	< 1.03	< 6.3	< 27	< 22	ND U	< 300	< 54	< 6.1	ND U
1,3-Dichlorobenzene	< 170	< 4.8	< 6.4	< 1.03	< 6.3	< 24	< 22	ND U	< 300	< 48	< 6.1	ND U
1,4-Dichlorobenzene	< 170	< 6.0	< 6.4	< 1.04	< 6.3	< 30	< 22	ND U	< 300	< 60	< 6.1	ND U
Dichlorodifluoromethane (Freon 12)	< 140	**7.4 J**	**5.4**	**2.48 J**	< 5.2	< 25	< 18	ND U	< 250	< 49	< 5.0	ND U
1,1-Dichloroethane (1,1-DCA)	**17,000**	**170**	**48**	**5.01 J**	< 4.2	**360**	**360**	ND U	**25,000**	**350**	**100**	ND U
1,2-Dichloroethane (1,2-DCA)	< 120	< 6.1	**15**	< 0.700	< 4.2	< 30	< 15	ND U	< 200	**3,300**	**89**	ND U
1,1-Dichloroethene (1,1-DCE)	**5,500**	**36**	**20**	**9.86**	< 4.1	**150**	**340**	ND U	**15,000**	< 40	**15**	ND U
cis-1,2-Dichloroethene (cis-1,2-DCE)	**760**	**14**	**8.7**	**0.989 J**	< 4.1	**130**	**41**	ND U	**2,200**	**87**	**24**	ND U
trans-1,2-Dichloroethene (trans-1,2-DCE)	< 120	**8.3**	**22**	< 1.33	< 4.1	< 20	< 15	ND U	< 200	< 40	**7.9**	ND U
1,2-Dichloropropane	< 130	< 6.9	< 4.9	< 0.800	< 4.8	< 35	< 17	ND U	< 230	< 69	< 4.7	ND U
cis-1,3-Dichloropropene	< 130	< 4.5	< 4.8	< 0.785	< 4.7	< 23	< 17	ND U	< 230	< 45	< 4.6	ND U

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]												
Location	SVE-05A				SVE-06A				SVE-07A			
Date	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/15/2012
Analytical Laboratory	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15 Extended [2]	TO-15	TO-15	TO-15	TO-15 Extended [2]
trans-1,3-Dichloropropene	< 130	< 4.5	< 4.8	< 0.785	< 4.7	< 23	< 17	ND U	< 230	< 45	< 4.6	ND U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 200	< 7.0	< 7.4	< 1.20	< 7.3	< 35	< 26	ND U	< 350	< 70	< 7.1	ND U
1,4-Dioxane	< 420	–	< 15	< 1.67 RA	< 15	–	< 54	ND RA, U	< 730	–	< 15	ND RA, U
Ethanol	< 220	–	**12**	**6.32 RA**	**10**	–	< 28	ND RA, U	< 380	–	< 7.6	ND RA, U
Ethylbenzene	< 130	**9.1**	< 4.6	< 0.751	< 4.5	**24 J**	< 16	ND U	< 220	**48 J**	< 4.4	ND U
4-Ethyltoluene	< 140	< 4.9	< 5.2	< 0.842	< 5.1	< 25	< 18	ND U	< 250	< 49	< 5.0	ND U
Heptane	< 120	–	< 4.4	< 0.489	< 4.3	–	< 15	ND U	< 210	–	< 4.2	ND U
Hexachlorobutadiene	< 1,200	< 16	< 45	< 1.86	< 44	< 80	< 160	ND U	< 2,200	< 160	< 43	ND U
Hexane	< 100	–	< 3.8	**0.764 J**	< 3.7	–	< 13	ND U	< 180	–	< 3.6	ND U
2-Hexanone (methyl butyl ketone)	< 480	< 8.2	< 17	< 0.483	< 17	< 41	< 61	ND U	< 830	< 82	< 17	ND U
Methyl tert-butyl ether (MTBE)	< 100	–	< 3.8	< 1.15	< 3.8	–	< 13	ND U	< 180	–	< 3.6	ND U
Methylene chloride	< 100	**20 S10, B**	**5.1**	**4.74 J**	< 3.6	< 17	< 13	ND U	< 180	**450 B**	**8.0**	ND U
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 120	**53**	< 4.4	< 1.39	< 4.3	< 41	< 15	ND U	< 210	< 82	< 4.2	ND U
Naphthalene	–	–	–	< 1.44	–	–	–	**247 U, B**	–	–	–	ND U
2-Propanol (isopropanol)	< 290	–	< 10	**1.19 RA,J**	< 10	–	< 37	ND RA, U	< 500	–	< 10	ND RA, U
n-Propylbenzene	< 140	–	< 5.2	< 0.859	< 5.1	–	< 18	ND U	< 250	–	< 5.0	ND U
Styrene	< 120	< 4.3	< 4.5	< 0.737	< 4.4	< 21	< 16	ND U	< 220	< 43	< 4.3	ND U
1,1,2,2-Tetrachloroethane	< 200	< 6.9	< 7.3	< 1.19	< 7.2	< 34	< 26	ND U	< 350	< 69	< 7.0	ND U
Tetrachloroethene (PCE)	**2,400**	**400**	**640**	**16.7**	< 7.1	**580**	**1,400**	ND U	**1,200**	**950**	**420**	ND U
Tetrahydrofuran	**1,400**	–	< 3.1	–	**44**	–	< 11	**1,100,000**	**3,800**	–	< 3.0	**130,000**
Toluene	< 110	< 3.8	< 4.0	**16.7**	**8.0**	< 19	< 14	ND U	< 190	< 38	< 3.8	**23.7 U**
1,2,4-Trichlorobenzene	< 860	< 19	< 32	< 1.24	< 31	< 89	< 110	ND U	< 1,500	< 190	< 30	ND U
1,1,1-Trichloroethane (1,1,1-TCA)	**570**	< 5.5	< 5.8	**8.05 J**	< 5.7	< 27	< 20	ND U	**1,000**	< 55	**6.5**	ND U
1,1,2-Trichloroethane (1,1,2-TCA)	< 160	< 5.5	< 5.8	< 0.935	< 5.7	< 27	< 20	ND U	< 280	< 55	< 5.5	ND U
Trichloroethene (TCE)	**34,000**	**810**	**690**	**69.3**	< 5.6	**3,400**	**4,800**	ND U	**55,000**	**1,400**	**540**	ND U
Trichlorofluoromethane (Freon 11)	< 160	< 5.6	**6.5**	**2.37 J**	< 5.9	< 28	< 21	**51.8 U**	< 280	< 56	**11**	**6.63 U**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 220	< 7.7	< 8.2	< 1.33	< 8.0	< 38	**130**	ND U	< 390	< 77	**62**	ND U
1,2,4-Trimethylbenzene	< 140	< 6.4	< 5.2	< 0.850	< 5.1	< 32	< 18	ND U	< 250	< 64	< 5.0	ND U
1,3,5-Trimethylbenzene	< 140	< 9.8	< 5.2	< 0.850	< 5.1	< 49	< 18	ND U	< 250	< 98	< 5.0	ND U
2,2,4-Trimethylpentane	< 140	–	< 5.0	**0.942 J**	< 4.9	–	< 17	ND U	< 240	–	< 4.7	ND U

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]												
Location	SVE-05A				SVE-06A				SVE-07A			
Date	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/14/2012	10/6/2008	1/13/2010	1/13/2011	11/15/2012
Analytical Laboratory	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA	ATL	TA
Analytical Method	TO-15	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15	TO-15 Extended [2]	TO-15	TO-15	TO-15	TO-15 Extended [2]
Vinyl acetate	–	< 35	–	**3.30 J**	–	< 180	–	ND U	–	< 350	–	ND U
Vinyl chloride	< 74	< 5.1	< 2.7	< 0.416	< 2.7	< 26	< 9.5	ND U	< 130	**1,400**	**7.5**	ND U
m-,p-Xylene	< 130	< 8.7	< 4.6	–	< 4.5	< 43	< 16	–	< 220	< 87	< 4.4	–
o-Xylene	< 130	< 4.3	< 4.6	< 0.751	< 4.5	< 22	< 16	ND U	< 220	< 43	< 4.4	ND U
Xylenes	–	< 4.3	–	< 1.12	–	< 22	–	ND U	–	< 43	–	ND U

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]											
Location	SMP-01A			SMP-02A			SMP-03A		SMP-04A		
Date	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/15/2012	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/15/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Acetone	**2,200 E**	**14**	**12.4 J, B**	**560**	< 210	**6.29 J, B**	< 130	**8.89 J, B**	**1,800 E**	**260**	**5.48 J, B**
Benzene	**4.1**	< 4.4	**1.10 J**	**62**	< 72	**3.36 J**	< 44	**8.07 J**	**5.2**	< 74	**4.46 J**
Benzyl chloride (alpha chlorotoluene)	< 5.9	< 7.1	< 7.93	< 80	< 120	< 7.57	< 71	< 7.52	< 6.4	< 120	< 31.7
Bromodichloromethane	< 7.7	< 9.2	< 2.96	< 100	< 150	< 2.82	< 91	< 2.80	< 8.3	< 160	< 11.8
Bromoform	< 12	< 14	< 4.56	< 160	< 230	< 4.36	< 140	< 4.33	< 13	< 240	< 18.2
Bromomethane (methyl bromide)	< 4.4	< 5.3	< 1.66	< 60	< 87	< 1.59	< 53	< 1.58	< 4.8	< 90	< 6.65
1,3-Butadiene	< 2.5	< 3.0	< 0.832	< 34	< 50	< 0.794	< 30	< 0.789	< 2.7	< 51	< 3.32
2-Butanone (methyl ethyl ketone)	**82**	< 4.0	< 2.49	**56**	< 66	< 2.38	< 40	< 2.36	**49**	< 68	**14.8 J**
Carbon disulfide	**200**	**7.8**	< 4.54	< 48	< 70	< 4.34	< 42	< 4.31	**19**	**140**	**59.6 J**
Carbon tetrachloride	< 7.2	< 8.6	< 2.70	< 98	< 140	< 2.57	< 86	< 2.56	< 7.8	< 140	< 10.8
Chlorobenzene	< 5.3	< 6.3	**2.11 J**	< 72	< 100	**6.11 J**	< 63	**19.7 J**	< 5.7	< 110	< 7.97
Chlorodibromomethane (dibromochloromethane)	< 9.8	< 12	< 3.76	< 130	< 190	< 3.59	< 120	< 3.57	< 10	< 200	< 15.0
Chloroethane (ethyl chloride)	**5.7**	< 3.6	**2.18 J**	**130**	< 59	**31.7**	< 36	**20.5**	**4.4**	**150**	**125**
Chloroform	**18**	**15**	**45.8**	**510**	**230**	**508**	**130**	**684**	< 6.0	< 110	**104 J**
Chloromethane (methyl chloride)	< 9.4	< 11	< 0.720	< 130	< 180	**0.695 J**	< 110	**0.826 J**	< 10	< 190	**14.4 J**
3-Chloropropene	< 14	< 17	< 1.32	< 190	< 280	< 1.26	< 170	< 1.25	< 15	< 290	< 5.27
Cumene	< 5.6	< 6.8	< 4.08	< 76	< 110	< 3.89	< 67	< 3.87	< 6.1	< 110	< 16.3
Cyclohexane	< 3.9	< 4.7	< 1.08	**340**	< 77	**5.70 J**	< 47	**6.26 J**	< 4.2	< 80	**6.08 J**
1,2-Dibromoethane (ethylene dibromide)	< 8.8	< 10	< 3.29	< 120	< 170	< 3.14	< 100	< 3.12	< 9.5	< 180	< 13.2
1,2-Dichlorobenzene	< 6.9	< 8.3	< 2.55	< 93	< 130	< 2.44	< 82	< 2.42	< 7.4	< 140	< 10.2
1,3-Dichlorobenzene	< 6.9	< 8.3	< 2.55	< 93	< 130	**3.02 J, B**	< 82	< 2.42	< 7.4	< 140	< 10.2
1,4-Dichlorobenzene	< 6.9	< 8.3	< 2.58	< 93	< 130	< 2.46	< 82	< 2.44	< 7.4	< 140	< 10.3
Dichlorodifluoromethane (Freon 12)	< 5.7	< 6.8	**3.44 J**	< 77	< 110	**3.29 J**	< 68	**4.36 J**	< 6.1	< 110	< 8.39
1,1-Dichloroethane (1,1-DCA)	**140**	**82**	**111**	**5,700**	**3,400**	**331**	**490**	**385**	**39**	**1,800**	**212**
1,2-Dichloroethane (1,2-DCA)	< 4.6	< 5.6	< 1.73	< 63	< 91	< 1.66	< 55	< 1.65	< 5.0	< 94	< 6.93
1,1-Dichloroethene (1,1-DCE)	**110**	**9.9**	**102**	**4,000**	**110**	**1,020 RA**	< 54	**1,590 RA**	**48**	**230**	**345**
cis-1,2-Dichloroethene (cis-1,2-DCE)	**160**	**8.5**	**352**	**690**	**340**	**799 RA**	**1,600**	**5,160 RA**	**47**	**120**	**69.9 J**
trans-1,2-Dichloroethene (trans-1,2-DCE)	< 4.5	**5.8**	**28.0**	**540**	**110**	**55.8**	**76**	**298**	**35**	< 92	**20.9 J**
1,2-Dichloropropane	< 5.3	< 6.4	< 1.98	< 72	< 100	< 1.89	< 63	< 1.88	< 5.7	< 110	< 7.92
cis-1,3-Dichloropropene	< 5.2	< 6.2	< 1.94	< 70	< 100	< 1.86	< 62	< 1.84	< 5.6	< 100	< 7.77

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]											
Location	SMP-01A			SMP-02A			SMP-03A		SMP-04A		
Date	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/15/2012	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/15/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
trans-1,3-Dichloropropene	< 5.2	< 6.2	< 1.94	< 70	< 100	< 1.86	< 62	< 1.84	< 5.6	< 100	< 7.77
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 8.0	< 9.6	< 2.97	< 110	< 160	< 2.83	< 95	< 2.81	< 8.6	< 160	< 11.9
1,4-Dioxane	< 16	< 20	< 4.13 RA	< 220	< 320	**5.09 RA,J**	< 200	**21.4 RA**	< 18	< 330	< 16.5 RA
Ethanol	**360**	< 10	< 2.81 RA	**270**	< 170	< 2.68 RA	< 100	< 2.66 RA	**140**	< 170	< 11.2 RA
Ethylbenzene	**4.9**	< 6.0	< 1.86	< 68	< 97	< 1.78	< 59	< 1.76	< 5.4	< 100	< 7.44
4-Ethyltoluene	**6.4**	< 6.8	< 2.09	< 76	< 110	< 1.99	< 67	< 1.98	< 6.1	< 110	< 8.34
Heptane	< 4.7	< 5.6	< 1.21	< 64	< 92	< 1.16	< 56	< 1.15	< 5.1	< 95	< 4.84
Hexachlorobutadiene	< 49	< 59	< 4.61	< 660	< 960	< 4.40	< 580	< 4.37	< 53	< 990	< 18.4
Hexane	< 4.0	< 4.8	< 1.37	**190**	< 79	**6.10 J**	< 48	**4.62 J**	< 4.4	< 82	**7.61 J**
2-Hexanone (methyl butyl ketone)	< 19	< 22	< 1.20	< 250	< 370	< 1.14	< 220	< 1.13	< 20	< 380	< 4.78
Methyl tert-butyl ether (MTBE)	< 4.1	< 5.0	< 2.85	< 56	< 81	< 2.72	< 49	< 2.70	< 4.4	< 84	< 11.4
Methylene chloride	< 4.0	< 4.8	< 1.50	**69**	< 78	**17.4 J**	< 47	**22.1**	< 4.3	**92**	**25.4 J**
4-Methyl-2-pentanone (methyl isobutyl ketone)	**10**	< 5.6	< 3.43	< 64	< 92	< 3.28	< 56	< 3.25	< 5.0	< 95	< 13.7
Naphthalene	–	–	< 3.57	–	–	< 3.41	–	< 3.38	–	–	< 14.3
2-Propanol (isopropanol)	**31**	< 14	< 1.15 RA	< 150	< 220	< 1.10 RA	< 130	< 1.09 RA	**13**	**340**	< 4.60 RA
n-Propylbenzene	< 5.6	< 6.8	< 2.13	< 76	< 110	< 2.03	< 67	< 2.02	< 6.1	< 110	< 8.51
Styrene	< 4.9	< 5.8	< 1.83	< 66	< 95	< 1.74	< 58	< 1.73	< 5.3	< 99	< 7.30
1,1,2,2-Tetrachloroethane	< 7.9	< 9.4	< 2.94	< 110	< 150	< 2.81	< 94	< 2.79	< 8.5	< 160	< 11.8
Tetrachloroethene (PCE)	**24**	**230**	**372**	**830**	**1,600**	**805**	**760**	**1,180**	**11**	**580**	**162**
Tetrahydrofuran	**6.9**	< 4.0	–	< 46	< 66	–	< 40	–	**43**	< 68	–
Toluene	**26**	**6.7**	**2.26 J**	< 58	< 84	**17.5 J**	< 51	**11.6 J**	**14**	< 87	< 6.46
1,2,4-Trichlorobenzene	< 34	< 41	< 3.07	< 460	< 660	< 2.93	< 400	< 2.91	< 37	< 690	< 12.3
1,1,1-Trichloroethane (1,1,1-TCA)	**360**	**60**	**154**	**2,100**	**420**	**3,330 RA**	**280**	**3,380 RA**	< 6.7	< 130	**371**
1,1,2-Trichloroethane (1,1,2-TCA)	< 6.2	< 7.5	< 2.32	< 85	< 120	**3.49 J**	< 74	**2.93 J**	< 6.7	< 130	< 9.26
Trichloroethene (TCE)	**980**	**570**	**2,110 RA**	**20,000**	**31,000**	**7,100 RA**	**24,000**	**13,700 RA**	**210**	**880**	**382**
Trichlorofluoromethane (Freon 11)	< 6.4	< 7.7	**2.61 J**	< 87	< 120	**2.60 J**	< 77	**3.22 J**	< 6.9	**130**	**10.6 J**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 8.8	< 10	< 3.28	< 120	< 170	**12.5 J**	< 100	**11.9 J**	< 9.5	**640**	**44.4 J**
1,2,4-Trimethylbenzene	**9.4**	< 6.8	< 2.11	< 76	< 110	< 2.01	< 67	< 2.00	**6.7**	< 110	< 8.42
1,3,5-Trimethylbenzene	< 5.6	< 6.8	< 2.11	< 76	< 110	< 2.01	< 67	< 2.00	< 6.1	< 110	< 8.42
2,2,4-Trimethylpentane	< 5.3	< 6.4	< 2.00	< 73	< 100	< 1.91	< 64	< 1.90	< 5.8	< 110	< 8.00

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter (3)											
Location	SMP-01A			SMP-02A			SMP-03A		SMP-04A		
Date	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/15/2012	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/15/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Vinyl acetate	–	–	< 6.40	–	–	< 6.11	–	< 6.07	–	–	< 25.6
Vinyl chloride	< 2.9	< 3.5	< 1.03	< 40	< 57	**2.10 J**	< 35	**7.02 J**	< 3.2	< 59	**20.9 J**
m-,p-Xylene	**15**	< 6.0	–	< 68	< 97	–	< 59	–	**9.3**	< 100	–
o-Xylene	**6.2**	< 6.0	< 1.86	< 68	< 97	< 1.78	< 59	< 1.76	< 5.4	< 100	< 7.44
Xylenes	–	–	< 2.76	–	–	< 2.64	–	< 2.62	–	–	< 11.0

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter (μg/m^3)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]												
Location	SMP-05A			SMP-06			SMP-07A			SMP-08A		
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Acetone	**100**	**13**	**7.76 J, B**	**1,200**	< 96	**107 B**	**1,000**	< 550	**61.8 J, B**	**1,600**	< 550	**100 B**
Benzene	**15**	< 4.4	< 0.994	**3,800**	< 32	**10.1 J**	**5.2**	< 180	< 22.7	**7,100**	< 180	**22.9 J**
Benzyl chloride (alpha chlorotoluene)	< 13	< 7.1	< 7.62	< 300	< 52	< 7.80	< 6.3	< 300	< 174	< 120	< 300	< 38.2
Bromodichloromethane	< 16	< 9.2	< 2.84	< 390	< 68	< 2.91	< 8.1	< 390	< 64.9	< 160	< 390	< 14.3
Bromoform	< 25	< 14	< 4.39	< 600	< 100	< 4.49	< 12	< 600	< 100	< 250	< 600	< 22.0
Bromomethane (methyl bromide)	< 9.5	< 5.3	< 1.60	< 220	< 39	< 1.64	< 4.7	< 220	< 36.5	< 92	< 220	< 8.02
1,3-Butadiene	< 5.4	< 3.0	< 0.800	< 130	< 22	< 0.818	< 2.7	< 130	< 18.3	< 53	< 130	< 4.01
2-Butanone (methyl ethyl ketone)	**17**	< 4.0	< 2.40	< 170	< 30	< 2.45	**33**	< 170	< 54.7	< 70	< 170	**14.0 J**
Carbon disulfide	**23**	< 4.3	< 4.37	**370**	< 31	**4.63 J**	**9.0**	< 180	< 99.7	**140**	< 180	**21.9 J**
Carbon tetrachloride	< 15	< 8.6	< 2.59	< 360	< 64	< 2.65	< 7.6	< 360	< 59.2	< 150	< 360	< 13.0
Chlorobenzene	< 11	< 6.3	**6.29 J**	< 270	< 46	< 1.96	< 5.6	< 270	< 43.8	< 110	< 270	< 9.61
Chlorodibromomethane (dibromochloromethane)	< 21	< 12	< 3.61	< 490	< 86	< 3.70	< 10	< 490	< 82.5	< 200	< 490	< 18.1
Chloroethane (ethyl chloride)	**18**	**5.5**	< 0.772	**2,600**	**27**	**6.71 J**	< 3.2	**260**	**33.8 J**	**3,600**	< 150	**22.4 J**
Chloroform	< 12	**9.8**	**28.0**	< 280	< 49	< 2.06	< 5.9	< 280	< 46.0	< 120	< 280	< 10.1
Chloromethane (methyl chloride)	< 20	< 11	**1.93 J**	< 480	< 83	**5.84 J**	< 10	< 480	< 15.8	< 200	< 480	< 3.47
3-Chloropropene	< 30	< 17	< 1.27	< 730	< 130	< 1.30	< 15	< 730	< 28.9	< 300	< 730	**7.97 J**
Cumene	**22**	< 6.8	< 3.92	**410**	< 50	**6.42 J**	**10**	**18,000**	**2,730**	**810**	< 280	< 19.6
Cyclohexane	**99**	< 4.7	< 1.04	**17,000**	< 35	**39.0**	**17**	< 200	**195 J**	**18,000**	< 200	**91.8 J**
1,2-Dibromoethane (ethylene dibromide)	< 19	< 10	< 3.17	< 440	< 78	< 3.24	< 9.3	< 440	< 72.3	< 180	< 440	< 15.9
1,2-Dichlorobenzene	< 15	< 8.3	**4.64 J, B**	**700**	< 61	< 2.51	< 7.3	< 350	< 56.0	< 140	< 350	< 12.3
1,3-Dichlorobenzene	< 15	< 8.3	< 2.45	< 350	< 61	< 2.51	< 7.3	< 350	< 56.0	< 140	< 350	< 12.3
1,4-Dichlorobenzene	< 15	< 8.3	< 2.48	< 350	< 61	< 2.53	< 7.3	< 350	< 56.6	< 140	< 350	< 12.4
Dichlorodifluoromethane (Freon 12)	< 12	< 6.8	**3.08 J**	< 290	< 50	**3.61 J**	< 6.0	< 290	< 46.1	< 120	< 290	< 10.1
1,1-Dichloroethane (1,1-DCA)	**140**	**140**	**193**	< 230	< 41	**6.32 J**	< 4.9	< 230	< 38.1	< 96	< 230	**15.0 J**
1,2-Dichloroethane (1,2-DCA)	< 9.9	< 5.6	< 1.67	< 230	< 41	< 1.71	< 4.9	< 230	< 38.1	< 96	< 230	< 8.36
1,1-Dichloroethene (1,1-DCE)	**280**	< 5.4	**2.92 J**	**7,500**	**88**	**5.87 J**	< 4.8	**2,700**	< 44.5	**8,700**	< 230	**28.9 J**
cis-1,2-Dichloroethene (cis-1,2-DCE)	**200**	< 5.4	**5.33 J**	**400**	< 40	< 1.67	< 4.8	< 230	< 37.3	**810**	< 230	< 8.19
trans-1,2-Dichloroethene (trans-1,2-DCE)	**400**	< 5.4	**10.2 J**	**390**	< 40	< 3.23	< 4.8	< 230	< 72.2	**510**	< 230	< 15.8
1,2-Dichloropropane	< 11	< 6.4	< 1.90	< 270	< 47	< 1.95	< 5.6	< 270	< 43.5	< 110	< 270	< 9.55
cis-1,3-Dichloropropene	< 11	< 6.2	< 1.87	< 260	< 46	< 1.91	< 5.5	< 260	< 42.7	< 110	< 260	< 9.38

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter (3)												
Location	SMP-05A			SMP-06			SMP-07A			SMP-08A		
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
trans-1,3-Dichloropropene	< 11	< 6.2	< 1.87	< 260	< 46	< 1.91	< 5.5	< 260	< 42.7	< 110	< 260	< 9.38
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 17	< 9.6	< 2.85	< 400	< 71	< 2.92	< 8.4	< 400	< 65.2	< 170	< 400	< 14.3
1,4-Dioxane	< 35	< 20	< 3.97 RA	< 840	< 140	< 4.06 RA	< 17	< 840	< 90.7 RA	< 340	< 840	< 19.9 RA
Ethanol	**150**	< 10	< 2.70 RA	< 440	< 76	**7.57 RA,J**	**120**	< 440	< 61.7 RA	**290**	< 440	< 13.5 RA
Ethylbenzene	< 10	< 6.0	< 1.79	**760**	< 44	< 1.83	< 5.2	**620**	< 40.9	< 100	< 250	< 8.97
4-Ethyltoluene	< 12	< 6.8	< 2.01	< 280	< 50	< 2.05	< 5.9	< 280	< 45.8	< 120	< 280	< 10.1
Heptane	**12**	< 5.6	< 1.17	**10,000**	< 41	**43.8**	**6.4**	< 240	< 26.6	**17,000**	< 240	**44.2 J**
Hexachlorobutadiene	< 100	< 59	< 4.43	< 2,500	< 430	< 4.53	< 52	< 2,500	< 101	< 1,000	< 2,500	< 22.2
Hexane	**35**	< 4.8	< 1.31	**19,000**	**77**	**88.2**	**8.5**	**210**	**35.8 J**	**34,000**	< 200	**139**
2-Hexanone (methyl butyl ketone)	< 40	< 22	< 1.15	< 950	< 160	< 1.18	< 20	< 950	< 26.3	< 390	< 950	< 5.76
Methyl tert-butyl ether (MTBE)	< 8.8	< 5.0	< 2.74	< 210	< 36	< 2.80	< 4.4	< 210	< 62.6	< 86	< 210	< 13.7
Methylene chloride	< 8.5	< 4.8	< 1.45	**410**	< 35	< 1.48	< 4.2	< 200	< 33.0	< 83	< 200	**12.0 J**
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 10	< 5.6	< 3.30	< 240	< 41	< 3.38	< 5.0	< 240	< 75.3	< 97	< 240	< 16.5
Naphthalene	–	–	< 3.43	–	–	**5.35 J, B**	–	–	**143 J, B**	–	–	< 17.2
2-Propanol (isopropanol)	< 24	< 14	< 1.11 RA	< 570	< 99	**2.64 RA,J**	< 12	< 570	< 25.3 RA	< 230	< 570	< 5.54 RA
n-Propylbenzene	**32**	< 6.8	< 2.05	< 280	< 50	< 2.09	**12**	**17,000**	**2,080**	**290**	< 280	< 10.3
Styrene	< 10	< 5.8	< 1.76	< 250	< 43	< 1.80	< 5.2	< 250	< 40.1	< 100	< 250	< 8.80
1,1,2,2-Tetrachloroethane	< 17	< 9.4	< 2.83	< 400	< 69	< 2.89	< 8.3	< 400	< 64.6	< 160	< 400	< 14.2
Tetrachloroethene (PCE)	< 16	**81**	**151**	< 390	< 68	**47.0**	< 8.2	**460**	**182 J**	< 160	< 390	**342**
Tetrahydrofuran	< 7.2	< 4.0	–	< 170	< 30	–	**8.5**	< 170	–	< 70	< 170	–
Toluene	**35**	< 5.2	< 1.55	**230**	< 38	**71.1**	**20**	< 220	**108 J**	**110**	< 220	**35.7 J**
1,2,4-Trichlorobenzene	< 72	< 41	< 2.96	< 1,700	< 300	**5.06 J, B**	< 36	< 1,700	< 67.5	< 710	< 1,700	< 14.8
1,1,1-Trichloroethane (1,1,1-TCA)	< 13	**45**	**64.7**	< 320	< 55	< 2.28	< 6.6	< 320	< 50.9	< 130	< 320	< 11.2
1,1,2-Trichloroethane (1,1,2-TCA)	< 13	< 7.5	< 2.23	< 320	< 55	< 2.28	< 6.6	< 320	< 50.9	< 130	< 320	< 11.2
Trichloroethene (TCE)	**380**	**1,900**	**1,110 RA**	**1,300**	< 54	**7.56 J**	**8.6**	< 310	**76.0 J**	**500**	< 310	**40.9 J**
Trichlorofluoromethane (Freon 11)	< 14	< 7.7	**2.59 J**	< 320	< 57	**3.75 J**	< 6.8	< 320	< 52.4	< 130	< 320	< 11.5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 19	**17**	**25.6 J**	< 440	< 77	**14.2 J**	< 9.3	< 440	< 72.1	< 180	< 440	**16.9 J**
1,2,4-Trimethylbenzene	< 12	< 6.8	< 2.03	**430**	< 50	< 2.07	**8.3**	< 280	< 46.3	< 120	< 280	< 10.2
1,3,5-Trimethylbenzene	< 12	< 6.8	< 2.03	< 280	< 50	< 2.07	< 5.9	< 280	< 46.3	< 120	< 280	< 10.2
2,2,4-Trimethylpentane	< 11	< 6.4	< 1.93	< 270	**260**	**147**	< 5.6	**5,100**	**435 J**	< 110	**400**	**159**

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]												
Location	SMP-05A			SMP-06			SMP-07A			SMP-08A		
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Vinyl acetate	–	–	< 6.15	–	–	< 6.29	–	–	< 140	–	–	< 30.8
Vinyl chloride	< 6.2	< 3.5	< 0.990	**400**	< 26	**1.45 J**	< 3.1	< 150	< 22.6	**560**	< 150	**8.11 J**
m-,p-Xylene	**20**	< 6.0	–	**610**	< 44	–	**14**	< 250	–	< 100	< 250	–
o-Xylene	< 10	< 6.0	< 1.79	< 250	< 44	< 1.83	**5.4**	< 250	< 40.9	< 100	< 250	< 8.97
Xylenes	–	–	< 2.66	–	–	< 2.72	–	–	< 60.7	–	–	< 13.3

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter (µg/m^3)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]									
Location		SMP-09A			SMP-10A			SMP-11A	
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Acetone	**1,100 E**	**20**	**9.10 B**	**1,200 E**	**24**	**16.2 B**	**330**	**14**	**27.0 B**
Benzene	< 3.6	< 3.3	< 0.400	< 3.7	< 3.4	**0.513 J**	< 3.4	< 3.3	**0.564 J**
Benzyl chloride (alpha chlorotoluene)	< 5.9	< 5.3	< 3.07	< 6.0	< 5.4	< 3.26	< 5.6	< 5.3	< 3.07
Bromodichloromethane	< 7.7	< 6.9	< 1.15	< 7.8	< 7.0	< 1.22	< 7.2	< 6.9	< 1.14
Bromoform	< 12	< 10	< 1.77	< 12	< 11	< 1.88	< 11	< 11	< 1.76
Bromomethane (methyl bromide)	< 4.4	< 4.0	< 0.645	< 4.5	< 4.1	< 0.685	< 4.2	< 4.0	< 0.644
1,3-Butadiene	< 2.5	< 2.3	< 0.322	< 2.6	< 2.3	< 0.342	< 2.4	< 2.3	< 0.322
2-Butanone (methyl ethyl ketone)	**24**	< 3.0	**3.00 J**	**32**	**3.4**	**8.29**	**12**	< 3.0	**1.78 J**
Carbon disulfide	**7.4**	< 3.2	< 1.76	**8.8**	< 3.3	< 1.87	< 3.4	< 3.2	< 1.76
Carbon tetrachloride	< 7.2	< 6.4	< 1.04	**8.4**	**23**	**25.9**	< 6.8	**9.3**	**4.41 J**
Chlorobenzene	< 5.3	< 4.7	< 0.772	< 5.4	< 4.8	< 0.821	< 5.0	< 4.7	< 0.771
Chlorodibromomethane (dibromochloromethane)	< 9.8	< 8.7	< 1.46	< 9.9	< 8.9	< 1.55	< 9.2	< 8.8	< 1.45
Chloroethane (ethyl chloride)	< 3.0	< 2.7	**0.835 J**	< 3.1	< 2.8	**1.42 J**	< 2.8	< 2.7	**7.86**
Chloroform	< 5.6	< 5.0	**12.9**	**9.2**	**19**	**19.2**	< 5.3	**66**	**37.6**
Chloromethane (methyl chloride)	< 9.4	< 8.5	**0.323 J**	< 9.6	< 8.7	**0.378 J**	< 8.9	< 8.5	**2.14 J**
3-Chloropropene	< 14	< 13	< 0.510	< 14	< 13	< 0.543	< 14	< 13	< 0.510
Cumene	< 5.6	< 5.0	< 1.58	< 5.7	< 5.2	< 1.68	< 5.3	< 5.1	< 1.58
Cyclohexane	< 3.9	< 3.5	< 0.418	**6.2**	< 3.6	**1.11 J**	< 3.7	< 3.5	< 0.418
1,2-Dibromoethane (ethylene dibromide)	< 8.8	< 7.9	< 1.28	< 9.0	< 8.1	< 1.36	< 8.3	< 7.9	< 1.27
1,2-Dichlorobenzene	< 6.9	< 6.2	< 0.989	< 7.0	< 6.3	< 1.05	< 6.5	< 6.2	< 0.987
1,3-Dichlorobenzene	< 6.9	< 6.2	< 0.989	< 7.0	< 6.3	< 1.05	< 6.5	< 6.2	< 0.987
1,4-Dichlorobenzene	< 6.9	< 6.2	< 0.998	< 7.0	< 6.3	< 1.06	< 6.5	< 6.2	< 0.997
Dichlorodifluoromethane (Freon 12)	< 5.7	< 5.1	**2.68 J**	< 5.8	< 5.2	**3.57 J**	< 5.3	**7.2**	**4.50 J**
1,1-Dichloroethane (1,1-DCA)	< 4.6	< 4.1	**6.77 J**	**55**	**18**	**11.2**	< 4.4	**75**	**19.4**
1,2-Dichloroethane (1,2-DCA)	< 4.6	**220**	**10.8**	< 4.7	< 4.2	< 0.714	< 4.4	**14**	**7.22 J**
1,1-Dichloroethene (1,1-DCE)	< 4.5	**10**	**1.26 J**	**10**	**5.6**	**5.03 J**	< 4.3	**80**	**133**
cis-1,2-Dichloroethene (cis-1,2-DCE)	< 4.5	< 4.1	**1.96 J**	**14**	< 4.2	**2.39 J**	< 4.3	**7.8**	**7.06 J**
trans-1,2-Dichloroethene (trans-1,2-DCE)	< 4.5	< 4.1	< 1.27	< 4.6	< 4.2	**3.68 J**	< 4.3	< 4.1	< 1.27
1,2-Dichloropropane	< 5.3	< 4.7	< 0.767	< 5.4	< 4.8	< 0.815	< 5.0	< 4.8	< 0.766
cis-1,3-Dichloropropene	< 5.2	< 4.6	< 0.753	< 5.3	< 4.8	< 0.801	< 4.9	< 4.7	< 0.753

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]									
Location	SMP-09A			SMP-10A			SMP-11A		
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
trans-1,3-Dichloropropene	< 5.2	< 4.6	< 0.753	< 5.3	< 4.8	< 0.801	< 4.9	< 4.7	< 0.753
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 8.0	< 7.2	< 1.15	< 8.1	< 7.3	< 1.22	< 7.6	< 7.2	< 1.15
1,4-Dioxane	< 16	< 15	< 1.60 RA	< 17	< 15	< 1.70 RA	< 16	< 15	< 1.60 RA
Ethanol	**100**	< 7.7	**2.07 RA,J**	**76**	< 7.9	**4.22 RA,J**	**71**	< 7.8	**3.67 RA,J**
Ethylbenzene	< 5.0	< 4.4	< 0.721	< 5.0	< 4.6	**1.30 J**	< 4.7	< 4.5	**1.03 J**
4-Ethyltoluene	**9.6**	< 5.0	< 0.808	< 5.7	< 5.2	< 0.859	< 5.3	< 5.1	< 0.807
Heptane	< 4.7	< 4.2	< 0.469	< 4.8	< 4.3	**0.594 J**	< 4.4	< 4.2	< 0.469
Hexachlorobutadiene	< 49	< 44	< 1.78	< 50	< 45	< 1.90	< 46	< 44	< 1.78
Hexane	< 4.0	< 3.6	< 0.529	< 4.1	< 3.7	**0.960 J**	< 3.8	< 3.6	**0.646 J**
2-Hexanone (methyl butyl ketone)	< 19	< 17	< 0.463	< 19	< 17	< 0.492	< 18	< 17	< 0.463
Methyl tert-butyl ether (MTBE)	< 4.1	< 3.7	< 1.10	< 4.2	< 3.8	< 1.17	< 3.9	< 3.7	< 1.10
Methylene chloride	< 4.0	**9.0**	**1.69 J**	< 4.0	< 3.6	**2.59 J**	**4.1**	< 3.6	**1.81 J**
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 4.7	< 4.2	< 1.33	< 4.8	< 4.3	< 1.41	< 4.4	< 4.2	< 1.33
Naphthalene	–	–	< 1.38	–	–	< 1.47	–	–	< 1.38
2-Propanol (isopropanol)	< 11	< 10	< 0.445 RA	< 11	< 10	**0.868 RA,J**	< 11	< 10	**0.739 RA,J**
n-Propylbenzene	< 5.6	< 5.0	< 0.824	< 5.7	< 5.2	< 0.876	< 5.3	< 5.1	< 0.823
Styrene	< 4.9	< 4.4	< 0.707	< 5.0	< 4.5	< 0.752	< 4.6	< 4.4	< 0.706
1,1,2,2-Tetrachloroethane	< 7.9	< 7.0	< 1.14	< 8.0	< 7.2	< 1.21	< 7.4	< 7.1	< 1.14
Tetrachloroethene (PCE)	< 7.8	**47**	**62.3**	**8.4**	**260**	**249**	< 7.3	**820**	**412**
Tetrahydrofuran	< 3.4	< 3.0	–	< 3.4	< 3.1	–	**6.4**	< 3.0	–
Toluene	**21**	**6.2**	< 0.626	**11**	< 4.0	**262**	**12**	**6.3**	**1.65 J**
1,2,4-Trichlorobenzene	< 34	< 30	< 1.19	< 34	< 31	< 1.27	< 32	< 30	< 1.19
1,1,1-Trichloroethane (1,1,1-TCA)	< 6.2	< 5.6	**6.04 J**	< 6.4	< 5.7	**1.02 J**	< 5.9	< 5.6	**1.46 J**
1,1,2-Trichloroethane (1,1,2-TCA)	< 6.2	< 5.6	< 0.897	< 6.4	< 5.7	< 0.954	< 5.9	< 5.6	< 0.896
Trichloroethene (TCE)	**25**	**31**	**306**	**170**	**100**	**154**	< 5.8	**320**	**110**
Trichlorofluoromethane (Freon 11)	< 6.4	**14**	**1.80 J**	< 6.5	< 5.9	**3.23 J**	< 6.1	**90**	**39.2**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	< 8.8	**77**	**2.43 J**	< 8.9	< 8.0	**4.59 J**	< 8.3	**370**	**187**
1,2,4-Trimethylbenzene	**11**	< 5.0	< 0.816	**5.9**	< 5.2	**0.871 J**	**5.3**	< 5.1	< 0.815
1,3,5-Trimethylbenzene	< 5.6	< 5.0	< 0.816	< 5.7	< 5.2	< 0.867	< 5.3	< 5.1	< 0.815
2,2,4-Trimethylpentane	< 5.3	< 4.8	< 0.776	< 5.4	< 4.9	< 0.824	< 5.0	< 4.8	< 0.775

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]									
Location	SMP-09A			SMP-10A			SMP-11A		
Date	10/6/2008	1/13/2011	11/15/2012	10/6/2008	1/13/2011	11/14/2012	10/6/2008	1/13/2011	11/14/2012
Analytical Laboratory	ATL	ATL	TA	ATL	ATL	TA	ATL	ATL	TA
Analytical Method	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended	TO-15	TO-15	TO-15 Extended
Vinyl acetate	–	–	< 2.48	–	–	< 2.63	–	–	< 2.48
Vinyl chloride	< 2.9	**4.1**	< 0.399	< 3.0	< 2.7	< 0.424	< 2.8	< 2.6	< 0.398
m-,p-Xylene	**14**	< 4.4	–	**7.4**	< 4.6	–	**7.9**	< 4.5	–
o-Xylene	**5.0**	< 4.4	< 0.721	< 5.0	< 4.6	**1.28 J**	< 4.7	< 4.5	**1.49 J**
Xylenes	–	–	< 1.07	–	–	**4.14 J**	–	–	**4.76 J**

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]					
Location	PZ-01	PZ-02		PZ-03	
Date	11/14/2012	1/13/2011	11/15/2012	1/13/2011	11/15/2012
Analytical Laboratory	TA	ATL	TA	ATL	TA
Analytical Method	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15 Extended
Acetone	**44.6 B**	**13**	**9.09 J, B**	**23**	**21.9 B**
Benzene	**2.27 J**	< 3.8	**3.18 J**	**5.5**	**1.84 J**
Benzyl chloride (alpha chlorotoluene)	< 7.94	< 6.1	< 7.60	< 7.2	< 7.55
Bromodichloromethane	< 2.96	< 7.9	< 2.84	< 9.3	< 2.82
Bromoform	< 4.57	< 12	< 4.38	< 14	< 4.35
Bromomethane (methyl bromide)	< 1.67	< 4.6	< 1.60	< 5.4	< 1.59
1,3-Butadiene	< 0.833	< 2.6	< 0.798	< 3.1	< 0.792
2-Butanone (methyl ethyl ketone)	**10.1 J**	**4.4**	< 2.39	**5.1**	**7.25 J**
Carbon disulfide	< 4.55	< 3.6	< 4.36	**14**	**18.2**
Carbon tetrachloride	**85.4**	< 7.4	< 2.59	< 8.7	< 2.57
Chlorobenzene	< 2.00	< 5.4	**2.38 J**	< 6.4	**3.44 J**
Chlorodibromomethane (dibromochloromethane)	< 3.77	< 10	< 3.61	< 12	< 3.58
Chloroethane (ethyl chloride)	**3.65 J**	< 3.1	**9.96 J**	**12**	**106**
Chloroform	**139**	**96**	**181**	**120**	**69.2**
Chloromethane (methyl chloride)	**19.1**	< 9.7	**1.03 J**	< 11	**18.5**
3-Chloropropene	< 1.32	< 15	< 1.26	< 17	< 1.26
Cumene	< 4.08	< 5.8	< 3.91	< 6.8	< 3.88
Cyclohexane	**1.68 J**	< 4.0	**1.95 J**	< 4.8	**1.41 J**
1,2-Dibromoethane (ethylene dibromide)	< 3.30	< 9.0	< 3.16	< 11	< 3.14
1,2-Dichlorobenzene	**8.40 J, B**	< 7.1	< 2.45	< 8.3	< 2.43
1,3-Dichlorobenzene	< 2.56	< 7.1	< 2.45	< 8.3	< 2.43
1,4-Dichlorobenzene	< 2.58	< 7.1	< 2.47	< 8.3	< 2.45
Dichlorodifluoromethane (Freon 12)	**9.13 J**	< 5.8	**3.26 J**	**10**	**3.58 J**
1,1-Dichloroethane (1,1-DCA)	**124**	**250**	**191**	**1,600**	**156**
1,2-Dichloroethane (1,2-DCA)	**29.7**	< 4.8	< 1.66	**5.6**	**3.22 J**
1,1-Dichloroethene (1,1-DCE)	**109**	**84**	**439**	**170**	**78.7**
cis-1,2-Dichloroethene (cis-1,2-DCE)	**24.7**	**88**	**5,340 RA**	**78**	**189**
trans-1,2-Dichloroethene (trans-1,2-DCE)	**6.31 J**	**11**	**214**	**33**	**16.9 J**
1,2-Dichloropropane	< 1.98	< 5.4	< 1.90	< 6.4	< 1.89
cis-1,3-Dichloropropene	< 1.95	< 5.3	< 1.87	< 6.3	< 1.85

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [(3)]					
Location	PZ-01	PZ-02		PZ-03	
Date	11/14/2012	1/13/2011	11/15/2012	1/13/2011	11/15/2012
Analytical Laboratory	TA	ATL	TA	ATL	TA
Analytical Method	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15 Extended
trans-1,3-Dichloropropene	< 1.95	< 5.3	< 1.87	< 6.3	< 1.85
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	< 2.97	< 8.2	< 2.85	< 9.7	< 2.83
1,4-Dioxane	< 4.14 RA	< 17	< 3.96 RA	< 20	< 3.94 RA
Ethanol	**8.04 RA,J**	< 8.8	< 2.69 RA	**10**	< 2.67 RA
Ethylbenzene	< 1.86	< 5.1	< 1.78	< 6.0	< 1.77
4-Ethyltoluene	< 2.09	< 5.8	< 2.00	< 6.8	< 1.99
Heptane	< 1.21	< 4.8	< 1.16	< 5.7	< 1.15
Hexachlorobutadiene	< 4.62	< 50	< 4.42	< 59	< 4.39
Hexane	**4.85 J**	< 4.1	< 1.31	< 4.9	**1.37 J**
2-Hexanone (methyl butyl ketone)	< 1.20	< 19	< 1.15	< 23	< 1.14
Methyl tert-butyl ether (MTBE)	< 2.86	< 4.2	< 2.73	< 5.0	< 2.71
Methylene chloride	**139**	**6.1**	**14.0 J**	**4.8**	**5.52 J**
4-Methyl-2-pentanone (methyl isobutyl ketone)	< 3.44	< 4.8	< 3.29	< 5.7	< 3.27
Naphthalene	< 3.57	–	< 3.42	–	< 3.40
2-Propanol (isopropanol)	**2.62 RA,J**	< 12	< 1.10 RA	< 14	< 1.10 RA
n-Propylbenzene	< 2.13	< 5.8	< 2.04	< 6.8	< 2.03
Styrene	< 1.83	< 5.0	< 1.75	< 5.9	< 1.74
1,1,2,2-Tetrachloroethane	< 2.95	< 8.1	< 2.82	< 9.5	< 2.80
Tetrachloroethene (PCE)	**2,000**	**200**	**434**	**720**	**205**
Tetrahydrofuran	–	< 3.5	–	< 4.1	–
Toluene	**27.2**	< 4.4	< 1.55	< 5.2	**1.66 J**
1,2,4-Trichlorobenzene	**10.2 J, B**	< 35	< 2.95	< 41	< 2.93
1,1,1-Trichloroethane (1,1,1-TCA)	**2.60 J**	**11**	**506**	< 7.6	**127**
1,1,2-Trichloroethane (1,1,2-TCA)	< 2.32	< 6.4	< 2.22	< 7.6	< 2.21
Trichloroethene (TCE)	**1,020**	**950**	**6,220 RA**	**680**	**520**
Trichlorofluoromethane (Freon 11)	**11.3 J**	< 6.6	**2.33 J**	**130**	**9.37 J**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	**29.6 J**	**18**	**3.97 J**	**820**	**43.3**
1,2,4-Trimethylbenzene	< 2.11	< 5.8	< 2.02	< 6.8	< 2.01
1,3,5-Trimethylbenzene	< 2.11	< 5.8	< 2.02	< 6.8	< 2.01
2,2,4-Trimethylpentane	**2.14 J**	< 5.5	< 1.92	< 6.5	< 1.91

Table C-3. Soil Gas Analytical Results - Volatile Organic Compounds

Parameter [3]					
Location	PZ-01	PZ-02		PZ-03	
Date	11/14/2012	1/13/2011	11/15/2012	1/13/2011	11/15/2012
Analytical Laboratory	TA	ATL	TA	ATL	TA
Analytical Method	TO-15 Extended	TO-15	TO-15 Extended	TO-15	TO-15 Extended
Vinyl acetate	< 6.41	–	< 6.14	–	< 6.09
Vinyl chloride	< 1.03	< 3.0	**5.93 J**	< 3.5	**1.99 J**
m-,p-Xylene	–	< 5.1	–	< 6.0	–
o-Xylene	< 1.86	< 5.1	< 1.78	< 6.0	< 1.77
Xylenes	**2.95 J**	–	< 2.65	–	< 2.63

Notes

(1) Samples analyzed using USEPA Method TO-15. For those samples analyzed by TO-15 Extended, only analytes common to both methods are included in this table. The remaining analytical results are presented in a separate table.

(2) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Laboratory data qualifers are as follows.

LW Quantitated against gasoline.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

E Exceeds instrument calibration range.

B Analyte was detected in the associated Method Blank.

B1 Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

S10 Insufficient sample available for reanalysis.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

Definitions

– Not available.

< 940 Not detected at or above the method detection limit (MDL) for samples analyzed by TA; not detected at or above the reporting limit (RL) for samples analyzed by ATL.

ATL Eurofins Air Toxics Ltd.

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-01A	SVE-02A	SVE-03A	SVE-04A		SVE-05A
Date	7/18/2012	7/18/2012	7/18/2012	11/15/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Acetaldehyde	**18.2 J**	**24.7**	< 44.1	**13.0 B**	**8.57 J, B**	**97.6 B**
Acetonitrile	**10.7 J**	< 0.615	< 13.5	< 0.793	< 0.799	**1.04 J**
Acetylene	< 2.67	< 0.656	< 14.4	**4.94 J**	**5.13 J**	**3.23**
Acrylonitrile	< 10.2	< 2.52	< 55.3	< 3.25	< 3.27	< 1.35
Benzaldehyde	< 6.11	**1.95 J**	< 33.0	< 1.94	< 1.95	**3.40 J**
Butane	**83.3**	**44.1**	**110 J**	**29.3**	**31.5**	**15.0**
Butanol	< 13.3 RA	**7.37 RA,J**	< 72.0 RA	< 4.23 RA	< 4.26 RA	**2.85 RA,J**
cis-2-Butene	**40.7**	**3.96 J**	**38.0 J**	**20.7**	**23.5**	**0.415 J**
trans-2-Butene	**68.9**	**12.0**	**33.1 J**	**24.2**	**27.1**	**0.503 J**
Butyl acrylate	< 23.3	< 5.74	< 126	< 7.40	< 7.46	< 3.09
n-Butylbenzene	< 3.57	< 0.878	< 19.3	< 1.13	< 1.14	< 0.472
tert-Butylbenzene	< 7.39	< 1.82	< 39.9	< 2.35	< 2.36	< 0.978
Butyraldehyde	< 13.3	< 3.26	< 71.6	< 4.21	< 4.24	**3.05 J**
Chlorobromomethane (bromochloromethane)	< 7.13	< 1.75	< 38.5	< 2.26	< 2.28	< 0.943
2-Chloro-1,3-butadiene (chloroprene)	< 3.37	< 0.828	< 18.2	< 1.07	< 1.08	< 0.446
Chlorodifluoromethane	< 8.62	< 2.12	< 46.5	**3.07 J**	**3.33 J**	**3.11 J**
2 & 3-Chlorotoluene	< 13.6	**5.07 J**	< 73.5	< 4.32	< 4.35	< 1.80
4-Chlorotoluene	< 12.4	< 3.04	< 66.8	< 3.92	< 3.95	< 1.64
Cyclohexene	**9.27 J**	**0.888 J**	< 10.9	**2.78 J**	**3.38 J**	< 0.266
Cyclopentane	< 3.00	**3.12 J**	< 16.2	**1.04 J**	**1.04 J**	**0.615 J**
Cyclopentene	**4.96 J**	**0.803 J**	< 15.4	**5.19 J**	**6.23 J**	< 0.378
Cymene	< 13.8	< 3.39	< 74.4	< 4.37	< 4.40	< 1.82
n-Decane	**903**	< 1.87	**393 J**	< 2.41	< 2.43	< 1.01
1-Decene	< 13.8	< 3.40	< 74.8	< 4.39	< 4.42	< 1.83
Dichlorofluoromethane	< 5.51	< 1.35	< 29.7	< 1.75	< 1.76	< 0.728
1,3-Diethylbenzene	**190**	< 3.42	< 75.0	**21.5 J**	**21.5 J**	< 1.84
1,4-Diethylbenzene	< 13.8	< 3.38	< 74.3	< 4.36	< 4.39	< 1.82
2,2-Dimethylbutane	**21.2 J**	**2.22 J**	**84.1 J**	**1.79 J**	**2.05 J**	**0.801 J**
2,3-Dimethylbutane	**196**	**15.5**	**521**	**9.56 J**	**10.4 J**	**1.40 J**
2,5-Dimethylhexane	**2,080**	< 1.49	**8,460**	**29.7**	**36.7**	< 0.800
2,3-Dimethylpentane	**3,700**	**1.89 J**	**4,760**	**129**	**153**	**1.30 J**
2,4-Dimethylpentane	**628**	< 1.32	**1,210**	**22.6 J**	**24.6**	< 0.709
Ethane	**205**	**91.0**	**452**	**97.0**	**98.9**	**22.0**
Ethene	**533**	**60.3**	**416**	**307**	**282**	**9.15**
Ethyl ether	< 7.16	< 1.76	< 38.7	< 2.27	< 2.29	< 0.947
2-Ethyl-1-butene	< 4.46	< 1.10	< 24.1	< 1.42	< 1.43	< 0.590
2-Ethyltoluene	< 6.43	< 1.58	< 34.7	< 2.04	< 2.05	< 0.851
3-Ethyltoluene	< 6.43	< 1.58	< 34.7	< 2.04	< 2.05	< 0.851
Heptanal	< 20.8	< 5.11	< 112	< 6.60	< 6.64	< 2.75
1-Heptene	< 9.69	< 2.38	< 52.3	< 3.07	< 3.10	< 1.28
trans-2-Heptene	< 2.61	< 0.642	< 14.1	< 0.828	< 0.834	< 0.345
cis-3-Heptene	< 2.19	< 0.540	< 11.9	< 0.696	< 0.701	< 0.290
trans-3-Heptene	< 5.15	< 1.27	< 27.8	< 1.63	< 1.65	< 0.681
Hexanal	< 8.31	**14.1 J**	< 44.9	< 2.64	< 2.65	**4.78 J**
1-Hexene	< 8.16	< 2.01	< 44.1	**8.29 J**	**9.26 J**	< 1.08
cis-2-Hexene	< 8.63	< 2.12	< 46.6	< 2.74	< 2.76	< 1.14
trans-2-Hexene	< 3.38	< 0.832	< 18.3	< 1.07	< 1.08	< 0.448
cis-3-Hexene	< 4.59	< 1.13	< 24.8	< 1.46	< 1.47	< 0.607
Indan	**23.3 J**	< 1.60	< 35.2	**15.1 J**	**15.0 J**	< 0.861
Indene	< 2.90	< 0.713	< 15.7	< 0.920	< 0.926	< 0.383
Isobutane	**40.5 J**	**31.0**	**57.9 J**	**12.8 J**	**14.2**	**4.96 J**
1-Butene/Isobutene	**480**	**225**	**513**	**216**	**231**	**2.70 J**
Isobutylbenzene	**77.4 J**	< 1.82	**51.2 J**	< 2.35	< 2.36	< 0.978
Isoheptane	**21.7 J**	< 1.32	< 29.0	< 1.70	< 1.71	< 0.709
Isohexane	**34.7 J**	< 0.885	**60.1 J**	**4.54 J**	**5.08 J**	**2.56 J**

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-01A	SVE-02A	SVE-03A	SVE-04A		SVE-05A
Date	7/18/2012	7/18/2012	7/18/2012	11/15/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Isopentane	**145**	**30.2**	**174 J**	**20.4**	**21.4**	**21.5**
Isoprene	< 3.08	< 0.758	< 16.6	**1.71 J**	**2.02 J**	**0.451 J**
Limonene	< 13.6	**8.32 J**	< 73.3	< 4.31	< 4.34	< 1.80
Methanol	**11.1 RA,J**	**8.11 RA**	**91.4 RA,J**	**4.78 RA,J, B**	**5.01 RA,J, B**	**55.0 RA,B**
3-Methyl-1-butene	**28.2 J**	**7.11 J**	**19.9 J**	**14.2 J**	**16.1**	< 0.421
2-Methyl-2-butene	**96.8**	**90.8**	**58.6 J**	**33.2**	**37.4**	**0.842 J**
Methylcyclohexane	**698**	< 1.29	**156 J**	**4.08 J**	**4.99 J**	< 0.695
1-Methylcyclohexene	< 5.30	< 1.30	< 28.6	**3.52 J**	**4.19 J**	< 0.701
Methylcyclopentane	**34.4 J**	**1.76 J**	**32.0 J**	**1.71 J**	**1.84 J**	**1.39 J**
1-Methylcyclopentene	**9.18 J**	**2.10 J**	< 24.2	**4.27 J**	**5.21 J**	< 0.593
2-Methylheptane	**52.1 J**	< 1.50	< 33.0	< 1.94	< 1.95	< 0.808
3-Methylheptane	< 11.8	< 2.91	< 63.8	< 3.75	**69.3**	< 1.56
3-Methylhexane	**92.8**	< 1.11	**57.0 J**	**2.04 J**	**2.54 J**	**0.764 J**
3-Methylpentane	**74.1**	**1.42 J**	**158 J**	**2.32 J**	**2.81 J**	**2.05 J**
2-Methyl-1-pentene	**10.7 J**	< 0.954	< 21.0	**1.45 J**	**1.92 J**	< 0.513
cis-3-Methyl-2-pentene	**6.53 J**	**2.48 J**	< 24.1	< 1.42	< 1.43	< 0.590
4-Methyl-1-pentene	**4.31 J**	< 0.804	< 17.7	**5.36 J**	**6.19 J**	< 0.432
cis/trans-4-Methyl-2-pentene	**13.9 J**	**8.75 J**	< 49.1	< 2.89	< 2.91	< 1.20
2-Methyl-2-pentene	**81.0**	**7.18 J**	**37.9 J**	**23.2**	**25.0**	< 0.578
Neopentane	< 4.05	**1.13 J**	< 21.9	< 1.28	< 1.29	< 0.536
n-Nonane	**29.9 J**	< 1.69	**186 J**	< 2.18	< 2.19	< 0.908
1-Nonene	< 12.5	< 3.06	< 67.2	< 3.95	< 3.98	< 1.65
4-Nonene	< 2.65	< 0.651	< 14.3	< 0.840	< 0.846	< 0.350
n-Octane	< 6.17	< 1.52	< 33.3	< 1.96	< 1.97	< 0.816
1-Octene	< 3.11	< 0.765	< 16.8	< 0.987	< 0.994	< 0.411
cis-2-Octene	< 5.95	< 1.46	< 32.1	< 1.89	< 1.90	**1.91 J**
n-Pentane	**27.2 J**	**6.70 J**	**35.7 J**	**9.01 J**	**9.81 J**	**10.7**
1-Pentene	**31.4 J**	**0.895 J**	< 18.3	**22.8**	**25.5**	**1.14 J**
cis-2-Pentene	**5.23 J**	**0.913 J**	< 18.8	**2.32 J**	**2.84 J**	< 0.459
trans-2-Pentene	**10.6 J**	**1.58 J**	< 24.5	**4.61 J**	**5.46 J**	**0.658 J**
alpha-Pinene	< 7.36	< 1.81	< 39.7	< 2.34	< 2.35	< 0.974
beta-Pinene	< 7.29	< 1.79	< 39.4	< 2.31	< 2.33	< 0.964
Propane	**191**	**130**	**219**	**100**	**109**	**23.9**
Propanol	< 12.3 RA	< 3.03 RA	< 66.5 RA	< 3.90 RA	< 3.93 RA	< 1.63 RA
Propene	**991**	**91.4**	**435**	**468**	**506**	**3.98 J**
1,1,1,2-Tetrafluoroethane (Freon 134a)	< 5.46	< 1.34	< 29.5	**2.86 J**	**3.02 J**	**2.11 J**
1,2,3-Trimethylbenzene	< 12.6	< 3.09	< 67.8	< 3.99	< 4.01	< 1.66
2,2,5-Trimethylhexane	**63.2 J**	< 1.74	**766**	**5.68 J**	**6.93 J**	< 0.935
2,2,3-Trimethylpentane	**728**	< 1.49	**2,420**	**36.4**	**43.9**	< 0.800
2,3,4-Trimethylpentane	**942**	< 1.04	**6,950**	**63.0**	**75.8**	**1.23 J**
2,4,4-Trimethyl-1-pentene	< 5.95	< 1.46	< 32.1	< 1.89	< 1.90	< 0.786
2,4,4-Trimethyl-2-pentene	< 6.18	< 1.52	< 33.4	< 1.96	< 1.97	< 0.817
n-Undecane	**84.2 J**	**24.4 J**	**74.9 J**	< 1.41	< 1.42	**0.969 J**
1-Undecene	< 7.92	< 1.95	< 42.7	< 2.51	< 2.53	< 1.05
Vinyl bromide	< 10.4	< 2.57	< 56.4	< 3.31	< 3.34	< 1.38
m-,p-Xylene	**32.5 J**	< 2.79	< 61.3	**3.91 J**	**5.70 J**	< 1.50

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-01A	SVE-02A	SVE-03A	SVE-04A		SVE-05A
Date	7/18/2012	7/18/2012	7/18/2012	11/15/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA

Notes

(1) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(2) Laboratory data qualifers are as follows.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Samples analyzed using USEPA Method TO-15 Extended.

Definitions

– Not available.

< 2.67 Not detected at or above the method detection limit (MDL).

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-06A (1)	SVE-07A (1)	SMP-01A	SMP-02A	SMP-03A	SMP-04A
Date	11/14/2012	11/15/2012	11/14/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Acetaldehyde	ND U	**129 U, B**	**22.7 B**	**12.0 B**	**15.2 B**	< 10.7
Acetonitrile	ND U	ND U	< 0.819	< 0.782	< 0.777	< 3.27
Acetylene	ND U	ND U	< 0.874	< 0.835	**2.16 J**	< 3.50
Acrylonitrile	ND U	ND U	< 3.35	< 3.20	< 3.18	< 13.4
Benzaldehyde	ND U	ND U	< 2.00	< 1.91	< 1.90	< 8.00
Butane	**48.2 U**	**27.6 U**	**4.24 J**	**30.3**	**71.9**	**103**
Butanol	ND RA, U	ND RA, U	< 4.37 RA	< 4.17 RA	< 4.14 RA	< 17.5 RA
cis-2-Butene	ND U	ND U	< 0.938	**2.08 J**	**6.61 J**	**43.4 J**
trans-2-Butene	ND U	ND U	< 0.894	**3.40 J**	**12.0 J**	**52.8 J**
Butyl acrylate	ND U	ND U	< 7.65	< 7.30	< 7.25	< 30.6
n-Butylbenzene	ND U	ND U	< 1.17	< 1.12	< 1.11	< 4.68
tert-Butylbenzene	ND U	ND U	< 2.42	< 2.31	< 2.30	< 9.68
Butyraldehyde	ND U	ND U	< 4.34	< 4.15	< 4.12	< 17.4
Chlorobromomethane (bromochloromethane)	ND U	ND U	< 2.33	< 2.23	< 2.21	< 9.33
2-Chloro-1,3-butadiene (chloroprene)	ND U	ND U	< 1.10	< 1.05	< 1.05	< 4.41
Chlorodifluoromethane	ND U	ND U	< 2.82	< 2.70	< 2.68	< 11.3
2 & 3-Chlorotoluene	ND U	ND U	< 4.46	< 4.26	< 4.23	< 17.8
4-Chlorotoluene	ND U	ND U	< 4.05	< 3.87	< 3.84	< 16.2
Cyclohexene	ND U	ND U	< 0.659	< 0.629	< 0.625	**2.91 J**
Cyclopentane	ND U	ND U	< 0.983	**1.87 J**	**3.16 J**	< 3.93
Cyclopentene	ND U	ND U	< 0.935	< 0.893	< 0.887	**7.17 J**
Cymene	ND U	ND U	< 4.51	< 4.31	< 4.28	< 18.0
n-Decane	ND U	ND U	< 2.49	< 2.38	< 2.37	< 9.97
1-Decene	ND U	ND U	< 4.53	< 4.33	< 4.30	< 18.1
Dichlorofluoromethane	ND U	ND U	< 1.80	< 1.72	< 1.71	< 7.21
1,3-Diethylbenzene	ND U	ND U	< 4.55	< 4.35	< 4.32	**261**
1,4-Diethylbenzene	ND U	ND U	< 4.51	< 4.30	< 4.27	**61.6 J**
2,2-Dimethylbutane	ND U	ND U	< 1.42	**2.36 J**	**2.63 J**	**6.67 J**
2,3-Dimethylbutane	ND U	ND U	< 1.05	**7.74 J**	**9.54 J**	**28.9 J**
2,5-Dimethylhexane	ND U	ND U	< 1.98	< 1.89	< 1.88	**31.8 J**
2,3-Dimethylpentane	ND U	ND U	< 1.77	< 1.69	< 1.68	**125**
2,4-Dimethylpentane	ND U	ND U	< 1.76	**1.68 J**	< 1.67	**37.0 J**
Ethane	**121 U, B**	**44.5 J, B**	**99.4**	**87.8**	**246**	**284 B**
Ethene	**46.6 U**	**24.6 U**	**8.75**	**18.5**	**96.3**	**384**
Ethyl ether	ND U	ND U	< 2.35	< 2.24	< 2.23	< 9.38
2-Ethyl-1-butene	ND U	ND U	< 1.46	< 1.40	< 1.39	< 5.84
2-Ethyltoluene	ND U	ND U	< 2.11	< 2.01	< 2.00	< 8.42
3-Ethyltoluene	ND U	ND U	< 2.11	< 2.01	< 2.00	< 8.42
Heptanal	ND U	ND U	< 6.81	< 6.51	< 6.46	< 27.2
1-Heptene	ND U	ND U	< 3.17	< 3.03	**4.79 J**	< 12.7
trans-2-Heptene	ND U	ND U	< 0.855	< 0.816	< 0.811	< 3.42
cis-3-Heptene	ND U	ND U	< 0.719	< 0.687	< 0.682	< 2.87
trans-3-Heptene	ND U	ND U	< 1.69	< 1.61	< 1.60	< 6.75
Hexanal	ND U	ND U	**3.44 J**	< 2.60	< 2.58	< 10.9
1-Hexene	ND U	ND U	< 2.67	< 2.55	< 2.54	< 10.7
cis-2-Hexene	ND U	ND U	< 2.83	< 2.70	< 2.68	< 11.3
trans-2-Hexene	ND U	ND U	< 1.11	< 1.06	< 1.05	< 4.43
cis-3-Hexene	ND U	ND U	< 1.50	< 1.44	< 1.43	< 6.01
Indan	ND U	ND U	< 2.13	< 2.04	< 2.02	< 8.53
Indene	ND U	ND U	< 0.950	< 0.907	< 0.901	< 3.80
Isobutane	ND U	**7.01 U**	**15.6**	**46.9**	**65.9**	**82.6**
1-Butene/Isobutene	ND U	ND U	**9.02 J**	**149**	**326**	**745**
Isobutylbenzene	ND U	ND U	< 2.42	< 2.31	< 2.30	**65.1 J**
Isoheptane	ND U	ND U	< 1.76	**2.72 J**	**1.71 J**	< 7.02
Isohexane	ND U	ND U	< 1.18	**2.97 J**	**2.73 J**	**15.1 J**

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-06A [(1)]	SVE-07A [(1)]	SMP-01A	SMP-02A	SMP-03A	SMP-04A
Date	11/14/2012	11/15/2012	11/14/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Isopentane	ND U	**31.3 U**	**3.28 J**	**56.9**	**90.6**	**182**
Isoprene	ND U	ND U	< 1.01	< 0.964	**0.992 J**	**4.21 J**
Limonene	ND U	ND U	< 4.45	< 4.25	< 4.22	< 17.8
Methanol	ND RA, U	ND RA, U	**5.88 RA,J, B**	**4.31 RA,J, B**	**5.95 RA,J, B**	< 8.85 RA
3-Methyl-1-butene	ND U	ND U	< 1.04	**2.97 J**	**8.23 J**	**32.0 J**
2-Methyl-2-butene	ND U	ND U	< 0.970	**4.89 J**	**21.4**	**252**
Methylcyclohexane	ND U	ND U	< 1.72	< 1.64	< 1.63	< 6.88
1-Methylcyclohexene	ND U	ND U	< 1.74	< 1.66	**2.14 J**	**74.2 J**
Methylcyclopentane	ND U	ND U	< 1.09	**3.70 J**	**2.96 J**	**4.89 J**
1-Methylcyclopentene	ND U	ND U	< 1.47	< 1.40	**1.59 J**	**56.7 J**
2-Methylheptane	ND U	ND U	< 2.00	< 1.91	< 1.90	< 8.00
3-Methylheptane	ND U	ND U	< 3.87	< 3.70	< 3.67	**24.3 J**
3-Methylhexane	ND U	ND U	< 1.48	**2.05 J**	< 1.40	< 5.92
3-Methylpentane	ND U	ND U	< 1.30	**2.06 J**	**1.61 J**	**8.91 J**
2-Methyl-1-pentene	ND U	ND U	< 1.27	< 1.21	**2.07 J**	**18.3 J**
cis-3-Methyl-2-pentene	ND U	ND U	**2.31 J**	< 1.40	**2.11 J**	**10.7 J**
4-Methyl-1-pentene	ND U	ND U	< 1.07	< 1.02	< 1.02	< 4.28
cis/trans-4-Methyl-2-pentene	ND U	ND U	< 2.98	**4.40 J**	**5.57 J**	< 11.9
2-Methyl-2-pentene	ND U	ND U	< 1.43	< 1.37	**6.36 J**	**372**
Neopentane	ND U	ND U	**4.18 J**	**1.78 J**	**2.92 J**	< 5.30
n-Nonane	ND U	ND U	< 2.25	< 2.15	< 2.13	< 8.99
1-Nonene	ND U	ND U	< 4.08	< 3.90	< 3.87	< 16.3
4-Nonene	ND U	ND U	< 0.867	< 0.828	< 0.823	< 3.47
n-Octane	ND U	ND U	< 2.02	< 1.93	< 1.92	< 8.08
1-Octene	ND U	ND U	< 1.02	< 0.973	< 0.967	**11.8 J**
cis-2-Octene	ND U	ND U	< 1.95	< 1.86	< 1.85	< 7.79
n-Pentane	ND U	**26.1 U**	< 1.26	**5.31 J**	**11.1 J**	**30.0 J**
1-Pentene	ND U	ND U	< 1.11	< 1.06	< 1.05	**23.4 J**
cis-2-Pentene	ND U	ND U	< 1.14	< 1.09	< 1.08	**5.36 J**
trans-2-Pentene	ND U	ND U	< 1.49	< 1.42	< 1.41	**9.03 J**
alpha-Pinene	ND U	ND U	< 2.41	< 2.30	< 2.29	< 9.64
beta-Pinene	ND U	ND U	< 2.39	< 2.28	< 2.26	< 9.54
Propane	**30.0 U**	**50.4 U**	**51.8**	**150**	**255**	**243**
Propanol	ND RA, U	ND RA, U	< 4.03 RA	< 3.85 RA	< 3.82 RA	< 16.1 RA
Propene	**22.2 U**	**7.45 U**	**2.03 J**	**36.3**	**113**	**675**
1,1,1,2-Tetrafluoroethane (Freon 134a)	ND U	ND U	< 1.79	< 1.71	< 1.70	< 7.15
1,2,3-Trimethylbenzene	ND U	ND U	< 4.11	< 3.93	< 3.90	< 16.4
2,2,5-Trimethylhexane	ND U	ND U	< 2.32	< 2.21	< 2.20	**9.33 J**
2,2,3-Trimethylpentane	ND U	ND U	< 1.98	< 1.89	< 1.88	**27.9 J**
2,3,4-Trimethylpentane	**194 U**	ND U	< 1.38	< 1.32	< 1.31	**67.3 J**
2,4,4-Trimethyl-1-pentene	ND U	ND U	< 1.95	< 1.86	< 1.85	< 7.79
2,4,4-Trimethyl-2-pentene	ND U	ND U	< 2.02	< 1.93	< 1.92	< 8.09
n-Undecane	ND U	ND U	< 1.46	< 1.39	< 1.38	< 5.82
1-Undecene	ND U	ND U	< 2.59	< 2.48	< 2.46	< 10.4
Vinyl bromide	ND U	ND U	< 3.42	< 3.27	< 3.25	< 13.7
m-,p-Xylene	ND U	ND U	< 3.72	< 3.55	< 3.53	< 14.9

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SVE-06A (1)	SVE-07A (1)	SMP-01A	SMP-02A	SMP-03A	SMP-04A
Date	11/14/2012	11/15/2012	11/14/2012	11/15/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA

Notes

(1) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(2) Laboratory data qualifers are as follows.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Samples analyzed using USEPA Method TO-15 Extended.

Definitions

– Not available.

< 2.67 Not detected at or above the method detection limit (MDL).

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SMP-05A	SMP-06	SMP-07A	SMP-08A	SMP-09A	SMP-10A
Date	11/15/2012	11/14/2012	11/14/2012	11/14/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Acetaldehyde	**9.92 J, B**	**110 B**	< 58.8	**129 B**	**11.2 B**	**18.8 B**
Acetonitrile	< 0.787	< 0.806	< 18.0	< 3.95	< 0.317	< 0.337
Acetylene	< 0.841	**1.31 J**	< 19.2	< 4.21	**1.07 J**	< 0.360
Acrylonitrile	< 3.23	< 3.30	< 73.7	< 16.2	< 1.30	< 1.38
Benzaldehyde	< 1.92	< 1.97	< 43.9	< 9.64	< 0.775	**1.55 J**
Butane	**5.91 J**	**83.3**	**233 J**	**228**	**61.6**	**1.93 J**
Butanol	< 4.20 RA	**4.52 RA,J**	< 95.9 RA	< 21.1 RA	< 1.69 RA	**2.46 RA,J**
cis-2-Butene	< 0.902	**37.5**	**72.5 J**	**74.8**	< 0.363	< 0.386
trans-2-Butene	< 0.860	**39.3**	**78.6 J**	**91.5**	< 0.346	< 0.368
Butyl acrylate	< 7.35	< 7.52	< 168	< 36.9	< 2.96	< 3.15
n-Butylbenzene	< 1.13	< 1.15	< 25.7	< 5.64	< 0.453	< 0.482
tert-Butylbenzene	< 2.33	< 2.38	< 53.2	< 11.7	< 0.938	< 0.997
Butyraldehyde	< 4.18	< 4.27	< 95.4	< 20.9	**3.03 J**	**3.40 J**
Chlorobromomethane (bromochloromethane)	< 2.25	< 2.30	< 51.3	< 11.3	< 0.904	< 0.961
2-Chloro-1,3-butadiene (chloroprene)	< 1.06	< 1.09	< 24.2	< 5.32	< 0.428	< 0.454
Chlorodifluoromethane	< 2.71	**8.99 J**	< 62.0	< 13.6	**1.61 J**	**1.80 J**
2 & 3-Chlorotoluene	< 4.29	< 4.39	< 97.9	< 21.5	< 1.73	< 1.84
4-Chlorotoluene	< 3.90	< 3.99	< 89.0	< 19.5	< 1.57	< 1.67
Cyclohexene	< 0.633	**5.68 J**	< 14.5	< 3.18	< 0.255	< 0.271
Cyclopentane	< 0.945	**17.4**	< 21.6	**39.3 J**	< 0.381	< 0.405
Cyclopentene	< 0.900	**9.96 J**	< 20.5	**15.2 J**	< 0.362	< 0.385
Cymene	< 4.34	< 4.44	< 99.1	< 21.7	< 1.75	< 1.86
n-Decane	< 2.40	**252**	< 54.8	< 12.0	< 0.966	**2.14 J**
1-Decene	< 4.36	< 4.46	< 99.6	< 21.9	< 1.76	< 1.87
Dichlorofluoromethane	< 1.73	**4.96 J**	< 39.6	< 8.70	< 0.699	< 0.743
1,3-Diethylbenzene	< 4.38	< 4.48	**318 J**	< 21.9	< 1.76	< 1.87
1,4-Diethylbenzene	< 4.33	< 4.43	< 99.0	< 21.7	< 1.75	< 1.86
2,2-Dimethylbutane	< 1.36	**67.3**	**307 J**	**222**	< 0.548	< 0.583
2,3-Dimethylbutane	< 1.01	**294**	**1,470**	**1,010**	**0.931 J**	< 0.431
2,5-Dimethylhexane	< 1.91	**798**	**21,400**	**1,190**	< 0.768	< 0.816
2,3-Dimethylpentane	< 1.71	**1,130**	**13,300**	**2,490**	< 0.687	**1.45 J**
2,4-Dimethylpentane	< 1.69	**392**	**2,950**	**906**	< 0.680	< 0.723
Ethane	**21.2**	**235**	**881 B**	**658 B**	**418 RA,B**	**42.9**
Ethene	**0.774 J**	**29.3**	**285**	**204**	**9.88**	**0.887 J**
Ethyl ether	< 2.26	< 2.31	< 51.5	< 11.3	< 0.909	< 0.966
2-Ethyl-1-butene	< 1.41	< 1.44	< 32.1	< 7.05	< 0.566	< 0.602
2-Ethyltoluene	< 2.03	< 2.07	< 46.3	< 10.2	< 0.816	< 0.867
3-Ethyltoluene	< 2.03	< 2.07	< 46.3	< 10.2	< 0.816	< 0.867
Heptanal	< 6.55	< 6.70	< 150	< 32.8	< 2.64	< 2.80
1-Heptene	< 3.05	< 3.12	**553**	**160**	< 1.23	< 1.31
trans-2-Heptene	< 0.822	< 0.841	< 18.8	< 4.12	< 0.331	< 0.352
cis-3-Heptene	< 0.692	< 0.707	< 15.8	**29.1 J**	< 0.279	< 0.296
trans-3-Heptene	< 1.62	< 1.66	< 37.1	< 8.13	< 0.654	< 0.695
Hexanal	< 2.62	< 2.68	< 59.8	< 13.1	**2.72 J**	**6.18 J**
1-Hexene	< 2.57	< 2.63	< 58.7	< 12.9	< 1.04	< 1.10
cis-2-Hexene	< 2.72	< 2.78	< 62.1	< 13.6	< 1.10	< 1.16
trans-2-Hexene	< 1.07	**2.99 J**	< 24.4	**6.81 J**	< 0.430	< 0.457
cis-3-Hexene	< 1.45	**2.90 J**	< 33.0	< 7.25	< 0.583	< 0.620
Indan	< 2.05	< 2.10	**240 J**	< 10.3	< 0.826	< 0.878
Indene	< 0.913	< 0.934	< 20.9	< 4.58	< 0.368	< 0.391
Isobutane	**20.7**	**61.1**	**141 J**	**143**	**106**	**4.16 J**
1-Butene/Isobutene	**2.70 J**	**388**	**620**	**760**	**2.83 J**	**0.726 J**
Isobutylbenzene	< 2.33	< 2.38	**581 J**	< 11.7	< 0.938	< 0.997
Isoheptane	< 1.69	**108**	< 38.6	**117**	< 0.680	**3.22 J**
Isohexane	< 1.13	**228**	**164 J**	**505**	**0.785 J**	< 0.485

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SMP-05A	SMP-06	SMP-07A	SMP-08A	SMP-09A	SMP-10A
Date	11/15/2012	11/14/2012	11/14/2012	11/14/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA
Isopentane	**2.81 J**	**249**	**829**	**890**	**24.9**	**1.22 J**
Isoprene	< 0.971	**9.12 J**	< 22.2	**10.4 J**	< 0.391	< 0.416
Limonene	< 4.28	< 4.37	< 97.6	< 21.4	< 1.72	< 1.83
Methanol	**4.45 RA,J, B**	**71.1 RA,B**	< 48.6 RA	**27.6 RA,J, B**	**3.37 RA,B**	**6.78 RA,B**
3-Methyl-1-butene	< 1.00	**16.7**	**40.5 J**	**45.5 J**	**0.613 J**	< 0.430
2-Methyl-2-butene	< 0.933	**110**	**154 J**	**236**	< 0.376	< 0.400
Methylcyclohexane	< 1.66	**45.9**	**441 J**	**55.5 J**	< 0.667	< 0.709
1-Methylcyclohexene	< 1.67	< 1.71	< 38.1	**39.2 J**	< 0.672	< 0.715
Methylcyclopentane	< 1.05	**75.7**	**47.2 J**	**141**	< 0.423	**1.29 J**
1-Methylcyclopentene	< 1.41	**9.43 J**	< 32.2	**16.7 J**	< 0.569	< 0.604
2-Methylheptane	< 1.92	**38.8**	< 44.0	< 9.65	< 0.775	< 0.824
3-Methylheptane	< 3.72	**714**	**21,100**	**676**	< 1.50	< 1.59
3-Methylhexane	< 1.42	**149**	**175 J**	**179**	< 0.573	**2.89 J**
3-Methylpentane	< 1.25	**186**	**252 J**	**442**	**0.753 J**	< 0.534
2-Methyl-1-pentene	< 1.22	**9.46 J**	< 27.9	**20.7 J**	< 0.492	< 0.523
cis-3-Methyl-2-pentene	< 1.41	**7.47 J**	< 32.1	**15.2 J**	< 0.566	< 0.602
4-Methyl-1-pentene	< 1.03	**3.12 J**	< 23.5	**8.44 J**	< 0.415	< 0.441
cis/trans-4-Methyl-2-pentene	< 2.87	**19.4 J**	< 65.5	**46.5 J**	< 1.15	< 1.23
2-Methyl-2-pentene	< 1.38	**17.9 J**	**36.9 J**	**49.6 J**	< 0.555	< 0.590
Neopentane	< 1.28	< 1.31	< 29.1	< 6.40	**0.891 J**	< 0.546
n-Nonane	< 2.16	< 2.21	**1,560**	< 10.8	< 0.871	**1.95 J**
1-Nonene	< 3.92	< 4.01	< 89.6	< 19.7	< 1.58	< 1.68
4-Nonene	< 0.834	< 0.854	< 19.1	< 4.18	< 0.336	< 0.357
n-Octane	< 1.94	< 1.99	< 44.4	< 9.75	< 0.783	< 0.833
1-Octene	< 0.980	< 1.00	**8,900**	< 4.91	< 0.395	< 0.420
cis-2-Octene	< 1.87	< 1.92	< 42.8	< 9.39	< 0.755	< 0.802
n-Pentane	< 1.22	**84.1**	**131 J**	**241**	**2.60 J**	**0.684 J**
1-Pentene	< 1.07	**7.28 J**	< 24.4	**23.7 J**	< 0.430	< 0.457
cis-2-Pentene	< 1.09	**6.39 J**	< 25.0	**17.4 J**	< 0.441	< 0.468
trans-2-Pentene	< 1.43	**13.1 J**	< 32.7	**34.2 J**	< 0.576	< 0.612
alpha-Pinene	< 2.32	< 2.37	< 53.0	< 11.6	< 0.934	< 0.993
beta-Pinene	< 2.30	< 2.35	< 52.4	< 11.5	< 0.925	< 0.983
Propane	**40.7**	**252**	**471**	**508**	**387 RA**	**17.7**
Propanol	< 3.88 RA	< 3.97 RA	< 88.5 RA	< 19.4 RA	< 1.56 RA	< 1.66 RA
Propene	**1.92 J**	**325**	**805**	**739**	**2.23 J**	< 0.307
1,1,1,2-Tetrafluoroethane (Freon 134a)	< 1.72	< 1.76	< 39.3	**35.8 J**	**1.02 J**	**1.11 J**
1,2,3-Trimethylbenzene	< 3.96	< 4.05	< 90.4	< 19.8	< 1.59	< 1.69
2,2,5-Trimethylhexane	< 2.23	**287**	**4,850**	**435**	< 0.897	< 0.953
2,2,3-Trimethylpentane	< 1.91	**466**	**7,750**	**724**	< 0.768	< 0.816
2,3,4-Trimethylpentane	< 1.33	**1,510**	**31,400**	**2,020**	< 0.536	< 0.569
2,4,4-Trimethyl-1-pentene	< 1.87	< 1.92	< 42.8	< 9.39	< 0.755	< 0.802
2,4,4-Trimethyl-2-pentene	< 1.95	< 1.99	< 44.5	< 9.76	< 0.784	< 0.834
n-Undecane	< 1.40	< 1.43	< 32.0	< 7.02	< 0.564	**5.91 J**
1-Undecene	< 2.49	< 2.55	< 57.0	< 12.5	< 1.00	< 1.07
Vinyl bromide	< 3.29	< 3.37	< 75.2	< 16.5	< 1.33	< 1.41
m-,p-Xylene	< 3.58	< 3.66	< 81.7	< 17.9	< 1.44	**2.86 J**

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter						
Location	SMP-05A	SMP-06	SMP-07A	SMP-08A	SMP-09A	SMP-10A
Date	11/15/2012	11/14/2012	11/14/2012	11/14/2012	11/15/2012	11/14/2012
Analytical Laboratory	TA	TA	TA	TA	TA	TA

Notes

(1) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(2) Laboratory data qualifers are as follows.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Samples analyzed using USEPA Method TO-15 Extended.

Definitions

– Not available.

< 2.67 Not detected at or above the method detection limit (MDL).

ND Not detected.

TA TestAmerica Laboratories, Inc.

USEPA United States Environmental Protection Agency

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter				
Location	SMP-11A	PZ-01	PZ-02	PZ-03
Date	11/14/2012	11/14/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA
Acetaldehyde	**12.6 B**	**86.3 B**	**14.4 B**	**23.0 B**
Acetonitrile	< 0.317	**1.36 J**	< 0.786	< 0.780
Acetylene	**0.710 J**	**4.32 J**	**2.47 J**	**2.11 J**
Acrylonitrile	< 1.30	< 3.36	< 3.22	< 3.20
Benzaldehyde	< 0.774	**3.15 J**	< 1.92	< 1.91
Butane	**10.6**	**4.90 J**	**56.9**	**58.8**
Butanol	< 1.69 RA	< 4.38 RA	< 4.19 RA	< 4.16 RA
cis-2-Butene	**0.749 J**	**1.01 J**	**5.94 J**	**23.5**
trans-2-Butene	**1.39 J**	**1.04 J**	**9.88 J**	**30.4**
Butyl acrylate	< 2.96	< 7.66	< 7.33	< 7.28
n-Butylbenzene	< 0.453	< 1.17	< 1.12	< 1.11
tert-Butylbenzene	< 0.937	< 2.43	< 2.32	< 2.31
Butyraldehyde	**1.84 J**	**15.6 J**	< 4.17	< 4.14
Chlorobromomethane (bromochloromethane)	< 0.903	< 2.34	< 2.24	< 2.22
2-Chloro-1,3-butadiene (chloroprene)	< 0.427	< 1.11	< 1.06	< 1.05
Chlorodifluoromethane	**1.70 J**	**3.47 J**	< 2.71	< 2.69
2 & 3-Chlorotoluene	< 1.73	< 4.47	< 4.28	< 4.25
4-Chlorotoluene	< 1.57	< 4.06	< 3.89	< 3.86
Cyclohexene	< 0.255	< 0.660	< 0.632	**0.906 J**
Cyclopentane	**2.14 J**	< 0.985	**1.68 J**	**1.35 J**
Cyclopentene	< 0.362	< 0.937	< 0.897	**5.18 J**
Cymene	< 1.75	< 4.52	< 4.33	< 4.30
n-Decane	< 0.965	< 2.50	< 2.39	**43.8**
1-Decene	< 1.75	< 4.54	< 4.35	< 4.32
Dichlorofluoromethane	< 0.698	< 1.81	< 1.73	**1.78 J**
1,3-Diethylbenzene	< 1.76	< 4.56	< 4.37	< 4.34
1,4-Diethylbenzene	< 1.74	< 4.52	< 4.32	< 4.29
2,2-Dimethylbutane	< 0.548	**1.45 J**	**1.46 J**	**1.35 J**
2,3-Dimethylbutane	**0.429 J**	**4.38 J**	**3.75 J**	**7.87 J**
2,5-Dimethylhexane	< 0.767	**7.77 J**	< 1.90	**5.69 J**
2,3-Dimethylpentane	< 0.686	**17.2 J**	< 1.70	**37.9**
2,4-Dimethylpentane	< 0.679	**4.45 J**	< 1.68	**7.35 J**
Ethane	**28.8**	**20.8**	**209**	**173**
Ethene	**16.0**	**3.76 J**	**90.3**	**107**
Ethyl ether	< 0.908	< 2.35	< 2.25	< 2.24
2-Ethyl-1-butene	< 0.566	< 1.46	< 1.40	< 1.39
2-Ethyltoluene	< 0.815	< 2.11	< 2.02	< 2.01
3-Ethyltoluene	< 0.815	< 2.11	< 2.02	< 2.01
Heptanal	< 2.64	< 6.83	< 6.53	< 6.49
1-Heptene	< 1.23	< 3.18	< 3.05	< 3.02
trans-2-Heptene	< 0.331	< 0.857	< 0.820	< 0.814
cis-3-Heptene	< 0.278	< 0.721	< 0.690	< 0.685
trans-3-Heptene	< 0.653	< 1.69	< 1.62	< 1.61
Hexanal	**1.92 J**	< 2.73	< 2.61	< 2.59
1-Hexene	< 1.03	< 2.68	< 2.57	< 2.55
cis-2-Hexene	< 1.09	< 2.83	< 2.71	< 2.69
trans-2-Hexene	< 0.429	< 1.11	< 1.06	< 1.06
cis-3-Hexene	< 0.582	< 1.51	< 1.44	< 1.43
Indan	< 0.825	< 2.14	< 2.05	< 2.03
Indene	< 0.367	< 0.952	< 0.911	< 0.905
Isobutane	**7.47**	**4.86 J**	**40.8**	**80.8**
1-Butene/Isobutene	**8.07**	**8.52 J**	**182**	**492**
Isobutylbenzene	< 0.937	< 2.43	< 2.32	< 2.31
Isoheptane	< 0.679	**3.31 J**	< 1.68	< 1.67
Isohexane	**0.902 J**	**5.05 J**	< 1.13	**2.98 J**

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter				
Location	SMP-11A	PZ-01	PZ-02	PZ-03
Date	11/14/2012	11/14/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA
Isopentane	**6.01 J**	**7.31 J**	**31.5**	**38.5**
Isoprene	< 0.391	< 1.01	**1.11 J**	< 0.962
Limonene	< 1.72	< 4.46	< 4.27	< 4.24
Methanol	**4.75 RA,B**	**26.1 RA,B**	**3.72 RA,J, B**	< 2.11 RA
3-Methyl-1-butene	**0.913 J**	< 1.05	**6.70 J**	**13.0 J**
2-Methyl-2-butene	**0.554 J**	**1.36 J**	**11.2 J**	**79.9**
Methylcyclohexane	< 0.666	< 1.72	< 1.65	< 1.64
1-Methylcyclohexene	< 0.672	< 1.74	**2.96 J**	**9.88 J**
Methylcyclopentane	< 0.422	**3.39 J**	< 1.05	**1.14 J**
1-Methylcyclopentene	< 0.568	< 1.47	**2.35 J**	**17.9 J**
2-Methylheptane	< 0.774	< 2.01	< 1.92	< 1.91
3-Methylheptane	< 1.50	**7.92 J**	< 3.71	**7.65 J**
3-Methylhexane	< 0.573	**4.09 J**	< 1.42	< 1.41
3-Methylpentane	< 0.502	**4.80 J**	< 1.24	**2.24 J**
2-Methyl-1-pentene	< 0.492	< 1.27	**2.47 J**	**2.69 J**
cis-3-Methyl-2-pentene	< 0.566	< 1.46	**4.50 J**	**2.73 J**
4-Methyl-1-pentene	< 0.414	< 1.07	< 1.03	< 1.02
cis/trans-4-Methyl-2-pentene	< 1.15	< 2.99	**6.05 J**	< 2.84
2-Methyl-2-pentene	< 0.554	< 1.43	**8.94 J**	**40.8**
Neopentane	< 0.513	< 1.33	**3.49 J**	**1.53 J**
n-Nonane	< 0.870	< 2.25	< 2.16	< 2.14
1-Nonene	< 1.58	< 4.09	< 3.91	< 3.89
4-Nonene	< 0.336	< 0.869	< 0.832	< 0.826
n-Octane	< 0.782	< 2.03	< 1.94	< 1.93
1-Octene	< 0.394	< 1.02	< 0.978	< 0.971
cis-2-Octene	< 0.754	< 1.95	< 1.87	< 1.86
n-Pentane	**3.41 J**	**3.24 J**	**9.16 J**	**7.74 J**
1-Pentene	**0.782 J**	**1.11 J**	**2.53 J**	**7.78 J**
cis-2-Pentene	< 0.440	< 1.14	< 1.09	**2.33 J**
trans-2-Pentene	< 0.575	< 1.49	**1.53 J**	**4.28 J**
alpha-Pinene	< 0.933	< 2.42	< 2.31	< 2.30
beta-Pinene	< 0.924	< 2.39	< 2.29	< 2.27
Propane	**35.0**	**18.0**	**192**	**164**
Propanol	< 1.56 RA	< 4.04 RA	< 3.87 RA	< 3.84 RA
Propene	**24.8**	**7.40 J**	**92.3**	**274**
1,1,1,2-Tetrafluoroethane (Freon 134a)	**3.17 J**	< 1.79	< 1.71	**7.43 J**
1,2,3-Trimethylbenzene	< 1.59	< 4.12	< 3.95	< 3.92
2,2,5-Trimethylhexane	< 0.896	**2.63 J**	< 2.22	< 2.21
2,2,3-Trimethylpentane	< 0.767	**5.15 J**	< 1.90	**7.31 J**
2,3,4-Trimethylpentane	< 0.535	**18.4 J**	< 1.33	**20.5 J**
2,4,4-Trimethyl-1-pentene	< 0.754	< 1.95	< 1.87	< 1.86
2,4,4-Trimethyl-2-pentene	< 0.783	< 2.03	< 1.94	< 1.93
n-Undecane	< 0.564	< 1.46	< 1.40	**26.4 J**
1-Undecene	< 1.00	< 2.60	< 2.49	< 2.47
Vinyl bromide	< 1.32	< 3.43	< 3.28	< 3.26
m-,p-Xylene	**3.27 J**	< 3.73	< 3.57	< 3.55

Table C-4. Soil Gas Analytical Results - Additional Volatile Organic Compounds

Parameter				
Location	SMP-11A	PZ-01	PZ-02	PZ-03
Date	11/14/2012	11/14/2012	11/15/2012	11/15/2012
Analytical Laboratory	TA	TA	TA	TA

Notes

(1) High concentrations of non-target compounds resulted in elevated reporting limits for samples collected from SVE-6A and SVE-7A in November 2012. The analytical laboratory reanalyzed the soil vapor sample to report Below Limit of Detection (BLOD) results. Detections below the method detection limit (MDL) are estimated results ("U").

(2) Laboratory data qualifers are as follows.

J Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

RA Results are from a second analysis of the sample.

U Result less than sample specific method detection limit.

(3) All results in micrograms per cubic meter ($\mu g/m^3$)

(4) Samples analyzed using USEPA Method TO-15 Extended.

Definitions

–	Not available.
< 2.67	Not detected at or above the method detection limit (MDL).
ND	Not detected.
TA	TestAmerica Laboratories, Inc.
USEPA	United States Environmental Protection Agency

Table C-5. Soil Gas Analytical Results -Total Petroleum Hydrocarbons as Diesel, Polycyclic Aromatic Hydrocarbons

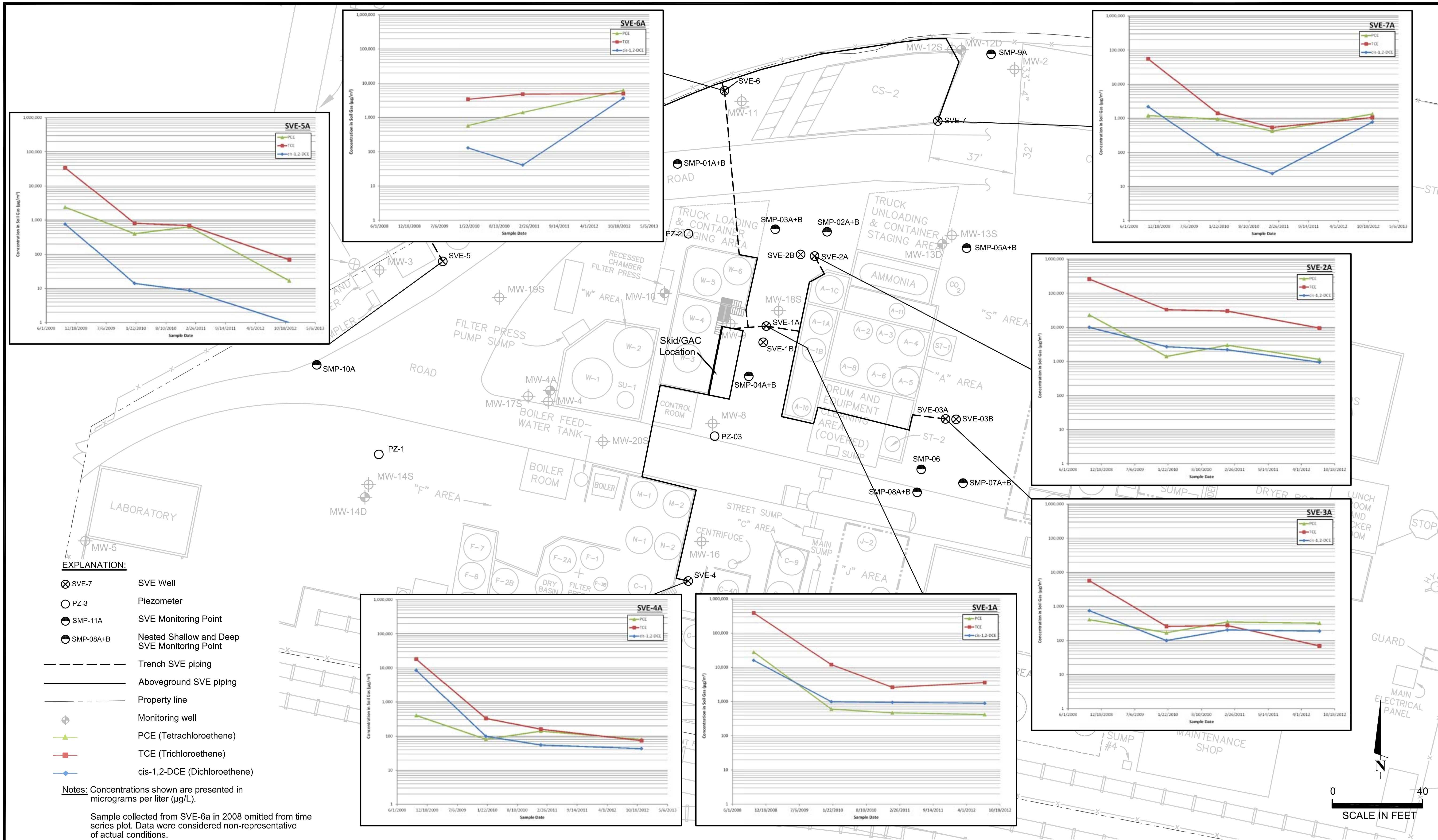
Parameter	Samples		
Location	SVE-01A	SVE-02A	SVE-03A
Date	7/18/2012	7/18/2012	7/18/2012
Analytical Laboratory	ATL	ATL	ATL
Total Petroleum Hydrocarbons by USEPA Method TO-17			
TPH-d	**90,000**	**5,500**	**120,000**
Polycyclic Aromatic Hydrocarbons by USEPA Method TO-13A			
Acenaphthene	< 50	< 50	< 50
Acenaphthylene	< 50	< 50	< 50
Anthracene	< 50	< 50	< 50
Benz(a)anthracene	< 50	< 50	< 50
Benzo(a)pyrene	< 50	< 50	< 50
Benzo(b)fluoranthene	< 50	< 50	< 50
Benzo(g,h,i)perylene	< 50	< 50	< 50
Benzo(k)fluoranthene	< 50	< 50	< 50
Beta-Chloronaphthalene	< 50	< 50	< 50
Chrysene	< 50	< 50	< 50
Dibenz(a,h)anthracene	< 50	< 50	< 50
Fluoranthene	< 50	< 50	< 50
Fluorene	< 50	< 50	< 50
Indeno(1,2,3-c,d)pyrene	< 50	< 50	< 50
1-Methylnaphthalene	< 50	< 50	< 50
2-Methylnaphthalene	< 50	< 50	< 50
Naphthalene	< 50	< 50	< 50
Phenanthrene	< 50	< 50	< 50
Pyrene	< 50	< 50	< 50
Volatile Organic Compounds by USEPA Method TO-17			
Fluorene	< 25	< 25	< 25
1-Methylnaphthalene	**2.6**	< 2.5	< 2.5
2-Methylnaphthalene	**4.3**	< 2.5	< 2.5
Naphthalene	**9.4**	< 2.5	**4.8**
Phenanthrene	< 25	< 25	< 25
Pyrene	< 25	< 25	< 25

Notes

(1) All results in micrograms per cubic meter ($\mu g/m^3$)

Definitions

< 50	Not detected at or above the reporting limit (RL)
TPH-d	Total Petroleum Hydrocarbons as diesel
ATL	Eurofins Air Toxics Ltd.
USEPA	United States Environmental Protection Agency



Changes in Concentrations of Volatile Organic Compounds in Soil Gas, 2008 - 2012

Phibro-Tech, Inc.

8851 Dice Road

Santa Fe Springs, California

APPENDIX D

SITE INVESTIGATION DATA INCLUDED IN HHRA

TABLE D-1
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	2-Chlorotoluene	4-Isopropyltoluene	Acetone
FeCl-SB04	FeCl-SB04-1	1	14-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
FeCl-SB04	FeCl-SB04-5	5	14-Sep-90	NA	--	NA	NA	--	--	--	--	--	0.006	--	--	--	0.011	--	--	0.038
MW-12D	MW-12D-4	4	4-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
MW-14S	MW-14S-5	5	30-Aug-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	PTI-MW17-S-2.0	2	19-Jun-07	<0.087 U	<0.087 U	0.24	<0.22 U	0.22	1.5	<0.087 U	<0.087 U	<0.087 U	--	0.13	<0.087 U	<0.087 U	--	<0.22 U	<0.087 U	--
MW-17	PTI-MW17-S-7.5	7.5	19-Jun-07	<0.002 U	<0.002 U	0.013	<0.005 U	<0.005 U	<0.005 U	<0.002 U	<0.002 U	<0.002 U	--	<0.002 U	<0.002 U	<0.002 U	--	<0.005 U	<0.002 U	--
MW-18	PTI-MW18-S-2.5	2.5	13-Jun-07	5.8	<0.098 U	2.8	1	<0.24 U	<0.24 U	<0.098 U	<0.098 U	<0.098 U	--	<0.098 U	<0.098 U	<0.098 U	--	<0.24 U	<0.098 U	--
MW-18	PTI-MW18-S-10.0	10	13-Jun-07	0.12	<0.0016 U	0.3	0.15	<0.0039 U	<0.0039 U	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.0016 U	<0.0016 U	<0.0016 U	--	0.0046	<0.0016 U	--
MW-19	PTI-MW19-S-3.0	3	18-Jun-07	<0.002 U	<0.002 U	0.049	0.01	<0.005 U	<0.005 U	<0.002 U	<0.002 U	<0.002 U	--	<0.002 U	<0.002 U	0.0027 I	--	<0.005 U	0.013 I	--
MW-19	PTI-MW19-S-8.0	8	18-Jun-07	<0.0019 U	<0.0019 U	0.0027	<0.0046 U	<0.0046 U	<0.0046 U	<0.0019 U	<0.0019 U	<0.0019 U	--	<0.0019 U	<0.0019 U	<0.0019 U	--	<0.0046 U	<0.0019 U	--
MW-20	PTI-MW20-S-1.5	1.5	15-Jun-07	<0.0018 U	<0.0018 U	0.0032 I	0.086 I	<0.0045 U	0.18 I	0.041 I	<0.0018 U	<0.0018 U	--	0.062 I	0.011 I	<0.0018 U	--	<0.0045 U	0.014 I	--
PI01	PI01-2	2	10-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PI01	PI01-3	3	10-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	0.06
PI01	PI01-7	7	10-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
PL-HB01	PL-HB01-0.5-1	0.5	19-Jan-91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL-HB01	PL-HB01-3-4	3	19-Jan-91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL-HB01	PL-HB01-5-6	5	19-Jan-91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PZ-01	PTI-PZ01-S-3.0	3	14-Jun-07	<0.93 U	<0.93 U	<0.93 U	<2.3 U	18	130	1.6	1.6	<0.93 U	--	20	<0.93 U	7.2	--	<2.3 U	<0.93 U	--
PZ-02	PTI-PZ02-S-3.5	3.5	12-Jun-07	<0.11 U	<0.11 U	0.3	0.51	<0.28 U	<0.28 U	<0.11 U	<0.11 U	<0.11 U	--	<0.11 U	<0.11 U	<0.11 U	--	<0.28 U	<0.11 U	--
PZ-02	PTI-PZ02-S-7.5	7.5	12-Jun-07	<0.002 U	<0.002 U	0.0075	<0.0049 U	<0.0049 U	<0.0049 U	<0.002 U	<0.002 U	<0.002 U	--	<0.002 U	<0.002 U	<0.002 U	--	<0.0049 U	<0.002 U	--
PZ-03	PTI-PZ03-S-4.0	4	12-Jun-07	<0.0015 U	<0.0015 U	0.037	0.012	<0.0039 U	<0.0039 U	<0.0015 U	<0.0015 U	<0.0015 U	--	<0.0015 U	<0.0015 U	<0.0015 U	--	<0.0039 U	<0.0015 U	--
PZ-03	PTI-PZ03-S-9.0	9	12-Jun-07	<0.0016 U	<0.0016 U	0.074	0.012	<0.0041 U	<0.0041 U	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.0041 U	<0.0016 U	--
RR05	RR05-1-2	1	23-Aug-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RS06	RS06-3	3	--	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB02	SB02-1-2	1	18-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB02	SB02-5	5	18-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB02	SB02-10	10	18-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	0.01	--	--	0.02
SB04	SB04-6	6	15-Dec-89	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB05	SB05-5	5	14-Dec-89	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB05	SB05-10	10	14-Dec-89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB06	SB06-6	6	14-Dec-89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB07	SB07-3	3	20-Sep-90	NA	--	0.65	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB07	SB07-5	5	20-Sep-90	1.4	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SB07	SB07-10	10	20-Sep-90	0.55	--	0.084	NA	--	--	--	--	--	0.059	--	--	--	NA	--	--	NA
SB08	SB08-5	5	19-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB08	SB08-10	10	19-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
SMP-02B	PTI-SMP02B-S-2.0	2	21-Jun-07	<0.0022 U	<0.0022 U	0.019	<0.0055 U	<0.0055 U	<0.0055 U	0.0036	0.0043	<0.0022 U	--	<0.0022 U	<0.0022 U	<0.0022 U	--	<0.0055 U	<0.0022 U	--
SMP-04B	PTI-SMP04B-S-1.5	1.5	20-Jun-07	<0.099 U	<0.099 U	<0.099 U	<0.25 U	<0.25 U	<0.25 U	<0.099 U	<0.099 U	<0.099 U	--	<0.099 U	<0.099 U	<0.099 U	--	<0.25 U	<0.099 U	--
SMP-04B	PTI-SMP04B-S-5.5	5.5	20-Jun-07	<0.0016 U	<0.0016 U	0.056 A-01,I	0.039 A-01,I	<0.004 U	<0.004 U	0.003 A-01,I	<0.0016 U	<0.0016 U	--	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.004 U	<0.0016 U	--
SMP-04B	PTI-SMP04B-S-9.5	9.5	20-Jun-07	<0.0016 U	<0.0016 U	0.031	0.0044	<0.0041 U	<0.0041 U	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.0016 U	<0.0016 U	<0.0016 U	--	<0.0041 U	<0.0016 U	--
SMP-06	PTI-SMP06-S-10.0	10	23-Jun-07	<0.0017 U	<0.0017 U	<0.0017 U	<0.0042 U	<0.0042 U	<0.0042 U	<0.0017 U	<0.0017 U	<0.0017 U	--	<0.0017 U	<0.0017 U	<0.0017 U	--	<0.0042 U	<0.0017 U	--
SMP-07	PTI-SMP-07-S-9.5	9.5	23-Jun-07	<0.09 U	<0.09 U	<0.09 U	<0.23 U	<0.23 U	<0.23 U	<0.09 U	<0.09 U	<0.09 U	--	<0.09 U	<0.09 U	<0.09 U	--	<0.23 U	<0.09 U	--
SVE-02B	PTI-SVE02B-S-4.0	4	21-Jun-07	<0.0018 U	<0.0018 U	0.032 M1	0.022 M1	<0.0044 U	<0.0044 U	<0.0018 U	<0.0018 U	<0.0018 U	--	<0.0018 U	<0.0018 U	<0.0018 U	--	<0.0044 U	<0.0018 U	--
SVE-02B	PTI-SVE02B-S-10.0	10	21-Jun-07	0.019	0.0019	0.087	0.028	<0.0044 U	<0.0044 U	<0.0018 U	<0.0018 U	<0.0018 U	--	<0.0018 U	<0.0018 U	<0.0018 U	--	<0.0044 U	<0.0018 U	--
UST-SB01	UST-SB01-10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB02	UST-SB02-10A	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB02	UST-SB02-10B	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB03	UST-SB03-10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB04	UST-SB04-10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB05	UST-SB05-5.5	5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB06	UST-SB06-5.5	5.5	24-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB06	UST-SB06-10	10	24-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE D-1
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Benzene	Butylbenzene	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Naphthalene	Propylbenzene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes
FeCl-SB04	FeCl-SB04-1	1	14-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.009	--	--	--	NA	0.079	--	<0.005 U	--	NA
FeCl-SB04	FeCl-SB04-5	5	14-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.01	--	--	--	0.011	0.1	--	0.11	--	0.22
MW-12D	MW-12D-4	4	4-Sep-90	<0.005 U	--	--	NA	--	NA	--	NA	--	--	--	0.01	NA	--	0.11	--	NA
MW-14S	MW-14S-5	5	30-Aug-90	<0.005 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	<0.005 U	--	NA
MW-17	PTI-MW17-S-2.0	2	19-Jun-07	<0.087 U	<0.22 U	<0.087 U	<0.087 U	0.18	<0.087 U	<0.087 U	<0.87 U	<0.22 U	<0.087 U	<0.22 U	<0.087 U	<0.087 U	<0.087 U	0.68	<0.22 U	<0.087 U
MW-17	PTI-MW17-S-7.5	7.5	19-Jun-07	<0.002 U	<0.005 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.02 U	<0.005 U	<0.002 U	<0.005 U	<0.002 U	<0.002 U	<0.002 U	0.0042	<0.005 U	<0.002 U
MW-18	PTI-MW18-S-2.5	2.5	13-Jun-07	<0.098 U	<0.24 U	<0.098 U	0.54	<0.098 U	<0.098 U	<0.098 U	<0.98 U	<0.24 U	<0.098 U	<0.24 U	1.3	<0.098 U	<0.098 U	12	<0.24 U	<0.098 U
MW-18	PTI-MW18-S-10.0	10	13-Jun-07	0.0023	<0.0039 U	0.012	0.04	0.022	0.0081	0.0045	0.035	<0.0039 U	<0.0016 U	0.02	0.23	0.0061	0.0048	7.1	<0.0039 U	0.048
MW-19	PTI-MW19-S-3.0	3	18-Jun-07	<0.002 U	<0.005 U	0.0028	<0.002 U	0.005	<0.002 U	<0.002 U	<0.02 U	0.008 I	<0.002 U	<0.005 U	0.013	0.0022	<0.002 U	0.13	<0.005 U	<0.0024 U
MW-19	PTI-MW19-S-8.0	8	18-Jun-07	<0.0019 U	<0.0046 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.019 U	<0.0046 U	<0.0019 U	<0.0046 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0019 U	<0.0046 U	<0.0019 U
MW-20	PTI-MW20-S-1.5	1.5	15-Jun-07	0.068 I	0.011 I	<0.0018 U	<0.0018 U	0.2 I	0.033 I	0.0087 I	<0.018 U	0.029 I	0.011 I	0.01 I	<0.0018 U	0.12 I	0.019 I	0.057 I	0.005 I	0.165 I
PI01	PI01-2	2	10-Sep-90	<0.25 U	--	--	--	--	0.06	--	--	--	--	--	--	1.3	--	<0.25 U	--	0.41
PI01	PI01-3	3	10-Sep-90	<0.025 U	--	--	NA	--	NA	--	0.026	--	--	--	NA	0.048	--	<0.025 U	--	NA
PI01	PI01-7	7	10-Sep-90	<0.005 U	--	--	NA	--	--	--	0.011	--	--	--	NA	--	--	<0.005 U	--	--
PL-HB01	PL-HB01-0.5-1	0.5	19-Jan-91	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005 U	--	--
PL-HB01	PL-HB01-3-4	3	19-Jan-91	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005 U	--	--
PL-HB01	PL-HB01-5-6	5	19-Jan-91	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005 U	--	--
PZ-01	PTI-PZ01-S-3.0	3	14-Jun-07	<0.93 U	<2.3 U	<0.93 U	<0.93 U	<0.93 U	<0.93 U	<0.93 U	<9.3 U	<2.3 U	<0.93 U	<2.3 U	<0.93 U	<0.93 U	<0.93 U	<0.93 U	<2.3 U	<0.93 U
PZ-02	PTI-PZ02-S-3.5	3.5	12-Jun-07	<0.11 U	<0.28 U	<0.11 U	<0.11 U	5.5	<0.11 U	<0.11 U	<1.1 U	<0.28 U	<0.11 U	<0.28 U	<0.11 U	<0.11 U	0.11	1.4	<0.28 U	<0.11 U
PZ-02	PTI-PZ02-S-7.5	7.5	12-Jun-07	<0.002 U	<0.0049 U	<0.002 U	<0.002 U	0.035	<0.002 U	<0.002 U	<0.02 U	<0.0049 U	<0.002 U	<0.0049 U	<0.002 U	<0.002 U	<0.002 U	0.0069	<0.0049 U	<0.002 U
PZ-03	PTI-PZ03-S-4.0	4	12-Jun-07	<0.0015 U	<0.0039 U	<0.0015 U	<0.0015 U	0.062	<0.0015 U	<0.0015 U	<0.015 U	<0.0039 U	<0.0015 U	<0.0039 U	0.041	<0.0015 U	0.03	0.14	<0.0039 U	<0.0021 U
PZ-03	PTI-PZ03-S-9.0	9	12-Jun-07	0.0019	<0.0041 U	<0.0016 U	<0.0016 U	0.031	<0.0016 U	<0.0016 U	<0.016 U	<0.0041 U	<0.0016 U	<0.0041 U	<0.0016 U	<0.0016 U	0.015	0.033	<0.0041 U	<0.0016 U
RR05	RR05-1-2	1	23-Aug-90	<0.025 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	<0.025 U	--	NA
RS06	RS06-3	3	--	<5 U	--	--	NA	--	9	--	NA	--	--	--	NA	NA	--	110	--	43
SB02	SB02-1-2	1	18-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.031	--	--	--	NA	0.041	--	<0.005 U	--	NA
SB02	SB02-5	5	18-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.013	--	--	--	NA	0.005	--	<0.005 U	--	NA
SB02	SB02-10	10	18-Sep-90	NA	--	--	NA	--	NA	--	0.12	--	--	--	NA	0.022	--	NA	--	NA
SB04	SB04-6	6	15-Dec-89	<0.025 U	--	--	NA	--	NA	--	NA	--	--	--	NA	0.065	--	0.09	--	NA
SB05	SB05-5	5	14-Dec-89	<0.025 U	--	--	NA	--	0.07	--	NA	--	--	--	NA	0.34	--	0.125	--	0.21
SB05	SB05-10	10	14-Dec-89	NA	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
SB06	SB06-6	6	14-Dec-89	<0.025 U	--	--	--	--	NA	--	--	--	--	--	--	0.38	--	<0.05 U	--	NA
SB07	SB07-3	3	20-Sep-90	<0.5 U	--	--	0.51	--	--	--	0.51	--	--	--	NA	--	--	4.8	--	--
SB07	SB07-5	5	20-Sep-90	<0.25 U	--	--	NA	--	--	--	NA	--	--	--	0.31	--	--	0.91	--	--
SB07	SB07-10	10	20-Sep-90	<0.025 U	--	--	0.062	--	NA	--	0.35	--	--	--	0.058	0.086	--	0.26	--	NA
SB08	SB08-5	5	19-Sep-90	<0.25 U	--	--	--	--	3.3	--	--	--	--	--	--	0.4	--	<0.25 U	--	NA
SB08	SB08-10	10	19-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.04	--	--	--	NA	0.13	--	<0.005 U	--	0.056
SMP-02B	PTI-SMP02B-S-2.0	2	21-Jun-07	<0.0022 U	<0.0055 U	<0.0022 U	<0.0022 U	0.0033	<0.0022 U	<0.0022 U	<0.022 U	<0.0055 U	<0.0022 U	<0.0055 U	<0.0022 U	<0.0022 U	<0.0022 U	0.056	<0.0055 U	0.0075
SMP-04B	PTI-SMP04B-S-1.5	1.5	20-Jun-07	<0.099 U	<0.25 U	<0.099 U	<0.099 U	<0.099 U	<0.099 U	<0.099 U	<0.99 U	<0.25 U	<0.099 U	<0.25 U	<0.099 U	<0.099 U	<0.099 U	0.11	<0.25 U	<0.099 U
SMP-04B	PTI-SMP04B-S-5.5	5.5	20-Jun-07	0.011 A-01,I	<0.004 U	<0.0016 U	<0.0016 U	0.029 A-01,I	<0.0016 U	<0.0016 U	<0.016 U	0.0046 A-01,I	<0.0016 U	<0.004 U	0.014 A-01,I	0.0093 A-01,I	0.017 A-01,I	0.15 A-01,I	<0.004 U	0.0093 A-01,I
SMP-04B	PTI-SMP04B-S-9.5	9.5	20-Jun-07	<0.0016 U	<0.0041 U	<0.0016 U	<0.0016 U	0.005	<0.0016 U	<0.0016 U	<0.016 U	<0.0041 U	<0.0016 U	<0.0041 U	<0.0016 U	<0.0016 U	<0.0016 U	0.019	<0.0041 U	<0.0016 U
SMP-06	PTI-SMP06-S-10.0	10	23-Jun-07	<0.0017 U	<0.0042 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.017 U	<0.0042 U	<0.0017 U	<0.0042 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0017 U	<0.0042 U	<0.0017 U
SMP-07	PTI-SMP-07-S-9.5	9.5	23-Jun-07	<0.09 U	0.33	<0.09 U	<0.09 U	<0.09 U	0.11	3.5	<0.9 U	9.8	5	1.9	<0.09 U	<0.09 U	<0.09 U	<0.09 U	<0.23 U	<0.09 U
SVE-02B	PTI-SVE02B-S-4.0	4	21-Jun-07	<0.0018 U	<0.0044 U	<0.0018 U	<0.0018 U	0.0059	<0.0018 U	<0.0018 U	<0.018 U	<0.0044 U	<0.0018 U	<0.0044 U	<0.0018 U	<0.0018 U	<0.0018 U	0.11 A-01,	<0.0044 U	<0.0018 U
SVE-02B	PTI-SVE02B-S-10.0	10	21-Jun-07	<0.0018 U	<0.0044 U	0.0023	0.016	0.014	<0.0018 U	<0.0018 U	<0.018 U	<0.0044 U	<0.0018 U	<0.0044 U	0.021	<0.0018 U	0.0029	0.13	<0.0044 U	<0.0018 U
UST-SB01	UST-SB01-10	10	--	NA	--	--	--	--	5	--	--	--	--	--	--	NA	--	--	--	14
UST-SB02	UST-SB02-10A	10	--	2.1	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
UST-SB02	UST-SB02-10B	10	--	NA	--	--	--	--	4	--	--	--	--	--	--	NA	--	--	--	8
UST-SB03	UST-SB03-10	10	--	0.2	--	--	--	--	0.7	--	--	--	--	--	--	0.3	--	--	--	2
UST-SB04	UST-SB04-10	10	--	2	--	--	--	--	11	--	--	--	--	--	--	3	--	--	--	27
UST-SB05	UST-SB05-5.5	5.5	--	1.7	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	9
UST-SB06	UST-SB06-5.5	5.5	24-Sep-90	<0.25 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
UST-SB06	UST-SB06-10	10	24-Sep-90	<0.005 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA

TABLE D-1
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	2-Chlorotoluene	4-Isopropyltoluene	Acetone
UST-SB07	UST-SB07-4.5	4.5	21-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB07	UST-SB07-8	8	21-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB10	UST-SB10-10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB11	UST-SB11-10	10	21-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB12	UST-SB12-10	9	18-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB13	UST-SB13-10	9	18-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB14	UST-SB14-10	9	19-Mar-92	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	--
UST-SB15	UST-SB15-5	4	19-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB15	UST-SB15-10	9	19-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB16	UST-SB16-5	4	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB16	UST-SB16-10	9	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB17	UST-SB17-5	4	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB17	UST-SB17-10	9	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB18	UST-SB18-5	4	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB18	UST-SB18-10	9	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB01	WMU12-SB01-3	2	19-Mar-92	0.051	--	0.016	0.007	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB01	WMU12-SB01-5	4	19-Mar-92	0.018	--	0.019	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB01	WMU12-SB01-10	9	19-Mar-92	0.029	--	0.055	0.0054	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB02	WMU12-SB02-3	2	20-Mar-92	--	--	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB02	WMU12-SB02-5	4	20-Mar-92	--	--	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU12-SB02	WMU12-SB02-10	9	20-Mar-92	0.011	--	0.024	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU18/19	WMU18/19-1-2	1	26-Oct-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
WMU18/19	WMU18/19-3-4	3	26-Oct-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	0.12
WMU18/19	WMU18/19-5-6	5	26-Oct-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU20B	WMU20B-2.2	2.2	--	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	--	--	--	--
WMU20-HB01	WMU20-HB1-2	1	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU20-HB01	WMU20-HB1-6	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU20-HB01	WMU20-HB1-6 DUP	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU20-HB02	WMU20-HB2-2	1	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU20-HB02	WMU20-HB2-6	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU23B	WMU23B-1.5	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU35B	WMU35B-7	7	26-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU42	WMU42-4.5	4.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46A	WMU46A-4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46C	WMU46C-1-2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46D	WMU46D-3.5	3.5	6-Sep-90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46E	WMU46E-3.5	3.5	6-Sep-90	NA	--	NA	NA	--	--	--	--	--	NA	--	--	--	NA	--	--	NA
WMU46-SB02	WMU46-SB02-3	2	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46-SB02	WMU46-SB02-6	5	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46-SB02	WMU46-SB02-10	9	14-Apr-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WMU46-SB03	WMU46-SB03-10	9	19-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE D-1
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Benzene	Butylbenzene	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Naphthalene	Propylbenzene	sec-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	Xylenes
UST-SB07	UST-SB07-4.5	4.5	21-Sep-90	<1.5 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	<1 U	--	NA
UST-SB07	UST-SB07-8	8	21-Sep-90	<0.5 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
UST-SB10	UST-SB10-10	10	--	<0.05 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
UST-SB11	UST-SB11-10	10	21-Sep-90	<5 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
UST-SB12	UST-SB12-10	9	18-Mar-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB13	UST-SB13-10	9	18-Mar-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB14	UST-SB14-10	9	19-Mar-92	<1.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005 U	--	--
UST-SB15	UST-SB15-5	4	19-Mar-92	<0.13 U	--	--	--	--	0.26	--	--	--	--	--	--	--	--	--	--	2.3
UST-SB15	UST-SB15-10	9	19-Mar-92	0.25	--	--	--	--	0.014	--	--	--	--	--	--	--	--	<0.005 U	--	0.011
UST-SB16	UST-SB16-5	4	14-Apr-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB16	UST-SB16-10	9	14-Apr-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB17	UST-SB17-5	4	14-Apr-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB17	UST-SB17-10	9	14-Apr-92	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-SB18	UST-SB18-5	4	14-Apr-92	0.01	--	--	--	--	0.13	--	--	--	--	--	--	0.055	--	--	--	2.3
UST-SB18	UST-SB18-10	9	14-Apr-92	<0.005 U	--	--	--	--	0.047	--	--	--	--	--	--	0.19	--	<0.025 U	--	0.16
WMU12-SB01	WMU12-SB01-3	2	19-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.001 U	--	--
WMU12-SB01	WMU12-SB01-5	4	19-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.001 U	--	--
WMU12-SB01	WMU12-SB01-10	9	19-Mar-92	--	--	--	--	0.0035	--	--	--	--	--	--	--	--	--	<0.001 U	--	--
WMU12-SB02	WMU12-SB02-3	2	20-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.055	--	--
WMU12-SB02	WMU12-SB02-5	4	20-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.036	--	--
WMU12-SB02	WMU12-SB02-10	9	20-Mar-92	--	--	--	0.0034	--	--	--	--	--	--	--	--	--	--	0.033	--	--
WMU18/19	WMU18/19-1-2	1	26-Oct-90	<0.005 U	--	--	NA	--	NA	--	NA	--	--	--	NA	0.009	--	0.009	--	0.01
WMU18/19	WMU18/19-3-4	3	26-Oct-90	<0.005 U	--	--	NA	--	--	--	NA	--	--	--	NA	--	--	<0.005 U	--	--
WMU18/19	WMU18/19-5-6	5	26-Oct-90	<0.005 U	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005 U	--	--
WMU20B	WMU20B-2.2	2.2	--	<0.25 U	--	--	NA	--	NA	--	NA	--	--	--	NA	NA	--	2.6	--	NA
WMU20-HB01	WMU20-HB1-2	1	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	10	--	--	<0.44 U	--	--
WMU20-HB01	WMU20-HB1-6	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	0.206	--	--	<0.004 U	--	--
WMU20-HB01	WMU20-HB1-6 DUP	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	0.181	--	--	<0.0035 U	--	--
WMU20-HB02	WMU20-HB2-2	1	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	0.0064	--	--	<0.001 U	--	--
WMU20-HB02	WMU20-HB2-6	5	13-Mar-92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.001 U	--	--
WMU23B	WMU23B-1.5	1.5	--	<0.005 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
WMU35B	WMU35B-7	7	26-Sep-90	<0.4 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
WMU42	WMU42-4.5	4.5	--	<0.165 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
WMU46A	WMU46A-4	4	--	<0.05 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	--	--	NA
WMU46C	WMU46C-1-2	1	--	<0.005 U	--	--	--	--	NA	--	--	--	--	--	--	NA	--	<0.005 U	--	NA
WMU46D	WMU46D-3.5	3.5	6-Sep-90	<0.025 U	--	--	--	--	NA	--	--	--	--	--	--	0.26	--	<0.025 U	--	NA
WMU46E	WMU46E-3.5	3.5	6-Sep-90	<0.005 U	--	--	NA	--	NA	--	0.028	--	--	--	NA	0.33	--	<0.005 U	--	NA
WMU46-SB02	WMU46-SB02-3	2	14-Apr-92	<0.005 U	--	--	--	--	0.005	--	--	--	--	--	--	NA	--	--	--	0.01
WMU46-SB02	WMU46-SB02-6	5	14-Apr-92	<0.005 U	--	--	--	--	0.077	--	--	--	--	--	--	0.01	--	<0.005 U	--	0.14
WMU46-SB02	WMU46-SB02-10	9	14-Apr-92	<0.005 U	--	--	--	--	0.75	--	--	--	--	--	--	0.043	--	<0.025 U	--	1.4
WMU46-SB03	WMU46-SB03-10	9	19-Mar-92	<0.25 U	--	--	--	--	5.1	--	--	--	--	--	--	NA	--	<0.005 U	--	14

Notes:
All analytical results are presented in milligrams per kilogram (mg/kg).
-- = chemical not analyzed for or sample date not available.
A-01 = Laboratory field blank/laboratory field blank duplicate/relative percent difference (LFB/LFBD RPD) exceeded the acceptance limit. Recovery met acceptance criteria.
B = estimate value; constituent detected in the sample and the associated method blank. Detected constituent was less than 10 times the method blank value.
bgs = below ground surface.
DUP = field duplicate sample.
I = Internal standard recovery was outside of method limits. Matrix interference was confirmed.
J = result is less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL) and the concentration is an approximated value.
M1 = The matrix spike (MS) and/or matrix spike duplicate (MSD) were above the acceptance limits due to sample matrix interference.
NA = chemical was not detected, reporting limit was not available.
U = constituent was not detected at the reporting limit given.

TABLE D-2
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
SEMI-VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	1,2,4-Trichlorobenzene	2-Methylnaphthalene	Pyrene
FeCl-SB04	FeCl-SB04-1	1	14-Sep-90	NA	<0.33 U	NA
FeCl-SB04	FeCl-SB04-5	5	14-Sep-90	1.2	<0.33 U	NA
PI01	PI01-2	2	10-Sep-90	--	<0.33 U	--
PL-HB01	PL-HB01-0.5-1	0.5	19-Jan-91	NA	<0.53 U	NA
PL-HB01	PL-HB01-3-4	3	19-Jan-91	--	<0.53 U	--
PL-HB01	PL-HB01-5-6	5	19-Jan-91	NA	<0.53 U	NA
SB02	SB02-1-2	1	18-Sep-90	--	<0.01 U	--
SB07	SB07-3	3	20-Sep-90	NA	<10 U	NA
SB08	SB08-5	5	19-Sep-90	NA	26	NA
WMU18/19	WMU18/19-1-2	1	26-Oct-90	NA	<1.3 U	1.3
WMU18/19	WMU18/19-3-4	3	26-Oct-90	--	<0.33 U	--
WMU18/19	WMU18/19-5-6	5	26-Oct-90	--	<0.33 U	--

Notes:
All analytical results are presented in milligrams per kilogram (mg/kg).
-- = chemical not analyzed for.
bgs = below ground surface.
NA = chemical was not detected, reporting limit was not available.
U = constituent was not detected at the reporting limit given.

TABLE D-3
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
TOTAL PETROLEUM HYDROCARBONS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	EFH (C23 - C40)	TPH (extractable)	TPH-Diesel	TPH-Gasoline
MW-18	PTI-MW18-S-2.5	2.5	13-Jun-07	2300	--	1200	0.64
PZ-02	PTI-PZ02-S-3.5	3.5	12-Jun-07	24000	--	17000	1.9 QP1
RS06	RS06-3	3	--	--	460	--	--
SB08	SB08-5	5	19-Sep-90	--	4200	--	--
SMP-04B	PTI-SMP04B-S-1.5	1.5	20-Jun-07	3900	--	2100	<20 U
SMP-04B	PTI-SMP04B-S-5.5	5.5	20-Jun-07	1400	--	650	<0.37 U
SMP-04B	PTI-SMP04B-S-9.5	9.5	20-Jun-07	<5 U	--	<5 U	<0.32 U
SMP-06	PTI-SMP06-S-10.0	10	23-Jun-07	250	--	26	<0.42 U
SMP-07	PTI-SMP-07-S-9.5	9.5	23-Jun-07	650	--	960	580
UST-SB06	UST-SB06-5.5	5.5	24-Sep-90	--	7400	--	--
UST-SB07	UST-SB07-4.5	4.5	21-Sep-90	--	3800	--	--
UST-SB07	UST-SB07-8	8	21-Sep-90	--	1500	--	--
UST-SB10	UST-SB10-10	10	--	--	3700	--	--
UST-SB11	UST-SB11-10	10	21-Sep-90	--	2900	--	--
UST-SB12	UST-SB12-10	9	18-Mar-92	--	<100 U	--	--
UST-SB13	UST-SB13-10	9	18-Mar-92	--	<100 U	--	--
UST-SB14	UST-SB14-10	9	19-Mar-92	--	9000	--	--
UST-SB15	UST-SB15-5	4	19-Mar-92	--	810	--	--
UST-SB15	UST-SB15-10	9	19-Mar-92	--	960	--	--
UST-SB17	UST-SB17-5	4	14-Apr-92	--	29	--	--
UST-SB17	UST-SB17-10	9	14-Apr-92	--	<1 U	--	--
UST-SB18	UST-SB18-5	4	14-Apr-92	--	1900	--	--
UST-SB18	UST-SB18-10	9	14-Apr-92	--	3000	--	--
WMU23B	WMU23B-1.5	1.5	--	--	4000	--	--
WMU35B	WMU35B-7	7	26-Sep-90	--	1000	--	--
WMU42	WMU42-4.5	4.5	--	--	16400	--	--
WMU46A	WMU46A-4	4	--	--	8500	--	--
WMU46-SB02	WMU46-SB02-3	2	14-Apr-92	--	44	--	--
WMU46-SB02	WMU46-SB02-6	5	14-Apr-92	--	470	--	--
WMU46-SB02	WMU46-SB02-10	9	14-Apr-92	--	2600	--	--
WMU46-SB03	WMU46-SB03-10	9	19-Mar-92	--	3400	--	--

Notes:
All analytical results are presented in milligrams per kilogram (mg/kg).
-- = chemical not analyzed for or sample date not available.
bgs = below ground surface.
QP1 = Hydrocarbon result partly due to individual peak(s) in quantitation range.
U = constituent was not detected at the reporting limit given.

TABLE D-4

ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
POLYCHLORINATED BIPHENYLS

Phibro-Tech, Inc. Facility

Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Aroclor 1260
FeCl-SB01	FeCl-SB01-1.0	1	17-Sep-90	--
FeCl-SB01	FeCl-SB01-5.5	5.5	17-Sep-90	--
FeCl-SB02	FeCl-SB02-1	1	14-Sep-90	21
FeCl-SB02	FeCl-SB02-5	5	14-Sep-90	80
FeCl-SB03	FeCl-SB03-1	1	14-Sep-90	23
FeCl-SB03	FeCl-SB03-5	5	14-Sep-90	15
FeCl-SB04	FeCl-SB04-1	1	14-Sep-90	11
FeCl-SB04	FeCl-SB04-5	5	14-Sep-90	4.4
FeCl-SB05	FeCl-SB05-1.0	1	17-Sep-90	--
FeCl-SB05	FeCl-SB05-5.0	5	17-Sep-90	--
FeCl-SB06	FeCl-SB06-1	1	14-Sep-90	50
FeCl-SB06	FeCl-SB06-5.5	5.5	14-Sep-90	6.5
FeCl-SB07	FeCl-SB07-1.5	1.5	9/14/1990	--
FeCl-SB07	FeCl-SB07-5	5	9/14/1990	4
LAB-HB01	LAB-HB01-0.5-1	0.5	--	4.2
LAB-HB01	LAB-HB01-1-2	1	--	0.43
LAB-HB01	LAB-HB01-3-4	3	--	0.09
LAB-HB01	LAB-HB01-5-6	5	--	--
PI01	PI01-2	2	9/10/1990	1.1
PI01	PI01-3	3	9/10/1990	--
PI01	PI01-7	7	9/10/1990	--
PL-HB01	PL-HB01-0.5-1	0.5	1/19/1991	3
PL-HB01	PL-HB01-3-4	3	1/19/1991	--
PL-HB01	PL-HB01-5-6	5	1/19/1991	0.017
SB02	SB02-1-2	1	9/18/1990	--
SB02	SB02-5	5	9/18/1990	--
SB07	SB07-3	3	9/20/1990	1.7
SB07	SB07-5	5	9/20/1990	--
SB07	SB07-10	10	9/20/1990	--
SB08	SB08-5	5	9/19/1990	--
SB08	SB08-10	10	9/19/1990	--
SMP-04B	PTI-SMP04B-S-1.5	1.5	6/20/2007	0.13 M2
SMP-04B	PTI-SMP04B-S-5.5	5.5	6/20/2007	0.34
UST-SB07	UST-SB07-4.5	4.5	9/21/1990	--
WMU18/19	WMU18/19-1-2	1	10/26/1990	3.9
WMU18/19	WMU18/19-3-4	3	10/26/1990	--
WMU18/19	WMU18/19-5-6	5	10/26/1990	--

Notes:

All analytical results are presented in milligrams per kilogram (mg/kg).

-- = chemical not analyzed for or sample date not available.

bgs = below ground surface.

M2 = The MS and /or MSD were below the acceptance limits due to sample matrix interference.

TABLE D-5
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
INORGANICS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
B-1	B-1-10	10	01-Jan-86	--	--	--	--	53	--	--	470	--	--	--	--	--	--	--	--
B-3	B-3-5	5	01-Jan-86	--	--	--	--	420	--	--	1200	--	--	--	--	--	--	--	--
B-4	B-4-5	5	01-Jan-86	--	--	--	--	10000	--	--	480	--	--	--	--	--	--	--	--
B-4	B-4-10	10	01-Jan-86	--	--	--	<0.62 U	16000	--	--	820	--	--	--	--	--	--	--	92
B-5	B-5-5	5	01-Jan-86	--	--	--	--	85	--	--	230	--	--	--	--	--	--	--	--
B-5	B-5-10	10	01-Jan-86	--	--	--	--	30	--	--	78	--	--	--	--	--	26	--	79
B-6	B-6-5	5	01-Jan-86	--	--	--	--	3700	--	--	460	--	--	--	--	--	--	--	--
DHS-HB01	DHS-HB01-0-1.5	0	--	--	--	--	3.6	2630	<0.5 U	--	231	28100	732	--	--	--	72.6	--	271
DHS-HB02	DHS-HB02-0-2	0	--	--	--	--	15	2070	53.7	--	1970	34700	949	--	--	--	101	--	4150
DHS-HB03	DHS-HB03-0-2	0	--	--	--	--	21.8	1380	30.5	--	6570	33200	19100	--	--	--	363	--	14000
FeCl-SB04	FeCl-SB04-1	1	14-Sep-90	14.5	--	--	1.7	711	1.8	--	463	17300	243	--	NA	--	42.7	--	413
FeCl-SB04	FeCl-SB04-5	5	14-Sep-90	13.5	--	--	1.9	558	<0.2 U	--	461	22400	188	--	NA	--	50.9	--	500
LAB-HB01	LAB-HB01-0.5-1	0.5	--	--	--	--	0.83	105	0.62	--	556	15700	88.7	--	--	--	30.4	--	982
LAB-HB01	LAB-HB01-1-2	1	--	--	--	--	<1 U	36.4	<0.2 U	--	39.6	31800	<10 U	--	--	--	29.4	--	64
LAB-HB01	LAB-HB01-3-4	3	--	--	--	--	<0.5 U	32.4	<0.2 U	--	37.4	25300	<5 U	--	--	--	24.9	--	55.1
LAB-HB01	LAB-HB01-5-6	5	--	--	--	--	<0.5 U	28	<0.2 U	--	32.4	23200	<5 U	--	--	--	22.3	--	48.6
MW-01D	MW-01D-2	2	--	--	--	--	40.4	10400	NA	--	13900	47400	517	--	--	--	28400	--	40100
MW-01D	MW-01D-5.5	5.5	--	--	--	--	2.8	3800	NA	--	2900	24400	61.8	--	--	--	624	--	2840
MW-01S	MW-01S-10	10	--	--	--	--	--	27	--	--	63	--	--	--	--	--	29	--	85
MW-02	MW-02-10	10	--	--	--	--	--	16	--	--	36	--	--	--	--	--	21	--	57
MW-03	MW-03-10	10	--	--	--	--	--	17	--	--	44	--	--	--	--	--	18	--	59
MW-04	MW-04-10	10	--	--	--	--	--	16	--	--	37	--	--	--	--	--	21	--	52
MW-04A	MW-04A-10	10	--	--	--	--	--	14	--	--	410	--	--	--	--	--	31	--	110
MW-05	MW-05-10	10	--	--	--	--	--	5.9	--	--	36	--	--	--	--	--	6.6	--	38
MW-06A	MW-06A-10	10	--	--	--	--	--	8.5	--	--	43	--	--	--	--	--	12	--	43
MW-06D	MW-06D-5.5	5.5	06-Sep-90	--	--	--	<0.5 U	26	<0.2 U	--	524	21400	<5 U	--	--	--	746	--	279
MW-08	MW-08-10	10	--	--	--	--	--	41	--	--	61	--	--	--	--	--	27	--	96
MW-10	MW-10-10	10	--	--	--	--	--	31	--	--	89	--	--	--	--	--	28	--	100
MW-11	MW-11-10	10	01-Jan-86	--	--	--	1.2	16	--	--	2400	--	--	--	--	--	NA	--	120
MW-17	PTI-MW17-S-2.0	2	19-Jun-07	40	120	0.57	<0.5 U	51	0.24 M2	11	46	--	25	--	0.034	<2 U	21	49	86
MW-17	PTI-MW17-S-7.5	7.5	19-Jun-07	12	190	1.1	<1 U	46	0.42	14	40	--	11	--	0.081	<4 U	30	75	61
MW-18	PTI-MW18-S-2.5	2.5	13-Jun-07	2.3	350	<0.5 U	3.4	170	<2 U	11	600	--	890	--	0.95	<2 U	54	31	180
MW-18	PTI-MW18-S-10.0	10	13-Jun-07	<16 U	250	<4 U	<4 U	1800	130	48	8700	--	17	--	2	<16 U	280	62	300
MW-19	PTI-MW19-S-3.0	3	18-Jun-07	44	93	<0.5 U	5.4	200	1.2 M2	7.9	210	--	27	--	0.37	<2 U	18	28	250
MW-19	PTI-MW19-S-8.0	8	18-Jun-07	7.7	140	0.67	4.4	43	<0.2 U	10	30	--	7.5	--	<0.02 U	<2 U	23	56	53
MW-20	PTI-MW20-S-1.5	1.5	15-Jun-07	3.6	990	<0.5 U	0.55	180	<2 U	10	190	--	4800	--	1.5	<2 U	24	29	220
PI01	PI01-2	2	10-Sep-90	72	--	--	5.1	37000	<0.2 U	--	1180	20900	61.3	--	0.35	--	39	--	126
PI01	PI01-3	3	10-Sep-90	21	--	--	1.6	2360	<0.2 U	--	1120	17400	6.4	--	--	--	41.4	--	108
PI01	PI01-7	7	10-Sep-90	5.3	--	--	1.1	136	4	--	176	18500	<5 U	--	--	--	17.7	--	39.9
PI02	PI02-0.5	0.5	--	--	--	--	2.9	2980	15.6	--	2110	18300	81.3	--	--	--	205	--	130
PI02	PI02-1.5	1.5	--	--	--	--	0.9	1780	<0.2 U	--	23.7	15700	<5 U	--	--	--	14.8	--	40.3
PI02	PI02-5	5	--	--	--	--	<0.5 U	33.1	<0.2 U	--	28	21800	5.4	--	--	--	20.6	--	50.9
PI03	PI03-0.5	0.5	--	--	--	--	<1 U	6940	143	--	908	41300	641	--	--	--	12.9	--	24.7
PI03	PI03-1.5	1.5	--	--	--	--	<0.5 U	1870	<0.2 U	--	604	13300	63.5	--	--	--	39.6	--	115
PI03	PI03-5	5	--	--	--	--	2.9	1380	5.6	--	1260	22100	6.4	--	--	--	90.5	--	78.3
PI04	PI04-1	1	10-Sep-90	--	--	--	2	552	<0.2 U	--	323	19100	1090	--	--	--	309	--	872
PI04	PI04-2	2	10-Sep-90	--	--	--	2.6	28.4	<0.2 U	--	82.5	10500	1660	--	--	--	41.7	--	1170
PI04	PI04-6	6	--	--	--	--	<2.5 U	1870	<0.2 U	--	17400	29300	704	--	--	--	652	--	476
PI05	PI05-1	1	--	--	--	--	1.4	65.2	<0.2 U	--	1580	28400	1010	--	--	--	134	--	584
PI05	PI05-1.5	1.5	--	--	--	--	2	62.7	21.4	--	980	18000	2830	--	--	--	45.9	--	1070
PI05	PI05-5	5	--	--	--	--	<0.5 U	34.2	<0.2 U	--	314	20800	26.6	--	--	--	24	--	210
PI05	PI05-10	10	--	--	--	--	<1 U	33	<0.2 U	--	39.4	28200	10.6	--	--	--	28.3	--	57.8
PI06	PI06-1	1	--	--	--	--	4.6	1710	<0.2 U	--	7090	17600	885	--	--	--	340	--	2790

TABLE D-5
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
INORGANICS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
PI06	PI06-1.5	1.5	--	--	--	--	1.7	293	<0.2 U	--	3950	16600	416	--	--	--	217	--	1550
PI06	PI06-5	5	--	--	--	--	<0.5 U	23.9	<0.2 U	--	201	23400	<5 U	--	--	--	46.5	--	86.8
PI06	PI06-10	10	--	--	--	--	5.1	1140	<0.2 U	--	2550	16700	684	--	--	--	237	--	1690
PI07	PI07-0	0	--	--	--	--	24.2	2050	<0.2 U	--	3390	30200	4200	--	--	--	498	--	21100
PI07	PI07-5	5	--	--	--	--	<0.5 U	26.1	<0.2 U	--	751	23200	<5 U	--	--	--	53.6	--	113
PI07	PI07-10	10	--	--	--	--	0.82	61.5	0.74	--	42.6	26400	6.2	--	--	--	28.6	--	63.7
PL-HB01	PL-HB01-0.5-1	0.5	19-Jan-91	5.7	--	--	<0.5 U	42.7	<0.2 U	--	170	14400	30	--	NA	--	28.2	--	103
PL-HB01	PL-HB01-3-4	3	19-Jan-91	8.4	--	--	<0.5 U	34	<0.2 U	--	36.1	30700	8.4	--	NA	--	23.1	--	60.5
PL-HB01	PL-HB01-5-6	5	19-Jan-91	9	--	--	<0.5 U	32.9	<0.2 U	--	34.3	29900	8.1	--	NA	--	22.9	--	60
PL-HB02	PL-HB02-1-2	1	--	--	--	--	<0.5 U	23.9	<0.5 U	--	31.8	21100	<5 U	--	--	--	19.2	--	49.2
PL-HB02	PL-HB02-3-4	3	--	--	--	--	<1 U	34.4	<1 U	--	37.9	30700	<10 U	--	--	--	27.6	--	67.1
PL-HB02	PL-HB02-5-6	5	--	--	--	--	<1 U	38.3	<0.2 U	--	42.4	32300	<10 U	--	--	--	30.7	--	68.8
PL-HB03	PL-HB03-2.5-3	2.5	--	--	--	--	<0.5 U	33	<0.2 U	--	29.6	28300	6.91	--	--	--	21.4	--	51.6
PL-HB03	PL-HB03-4.5-5	4.5	--	--	--	--	<0.5 U	50.1	<0.2 U	--	50	36000	9.1	--	--	--	35.4	--	74.2
PL-HB03	PL-HB03-6-6.5	6	--	--	--	--	<0.5 U	38	<0.2 U	--	43.1	29400	8.6	--	--	--	31.5	--	65.8
PL-HB04	PL-HB04-1-2	1	26-Oct-90	--	--	--	<0.5 U	23	<1 U	--	96.7	21000	48.5	--	--	--	32.2	--	94.2
PL-HB04	PL-HB04-3-4	3	26-Oct-90	--	--	--	<0.5 U	21.8	<0.5 U	--	75	18600	9	--	--	--	45.7	--	114
PL-HB04	PL-HB04-5-6	5	26-Oct-90	--	--	--	<1 U	36	<0.2 U	--	109	29800	<10 U	--	--	--	102	--	234
PZ-01	PTI-PZ01-S-3.0	3	14-Jun-07	10	140	0.61	2.5	970	61	16	650	--	160	--	0.14	14	69	39	380
PZ-02	PTI-PZ02-S-3.5	3.5	12-Jun-07	4.2	1000	<0.5 U	0.6	120	<2 U	11	230	--	6100	--	1.3	<2 U	25	29	210
PZ-02	PTI-PZ02-S-7.5	7.5	12-Jun-07	6.5	160	<1 U	<1 U	31	0.38	14	36	--	8.8	--	0.042	<4 U	24	60	57
PZ-03	PTI-PZ03-S-4.0	4	12-Jun-07	6.3	200	0.62	<0.5 U	30	<1 U	19	30	--	8.5	--	<0.02 U	<2 U	22	52	75
PZ-03	PTI-PZ03-S-9.0	9	12-Jun-07	6.5	140	0.5	<0.5 U	29	<0.2 U	12	39	--	6.8	--	0.11	<2 U	22	48	64
RR01	RR01-1-2	1	--	--	--	--	1.3	3840	216	--	1170	40200	240	--	--	--	85.1	--	331
RR02	RR02-1-2	1	--	--	--	--	0.82	550	9	--	808	17000	39.6	--	--	--	713	--	410
RR03	RR03-1-2	1	--	--	--	--	1.1	243	10.3	--	1260	18500	36.1	--	--	--	470	--	297
RR04	RR04-1-2	1	--	--	--	--	<0.5 U	86.1	<0.2 U	--	540	18100	44.2	--	--	--	108	--	134
RR05	RR05-1-2	1	23-Aug-90	--	--	--	<0.5 U	21.1	<0.2 U	--	42.3	16700	7.1	--	--	--	19.2	--	55.2
RR06	RR06-1-2	1	--	--	--	--	1.4	22.4	<0.2 U	--	123	17000	8.1	--	--	--	79.7	--	101
RS01	RS01-1	1	--	--	--	--	<0.5 U	138	<0.2 U	--	20	1780	<5 U	--	--	--	58.9	--	64.8
RS01	RS01-3	3	--	--	--	--	5	779	<0.2 U	--	215	7490	13.8	--	--	--	788	--	165
RS01	RS01-5	5	--	--	--	--	1.4	19.4	<0.2 U	--	83	16300	<5 U	--	--	--	30.7	--	150
RS01	RS01-10	10	--	--	--	--	<0.5 U	20.9	<0.2 U	--	24.9	18800	6	--	--	--	19.3	--	47.8
RS02	RS02-1	1	--	--	--	--	1.9	250	<0.2 U	--	346	16600	143	--	--	--	63.2	--	99.7
RS02	RS02-3	3	--	--	--	--	1	221	0.77	--	774	10600	41	--	--	--	65.7	--	104
RS02	RS02-5	5	--	--	--	--	6.5	38.2	<0.2 U	--	206	21300	116	--	--	--	363	--	2940
RS02	RS02-10	10	--	--	--	--	<1 U	33.5	<0.2 U	--	116	30600	11	--	--	--	59.1	--	225
RS03	RS03-1	1	--	--	--	--	14.2	37.3	<0.2 U	--	91.9	13100	6650	--	--	--	100	--	3700
RS03	RS03-3	3	--	--	--	--	161	3140	<0.2 U	--	19100	15600	113000	--	--	--	390	--	23800
RS03	RS03-5	5	--	--	--	--	2.6	4040	<0.2 U	--	767	19300	911	--	--	--	55.3	--	916
RS03	RS03-10	10	--	--	--	--	<0.5 U	22.6	<0.2 U	--	29.9	19600	12.9	--	--	--	22.1	--	62.1
RS04	RS04-1	1	--	--	--	--	7.2	63.5	4.8	--	152	15900	2410	--	--	--	21.2	--	1230
RS04	RS04-3	3	--	--	--	--	<0.5 U	26.1	138	--	276	20000	20	--	--	--	28	--	333
RS04	RS04-5	5	--	--	--	--	0.8	34.4	<0.2 U	--	259	19800	59.2	--	--	--	30.2	--	366
RS04	RS04-10	10	--	--	--	--	<0.5 U	16	8.2	--	26.4	17200	7.7	--	--	--	16.3	--	49.5
RS05	RS05-1	1	--	--	--	--	<0.5 U	177	<0.2 U	--	25.2	1530	12.4	--	--	--	9.6	--	14.1
RS05	RS05-3	3	--	--	--	--	<0.5 U	64	<0.2 U	--	81.5	18300	898	--	--	--	25.8	--	89.5
RS05	RS05-5	5	--	--	--	--	21.3	383	<0.2 U	--	276	11400	228	--	--	--	95.5	--	360
RS05	RS05-10	10	--	--	--	--	2.6	155	<0.2 U	--	138	17800	194	--	--	--	58.6	--	376
RS06	RS06-1.5	1.5	--	--	--	--	2	279	<0.2 U	--	1050	30200	33.5	--	--	--	536	--	49.8
RS06	RS06-3	3	--	--	--	--	1.7	213	<0.2 U	--	415	18600	1590	--	--	--	24.4	--	300
RS06	RS06-5	5	--	--	--	--	<0.5 U	17.2	<0.2 U	--	26.5	12800	13.4	--	--	--	10.8	--	37.6
RS06	RS06-10	10	--	--	--	--	<0.5 U	27.5	<0.2 U	--	20.2	15300	<5 U	--	--	--	13.5	--	35.3

TABLE D-5
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
INORGANICS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
SB02	SB02-1-2	1	18-Sep-90	58	--	--	40.9	1190	29.4	--	7560	49700	14800	--	0.88	--	1000	--	30800
SB02	SB02-5	5	18-Sep-90	4.2	--	--	9.8	109	13.2	--	1480	12600	1430	--	--	--	246	--	8840
SB02	SB02-10	10	18-Sep-90	12.2	--	--	21.4	272	<0.2 U	--	16400	26300	2850	--	--	--	936	--	14900
SB03	SB03-5	5	--	--	--	--	<1 U	33.5	<0.2 U	--	24.6	28200	<10 U	--	--	--	78.5	--	6040
SB03	SB03-10	10	--	--	--	--	<1 U	46.6	<0.2 U	--	35.2	32100	15	--	--	--	31.9	--	120
SB04	SB04-6	6	15-Dec-89	--	--	--	0.3	65	<1 U	--	120	13000	29	--	--	--	12	--	59
SB05	SB05-5	5	14-Dec-89	--	--	--	1.3	400	<1 U	--	520	25000	110	--	--	--	46	--	380
SB05	SB05-10	10	14-Dec-89	--	--	--	NA	720	4.47	--	47	16000	2.7	--	--	--	9.9	--	120
SB06	SB06-6	6	14-Dec-89	--	--	--	0.8	310	1.84	--	230	48000	58	--	--	--	24	--	130
SB07	SB07-3	3	20-Sep-90	15	--	--	1.9	8030	73.2	--	6490	27300	860	--	1.5	--	247	--	1010
SB07	SB07-5	5	20-Sep-90	4.6	--	--	<2.5 U	12000	1040	--	448	57000	180	--	--	--	12.9	--	27.1
SB07	SB07-10	10	20-Sep-90	8.6	--	--	<1 U	5540	216	--	2590	28300	11.7	--	--	--	134	--	86.3
SB08	SB08-5	5	19-Sep-90	9.8	--	--	<1 U	26.5	<0.2 U	--	2900	39000	236	--	NA	--	905	--	360
SB08	SB08-10	10	19-Sep-90	14	--	--	<1 U	47.4	<0.2 U	--	704	41400	14.7	--	--	--	405	--	171
SMP-02B	PTI-SMP02B-S-2.0	2	21-Jun-07	4.4	96	<0.5 U	5.4	360	13	3.2	670	--	200	--	0.13	3.9	170	14	340
SMP-04B	PTI-SMP04B-S-1.5	1.5	20-Jun-07	4.7	740	<0.5 U	<0.5 U	120	<0.2 U	9.1	430	--	6.5	--	0.99	2.5	22	31	230
SMP-04B	PTI-SMP04B-S-5.5	5.5	20-Jun-07	<10 U	250	<2.5 U	<2.5 U	4000	1.1	8.1	320	--	570	--	0.25	<10 U	22	34	900
SMP-04B	PTI-SMP04B-S-9.5	9.5	20-Jun-07	9	130	0.73	<0.5 U	33	<0.2 U	15	34	--	9	--	0.023	<2 U	24	59	69
SMP-06	PTI-SMP06-S-10.0	10	23-Jun-07	5.4	79	<0.5 U	<0.5 U	10	0.26	3.4	17	--	16	--	0.04	<2 U	8.3	20	39
SMP-07	PTI-SMP-07-S-9.5	9.5	23-Jun-07	18	210	1.1	<1 U	45	<0.2 U	17	55	--	15	--	0.11	<4 U	37	68	80
SVE-02B	PTI-SVE02B-S-4.0	4	21-Jun-07	2	130 M2	0.52	<0.5 U	320 MHA	<0.4 U	9.8	28	--	44	--	0.56 M2	5.5	19	43	97
SVE-02B	PTI-SVE02B-S-10.0	10	21-Jun-07	8.8	240	0.76	<0.49 U	36	<0.2 U	14	44	--	9.7	--	0.077	<2 U	31	57	66
UST-SB07	UST-SB07-4.5	4.5	21-Sep-90	4.9	--	--	--	22.1	<0.2 U	--	--	--	--	--	NA	--	--	--	--
VZ-PM-1	VZPM-1-9	9	23-Apr-12	<47 U	170	<12 U	<12 U	16000	3200	<23 U	550	54000 B	<47 U	230	--	<47 U	<47 U	54	<120 U
WMU09	WMU09-1-2	1	--	--	--	--	1.8	2960	96.6	--	1250	18400	1380	--	--	--	39.9	--	442
WMU12-SB01	WMU12-SB01-3	2	19-Mar-92	--	--	--	0.47	88	<0.2 U	--	25	22000	13	--	--	--	18	--	140
WMU12-SB01	WMU12-SB01-5	4	19-Mar-92	--	--	--	0.26	40	<0.2 U	--	23	23000	9.9	--	--	--	21	--	66
WMU12-SB01	WMU12-SB01-10	9	19-Mar-92	--	--	--	0.54	71	<0.2 U	--	72	40000	20	--	--	--	50	--	100
WMU12-SB02	WMU12-SB02-3	2	20-Mar-92	--	--	--	1.8	450	NA	--	37	1600	68	--	--	--	17	--	190
WMU12-SB02	WMU12-SB02-5	4	20-Mar-92	--	--	--	0.14	94	NA	--	22	22000	9.4	--	--	--	20	--	56
WMU12-SB02	WMU12-SB02-10	9	20-Mar-92	--	--	--	<0.14 U	35	NA	--	27	22000	9.9	--	--	--	22	--	57
WMU18/19	WMU18/19-1-2	1	26-Oct-90	7.6	--	--	1.9	828	<0.5 U	--	6070	44000	1000	--	NA	--	1070	--	869
WMU18/19	WMU18/19-3-4	3	26-Oct-90	19	--	--	<1 U	353	<0.5 U	--	9660	29400	317	--	NA	--	425	--	369
WMU18/19	WMU18/19-5-6	5	26-Oct-90	13	--	--	<1 U	26.7	<1 U	--	2160	35000	45.7	--	NA	--	260	--	259
WMU20A	WMU20A-1-2	1	--	--	--	--	4.7	1190	<0.2 U	--	770	16200	113	--	--	--	98.2	--	316
WMU20B	WMU20B-1-2	1	--	--	--	--	4.4	244	1.4	--	426	12800	541	--	--	--	218	--	267
WMU22	WMU22-1-2	1	--	--	--	--	1.5	502	<0.2 U	--	498	24400	180	--	--	--	35.6	--	137
WMU23A	WMU23A-1-2	1	--	--	--	--	3.5	194	<0.2 U	--	8340	15100	105	--	--	--	151	--	187
WMU23B	WMU23B-1-2	1	--	--	--	--	1.2	1010	<0.2 U	--	358	15600	1810	--	--	--	88.1	--	687
WMU24	WMU24-1-2	1	--	--	--	--	2.6	117	<0.2 U	--	235	13200	827	--	--	--	15.8	--	1630
WMU25	WMU25-1-2	1	--	--	--	--	<1 U	1040	<2 U	--	5760	23300	189	--	--	--	1220	--	389
WMU31	WMU31-1-2	1	--	--	--	--	4.6	29.6	<0.2 U	--	161	17800	22.3	--	--	--	37.2	--	313
WMU31	WMU31-3-4	3	--	--	--	--	1.8	42.8	<0.2 U	--	599	15300	8.5	--	--	--	61.1	--	936
WMU32	WMU32-1-2	1	--	--	--	--	2.8	428	<0.2 U	--	1740	9320	61.2	--	--	--	170	--	2300
WMU32	WMU32-3-4	3	--	--	--	--	1.4	92	<0.2 U	--	1330	17200	15.3	--	--	--	74.2	--	818
WMU33B	WMU33B-0	0	--	--	--	--	1.7	96.8	<0.2 U	--	368	8430	61.7	--	--	--	29.8	--	391
WMU33B	WMU33B-1.5-2.5	1.5	--	--	--	--	7.2	21	<0.2 U	--	1770	17400	10.4	--	--	--	38.6	--	1120
WMU35B	WMU35B-2-3	2	26-Sep-90	--	--	--	<0.5 U	40.7	<0.2 U	--	454	18500	11.4	--	--	--	254	--	126
WMU35B	WMU35B-6-7	6	26-Sep-90	--	--	--	<1 U	35.2	<0.2 U	--	96.3	29900	<10 U	--	--	--	41	--	64.6
WMU36A	WMU36A-1.5-2.5	1.5	--	--	--	--	11.7	3020	13	--	4690	15600	258	--	--	--	2410	--	2720
WMU36A	WMU36A-4-5	4	--	--	--	--	<0.5 U	46.6	<1 U	--	59.3	19600	10.3	--	--	--	36.1	--	88.4
WMU42	WMU42-1.5-2.5	1.5	--	--	--	--	0.64	31.1	<0.2 U	--	68.3	17100	130	--	--	--	16.2	--	158
WMU42	WMU42-4-5	4	--	--	--	--	<1 U	37.4	<0.2 U	--	61.6	29500	38.5	--	--	--	30.7	--	188

TABLE D-5
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOILS (0-10 FEET BGS)
INORGANICS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
WMU46A	WMU46A-0-2	0	--	--	--	--	<1 U	185	<2 U	--	1340	23900	172	--	--	--	506	--	262
WMU46A	WMU46A-2-4	2	--	--	--	--	<1 U	19.6	<2 U	--	1970	17800	93	--	--	--	1560	--	389
WMU46A	WMU46A-4-6	4	--	--	--	--	<1 U	32.7	<2 U	--	49.4	26200	<10 U	--	--	--	429	--	111
WMU46B	WMU46B-1-2	1	--	--	--	--	<25 U	9570	0.98	--	23100	31200	1370	--	--	--	6230	--	2170
WMU46B	WMU46B-2-4	2	--	--	--	--	<1 U	18.8	<0.2 U	--	1530	16100	25.2	--	--	--	472	--	238
WMU46B	WMU46B-4-6	4	--	--	--	--	<25 U	7530	1.27	--	13300	28800	2180	--	--	--	11800	--	2920
WMU46C	WMU46C-1-2	1	--	--	--	--	3.1	937	6.5	--	3780	17100	465	--	--	--	520	--	928
WMU46C	WMU46C-2-4	2	--	--	--	--	1.9	118	<0.2 U	--	7060	15600	42.8	--	--	--	102	--	255
WMU46C	WMU46C-4-6	4	--	--	--	--	1.4	64.3	<0.2 U	--	2780	20200	32.3	--	--	--	269	--	920
WMU46D	WMU46D-1-1.8	1	--	--	--	--	23.3	1410	6	--	5970	29500	18300	--	--	--	380	--	14600
WMU46D	WMU46D-3	3	06-Sep-90	--	--	--	<0.5 U	15.6	<0.2 U	--	56.9	11200	46.8	--	--	--	14	--	80
WMU46D	WMU46D-5	5	06-Sep-90	--	--	--	<0.5 U	22	<0.2 U	--	866	20500	9	--	--	--	226	--	161
WMU46E	WMU46E-1.5	1.5	06-Sep-90	--	--	--	15.6	778	9.7	--	4270	26750	6320	--	--	--	284	--	12200
WMU46E	WMU46E-3	3	06-Sep-90	--	--	--	19.2	1970	23.9	--	5680	45700	16900	--	--	--	362	--	14400
WMU46E	WMU46E-5	5	06-Sep-90	--	--	--	4	988	23.9	--	4250	22200	1590	--	--	--	362	--	2540
WMU46-HB01	WMU46-HB01-1-2	1	13-Mar-92	--	--	--	<0.14 U	37	<0.2 U	--	39	22000	13	--	--	--	31	--	57
WMU46-HB01	WMU46-HB01-5-6	5	13-Mar-92	--	--	--	0.43	55	<0.2 U	--	1000	36000	17	--	--	--	380	--	220
WMU46-HB01	WMU46-HB01-9-10	9	13-Mar-92	--	--	--	<0.14 U	72	<0.2 U	--	410	4600	21	--	--	--	150	--	120
WMU46-HB02	WMU46-HB02-1-2	1	12-Mar-92	--	--	--	0.28	44	<0.2 U	--	130	23000	11	--	--	--	290	--	80
WMU46-HB02	WMU46-HB02-5-6	5	12-Mar-92	--	--	--	0.32	61	<0.2 U	--	54	35000	18	--	--	--	180	--	78
WMU46-HB02	WMU46-HB02-9-10	9	12-Mar-92	--	--	--	<0.14 U	17	<0.2 U	--	18	10000	5.6	--	--	--	150	--	29
WMU46-SB01	WMU46-SB01-10	9	20-Mar-92	--	--	--	0.33	44	<0.2 U	--	890	26000	11	--	--	--	900	--	100
WMU46-SB02	WMU46-SB02-3	2	14-Apr-92	--	--	--	<0.14 U	39	<0.2 U	--	300	36000	18	--	--	--	310	--	1100
WMU46-SB02	WMU46-SB02-6	5	14-Apr-92	--	--	--	6.1	42	<0.2 U	--	230	27000	13	--	--	--	200	--	17
WMU46-SB02	WMU46-SB02-10	9	14-Apr-92	--	--	--	<0.14 U	48	<0.2 U	--	56	36000	20	--	--	--	34	--	99
WMU46-SB03	WMU46-SB03-10	9	19-Mar-92	--	--	--	0.49	55	<0.2 U	--	2600	37000	14	--	--	--	1400	--	240

Notes:
All analytical results are presented in milligrams per kilogram (mg/kg).
-- = chemical not analyzed for or sample date not available.
bgs = below ground surface.
M2 = The matrix spike(MS) and/or matrix spike duplicate (MSD) were below the acceptance limits due to sample matrix interference.
MHA = Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.
NA = chemical was not detected, reporting limit was not available.
U = constituent was not detected at the reporting limit given.

TABLE D-6
ANALYTICAL DATA INCLUDED IN THE HHRA: BACKGROUND SOILS (0-10 FEET BGS)
INORGANICS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium VI	Cobalt	Copper	Iron	Lead	Mercury	Nickel	Vanadium	Zinc
BG02	BG02-2-2.5	2	--	--	--	--	NA	33.2	0.96	--	28.7	28100	7.2	--	22.4	--	61.1
BG02	BG02-5-5.5	5	--	--	--	--	NA	32.3	1.2	--	31.3	27300	6.1	--	24.4	--	59.5
BG02	BG02-10-10.5	10	--	--	--	--	NA	8.4	3.1	--	9.3	11900	NA	--	6.7	--	27.6
BG03A	BG03A-1-2	1	--	--	--	--	NA	14.7	NA	--	21.4	11600	18.4	--	9.2	--	18.4
BG03A	BG03A-5-6	5	--	--	--	--	NA	21.5	NA	--	23.3	19000	6.7	--	15.3	--	6.7
BG03A	BG03A-7-8	7	--	--	--	--	NA	33.4	NA	--	35.6	27100	9.2	--	23.8	--	9.2
BG03A	BG03A-10-11	10	--	--	--	--	NA	21.4	NA	--	25.2	19400	6	--	17.3	--	7.8
BG03B	BG03B-1-2	1	--	--	--	--	NA	11.1	NA	--	17	8840	21.1	--	12	--	21.1
BG03B	BG03B-5-6	5	--	--	--	--	NA	20.6	NA	--	28	18100	6.8	--	16.2	--	6.8
BG03B	BG03B-7-8	7	--	--	--	--	NA	17.8	NA	--	20.7	16200	6.5	--	12.6	--	6.5
BG03B	BG03B-10-11	10	--	--	--	--	NA	21.2	NA	--	25.5	19700	5.2	--	17.4	--	5.2
BG04A	BG04A-1-2	1	--	--	--	--	NA	16.3	NA	--	14.4	14500	14.3	--	10	--	14.3
BG04A	BG04A-5-6	5	--	--	--	--	NA	22.8	NA	--	21	19200	7	--	14.3	--	7
BG04A	BG04A-7-8	7	--	--	--	--	NA	16.8	NA	--	19.3	15300	5.1	--	11.2	--	5.1
BG04A	BG04A-10-11	10	--	--	--	--	NA	15	NA	--	17	13700	NA	--	10.3	--	NA
BG04B	BG04B-1-2	1	--	--	--	--	NA	16.6	NA	--	23.4	14400	22	--	11.1	--	22
BG04B	BG04B-5-6	5	--	--	--	--	NA	21.3	NA	--	19.4	17000	6.2	--	14.6	--	6.2
BG04B	BG04B-7-8	7	--	--	--	--	NA	21.8	NA	--	23.2	19000	5.2	--	14.2	--	5.2
BG04B	BG04B-10-11	10	--	--	--	--	NA	18.6	NA	--	17.7	14200	NA	--	11.2	--	NA
MW-22	MW22-7.5	7.5	22-Apr-10	10	150	0.69	0.94	29	0.38	12	28	--	5.5	0.033	20	54	56
MW-23	MW-23-8.0	8	20-Apr-10	7.1	140	<0.5 U	0.81	25	0.77	9.7	25	--	5.3	0.028	17	49	47

Notes:
All analytical results are presented in milligrams per kilogram (mg/kg).
-- = chemical not analyzed for or sample date not available.
bgs = below ground surface.
NA = chemical was not detected, reporting limit was not available.
U = constituent was not detected at the reporting limit given.

TABLE D-7
ANALYTICAL DATA INCLUDED IN THE HHRA: ONSITE SOIL GAS
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc. Facility
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,3-Dichlorobenzene	2-Butanone (MEK)	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Naphthalene	>C10-C12 Aliphatic Hydrocarbons (ref_ to Dodecane)	>C10-C12 Aromatic Hydrocarbons (ref_ to 1,2,4,5-TMB)	>C6-C8 Aliphatic Hydrocarbons (ref_ to Heptane)
PZ-01	PZ-01-11142012	35	14-Nov-12	2.6 J	<2.32 U	124	109	10.2 J, B	<2.11 U	8.4 J, B	29.7	<2.56 U	10.1 J	44.6 B	2.27 J	<2 U	3.65 J	139	24.7	<1.86 U	<4.08 U	139	<3.57 U	<140 U	<110 U	<86 U
PZ-02	PZ-02-11152012	24	15-Nov-12	506	<2.22 U	191	439	<2.95 U	<2.02 U	<2.45 U	<1.66 U	<2.45 U	<2.39 U	9.09 J, B	3.18 J	2.38 J	9.96 J	181	5340 RA	<1.78 U	<3.91 U	14 J	<3.42 U	<360 U	<280 U	<210 U
PZ-03	PZ-03-11152012	22.5	15-Nov-12	127	<2.21 U	156	78.7	<2.93 U	<2.01 U	<2.43 U	3.22 J	<2.43 U	7.25 J	21.9 B	1.84 J	3.44 J	106	69.2	189	<1.77 U	<3.88 U	5.52 J	<3.4 U	12000	<110 U	1400
SMP-01A	SMP-01A-11142012	29	14-Nov-12	154	<2.32 U	111	102	<3.07 U	<2.11 U	<2.55 U	<1.73 U	<2.55 U	<2.49 U	12.4 J, B	1.1 J	2.11 J	2.18 J	45.8	352	<1.86 U	<4.08 U	<1.5 U	<3.57 U	<150 U	<120 U	<87 U
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	3330 RA	3.49 J	331	1020 RA	<2.93 U	<2.01 U	<2.44 U	<1.66 U	3.02 J, B	<2.38 U	6.29 J, B	3.36 J	6.11 J	31.7	508	799 RA	<1.78 U	<3.89 U	17.4 J	<3.41 U	<360 U	<280 U	<210 U
SMP-03A	SMP-03-11152012	25	15-Nov-12	3380 RA	2.93 J	385	1590 RA	<2.91 U	<2 U	<2.42 U	<1.65 U	<2.42 U	<2.36 U	8.89 J, B	8.07 J	19.7 J	20.5	684	5160 RA	<1.76 U	<3.87 U	22.1	<3.38 U	<480 U	<370 U	<280 U
SMP-04A	SMP-04A-11152012	25	15-Nov-12	371	<9.26 U	212	345	<12.3 U	<8.42 U	<10.2 U	<6.93 U	<10.2 U	14.8 J	5.48 J, B	4.46 J	<7.97 U	125	104 J	69.9 J	<7.44 U	<16.3 U	25.4 J	<14.3 U	390000	1000	5600
SMP-05A	SMP-05A-11152012	29	15-Nov-12	64.7	<2.23 U	193	2.92 J	<2.96 U	<2.03 U	4.64 J, B	<1.67 U	<2.45 U	<2.4 U	7.76 J, B	<0.994 U	6.29 J	<0.772 U	28	5.33 J	<1.79 U	<3.92 U	<1.45 U	<3.43 U	<140 U	<110 U	<84 U
SMP-06	SMP-06-11142012	23	14-Nov-12	<2.28 U	<2.28 U	6.32 J	5.87 J	5.06 J, B	<2.07 U	<2.51 U	<1.71 U	<2.51 U	<2.45 U	107 B	10.1 J	<1.96 U	6.71 J	<2.06 U	<1.67 U	<1.83 U	6.42 J	<1.48 U	5.35 J, B	8900	<160 U	47000
SMP-07A	SMP-07A-11142012	27	14-Nov-12	<50.9 U	<50.9 U	<38.1 U	<44.5 U	<67.5 U	<46.3 U	<56 U	<38.1 U	<56 U	<54.7 U	61.8 J, B	<22.7 U	<43.8 U	33.8 J	<46 U	<37.3 U	<40.9 U	2730	<33 U	143 J, B	690000	<2400 U	1000000
SMP-08A	SMP-08A-11142012	27	14-Nov-12	<11.2 U	<11.2 U	15 J	28.9 J	<14.8 U	<10.2 U	<12.3 U	<8.36 U	<12.3 U	14 J	100 B	22.9 J	<9.61 U	22.4 J	<10.1 U	<8.19 U	<8.97 U	<19.6 U	12 J	<17.2 U	430000	<2400 U	100000
SMP-09A	SMP-09A-11152012	25	15-Nov-12	6.04 J	<0.897 U	6.77 J	1.26 J	<1.19 U	<0.816 U	<0.989 U	10.8	<0.989 U	3 J	9.1 B	<0.4 U	<0.772 U	0.835 J	12.9	1.96 J	<0.721 U	<1.58 U	1.69 J	<1.38 U	<140 U	<110 U	<86 U
SMP-10A	SMP-10A-11142012	25	14-Nov-12	1.02 J	<0.954 U	11.2	5.03 J	<1.27 U	0.871 J	<1.05 U	<0.714 U	<1.05 U	8.29	16.2 B	0.513 J	<0.821 U	1.42 J	19.2	2.39 J	1.3 J	<1.68 U	2.59 J	<1.47 U	<150 U	<120 U	<88 U
SMP-11A	SMP-11A-11142012	25	14-Nov-12	1.46 J	<0.896 U	19.4	133	<1.19 U	<0.815 U	<0.987 U	7.22 J	<0.987 U	1.78 J	27 B	0.564 J	<0.771 U	7.86	37.6	7.06 J	1.03 J	<1.58 U	1.81 J	<1.38 U	<150 U	<120 U	<87 U
SVE-01A	SVE-1A-071812	29	18-Jul-12	3760	<7.07 U	420	2600	<9.38 U	<6.43 U	<7.79 U	<5.29 U	<7.79 U	471	330	8.31 J	<6.08 U	54	710	890	17	18.4 J	138	9.4	310000	<310 U	58000
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	8530 RA	7.71 J	607	3690 RA	<2.31 U	<23 U	4.96 J	50	3.53 J	47.9	33.7 B	8.18 J	25	59	530	948	<20 U	<3.06 U	81.2	<99 U	<660 U	<520 U	<390 U
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	<38.2 U	<38.2 U	<28.6 U	<33.4 U	<770 U	<34.7 U	<42.1 U	<28.6 U	<42.1 U	1690	470 B	<82 U	<32.9 U	<68 U	<34.5 U	<28 U	<30.7 U	92.9 J	192 J	4.8	350000	<2800 U	320000
SVE-04A	SVE-4-11152012	28	15-Nov-12	<5.6 U	<5.6 U	88	31	<30 U	5.8	<6.2 U	1.95 J	<6.2 U	7.52 J	26	8.7	<4.7 U	48	9.3	43	4.9	9.8	23.3	39	35000	350	4800
SVE-05A	SVE-5-11142012	30	14-Nov-12	8.05 J	<0.935 U	5.01 J	9.86	<1.24 U	<0.85 U	<1.03 U	<0.7 U	<1.03 U	6.34 J	28.5 B	1.64 J	<0.805 U	1.04 J	4.46 J	0.989 J	<0.751 U	<1.65 U	4.74 J	<1.44 U	<150 U	<120 U	<88 U
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<140000 U	<110000 U	<86000 U
SVE-06A	SVE-6-1142012	31.5	14-Nov-12	<740 U	<740 U	<554 U	<647 U	<982 U	<673 U	<815 U	<554 U	<815 U	303000 RA	125000 B	<330 U	<637 U	<257 U	<668 U	<543 U	<594 U	<1300 U	<480 U	<1140 U	--	--	--
SVE-07A	SVE-7-11152012	28	15-Nov-12	<158 U	<158 U	<118 U	<138 U	<209 U	<143 U	<174 U	<118 U	<174 U	35200	12800 B	<70.4 U	<136 U	<54.7 U	<142 U	<116 U	<127 U	<278 U	<102 U	<243 U	<24000 U	<19000 U	<14000 U
SVE-07A	SVE-7-11162012	28	16-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All analytical results are presented in micrograms per cubic meter (µg/m^3).

-- = not analyzed for.

B = estimate value; constituent detected in the sample and the associated method blank. Detected constituent was less than 10 times the method blank value.

bgs = below ground surface.

cn = result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.

J = result is less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL) and the concentration is an approximated value.

LW = quantitated against gasoline.

RA = results are from a second reanalysis of the sample.

U = constituent was not detected at the reporting limit given.

TABLE D-7
ANALYTICAL DATA INCLUDED IN THE HRA: ON-SITE SOIL GAS
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	>C8-C10 Aliphatic Hydrocarbons (ref_ to Decane)	1,1,1,2-Tetrafluoroethane (Freon 134a)	1,1,2-Trichlorotrifluoroethane (Freon 113)	1,3-Butadiene	1,3-Diethylbenzene	1,4-Diethylbenzene	1,4-Dioxane	1-Butene/Isobutene	1-Heptene	1-Hexene	1-Methylcyclohexene	1-Methylcyclopentene	1-Methylnaphthalene	1-Octene	1-Pentene	2 & 3-Chlorotoluene	2,2,3-Trimethylpentane	2,2,4-Trimethylpentane	2,2,5-Trimethylhexane	2,2-Dimethylbutane	2,3,4-Trimethylpentane	2,3-Dimethylbutane	2,3-Dimethylpentane	2,4-Dimethylpentane	2,5-Dimethylhexane	2-Methyl-1-pentene
PZ-01	PZ-01-11142012	35	14-Nov-12	<120 U	<1.79 U	29.6 J	<0.833 U	<4.56 U	<4.52 U	<4.14 U	8.52 J	<3.18 U	<2.68 U	<1.74 U	<1.47 U	--	<1.02 U	1.11 J	<4.47 U	5.15 J	2.14 J	2.63 J	1.45 J	18.4 J	4.38 J	17.2 J	4.45 J	7.77 J	<1.27 U
PZ-02	PZ-02-11152012	24	15-Nov-12	<300 U	<1.71 U	3.97 J	<0.798 U	<4.37 U	<4.32 U	<3.96 U	182	<3.05 U	<2.57 U	2.96 J	2.35 J	--	<0.978 U	2.53 J	<4.28 U	<1.9 U	<1.92 U	<2.22 U	1.46 J	<1.33 U	3.75 J	<1.7 U	<1.68 U	<1.9 U	2.47 J
PZ-03	PZ-03-11152012	22.5	15-Nov-12	1800	7.43 J	43.3	<0.792 U	<4.34 U	<4.29 U	<3.94 U	492	<3.02 U	<2.55 U	9.88 J	17.9 J	--	<0.971 U	7.78 J	<4.25 U	7.31 J	<1.91 U	<2.21 U	1.35 J	20.5 J	7.87 J	37.9	7.35 J	5.69 J	2.69 J
SMP-01A	SMP-01A-11142012	29	14-Nov-12	<120 U	<1.79 U	<3.28 U	<0.832 U	<4.55 U	<4.51 U	<4.13 U	9.02 J	<3.17 U	<2.67 U	<1.74 U	<1.47 U	--	<1.02 U	<1.11 U	<4.46 U	<1.98 U	<2 U	<2.32 U	<1.42 U	<1.38 U	<1.05 U	<1.77 U	<1.76 U	<1.98 U	<1.27 U
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	<300 U	<1.71 U	12.5 J	<0.794 U	<4.35 U	<4.3 U	5.09 RA,J	149	<3.03 U	<2.55 U	<1.66 U	<1.4 U	--	<0.973 U	<1.06 U	<4.26 U	<1.89 U	<1.91 U	<2.21 U	2.36 J	<1.32 U	7.74 J	<1.69 U	1.68 J	<1.89 U	<1.21 U
SMP-03A	SMP-03-11152012	25	15-Nov-12	730	<1.7 U	11.9 J	<0.789 U	<4.32 U	<4.27 U	21.4 RA	326	4.79 J	<2.54 U	2.14 J	1.59 J	--	<0.967 U	<1.05 U	<4.23 U	<1.88 U	<1.9 U	<2.2 U	2.63 J	<1.31 U	9.54 J	<1.68 U	<1.67 U	<1.88 U	2.07 J
SMP-04A	SMP-04A-11152012	25	15-Nov-12	190000	<7.15 U	44.4 J	<3.32 U	261	61.6 J	<16.5 U	745	<12.7 U	<10.7 U	74.2 J	56.7 J	--	11.8 J	23.4 J	<17.8 U	27.9 J	<8 U	9.33 J	6.67 J	67.3 J	28.9 J	125	37 J	31.8 J	18.3 J
SMP-05A	SMP-05A-11152012	29	15-Nov-12	<120 U	<1.72 U	25.6 J	<0.8 U	<4.38 U	<4.33 U	<3.97 U	2.7 J	<3.05 U	<2.57 U	<1.67 U	<1.41 U	--	<0.98 U	<1.07 U	<4.29 U	<1.91 U	<1.93 U	<2.23 U	<1.36 U	<1.33 U	<1.01 U	<1.71 U	<1.69 U	<1.91 U	<1.22 U
SMP-06	SMP-06-11142012	23	14-Nov-12	110000	<1.76 U	14.2 J	<0.818 U	<4.48 U	<4.43 U	<4.06 U	388	<3.12 U	<2.63 U	<1.71 U	9.43 J	--	<1 U	7.28 J	<4.39 U	466	147	287	67.3	1510	294	1130	392	798	9.46 J
SMP-07A	SMP-07A-11142012	27	14-Nov-12	2300000	<39.3 U	<72.1 U	<18.3 U	318 J	<99 U	<90.7 U	620	553	<58.7 U	<38.1 U	<32.2 U	--	8900	<24.4 U	<97.9 U	7750	435 J	4850	307 J	31400	1470	13300	2950	21400	<27.9 U
SMP-08A	SMP-08A-11142012	27	14-Nov-12	760000	35.8 J	16.9 J	<4.01 U	<21.9 U	<21.7 U	<19.9 U	760	160	<12.9 U	39.2 J	16.7 J	--	<4.91 U	23.7 J	<21.5 U	724	159	435	222	2020	1010	2490	906	1190	20.7 J
SMP-09A	SMP-09A-11152012	25	15-Nov-12	<120 U	1.02 J	2.43 J	<0.322 U	<1.76 U	<1.75 U	<1.6 U	2.83 J	<1.23 U	<1.04 U	<0.672 U	<0.569 U	--	<0.395 U	<0.43 U	<1.73 U	<0.768 U	<0.776 U	<0.897 U	<0.548 U	<0.536 U	0.931 J	<0.687 U	<0.68 U	<0.768 U	<0.492 U
SMP-10A	SMP-10A-11142012	25	14-Nov-12	<120 U	1.11 J	4.59 J	<0.342 U	<1.87 U	<1.86 U	<1.7 U	0.726 J	<1.31 U	<1.1 U	<0.715 U	<0.604 U	--	<0.42 U	<0.457 U	<1.84 U	<0.816 U	<0.824 U	<0.953 U	<0.583 U	<0.569 U	<0.431 U	1.45 J	<0.723 U	<0.816 U	<0.523 U
SMP-11A	SMP-11A-11142012	25	14-Nov-12	<120 U	3.17 J	187	<0.322 U	<1.76 U	<1.74 U	<1.6 U	8.07	<1.23 U	<1.03 U	<0.672 U	<0.568 U	--	<0.394 U	0.782 J	<1.73 U	<0.767 U	<0.775 U	<0.896 U	<0.548 U	<0.535 U	0.429 J	<0.686 U	<0.679 U	<0.767 U	<0.492 U
SVE-01A	SVE-1A-071812	29	18-Jul-12	590000	<5.46 U	49.3 J	<6.3 U	190	<13.8 U	<41 U	480	<9.69 U	<8.16 U	<5.3 U	9.18 J	2.6	<3.11 U	31.4 J	<13.6 U	728	120	63.2 J	21.2 J	942	196	3700	628	2080	10.7 J
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	<550 U	<1.34 U	25.2 J	<10 U	<3.42 U	<3.38 U	4.83 RA,J	225	<2.38 U	<2.01 U	<1.3 U	2.1 J	<2.5 U	<0.765 U	0.895 J	5.07 J	<1.49 U	<22 U	<1.74 U	2.22 J	<1.04 U	15.5	1.89 J	<1.32 U	<1.49 U	<0.954 U
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	2500000	<29.5 U	<54.1 U	<57 U	<75 U	<74.3 U	<68.1 U	513	<52.3 U	<44.1 U	<28.6 U	<24.2 U	<2.5 U	<16.8 U	<18.3 U	<73.5 U	2420	820	766	84.1 J	6950	521	4760	1210	8460	<21 U
SVE-04A	SVE-4-11152012	28	15-Nov-12	49000	3.02 J	34.5 J	1.79 J	21.5 J	<4.39 U	<4.03 U	231	<3.1 U	9.26 J	4.19 J	5.21 J	--	<0.994 U	25.5	<4.35 U	43.9	4.42 J	6.93 J	2.05 J	75.8	9.56 J	153	24.6	36.7	1.92 J
SVE-05A	SVE-5-11142012	30	14-Nov-12	<120 U	2.11 J	<1.33 U	<0.336 U	<1.84 U	<1.82 U	<1.67 U	2.7 J	<1.28 U	<1.08 U	<0.701 U	<0.593 U	--	<0.411 U	1.14 J	<1.8 U	<0.8 U	0.942 J	<0.935 U	0.801 J	1.23 J	1.4 J	1.3 J	<0.709 U	<0.8 U	<0.513 U
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	<120000 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVE-06A	SVE-6-1142012	31.5	14-Nov-12	--	<571 U	<1050 U	<266 U	<1450 U	<1440 U	<1320 U	<341 U	<1010 U	<854 U	<555 U	<469 U	--	<326 U	<354 U	<1420 U	<633 U	<640 U	<740 U	<452 U	<442 U	<334 U	<567 U	<561 U	<633 U	<406 U
SVE-07A	SVE-7-11152012	28	15-Nov-12	<20000 U	<122 U	<224 U	<56.6 U	<310 U	<307 U	<281 U	<72.6 U	<216 U	<182 U	<118 U	<99.9 U	--	<69.4 U	<75.5 U	<304 U	<135 U	<136 U	<158 U	<96.4 U	<94.1 U	<71.3 U	<121 U	<120 U	<135 U	<86.5 U
SVE-07A	SVE-7-11162012	28	16-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All analytical results are presented in micrograms per cubic meter ($\mu g/m^3$).

-- = not analyzed for.

B = estimate value; constituent detected in the sample and the associated method blank. Detected constituent was less than 10 times the method blank value.

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LW = quantitated against gasoline.

RA = results are from a second reanalysis of the sample.

U = constituent was not detected at the reporting limit given.

TABLE D-7
ANALYTICAL DATA INCLUDED IN THE HRA: ON-SITE SOIL GAS
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	2-Methyl-2-butene	2-Methyl-2-pentene	2-Methylheptane	2-Methylnaphthalene	2-Propanol	3-Chloropropene	3-Methyl-1-butene	3-Methylheptane	3-Methylhexane	3-Methylpentane	4-Methyl-1-pentene	Acetaldehyde
PZ-01	PZ-01-11142012	35	14-Nov-12	1.36 J	<1.43 U	<2.01 U	--	2.62 RA,J	<1.32 U	<1.05 U	7.92 J	4.09 J	4.8 J	<1.07 U	86.3 B
PZ-02	PZ-02-11152012	24	15-Nov-12	11.2 J	8.94 J	<1.92 U	--	<1.1 U	<1.26 U	6.7 J	<3.71 U	<1.42 U	<1.24 U	<1.03 U	14.4 B
PZ-03	PZ-03-11152012	22.5	15-Nov-12	79.9	40.8	<1.91 U	--	<1.1 U	<1.26 U	13 J	7.65 J	<1.41 U	2.24 J	<1.02 U	23 B
SMP-01A	SMP-01A-11142012	29	14-Nov-12	<0.97 U	<1.43 U	<2 U	--	<1.15 U	<1.32 U	<1.04 U	<3.87 U	<1.48 U	<1.3 U	<1.07 U	22.7 B
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	4.89 J	<1.37 U	<1.91 U	--	<1.1 U	<1.26 U	2.97 J	<3.7 U	2.05 J	2.06 J	<1.02 U	12 B
SMP-03A	SMP-03-11152012	25	15-Nov-12	21.4	6.36 J	<1.9 U	--	<1.09 U	<1.25 U	8.23 J	<3.67 U	<1.4 U	1.61 J	<1.02 U	15.2 B
SMP-04A	SMP-04A-11152012	25	15-Nov-12	252	372	<8 U	--	<4.6 U	<5.27 U	32 J	24.3 J	<5.92 U	8.91 J	<4.28 U	<10.7 U
SMP-05A	SMP-05A-11152012	29	15-Nov-12	<0.933 U	<1.38 U	<1.92 U	--	<1.11 U	<1.27 U	<1 U	<3.72 U	<1.42 U	<1.25 U	<1.03 U	9.92 J, B
SMP-06	SMP-06-11142012	23	14-Nov-12	110	17.9 J	38.8	--	2.64 RA,J	<1.3 U	16.7	714	149	186	3.12 J	110 B
SMP-07A	SMP-07A-11142012	27	14-Nov-12	154 J	36.9 J	<44 U	--	<25.3 U	<28.9 U	40.5 J	21100	175 J	252 J	<23.5 U	<58.8 U
SMP-08A	SMP-08A-11142012	27	14-Nov-12	236	49.6 J	<9.65 U	--	<5.54 U	7.97 J	45.5 J	676	179	442	8.44 J	129 B
SMP-09A	SMP-09A-11152012	25	15-Nov-12	<0.376 U	<0.555 U	<0.775 U	--	<0.445 U	<0.51 U	0.613 J	<1.5 U	<0.573 U	0.753 J	<0.415 U	11.2 B
SMP-10A	SMP-10A-11142012	25	14-Nov-12	<0.4 U	<0.59 U	<0.824 U	--	0.868 RA,J	<0.543 U	<0.43 U	<1.59 U	2.89 J	<0.534 U	<0.441 U	18.8 B
SMP-11A	SMP-11A-11142012	25	14-Nov-12	0.554 J	<0.554 U	<0.774 U	--	0.739 RA,J	<0.51 U	0.913 J	<1.5 U	<0.573 U	<0.502 U	<0.414 U	12.6 B
SVE-01A	SVE-1A-071812	29	18-Jul-12	96.8	81	52.1 J	4.3	5.07 RA,J	<4.02 U	28.2 J	<11.8 U	92.8	74.1	4.31 J	18.2 J
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	90.8	7.18 J	<1.5 U	<2.5 U	2.19 RA,J	<59 U	7.11 J	<2.91 U	<1.11 U	1.42 J	<0.804 U	24.7
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	58.6 J	37.9 J	<33 U	<2.5 U	<250 U	<320 U	19.9 J	<63.8 U	57 J	158 J	<17.7 U	<44.1 U
SVE-04A	SVE-4-11152012	28	15-Nov-12	37.4	25	<1.95 U	--	<10 U	<13 U	16.1	69.3	2.54 J	2.81 J	6.19 J	8.57 J, B
SVE-05A	SVE-5-11142012	30	14-Nov-12	0.842 J	<0.578 U	<0.808 U	--	1.19 RA,J	<0.532 U	<0.421 U	<1.56 U	0.764 J	2.05 J	<0.432 U	97.6 B
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--
SVE-06A	SVE-6-1142012	31.5	14-Nov-12	<310 U	<457 U	<639 U	--	<367 U	<421 U	<333 U	<1240 U	<473 U	<414 U	<342 U	<855 U
SVE-07A	SVE-7-11152012	28	15-Nov-12	<66.1 U	<97.5 U	<136 U	--	<78.3 U	<89.7 U	<71 U	<264 U	<101 U	<88.3 U	<72.9 U	<182 U
SVE-07A	SVE-7-11162012	28	16-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--

LocationID	SampleID	Acetonitrile	Acetylene	Benzaldehyde	Butane	Butyraldehyde	C5-C6 Aliphatic Hydrocarbons (ref_ to Pentane + Hexane)	Carbon Disulfide	Carbon Tetrachloride	Chlorodifluoromethane (Freon 22)	Chloromethane	cis/trans-4-Methyl-2-pentene	cis-2-Butene	cis-2-Octene	cis-2-Pentene
PZ-01	PZ-01-11142012	1.36 J	4.32 J	3.15 J	4.9 J	15.6 J	<68 U	<4.55 U	85.4	3.47 J	19.1	<2.99 U	1.01 J	<1.95 U	<1.14 U
PZ-02	PZ-02-11152012	<0.786 U	2.47 J	<1.92 U	56.9	<4.17 U	<160 U	<4.36 U	<2.59 U	<2.71 U	1.03 J	6.05 J	5.94 J	<1.87 U	<1.09 U
PZ-03	PZ-03-11152012	<0.78 U	2.11 J	<1.91 U	58.8	<4.14 U	420	18.2	<2.57 U	<2.69 U	18.5	<2.84 U	23.5	<1.86 U	2.33 J
SMP-01A	SMP-01A-11142012	<0.819 U	<0.874 U	<2 U	4.24 J	<4.34 U	<69 U	<4.54 U	<2.7 U	<2.82 U	<0.72 U	<2.98 U	<0.938 U	<1.95 U	<1.14 U
SMP-02A	SMP-02A-11152012	<0.782 U	<0.835 U	<1.91 U	30.3	<4.15 U	<160 U	<4.34 U	<2.57 U	<2.7 U	0.695 J	4.4 J	2.08 J	<1.86 U	<1.09 U
SMP-03A	SMP-03-11152012	<0.777 U	2.16 J	<1.9 U	71.9	<4.12 U	<220 U	<4.31 U	<2.56 U	<2.68 U	0.826 J	5.57 J	6.61 J	<1.85 U	<1.08 U
SMP-04A	SMP-04A-11152012	<3.27 U	<3.5 U	<8 U	103	<17.4 U	1500	59.6 J	<10.8 U	<11.3 U	14.4 J	<11.9 U	43.4 J	<7.79 U	5.36 J
SMP-05A	SMP-05A-11152012	<0.787 U	<0.841 U	<1.92 U	5.91 J	<4.18 U	<66 U	<4.37 U	<2.59 U	<2.71 U	1.93 J	<2.87 U	<0.902 U	<1.87 U	<1.09 U
SMP-06	SMP-06-11142012	<0.806 U	1.31 J	<1.97 U	83.3	<4.27 U	1400	4.63 J	<2.65 U	8.99 J	5.84 J	19.4 J	37.5	<1.92 U	6.39 J
SMP-07A	SMP-07A-11142012	<18 U	<19.2 U	<43.9 U	233 J	<95.4 U	4700	<99.7 U	<59.2 U	<62 U	<15.8 U	<65.5 U	72.5 J	<42.8 U	<25 U
SMP-08A	SMP-08A-11142012	<3.95 U	<4.21 U	<9.64 U	228	<20.9 U	4400	21.9 J	<13 U	<13.6 U	<3.47 U	46.5 J	74.8	<9.39 U	17.4 J
SMP-09A	SMP-09A-11152012	<0.317 U	1.07 J	<0.775 U	61.6	3.03 J	<68 U	<1.76 U	<1.04 U	1.61 J	0.323 J	<1.15 U	<0.363 U	<0.755 U	<0.441 U
SMP-10A	SMP-10A-11142012	<0.337 U	<0.36 U	1.55 J	1.93 J	3.4 J	<70 U	<1.87 U	25.9	1.8 J	0.378 J	<1.23 U	<0.386 U	<0.802 U	<0.468 U
SMP-11A	SMP-11A-11142012	<0.317 U	0.71 J	<0.774 U	10.6	1.84 J	<69 U	<1.76 U	4.41 J	1.7 J	2.14 J	<1.15 U	0.749 J	<0.754 U	<0.44 U
SVE-01A	SVE-1A-071812	10.7 J	<2.67 U	<6.11 U	83.3	<13.3 U	1900	1600	<8.23 U	<8.62 U	6.88 J	13.9 J	40.7	<5.95 U	5.23 J
SVE-02A	SVE-2A-071812	<0.615 U	<0.656 U	1.95 J	44.1	<3.26 U	<310 U	26.8	2.41 J	<2.12 U	5.39 J	8.75 J	3.96 J	<1.46 U	0.913 J
SVE-03A	SVE-3A-071812	<13.5 U	<14.4 U	<33 U	110 J	<71.6 U	3200	<80 U	<44.4 U	<46.5 U	46.3 J	<49.1 U	38 J	<32.1 U	<18.8 U
SVE-04A	SVE-4-11152012	<0.799 U	5.13 J	<1.95 U	31.5	<4.24 U	350	56	<6.4 U	3.33 J	70.9	<2.91 U	23.5	<1.9 U	2.84 J
SVE-05A	SVE-5-11142012	1.04 J	3.23	3.4 J	15	3.05 J	<70 U	1.84 J	1.82 J	3.11 J	0.888 J	<1.2 U	0.415 J	1.91 J	<0.459 U
SVE-06A	SVE-6-11142012	--	--	--	--	--	<68000 U	--	--	--	--	--	--	--	--
SVE-06A	SVE-6-1142012	<262 U	<279 U	<639 U	<285 U	<1390 U	--	<1450 U	<861 U	<902 U	<230 U	<952 U	<300 U	<622 U	<363 U
SVE-07A	SVE-7-11152012	<55.8 U	<59.5 U	<136 U	<60.8 U	<296 U	<11000 U	<309 U	<184 U	<192 U	<49 U	<203 U	<63.9 U	<133 U	<77.5 U
SVE-07A	SVE-7-11162012	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All analytical results are presented in micrograms per cubic meter ($\mu g/m^3$).
-- = not analyzed for.
B = estimate value; constituent detected in the sample and the associated method blank. Detected constituent was less than 10 times the method blank value.
bgs = below ground surface.
cn = result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.
J = result is less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL) and the concentration is an approximated value.
LW = quantitated against gasoline.
RA = results are from a second reanalysis of the sample.
U = constituent was not detected at the reporting limit given.

TABLE D-7
ANALYTICAL DATA INCLUDED IN THE HRA: ON-SITE SOIL GAS
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	cis-3-Heptene	cis-3-Hexene	cis-3-Methyl-2-pentene	Cyclohexane	Cyclohexanone	Cyclohexene	Cyclopentane	Cyclopentene	Dichlorodifluoromethane (Freon 12)	Dichlorofluoromethane	Ethane	Ethanol	Ethene	GRO (C5-C10)	Hexanal	Indan	Isobutane	Isobutylbenzene	Isoheptane	Isohexane	Isopentane	Isoprene	Limonene	Methanol	Methylcyclohexane
PZ-01	PZ-01-11142012	35	14-Nov-12	<0.721 U	<1.51 U	<1.46 U	1.68 J	--	<0.66 U	<0.985 U	<0.937 U	9.13 J	<1.81 U	20.8	8.04 RA,J	3.76 J	<3300 U	<2.73 U	<2.14 U	4.86 J	<2.43 U	3.31 J	5.05 J	7.31 J	<1.01 U	<4.46 U	26.1 RA,B	<1.72 U
PZ-02	PZ-02-11152012	24	15-Nov-12	<0.69 U	<1.44 U	4.5 J	1.95 J	--	<0.632 U	1.68 J	<0.897 U	3.26 J	<1.73 U	209	<2.69 U	90.3	4500 J LW	<2.61 U	<2.05 U	40.8	<2.32 U	<1.68 U	<1.13 U	31.5	1.11 J	<4.27 U	3.72 RA,J,B	<1.65 U
PZ-03	PZ-03-11152012	22.5	15-Nov-12	<0.685 U	<1.43 U	2.73 J	1.41 J	--	0.906 J	1.35 J	5.18 J	3.58 J	1.78 J	173	<2.67 U	107	<3300 U	<2.59 U	<2.03 U	80.8	<2.31 U	<1.67 U	2.98 J	38.5	<0.962 U	<4.24 U	<2.11 U	<1.64 U
SMP-01A	SMP-01A-11142012	29	14-Nov-12	<0.719 U	<1.5 U	2.31 J	<1.08 U	--	<0.659 U	<0.983 U	<0.935 U	3.44 J	<1.8 U	99.4	<2.81 U	8.75	<3300 U	3.44 J	<2.13 U	15.6	<2.42 U	<1.76 U	<1.18 U	3.28 J	<1.01 U	<4.45 U	5.88 RA,J,B	<1.72 U
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	<0.687 U	<1.44 U	<1.4 U	5.7 J	--	<0.629 U	1.87 J	<0.893 U	3.29 J	<1.72 U	87.8	<2.68 U	18.5	3700 J LW	<2.6 U	<2.04 U	46.9	<2.31 U	2.72 J	2.97 J	56.9	<0.964 U	<4.25 U	4.31 RA,J,B	<1.64 U
SMP-03A	SMP-03-11152012	25	15-Nov-12	<0.682 U	<1.43 U	2.11 J	6.26 J	--	<0.625 U	3.16 J	<0.887 U	4.36 J	<1.71 U	246	<2.66 U	96.3	7000 J LW	<2.58 U	<2.02 U	65.9	<2.3 U	1.71 J	2.73 J	90.6	0.992 J	<4.22 U	5.95 RA,J,B	<1.63 U
SMP-04A	SMP-04A-11152012	25	15-Nov-12	<2.87 U	<6.01 U	10.7 J	6.08 J	--	2.91 J	<3.93 U	7.17 J	<8.39 U	<7.21 U	284 B	<11.2 U	384	180000 LW cn	<10.9 U	<8.53 U	82.6	65.1 J	<7.02 U	15.1 J	182	4.21 J	<17.8 U	<8.85 U	<6.88 U
SMP-05A	SMP-05A-11152012	29	15-Nov-12	<0.692 U	<1.45 U	<1.41 U	<1.04 U	--	<0.633 U	<0.945 U	<0.9 U	3.08 J	<1.73 U	21.2	<2.7 U	0.774 J	<3300 U	<2.62 U	<2.05 U	20.7	<2.33 U	<1.69 U	<1.13 U	2.81 J	<0.971 U	<4.28 U	4.45 RA,J,B	<1.66 U
SMP-06	SMP-06-11142012	23	14-Nov-12	<0.707 U	2.9 J	7.47 J	39	--	5.68 J	17.4	9.96 J	3.61 J	4.96 J	235	7.57 RA,J	29.3	150000 LW cn	<2.68 U	<2.1 U	61.1	<2.38 U	108	228	249	9.12 J	<4.37 U	71.1 RA,B	45.9
SMP-07A	SMP-07A-11142012	27	14-Nov-12	<15.8 U	<33 U	<32.1 U	195 J	--	<14.5 U	<21.6 U	<20.5 U	<46.1 U	<39.6 U	881 B	<61.7 U	285	3500000 LW cn	<59.8 U	240 J	141 J	581 J	<38.6 U	164 J	829	<22.2 U	<97.6 U	<48.6 U	441 J
SMP-08A	SMP-08A-11142012	27	14-Nov-12	29.1 J	<7.25 U	15.2 J	91.8 J	--	<3.18 U	39.3 J	15.2 J	<10.1 U	<8.7 U	658 B	<13.5 U	204	630000 LW cn	<13.1 U	<10.3 U	143	<11.7 U	117	505	890	10.4 J	<21.4 U	27.6 RA,J,B	55.5 J
SMP-09A	SMP-09A-11152012	25	15-Nov-12	<0.279 U	<0.583 U	<0.566 U	<0.418 U	--	<0.255 U	<0.381 U	<0.362 U	2.68 J	<0.699 U	418 RA,B	2.07 RA,J	9.88	<3300 U	2.72 J	<0.826 U	106	<0.938 U	<0.68 U	0.785 J	24.9	<0.391 U	<1.72 U	3.37 RA,B	<0.667 U
SMP-10A	SMP-10A-11142012	25	14-Nov-12	<0.296 U	<0.62 U	<0.602 U	1.11 J	--	<0.271 U	<0.405 U	<0.385 U	3.57 J	<0.743 U	42.9	4.22 RA,J	0.887 J	<3300 U	6.18 J	<0.878 U	4.16 J	<0.997 U	3.22 J	<0.485 U	1.22 J	<0.416 U	<1.83 U	6.78 RA,B	<0.709 U
SMP-11A	SMP-11A-11142012	25	14-Nov-12	<0.278 U	<0.582 U	<0.566 U	<0.418 U	--	<0.255 U	2.14 J	<0.362 U	4.5 J	<0.698 U	28.8	3.67 RA,J	16	5700 J LW	1.92 J	<0.825 U	7.47	<0.937 U	<0.679 U	0.902 J	6.01 J	<0.391 U	<1.72 U	4.75 RA,B	<0.666 U
SVE-01A	SVE-1A-071812	29	18-Jul-12	<2.19 U	<4.59 U	6.53 J	420	--	9.27 J	<3 U	4.96 J	<6.41 U	<5.51 U	205	60	533	300000 LW	<8.31 U	23.3 J	40.5 J	77.4 J	21.7 J	34.7 J	145	<3.08 U	<13.6 U	11.1 RA,J	698
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	<0.54 U	<1.13 U	2.48 J	14.1 J	--	0.888 J	3.12 J	0.803 J	3.72 J	<1.35 U	91	57	60.3	8500 J LW cn	14.1 J	<1.6 U	31	<1.82 U	<1.32 U	<0.885 U	30.2	<0.758 U	8.32 J	8.11 RA	<1.29 U
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	<11.9 U	<24.8 U	<24.1 U	390	--	<10.9 U	<16.2 U	<15.4 U	<34.6 U	<29.7 U	452	<46.3 U	416	1300000 LW	<44.9 U	<35.2 U	57.9 J	51.2 J	<29 U	60.1 J	174 J	<16.6 U	<73.3 U	91.4 RA,J	156 J
SVE-04A	SVE-4-11152012	28	15-Nov-12	<0.701 U	<1.47 U	<1.43 U	3.33 J	--	3.38 J	1.04 J	6.23 J	3.16 J	<1.76 U	98.9	7.9	307	55000 LW cn	<2.65 U	15.1 J	14.2	<2.36 U	<1.71 U	5.08 J	21.4	2.02 J	<4.34 U	5.01 RA,J,B	4.99 J
SVE-05A	SVE-5-11142012	30	14-Nov-12	<0.29 U	<0.607 U	<0.59 U	1.16 J	--	<0.266 U	0.615 J	<0.378 U	2.48 J	<0.728 U	22	6.32 RA	9.15	<3300 U	4.78 J	<0.861 U	4.96 J	<0.978 U	<0.709 U	2.56 J	21.5	0.451 J	<1.8 U	55 RA,B	<0.695 U
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	1200000 LW cn	--	--	--	--	--	--	--	--	--	--	--
SVE-06A	SVE-6-1142012	31.5	14-Nov-12	<230 U	<481 U	<467 U	<345 U	--	<210 U	<314 U	<299 U	<671 U	<576 U	<159 U	<897 U	<189 U	--	<870 U	<681 U	<330 U	<774 U	<561 U	<377 U	<755 U	<322 U	<1420 U	<707 U	<550 U
SVE-07A	SVE-7-11152012	28	15-Nov-12	<49 U	<102 U	<99.5 U	<73.5 U	--	<44.9 U	<66.9 U	<63.7 U	<143 U	<123 U	44.5 J, B	<191 U	<40.2 U	--	<185 U	<145 U	<70.4 U	<165 U	<120 U	<80.3 U	<161 U	<68.7 U	<303 U	<151 U	<117 U
SVE-07A	SVE-7-11162012	28	16-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	110000 LW cn	--	--	--	--	--	--	--	--	--	--	--

Notes:

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TABLE D-7
ANALYTICAL DATA INCLUDED IN THE HRA: ON-SITE SOIL GAS
VOLATILE ORGANIC COMPOUNDS
Phibro-Tech, Inc.
Santa Fe, California

LocationID	SampleID	Depth (feet bgs)	Sample Date	Methylcyclopentane	n-Butanol	n-Decane	Neopentane	n-Heptane	n-Hexane	n-Nonane	n-Pentane	n-Undecane	Propane	Propene	Propylbenzene	Styrene	Tetrachloroethene	Tetrahydrofuran	Toluene	TPH (Diesel Range C10-C24)	trans-1,2-Dichloroethene	trans-2-Butene	trans-2-Hexene	trans-2-Pentene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl Acetate	Vinyl Chloride	Xylenes
PZ-01	PZ-01-11142012	35	14-Nov-12	3.39 J	<4.38 U	<2.5 U	<1.33 U	<1.21 U	4.85 J	<2.25 U	3.24 J	<1.46 U	18	7.4 J	<2.13 U	<1.83 U	2000	--	27.2	--	6.31 J	1.04 J	<1.11 U	<1.49 U	1020	11.3 J	<6.41 U	<1.03 U	2.95 J
PZ-02	PZ-02-11152012	24	15-Nov-12	<1.05 U	<4.19 U	<2.39 U	3.49 J	<1.16 U	<1.31 U	<2.16 U	9.16 J	<1.4 U	192	92.3	<2.04 U	<1.75 U	434	--	<1.55 U	--	214	9.88 J	<1.06 U	1.53 J	6220 RA	2.33 J	<6.14 U	5.93 J	<2.65 U
PZ-03	PZ-03-11152012	22.5	15-Nov-12	1.14 J	<4.16 U	43.8	1.53 J	<1.15 U	1.37 J	<2.14 U	7.74 J	26.4 J	164	274	<2.03 U	<1.74 U	205	--	1.66 J	--	16.9 J	30.4	<1.06 U	4.28 J	520	9.37 J	<6.09 U	1.99 J	<2.63 U
SMP-01A	SMP-01A-11142012	29	14-Nov-12	<1.09 U	<4.37 U	<2.49 U	4.18 J	<1.21 U	<1.37 U	<2.25 U	<1.26 U	<1.46 U	51.8	2.03 J	<2.13 U	<1.83 U	372	--	2.26 J	--	28	<0.894 U	<1.11 U	<1.49 U	2110 RA	2.61 J	<6.4 U	<1.03 U	<2.76 U
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	3.7 J	<4.17 U	<2.38 U	1.78 J	<1.16 U	6.1 J	<2.15 U	5.31 J	<1.39 U	150	36.3	<2.03 U	<1.74 U	805	--	17.5 J	--	55.8	3.4 J	<1.06 U	<1.42 U	7100 RA	2.6 J	<6.11 U	2.1 J	<2.64 U
SMP-03A	SMP-03-11152012	25	15-Nov-12	2.96 J	<4.14 U	<2.37 U	2.92 J	<1.15 U	4.62 J	<2.13 U	11.1 J	<1.38 U	255	113	<2.02 U	<1.73 U	1180	--	11.6 J	--	298	12 J	<1.05 U	<1.41 U	13700 RA	3.22 J	<6.07 U	7.02 J	<2.62 U
SMP-04A	SMP-04A-11152012	25	15-Nov-12	4.89 J	<17.5 U	<9.97 U	<5.3 U	<4.84 U	7.61 J	<8.99 U	30 J	<5.82 U	243	675	<8.51 U	<7.3 U	162	--	<6.46 U	--	20.9 J	52.8 J	<4.43 U	9.03 J	382	10.6 J	<25.6 U	20.9 J	<11 U
SMP-05A	SMP-05A-11152012	29	15-Nov-12	<1.05 U	<4.2 U	<2.4 U	<1.28 U	<1.17 U	<1.31 U	<2.16 U	<1.22 U	<1.4 U	40.7	1.92 J	<2.05 U	<1.76 U	151	--	<1.55 U	--	10.2 J	<0.86 U	<1.07 U	<1.43 U	1110 RA	2.59 J	<6.15 U	<0.99 U	<2.66 U
SMP-06	SMP-06-11142012	23	14-Nov-12	75.7	4.52 RA,J	252	<1.31 U	43.8	88.2	<2.21 U	84.1	<1.43 U	252	325	<2.09 U	<1.8 U	47	--	71.1	--	<3.23 U	39.3	2.99 J	13.1 J	7.56 J	3.75 J	<6.29 U	1.45 J	<2.72 U
SMP-07A	SMP-07A-11142012	27	14-Nov-12	47.2 J	<95.9 U	<54.8 U	<29.1 U	<26.6 U	35.8 J	1560	131 J	<32 U	471	805	2080	<40.1 U	182 J	--	108 J	--	<72.2 U	78.6 J	<24.4 U	<32.7 U	76 J	<52.4 U	<140 U	<22.6 U	<60.7 U
SMP-08A	SMP-08A-11142012	27	14-Nov-12	141	<21.1 U	<12 U	<6.4 U	44.2 J	139	<10.8 U	241	<7.02 U	508	739	<10.3 U	<8.8 U	342	--	35.7 J	--	<15.8 U	91.5	6.81 J	34.2 J	40.9 J	<11.5 U	<30.8 U	8.11 J	<13.3 U
SMP-09A	SMP-09A-11152012	25	15-Nov-12	<0.423 U	<1.69 U	<0.966 U	0.891 J	<0.469 U	<0.529 U	<0.871 U	2.6 J	<0.564 U	387 RA	2.23 J	<0.824 U	<0.707 U	62.3	--	<0.626 U	--	<1.27 U	<0.346 U	<0.43 U	<0.576 U	306	1.8 J	<2.48 U	<0.399 U	<1.07 U
SMP-10A	SMP-10A-11142012	25	14-Nov-12	1.29 J	2.46 RA,J	2.14 J	<0.546 U	0.594 J	0.96 J	1.95 J	0.684 J	5.91 J	17.7	<0.307 U	<0.876 U	<0.752 U	249	--	262	--	3.68 J	<0.368 U	<0.457 U	<0.612 U	154	3.23 J	<2.63 U	<0.424 U	4.14 J
SMP-11A	SMP-11A-11142012	25	14-Nov-12	<0.422 U	<1.69 U	<0.965 U	<0.513 U	<0.469 U	0.646 J	<0.87 U	3.41 J	<0.564 U	35	24.8	<0.823 U	<0.706 U	412	--	1.65 J	--	<1.27 U	1.39 J	<0.429 U	<0.575 U	110	39.2	<2.48 U	<0.398 U	4.76 J
SVE-01A	SVE-1A-071812	29	18-Jul-12	34.4 J	<13.3 U	903	<4.05 U	15.5 J	9.82 J	29.9 J	27.2 J	84.2 J	191	991	68	<5.57 U	420	2000	24	90000	68	68.9	<3.38 U	10.6 J	3600	8.57 J	<19.5 U	94.5	44.9 J
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	1.76 J	7.37 RA,J	<1.87 U	1.13 J	<19 U	<17 U	<1.69 U	6.7 J	24.4 J	130	91.4	<23 U	<20 U	390	220	2.65 J	5500	51.7	12	<0.832 U	1.58 J	9560 RA	3.02 J	<4.8 U	8.96 J	<2.07 U
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	32 J	<72 U	393 J	<21.9 U	<20 U	<91 U	186 J	35.7 J	74.9 J	219	435	150	<30.1 U	<47.9 U	21000	<97 U	120000	<54.2 U	33.1 J	<18.3 U	<24.5 U	40.7 J	<39.3 U	<105 U	<66 U	<45.6 U
SVE-04A	SVE-4-11152012	28	15-Nov-12	1.84 J	<4.26 U	<2.43 U	<1.29 U	<4.2 U	5.1	<2.19 U	9.81 J	<1.42 U	109	506	<5 U	2.38 J	80	36	7.52 J	--	4.2	27.1	<1.08 U	5.46 J	74	9.1 J	<6.24 U	<2.6 U	5.7 J
SVE-05A	SVE-5-11142012	30	14-Nov-12	1.39 J	2.85 RA,J	<1.01 U	<0.536 U	<0.489 U	0.764 J	<0.908 U	10.7	0.969 J	23.9	3.98 J	<0.859 U	<0.737 U	16.7	--	16.7	--	<1.33 U	0.503 J	<0.448 U	0.658 J	69.3	2.37 J	3.3 J	<0.416 U	<1.12 U
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVE-06A	SVE-6-1142012	31.5	14-Nov-12	<349 U	<1400 U	<797 U	<424 U	<387 U	<436 U	<718 U	<404 U	<465 U	<238 U	<238 U	<680 U	<583 U	<929 U	--	<516 U	--	<1050 U	<286 U	<354 U	<475 U	<736 U	<762 U	<2040 U	<329 U	<883 U
SVE-07A	SVE-7-11152012	28	15-Nov-12	<74.3 U	<297 U	<170 U	<90.3 U	<82.5 U	<93 U	<153 U	<86.1 U	<99.2 U	<50.8 U	<50.8 U	<145 U	<124 U	<198 U	--	<110 U	--	<224 U	<60.9 U	<75.5 U	<101 U	<157 U	<162 U	<436 U	<70.1 U	<188 U
SVE-07A	SVE-7-11162012	28	16-Nov-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

All analytical results are presented in micrograms per cubic meter (µg/m^3).
-- = not analyzed for.
B = estimate value; constituent detected in the sample and the associated method blank. Detected constituent was less than 10 times the method blank value.
bgs = below ground surface.
cn = The result is due to individual peaks in the chromatogram and is not typical of a fuel pattern.
J = result is less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL) and the concentration is an approximated value.
LW = quantitated against gasoline.
RA = results are from a second reanalysis of the sample.
U = constituent was not detected at the reporting limit given.

APPENDIX E

DETERMINATION OF AMBIENT ARSENIC CONCENTRATIONS

APPENDIX E
DETERMINATION OF AMBIENT ARSENIC CONCENTRATIONS

E.1 Introduction

As indicated in the human health risk assessment (HHRA) for the Phibro-Tech, Inc. (PTI) Facility (the "Site"), California Environmental Protection Agency (Cal/EPA) guidance calls for the exclusion of inorganic chemicals from the quantitative risk assessment if they are detected at levels within the local background/ambient concentrations. As ambient soil concentrations of arsenic commonly exceed concentrations corresponding to an incremental cancer risk of 10^{-6} under typical HHRA exposure scenarios (e.g., residential, commercial/industrial), a more detailed Site-wide determination of ambient levels for arsenic was conducted. The Site-wide ambient determination for arsenic was conducted following the approach put forth by the Cal/EPA (1997, 2009) to determine whether arsenic in Site soils should be considered a chemical of potential concern (COPC) in the HHRA. The approach and conclusions of the evaluation are summarized below.

E.2 Evaluation of Arsenic

The approach set forth by Cal/EPA (1997, 2009) evaluates whether the data distributions reflect single normal or lognormal populations, or contain multiple populations that would indicate contamination in addition to ambient levels. Cal/EPA recommends a "weight-of-evidence" approach where three indicators of local background/ambient exceedance are considered. The three indicators include: (1) the degree to which the site data distributions are fit by a normal or lognormal distribution; (2) a graphical assessment (probability plot against the normal or lognormal distribution) to identify breaks or nonlinearity indicative of more than a single population; and (3) the skewness of the data as indicated by the coefficient of variation (CV = standard deviation/average) and the data range (order of magnitude difference between the maximum and minimum concentrations). The arsenic dataset used herein for the ambient determination includes all arsenic data from samples that were collected from onsite as well as offsite sampling locations (i.e., five background samples from the vicinity of the Site), with the exception of 11 non-detect (ND) arsenic results. These ND data were excluded as the detection limits for most of the NDs were high and overall, the number of NDs is a small portion of the arsenic dataset. This arsenic dataset is summarized in Table E-1.

The USEPA's ProUCL software, version 4.1.01 (USEPA, 2011a) was used to conduct all statistical tests and graphical assessments of the data, including testing the data for goodness-of-fit to a normal or lognormal distribution, producing probability plots, and testing the data for statistical outliers.

E.*2.1 Data Distributions*

The arsenic dataset was tested for goodness-of-fit to a single normal or lognormal distribution using the goodness-of-fit test function in ProUCL. This function invokes the Lilliefors test for normality and lognormality, as well as the Anderson-Darling test and Kolmogorov-Smirnov test for gamma data distribution (USEPA, 2011b). The test function was performed on the raw dataset as well as the dataset log-transformed as recommended by Cal/EPA guidance (1997). The results of the goodness-of-fit tests are provided as ProUCL output in Exhibit A. As presented, the data distribution test results suggest the arsenic dataset is lognormally distributed at a prescribed 95% level of confidence.

E.*2.2 Graphical Assessment*

A visual review of the cumulative probability plots for arsenic (both on the raw and log-transformed datasets; presented in Exhibit B) indicates a generally smooth line for the data with one inflection point on the cumulative probability plot for the raw dataset and on the log-transformed dataset. On the raw dataset cumulative probability plot, there appears to be an inflection point in the distribution at the soil concentration of approximately 23 milligrams per kilogram (mg/kg). On the log-transformed dataset cumulative probability plot, there appears to be an inflection point in the distribution at a soil concentration of approximately 1.55 mg/kg (i.e., 35 mg/kg, respectively, in non-transformed scale). These multiple data populations could consist of the following: a population representative of naturally occurring background concentrations (i.e., those closest to the origin, below the inflection point); and a small population above naturally occurring background concentrations representative of anthropogenic concentrations unrelated to Site operations and/or contamination from Site operations (i.e., above the inflection point). In addition, the box plots for the raw and log-transformed datasets indicate potential outliers at soil concentrations above approximately 23 mg/kg and 1.65 mg/kg (i.e., 45 mg/kg in non-transformed scale). The box plots are presented in Exhibit C. A statistical test designed to identify outliers at a prescribed level of confidence (the Rosner outlier test) was then conducted with the raw and log-transformed datasets. Potential outliers were identified at 1% and 5% significance levels at and above 31 mg/kg in the raw dataset; no outliers were detected at the 1% or 5% significance levels in the log-transformed dataset (Exhibit D). The visual evidence of the cumulative probability plots along with the results of the outlier test support that the arsenic dataset is comprised of more than one population (i.e., ambient populations and possible other populations that may be representative of contamination).

E.*2.3 Summary Statistics*

As indicated in Table E-2, the arsenic dataset consists of 134 samples ranging in concentration of 2.0 mg/kg up to 72 mg/kg, with a mean of 10 mg/kg.

Typically, data drawn from just one population will display a range of detected values of no more than two orders of magnitude and a coefficient of variation no greater than one

(Cal/EPA, 1997). As shown in Table E-2, the detected values in the arsenic dataset span 1.6 orders of magnitude with a coefficient of variation of 0.92, approximating the criteria suggestive of multiple data populations.

E.*2.4 Conclusions of the Evaluation of Arsenic*

Although the arsenic dataset tested to fit a lognormal distribution, based on the results of the graphical assessment and the summary statistics presented above, arsenic is considered to be present at the Site at concentrations above ambient levels and is therefore considered a COPC in the HHRA. An ambient-based target concentration (ABTC) for arsenic was subsequently developed for the Site as described in Section E.3 below.

E.3 Development of Arsenic Ambient-Based Target Concentration

An ABTC for arsenic was developed per Cal/EPA guidance (2009). The Cal/EPA-recommended approach involves the statistical approximation of an upper limit concentration from the site-specific data following the removal of identified outliers. As discussed in Section E.2.2 above, box plots of the raw and log-transformed arsenic data and the results of the Rosner outlier test on the data indicate the presence of potential outliers at 23 mg/kg or above. Both the raw and log-transformed datasets were additionally evaluated for outliers using the approach discussed below to provide further information necessary to make an informed determination of the representative upper limit of ambient arsenic concentrations.

As per the Cal/EPA guidance (2009), the arsenic data were analyzed for values that do not conform to the pattern established by the majority of values in the dataset (i.e., outliers). The fourth spread (f_s) is a measure of spread in a dataset that is resistant to outliers and is calculated as follows:

$$f_s = Q_3 – Q_1 \qquad \text{(Eq. E-1)}$$

As presented in Table E-2, the f_s (i.e., third quartile [Q_3] minus the first quartile [Q_1]) for the raw and log-transformed arsenic datasets are 7.2 and 0.4, respectively.

Any observation farther than $1.5f_s$ from the closest fourth is considered an outlier (Cal/EPA, 2009); thus any observations below the lower quartile limit (LQL; Q1 – 1.5 f_s) and above the upper quartile limit (UQL; Q3 + $1.5f_s$) would be considered an outlier. As presented in Table E-2, the LQL and UQL for the raw arsenic dataset are -6.0 and 23, respectively. For the log-transformed arsenic dataset, the LQL and UQL are 0.084 and 1.7, respectively (i.e., 1.2 mg/kg and 47 mg/kg, in non-transformed scale, respectively). Thus, potential outliers are any observations greater than the UQLs of the raw and log-transformed arsenic datasets of 23 mg/kg and 1.7 mg/kg (i.e., 47 mg/kg in non-transformed scale), respectively. No values were observed below the LQL of either the raw arsenic dataset or the log-transformed arsenic datasets.

The results of the fourth spread analyses are consistent with the box plots (as shown on Exhibit C) which provide a pictorial summary of the most prominent features of a dataset, including: 1) center; 2) spread; 3) extent and nature of any departure from symmetry; and 4) identification of any outliers or observations that lie unusually far from the main body of data (Cal/EPA, 2009). Potential outliers are identified in the box plots above the estimated UQLs, approximately 23 mg/kg in the plot of the raw dataset and 1.65 mg/kg in the plot of the log-transformed dataset (i.e., 45 mg/kg in non-transformed scale). Further, the UQLs are consistent with the approximate concentrations at which there appear to be apparent inflection points in the cumulative percent plot lines for the dataset (as shown in Exhibit B) indicating the presence of two distinct populations (i.e., ambient and potential contamination). For the raw dataset, the results of the fourth spread analysis approximate the results of the Rosner outlier test; outliers identified using the Rosner test for the raw arsenic dataset are 31 mg/kg or higher (no outliers using the Rosner test were identified for the log-transformed arsenic dataset).

Based on the fourth spread analyses, eight data points with arsenic concentrations ranging from 23 mg/kg up to 72 mg/kg were determined to be outliers in the raw arsenic dataset. The remaining 126 data points with arsenic concentrations ranging from 2.0 mg/kg up to 22 mg/kg appear to be representative of ambient levels. In the log-transformed dataset, two data points with arsenic concentration of 58 mg/kg and 72 mg/kg were determined to be outliers based on the fourth spread analyses. The remaining 132 data points with arsenic concentrations ranging from 2 mg/kg up to 44 mg/kg also appear to be representative of ambient levels.

Per Cal/EPA guidance (2009), for datasets of small sample size, the 98^{th} percentile of an adjusted dataset (i.e., a dataset excluding outliers) may be used as an approximate upper-bound concentration. As indicated in Table E-3, the 98^{th} percentile of the raw and log-transformed arsenic datasets with outliers removed is 19 mg/kg and 1.4 mg/kg (i.e., 28 mg/kg in non-transformed scale).

Based on these results, the lower value of 19 mg/kg is proposed as the ABTC for arsenic and is considered conservative and appropriate for the Site. Results of the visual graphs (cumulative probability plots and box plots) are less conservative, but support use of 19 mg/kg as the ABTC. Arsenic concentrations below the ABTC are considered to be representative of ambient arsenic concentrations.

E.4 Additional Considerations for the Development of an Ambient-Based Target Concentration for Arsenic

The ABTC of 19 mg/kg is within the range of the southern California regional background arsenic dataset used by DTSC for establishing a background arsenic concentration of 12 mg/kg for evaluating arsenic as a COPC for southern California school sites (Cal/EPA, 2008). The 12 mg/kg target number represents an upper-bound arsenic background/ambient concentration based on data collected from Preliminary Environmental Assessment (PEA) reports from 19 school sites from five counties in southern California (Los Angeles, Orange, Riverside, San Bernardino, and San Diego). The ABTC of 19 mg/kg is within the DTSC background arsenic range (0.15 mg/kg to 19.63 mg/kg in non-transformed scale), with a sample size of 1086 samples.

E.5 Summary and Conclusions

A detailed evaluation of arsenic concentrations in onsite and offsite soils was conducted to evaluate arsenic as a COPC for the HHRA and calculate a potential ABTC for the Site. Based on the results of graphical and statistical assessment of the arsenic data, arsenic is considered to be present above ambient levels and is therefore considered a COPC in the HHRA. The 98th percentile of the raw arsenic dataset (excluding NDs and outliers), 19 mg/kg, is proposed as the ABTC for the Site.

E.6 References

California Environmental Protection Agency (Cal/EPA). 2009. *Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals.* Department of Toxic Substances Control. January 16.

California Environmental Protection Agency (Cal/EPA). 2008. *Interim Guidance for Sampling Agricultural Properties (Third Revision)*. Department of Toxic Substances Control. August 7

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U.S. Environmental Protection Agency (USEPA). 2011a. *ProUCL Version 4.1.01*, Downloaded from: http://www.epa.gov/esd/tsc/software.htm.

U.S. Environmental Protection Agency (USEPA). 2011b. *ProUCL Version 4.1.00 Technical Guide (Draft)*. EPA/600/R-07/041. May.

APPENDIX E

TABLES

TABLE E-1
SUMMARY OF ARSENIC DATASET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Area [1]	Sample ID	Sample Date	Sample Depth [2]	Raw Arsenic (mg/kg)	Log-Transformed Arsenic (mg/kg)
Onsite	FeCl-SB04-1	14-Sep-90	1	14.5	1.2
Onsite	FeCl-SB04-5	14-Sep-90	5	13.5	1.1
Onsite	PTI-MW17-S-2.0	19-Jun-07	2	40	1.6
Onsite	PTI-MW17-S-21.0	19-Jun-07	21	3.6	0.56
Onsite	PTI-MW17-S-30.0	19-Jun-07	30	7.9	0.90
Onsite	PTI-MW17-S-42.5	19-Jun-07	42.5	3.4	0.53
Onsite	PTI-MW17-S-53.5	19-Jun-07	53.5	3.1	0.49
Onsite	PTI-MW17-S-7.5	19-Jun-07	7.5	12	1.1
Onsite	PTI-MW18-S-2.5	13-Jun-07	2.5	2.3	0.36
Onsite	PTI-MW18-S-30.0	13-Jun-07	30	6	0.78
Onsite	PTI-MW18-S-43.0	13-Jun-07	43	12	1.1
Onsite	PTI-MW18-S-55.0	14-Jun-07	55	7.6	0.88
Onsite	PTI-MW19-S-24.5	18-Jun-07	24.5	2.7	0.43
Onsite	PTI-MW19-S-3.0	18-Jun-07	3	44	1.6
Onsite	PTI-MW19-S-32.5	18-Jun-07	32.5	12	1.1
Onsite	PTI-MW19-S-45.0	18-Jun-07	45	8.5	0.93
Onsite	PTI-MW19-S-60.5	18-Jun-07	60.5	5.6	0.75
Onsite	PTI-MW19-S-71.0	18-Jun-07	71	2.7	0.43
Onsite	PTI-MW19-S-8.0	18-Jun-07	8	7.7	0.89
Onsite	PTI-MW20-S-1.5	15-Jun-07	1.5	3.6	0.56
Onsite	PTI-MW20-S-11.0	15-Jun-07	11	5.7	0.76
Onsite	PTI-MW20-S-23.0	15-Jun-07	23	4.8	0.68
Onsite	PTI-MW20-S-30.0	15-Jun-07	30	6.7	0.83
Onsite	PTI-MW20-S-43.0	15-Jun-07	43	11	1.0
Onsite	PTI-MW20-S-50.0	15-Jun-07	50	6	0.78
Onsite	PTI-MW20-S-58.0	15-Jun-07	58	2.4	0.38
Onsite	MW21-13	19-Apr-10	13	15	1.2
Onsite	MW21-25	19-Apr-10	25	4.8	0.68
Onsite	MW21-25.5	19-Apr-10	25.5	14	1.1
Onsite	MW21-38	19-Apr-10	38	23	1.4
Onsite	MW21-49	19-Apr-10	49	9.6	0.98
Onsite	PI01-12	10-Sep-90	12	8.8	0.94
Onsite	PI01-17	--	17	3.3	0.52
Onsite	PI01-2	10-Sep-90	2	72	1.9
Onsite	PI01-21.5	--	21.5	3.7	0.57
Onsite	PI01-27	--	27	7.4	0.87
Onsite	PI01-3	10-Sep-90	3	21	1.3
Onsite	PI01-37	--	37	19.2	1.3
Onsite	PI01-7	10-Sep-90	7	5.3	0.72
Onsite	PL-HB01-0.5-1	19-Jan-91	0.5	5.7	0.76
Onsite	PL-HB01-3-4	19-Jan-91	3	8.4	0.92
Onsite	PL-HB01-5-6	19-Jan-91	5	9	0.95
Onsite	PTI-PZ01-S-12.5	14-Jun-07	12.5	6.5	0.81
Onsite	PTI-PZ01-S-3.0	14-Jun-07	3	10	1.0
Onsite	PTI-PZ01-S-41.0	14-Jun-07	41	16	1.2
Onsite	PTI-PZ02-S-20.0	12-Jun-07	20	2.6	0.41
Onsite	PTI-PZ02-S-3.5	12-Jun-07	3.5	4.2	0.62

TABLE E-1
SUMMARY OF ARSENIC DATASET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Area [1]	Sample ID	Sample Date	Sample Depth [2]	Raw Arsenic (mg/kg)	Log-Transformed Arsenic (mg/kg)
Onsite	PTI-PZ02-S-30.0	12-Jun-07	30	8.8	0.94
Onsite	PTI-PZ02-S-7.5	12-Jun-07	7.5	6.5	0.81
Onsite	PTI-PZ03-S-15.0	12-Jun-07	15	3.6	0.56
Onsite	PTI-PZ03-S-24.0	12-Jun-07	24	3.5	0.54
Onsite	PTI-PZ03-S-29.0	12-Jun-07	29	10	1.0
Onsite	PTI-PZ03-S-4.0	12-Jun-07	4	6.3	0.80
Onsite	PTI-PZ03-S-9.0	12-Jun-07	9	6.5	0.81
Onsite	RS06-20	--	20	2.8	0.45
Onsite	SB02-10	18-Sep-90	10	12.2	1.1
Onsite	SB02-1-2	18-Sep-90	1	58	1.8
Onsite	SB02-15.5	18-Sep-90	15.5	8.8	0.94
Onsite	SB02-5	18-Sep-90	5	4.2	0.62
Onsite	SB07-10	20-Sep-90	10	8.6	0.93
Onsite	SB07-3	20-Sep-90	3	15	1.2
Onsite	SB07-40	20-Sep-90	40	31	1.5
Onsite	SB07-5	20-Sep-90	5	4.6	0.66
Onsite	SB08-10	19-Sep-90	10	14	1.1
Onsite	SB08-5	19-Sep-90	5	9.8	0.99
Onsite	PTI-SMP01B-S-11.0	22-Jun-07	11	10	1.0
Onsite	PTI-SMP01B-S-16.5	22-Jun-07	16.5	6.6	0.82
Onsite	PTI-SMP01B-S-30.0	22-Jun-07	30	9.1	0.96
Onsite	PTI-SMP01B-S-43.0	22-Jun-07	43	24	1.4
Onsite	PTI-SMP02B-S-12.0	21-Jun-07	12	9.7	0.99
Onsite	PTI-SMP02B-S-2.0	21-Jun-07	2	4.4	0.64
Onsite	PTI-SMP02B-S-42.0	21-Jun-07	42	8.5	0.93
Onsite	PTI-SMP03B-S-14.0	22-Jun-07	14	10	1.0
Onsite	PTI-SMP03B-S-24.0	22-Jun-07	24	18	1.3
Onsite	PTI-SMP03B-S-43.0	22-Jun-07	43	4.5	0.65
Onsite	PTI-SMP04B-32.0	20-Jun-07	32	12	1.1
Onsite	PTI-SMP04B-42.5	20-Jun-07	42.5	12	1.1
Onsite	PTI-SMP04B-S-1.5	20-Jun-07	1.5	4.7	0.67
Onsite	PTI-SMP04B-S-22.0	20-Jun-07	22	3.3	0.52
Onsite	PTI-SMP04B-S-9.5	20-Jun-07	9.5	9	0.95
Onsite	PTI-SMP05B-S-10.5	22-Jun-07	10.5	12	1.1
Onsite	PTI-SMP05B-S-29.0	22-Jun-07	29	3.8	0.58
Onsite	PTI-SMP05B-S-43.0	22-Jun-07	43	9.4	0.97
Onsite	PTI-SMP06-S-10.0	23-Jun-07	10	5.4	0.73
Onsite	PTI-SMP06-S-23.0	23-Jun-07	23	2	0.30
Onsite	PTI-SMP06-S-32.0	23-Jun-07	32	8.2	0.91
Onsite	PTI-SMP-07-S-32.0	23-Jun-07	32	2.3	0.36
Onsite	PTI-SMP-07-S-34.0	23-Jun-07	34	16	1.2
Onsite	PTI-SMP-07-S-43.0	23-Jun-07	43	9.4	0.97
Onsite	PTI-SMP-07-S-9.5	23-Jun-07	9.5	18	1.3
Onsite	PTI-SMP08-S-26.0	23-Jun-07	26	2.8	0.45
Onsite	PTI-SMP08-S-41.0	23-Jun-07	41	11	1.0
Onsite	PTI-SVE01B-S-14.0	21-Jun-07	14	14	1.1
Onsite	PTI-SVE01B-S-20.5	21-Jun-07	20.5	3.6	0.56

TABLE E-1
SUMMARY OF ARSENIC DATASET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Area [1]	Sample ID	Sample Date	Sample Depth [2]	Raw Arsenic (mg/kg)	Log-Transformed Arsenic (mg/kg)
Onsite	PTI-SVE01B-S-30.0	21-Jun-07	30	13	1.1
Onsite	PTI-SVE02B-S-10.0	21-Jun-07	10	8.8	0.94
Onsite	PTI-SVE02B-S-4.0	21-Jun-07	4	2	0.30
Onsite	PTI-SVE02B-S-43.0	21-Jun-07	43	8.3	0.92
Onsite	PTI-SVE03B-S-12.0	23-Jun-07	12	16	1.2
Onsite	PTI-SVE03B-S-21.0	23-Jun-07	21	4.5	0.65
Onsite	PTI-SVE03B-S-35.0	23-Jun-07	35	11	1.0
Onsite	PTI-SVE03B-S-45.0	23-Jun-07	45	7.3	0.86
Onsite	UST-SB07-17	21-Sep-90	17	4.1	0.61
Onsite	UST-SB07-4.5	21-Sep-90	4.5	4.9	0.69
Onsite	UST-SB07-40.5	21-Sep-90	40.5	18	1.3
Onsite	VZPM-1-18	23-Apr-12	18	12	1.1
Onsite	VZPM-1-20-25	23-Apr-12	20	6.7	0.83
Onsite	VZPM-1-25-30	23-Apr-12	25	3.5	0.54
Onsite	VZPM-1-32	23-Apr-12	32	9.8	0.99
Onsite	VZPM-1-35-38	23-Apr-12	35	10	1.0
Onsite	VZPM-1-41	23-Apr-12	41	10	1.0
Onsite	VZPM-1-46	23-Apr-12	46	10	1.0
Onsite	VZPM-1-49.5	23-Apr-12	49.5	10	1.0
Onsite	VZPM-2-18	23-Apr-12	18	7.7	0.89
Onsite	VZPM-2-22	23-Apr-12	22	11	1.0
Onsite	VZPM-2-30	23-Apr-12	30	9.4	0.97
Onsite	VZPM-2-36	23-Apr-12	36	4.5	0.65
Onsite	VZPM-2-41	23-Apr-12	41	15	1.2
Onsite	VZPM-2-46	23-Apr-12	46	26	1.4
Onsite	VZPM-2-49.5	23-Apr-12	49.5	11	1.0
Onsite	VZ-PM-3-18	24-Apr-12	18	6.2	0.79
Onsite	VZ-PM-3-21	24-Apr-12	21	2.8	0.45
Onsite	VZ-PM-3-36	24-Apr-12	36	2.4	0.38
Onsite	VZ-PM-3-41.5	24-Apr-12	41.5	16	1.2
Onsite	VZ-PM-3-46	24-Apr-12	46	22	1.3
Onsite	VZ-PM-3-49.5	24-Apr-12	49.5	8.2	0.91
Onsite	WMU18/19-1-2	26-Oct-90	1	7.6	0.88
Onsite	WMU18/19-3-4	26-Oct-90	3	19	1.3
Onsite	WMU18/19-5-6	26-Oct-90	5	13	1.1
Background	MW22-27.0	22-Apr-10	27	7.6	0.88
Background	MW22-7.5	22-Apr-10	7.5	10	1.0
Background	MW-23-29.0	20-Apr-10	29	7.3	0.86
Background	MW-23-30.0	20-Apr-10	30	7.7	0.89
Background	MW-23-8.0	20-Apr-10	8	7.1	0.85

Notes:
-- = not available
mg/kg = milligrams per kilogram

[1] All soil samples were collected from onsite and in the vicinity of the Site.
[2] Depth from which sample was collected in feet below ground surface.

TABLE E-2
DESCRIPTIVE STATISTICS OF RAW AND LOG-TRANSFORMED ARSENIC DATASETS
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Descriptive Statistic	Soils (Excluding NDs) Raw Dataset	Soils (Excluding NDs) Log-Transformed Dataset
Sample Size (n)	134	134
Minimum Concentration	2.0	0.30
Maximum Concentration	72	1.9
Mean (μ)	10	0.90
Median	8.5	0.93
Standard Deviation	10	0.30
Standard Error of the Mean [1]	0.82	0.026
Lower Quartile (Q1)	4.8	0.68
Upper Quartile (Q3)	12	1.1
Fourth Spread (f_s)	7.2	0.40
Lower Quartile Limit (LQL)	-6.0	0.084
Upper Quartile Limit (UQL)	23	1.7
Range - Order of Magnitude Difference	1.6	Not Calculated
Coefficient of Variation	0.92	Not Calculated

Notes:

Concentration in units of milligrams per kilogram (mg/kg).

[1] The standard error of the mean = standard deviation / √n.

TABLE E-3
DESCRIPTIVE STATISTICS OF RAW AND LOG-TRANSFORMED ARSENIC DATASETS EXCLUDING OUTLIERS
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Descriptive Statistic	Raw Dataset (no NDs) Excluding Outliers	Log-Transformed Dataset (no NDs) Excluding Outliers
Sample Size (n)	126	132
Minimum Concentration	2.0	0.30 (2.0)
Maximum Concentration	22	1.6 (44)
Mean (μ)	8.5	0.89 (7.8)
Median	8.2	0.93 (8.4)
Standard Deviation	4.5	0.28 (1.9)
98th Percentile	19	1.4

Notes:
Concentration in units of milligrams per kilogram (mg/kg).

APPENDIX E

EXHIBITS

Exhibit A
DESCRIPTIVE STATISTICS OF RAW ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Goodness-of-Fit Test Statistics for Full Data Sets without Non-Detects

User Selected Options

From File	qrySiteData_Arsenic (noND).wst
Full Precision	OFF
Confidence Coefficient	0.95

Raw Arsenic Dataset

Raw Statistics

Number of Valid Observations	134
Number of Distinct Observations	72
Minimum	2
Maximum	72
Mean of Raw Data	10.36
Standard Deviation of Raw Data	9.538
Kstar	2.06
Mean of Log Transformed Data	2.082
Standard Deviation of Log Transformed Data	0.69

Normal Distribution Test Results

Correlation Coefficient R	0.801
Approximate Shapiro Wilk Test Statistic	0.668
Approximate Shapiro Wilk P Value	0
Lilliefors Test Statistic	0.208
Lilliefors Critical (0.95) Value	0.0765

Data not Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.921
A-D Test Statistic	1.792
A-D Critical (0.95) Value	0.765
K-S Test Statistic	0.114
K-S Critical(0.95) Value	0.0817

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.99
Approximate Shapiro Wilk Test Statistic	0.971
Approximate Shapiro Wilk P Value	0.0869
Lilliefors Test Statistic	0.0609
Lilliefors Critical (0.95) Value	0.0765

Data appear Lognormal at (0.05) Significance Level

Exhibit A
DESCRIPTIVE STATISTICS OF RAW ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Log-transformed Arsenic Dataset

Raw Statistics

Number of Valid Observations	134
Number of Distinct Observations	72
Minimum	0.301
Maximum	1.857
Mean of Raw Data	0.904
Standard Deviation of Raw Data	0.3
Kstar	8.187
Mean of Log Transformed Data	-0.162
Standard Deviation of Log Transformed Data	0.366

Normal Distribution Test Results

Correlation Coefficient R	0.99
Approximate Shapiro Wilk Test Statistic	0.971
Approximate Shapiro Wilk P Value	0.0869
Lilliefors Test Statistic	0.0609
Lilliefors Critical (0.95) Value	0.0765

Data appear Normal at (0.05) Significance Level

Gamma Distribution Test Results

Correlation Coefficient R	0.989
A-D Test Statistic	1.472
A-D Critical (0.95) Value	0.753
K-S Test Statistic	0.106
K-S Critical(0.95) Value	0.0807

Data not Gamma Distributed at (0.05) Significance Level

Lognormal Distribution Test Results

Correlation Coefficient R	0.977
Approximate Shapiro Wilk Test Statistic	0.943
Approximate Shapiro Wilk P Value	2.558E-05
Lilliefors Test Statistic	0.128
Lilliefors Critical (0.95) Value	0.0765

Data not Lognormal at (0.05) Significance Level

Exhibit B
CUMULATIVE PROBABILITY PLOTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

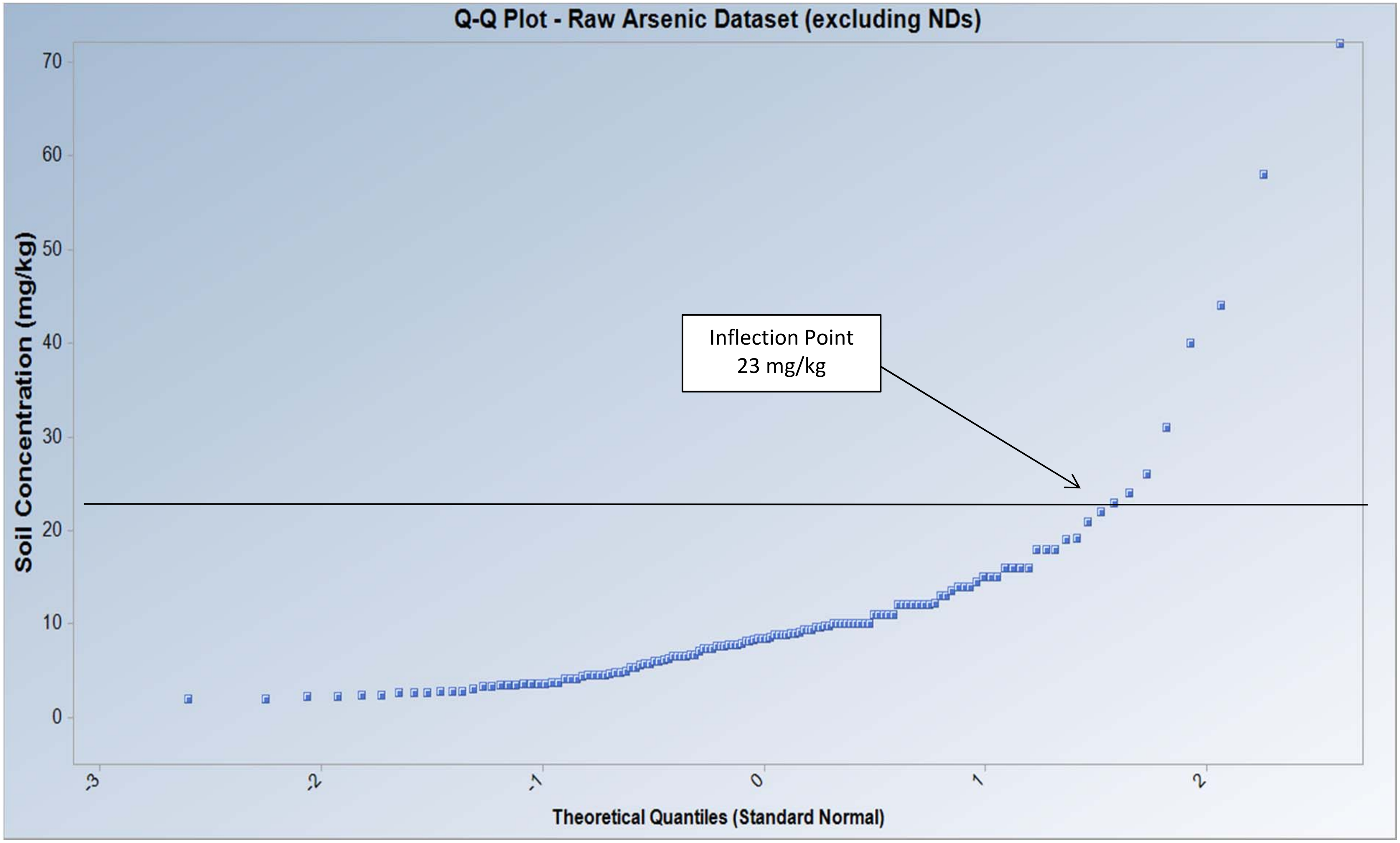

Exhibit B
CUMULATIVE PROBABILITY PLOTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

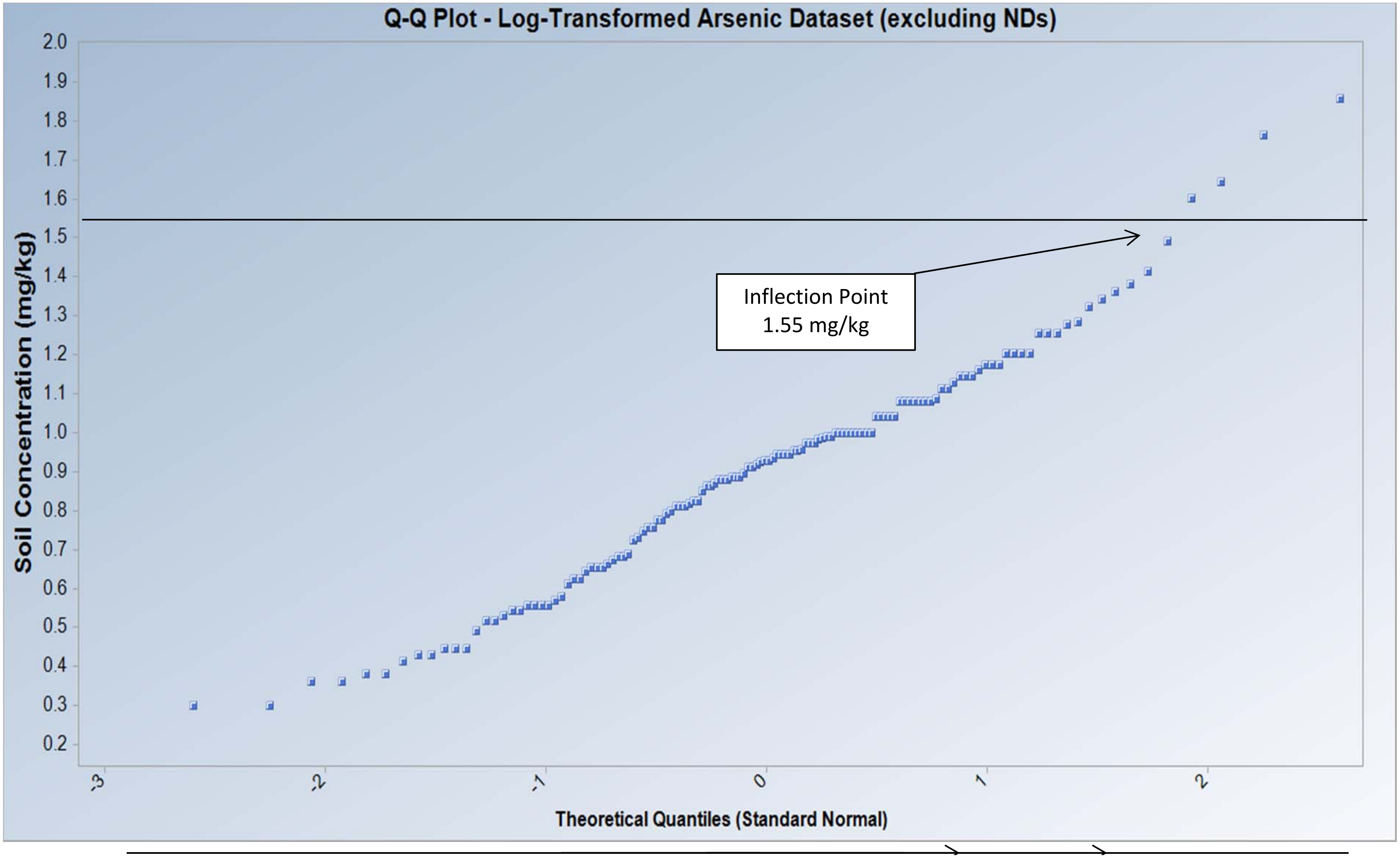

Exhibit C
BOX PLOTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

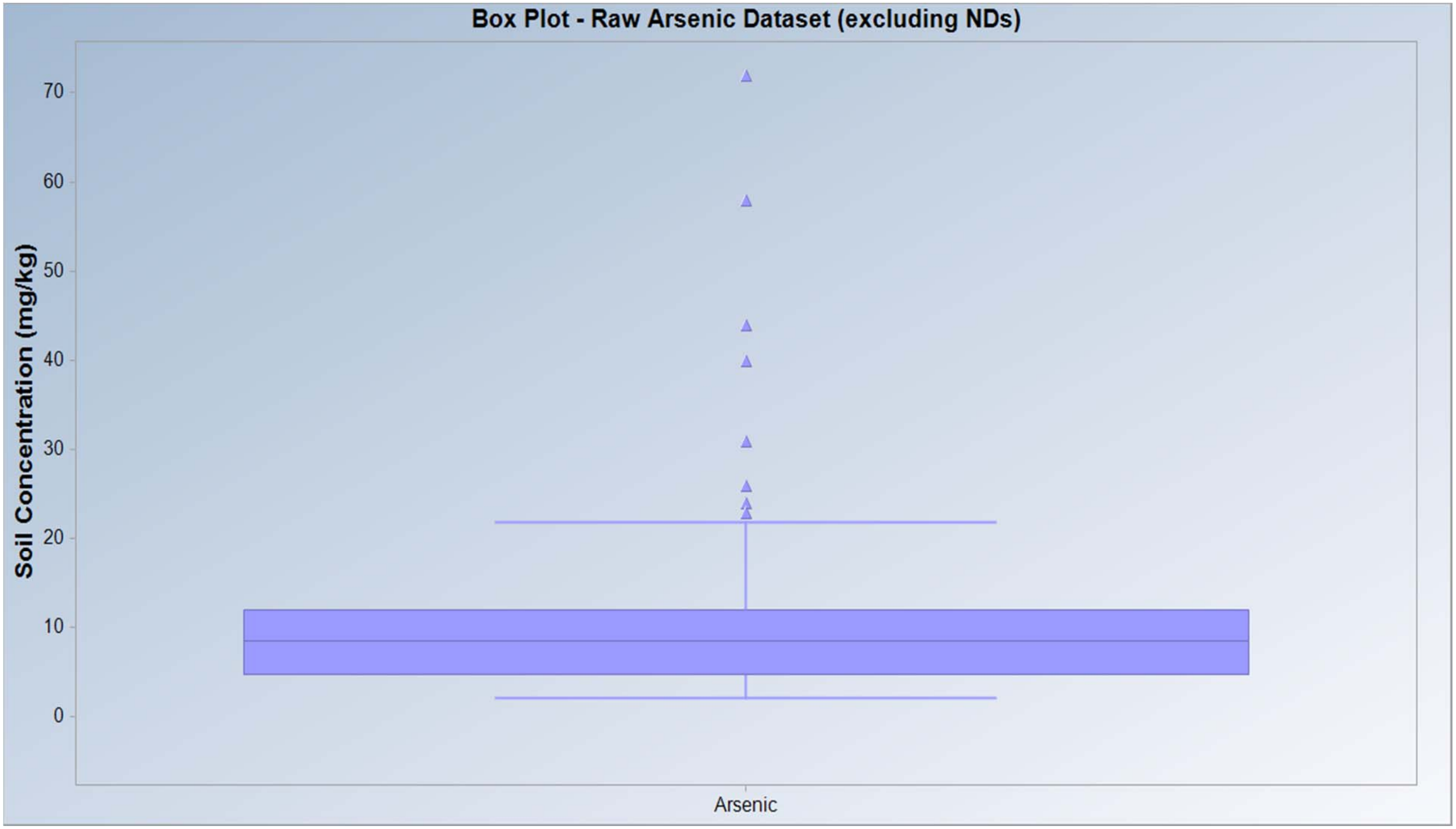

Exhibit C
BOX PLOTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

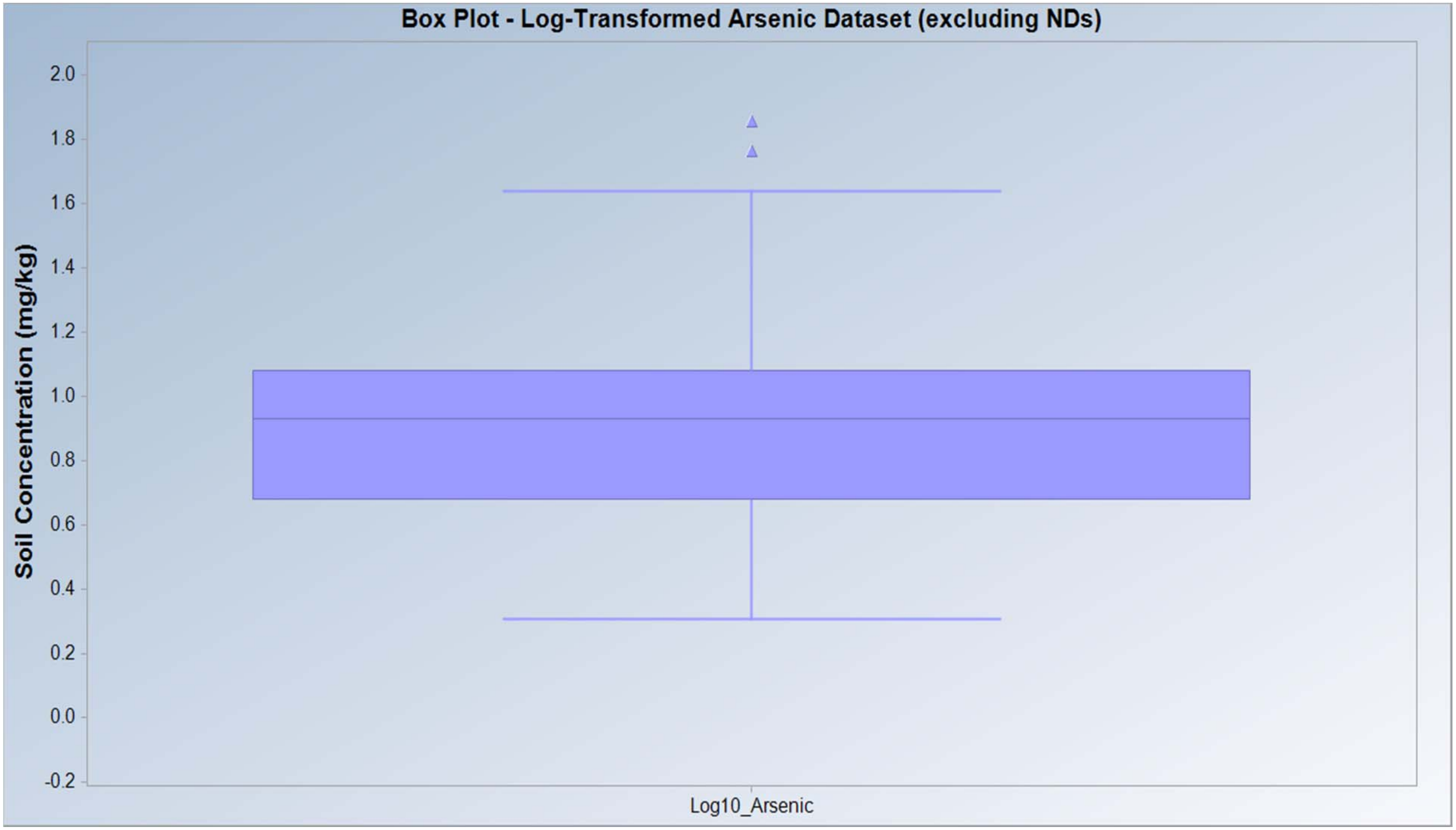

Exhibit D
OUTLIER TESTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Outlier Tests for Selected Variables

User Selected Options

From File	qrySiteData_Arsenic (noND).wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	10

Rosner's Outlier Test for Raw Arsenic Dataset

Mean	10.36
Standard Deviation	9.538
Number of data	134
Number of suspected outliers	10

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	10.36	9.503	72	34	6.487	3.475	3.845
2	9.895	7.916	58	57	6.077	3.468	3.845
3	9.531	6.734	44	14	5.119	3.468	3.845
4	9.268	6.04	40	3	5.088	3.465	3.835
5	9.032	5.421	31	62	4.052	3.465	3.835
6	8.861	5.081	26	119	3.373	3.463	3.833
7	8.727	4.868	24	69	3.138	3.46	3.83
8	8.607	4.692	23	30	3.067	3.457	3.827
9	8.493	4.53	22	125	2.982	3.455	3.825
10	8.385	4.382	21	37	2.879	3.452	3.822

For 5% significance level, there are 5 Potential Outliers
Therefore, Potential Statistical Outliers are
72, 58, 44, 40, 31

For 1% Significance Level, there are 5 Potential Outliers
Therefore, Potential Statistical Outliers are
72, 58, 44, 40, 31

Exhibit D
OUTLIER TESTS OF RAW AND LOG-TRANSFORMED ARSENIC DATA SET
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Rosner's Outlier Test for Log-transformed Arsenic Dataset

Mean	0.904
Standard Deviation	0.3
Number of data	134
Number of suspected outliers	10

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	0.904	0.298	1.857	34	3.195	3.475	3.845
2	0.897	0.289	1.763	57	3	3.468	3.845
3	0.89	0.28	1.643	14	2.691	3.468	3.845
4	0.885	0.273	1.602	3	2.628	3.465	3.835
5	0.879	0.267	1.491	62	2.297	3.465	3.835
6	0.874	0.262	0.301	85	2.187	3.463	3.833
7	0.879	0.258	0.301	97	2.238	3.46	3.83
8	0.883	0.254	1.415	119	2.094	3.457	3.827
9	0.879	0.25	0.362	9	2.066	3.455	3.825
10	0.883	0.247	0.362	87	2.111	3.452	3.822

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

APPENDIX F

DATA STATISTICAL EVALUATION

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	I:\Phibro-Tech\HRA\ProUCL\ProUCL input\qryProUCL_ForOutput_10bgs.xls.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chemical (1,1,1-trichloroethane)

General Statistics

Number of Valid Data	26	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	17
		Percent Non-Detects	65.38%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.011	Minimum Detected	-4.51
Maximum Detected	5.8	Maximum Detected	1.758
Mean of Detected	0.889	Mean of Detected	-2.181
SD of Detected	1.898	SD of Detected	2.203
Minimum Non-Detect	0.0015	Minimum Non-Detect	-6.502
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	24
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	2
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	92.31%

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.547	Shapiro Wilk Test Statistic	0.898
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.333	Mean	-4.489
SD	1.153	SD	2.726
95% DL/2 (t) UCL	0.72	95% H-Stat (DL/2) UCL	7.979
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-5.927
		SD in Log Scale	3.2
		Mean in Original Scale	0.308
		SD in Original Scale	1.157
		95% t UCL	0.696
		95% Percentile Bootstrap UCL	0.731
		95% BCA Bootstrap UCL	1.09
		95% H-UCL	21.36

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.294	Data appear Gamma Distributed at 5% Significance Level

Theta Star	3.027		
nu star	5.284		
A-D Test Statistic	0.792	**Nonparametric Statistics**	
5% A-D Critical Value	0.802	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.802	Mean	0.317
5% K-S Critical Value	0.3	SD	1.132
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.236
		95% KM (t) UCL	0.719
Assuming Gamma Distribution		95% KM (z) UCL	0.704
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.7
Minimum	0.000001	95% KM (bootstrap t) UCL	3.197
Maximum	5.8	95% KM (BCA) UCL	0.79
Mean	0.308	95% KM (Percentile Bootstrap) UCL	0.741
Median	0.000001	95% KM (Chebyshev) UCL	1.344
SD	1.157	97.5% KM (Chebyshev) UCL	1.788
k star	0.11	99% KM (Chebyshev) UCL	2.661
Theta star	2.806		
Nu star	5.701	**Potential UCLs to Use**	
AppChi2	1.489	95% KM (t) UCL	0.719
95% Gamma Approximate UCL (Use when n >= 40)	1.178		
95% Adjusted Gamma UCL (Use when n < 40)	1.297		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1-dichloroethane)

General Statistics

Number of Valid Data	28	Number of Detected Data	24
Number of Distinct Detected Data	22	Number of Non-Detect Data	4
		Percent Non-Detects	14.29%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0027	Minimum Detected	-5.915
Maximum Detected	2.8	Maximum Detected	1.03
Mean of Detected	0.206	Mean of Detected	-3.092
SD of Detected	0.572	SD of Detected	1.609
Minimum Non-Detect	0.0017	Minimum Non-Detect	-6.377
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	27
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	1
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	96.43%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.368	Shapiro Wilk Test Statistic	0.96
5% Shapiro Wilk Critical Value	0.916	5% Shapiro Wilk Critical Value	0.916
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.196	Mean	-3.149
SD	0.533	SD	1.729

95% DL/2 (t) UCL	0.368	95% H-Stat (DL/2) UCL	0.607
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-3.284
		SD in Log Scale	1.656
		Mean in Original Scale	0.179
		SD in Original Scale	0.532
		95% t UCL	0.351
		95% Percentile Bootstrap UCL	0.364
		95% BCA Bootstrap UCL	0.544
		95% H-UCL	0.43
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.404	Data appear Lognormal at 5% Significance Level	
Theta Star	0.509		
nu star	19.4		
A-D Test Statistic	1.977	Nonparametric Statistics	
5% A-D Critical Value	0.822	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.822	Mean	0.182
5% K-S Critical Value	0.19	SD	0.522
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.101
		95% KM (t) UCL	0.354
Assuming Gamma Distribution		95% KM (z) UCL	0.348
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.353
Minimum	0.000001	95% KM (bootstrap t) UCL	1.029
Maximum	2.8	95% KM (BCA) UCL	0.384
Mean	0.178	95% KM (Percentile Bootstrap) UCL	0.365
Median	0.0315	95% KM (Chebyshev) UCL	0.622
SD	0.532	97.5% KM (Chebyshev) UCL	0.813
k star	0.271	99% KM (Chebyshev) UCL	1.187
Theta star	0.656		
Nu star	15.18	Potential UCLs to Use	
AppChi2	7.384	99% KM (Chebyshev) UCL	1.187
95% Gamma Approximate UCL (Use when n >= 40)	0.365		
95% Adjusted Gamma UCL (Use when n < 40)	0.383		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1-dichloroethene)

General Statistics

Number of Valid Data	23	Number of Detected Data	14
Number of Distinct Detected Data	13	Number of Non-Detect Data	9
		Percent Non-Detects	39.13%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.003	Minimum Detected	-5.809
Maximum Detected	1	Maximum Detected	0
Mean of Detected	0.135	Mean of Detected	-3.609
SD of Detected	0.283	SD of Detected	1.775
Minimum Non-Detect	0.0042	Minimum Non-Detect	-5.473
Maximum Non-Detect	2.3	Maximum Non-Detect	0.833

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	23
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.536	Shapiro Wilk Test Statistic	0.921
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.148	Mean	-3.782
SD	0.313	SD	2.023
95% DL/2 (t) UCL	0.26	95% H-Stat (DL/2) UCL	1.029
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-4.41
		SD in Log Scale	1.803
		Mean in Original Scale	0.0841
		SD in Original Scale	0.227
		95% t UCL	0.165
		95% Percentile Bootstrap UCL	0.169
		95% BCA Bootstrap UCL	0.219
		95% H-UCL	0.259
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.368	Data appear Lognormal at 5% Significance Level	
Theta Star	0.366		
nu star	10.32		
A-D Test Statistic	1.203	**Nonparametric Statistics**	
5% A-D Critical Value	0.811	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.811	Mean	0.0898
5% K-S Critical Value	0.244	SD	0.226
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.0501
		95% KM (t) UCL	0.176
Assuming Gamma Distribution		95% KM (z) UCL	0.172
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.175
Minimum	0.000001	95% KM (bootstrap t) UCL	0.495
Maximum	1	95% KM (BCA) UCL	0.189
Mean	0.0821	95% KM (Percentile Bootstrap) UCL	0.175
Median	0.0054	95% KM (Chebyshev) UCL	0.308
SD	0.227	97.5% KM (Chebyshev) UCL	0.403
k star	0.16	99% KM (Chebyshev) UCL	0.588
Theta star	0.514		
Nu star	7.354	Potential UCLs to Use	
AppChi2	2.367	99% KM (Chebyshev) UCL	0.588
95% Gamma Approximate UCL (Use when n >= 40)	0.255		
95% Adjusted Gamma UCL (Use when n < 40)	0.279		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (aroclor 1260)

General Statistics

Number of Valid Data	53	Number of Detected Data	35
Number of Distinct Detected Data	33	Number of Non-Detect Data	18
		Percent Non-Detects	33.96%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.017	Minimum Detected	-4.075
Maximum Detected	1500	Maximum Detected	7.313
Mean of Detected	133.6	Mean of Detected	2.087
SD of Detected	330	SD of Detected	2.7
Minimum Non-Detect	0.0083	Minimum Non-Detect	-4.791
Maximum Non-Detect	1.25	Maximum Non-Detect	0.223

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	26
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	27
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	49.06%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.472	Shapiro Wilk Test Statistic	0.976
5% Shapiro Wilk Critical Value	0.934	5% Shapiro Wilk Critical Value	0.934
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	88.28	Mean	0.134
SD	274.4	SD	3.631
95% DL/2 (t) UCL	151.4	95% H-Stat (DL/2) UCL	17493
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-0.0276
		SD in Log Scale	3.779
		Mean in Original Scale	88.27
		SD in Original Scale	274.4
		95% t UCL	151.4
		95% Percentile Bootstrap UCL	154.4
		95% BCA Bootstrap UCL	181.2
		95% H-UCL	32784

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.25	Data appear Lognormal at 5% Significance Level	
Theta Star	534.7		
nu star	17.5		
A-D Test Statistic	2.178	**Nonparametric Statistics**	
5% A-D Critical Value	0.877	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.877	Mean	88.27
5% K-S Critical Value	0.163	SD	271.8
Data not Gamma Distributed at 5% Significance Level		SE of Mean	37.88
		95% KM (t) UCL	151.7
Assuming Gamma Distribution		95% KM (z) UCL	150.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	151.4
Minimum	0.000001	95% KM (bootstrap t) UCL	206
Maximum	1500	95% KM (BCA) UCL	151.9
Mean	88.26	95% KM (Percentile Bootstrap) UCL	149.7
Median	1.4	95% KM (Chebyshev) UCL	253.4
SD	274.4	97.5% KM (Chebyshev) UCL	324.8

k star	0.11	99% KM (Chebyshev) UCL	465.1
Theta star	799.2		
Nu star	11.71	Potential UCLs to Use	
AppChi2	5.033	99% KM (Chebyshev) UCL	465.1
95% Gamma Approximate UCL (Use when n >= 40)	205.2		
95% Adjusted Gamma UCL (Use when n < 40)	210.4		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (arsenic)

General Statistics

Number of Valid Data	50	Number of Detected Data	38
Number of Distinct Detected Data	35	Number of Non-Detect Data	12
		Percent Non-Detects	24.00%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2	Minimum Detected	0.693
Maximum Detected	72	Maximum Detected	4.277
Mean of Detected	13.57	Mean of Detected	2.233
SD of Detected	15.19	SD of Detected	0.813
Minimum Non-Detect	10	Minimum Non-Detect	2.303
Maximum Non-Detect	50	Maximum Non-Detect	3.912

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	48
Number treated as Detected	2
Single DL Non-Detect Percentage	96.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.647	Shapiro Wilk Test Statistic	0.954
5% Shapiro Wilk Critical Value	0.938	5% Shapiro Wilk Critical Value	0.938
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	15.54	Mean	2.414
SD	14.09	SD	0.819
95% DL/2 (t) UCL	18.88	95% H-Stat (DL/2) UCL	20.11
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.201
		SD in Log Scale	0.754
		Mean in Original Scale	12.55
		SD in Original Scale	13.56
		95% t UCL	15.77
		95% Percentile Bootstrap UCL	15.75
		95% BCA Bootstrap UCL	16.81
		95% H-UCL	15.03

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	1.38	Data appear Lognormal at 5% Significance Level
Theta Star	9.832	
nu star	104.9	

A-D Test Statistic	1.652	**Nonparametric Statistics**	
5% A-D Critical Value	0.767	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.767	Mean	12.69
5% K-S Critical Value	0.146	SD	13.76
Data not Gamma Distributed at 5% Significance Level		SE of Mean	2.073
		95% KM (t) UCL	16.17
Assuming Gamma Distribution		95% KM (z) UCL	16.11
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	16.17
Minimum	0.000001	95% KM (bootstrap t) UCL	17.51
Maximum	72	95% KM (BCA) UCL	16.37
Mean	13.27	95% KM (Percentile Bootstrap) UCL	16.26
Median	9	95% KM (Chebyshev) UCL	21.73
SD	13.74	97.5% KM (Chebyshev) UCL	25.64
k star	0.879	99% KM (Chebyshev) UCL	33.33
Theta star	15.1		
Nu star	87.92	**Potential UCLs to Use**	
AppChi2	67.3	95% KM (BCA) UCL	16.37
95% Gamma Approximate UCL (Use when n >= 40)	17.34		
95% Adjusted Gamma UCL (Use when n < 40)	17.48		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (barium)

General Statistics

Number of Valid Data	30	Number of Detected Data	29
Number of Distinct Detected Data	19	Number of Non-Detect Data	1
		Percent Non-Detects	3.33%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	79	Minimum Detected	4.369
Maximum Detected	1000	Maximum Detected	6.908
Mean of Detected	244.4	Mean of Detected	5.248
SD of Detected	239.9	SD of Detected	0.624
Minimum Non-Detect	50	Minimum Non-Detect	3.912
Maximum Non-Detect	50	Maximum Non-Detect	3.912

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.564	Shapiro Wilk Test Statistic	0.819
5% Shapiro Wilk Critical Value	0.926	5% Shapiro Wilk Critical Value	0.926
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	237.1	Mean	5.18
SD	239.1	SD	0.716
95% DL/2 (t) UCL	311.3	95% H-Stat (DL/2) UCL	305.7
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	233.3	Mean in Log Scale	5.2
SD	240.2	SD in Log Scale	0.667

95% MLE (t) UCL	307.8	Mean in Original Scale	237.8
95% MLE (Tiku) UCL	302.6	SD in Original Scale	238.5
		95% t UCL	311.8
		95% Percentile Bootstrap UCL	315.6
		95% BCA Bootstrap UCL	341.6
		95% H UCL	293.7
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	1.945	Data do not follow a Discernable Distribution (0.05)	
Theta Star	125.7		
nu star	112.8		
A-D Test Statistic	3.086	**Nonparametric Statistics**	
5% A-D Critical Value	0.757	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.757	Mean	238.9
5% K-S Critical Value	0.165	SD	233.6
Data not Gamma Distributed at 5% Significance Level		SE of Mean	43.41
		95% KM (t) UCL	312.7
Assuming Gamma Distribution		95% KM (z) UCL	310.3
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	312.3
Minimum	0.000001	95% KM (bootstrap t) UCL	363.7
Maximum	1000	95% KM (BCA) UCL	318.4
Mean	236.3	95% KM (Percentile Bootstrap) UCL	318.2
Median	155	95% KM (Chebyshev) UCL	428.1
SD	239.9	97.5% KM (Chebyshev) UCL	510
k star	0.659	99% KM (Chebyshev) UCL	670.8
Theta star	358.4		
Nu star	39.55	Potential UCLs to Use	
AppChi2	26.15	95% KM (Chebyshev) UCL	428.1
95% Gamma Approximate UCL (Use when n >= 40)	357.4		
95% Adjusted Gamma UCL (Use when n < 40)	366.2		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (benzene)

General Statistics

Number of Valid Data	78	Number of Detected Data	10
Number of Distinct Detected Data	10	Number of Non-Detect Data	68
		Percent Non-Detects	87.18%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0019	Minimum Detected	-6.266
Maximum Detected	2.1	Maximum Detected	0.742
Mean of Detected	0.634	Mean of Detected	-2.517
SD of Detected	0.906	SD of Detected	2.736
Minimum Non-Detect	0.0015	Minimum Non-Detect	-6.502
Maximum Non-Detect	5	Maximum Non-Detect	1.609

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	78
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.69	Shapiro Wilk Test Statistic	0.897
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.195	Mean	-4.332
SD	0.539	SD	2.329
95% DL/2 (t) UCL	0.297	95% H-Stat (DL/2) UCL	0.552
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-10.07
		SD in Log Scale	4.189
		Mean in Original Scale	0.0816
		SD in Original Scale	0.376
		95% t UCL	0.152
		95% Percentile Bootstrap UCL	0.161
		95% BCA Bootstrap UCL	0.19
		95% H-UCL	6.038
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.297	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	2.134		
nu star	5.944		
A-D Test Statistic	0.538	**Nonparametric Statistics**	
5% A-D Critical Value	0.808	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.808	Mean	0.0864
5% K-S Critical Value	0.287	SD	0.378
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0457
		95% KM (t) UCL	0.163
Assuming Gamma Distribution		95% KM (z) UCL	0.162
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.159
Minimum	0.000001	95% KM (bootstrap t) UCL	0.196
Maximum	2.1	95% KM (BCA) UCL	0.173
Mean	0.0813	95% KM (Percentile Bootstrap) UCL	0.166
Median	0.000001	95% KM (Chebyshev) UCL	0.286
SD	0.376	97.5% KM (Chebyshev) UCL	0.372
k star	0.0894	99% KM (Chebyshev) UCL	0.541
Theta star	0.909		
Nu star	13.95	Potential UCLs to Use	
AppChi2	6.539	95% KM (t) UCL	0.163
95% Gamma Approximate UCL (Use when n >= 40)	0.174		
95% Adjusted Gamma UCL (Use when n < 40)	0.176		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (beryllium)

General Statistics

Number of Valid Data	21	Number of Detected Data	10
Number of Distinct Detected Data	9	Number of Non-Detect Data	11
		Percent Non-Detects	52.38%

Raw Statistics

Minimum Detected	0.5
Maximum Detected	1.1
Mean of Detected	0.718
SD of Detected	0.218
Minimum Non-Detect	0.5
Maximum Non-Detect	12

Log-transformed Statistics

Minimum Detected	-0.693
Maximum Detected	0.0953
Mean of Detected	-0.368
SD of Detected	0.278
Minimum Non-Detect	-0.693
Maximum Non-Detect	2.485

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.824
5% Shapiro Wilk Critical Value	0.842

Data not Normal at 5% Significance Level

Assuming Normal Distribution

DL/2 Substitution Method	
Mean	0.89
SD	1.249
95% DL/2 (t) UCL	1.36
Maximum Likelihood Estimate(MLE) Method	N/A

MLE method failed to converge properly

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.888
5% Shapiro Wilk Critical Value	0.842

Data appear Lognormal at 5% Significance Level

Assuming Lognormal Distribution

DL/2 Substitution Method	
Mean	-0.541
SD	0.824
95% H-Stat (DL/2) UCL	1.256
Log ROS Method	
Mean in Log Scale	-0.66
SD in Log Scale	0.384
Mean in Original Scale	0.555
SD in Original Scale	0.226
95% t UCL	0.64
95% Percentile Bootstrap UCL	0.643
95% BCA Bootstrap UCL	0.66
95% H-UCL	0.655

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	9.701
Theta Star	0.074
nu star	194
A-D Test Statistic	0.584
5% A-D Critical Value	0.725
K-S Test Statistic	0.725
5% K-S Critical Value	0.266

Data appear Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics using Extrapolated Data	
Minimum	0.000001
Maximum	1.1
Mean	0.442
Median	0.458
SD	0.34
k star	0.268
Theta star	1.653
Nu star	11.24
AppChi2	4.731
95% Gamma Approximate UCL (Use when n >= 40)	1.051

Data Distribution Test with Detected Values Only

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Statistics

Kaplan-Meier (KM) Method	
Mean	0.625
SD	0.188
SE of Mean	0.0469
95% KM (t) UCL	0.706
95% KM (z) UCL	0.702
95% KM (jackknife) UCL	0.699
95% KM (bootstrap t) UCL	0.76
95% KM (BCA) UCL	0.74
95% KM (Percentile Bootstrap) UCL	0.716
95% KM (Chebyshev) UCL	0.829
97.5% KM (Chebyshev) UCL	0.918
99% KM (Chebyshev) UCL	1.091

Potential UCLs to Use

95% KM (t) UCL	0.706

95% Adjusted Gamma UCL (Use when n < 40)	1.127

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cadmium)

General Statistics

Number of Valid Data	184	Number of Detected Data	96
Number of Distinct Detected Data	65	Number of Non-Detect Data	88
		Percent Non-Detects	47.83%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.14	Minimum Detected	-1.966
Maximum Detected	161	Maximum Detected	5.081
Mean of Detected	6.53	Mean of Detected	0.833
SD of Detected	17.66	SD of Detected	1.331
Minimum Non-Detect	0.14	Minimum Non-Detect	-1.966
Maximum Non-Detect	50	Maximum Non-Detect	3.912

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	183
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	1
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	99.46%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.359	Lilliefors Test Statistic	0.0836
5% Lilliefors Critical Value	0.0904	5% Lilliefors Critical Value	0.0904
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	4.071	Mean	0.0109
SD	13.29	SD	1.533
95% DL/2 (t) UCL	5.691	95% H-Stat (DL/2) UCL	4.439
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-0.407
		SD in Log Scale	1.796
		Mean in Original Scale	3.549
		SD in Original Scale	13.1
		95% t UCL	5.146
		95% Percentile Bootstrap UCL	5.299
		95% BCA Bootstrap UCL	6.325
		95% H-UCL	4.961
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.582	Data appear Lognormal at 5% Significance Level	
Theta Star	11.23		
nu star	111.7		
A-D Test Statistic	4.731	**Nonparametric Statistics**	
5% A-D Critical Value	0.809	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.809	Mean	3.614
5% K-S Critical Value	0.096	SD	13.08

Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.971
		95% KM (t) UCL	5.22
Assuming Gamma Distribution		95% KM (z) UCL	5.212
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	5.212
Minimum	0.000001	95% KM (bootstrap t) UCL	7.122
Maximum	161	95% KM (BCA) UCL	5.519
Mean	3.483	95% KM (Percentile Bootstrap) UCL	5.35
Median	0.334	95% KM (Chebyshev) UCL	7.848
SD	13.13	97.5% KM (Chebyshev) UCL	9.68
k star	0.114	99% KM (Chebyshev) UCL	13.28
Theta star	30.44		
Nu star	42.1	Potential UCLs to Use	
AppChi2	28.23	95% KM (Chebyshev) UCL	7.848
95% Gamma Approximate UCL (Use when n >= 40)	5.195		
95% Adjusted Gamma UCL (Use when n < 40)	5.211		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chloroform)

General Statistics

Number of Valid Data	23	Number of Detected Data	6
Number of Distinct Detected Data	6	Number of Non-Detect Data	17
		Percent Non-Detects	73.91%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0034	Minimum Detected	-5.684
Maximum Detected	0.54	Maximum Detected	-0.616
Mean of Detected	0.195	Mean of Detected	-2.851
SD of Detected	0.256	SD of Detected	1.977
Minimum Non-Detect	0.0015	Minimum Non-Detect	-6.502
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	23
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: There are only 6 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.717	Shapiro Wilk Test Statistic	0.932
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.08	Mean	-4.965
SD	0.17	SD	2.426

95% DL/2 (t) UCL	0.141	95% H-Stat (DL/2) UCL	1.562
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-7.01
		SD in Log Scale	2.888
		Mean in Original Scale	0.0512
		SD in Original Scale	0.15
		95% t UCL	0.105
		95% Percentile Bootstrap UCL	0.102
		95% BCA Bootstrap UCL	0.124
		95% H-UCL	1.8
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.37	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.527		
nu star	4.445		
A-D Test Statistic	0.428	**Nonparametric Statistics**	
5% A-D Critical Value	0.735	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.735	Mean	0.0569
5% K-S Critical Value	0.348	SD	0.149
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0348
		95% KM (t) UCL	0.117
Assuming Gamma Distribution		95% KM (z) UCL	0.114
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.107
Minimum	0.000001	95% KM (bootstrap t) UCL	0.401
Maximum	0.54	95% KM (BCA) UCL	0.17
Mean	0.0509	95% KM (Percentile Bootstrap) UCL	0.127
Median	0.000001	95% KM (Chebyshev) UCL	0.209
SD	0.15	97.5% KM (Chebyshev) UCL	0.274
k star	0.117	99% KM (Chebyshev) UCL	0.403
Theta star	0.434		
Nu star	5.397	**Potential UCLs to Use**	
AppChi2	1.34	95% KM (t) UCL	0.117
95% Gamma Approximate UCL (Use when n >= 40)	0.205		
95% Adjusted Gamma UCL (Use when n < 40)	0.229		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chromium)

	General Statistics		
Number of Valid Data	201	Number of Detected Data	198
Number of Distinct Detected Data	170	Number of Non-Detect Data	3
		Percent Non-Detects	1.49%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	5.9	Minimum Detected	1.775
Maximum Detected	37000	Maximum Detected	10.52
Mean of Detected	1132	Mean of Detected	4.966
SD of Detected	3525	SD of Detected	1.905
Minimum Non-Detect	50	Minimum Non-Detect	3.912
Maximum Non-Detect	50	Maximum Non-Detect	3.912

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.375	Lilliefors Test Statistic	0.176
5% Lilliefors Critical Value	0.063	5% Lilliefors Critical Value	0.063
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1115	Mean	4.94
SD	3501	SD	1.903
95% DL/2 (t) UCL	1523	95% H-Stat (DL/2) UCL	1285
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	4.943
		SD in Log Scale	1.901
		Mean in Original Scale	1115
		SD in Original Scale	3501
		95% t UCL	1523
		95% Percentile Bootstrap UCL	1547
		95% BCA Bootstrap UCL	1718
		95% H-UCL	1285
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.327	Data do not follow a Discernable Distribution (0.05)	
Theta Star	3458		
nu star	129.6		
A-D Test Statistic	17.72	**Nonparametric Statistics**	
5% A-D Critical Value	0.862	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.862	Mean	1115
5% K-S Critical Value	0.0694	SD	3492
Data not Gamma Distributed at 5% Significance Level		SE of Mean	246.9
		95% KM (t) UCL	1523
Assuming Gamma Distribution		95% KM (z) UCL	1521
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1523
Minimum	0.000001	95% KM (bootstrap t) UCL	1744
Maximum	37000	95% KM (BCA) UCL	1636
Mean	1115	95% KM (Percentile Bootstrap) UCL	1575
Median	63.5	95% KM (Chebyshev) UCL	2192
SD	3501	97.5% KM (Chebyshev) UCL	2657
k star	0.295	99% KM (Chebyshev) UCL	3572
Theta star	3775		
Nu star	118.7	**Potential UCLs to Use**	
AppChi2	94.55	97.5% KM (Chebyshev) UCL	2657
95% Gamma Approximate UCL (Use when n >= 40)	1400		
95% Adjusted Gamma UCL (Use when n < 40)	1402		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chromium vi)

General Statistics

Number of Valid Data	170	Number of Detected Data	44

Number of Distinct Detected Data	41	Number of Non-Detect Data	126
		Percent Non-Detects	74.12%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.24	Minimum Detected	-1.427
Maximum Detected	3200	Maximum Detected	8.071
Mean of Detected	128	Mean of Detected	2.256
SD of Detected	500.6	SD of Detected	2.236
Minimum Non-Detect	0.2	Minimum Non-Detect	-1.609
Maximum Non-Detect	2	Maximum Non-Detect	0.693
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	140
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	30
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	82.35%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.276	Shapiro Wilk Test Statistic	0.969
5% Shapiro Wilk Critical Value	0.944	5% Shapiro Wilk Critical Value	0.944
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	33.27	Mean	-0.931
SD	258.7	SD	2.268
95% DL/2 (t) UCL	66.08	95% H-Stat (DL/2) UCL	9.524
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.515
		SD in Log Scale	4.536
		Mean in Original Scale	33.18
		SD in Original Scale	258.7
		95% t UCL	65.99
		95% Percentile Bootstrap UCL	70.92
		95% BCA Bootstrap UCL	97.02
		95% H-UCL	8124
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.267	Data appear Lognormal at 5% Significance Level	
Theta Star	479.6		
nu star	23.49		
A-D Test Statistic	3.392	**Nonparametric Statistics**	
5% A-D Critical Value	0.874	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.874	Mean	33.32
5% K-S Critical Value	0.146	SD	257.9
Data not Gamma Distributed at 5% Significance Level		SE of Mean	20.01
		95% KM (t) UCL	66.41
Assuming Gamma Distribution		95% KM (z) UCL	66.23
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	66.12
Minimum	0.000001	95% KM (bootstrap t) UCL	274.9
Maximum	3200	95% KM (BCA) UCL	70.17
Mean	33.14	95% KM (Percentile Bootstrap) UCL	71.52
Median	0.000001	95% KM (Chebyshev) UCL	120.5
SD	258.7	97.5% KM (Chebyshev) UCL	158.3
k star	0.0676	99% KM (Chebyshev) UCL	232.4
Theta star	489.9		
Nu star	23	Potential UCLs to Use	

AppChi2	13.09	97.5% KM (Chebyshev) UCL	158.3
95% Gamma Approximate UCL (Use when n >= 40)	58.22		
95% Adjusted Gamma UCL (Use when n < 40)	58.5		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cis-1,2-dichloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	13	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0033	Minimum Detected	-5.714
Maximum Detected	5.5	Maximum Detected	1.705
Mean of Detected	0.435	Mean of Detected	-3.568
SD of Detected	1.459	SD of Detected	2.032
Minimum Non-Detect	0.0017	Minimum Non-Detect	-6.377
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	1
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	95.24%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.327	Shapiro Wilk Test Statistic	0.876
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.319	Mean	-3.846
SD	1.192	SD	2.187
95% DL/2 (t) UCL	0.768	95% H-Stat (DL/2) UCL	2.072
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-4.431
		SD in Log Scale	2.239
		Mean in Original Scale	0.292
		SD in Original Scale	1.195
		95% t UCL	0.741
		95% Percentile Bootstrap UCL	0.807
		95% BCA Bootstrap UCL	1.077
		95% H-UCL	1.426

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.251	Data appear Lognormal at 5% Significance Level	
Theta Star	1.738		
nu star	7.014		
A-D Test Statistic	2.151	Nonparametric Statistics	
5% A-D Critical Value	0.849	Kaplan-Meier (KM) Method	

K-S Test Statistic	0.849	Mean	0.295
5% K-S Critical Value	0.25	SD	1.165
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.264
		95% KM (t) UCL	0.75
Assuming Gamma Distribution		95% KM (z) UCL	0.729
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.744
Minimum	0.000001	95% KM (bootstrap t) UCL	8.574
Maximum	5.5	95% KM (BCA) UCL	0.824
Mean	0.29	95% KM (Percentile Bootstrap) UCL	0.809
Median	0.005	95% KM (Chebyshev) UCL	1.445
SD	1.195	97.5% KM (Chebyshev) UCL	1.943
k star	0.148	99% KM (Chebyshev) UCL	2.92
Theta star	1.961		
Nu star	6.218	Potential UCLs to Use	
AppChi2	1.752	99% KM (Chebyshev) UCL	2.92
95% Gamma Approximate UCL (Use when n >= 40)	1.03		
95% Adjusted Gamma UCL (Use when n < 40)	1.145		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cobalt)

General Statistics

Number of Valid Data	21	Number of Detected Data	20
Number of Distinct Detected Data	15	Number of Non-Detect Data	1
		Percent Non-Detects	4.76%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	3.2	Minimum Detected	1.163
Maximum Detected	48	Maximum Detected	3.871
Mean of Detected	13.18	Mean of Detected	2.418
SD of Detected	9.139	SD of Detected	0.573
Minimum Non-Detect	23	Minimum Non-Detect	3.135
Maximum Non-Detect	23	Maximum Non-Detect	3.135

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.665	Shapiro Wilk Test Statistic	0.897
5% Shapiro Wilk Critical Value	0.905	5% Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	13.1	Mean	2.419
SD	8.916	SD	0.559
95% DL/2 (t) UCL	16.45	95% H-Stat (DL/2) UCL	16.96
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.416
		SD in Log Scale	0.559
		Mean in Original Scale	13.06
		SD in Original Scale	8.924
		95% t UCL	16.42

95% Percentile Bootstrap UCL	16.47
95% BCA Bootstrap UCL	17.97
95% H-UCL	16.91

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	2.824
Theta Star	4.666
nu star	112.9
A-D Test Statistic	0.915
5% A-D Critical Value	0.747
K-S Test Statistic	0.747
5% K-S Critical Value	0.195

Data follow Appr. Gamma Distribution at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics using Extrapolated Data

Minimum	3.2
Maximum	48
Mean	13.2
Median	11
SD	8.909
k star	2.979
Theta star	4.432
Nu star	125.1
AppChi2	100.3
95% Gamma Approximate UCL (Use when n >= 40)	16.47
95% Adjusted Gamma UCL (Use when n < 40)	16.76

Note: DL/2 is not a recommended method.

Data Distribution Test with Detected Values Only

Data Follow Appr. Gamma Distribution at 5% Significance Level

Nonparametric Statistics

Kaplan-Meier (KM) Method

Mean	13.09
SD	8.747
SE of Mean	1.969
95% KM (t) UCL	16.48
95% KM (z) UCL	16.33
95% KM (jackknife) UCL	16.48
95% KM (bootstrap t) UCL	19.14
95% KM (BCA) UCL	17.1
95% KM (Percentile Bootstrap) UCL	16.65
95% KM (Chebyshev) UCL	21.67
97.5% KM (Chebyshev) UCL	25.38
99% KM (Chebyshev) UCL	32.68

Potential UCLs to Use

95% KM (BCA) UCL	17.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (copper)

General Statistics

Number of Valid Observations	200	Number of Distinct Observations	178

Raw Statistics

Minimum	17
Maximum	23100
Mean	1488
Geometric Mean	283
Median	276
SD	3350
Std. Error of Mean	236.9
Coefficient of Variation	2.252
Skewness	3.87

Log-transformed Statistics

Minimum of Log Data	2.833
Maximum of Log Data	10.05
Mean of log Data	5.645
SD of log Data	1.87

Relevant UCL Statistics

Normal Distribution Test

Lilliefors Test Statistic	0.33
Lilliefors Critical Value	0.0626

Data not Normal at 5% Significance Level

Lognormal Distribution Test

Lilliefors Test Statistic	0.109
Lilliefors Critical Value	0.0626

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

Assuming Lognormal Distribution

95% Student's-t UCL	1879	95% H-UCL	2443
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	3040
95% Adjusted-CLT UCL (Chen-1995)	1947	97.5% Chebyshev (MVUE) UCL	3669
95% Modified-t UCL (Johnson-1978)	1890	99% Chebyshev (MVUE) UCL	4903
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	0.394	Data do not follow a Discernable Distribution (0.05)	
Theta Star	3772		
MLE of Mean	1488		
MLE of Standard Deviation	2369		
nu star	157.8		
Approximate Chi Square Value (.05)	129.7	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0488	95% CLT UCL	1877
Adjusted Chi Square Value	129.5	95% Jackknife UCL	1879
		95% Standard Bootstrap UCL	1884
Anderson-Darling Test Statistic	9.135	95% Bootstrap-t UCL	1964
Anderson-Darling 5% Critical Value	0.846	95% Hall's Bootstrap UCL	1993
Kolmogorov-Smirnov Test Statistic	0.143	95% Percentile Bootstrap UCL	1880
Kolmogorov-Smirnov 5% Critical Value	0.0683	95% BCA Bootstrap UCL	1943
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	2520
		97.5% Chebyshev(Mean, Sd) UCL	2967
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	3845
95% Approximate Gamma UCL (Use when n >= 40)	1809		
95% Adjusted Gamma UCL (Use when n < 40)	1812		
Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	2520

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (ethylbenzene)

General Statistics

Number of Valid Data	36	Number of Detected Data	19
Number of Distinct Detected Data	19	Number of Non-Detect Data	17
		Percent Non-Detects	47.22%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.005	Minimum Detected	-5.298
Maximum Detected	11	Maximum Detected	2.398
Mean of Detected	2.088	Mean of Detected	-1.301
SD of Detected	3.319	SD of Detected	2.473
Minimum Non-Detect	0.0015	Minimum Non-Detect	-6.502
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	30
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	6
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	83.33%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.689	Shapiro Wilk Test Statistic	0.932
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	

DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.12	Mean	-3.381
SD	2.597	SD	3.2
95% DL/2 (t) UCL	1.852	95% H-Stat (DL/2) UCL	114.3
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.891
		SD in Log Scale	3.398
		Mean in Original Scale	1.103
		SD in Original Scale	2.604
		95% t UCL	1.836
		95% Percentile Bootstrap UCL	1.828
		95% BCA Bootstrap UCL	2.099
		95% H-UCL	190
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.315	Data appear Lognormal at 5% Significance Level	
Theta Star	6.619		
nu star	11.99		
A-D Test Statistic	0.901	**Nonparametric Statistics**	
5% A-D Critical Value	0.836	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.836	Mean	1.108
5% K-S Critical Value	0.214	SD	2.565
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.439
		95% KM (t) UCL	1.85
Assuming Gamma Distribution		95% KM (z) UCL	1.83
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.839
Minimum	0.000001	95% KM (bootstrap t) UCL	2.32
Maximum	11	95% KM (BCA) UCL	1.889
Mean	1.102	95% KM (Percentile Bootstrap) UCL	1.871
Median	0.00655	95% KM (Chebyshev) UCL	3.023
SD	2.604	97.5% KM (Chebyshev) UCL	3.851
k star	0.119	99% KM (Chebyshev) UCL	5.479
Theta star	9.245		
Nu star	8.581	**Potential UCLs to Use**	
AppChi2	3.076	99% KM (Chebyshev) UCL	5.479
95% Gamma Approximate UCL (Use when n >= 40)	3.074		
95% Adjusted Gamma UCL (Use when n < 40)	3.229		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (iron)

General Statistics

Number of Valid Observations	153	Number of Distinct Observations	113
Raw Statistics		**Log-transformed Statistics**	
Minimum	1530	Minimum of Log Data	7.333
Maximum	57000	Maximum of Log Data	10.95
Mean	23171	Mean of log Data	9.94
Geometric Mean	20741	SD of log Data	0.539
Median	21300		
SD	9871		

Std. Error of Mean	798
Coefficient of Variation	0.426
Skewness	0.78

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Lilliefors Test Statistic	0.0947	Lilliefors Test Statistic	0.149
Lilliefors Critical Value	0.0716	Lilliefors Critical Value	0.0716
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	24491	95% H-UCL	26005
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	28803
95% Adjusted-CLT UCL (Chen-1995)	24537	97.5% Chebyshev (MVUE) UCL	30901
95% Modified-t UCL (Johnson-1978)	24500	99% Chebyshev (MVUE) UCL	35022
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	4.588	Data do not follow a Discernable Distribution (0.05)	
Theta Star	5051		
MLE of Mean	23171		
MLE of Standard Deviation	10818		
nu star	1404		
Approximate Chi Square Value (.05)	1318	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0484	95% CLT UCL	24483
Adjusted Chi Square Value	1317	95% Jackknife UCL	24491
		95% Standard Bootstrap UCL	24409
Anderson-Darling Test Statistic	1.697	95% Bootstrap-t UCL	24497
Anderson-Darling 5% Critical Value	0.756	95% Hall's Bootstrap UCL	24515
Kolmogorov-Smirnov Test Statistic	0.111	95% Percentile Bootstrap UCL	24483
Kolmogorov-Smirnov 5% Critical Value	0.076	95% BCA Bootstrap UCL	24523
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	26649
		97.5% Chebyshev(Mean, Sd) UCL	28154
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	31111
95% Approximate Gamma UCL (Use when n >= 40)	24683		
95% Adjusted Gamma UCL (Use when n < 40)	24697		
Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	26649

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (lead)

General Statistics

Number of Valid Data	183	Number of Detected Data	162
Number of Distinct Detected Data	140	Number of Non-Detect Data	21
		Percent Non-Detects	11.48%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.7	Minimum Detected	0.993
Maximum Detected	113000	Maximum Detected	11.64
Mean of Detected	1568	Mean of Detected	4.401
SD of Detected	9256	SD of Detected	2.201
Minimum Non-Detect	5	Minimum Non-Detect	1.609
Maximum Non-Detect	50	Maximum Non-Detect	3.912

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	105
Number treated as Detected	78
Single DL Non-Detect Percentage	57.38%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.433	Lilliefors Test Statistic	0.124
5% Lilliefors Critical Value	0.0696	5% Lilliefors Critical Value	0.0696
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1389	Mean	4.065
SD	8720	SD	2.287
95% DL/2 (t) UCL	2455	95% H-Stat (DL/2) UCL	1454
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	3.933
		SD in Log Scale	2.493
		Mean in Original Scale	1389
		SD in Original Scale	8720
		95% t UCL	2455
		95% Percentile Bootstrap UCL	2548
		95% BCA Bootstrap UCL	3430
		95% H-UCL	2302
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.241	Data do not follow a Discernable Distribution (0.05)	
Theta Star	6503		
nu star	78.14		
A-D Test Statistic	16.89	**Nonparametric Statistics**	
5% A-D Critical Value	0.895	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.895	Mean	1389
5% K-S Critical Value	0.0807	SD	8696
Data not Gamma Distributed at 5% Significance Level		SE of Mean	644.8
		95% KM (t) UCL	2455
Assuming Gamma Distribution		95% KM (z) UCL	2450
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2455
Minimum	0.000001	95% KM (bootstrap t) UCL	5088
Maximum	113000	95% KM (BCA) UCL	2560
Mean	1388	95% KM (Percentile Bootstrap) UCL	2570
Median	29	95% KM (Chebyshev) UCL	4200
SD	8720	97.5% KM (Chebyshev) UCL	5416
k star	0.156	99% KM (Chebyshev) UCL	7805
Theta star	8880		
Nu star	57.23	**Potential UCLs to Use**	
AppChi2	40.84	97.5% KM (Chebyshev) UCL	5416
95% Gamma Approximate UCL (Use when n >= 40)	1946		
95% Adjusted Gamma UCL (Use when n < 40)	1951		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (mercury)

General Statistics

Number of Valid Data	23	Number of Detected Data	21
Number of Distinct Detected Data	19	Number of Non-Detect Data	2
		Percent Non-Detects	8.70%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.023	Minimum Detected	-3.772
Maximum Detected	2	Maximum Detected	0.693
Mean of Detected	0.545	Mean of Detected	-1.404
SD of Detected	0.605	SD of Detected	1.425
Minimum Non-Detect	0.02	Minimum Non-Detect	-3.912
Maximum Non-Detect	0.02	Maximum Non-Detect	-3.912

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.816	Shapiro Wilk Test Statistic	0.936
5% Shapiro Wilk Critical Value	0.908	5% Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.498	Mean	-1.682
SD	0.597	SD	1.642
95% DL/2 (t) UCL	0.712	95% H-Stat (DL/2) UCL	2.415
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.467	Mean in Log Scale	-1.695
SD	0.624	SD in Log Scale	1.669
95% MLE (t) UCL	0.691	Mean in Original Scale	0.498
95% MLE (Tiku) UCL	0.68	SD in Original Scale	0.598
		95% t UCL	0.712
		95% Percentile Bootstrap UCL	0.698
		95% BCA Bootstrap UCL	0.737
		95% H UCL	2.577

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.676	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.805		
nu star	28.4		
A-D Test Statistic	0.641	**Nonparametric Statistics**	
5% A-D Critical Value	0.783	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.783	Mean	0.499
5% K-S Critical Value	0.197	SD	0.583
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.125
		95% KM (t) UCL	0.713
Assuming Gamma Distribution		95% KM (z) UCL	0.704
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.712
Minimum	0.000001	95% KM (bootstrap t) UCL	0.751
Maximum	2	95% KM (BCA) UCL	0.708
Mean	0.497	95% KM (Percentile Bootstrap) UCL	0.7
Median	0.14	95% KM (Chebyshev) UCL	1.043
SD	0.598	97.5% KM (Chebyshev) UCL	1.278
k star	0.353	99% KM (Chebyshev) UCL	1.74
Theta star	1.407		
Nu star	16.25	Potential UCLs to Use	

AppChi2	8.141	95% KM (Chebyshev) UCL	1.043
95% Gamma Approximate UCL (Use when n >= 40)	0.993		
95% Adjusted Gamma UCL (Use when n < 40)	1.046		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (methylene chloride)

General Statistics

Number of Valid Data	31	Number of Detected Data	12
Number of Distinct Detected Data	12	Number of Non-Detect Data	19
		Percent Non-Detects	61.29%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.009	Minimum Detected	-4.711
Maximum Detected	0.51	Maximum Detected	-0.673
Mean of Detected	0.0986	Mean of Detected	-3.274
SD of Detected	0.161	SD of Detected	1.343
Minimum Non-Detect	0.015	Minimum Non-Detect	-4.2
Maximum Non-Detect	9.3	Maximum Non-Detect	2.23

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	31
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.611	Shapiro Wilk Test Statistic	0.874
5% Shapiro Wilk Critical Value	0.859	5% Shapiro Wilk Critical Value	0.859
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.27	Mean	-3.311
SD	0.836	SD	1.847
95% DL/2 (t) UCL	0.525	95% H-Stat (DL/2) UCL	0.672
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-3.999
		SD in Log Scale	1.07
		Mean in Original Scale	0.046
		SD in Original Scale	0.107
		95% t UCL	0.0785
		95% Percentile Bootstrap UCL	0.0802
		95% BCA Bootstrap UCL	0.0961
		95% H-UCL	0.0531

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.535	Data appear Lognormal at 5% Significance Level	
Theta Star	0.184		
nu star	12.85		
A-D Test Statistic	1.162	Nonparametric Statistics	
5% A-D Critical Value	0.774	Kaplan-Meier (KM) Method	

K-S Test Statistic	0.774	Mean	0.0529
5% K-S Critical Value	0.257	SD	0.116
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.0242
		95% KM (t) UCL	0.0939
Assuming Gamma Distribution		95% KM (z) UCL	0.0926
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0931
Minimum	0.000001	95% KM (bootstrap t) UCL	0.234
Maximum	0.51	95% KM (BCA) UCL	0.102
Mean	0.0415	95% KM (Percentile Bootstrap) UCL	0.0952
Median	0.0105	95% KM (Chebyshev) UCL	0.158
SD	0.108	97.5% KM (Chebyshev) UCL	0.204
k star	0.196	99% KM (Chebyshev) UCL	0.293
Theta star	0.212		
Nu star	12.13	Potential UCLs to Use	
AppChi2	5.314	95% KM (BCA) UCL	0.102
95% Gamma Approximate UCL (Use when n >= 40)	0.0949		
95% Adjusted Gamma UCL (Use when n < 40)	0.0995		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (molybdenum)

General Statistics

Number of Valid Data	30	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	23
		Percent Non-Detects	76.67%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	2.5	Minimum Detected	0.916
Maximum Detected	160	Maximum Detected	5.075
Mean of Detected	51.56	Mean of Detected	2.948
SD of Detected	61.33	SD of Detected	1.706
Minimum Non-Detect	2	Minimum Non-Detect	0.693
Maximum Non-Detect	50	Maximum Non-Detect	3.912
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	27
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	90.00%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.812	Shapiro Wilk Test Statistic	0.884
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	

Mean	18.81	Mean	1.629
SD	34.72	SD	1.652
95% DL/2 (t) UCL	29.59	95% H-Stat (DL/2) UCL	56.55
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-0.943
		SD in Log Scale	2.834
		Mean in Original Scale	12.37
		SD in Original Scale	35.53
		95% t UCL	23.39
		95% Percentile Bootstrap UCL	23.65
		95% BCA Bootstrap UCL	28.19
		95% H-UCL	350.9
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.449	Data appear Normal at 5% Significance Level	
Theta Star	114.9		
nu star	6.282		
A-D Test Statistic	0.513	**Nonparametric Statistics**	
5% A-D Critical Value	0.744	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.744	Mean	14.2
5% K-S Critical Value	0.325	SD	34.34
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	6.779
		95% KM (t) UCL	25.72
Assuming Gamma Distribution		95% KM (z) UCL	25.35
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	24.3
Minimum	0.000001	95% KM (bootstrap t) UCL	32.78
Maximum	160	95% KM (BCA) UCL	30.9
Mean	12.03	95% KM (Percentile Bootstrap) UCL	28.96
Median	0.000001	95% KM (Chebyshev) UCL	43.75
SD	35.64	97.5% KM (Chebyshev) UCL	56.53
k star	0.0855	99% KM (Chebyshev) UCL	81.65
Theta star	140.7		
Nu star	5.129	Potential UCLs to Use	
AppChi2	1.212	95% KM (t) UCL	25.72
95% Gamma Approximate UCL (Use when n >= 40)	50.9	95% KM (Percentile Bootstrap) UCL	28.96
95% Adjusted Gamma UCL (Use when n < 40)	55.7		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (nickel)

General Statistics

Number of Valid Data	193	Number of Detected Data	187
Number of Distinct Detected Data	152	Number of Non-Detect Data	6
		Percent Non-Detects	3.11%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	6.6	Minimum Detected	1.887
Maximum Detected	28400	Maximum Detected	10.25
Mean of Detected	420.5	Mean of Detected	4.272
SD of Detected	2290	SD of Detected	1.469
Minimum Non-Detect	47	Minimum Non-Detect	3.85

Maximum Non-Detect	50	Maximum Non-Detect	3.912
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	105
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	88
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	54.40%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.428	Lilliefors Test Statistic	0.146
5% Lilliefors Critical Value	0.0648	5% Lilliefors Critical Value	0.0648
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	408.2	Mean	4.239
SD	2255	SD	1.457
95% DL/2 (t) UCL	676.4	95% H-Stat (DL/2) UCL	264
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	4.242
		SD in Log Scale	1.459
		Mean in Original Scale	408.4
		SD in Original Scale	2254
		95% t UCL	676.6
		95% Percentile Bootstrap UCL	701.8
		95% BCA Bootstrap UCL	929.5
		95% H-UCL	265.4
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.373	Data do not follow a Discernable Distribution (0.05)	
Theta Star	1127		
nu star	139.6		
A-D Test Statistic	20.96	**Nonparametric Statistics**	
5% A-D Critical Value	0.851	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.851	Mean	408.2
5% K-S Critical Value	0.072	SD	2249
Data not Gamma Distributed at 5% Significance Level		SE of Mean	162.3
		95% KM (t) UCL	676.5
Assuming Gamma Distribution		95% KM (z) UCL	675.2
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	676.5
Minimum	0.000001	95% KM (bootstrap t) UCL	1433
Maximum	28400	95% KM (BCA) UCL	719.4
Mean	407.4	95% KM (Percentile Bootstrap) UCL	684.2
Median	39.9	95% KM (Chebyshev) UCL	1116
SD	2255	97.5% KM (Chebyshev) UCL	1422
k star	0.299	99% KM (Chebyshev) UCL	2023
Theta star	1364		
Nu star	115.3	Potential UCLs to Use	
AppChi2	91.47	95% KM (Chebyshev) UCL	1116
95% Gamma Approximate UCL (Use when n >= 40)	513.4		
95% Adjusted Gamma UCL (Use when n < 40)	514.3		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (tetrachloroethene)

General Statistics

Number of Valid Data	27	Number of Detected Data	13
Number of Distinct Detected Data	13	Number of Non-Detect Data	14
		Percent Non-Detects	51.85%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.0064	Minimum Detected	-5.051
Maximum Detected	10	Maximum Detected	2.303
Mean of Detected	0.94	Mean of Detected	-2.641
SD of Detected	2.745	SD of Detected	2.2
Minimum Non-Detect	0.0016	Minimum Non-Detect	-6.438
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	25
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	2
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	92.59%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.387	Shapiro Wilk Test Statistic	0.894
5% Shapiro Wilk Critical Value	0.866	5% Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.477	Mean	-4.081
SD	1.921	SD	2.608
95% DL/2 (t) UCL	1.108	95% H-Stat (DL/2) UCL	6.766
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-5.004
		SD in Log Scale	2.884
		Mean in Original Scale	0.453
		SD in Original Scale	1.925
		95% t UCL	1.085
		95% Percentile Bootstrap UCL	1.177
		95% BCA Bootstrap UCL	1.617
		95% H-UCL	9.869
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.26	Data appear Lognormal at 5% Significance Level	
Theta Star	3.612		
nu star	6.767		
A-D Test Statistic	1.508	**Nonparametric Statistics**	
5% A-D Critical Value	0.841	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.841	Mean	0.458
5% K-S Critical Value	0.258	SD	1.888
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.378
		95% KM (t) UCL	1.103
Assuming Gamma Distribution		95% KM (z) UCL	1.08
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.088
Minimum	0.000001	95% KM (bootstrap t) UCL	11.41
Maximum	10	95% KM (BCA) UCL	1.166
Mean	0.453	95% KM (Percentile Bootstrap) UCL	1.19

Median	0.000001	95% KM (Chebyshev) UCL	2.107
SD	1.925	97.5% KM (Chebyshev) UCL	2.82
k star	0.119	99% KM (Chebyshev) UCL	4.221
Theta star	3.819		
Nu star	6.399	Potential UCLs to Use	
AppChi2	1.847	99% KM (Chebyshev) UCL	4.221
95% Gamma Approximate UCL (Use when n >= 40)	1.568		
95% Adjusted Gamma UCL (Use when n < 40)	1.708		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (toluene)

General Statistics

Number of Valid Data	42	Number of Detected Data	26
Number of Distinct Detected Data	26	Number of Non-Detect Data	16
		Percent Non-Detects	38.10%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0022	Minimum Detected	-6.119
Maximum Detected	3	Maximum Detected	1.099
Mean of Detected	0.282	Mean of Detected	-2.604
SD of Detected	0.614	SD of Detected	1.768
Minimum Non-Detect	0.0015	Minimum Non-Detect	-6.502
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	40
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	2
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	95.24%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.463	Shapiro Wilk Test Statistic	0.977
5% Shapiro Wilk Critical Value	0.92	5% Shapiro Wilk Critical Value	0.92
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.192	Mean	-3.661
SD	0.498	SD	2.369
95% DL/2 (t) UCL	0.321	95% H-Stat (DL/2) UCL	2.001
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-3.837
		SD in Log Scale	2.189
		Mean in Original Scale	0.176
		SD in Original Scale	0.498
		95% t UCL	0.306
		95% Percentile Bootstrap UCL	0.314
		95% BCA Bootstrap UCL	0.379
		95% H-UCL	0.906
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.448	Data appear Gamma Distributed at 5% Significance Level	

Theta Star	0.629		
nu star	23.32		
A-D Test Statistic	0.808	**Nonparametric Statistics**	
5% A-D Critical Value	0.813	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.813	Mean	0.18
5% K-S Critical Value	0.182	SD	0.492
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.0774
		95% KM (t) UCL	0.31
Assuming Gamma Distribution		95% KM (z) UCL	0.307
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.308
Minimum	0.000001	95% KM (bootstrap t) UCL	0.648
Maximum	3	95% KM (BCA) UCL	0.335
Mean	0.175	95% KM (Percentile Bootstrap) UCL	0.314
Median	0.00965	95% KM (Chebyshev) UCL	0.517
SD	0.499	97.5% KM (Chebyshev) UCL	0.663
k star	0.155	99% KM (Chebyshev) UCL	0.95
Theta star	1.126		
Nu star	13.02	**Potential UCLs to Use**	
AppChi2	5.907	95% KM (BCA) UCL	0.335
95% Gamma Approximate UCL (Use when n >= 40)	0.385		
95% Adjusted Gamma UCL (Use when n < 40)	0.396		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (tph (extractable))

General Statistics			
Number of Valid Data	24	Number of Detected Data	21
Number of Distinct Detected Data	21	Number of Non-Detect Data	3
		Percent Non-Detects	12.50%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	29	Minimum Detected	3.367
Maximum Detected	16400	Maximum Detected	9.705
Mean of Detected	3623	Mean of Detected	7.457
SD of Detected	3923	SD of Detected	1.6
Minimum Non-Detect	1	Minimum Non-Detect	0
Maximum Non-Detect	100	Maximum Non-Detect	4.605
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	5
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	19
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	20.83%

UCL Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.789	Shapiro Wilk Test Statistic	0.88
5% Shapiro Wilk Critical Value	0.908	5% Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	3174	Mean	6.822
SD	3854	SD	2.406

95% DL/2 (t) UCL	4522	95% H-Stat (DL/2) UCL	182457
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	2602	Mean in Log Scale	7.065
SD	4489	SD in Log Scale	1.841
95% MLE (t) UCL	4173	Mean in Original Scale	3181
95% MLE (Tiku) UCL	4183	SD in Original Scale	3848
		95% t UCL	4527
		95% Percentile Bootstrap UCL	4567
		95% BCA Bootstrap UCL	4733
		95% H UCL	27701
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.721	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	5024		
nu star	30.28		
A-D Test Statistic	0.281	Nonparametric Statistics	
5% A-D Critical Value	0.78	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.78	Mean	3174
5% K-S Critical Value	0.196	SD	3773
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	789.1
		95% KM (t) UCL	4526
Assuming Gamma Distribution		95% KM (z) UCL	4472
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	4521
Minimum	0.000001	95% KM (bootstrap t) UCL	5255
Maximum	16400	95% KM (BCA) UCL	4538
Mean	3170	95% KM (Percentile Bootstrap) UCL	4522
Median	2250	95% KM (Chebyshev) UCL	6613
SD	3857	97.5% KM (Chebyshev) UCL	8102
k star	0.222	99% KM (Chebyshev) UCL	11025
Theta star	14283		
Nu star	10.65	Potential UCLs to Use	
AppChi2	4.353	95% KM (Chebyshev) UCL	6613
95% Gamma Approximate UCL (Use when n >= 40)	7756		
95% Adjusted Gamma UCL (Use when n < 40)	8290		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trans-1,2-dichloroethene)

General Statistics

Number of Valid Data	20	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	13
		Percent Non-Detects	65.00%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0029	Minimum Detected	-5.843
Maximum Detected	0.11	Maximum Detected	-2.207
Mean of Detected	0.0284	Mean of Detected	-4.162
SD of Detected	0.0371	SD of Detected	1.191
Minimum Non-Detect	0.0016	Minimum Non-Detect	-6.438
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.68	Shapiro Wilk Test Statistic	0.958
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0429	Mean	-4.893
SD	0.103	SD	2.014
95% DL/2 (t) UCL	0.0828	95% H-Stat (DL/2) UCL	0.421
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-5.809
		SD in Log Scale	1.508
		Mean in Original Scale	0.0109
		SD in Original Scale	0.0247
		95% t UCL	0.0204
		95% Percentile Bootstrap UCL	0.0207
		95% BCA Bootstrap UCL	0.0276
		95% H-UCL	0.0307
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.647	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	0.0439		
nu star	9.06		
A-D Test Statistic	0.399	**Nonparametric Statistics**	
5% A-D Critical Value	0.729	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.729	Mean	0.0134
5% K-S Critical Value	0.32	SD	0.0242
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.00609
		95% KM (t) UCL	0.0239
Assuming Gamma Distribution		95% KM (z) UCL	0.0234
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0227
Minimum	0.000001	95% KM (bootstrap t) UCL	0.0395
Maximum	0.11	95% KM (BCA) UCL	0.0299
Mean	0.00994	95% KM (Percentile Bootstrap) UCL	0.0273
Median	0.000001	95% KM (Chebyshev) UCL	0.0399
SD	0.0251	97.5% KM (Chebyshev) UCL	0.0514
k star	0.147	99% KM (Chebyshev) UCL	0.074
Theta star	0.0675		
Nu star	5.892	Potential UCLs to Use	
AppChi2	1.585	95% KM (t) UCL	0.0239
95% Gamma Approximate UCL (Use when n >= 40)	0.0369		
95% Adjusted Gamma UCL (Use when n < 40)	0.0413		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trichloroethene)

General Statistics

Number of Valid Data	67	Number of Detected Data	29
Number of Distinct Detected Data	24	Number of Non-Detect Data	38
		Percent Non-Detects	56.72%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0042	Minimum Detected	-5.473
Maximum Detected	110	Maximum Detected	4.7
Mean of Detected	4.871	Mean of Detected	-1.69
SD of Detected	20.39	SD of Detected	2.33
Minimum Non-Detect	0.001	Minimum Non-Detect	-6.908
Maximum Non-Detect	1	Maximum Non-Detect	0

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	61
Number treated as Detected	6
Single DL Non-Detect Percentage	91.04%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.255	Shapiro Wilk Test Statistic	0.929
5% Shapiro Wilk Critical Value	0.926	5% Shapiro Wilk Critical Value	0.926
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2.133	Mean	-3.75
SD	13.5	SD	2.753
95% DL/2 (t) UCL	4.883	95% H-Stat (DL/2) UCL	3.251
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-4.977
		SD in Log Scale	3.559
		Mean in Original Scale	2.109
		SD in Original Scale	13.5
		95% t UCL	4.861
		95% Percentile Bootstrap UCL	5.277
		95% BCA Bootstrap UCL	8.591
		95% H-UCL	28.4
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.221	Data appear Lognormal at 5% Significance Level	
Theta Star	22		
nu star	12.84		
A-D Test Statistic	3.83	**Nonparametric Statistics**	
5% A-D Critical Value	0.889	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.889	Mean	2.114
5% K-S Critical Value	0.179	SD	13.4
Data not Gamma Distributed at 5% Significance Level		SE of Mean	1.666
		95% KM (t) UCL	4.893

Assuming Gamma Distribution		95% KM (z) UCL	4.854
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	4.864
Minimum	0.000001	95% KM (bootstrap t) UCL	29
Maximum	110	95% KM (BCA) UCL	5.404
Mean	2.108	95% KM (Percentile Bootstrap) UCL	5.393
Median	0.000001	95% KM (Chebyshev) UCL	9.375
SD	13.5	97.5% KM (Chebyshev) UCL	12.52
k star	0.0945	99% KM (Chebyshev) UCL	18.69
Theta star	22.31		
Nu star	12.66	**Potential UCLs to Use**	
AppChi2	5.667	97.5% KM (Chebyshev) UCL	12.52
95% Gamma Approximate UCL (Use when n >= 40)	4.711		
95% Adjusted Gamma UCL (Use when n < 40)	4.799		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (vanadium)

General Statistics

Number of Valid Data	30	Number of Detected Data	27
Number of Distinct Detected Data	23	Number of Non-Detect Data	3
		Percent Non-Detects	10.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	14	Minimum Detected	2.639
Maximum Detected	90	Maximum Detected	4.5
Mean of Detected	49.3	Mean of Detected	3.817
SD of Detected	18.52	SD of Detected	0.434
Minimum Non-Detect	50	Minimum Non-Detect	3.912
Maximum Non-Detect	50	Maximum Non-Detect	3.912

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.972	Shapiro Wilk Test Statistic	0.933
5% Shapiro Wilk Critical Value	0.923	5% Shapiro Wilk Critical Value	0.923
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	46.87	Mean	3.757
SD	19.04	SD	0.45
95% DL/2 (t) UCL	52.77	95% H-Stat (DL/2) UCL	55.6
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	49.27	Mean in Log Scale	3.781
SD	17.04	SD in Log Scale	0.429
95% MLE (t) UCL	54.55	Mean in Original Scale	47.57
95% MLE (Tiku) UCL	55.79	SD in Original Scale	18.38
		95% t UCL	53.27
		95% Percentile Bootstrap UCL	52.99
		95% BCA Bootstrap UCL	53.13
		95% H UCL	55.9

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	5.689	Data appear Normal at 5% Significance Level	
Theta Star	8.666		
nu star	307.2		
A-D Test Statistic	0.533	Nonparametric Statistics	
5% A-D Critical Value	0.746	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.746	Mean	47.66
5% K-S Critical Value	0.168	SD	18.21
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	3.452
		95% KM (t) UCL	53.52
Assuming Gamma Distribution		95% KM (z) UCL	53.34
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	53.53
Minimum	14	95% KM (bootstrap t) UCL	53.74
Maximum	90	95% KM (BCA) UCL	52.91
Mean	47.84	95% KM (Percentile Bootstrap) UCL	53.32
Median	49.5	95% KM (Chebyshev) UCL	62.7
SD	18.31	97.5% KM (Chebyshev) UCL	69.21
k star	5.722	99% KM (Chebyshev) UCL	82
Theta star	8.361		
Nu star	343.3	Potential UCLs to Use	
AppChi2	301.4	95% KM (t) UCL	53.52
95% Gamma Approximate UCL (Use when n >= 40)	54.49	95% KM (Percentile Bootstrap) UCL	53.32
95% Adjusted Gamma UCL (Use when n < 40)	54.9		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (xylenes)

General Statistics

Number of Valid Data	39	Number of Detected Data	23
Number of Distinct Detected Data	20	Number of Non-Detect Data	16
		Percent Non-Detects	41.03%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.0075	Minimum Detected	-4.893
Maximum Detected	43	Maximum Detected	3.761
Mean of Detected	5.411	Mean of Detected	-0.846
SD of Detected	10.57	SD of Detected	2.826
Minimum Non-Detect	0.0016	Minimum Non-Detect	-6.438
Maximum Non-Detect	0.93	Maximum Non-Detect	-0.0726

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	29
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	10
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	74.36%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.587	Shapiro Wilk Test Statistic	0.93
5% Shapiro Wilk Critical Value	0.914	5% Shapiro Wilk Critical Value	0.914
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	

Mean	3.21	Mean	-2.695
SD	8.477	SD	3.409
95% DL/2 (t) UCL	5.498	95% H-Stat (DL/2) UCL	608.2
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.343
		SD in Log Scale	3.791
		Mean in Original Scale	3.192
		SD in Original Scale	8.483
		95% t UCL	5.482
		95% Percentile Bootstrap UCL	5.497
		95% BCA Bootstrap UCL	6.445
		95% H-UCL	2659
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.269	Data appear Lognormal at 5% Significance Level	
Theta Star	20.13		
nu star	12.36		
A-D Test Statistic	0.861	Nonparametric Statistics	
5% A-D Critical Value	0.86	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.86	Mean	3.196
5% K-S Critical Value	0.198	SD	8.372
Data not Gamma Distributed at 5% Significance Level		SE of Mean	1.371
		95% KM (t) UCL	5.507
Assuming Gamma Distribution		95% KM (z) UCL	5.451
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	5.485
Minimum	0.000001	95% KM (bootstrap t) UCL	7.801
Maximum	43	95% KM (BCA) UCL	5.919
Mean	3.191	95% KM (Percentile Bootstrap) UCL	5.632
Median	0.01	95% KM (Chebyshev) UCL	9.171
SD	8.483	97.5% KM (Chebyshev) UCL	11.76
k star	0.118	99% KM (Chebyshev) UCL	16.83
Theta star	27		
Nu star	9.22	Potential UCLs to Use	
AppChi2	3.461	99% KM (Chebyshev) UCL	16.83
95% Gamma Approximate UCL (Use when n >= 40)	8.503		
95% Adjusted Gamma UCL (Use when n < 40)	8.857		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (zinc)

General Statistics

Number of Valid Data	195	Number of Detected Data	194
Number of Distinct Detected Data	167	Number of Non-Detect Data	1
		Percent Non-Detects	0.51%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	14.1	Minimum Detected	2.646
Maximum Detected	40100	Maximum Detected	10.6
Mean of Detected	1428	Mean of Detected	5.44
SD of Detected	4772	SD of Detected	1.584
Minimum Non-Detect	120	Minimum Non-Detect	4.787

Maximum Non-Detect	120	Maximum Non-Detect	4.787

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.388	Lilliefors Test Statistic	0.126
5% Lilliefors Critical Value	0.0636	5% Lilliefors Critical Value	0.0636
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1421	Mean	5.433
SD	4761	SD	1.583
95% DL/2 (t) UCL	1985	95% H-Stat (DL/2) UCL	1095
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	5.434
		SD in Log Scale	1.582
		Mean in Original Scale	1421
		SD in Original Scale	4761
		95% t UCL	1985
		95% Percentile Bootstrap UCL	2003
		95% BCA Bootstrap UCL	2150
		95% H-UCL	1094
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.364	Data do not follow a Discernable Distribution (0.05)	
Theta Star	3927		
nu star	141.1		
A-D Test Statistic	22.57	**Nonparametric Statistics**	
5% A-D Critical Value	0.853	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.853	Mean	1421
5% K-S Critical Value	0.0702	SD	4749
Data not Gamma Distributed at 5% Significance Level		SE of Mean	340.9
		95% KM (t) UCL	1985
Assuming Gamma Distribution		95% KM (z) UCL	1982
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1985
Minimum	0.000001	95% KM (bootstrap t) UCL	2185
Maximum	40100	95% KM (BCA) UCL	2025
Mean	1421	95% KM (Percentile Bootstrap) UCL	1994
Median	140	95% KM (Chebyshev) UCL	2907
SD	4761	97.5% KM (Chebyshev) UCL	3550
k star	0.349	99% KM (Chebyshev) UCL	4814
Theta star	4077		
Nu star	135.9	**Potential UCLs to Use**	
AppChi2	110	97.5% KM (Chebyshev) UCL	3550
95% Gamma Approximate UCL (Use when n >= 40)	1756		
95% Adjusted Gamma UCL (Use when n < 40)	1759		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

APPENDIX F
ESTIMATION OF REPRESENTATIVE EXPOSURE POINT CONCENTRATIONS FOR CHEMICALS OF POTENTIAL CONCERN IN BACKGROUND SOIL (0-10 FEET BGS) - PROUCL OUTPUT
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	qryProUCL_ForOutput_10bgs_bkgd.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chemical (chromium)

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	21

Raw Statistics

Minimum	8.4
Maximum	33.4
Mean	20.9
Geometric Mean	19.81
Median	21.2
SD	6.79
Std. Error of Mean	1.482
Coefficient of Variation	0.325
Skewness	0.404

Log-transformed Statistics

Minimum of Log Data	2.128
Maximum of Log Data	3.509
Mean of log Data	2.986
SD of log Data	0.345

Relevant UCL Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic	0.946
Shapiro Wilk Critical Value	0.908

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic	0.949
Shapiro Wilk Critical Value	0.908

Data appear Lognormal at 5% Significance Level

Assuming Normal Distribution

95% Student's-t UCL	23.45

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	23.47
95% Modified-t UCL (Johnson-1978)	23.47

Assuming Lognormal Distribution

95% H-UCL	24.27
95% Chebyshev (MVUE) UCL	27.96
97.5% Chebyshev (MVUE) UCL	31
99% Chebyshev (MVUE) UCL	36.95

Gamma Distribution Test

k star (bias corrected)	8.178
Theta Star	2.555
MLE of Mean	20.9
MLE of Standard Deviation	7.307
nu star	343.5
Approximate Chi Square Value (.05)	301.5
Adjusted Level of Significance	0.0383
Adjusted Chi Square Value	298.5
Anderson-Darling Test Statistic	0.349
Anderson-Darling 5% Critical Value	0.743
Kolmogorov-Smirnov Test Statistic	0.12
Kolmogorov-Smirnov 5% Critical Value	0.189

Data appear Gamma Distributed at 5% Significance Level

Data Distribution

Data appear Normal at 5% Significance Level

Nonparametric Statistics

95% CLT UCL	23.33
95% Jackknife UCL	23.45
95% Standard Bootstrap UCL	23.26
95% Bootstrap-t UCL	23.62
95% Hall's Bootstrap UCL	23.55
95% Percentile Bootstrap UCL	23.32
95% BCA Bootstrap UCL	23.37
95% Chebyshev(Mean, Sd) UCL	27.35
97.5% Chebyshev(Mean, Sd) UCL	30.15
99% Chebyshev(Mean, Sd) UCL	35.64

Assuming Gamma Distribution

95% Approximate Gamma UCL (Use when n >= 40)	23.8
95% Adjusted Gamma UCL (Use when n < 40)	24.04

Potential UCL to Use	Use 95% Student's-t UCL	23.45

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (copper)

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	19
Raw Statistics		**Log-transformed Statistics**	
Minimum	9.3	Minimum of Log Data	2.23
Maximum	35.6	Maximum of Log Data	3.572
Mean	22.59	Mean of log Data	3.079
Geometric Mean	21.75	SD of log Data	0.296
Median	23.2		
SD	6.009		
Std. Error of Mean	1.311		
Coefficient of Variation	0.266		
Skewness	0.00525		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.991	Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	24.85	95% H-UCL	25.64
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	29.13
95% Adjusted-CLT UCL (Chen-1995)	24.75	97.5% Chebyshev (MVUE) UCL	31.92
95% Modified-t UCL (Johnson-1978)	24.85	99% Chebyshev (MVUE) UCL	37.42
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	11.42	Data appear Normal at 5% Significance Level	
Theta Star	1.979		
MLE of Mean	22.59		
MLE of Standard Deviation	6.686		
nu star	479.5		
Approximate Chi Square Value (.05)	429.7	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0383	95% CLT UCL	24.75
Adjusted Chi Square Value	426.1	95% Jackknife UCL	24.85
		95% Standard Bootstrap UCL	24.73
Anderson-Darling Test Statistic	0.231	95% Bootstrap-t UCL	24.82
Anderson-Darling 5% Critical Value	0.743	95% Hall's Bootstrap UCL	24.99
Kolmogorov-Smirnov Test Statistic	0.0987	95% Percentile Bootstrap UCL	24.72
Kolmogorov-Smirnov 5% Critical Value	0.189	95% BCA Bootstrap UCL	24.69
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	28.31
		97.5% Chebyshev(Mean, Sd) UCL	30.78
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	35.64
95% Approximate Gamma UCL (Use when n >= 40)	25.21		
95% Adjusted Gamma UCL (Use when n < 40)	25.42		
Potential UCL to Use		Use 95% Student's-t UCL	24.85

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (iron)

General Statistics

Number of Valid Observations	19	Number of Distinct Observations	18

Raw Statistics		Log-transformed Statistics	
Minimum	8840	Minimum of Log Data	9.087
Maximum	28100	Maximum of Log Data	10.24
Mean	17607	Mean of log Data	9.734
Geometric Mean	16877	SD of log Data	0.3
Median	17000		
SD	5315		
Std. Error of Mean	1219		
Coefficient of Variation	0.302		
Skewness	0.7		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.92	Shapiro Wilk Test Statistic	0.96
Shapiro Wilk Critical Value	0.901	Shapiro Wilk Critical Value	0.901
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	19722	95% H-UCL	20117
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	22969
95% Adjusted-CLT UCL (Chen-1995)	19822	97.5% Chebyshev (MVUE) UCL	25288
95% Modified-t UCL (Johnson-1978)	19754	99% Chebyshev (MVUE) UCL	29842

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	10.11	Data appear Normal at 5% Significance Level	
Theta Star	1742		
MLE of Mean	17607		
MLE of Standard Deviation	5538		
nu star	384.1		
Approximate Chi Square Value (.05)	339.7	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0369	95% CLT UCL	19613
Adjusted Chi Square Value	336	95% Jackknife UCL	19722
		95% Standard Bootstrap UCL	19573
Anderson-Darling Test Statistic	0.394	95% Bootstrap-t UCL	20091
Anderson-Darling 5% Critical Value	0.741	95% Hall's Bootstrap UCL	20033
Kolmogorov-Smirnov Test Statistic	0.154	95% Percentile Bootstrap UCL	19700
Kolmogorov-Smirnov 5% Critical Value	0.198	95% BCA Bootstrap UCL	19795
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	22922
		97.5% Chebyshev(Mean, Sd) UCL	25222
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	29739
95% Approximate Gamma UCL (Use when n >= 40)	19910		
95% Adjusted Gamma UCL (Use when n < 40)	20126		

Potential UCL to Use		Use 95% Student's-t UCL	19722

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (lead)

General Statistics

Number of Valid Observations	18	Number of Distinct Observations	17

Raw Statistics		Log-transformed Statistics	
Minimum	5.1	Minimum of Log Data	1.629
Maximum	22	Maximum of Log Data	3.091
Mean	9.1	Mean of log Data	2.07
Geometric Mean	7.928	SD of log Data	0.5
Median	6.6		
SD	5.691		
Std. Error of Mean	1.341		
Coefficient of Variation	0.625		
Skewness	1.578		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.688	Shapiro Wilk Test Statistic	0.774
Shapiro Wilk Critical Value	0.897	Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	11.43	95% H-UCL	11.48
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	13.65
95% Adjusted-CLT UCL (Chen-1995)	11.84	97.5% Chebyshev (MVUE) UCL	15.7
95% Modified-t UCL (Johnson-1978)	11.52	99% Chebyshev (MVUE) UCL	19.72

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.191	Data do not follow a Discernable Distribution (0.05)	
Theta Star	2.852		
MLE of Mean	9.1		
MLE of Standard Deviation	5.095		
nu star	114.9		
Approximate Chi Square Value (.05)	91.12	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0357	95% CLT UCL	11.31
Adjusted Chi Square Value	89.09	95% Jackknife UCL	11.43
		95% Standard Bootstrap UCL	11.26
Anderson-Darling Test Statistic	2.055	95% Bootstrap-t UCL	12.6
Anderson-Darling 5% Critical Value	0.743	95% Hall's Bootstrap UCL	11.1
Kolmogorov-Smirnov Test Statistic	0.326	95% Percentile Bootstrap UCL	11.47
Kolmogorov-Smirnov 5% Critical Value	0.205	95% BCA Bootstrap UCL	11.68
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	14.95
		97.5% Chebyshev(Mean, Sd) UCL	17.48
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	22.45
95% Approximate Gamma UCL (Use when n >= 40)	11.47		
95% Adjusted Gamma UCL (Use when n < 40)	11.73		

Potential UCL to Use		Use 95% Student's-t UCL	11.43
		or 95% Modified-t UCL	11.52

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (nickel)

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	20

Raw Statistics		Log-transformed Statistics	
Minimum	6.7	Minimum of Log Data	1.902
Maximum	24.4	Maximum of Log Data	3.195
Mean	14.82	Mean of log Data	2.644
Geometric Mean	14.07	SD of log Data	0.333
Median	14.3		
SD	4.854		
Std. Error of Mean	1.059		
Coefficient of Variation	0.328		
Skewness	0.545		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.953	Shapiro Wilk Test Statistic	0.977
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	16.65	95% H-UCL	17.08
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	19.61
95% Adjusted-CLT UCL (Chen-1995)	16.7	97.5% Chebyshev (MVUE) UCL	21.68
95% Modified-t UCL (Johnson-1978)	16.67	99% Chebyshev (MVUE) UCL	25.74

Gamma Distribution Test		Data Distribution	
k star (bias corrected)	8.475	Data appear Normal at 5% Significance Level	
Theta Star	1.749		
MLE of Mean	14.82		
MLE of Standard Deviation	5.09		
nu star	356		
Approximate Chi Square Value (.05)	313.2	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0383	95% CLT UCL	16.56
Adjusted Chi Square Value	310.2	95% Jackknife UCL	16.65
		95% Standard Bootstrap UCL	16.51
Anderson-Darling Test Statistic	0.216	95% Bootstrap-t UCL	16.71
Anderson-Darling 5% Critical Value	0.743	95% Hall's Bootstrap UCL	16.77
Kolmogorov-Smirnov Test Statistic	0.101	95% Percentile Bootstrap UCL	16.55
Kolmogorov-Smirnov 5% Critical Value	0.189	95% BCA Bootstrap UCL	16.72
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	19.44
		97.5% Chebyshev(Mean, Sd) UCL	21.43
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	25.36
95% Approximate Gamma UCL (Use when n >= 40)	16.84		
95% Adjusted Gamma UCL (Use when n < 40)	17.01		

Potential UCL to Use		Use 95% Student's-t UCL	16.65

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (zinc)

General Statistics

Number of Valid Observations	19	Number of Distinct Observations	18

Raw Statistics		Log-transformed Statistics	

Minimum	5.1	Minimum of Log Data	1.629
Maximum	61.1	Maximum of Log Data	4.113
Mean	20.67	Mean of log Data	2.619
Geometric Mean	13.73	SD of log Data	0.908
Median	9.2		
SD	19.98		
Std. Error of Mean	4.583		
Coefficient of Variation	0.966		
Skewness	1.234		

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.753	Shapiro Wilk Test Statistic	0.862
Shapiro Wilk Critical Value	0.901	Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	28.62	95% H-UCL	35.28
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	40.25
95% Adjusted-CLT UCL (Chen-1995)	29.59	97.5% Chebyshev (MVUE) UCL	48.95
95% Modified-t UCL (Johnson-1978)	28.83	99% Chebyshev (MVUE) UCL	66.05
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	1.184	Data do not follow a Discernable Distribution (0.05)	
Theta Star	17.46		
MLE of Mean	20.67		
MLE of Standard Deviation	19		
nu star	44.98		
Approximate Chi Square Value (.05)	30.6	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0369	95% CLT UCL	28.21
Adjusted Chi Square Value	29.56	95% Jackknife UCL	28.62
		95% Standard Bootstrap UCL	27.98
Anderson-Darling Test Statistic	1.241	95% Bootstrap-t UCL	31.06
Anderson-Darling 5% Critical Value	0.76	95% Hall's Bootstrap UCL	27.98
Kolmogorov-Smirnov Test Statistic	0.228	95% Percentile Bootstrap UCL	28.99
Kolmogorov-Smirnov 5% Critical Value	0.203	95% BCA Bootstrap UCL	29.29
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	40.64
		97.5% Chebyshev(Mean, Sd) UCL	49.29
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	66.27
95% Approximate Gamma UCL (Use when n >= 40)	30.38		
95% Adjusted Gamma UCL (Use when n < 40)	31.45		
Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	40.64

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File	qryProUCL_ForOutput_10bgs_SV.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chemical (1,1,1,2-tetrafluoroethane (freon 134a))

General Statistics

Number of Valid Data	21	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	14
		Percent Non-Detects	66.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.02	Minimum Detected	0.0198
Maximum Detected	35.8	Maximum Detected	3.578
Mean of Detected	7.666	Mean of Detected	1.245
SD of Detected	12.59	SD of Detected	1.231
Minimum Non-Detect	1.34	Minimum Non-Detect	0.293
Maximum Non-Detect	571	Maximum Non-Detect	6.347

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.593	Shapiro Wilk Test Statistic	0.893
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	21.32	Mean	1.193
SD	62.32	SD	1.703
95% DL/2 (t) UCL	44.77	95% H-Stat (DL/2) UCL	56.16
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.441
		SD in Log Scale	0.93
		Mean in Original Scale	3.281
		SD in Original Scale	7.598
		95% t UCL	6.14
		95% Percentile Bootstrap UCL	6.359
		95% BCA Bootstrap UCL	8.51
		95% H-UCL	4.002

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.527	Data appear Gamma Distributed at 5% Significance Level

Theta Star	14.55		
nu star	7.375		
A-D Test Statistic	0.722	Nonparametric Statistics	
5% A-D Critical Value	0.736	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.736	Mean	3.718
5% K-S Critical Value	0.323	SD	7.938
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.025
		95% KM (t) UCL	7.211
Assuming Gamma Distribution		95% KM (z) UCL	7.049
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	7.061
Minimum	0.000001	95% KM (bootstrap t) UCL	25
Maximum	35.8	95% KM (BCA) UCL	8.028
Mean	2.592	95% KM (Percentile Bootstrap) UCL	7.722
Median	0.000001	95% KM (Chebyshev) UCL	12.54
SD	7.816	97.5% KM (Chebyshev) UCL	16.36
k star	0.119	99% KM (Chebyshev) UCL	23.87
Theta star	21.8		
Nu star	4.994	Potential UCLs to Use	
AppChi2	1.149	95% KM (t) UCL	7.211
95% Gamma Approximate UCL (Use when n >= 40)	11.26		
95% Adjusted Gamma UCL (Use when n < 40)	12.73		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1,1-trichloroethane)

General Statistics			
Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.02	Minimum Detected	0.0198
Maximum Detected	8530	Maximum Detected	9.051
Mean of Detected	1446	Mean of Detected	4.639
SD of Detected	2490	SD of Detected	3.148
Minimum Non-Detect	2.24	Minimum Non-Detect	0.806
Maximum Non-Detect	740	Maximum Non-Detect	6.607
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	17
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	80.95%
UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.651	Shapiro Wilk Test Statistic	0.921
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	987.8	Mean	3.971
SD	2115	SD	2.96

95% DL/2 (t) UCL	1784	95% H-Stat (DL/2) UCL	201723
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	3.437
		SD in Log Scale	3.131
		Mean in Original Scale	965.3
		SD in Original Scale	2125
		95% t UCL	1765
		95% Percentile Bootstrap UCL	1757
		95% BCA Bootstrap UCL	2027
		95% H-UCL	308458
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.257	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	5624		
nu star	7.198		
A-D Test Statistic	0.521	**Nonparametric Statistics**	
5% A-D Critical Value	0.846	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.846	Mean	969.7
5% K-S Critical Value	0.25	SD	2072
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	469.2
		95% KM (t) UCL	1779
Assuming Gamma Distribution		95% KM (z) UCL	1741
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1769
Minimum	0.000001	95% KM (bootstrap t) UCL	2305
Maximum	8530	95% KM (BCA) UCL	1937
Mean	963.9	95% KM (Percentile Bootstrap) UCL	1770
Median	6.04	95% KM (Chebyshev) UCL	3015
SD	2125	97.5% KM (Chebyshev) UCL	3900
k star	0.115	99% KM (Chebyshev) UCL	5638
Theta star	8376		
Nu star	4.833	**Potential UCLs to Use**	
AppChi2	1.076	95% KM (BCA) UCL	1937
95% Gamma Approximate UCL (Use when n >= 40)	4330		
95% Adjusted Gamma UCL (Use when n < 40)	4911		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1,2-trichlorotrifluoroethane (freon 113))

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	2.43	Minimum Detected	0.888
Maximum Detected	187	Maximum Detected	5.231
Mean of Detected	33.69	Mean of Detected	2.957
SD of Detected	45.04	SD of Detected	1.116
Minimum Non-Detect	1.33	Minimum Non-Detect	0.285
Maximum Non-Detect	1050	Maximum Non-Detect	6.957

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.6	Shapiro Wilk Test Statistic	0.963
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	57.51	Mean	2.967
SD	115.4	SD	1.571
95% DL/2 (t) UCL	100.9	95% H-Stat (DL/2) UCL	222.5
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.67
		SD in Log Scale	1.167
		Mean in Original Scale	26.86
		SD in Original Scale	39.39
		95% t UCL	41.69
		95% Percentile Bootstrap UCL	41.81
		95% BCA Bootstrap UCL	51.96
		95% H-UCL	59.27
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.867	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	38.88		
nu star	26		
A-D Test Statistic	0.431	**Nonparametric Statistics**	
5% A-D Critical Value	0.763	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.763	Mean	28.98
5% K-S Critical Value	0.228	SD	40.26
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	9.645
		95% KM (t) UCL	45.62
Assuming Gamma Distribution		95% KM (z) UCL	44.85
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	45.43
Minimum	0.000001	95% KM (bootstrap t) UCL	65.63
Maximum	187	95% KM (BCA) UCL	47.2
Mean	28.4	95% KM (Percentile Bootstrap) UCL	45.3
Median	21.07	95% KM (Chebyshev) UCL	71.03
SD	39.1	97.5% KM (Chebyshev) UCL	89.22
k star	0.327	99% KM (Chebyshev) UCL	125
Theta star	86.78		
Nu star	13.75	Potential UCLs to Use	
AppChi2	6.398	95% KM (Chebyshev) UCL	71.03
95% Gamma Approximate UCL (Use when n >= 40)	61.02		
95% Adjusted Gamma UCL (Use when n < 40)	64.9		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1-dichloroethane)

General Statistics

Number of Valid Data	21	Number of Detected Data	17
Number of Distinct Detected Data	17	Number of Non-Detect Data	4
		Percent Non-Detects	19.05%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	5.01	Minimum Detected	1.611
Maximum Detected	607	Maximum Detected	6.409
Mean of Detected	169.5	Mean of Detected	4.27
SD of Detected	175.6	SD of Detected	1.644
Minimum Non-Detect	28.6	Minimum Non-Detect	3.353
Maximum Non-Detect	554	Maximum Non-Detect	6.317
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	1
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	95.24%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.863	Shapiro Wilk Test Statistic	0.884
5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	154.8	Mean	4.186
SD	167.2	SD	1.57
95% DL/2 (t) UCL	217.8	95% H-Stat (DL/2) UCL	750.6
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	4.041
		SD in Log Scale	1.564
		Mean in Original Scale	141.9
		SD in Original Scale	167.7
		95% t UCL	205
		95% Percentile Bootstrap UCL	202.8
		95% BCA Bootstrap UCL	220.1
		95% H-UCL	637.4
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.616	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	275.2		
nu star	20.94		
A-D Test Statistic	0.531	**Nonparametric Statistics**	
5% A-D Critical Value	0.781	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.781	Mean	145.4
5% K-S Critical Value	0.218	SD	165.1
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	37.79
		95% KM (t) UCL	210.6
Assuming Gamma Distribution		95% KM (z) UCL	207.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	210.3
Minimum	0.000001	95% KM (bootstrap t) UCL	228.7
Maximum	607	95% KM (BCA) UCL	209.1
Mean	142.2	95% KM (Percentile Bootstrap) UCL	205.2
Median	99.8	95% KM (Chebyshev) UCL	310.1
SD	168.5	97.5% KM (Chebyshev) UCL	381.4

k star	0.268	99% KM (Chebyshev) UCL	521.4
Theta star	530.1		
Nu star	11.26	Potential UCLs to Use	
AppChi2	4.746	95% KM (Chebyshev) UCL	310.1
95% Gamma Approximate UCL (Use when n >= 40)	337.4		
95% Adjusted Gamma UCL (Use when n < 40)	361.9		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,1-dichloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	17
Number of Distinct Detected Data	17	Number of Non-Detect Data	4
		Percent Non-Detects	19.05%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.26	Minimum Detected	0.231
Maximum Detected	3690	Maximum Detected	8.213
Mean of Detected	599.5	Mean of Detected	4.391
SD of Detected	1066	SD of Detected	2.458
Minimum Non-Detect	33.4	Minimum Non-Detect	3.509
Maximum Non-Detect	647	Maximum Non-Detect	6.472

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	17
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	4
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	80.95%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.634	Shapiro Wilk Test Statistic	0.963
5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	505.9	Mean	4.313
SD	975.7	SD	2.265
95% DL/2 (t) UCL	873.1	95% H-Stat (DL/2) UCL	9977
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	2410	Mean in Log Scale	4.069
SD	1018	SD in Log Scale	2.313
95% MLE (t) UCL	2793	Mean in Original Scale	488.5
95% MLE (Tiku) UCL	3271	SD in Original Scale	982.2
		95% t UCL	858.2
		95% Percentile Bootstrap UCL	860
		95% BCA Bootstrap UCL	987.7
		95% H UCL	9548

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.317	Data appear Gamma Distributed at 5% Significance Level
Theta Star	1891	
nu star	10.78	

A-D Test Statistic	0.521	**Nonparametric Statistics**	
5% A-D Critical Value	0.834	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.834	Mean	492.5
5% K-S Critical Value	0.226	SD	957.2
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	215.4
		95% KM (t) UCL	864
Assuming Gamma Distribution		95% KM (z) UCL	846.8
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	861.8
Minimum	0.000001	95% KM (bootstrap t) UCL	1321
Maximum	3690	95% KM (BCA) UCL	872.7
Mean	485.3	95% KM (Percentile Bootstrap) UCL	885.9
Median	31	95% KM (Chebyshev) UCL	1431
SD	983.8	97.5% KM (Chebyshev) UCL	1838
k star	0.157	99% KM (Chebyshev) UCL	2636
Theta star	3084		
Nu star	6.61	**Potential UCLs to Use**	
AppChi2	1.959	95% KM (Chebyshev) UCL	1431
95% Gamma Approximate UCL (Use when n >= 40)	1637		
95% Adjusted Gamma UCL (Use when n < 40)	1811		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1,2-dichloroethane)

General Statistics

Number of Valid Data	21	Number of Detected Data	6
Number of Distinct Detected Data	6	Number of Non-Detect Data	15
		Percent Non-Detects	71.43%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.95	Minimum Detected	0.668
Maximum Detected	50	Maximum Detected	3.912
Mean of Detected	17.15	Mean of Detected	2.249
SD of Detected	18.98	SD of Detected	1.251
Minimum Non-Detect	0.7	Minimum Non-Detect	-0.357
Maximum Non-Detect	554	Maximum Non-Detect	6.317

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 6 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.829	Shapiro Wilk Test Statistic	0.963
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	23.25	Mean	1.396
SD	60.43	SD	1.846
95% DL/2 (t) UCL	45.99	95% H-Stat (DL/2) UCL	110.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.0851
		SD in Log Scale	1.595
		Mean in Original Scale	5.268
		SD in Original Scale	12.22
		95% t UCL	9.868
		95% Percentile Bootstrap UCL	10.2
		95% BCA Bootstrap UCL	12.22
		95% H-UCL	13.37
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.6	Data appear Normal at 5% Significance Level	
Theta Star	28.6		
nu star	7.195		
A-D Test Statistic	0.273	**Nonparametric Statistics**	
5% A-D Critical Value	0.716	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.716	Mean	6.986
5% K-S Critical Value	0.341	SD	12.07
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	3.065
		95% KM (t) UCL	12.27
Assuming Gamma Distribution		95% KM (z) UCL	12.03
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	11.48
Minimum	0.000001	95% KM (bootstrap t) UCL	22.1
Maximum	50	95% KM (BCA) UCL	16.33
Mean	4.9	95% KM (Percentile Bootstrap) UCL	13.99
Median	0.000001	95% KM (Chebyshev) UCL	20.34
SD	12.37	97.5% KM (Chebyshev) UCL	26.12
k star	0.0981	99% KM (Chebyshev) UCL	37.48
Theta star	49.94		
Nu star	4.12	**Potential UCLs to Use**	
AppChi2	0.77	95% KM (t) UCL	12.27
95% Gamma Approximate UCL (Use when n >= 40)	26.22	95% KM (Percentile Bootstrap) UCL	13.99
95% Adjusted Gamma UCL (Use when n < 40)	30.17		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (1-butene/isobutene)

General Statistics			
Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	18	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.726	Minimum Detected	-0.32
Maximum Detected	760	Maximum Detected	6.633

Mean of Detected	270.8	Mean of Detected	4.223
SD of Detected	266.2	SD of Detected	2.389
Minimum Non-Detect	72.6	Minimum Non-Detect	4.285
Maximum Non-Detect	341	Maximum Non-Detect	5.832

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	14
Number treated as Detected	7
Single DL Non-Detect Percentage	66.67%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.873	Shapiro Wilk Test Statistic	0.827
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	254.9	Mean	4.237
SD	258.4	SD	2.28
95% DL/2 (t) UCL	352.1	95% H-Stat (DL/2) UCL	9834
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	216.7	Mean in Log Scale	4.061
SD	314.1	SD in Log Scale	2.328
95% MLE (t) UCL	334.9	Mean in Original Scale	246.3
95% MLE (Tiku) UCL	404.8	SD in Original Scale	264.1
		95% t UCL	345.7
		95% Percentile Bootstrap UCL	339.5
		95% BCA Bootstrap UCL	340.5
		95% H UCL	10131

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.427	Data Follow Appr. Gamma Distribution at 5% Significance Level
Theta Star	633.5	
nu star	16.24	

		Nonparametric Statistics	
A-D Test Statistic	1.145	Kaplan-Meier (KM) Method	
5% A-D Critical Value	0.81	Mean	249.5
K-S Test Statistic	0.81	SD	256.6
5% K-S Critical Value	0.211	SE of Mean	57.8
Data follow Appr. Gamma Distribution at 5% Significance Level		95% KM (t) UCL	349.2
Assuming Gamma Distribution		95% KM (z) UCL	344.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	349
Minimum	0.726	95% KM (bootstrap t) UCL	358.4
Maximum	760	95% KM (BCA) UCL	345.2
Mean	248.2	95% KM (Percentile Bootstrap) UCL	344.1
Median	182	95% KM (Chebyshev) UCL	501.4
SD	262.6	97.5% KM (Chebyshev) UCL	610.5
k star	0.428	99% KM (Chebyshev) UCL	824.6
Theta star	579.7		
Nu star	17.98	Potential UCLs to Use	
AppChi2	9.377	95% KM (Chebyshev) UCL	501.4
95% Gamma Approximate UCL (Use when n >= 40)	475.9		
95% Adjusted Gamma UCL (Use when n < 40)	501.4		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (2-butanone (mek))

General Statistics

Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.78	Minimum Detected	0.577
Maximum Detected	303000	Maximum Detected	12.62
Mean of Detected	24320	Mean of Detected	4.131
SD of Detected	80752	SD of Detected	3.67
Minimum Non-Detect	2.36	Minimum Non-Detect	0.859
Maximum Non-Detect	54.7	Maximum Non-Detect	4.002

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	17
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	80.95%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.346	Shapiro Wilk Test Statistic	0.8
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	16215	Mean	2.965
SD	66155	SD	3.468
95% DL/2 (t) UCL	41113	95% H-Stat (DL/2) UCL	1496468
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	2.143
		SD in Log Scale	4.181
		Mean in Original Scale	16214
		SD in Original Scale	66155
		95% t UCL	41112
		95% Percentile Bootstrap UCL	43497
		95% BCA Bootstrap UCL	61072
		95% H-UCL	99972915

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.151	Data do not follow a Discernable Distribution (0.05)	
Theta Star	161337		
nu star	4.221		
A-D Test Statistic	2.388	**Nonparametric Statistics**	
5% A-D Critical Value	0.897	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.897	Mean	16214
5% K-S Critical Value	0.256	SD	64561
Data not Gamma Distributed at 5% Significance Level		SE of Mean	14620
		95% KM (t) UCL	41430
Assuming Gamma Distribution		95% KM (z) UCL	40262
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	41112

Minimum	0.000001	95% KM (bootstrap t) UCL	2936285
Maximum	303000	95% KM (BCA) UCL	44969
Mean	16213	95% KM (Percentile Bootstrap) UCL	43418
Median	7.25	95% KM (Chebyshev) UCL	79942
SD	66155	97.5% KM (Chebyshev) UCL	107517
k star	0.0943	99% KM (Chebyshev) UCL	161683
Theta star	171907		
Nu star	3.961	Potential UCLs to Use	
AppChi2	0.706	99% KM (Chebyshev) UCL	161683
95% Gamma Approximate UCL (Use when n >= 40)	90914		
95% Adjusted Gamma UCL (Use when n < 40)	104980		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (2-propanol)

General Statistics

Number of Valid Data	21	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	14
		Percent Non-Detects	66.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.739	Minimum Detected	-0.302
Maximum Detected	5.07	Maximum Detected	1.623
Mean of Detected	2.188	Mean of Detected	0.582
SD of Detected	1.502	SD of Detected	0.694
Minimum Non-Detect	0.445	Minimum Non-Detect	-0.81
Maximum Non-Detect	367	Maximum Non-Detect	5.905

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.873	Shapiro Wilk Test Statistic	0.939
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	12.82	Mean	0.665
SD	40.04	SD	1.651
95% DL/2 (t) UCL	27.89	95% H-Stat (DL/2) UCL	28.25
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-0.0676

SD in Log Scale	0.678
Mean in Original Scale	1.207
SD in Original Scale	1.102
95% t UCL	1.622
95% Percentile Bootstrap UCL	1.614
95% BCA Bootstrap UCL	1.739
95% H-UCL	1.634

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.602	Data appear Normal at 5% Significance Level	
Theta Star	1.366		
nu star	22.43		
A-D Test Statistic	0.316	Nonparametric Statistics	
5% A-D Critical Value	0.713	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.713	Mean	1.419
5% K-S Critical Value	0.314	SD	1.161
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.318
		95% KM (t) UCL	1.967
Assuming Gamma Distribution		95% KM (z) UCL	1.942
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1.927
Minimum	0.000001	95% KM (bootstrap t) UCL	2.21
Maximum	5.07	95% KM (BCA) UCL	2.432
Mean	1.042	95% KM (Percentile Bootstrap) UCL	2.176
Median	0.887	95% KM (Chebyshev) UCL	2.805
SD	1.22	97.5% KM (Chebyshev) UCL	3.404
k star	0.196	99% KM (Chebyshev) UCL	4.582
Theta star	5.324		
Nu star	8.218	Potential UCLs to Use	
AppChi2	2.862	95% KM (t) UCL	1.967
95% Gamma Approximate UCL (Use when n >= 40)	2.991	95% KM (Percentile Bootstrap) UCL	2.176
95% Adjusted Gamma UCL (Use when n < 40)	3.262		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (acetaldehyde)

General Statistics

Number of Valid Data	21	Number of Detected Data	16
Number of Distinct Detected Data	16	Number of Non-Detect Data	5
		Percent Non-Detects	23.81%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	9.92	Minimum Detected	2.295
Maximum Detected	129	Maximum Detected	4.86
Mean of Detected	38.66	Mean of Detected	3.224
SD of Detected	41.04	SD of Detected	0.893
Minimum Non-Detect	10.7	Minimum Non-Detect	2.37
Maximum Non-Detect	855	Maximum Non-Detect	6.751

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.685	Shapiro Wilk Test Statistic	0.811
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	55.59	Mean	3.331
SD	92.89	SD	1.074
95% DL/2 (t) UCL	90.55	95% H-Stat (DL/2) UCL	94.5
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	3.098
		SD in Log Scale	0.847
		Mean in Original Scale	33.37
		SD in Original Scale	36.96
		95% t UCL	47.28
		95% Percentile Bootstrap UCL	47.85
		95% BCA Bootstrap UCL	49.86
		95% H-UCL	49.65
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	1.099	Data do not follow a Discernable Distribution (0.05)	
Theta Star	35.18		
nu star	35.17		
A-D Test Statistic	1.775	**Nonparametric Statistics**	
5% A-D Critical Value	0.758	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.758	Mean	34.48
5% K-S Critical Value	0.22	SD	37.35
Data not Gamma Distributed at 5% Significance Level		SE of Mean	8.792
		95% KM (t) UCL	49.65
Assuming Gamma Distribution		95% KM (z) UCL	48.95
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	49.54
Minimum	0.000001	95% KM (bootstrap t) UCL	55.71
Maximum	129	95% KM (BCA) UCL	49.78
Mean	34.64	95% KM (Percentile Bootstrap) UCL	49.08
Median	21.72	95% KM (Chebyshev) UCL	72.81
SD	36.79	97.5% KM (Chebyshev) UCL	89.39
k star	0.509	99% KM (Chebyshev) UCL	122
Theta star	68.03		
Nu star	21.39	Potential UCLs to Use	
AppChi2	11.88	95% KM (BCA) UCL	49.78
95% Gamma Approximate UCL (Use when n >= 40)	62.37		
95% Adjusted Gamma UCL (Use when n < 40)	65.36		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (acetone)

General Statistics

Number of Valid Observations	21	Number of Distinct Observations	21

Raw Statistics		Log-transformed Statistics	
Minimum	5.48	Minimum of Log Data	1.701
Maximum	125000	Maximum of Log Data	11.74
Mean	6625	Mean of log Data	4.016
Geometric Mean	55.5	SD of log Data	2.53
Median	27		
SD	27265		
Std. Error of Mean	5950		
Coefficient of Variation	4.115		
Skewness	4.509		

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.261	Shapiro Wilk Test Statistic	0.774
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	16887	95% H-UCL	23973
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	3386
95% Adjusted-CLT UCL (Chen-1995)	22666	97.5% Chebyshev (MVUE) UCL	4485
95% Modified-t UCL (Johnson-1978)	17862	99% Chebyshev (MVUE) UCL	6642
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	0.168	Data do not follow a Discernable Distribution (0.05)	
Theta Star	39366		
MLE of Mean	6625		
MLE of Standard Deviation	16149		
nu star	7.068		
Approximate Chi Square Value (.05)	2.208	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0383	95% CLT UCL	16411
Adjusted Chi Square Value	2.005	95% Jackknife UCL	16887
		95% Standard Bootstrap UCL	16081
Anderson-Darling Test Statistic	4.527	95% Bootstrap-t UCL	1614914
Anderson-Darling 5% Critical Value	0.906	95% Hall's Bootstrap UCL	1163862
Kolmogorov-Smirnov Test Statistic	0.394	95% Percentile Bootstrap UCL	18487
Kolmogorov-Smirnov 5% Critical Value	0.211	95% BCA Bootstrap UCL	24508
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	32559
		97.5% Chebyshev(Mean, Sd) UCL	43781
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	65824
95% Approximate Gamma UCL (Use when n >= 40)	21207		
95% Adjusted Gamma UCL (Use when n < 40)	23351		
Potential UCL to Use		Use 99% Chebyshev (Mean, Sd) UCL	65824

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Chemical (acetylene)

General Statistics

Number of Valid Data	21	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	12
		Percent Non-Detects	57.14%

Raw Statistics

Log-transformed Statistics

Minimum Detected	0.71	Minimum Detected	-0.342
Maximum Detected	5.13	Maximum Detected	1.635
Mean of Detected	2.501	Mean of Detected	0.743
SD of Detected	1.487	SD of Detected	0.65
Minimum Non-Detect	0.36	Minimum Non-Detect	-1.022
Maximum Non-Detect	279	Maximum Non-Detect	5.631

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.936	Shapiro Wilk Test Statistic	0.969
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	10.26	Mean	0.736
SD	30.3	SD	1.569
95% DL/2 (t) UCL	21.67	95% H-Stat (DL/2) UCL	23.73
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.195
		SD in Log Scale	0.702
		Mean in Original Scale	1.565
		SD in Original Scale	1.276
		95% t UCL	2.045
		95% Percentile Bootstrap UCL	2.031
		95% BCA Bootstrap UCL	2.139
		95% H-UCL	2.196
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	2.097	Data appear Normal at 5% Significance Level	
Theta Star	1.193		
nu star	37.75		
A-D Test Statistic	0.182	**Nonparametric Statistics**	
5% A-D Critical Value	0.727	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.727	Mean	1.766
5% K-S Critical Value	0.281	SD	1.341
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.357
		95% KM (t) UCL	2.382
Assuming Gamma Distribution		95% KM (z) UCL	2.354
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2.326
Minimum	0.000001	95% KM (bootstrap t) UCL	2.494
Maximum	5.13	95% KM (BCA) UCL	2.72
Mean	1.369	95% KM (Percentile Bootstrap) UCL	2.527
Median	1.138	95% KM (Chebyshev) UCL	3.324
SD	1.429	97.5% KM (Chebyshev) UCL	3.998

k star	0.218	99% KM (Chebyshev) UCL	5.322
Theta star	6.285		
Nu star	9.145	Potential UCLs to Use	
AppChi2	3.415	95% KM (t) UCL	2.382
95% Gamma Approximate UCL (Use when n >= 40)	3.665	95% KM (Percentile Bootstrap) UCL	2.527
95% Adjusted Gamma UCL (Use when n < 40)	3.973		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (benzene)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.513	Minimum Detected	-0.667
Maximum Detected	22.9	Maximum Detected	3.131
Mean of Detected	6.278	Mean of Detected	1.29
SD of Detected	6.423	SD of Detected	1.167
Minimum Non-Detect	0.4	Minimum Non-Detect	-0.916
Maximum Non-Detect	330	Maximum Non-Detect	5.799

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.828	Shapiro Wilk Test Statistic	0.962
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	15	Mean	1.442
SD	35.43	SD	1.623
95% DL/2 (t) UCL	28.33	95% H-Stat (DL/2) UCL	56.41
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.003
		SD in Log Scale	1.204
		Mean in Original Scale	5.014
		SD in Original Scale	5.779
		95% t UCL	7.189
		95% Percentile Bootstrap UCL	7.141
		95% BCA Bootstrap UCL	7.637
		95% H-UCL	12.14

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.884	Data appear Gamma Distributed at 5% Significance Level
Theta Star	7.103	
nu star	26.52	

A-D Test Statistic	0.259	**Nonparametric Statistics**	
5% A-D Critical Value	0.762	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.762	Mean	5.487
5% K-S Critical Value	0.228	SD	5.973
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	1.464
		95% KM (t) UCL	8.013
Assuming Gamma Distribution		95% KM (z) UCL	7.896
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	8.008
Minimum	0.000001	95% KM (bootstrap t) UCL	8.968
Maximum	22.9	95% KM (BCA) UCL	8.109
Mean	5.331	95% KM (Percentile Bootstrap) UCL	7.978
Median	4.149	95% KM (Chebyshev) UCL	11.87
SD	5.707	97.5% KM (Chebyshev) UCL	14.63
k star	0.351	99% KM (Chebyshev) UCL	20.06
Theta star	15.17		
Nu star	14.76	Potential UCLs to Use	
AppChi2	7.096	95% KM (Chebyshev) UCL	11.87
95% Gamma Approximate UCL (Use when n >= 40)	11.09		
95% Adjusted Gamma UCL (Use when n < 40)	11.76		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (butane)

General Statistics

Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	18	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.93	Minimum Detected	0.658
Maximum Detected	233	Maximum Detected	5.451
Mean of Detected	65.17	Mean of Detected	3.513
SD of Detected	67.53	SD of Detected	1.385
Minimum Non-Detect	27.6	Minimum Non-Detect	3.318
Maximum Non-Detect	48.2	Maximum Non-Detect	3.875

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	11
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	10
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	52.38%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.805	Shapiro Wilk Test Statistic	0.93
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	60.77	Mean	3.455
SD	65.58	SD	1.329
95% DL/2 (t) UCL	85.45	95% H-Stat (DL/2) UCL	189.3

Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	36.6	Mean in Log Scale	3.392
SD	91.51	SD in Log Scale	1.37
95% MLE (t) UCL	71.05	Mean in Original Scale	59.87
95% MLE (Tiku) UCL	80.43	SD in Original Scale	66.22
		95% t UCL	84.8
		95% Percentile Bootstrap UCL	83.77
		95% BCA Bootstrap UCL	87.95
		95% H UCL	196.7
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.779	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	83.69		
nu star	29.59		
A-D Test Statistic	0.315	**Nonparametric Statistics**	
5% A-D Critical Value	0.774	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.774	Mean	60.04
5% K-S Critical Value	0.205	SD	64.58
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	14.5
		95% KM (t) UCL	85.05
Assuming Gamma Distribution		95% KM (z) UCL	83.89
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	84.99
Minimum	0.000001	95% KM (bootstrap t) UCL	97.08
Maximum	233	95% KM (BCA) UCL	82.52
Mean	59.33	95% KM (Percentile Bootstrap) UCL	84.25
Median	44.1	95% KM (Chebyshev) UCL	123.2
SD	66.68	97.5% KM (Chebyshev) UCL	150.6
k star	0.411	99% KM (Chebyshev) UCL	204.3
Theta star	144.5		
Nu star	17.25	**Potential UCLs to Use**	
AppChi2	8.848	95% KM (Chebyshev) UCL	123.2
95% Gamma Approximate UCL (Use when n >= 40)	115.6		
95% Adjusted Gamma UCL (Use when n < 40)	122		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (butyraldehyde)

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.84	Minimum Detected	0.61
Maximum Detected	15.6	Maximum Detected	2.747
Mean of Detected	5.384	Mean of Detected	1.361
SD of Detected	5.741	SD of Detected	0.811
Minimum Non-Detect	3.26	Minimum Non-Detect	1.182
Maximum Non-Detect	1390	Maximum Non-Detect	7.237

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),

Number treated as Non-Detect	21
Number treated as Detected	0

Observations < Largest ND are treated as NDs

Single DL Non-Detect Percentage 100.00%

Warning: There are only 5 Detected Values in this data

Note: It should be noted that even though bootstrap may be performed on this data set

the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.647	Shapiro Wilk Test Statistic	0.798
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	47.51	Mean	1.839
SD	151.9	SD	1.656
95% DL/2 (t) UCL	104.7	95% H-Stat (DL/2) UCL	92.68
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.146
		SD in Log Scale	0.386
		Mean in Original Scale	3.526
		SD in Original Scale	2.783
		95% t UCL	4.573
		95% Percentile Bootstrap UCL	4.725
		95% BCA Bootstrap UCL	5.358
		95% H-UCL	3.989
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.812	Data appear Lognormal at 5% Significance Level	
Theta Star	6.627		
nu star	8.125		
A-D Test Statistic	0.815	**Nonparametric Statistics**	
5% A-D Critical Value	0.686	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.686	Mean	3.646
5% K-S Critical Value	0.361	SD	3.245
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.972
		95% KM (t) UCL	5.323
Assuming Gamma Distribution		95% KM (z) UCL	5.245
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	5.262
Minimum	1.84	95% KM (bootstrap t) UCL	8.783
Maximum	15.6	95% KM (BCA) UCL	5.279
Mean	4.082	95% KM (Percentile Bootstrap) UCL	5.487
Median	3.588	95% KM (Chebyshev) UCL	7.883
SD	2.695	97.5% KM (Chebyshev) UCL	9.717
k star	4.649	99% KM (Chebyshev) UCL	13.32
Theta star	0.878		
Nu star	195.3	Potential UCLs to Use	
AppChi2	163.9	95% KM (t) UCL	5.323
95% Gamma Approximate UCL (Use when n >= 40)	4.863	95% KM (% Bootstrap) UCL	5.487
95% Adjusted Gamma UCL (Use when n < 40)	4.929		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (carbon disulfide)

General Statistics

Number of Valid Data	21	Number of Detected Data	8
Number of Distinct Detected Data	8	Number of Non-Detect Data	13
		Percent Non-Detects	61.90%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.84	Minimum Detected	0.61
Maximum Detected	1600	Maximum Detected	7.378
Mean of Detected	223.6	Mean of Detected	3.364
SD of Detected	556.5	SD of Detected	2.011
Minimum Non-Detect	1.76	Minimum Non-Detect	0.565
Maximum Non-Detect	1450	Maximum Non-Detect	7.279

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	20
Number treated as Detected	1
Single DL Non-Detect Percentage	95.24%

Warning: There are only 8 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.453	Shapiro Wilk Test Statistic	0.923
5% Shapiro Wilk Critical Value	0.818	5% Shapiro Wilk Critical Value	0.818
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	132	Mean	2.404
SD	371.2	SD	2.218
95% DL/2 (t) UCL	271.7	95% H-Stat (DL/2) UCL	1218
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.819
		SD in Log Scale	2.487
		Mean in Original Scale	85.63
		SD in Original Scale	347.4
		95% t UCL	216.4
		95% Percentile Bootstrap UCL	235.9
		95% BCA Bootstrap UCL	321.7
		95% H-UCL	802.3

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.291	Data appear Lognormal at 5% Significance Level
Theta Star	769.7	
nu star	4.649	
A-D Test Statistic	1.047	Nonparametric Statistics

5% A-D Critical Value	0.792	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.792	Mean	88.42
5% K-S Critical Value	0.316	SD	338.5
Data not Gamma Distributed at 5% Significance Level		SE of Mean	78.99
		95% KM (t) UCL	224.7
Assuming Gamma Distribution		95% KM (z) UCL	218.4
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	217.7
Minimum	0.000001	95% KM (bootstrap t) UCL	1916
Maximum	1600	95% KM (BCA) UCL	248.3
Mean	85.19	95% KM (Percentile Bootstrap) UCL	238.6
Median	0.000001	95% KM (Chebyshev) UCL	432.8
SD	347.6	97.5% KM (Chebyshev) UCL	581.7
k star	0.0935	99% KM (Chebyshev) UCL	874.4
Theta star	911.2		
Nu star	3.927	Potential UCLs to Use	
AppChi2	0.693	99% KM (Chebyshev) UCL	874.4
95% Gamma Approximate UCL (Use when n >= 40)	482.7		
95% Adjusted Gamma UCL (Use when n < 40)	557.9		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (carbon tetrachloride)

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.82	Minimum Detected	0.599
Maximum Detected	85.4	Maximum Detected	4.447
Mean of Detected	23.99	Mean of Detected	2.133
SD of Detected	35.76	SD of Detected	1.655
Minimum Non-Detect	1.04	Minimum Non-Detect	0.0392
Maximum Non-Detect	861	Maximum Non-Detect	6.758
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.733	Shapiro Wilk Test Statistic	0.894
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	

DL/2 Substitution Method		DL/2 Substitution Method	
Mean	34.34	Mean	1.627
SD	94.47	SD	1.813
95% DL/2 (t) UCL	69.9	95% H-Stat (DL/2) UCL	124.2
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.473
		SD in Log Scale	1.31
		Mean in Original Scale	6.537
		SD in Original Scale	18.86
		95% t UCL	13.64
		95% Percentile Bootstrap UCL	14.37
		95% BCA Bootstrap UCL	18.82
		95% H-UCL	9.15
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.37	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	64.77		
nu star	3.703		
A-D Test Statistic	0.458	Nonparametric Statistics	
5% A-D Critical Value	0.706	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.706	Mean	7.997
5% K-S Critical Value	0.37	SD	19.09
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	4.925
		95% KM (t) UCL	16.49
Assuming Gamma Distribution		95% KM (z) UCL	16.1
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	15.65
Minimum	0.000001	95% KM (bootstrap t) UCL	102.5
Maximum	85.4	95% KM (BCA) UCL	29.03
Mean	5.711	95% KM (Percentile Bootstrap) UCL	19.01
Median	0.000001	95% KM (Chebyshev) UCL	29.47
SD	19.11	97.5% KM (Chebyshev) UCL	38.76
k star	0.0933	99% KM (Chebyshev) UCL	57
Theta star	61.23		
Nu star	3.918	Potential UCLs to Use	
AppChi2	0.689	95% KM (t) UCL	16.49
95% Gamma Approximate UCL (Use when n >= 40)	32.45		
95% Adjusted Gamma UCL (Use when n < 40)	37.51		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chlorobenzene)

General Statistics			
Number of Valid Data	21	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	14
		Percent Non-Detects	66.67%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.11	Minimum Detected	0.747
Maximum Detected	25	Maximum Detected	3.219
Mean of Detected	9.29	Mean of Detected	1.814
SD of Detected	9.2	SD of Detected	0.975

Minimum Non-Detect	0.771	Minimum Non-Detect	-0.26
Maximum Non-Detect	637	Maximum Non-Detect	6.457
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 7 Detected Values in this data

Note: It should be noted that even though bootstrap may be performed on this data set

the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.781	Shapiro Wilk Test Statistic	0.9
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	24.11	Mean	1.375
SD	69.2	SD	1.823
95% DL/2 (t) UCL	50.15	95% H-Stat (DL/2) UCL	99.8
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.441
		SD in Log Scale	1.199
		Mean in Original Scale	3.683
		SD in Original Scale	6.482
		95% t UCL	6.122
		95% Percentile Bootstrap UCL	6.209
		95% BCA Bootstrap UCL	6.921
		95% H-UCL	6.849
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.865	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	10.74		
nu star	12.11		
A-D Test Statistic	0.509	**Nonparametric Statistics**	
5% A-D Critical Value	0.723	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.723	Mean	5.166
5% K-S Critical Value	0.318	SD	6.488
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	1.706
		95% KM (t) UCL	8.108
Assuming Gamma Distribution		95% KM (z) UCL	7.972
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	7.888
Minimum	0.000001	95% KM (bootstrap t) UCL	14.03
Maximum	25	95% KM (BCA) UCL	9.669
Mean	3.097	95% KM (Percentile Bootstrap) UCL	8.556
Median	0.000001	95% KM (Chebyshev) UCL	12.6
SD	6.747	97.5% KM (Chebyshev) UCL	15.82
k star	0.105	99% KM (Chebyshev) UCL	22.14
Theta star	29.59		
Nu star	4.396	Potential UCLs to Use	
AppChi2	0.884	95% KM (t) UCL	8.108

95% Gamma Approximate UCL (Use when n >= 40)	15.4
95% Adjusted Gamma UCL (Use when n < 40)	17.61

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chlorodifluoromethane (freon 22))

General Statistics

Number of Valid Data	21	Number of Detected Data	7
Number of Distinct Detected Data	7	Number of Non-Detect Data	14
		Percent Non-Detects	66.67%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.61	Minimum Detected	0.476
Maximum Detected	8.99	Maximum Detected	2.196
Mean of Detected	3.43	Mean of Detected	1.053
SD of Detected	2.582	SD of Detected	0.605
Minimum Non-Detect	2.12	Minimum Non-Detect	0.751
Maximum Non-Detect	902	Maximum Non-Detect	6.805

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 7 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.716	Shapiro Wilk Test Statistic	0.861
5% Shapiro Wilk Critical Value	0.803	5% Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	31.01	Mean	1.507
SD	98.53	SD	1.605
95% DL/2 (t) UCL	68.09	95% H-Stat (DL/2) UCL	57.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.781
		SD in Log Scale	0.4
		Mean in Original Scale	2.424
		SD in Original Scale	1.603
		95% t UCL	3.027
		95% Percentile Bootstrap UCL	3.08
		95% BCA Bootstrap UCL	3.381
		95% H-UCL	2.805

Gamma Distribution Test with Detected Values Only	Data Distribution Test with Detected Values Only

k star (bias corrected)	1.778	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	1.93		
nu star	24.89		
A-D Test Statistic	0.616	**Nonparametric Statistics**	
5% A-D Critical Value	0.712	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.712	Mean	2.534
5% K-S Critical Value	0.314	SD	1.847
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	0.518
		95% KM (t) UCL	3.428
Assuming Gamma Distribution		95% KM (z) UCL	3.386
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	3.402
Minimum	0.95	95% KM (bootstrap t) UCL	4.503
Maximum	8.99	95% KM (BCA) UCL	3.746
Mean	2.649	95% KM (Percentile Bootstrap) UCL	3.611
Median	2.602	95% KM (Chebyshev) UCL	4.793
SD	1.59	97.5% KM (Chebyshev) UCL	5.771
k star	4.255	99% KM (Chebyshev) UCL	7.691
Theta star	0.623		
Nu star	178.7	Potential UCLs to Use	
AppChi2	148.8	95% KM (t) UCL	3.428
95% Gamma Approximate UCL (Use when n >= 40)	3.182		
95% Adjusted Gamma UCL (Use when n < 40)	3.227		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chloroethane)

General Statistics

Number of Valid Data	21	Number of Detected Data	17
Number of Distinct Detected Data	17	Number of Non-Detect Data	4
		Percent Non-Detects	19.05%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.835	Minimum Detected	-0.18
Maximum Detected	139	Maximum Detected	4.934
Mean of Detected	36.12	Mean of Detected	2.585
SD of Detected	45.08	SD of Detected	1.686
Minimum Non-Detect	0.772	Minimum Non-Detect	-0.259
Maximum Non-Detect	257	Maximum Non-Detect	5.549
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.768	Shapiro Wilk Test Statistic	0.942
5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	36.99	Mean	2.526

SD	46.51	SD	1.79
95% DL/2 (t) UCL	54.5	95% H-Stat (DL/2) UCL	282.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.275
		SD in Log Scale	1.761
		Mean in Original Scale	30.16
		SD in Original Scale	42.27
		95% t UCL	46.07
		95% Percentile Bootstrap UCL	46.46
		95% BCA Bootstrap UCL	48.86
		95% H-UCL	199.6
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.545	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	66.25		
nu star	18.54		
A-D Test Statistic	0.314	Nonparametric Statistics	
5% A-D Critical Value	0.788	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.788	Mean	31.71
5% K-S Critical Value	0.219	SD	41.92
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	9.706
		95% KM (t) UCL	48.45
Assuming Gamma Distribution		95% KM (z) UCL	47.68
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	48.4
Minimum	0.000001	95% KM (bootstrap t) UCL	56.09
Maximum	139	95% KM (BCA) UCL	48.63
Mean	30.75	95% KM (Percentile Bootstrap) UCL	47.14
Median	10.9	95% KM (Chebyshev) UCL	74.02
SD	42.07	97.5% KM (Chebyshev) UCL	92.33
k star	0.28	99% KM (Chebyshev) UCL	128.3
Theta star	109.7		
Nu star	11.77	Potential UCLs to Use	
AppChi2	5.078	95% KM (Chebyshev) UCL	74.02
95% Gamma Approximate UCL (Use when n >= 40)	71.3		
95% Adjusted Gamma UCL (Use when n < 40)	76.33		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chloroform)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.46	Minimum Detected	1.495
Maximum Detected	1090	Maximum Detected	6.994
Mean of Detected	242.9	Mean of Detected	4.368
SD of Detected	338.6	SD of Detected	1.696
Minimum Non-Detect	2.06	Minimum Non-Detect	0.723
Maximum Non-Detect	668	Maximum Non-Detect	6.504

APPENDIX F
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Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	18
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	85.71%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.729	Shapiro Wilk Test Statistic	0.96
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	195	Mean	3.963
SD	300.8	SD	1.859
95% DL/2 (t) UCL	308.2	95% H-Stat (DL/2) UCL	1502
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	292.3	Mean in Log Scale	3.711
SD	346.6	SD in Log Scale	1.869
95% MLE (t) UCL	422.8	Mean in Original Scale	177
95% MLE (Tiku) UCL	708.7	SD in Original Scale	302.8
		95% t UCL	291
		95% Percentile Bootstrap UCL	291.2
		95% BCA Bootstrap UCL	322.9
		95% H UCL	1205
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.489	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	496.8		
nu star	14.67		
A-D Test Statistic	0.554	**Nonparametric Statistics**	
5% A-D Critical Value	0.789	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.789	Mean	180.6
5% K-S Critical Value	0.233	SD	295.1
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	66.98
		95% KM (t) UCL	296.1
Assuming Gamma Distribution		95% KM (z) UCL	290.8
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	294.3
Minimum	0.000001	95% KM (bootstrap t) UCL	385.7
Maximum	1090	95% KM (BCA) UCL	297.9
Mean	173.7	95% KM (Percentile Bootstrap) UCL	301.2
Median	28	95% KM (Chebyshev) UCL	472.6
SD	304.7	97.5% KM (Chebyshev) UCL	598.9
k star	0.157	99% KM (Chebyshev) UCL	847.1
Theta star	1103		
Nu star	6.614	Potential UCLs to Use	
AppChi2	1.961	95% KM (Chebyshev) UCL	472.6
95% Gamma Approximate UCL (Use when n >= 40)	585.9		
95% Adjusted Gamma UCL (Use when n < 40)	648.1		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (chloromethane)

General Statistics

Number of Valid Data	21	Number of Detected Data	16
Number of Distinct Detected Data	16	Number of Non-Detect Data	5
		Percent Non-Detects	23.81%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.323	Minimum Detected	-1.13
Maximum Detected	70.9	Maximum Detected	4.261
Mean of Detected	12.22	Mean of Detected	1.293
SD of Detected	19.69	SD of Detected	1.704
Minimum Non-Detect	0.72	Minimum Non-Detect	-0.329
Maximum Non-Detect	230	Maximum Non-Detect	5.438

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.654	Shapiro Wilk Test Statistic	0.947
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	16.43	Mean	1.439
SD	28.66	SD	1.805
95% DL/2 (t) UCL	27.22	95% H-Stat (DL/2) UCL	100.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.053
		SD in Log Scale	1.584
		Mean in Original Scale	9.705
		SD in Original Scale	17.67
		95% t UCL	16.36
		95% Percentile Bootstrap UCL	16.92
		95% BCA Bootstrap UCL	18.79
		95% H-UCL	34.06

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.465	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	26.27		
nu star	14.89		
A-D Test Statistic	0.615	**Nonparametric Statistics**	
5% A-D Critical Value	0.794	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.794	Mean	10.36
5% K-S Critical Value	0.227	SD	17.7
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	4.137
		95% KM (t) UCL	17.49
Assuming Gamma Distribution		95% KM (z) UCL	17.16
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	17.46
Minimum	0.000001	95% KM (bootstrap t) UCL	27.25
Maximum	70.9	95% KM (BCA) UCL	17.89
Mean	9.734	95% KM (Percentile Bootstrap) UCL	17.36
Median	2.14	95% KM (Chebyshev) UCL	28.39

SD	17.69	97.5% KM (Chebyshev) UCL	36.19
k star	0.267	99% KM (Chebyshev) UCL	51.52
Theta star	36.49		
Nu star	11.21	Potential UCLs to Use	
AppChi2	4.708	95% KM (Chebyshev) UCL	28.39
95% Gamma Approximate UCL (Use when n >= 40)	23.17		
95% Adjusted Gamma UCL (Use when n < 40)	24.86		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cis-1,2-dichloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.989	Minimum Detected	-0.0111
Maximum Detected	5340	Maximum Detected	8.583
Mean of Detected	922.2	Mean of Detected	4.329
SD of Detected	1790	SD of Detected	2.872
Minimum Non-Detect	1.67	Minimum Non-Detect	0.513
Maximum Non-Detect	543	Maximum Non-Detect	6.297

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	16
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	5
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	76.19%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.557	Shapiro Wilk Test Statistic	0.94
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	676.2	Mean	3.876
SD	1551	SD	2.707
95% DL/2 (t) UCL	1260	95% H-Stat (DL/2) UCL	48934
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	3.423
		SD in Log Scale	2.885
		Mean in Original Scale	660.1
		SD in Original Scale	1557
		95% t UCL	1246
		95% Percentile Bootstrap UCL	1211
		95% BCA Bootstrap UCL	1419
		95% H-UCL	77609

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	0.268	Data appear Gamma Distributed at 5% Significance Level
Theta Star	3442	

nu star	8.038		
A-D Test Statistic	0.553	**Nonparametric Statistics**	
5% A-D Critical Value	0.844	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.844	Mean	662.5
5% K-S Critical Value	0.241	SD	1519
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	343.1
		95% KM (t) UCL	1254
Assuming Gamma Distribution		95% KM (z) UCL	1227
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1248
Minimum	0.000001	95% KM (bootstrap t) UCL	3347
Maximum	5340	95% KM (BCA) UCL	1334
Mean	658.7	95% KM (Percentile Bootstrap) UCL	1238
Median	7.06	95% KM (Chebyshev) UCL	2158
SD	1558	97.5% KM (Chebyshev) UCL	2805
k star	0.125	99% KM (Chebyshev) UCL	4076
Theta star	5251		
Nu star	5.269	Potential UCLs to Use	
AppChi2	1.278	95% KM (Chebyshev) UCL	2158
95% Gamma Approximate UCL (Use when n >= 40)	2715		
95% Adjusted Gamma UCL (Use when n < 40)	3056		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cis-2-butene)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	14	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.415	Minimum Detected	-0.879
Maximum Detected	74.8	Maximum Detected	4.315
Mean of Detected	24.98	Mean of Detected	2.285
SD of Detected	25.48	SD of Detected	1.751
Minimum Non-Detect	0.363	Minimum Non-Detect	-1.013
Maximum Non-Detect	300	Maximum Non-Detect	5.704
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.852	Shapiro Wilk Test Statistic	0.897
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	26.57	Mean	1.802
SD	36.84	SD	2.202
95% DL/2 (t) UCL	40.43	95% H-Stat (DL/2) UCL	624.8

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.557
		SD in Log Scale	1.997
		Mean in Original Scale	18.3
		SD in Original Scale	23.93
		95% t UCL	27.3
		95% Percentile Bootstrap UCL	27.52
		95% BCA Bootstrap UCL	28.75
		95% H-UCL	220.8
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.568	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	44.01		
nu star	17.03		
A-D Test Statistic	0.515	**Nonparametric Statistics**	
5% A-D Critical Value	0.782	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.782	Mean	19.5
5% K-S Critical Value	0.232	SD	23.76
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	5.567
		95% KM (t) UCL	29.1
Assuming Gamma Distribution		95% KM (z) UCL	28.66
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	29
Minimum	0.000001	95% KM (bootstrap t) UCL	31.7
Maximum	74.8	95% KM (BCA) UCL	29.12
Mean	18.69	95% KM (Percentile Bootstrap) UCL	28.77
Median	6.61	95% KM (Chebyshev) UCL	43.77
SD	23.75	97.5% KM (Chebyshev) UCL	54.27
k star	0.201	99% KM (Chebyshev) UCL	74.89
Theta star	92.75		
Nu star	8.461	Potential UCLs to Use	
AppChi2	3.005	95% KM (Chebyshev) UCL	43.77
95% Gamma Approximate UCL (Use when n >= 40)	52.61		
95% Adjusted Gamma UCL (Use when n < 40)	57.28		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (cyclohexane)

	General Statistics		
Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.11	Minimum Detected	0.104
Maximum Detected	420	Maximum Detected	6.04
Mean of Detected	78.57	Mean of Detected	2.432
SD of Detected	142.5	SD of Detected	2.138
Minimum Non-Detect	0.418	Minimum Non-Detect	-0.872
Maximum Non-Detect	345	Maximum Non-Detect	5.844

Note: Data have multiple DLs - Use of KM Method is recommended

Number treated as Non-Detect	19

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Phibro-Tech, Inc. Facility
Santa Fe Springs, California

For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Detected	2
Single DL Non-Detect Percentage	90.48%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.607	Shapiro Wilk Test Statistic	0.878
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	66.16	Mean	1.944
SD	125.7	SD	2.435
95% DL/2 (t) UCL	113.5	95% H-Stat (DL/2) UCL	1946
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.392
		SD in Log Scale	2.587
		Mean in Original Scale	56.36
		SD in Original Scale	124.5
		95% t UCL	103.2
		95% Percentile Bootstrap UCL	103.9
		95% BCA Bootstrap UCL	119
		95% H-UCL	2264
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.323	Data do not follow a Discernable Distribution (0.05)	
Theta Star	243.2		
nu star	9.692		
A-D Test Statistic	1.215	**Nonparametric Statistics**	
5% A-D Critical Value	0.825	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.825	Mean	57.61
5% K-S Critical Value	0.239	SD	121.5
Data not Gamma Distributed at 5% Significance Level		SE of Mean	27.55
		95% KM (t) UCL	105.1
Assuming Gamma Distribution		95% KM (z) UCL	102.9
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	104.7
Minimum	0.000001	95% KM (bootstrap t) UCL	164.8
Maximum	420	95% KM (BCA) UCL	108
Mean	56.12	95% KM (Percentile Bootstrap) UCL	101.5
Median	1.95	95% KM (Chebyshev) UCL	177.7
SD	124.6	97.5% KM (Chebyshev) UCL	229.7
k star	0.14	99% KM (Chebyshev) UCL	331.7
Theta star	401		
Nu star	5.878	**Potential UCLs to Use**	
AppChi2	1.578	99% KM (Chebyshev) UCL	331.7
95% Gamma Approximate UCL (Use when n >= 40)	209.1		
95% Adjusted Gamma UCL (Use when n < 40)	233.3		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (dichlorodifluoromethane (freon 12))

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FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL GAS - PROUCL OUTPUT
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

General Statistics

Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.48	Minimum Detected	0.908
Maximum Detected	9.13	Maximum Detected	2.212
Mean of Detected	3.847	Mean of Detected	1.294
SD of Detected	1.616	SD of Detected	0.309
Minimum Non-Detect	6.41	Minimum Non-Detect	1.858
Maximum Non-Detect	671	Maximum Non-Detect	6.509

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.618	Shapiro Wilk Test Statistic	0.793
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	24.46	Mean	1.829
SD	72.88	SD	1.235
95% DL/2 (t) UCL	51.89	95% H-Stat (DL/2) UCL	29.73
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.288
		SD in Log Scale	0.249
		Mean in Original Scale	3.76
		SD in Original Scale	1.309
		95% t UCL	4.253
		95% Percentile Bootstrap UCL	4.293
		95% BCA Bootstrap UCL	4.508
		95% H-UCL	4.135

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	7.495	Data do not follow a Discernable Distribution (0.05)	
Theta Star	0.513		
nu star	209.9		
A-D Test Statistic	1.331	**Nonparametric Statistics**	
5% A-D Critical Value	0.735	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.735	Mean	3.796
5% K-S Critical Value	0.229	SD	1.475
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.386
		95% KM (t) UCL	4.463
Assuming Gamma Distribution		95% KM (z) UCL	4.432
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	4.466
Minimum	2.48	95% KM (bootstrap t) UCL	5.328
Maximum	9.13	95% KM (BCA) UCL	4.451
Mean	3.904	95% KM (Percentile Bootstrap) UCL	4.515
Median	3.72	95% KM (Chebyshev) UCL	5.481
SD	1.305	97.5% KM (Chebyshev) UCL	6.21
k star	12.07	99% KM (Chebyshev) UCL	7.642

Theta star	0.323		
Nu star	507	Potential UCLs to Use	
AppChi2	455.8	95% KM (BCA) UCL	4.451
95% Gamma Approximate UCL (Use when n >= 40)	4.343		
95% Adjusted Gamma UCL (Use when n < 40)	4.379		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (ethane)

General Statistics

Number of Valid Data	21	Number of Detected Data	20
Number of Distinct Detected Data	20	Number of Non-Detect Data	1
		Percent Non-Detects	4.76%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	20.8	Minimum Detected	3.035
Maximum Detected	881	Maximum Detected	6.781
Mean of Detected	215.9	Mean of Detected	4.806
SD of Detected	230.5	SD of Detected	1.167
Minimum Non-Detect	121	Minimum Non-Detect	4.796
Maximum Non-Detect	121	Maximum Non-Detect	4.796

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.801	Shapiro Wilk Test Statistic	0.948
5% Shapiro Wilk Critical Value	0.905	5% Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	208.5	Mean	4.773
SD	227.2	SD	1.148
95% DL/2 (t) UCL	294	95% H-Stat (DL/2) UCL	465.8
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	91.09	Mean in Log Scale	4.766
SD	348.2	SD in Log Scale	1.153
95% MLE (t) UCL	222.2	Mean in Original Scale	208.1
95% MLE (Tiku) UCL	257.3	SD in Original Scale	227.5
		95% t UCL	293.7
		95% Percentile Bootstrap UCL	295.4
		95% BCA Bootstrap UCL	311.7
		95% H UCL	467.2

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.895	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	241.3		
nu star	35.79		
A-D Test Statistic	0.341	**Nonparametric Statistics**	
5% A-D Critical Value	0.768	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.768	Mean	208.3

5% K-S Critical Value	0.199	SD	222
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	49.73
		95% KM (t) UCL	294.1
Assuming Gamma Distribution		95% KM (z) UCL	290.1
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	294
Minimum	20.8	95% KM (bootstrap t) UCL	332.6
Maximum	881	95% KM (BCA) UCL	301
Mean	207.5	95% KM (Percentile Bootstrap) UCL	292.3
Median	99.4	95% KM (Chebyshev) UCL	425.1
SD	228	97.5% KM (Chebyshev) UCL	518.9
k star	0.88	99% KM (Chebyshev) UCL	703.1
Theta star	235.6		
Nu star	36.98	Potential UCLs to Use	
AppChi2	24.06	95% KM (Chebyshev) UCL	425.1
95% Gamma Approximate UCL (Use when n >= 40)	318.9		
95% Adjusted Gamma UCL (Use when n < 40)	329.9		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (ethanol)

General Statistics

Number of Valid Data	21	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	12
		Percent Non-Detects	57.14%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	2.07	Minimum Detected	0.728
Maximum Detected	60	Maximum Detected	4.094
Mean of Detected	17.99	Mean of Detected	2.236
SD of Detected	23.19	SD of Detected	1.164
Minimum Non-Detect	2.66	Minimum Non-Detect	0.978
Maximum Non-Detect	897	Maximum Non-Detect	6.799

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.66	Shapiro Wilk Test Statistic	0.897
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	37.16	Mean	2.038

SD	97.48	SD	1.665
95% DL/2 (t) UCL	73.85	95% H-Stat (DL/2) UCL	116.4
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.368
		SD in Log Scale	1.126
		Mean in Original Scale	9.016
		SD in Original Scale	16.71
		95% t UCL	15.3
		95% Percentile Bootstrap UCL	14.8
		95% BCA Bootstrap UCL	17.73
		95% H-UCL	14.76
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.671	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	26.83		
nu star	12.07		
A-D Test Statistic	0.83	Nonparametric Statistics	
5% A-D Critical Value	0.747	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.747	Mean	10.37
5% K-S Critical Value	0.288	SD	17.29
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	4.335
		95% KM (t) UCL	17.85
Assuming Gamma Distribution		95% KM (z) UCL	17.5
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	17.22
Minimum	0.000001	95% KM (bootstrap t) UCL	45.04
Maximum	60	95% KM (BCA) UCL	19.49
Mean	7.853	95% KM (Percentile Bootstrap) UCL	18.77
Median	1.008	95% KM (Chebyshev) UCL	29.27
SD	17.21	97.5% KM (Chebyshev) UCL	37.45
k star	0.129	99% KM (Chebyshev) UCL	53.51
Theta star	60.76		
Nu star	5.428	Potential UCLs to Use	
AppChi2	1.355	95% KM (t) UCL	17.85
95% Gamma Approximate UCL (Use when n >= 40)	31.46		
95% Adjusted Gamma UCL (Use when n < 40)	35.33		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (ethene)

General Statistics			
Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	19	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.774	Minimum Detected	-0.256
Maximum Detected	533	Maximum Detected	6.279
Mean of Detected	135.8	Mean of Detected	3.657
SD of Detected	167.6	SD of Detected	2.03
Minimum Non-Detect	24.6	Minimum Non-Detect	3.203
Maximum Non-Detect	46.6	Maximum Non-Detect	3.842

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	11
Number treated as Detected	10
Single DL Non-Detect Percentage	52.38%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.795	Shapiro Wilk Test Statistic	0.931
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	124.5	Mean	3.578
SD	162.9	SD	1.944
95% DL/2 (t) UCL	185.9	95% H-Stat (DL/2) UCL	1377
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	30.93	Mean in Log Scale	3.499
SD	260	SD in Log Scale	1.989
95% MLE (t) UCL	128.8	Mean in Original Scale	123.6
95% MLE (Tiku) UCL	154.8	SD in Original Scale	163.6
		95% t UCL	185.1
		95% Percentile Bootstrap UCL	181.5
		95% BCA Bootstrap UCL	189
		95% H UCL	1498
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.461	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	294.6		
nu star	17.52		
A-D Test Statistic	0.377	**Nonparametric Statistics**	
5% A-D Critical Value	0.802	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.802	Mean	123.8
5% K-S Critical Value	0.21	SD	159.6
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	35.78
		95% KM (t) UCL	185.5
Assuming Gamma Distribution		95% KM (z) UCL	182.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	185.3
Minimum	0.000001	95% KM (bootstrap t) UCL	204.8
Maximum	533	95% KM (BCA) UCL	188.9
Mean	122.9	95% KM (Percentile Bootstrap) UCL	187
Median	29.3	95% KM (Chebyshev) UCL	279.7
SD	164.2	97.5% KM (Chebyshev) UCL	347.2
k star	0.248	99% KM (Chebyshev) UCL	479.7
Theta star	496.2		
Nu star	10.4	Potential UCLs to Use	
AppChi2	4.192	95% KM (Chebyshev) UCL	279.7
95% Gamma Approximate UCL (Use when n >= 40)	304.7		
95% Adjusted Gamma UCL (Use when n < 40)	328.1		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (gro (c5-c10))

General Statistics

Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	3700	Minimum Detected	8.216
Maximum Detected	3500000	Maximum Detected	15.07
Mean of Detected	532457	Mean of Detected	11.34
SD of Detected	959486	SD of Detected	2.358
Minimum Non-Detect	3300	Minimum Non-Detect	8.102
Maximum Non-Detect	3300	Maximum Non-Detect	8.102

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.617	Shapiro Wilk Test Statistic	0.916
5% Shapiro Wilk Critical Value	0.874	5% Shapiro Wilk Critical Value	0.874
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	355521	Mean	10.03
SD	814949	SD	2.689
95% DL/2 (t) UCL	662239	95% H-Stat (DL/2) UCL	21091065
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	88498	Mean in Log Scale	9.38
SD	1043925	SD in Log Scale	3.532
95% MLE (t) UCL	481394	Mean in Original Scale	355139
95% MLE (Tiku) UCL	506997	SD in Original Scale	815123
		95% t UCL	661922
		95% Percentile Bootstrap UCL	671406
		95% BCA Bootstrap UCL	804037
		95% H UCL	1.378E+09
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.333	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	1599029		
nu star	9.324		
A-D Test Statistic	0.486	**Nonparametric Statistics**	
5% A-D Critical Value	0.82	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.82	Mean	356205
5% K-S Critical Value	0.246	SD	795005
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	180033
		95% KM (t) UCL	666711
Assuming Gamma Distribution		95% KM (z) UCL	652333
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	662585
Minimum	0.000001	95% KM (bootstrap t) UCL	1135013
Maximum	3500000	95% KM (BCA) UCL	751286
Mean	354971	95% KM (Percentile Bootstrap) UCL	681667
Median	7000	95% KM (Chebyshev) UCL	1140951
SD	815200	97.5% KM (Chebyshev) UCL	1480512
k star	0.104	99% KM (Chebyshev) UCL	2147512
Theta star	3410094		

Nu star	4.372	Potential UCLs to Use	
AppChi2	0.874	95% KM (BCA) UCL	751286
95% Gamma Approximate UCL (Use when n >= 40)	1775824		
95% Adjusted Gamma UCL (Use when n < 40)	2032101		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (isobutane)

General Statistics

Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	19	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.16	Minimum Detected	1.426
Maximum Detected	143	Maximum Detected	4.963
Mean of Detected	51.02	Mean of Detected	3.446
SD of Detected	43.68	SD of Detected	1.151
Minimum Non-Detect	7.01	Minimum Non-Detect	1.947
Maximum Non-Detect	330	Maximum Non-Detect	5.799

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.892	Shapiro Wilk Test Statistic	0.918
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	54.19	Mean	3.421
SD	49.69	SD	1.253
95% DL/2 (t) UCL	72.89	95% H-Stat (DL/2) UCL	152.3
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	3.362
		SD in Log Scale	1.153
		Mean in Original Scale	47.82
		SD in Original Scale	42.82
		95% t UCL	63.93
		95% Percentile Bootstrap UCL	63.43
		95% BCA Bootstrap UCL	65.46
		95% H-UCL	114.8

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.018	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	50.11		
nu star	38.69		
A-D Test Statistic	0.309	Nonparametric Statistics	

5% A-D Critical Value	0.765	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.765	Mean	48.71
5% K-S Critical Value	0.204	SD	42.65
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	9.799
		95% KM (t) UCL	65.61
Assuming Gamma Distribution		95% KM (z) UCL	64.82
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	65.6
Minimum	0.000001	95% KM (bootstrap t) UCL	69.39
Maximum	143	95% KM (BCA) UCL	65.07
Mean	48.44	95% KM (Percentile Bootstrap) UCL	65.07
Median	40.8	95% KM (Chebyshev) UCL	91.42
SD	42.9	97.5% KM (Chebyshev) UCL	109.9
k star	0.471	99% KM (Chebyshev) UCL	146.2
Theta star	102.9		
Nu star	19.77	Potential UCLs to Use	
AppChi2	10.68	95% KM (Chebyshev) UCL	91.42
95% Gamma Approximate UCL (Use when n >= 40)	89.66		
95% Adjusted Gamma UCL (Use when n < 40)	94.18		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (isopropylbenzene (cumene))

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	6.42	Minimum Detected	1.859
Maximum Detected	2730	Maximum Detected	7.912
Mean of Detected	571.7	Mean of Detected	3.923
SD of Detected	1207	SD of Detected	2.444
Minimum Non-Detect	1.58	Minimum Non-Detect	0.457
Maximum Non-Detect	1300	Maximum Non-Detect	7.17

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	20
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	95.24%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.575	Shapiro Wilk Test Statistic	0.862
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution | **Assuming Lognormal Distribution**

DL/2 Substitution Method		DL/2 Substitution Method	
Mean	175.4	Mean	1.893
SD	602.4	SD	2.292
95% DL/2 (t) UCL	402.2	95% H-Stat (DL/2) UCL	993.9
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-1.578
		SD in Log Scale	3.44
		Mean in Original Scale	136.2
		SD in Original Scale	594.7
		95% t UCL	360
		95% Percentile Bootstrap UCL	394.5
		95% BCA Bootstrap UCL	533.4
		95% H-UCL	13315
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.248	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	2306		
nu star	2.479		
A-D Test Statistic	0.718	Nonparametric Statistics	
5% A-D Critical Value	0.744	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.744	Mean	141.6
5% K-S Critical Value	0.381	SD	579.1
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	141.3
		95% KM (t) UCL	385.3
Assuming Gamma Distribution		95% KM (z) UCL	374
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	362
Minimum	0.000001	95% KM (bootstrap t) UCL	18916
Maximum	2730	95% KM (BCA) UCL	525.7
Mean	136.1	95% KM (Percentile Bootstrap) UCL	403.6
Median	0.000001	95% KM (Chebyshev) UCL	757.5
SD	594.7	97.5% KM (Chebyshev) UCL	1024
k star	0.0826	99% KM (Chebyshev) UCL	1547
Theta star	1648		
Nu star	3.47	Potential UCLs to Use	
AppChi2	0.524	95% KM (t) UCL	385.3
95% Gamma Approximate UCL (Use when n >= 40)	900.9		
95% Adjusted Gamma UCL (Use when n < 40)	1052		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (methanol)

General Statistics			
Number of Valid Data	21	Number of Detected Data	16
Number of Distinct Detected Data	16	Number of Non-Detect Data	5
		Percent Non-Detects	23.81%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	3.37	Minimum Detected	1.215
Maximum Detected	91.4	Maximum Detected	4.515
Mean of Detected	20.91	Mean of Detected	2.374
SD of Detected	27.44	SD of Detected	1.12

Minimum Non-Detect	2.11	Minimum Non-Detect	0.747
Maximum Non-Detect	707	Maximum Non-Detect	6.561

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.682	Shapiro Wilk Test Statistic	0.842
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	37.78	Mean	2.52
SD	77.33	SD	1.436
95% DL/2 (t) UCL	66.88	95% H-Stat (DL/2) UCL	97.58
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.177
		SD in Log Scale	1.124
		Mean in Original Scale	17.38
		SD in Original Scale	24.68
		95% t UCL	26.66
		95% Percentile Bootstrap UCL	27.17
		95% BCA Bootstrap UCL	28.47
		95% H-UCL	33.01
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.757	Data do not follow a Discernable Distribution (0.05)	
Theta Star	27.64		
nu star	24.21		
A-D Test Statistic	1.48	**Nonparametric Statistics**	
5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.769	Mean	18.5
5% K-S Critical Value	0.222	SD	25.09
Data not Gamma Distributed at 5% Significance Level		SE of Mean	5.96
		95% KM (t) UCL	28.78
Assuming Gamma Distribution		95% KM (z) UCL	28.3
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	28.74
Minimum	0.000001	95% KM (bootstrap t) UCL	35.76
Maximum	91.4	95% KM (BCA) UCL	29.67
Mean	17.95	95% KM (Percentile Bootstrap) UCL	29.15
Median	6.78	95% KM (Chebyshev) UCL	44.47
SD	24.58	97.5% KM (Chebyshev) UCL	55.72
k star	0.445	99% KM (Chebyshev) UCL	77.8
Theta star	40.33		
Nu star	18.69	**Potential UCLs to Use**	
AppChi2	9.893	97.5% KM (Chebyshev) UCL	55.72
95% Gamma Approximate UCL (Use when n >= 40)	33.91		
95% Adjusted Gamma UCL (Use when n < 40)	35.68		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (methylene chloride)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	15	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.69	Minimum Detected	0.525
Maximum Detected	192	Maximum Detected	5.257
Mean of Detected	45.38	Mean of Detected	2.821
SD of Detected	61.71	SD of Detected	1.567
Minimum Non-Detect	1.45	Minimum Non-Detect	0.372
Maximum Non-Detect	480	Maximum Non-Detect	6.174

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.717	Shapiro Wilk Test Statistic	0.939
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	47.17	Mean	2.553
SD	69.99	SD	1.877
95% DL/2 (t) UCL	73.51	95% H-Stat (DL/2) UCL	389.8
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.195
		SD in Log Scale	1.792
		Mean in Original Scale	33.44
		SD in Original Scale	55.17
		95% t UCL	54.2
		95% Percentile Bootstrap UCL	54.21
		95% BCA Bootstrap UCL	58.41
		95% H-UCL	204.3

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.539	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	84.16		
nu star	16.18		
A-D Test Statistic	0.622	**Nonparametric Statistics**	
5% A-D Critical Value	0.785	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.785	Mean	35.48
5% K-S Critical Value	0.232	SD	54.67
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	12.71
		95% KM (t) UCL	57.4
Assuming Gamma Distribution		95% KM (z) UCL	56.38
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	57.23
Minimum	0.000001	95% KM (bootstrap t) UCL	69.3
Maximum	192	95% KM (BCA) UCL	56.9

Mean	33.3	95% KM (Percentile Bootstrap) UCL	56.48
Median	12	95% KM (Chebyshev) UCL	90.87
SD	55.31	97.5% KM (Chebyshev) UCL	114.8
k star	0.193	99% KM (Chebyshev) UCL	161.9
Theta star	172.5		
Nu star	8.108	Potential UCLs to Use	
AppChi2	2.797	95% KM (Chebyshev) UCL	90.87
95% Gamma Approximate UCL (Use when n >= 40)	96.52		
95% Adjusted Gamma UCL (Use when n < 40)	105.4		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (naphthalene)

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.8	Minimum Detected	1.569
Maximum Detected	143	Maximum Detected	4.963
Mean of Detected	41.87	Mean of Detected	2.943
SD of Detected	58.21	SD of Detected	1.423
Minimum Non-Detect	1.38	Minimum Non-Detect	0.322
Maximum Non-Detect	247	Maximum Non-Detect	5.509

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.737	Shapiro Wilk Test Statistic	0.924
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	23.16	Mean	1.482
SD	45.4	SD	1.77
95% DL/2 (t) UCL	40.24	95% H-Stat (DL/2) UCL	93.07
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	-0.831
		SD in Log Scale	2.337
		Mean in Original Scale	10.1

SD in Original Scale	31.76
95% t UCL	22.05
95% Percentile Bootstrap UCL	22.8
95% BCA Bootstrap UCL	31.55
95% H-UCL	78.92

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	0.436
Theta Star	96.1
nu star	4.357
A-D Test Statistic	0.371
5% A-D Critical Value	0.698
K-S Test Statistic	0.698
5% K-S Critical Value	0.367

Data appear Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics using Extrapolated Data

Minimum	0.000001
Maximum	143
Mean	9.969
Median	0.000001
SD	31.8
k star	0.0916
Theta star	108.8
Nu star	3.848
AppChi2	0.662
95% Gamma Approximate UCL (Use when n >= 40)	57.9
95% Adjusted Gamma UCL (Use when n < 40)	67.04

Note: DL/2 is not a recommended method.

Data Distribution Test with Detected Values Only

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Statistics

Kaplan-Meier (KM) Method

Mean	14.56
SD	31.3
SE of Mean	8.028
95% KM (t) UCL	28.41
95% KM (z) UCL	27.76
95% KM (jackknife) UCL	26.98
95% KM (bootstrap t) UCL	76.29
95% KM (BCA) UCL	48.44
95% KM (Percentile Bootstrap) UCL	39
95% KM (Chebyshev) UCL	49.55
97.5% KM (Chebyshev) UCL	64.69
99% KM (Chebyshev) UCL	94.44

Potential UCLs to Use

95% KM (t) UCL	28.41

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (n-hexane)

General Statistics

Number of Valid Data	21	Number of Detected Data	13
Number of Distinct Detected Data	13	Number of Non-Detect Data	8
		Percent Non-Detects	38.10%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.646	Minimum Detected	-0.437
Maximum Detected	139	Maximum Detected	4.934
Mean of Detected	24.46	Mean of Detected	1.867
SD of Detected	42.13	SD of Detected	1.755
Minimum Non-Detect	0.529	Minimum Non-Detect	-0.637
Maximum Non-Detect	436	Maximum Non-Detect	6.078

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.629	Shapiro Wilk Test Statistic	0.935
5% Shapiro Wilk Critical Value	0.866	5% Shapiro Wilk Critical Value	0.866
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	28.41	Mean	1.557
SD	55.65	SD	2.046
95% DL/2 (t) UCL	49.35	95% H-Stat (DL/2) UCL	264.7
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.002
		SD in Log Scale	1.894
		Mean in Original Scale	15.55
		SD in Original Scale	34.66
		95% t UCL	28.59
		95% Percentile Bootstrap UCL	28.22
		95% BCA Bootstrap UCL	34.28
		95% H-UCL	87.67
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.421	Data Follow Appr. Gamma Distribution at 5% Significance Level	
Theta Star	58.12		
nu star	10.94		
A-D Test Statistic	0.742	**Nonparametric Statistics**	
5% A-D Critical Value	0.794	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.794	Mean	16.73
5% K-S Critical Value	0.25	SD	34.67
Data follow Appr. Gamma Distribution at 5% Significance Level		SE of Mean	8.148
		95% KM (t) UCL	30.78
Assuming Gamma Distribution		95% KM (z) UCL	30.13
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	30.6
Minimum	0.000001	95% KM (bootstrap t) UCL	64.95
Maximum	139	95% KM (BCA) UCL	32.58
Mean	15.14	95% KM (Percentile Bootstrap) UCL	30.82
Median	0.96	95% KM (Chebyshev) UCL	52.24
SD	34.83	97.5% KM (Chebyshev) UCL	67.61
k star	0.132	99% KM (Chebyshev) UCL	97.8
Theta star	115		
Nu star	5.532	**Potential UCLs to Use**	
AppChi2	1.406	95% KM (BCA) UCL	32.58
95% Gamma Approximate UCL (Use when n >= 40)	59.6		
95% Adjusted Gamma UCL (Use when n < 40)	66.82		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (n-pentane)

General Statistics

Number of Valid Data	21	Number of Detected Data	17
Number of Distinct Detected Data	17	Number of Non-Detect Data	4
		Percent Non-Detects	19.05%

APPENDIX F
ESTIMATION OF REPRESENTATIVE EXPOSURE POINT CONCENTRATIONS
FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL GAS - PROUCL OUTPUT
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.684	Minimum Detected	-0.38
Maximum Detected	241	Maximum Detected	5.485
Mean of Detected	36.44	Mean of Detected	2.526
SD of Detected	62.87	SD of Detected	1.507
Minimum Non-Detect	1.22	Minimum Non-Detect	0.199
Maximum Non-Detect	404	Maximum Non-Detect	6.001

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.6	Shapiro Wilk Test Statistic	0.971
5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	39.8	Mean	2.374
SD	68.38	SD	1.756
95% DL/2 (t) UCL	65.53	95% H-Stat (DL/2) UCL	217
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.188
		SD in Log Scale	1.604
		Mean in Original Scale	30.2
		SD in Original Scale	57.78
		95% t UCL	51.94
		95% Percentile Bootstrap UCL	51.27
		95% BCA Bootstrap UCL	59.38
		95% H-UCL	112.4

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.517	Data appear Lognormal at 5% Significance Level	
Theta Star	70.44		
nu star	17.59		
A-D Test Statistic	0.904	Nonparametric Statistics	
5% A-D Critical Value	0.791	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.791	Mean	31.32
5% K-S Critical Value	0.22	SD	57.55
Data not Gamma Distributed at 5% Significance Level		SE of Mean	13.27
		95% KM (t) UCL	54.2
Assuming Gamma Distribution		95% KM (z) UCL	53.14
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	53.96
Minimum	0.000001	95% KM (bootstrap t) UCL	91.2
Maximum	241	95% KM (BCA) UCL	58.07
Mean	30.25	95% KM (Percentile Bootstrap) UCL	55.83
Median	9.16	95% KM (Chebyshev) UCL	89.14
SD	57.81	97.5% KM (Chebyshev) UCL	114.2
k star	0.225	99% KM (Chebyshev) UCL	163.3
Theta star	134.6		
Nu star	9.441	Potential UCLs to Use	
AppChi2	3.596	99% KM (Chebyshev) UCL	163.3
95% Gamma Approximate UCL (Use when n >= 40)	79.42		
95% Adjusted Gamma UCL (Use when n < 40)	85.94		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (propane)

General Statistics

Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	19	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	17.7	Minimum Detected	2.874
Maximum Detected	508	Maximum Detected	6.23
Mean of Detected	182	Mean of Detected	4.77
SD of Detected	148	SD of Detected	1.084
Minimum Non-Detect	30	Minimum Non-Detect	3.401
Maximum Non-Detect	50.4	Maximum Non-Detect	3.92

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	7
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	14
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	33.33%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.897	Shapiro Wilk Test Statistic	0.908
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	166.6	Mean	4.598
SD	148.6	SD	1.165
95% DL/2 (t) UCL	222.5	95% H-Stat (DL/2) UCL	405.9
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	133.5	Mean in Log Scale	4.631
SD	189.5	SD in Log Scale	1.118
95% MLE (t) UCL	204.8	Mean in Original Scale	167.3
95% MLE (Tiku) UCL	210.8	SD in Original Scale	147.8
		95% t UCL	223
		95% Percentile Bootstrap UCL	221.1
		95% BCA Bootstrap UCL	229.4
		95% H UCL	379.6

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.123	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	162		
nu star	42.68		
A-D Test Statistic	0.433	Nonparametric Statistics	
5% A-D Critical Value	0.762	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.762	Mean	166.8
5% K-S Critical Value	0.203	SD	144.8
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	32.46

		95% KM (t) UCL	222.8
Assuming Gamma Distribution		95% KM (z) UCL	220.2
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	222.7
Minimum	0.000001	95% KM (bootstrap t) UCL	234.2
Maximum	508	95% KM (BCA) UCL	220.2
Mean	164.7	95% KM (Percentile Bootstrap) UCL	220.6
Median	150	95% KM (Chebyshev) UCL	308.3
SD	150.7	97.5% KM (Chebyshev) UCL	369.6
k star	0.309	99% KM (Chebyshev) UCL	489.8
Theta star	532.6		
Nu star	12.98	**Potential UCLs to Use**	
AppChi2	5.882	95% KM (Chebyshev) UCL	308.3
95% Gamma Approximate UCL (Use when n >= 40)	363.5		
95% Adjusted Gamma UCL (Use when n < 40)	387.5		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (propene)

General Statistics

Number of Valid Data	21	Number of Detected Data	18
Number of Distinct Detected Data	18	Number of Non-Detect Data	3
		Percent Non-Detects	14.29%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.92	Minimum Detected	0.652
Maximum Detected	991	Maximum Detected	6.899
Mean of Detected	284.7	Mean of Detected	4.251
SD of Detected	328.1	SD of Detected	2.271
Minimum Non-Detect	0.307	Minimum Non-Detect	-1.181
Maximum Non-Detect	22.2	Maximum Non-Detect	3.1

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	8
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	13
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	38.10%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.827	Shapiro Wilk Test Statistic	0.879
5% Shapiro Wilk Critical Value	0.897	5% Shapiro Wilk Critical Value	0.897
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	244.8	Mean	3.732
SD	318.7	SD	2.564
95% DL/2 (t) UCL	364.7	95% H-Stat (DL/2) UCL	21167
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	131.3	Mean in Log Scale	3.712
SD	442.3	SD in Log Scale	2.54
95% MLE (t) UCL	297.7	Mean in Original Scale	244.4
95% MLE (Tiku) UCL	316.1	SD in Original Scale	319
		95% t UCL	364.5

		95% Percentile Bootstrap UCL	356.9
		95% BCA Bootstrap UCL	371.7
		95% H UCL	18465
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.42	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	677.9		
nu star	15.12		
A-D Test Statistic	0.525	**Nonparametric Statistics**	
5% A-D Critical Value	0.809	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.809	Mean	244.5
5% K-S Critical Value	0.216	SD	311.3
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	69.89
		95% KM (t) UCL	365
Assuming Gamma Distribution		95% KM (z) UCL	359.4
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	364.5
Minimum	0.000001	95% KM (bootstrap t) UCL	388.4
Maximum	991	95% KM (BCA) UCL	359.7
Mean	244.1	95% KM (Percentile Bootstrap) UCL	363
Median	91.4	95% KM (Chebyshev) UCL	549.1
SD	319.3	97.5% KM (Chebyshev) UCL	680.9
k star	0.197	99% KM (Chebyshev) UCL	939.9
Theta star	1236		
Nu star	8.293	Potential UCLs to Use	
AppChi2	2.906	95% KM (Chebyshev) UCL	549.1
95% Gamma Approximate UCL (Use when n >= 40)	696.6		
95% Adjusted Gamma UCL (Use when n < 40)	759.3		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (tetrachloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	18
Number of Distinct Detected Data	18	Number of Non-Detect Data	3
		Percent Non-Detects	14.29%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	16.7	Minimum Detected	2.815
Maximum Detected	2000	Maximum Detected	7.601
Mean of Detected	459.4	Mean of Detected	5.535
SD of Detected	517.5	SD of Detected	1.223
Minimum Non-Detect	47.9	Minimum Non-Detect	3.869
Maximum Non-Detect	929	Maximum Non-Detect	6.834
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	18
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	85.71%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.766	Shapiro Wilk Test Statistic	0.977
5% Shapiro Wilk Critical Value	0.897	5% Shapiro Wilk Critical Value	0.897

Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	421.8	Mean	5.407
SD	492	SD	1.263
95% DL/2 (t) UCL	607	95% H-Stat (DL/2) UCL	1136
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	5.362
		SD in Log Scale	1.234
		Mean in Original Scale	407
		SD in Original Scale	495.4
		95% t UCL	593.4
		95% Percentile Bootstrap UCL	603.4
		95% BCA Bootstrap UCL	625.9
		95% H-UCL	1015
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.848	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	541.8		
nu star	30.53		
A-D Test Statistic	0.273	**Nonparametric Statistics**	
5% A-D Critical Value	0.768	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.768	Mean	411.1
5% K-S Critical Value	0.21	SD	483.7
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	109.1
		95% KM (t) UCL	599.3
Assuming Gamma Distribution		95% KM (z) UCL	590.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	598.7
Minimum	0.000001	95% KM (bootstrap t) UCL	705.8
Maximum	2000	95% KM (BCA) UCL	614.1
Mean	406.2	95% KM (Percentile Bootstrap) UCL	585.5
Median	249	95% KM (Chebyshev) UCL	886.8
SD	497.7	97.5% KM (Chebyshev) UCL	1093
k star	0.287	99% KM (Chebyshev) UCL	1497
Theta star	1413		
Nu star	12.07	**Potential UCLs to Use**	
AppChi2	5.275	95% KM (Chebyshev) UCL	886.8
95% Gamma Approximate UCL (Use when n >= 40)	929.6		
95% Adjusted Gamma UCL (Use when n < 40)	994.1		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (toluene)

General Statistics

Number of Valid Data	21	Number of Detected Data	14
Number of Distinct Detected Data	14	Number of Non-Detect Data	7
		Percent Non-Detects	33.33%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.65	Minimum Detected	0.501

Maximum Detected	262
Mean of Detected	55.31
SD of Detected	77.7
Minimum Non-Detect	0.626
Maximum Non-Detect	516

Maximum Detected	5.568
Mean of Detected	3.03
SD of Detected	1.616
Minimum Non-Detect	-0.468
Maximum Non-Detect	6.246

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	21
Number treated as Detected	0
Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.71
5% Shapiro Wilk Critical Value	0.874

Data not Normal at 5% Significance Level

Assuming Normal Distribution

DL/2 Substitution Method	
Mean	50.6
SD	81.99
95% DL/2 (t) UCL	81.46
Maximum Likelihood Estimate(MLE) Method	N/A

MLE method failed to converge properly

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.938
5% Shapiro Wilk Critical Value	0.874

Data appear Lognormal at 5% Significance Level

Assuming Lognormal Distribution

DL/2 Substitution Method	
Mean	2.502
SD	1.969
95% H-Stat (DL/2) UCL	513.5
Log ROS Method	
Mean in Log Scale	2.15
SD in Log Scale	1.932
Mean in Original Scale	37.73
SD in Original Scale	67.64
95% t UCL	63.18
95% Percentile Bootstrap UCL	64.86
95% BCA Bootstrap UCL	71.55
95% H-UCL	315.7

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	0.539
Theta Star	102.7
nu star	15.08
A-D Test Statistic	0.415
5% A-D Critical Value	0.782
K-S Test Statistic	0.782
5% K-S Critical Value	0.24

Data appear Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics using Extrapolated Data	
Minimum	0.000001
Maximum	262
Mean	37.44
Median	11.79
SD	67.83
k star	0.154
Theta star	243.2
Nu star	6.464
AppChi2	1.882
95% Gamma Approximate UCL (Use when n >= 40)	128.6
95% Adjusted Gamma UCL (Use when n < 40)	142.5

Note: DL/2 is not a recommended method.

Data Distribution Test with Detected Values Only

Data appear Gamma Distributed at 5% Significance Level

Nonparametric Statistics

Kaplan-Meier (KM) Method	
Mean	39.78
SD	67.04
SE of Mean	15.57
95% KM (t) UCL	66.63
95% KM (z) UCL	65.39
95% KM (jackknife) UCL	66.36
95% KM (bootstrap t) UCL	99.39
95% KM (BCA) UCL	71.01
95% KM (Percentile Bootstrap) UCL	66.72
95% KM (Chebyshev) UCL	107.6
97.5% KM (Chebyshev) UCL	137
99% KM (Chebyshev) UCL	194.7

Potential UCLs to Use

95% KM (BCA) UCL	71.01

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trans-1,2-dichloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	12
Number of Distinct Detected Data	12	Number of Non-Detect Data	9
		Percent Non-Detects	42.86%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	3.68	Minimum Detected	1.303
Maximum Detected	298	Maximum Detected	5.697
Mean of Detected	64.81	Mean of Detected	3.279
SD of Detected	93.56	SD of Detected	1.434
Minimum Non-Detect	1.27	Minimum Non-Detect	0.239
Maximum Non-Detect	1050	Maximum Non-Detect	6.957

Note: Data have multiple DLs - Use of KM Method is recommended	Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.681	Shapiro Wilk Test Statistic	0.956
5% Shapiro Wilk Critical Value	0.859	5% Shapiro Wilk Critical Value	0.859
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	70.92	Mean	2.783
SD	128.7	SD	1.991
95% DL/2 (t) UCL	119.4	95% H-Stat (DL/2) UCL	737.9
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	2.345
		SD in Log Scale	1.658
		Mean in Original Scale	38.93
		SD in Original Scale	75.88
		95% t UCL	67.49
		95% Percentile Bootstrap UCL	67.34
		95% BCA Bootstrap UCL	78.71
		95% H-UCL	154.8
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.566	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	114.6		
nu star	13.58		
A-D Test Statistic	0.473	**Nonparametric Statistics**	
5% A-D Critical Value	0.771	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.771	Mean	42.89
5% K-S Critical Value	0.256	SD	75.63
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	17.92
		95% KM (t) UCL	73.79
Assuming Gamma Distribution		95% KM (z) UCL	72.36

Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	73.23
Minimum	0.000001	95% KM (bootstrap t) UCL	137.1
Maximum	298	95% KM (BCA) UCL	76.69
Mean	37.25	95% KM (Percentile Bootstrap) UCL	74.71
Median	4.584	95% KM (Chebyshev) UCL	121
SD	76.67	97.5% KM (Chebyshev) UCL	154.8
k star	0.13	99% KM (Chebyshev) UCL	221.2
Theta star	285.8		
Nu star	5.474	Potential UCLs to Use	
AppChi2	1.377	95% KM (BCA) UCL	76.69
95% Gamma Approximate UCL (Use when n >= 40)	148.1		
95% Adjusted Gamma UCL (Use when n < 40)	166.2		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trans-2-butene)

General Statistics

Number of Valid Data	21	Number of Detected Data	15
Number of Distinct Detected Data	14	Number of Non-Detect Data	6
		Percent Non-Detects	28.57%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.503	Minimum Detected	-0.687
Maximum Detected	91.5	Maximum Detected	4.516
Mean of Detected	30.79	Mean of Detected	2.609
SD of Detected	29.95	SD of Detected	1.668
Minimum Non-Detect	0.346	Minimum Non-Detect	-1.061
Maximum Non-Detect	286	Maximum Non-Detect	5.656
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.882	Shapiro Wilk Test Statistic	0.898
5% Shapiro Wilk Critical Value	0.881	5% Shapiro Wilk Critical Value	0.881
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	30.31	Mean	2.02
SD	37.99	SD	2.225
95% DL/2 (t) UCL	44.61	95% H-Stat (DL/2) UCL	851.4
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.885
		SD in Log Scale	1.928
		Mean in Original Scale	22.6
		SD in Original Scale	28.39
		95% t UCL	33.29
		95% Percentile Bootstrap UCL	32.84
		95% BCA Bootstrap UCL	34.64

		95% H-UCL	238.5
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.631	Data appear Normal at 5% Significance Level	
Theta Star	48.79		
nu star	18.94		
A-D Test Statistic	0.324	**Nonparametric Statistics**	
5% A-D Critical Value	0.776	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.776	Mean	23.9
5% K-S Critical Value	0.23	SD	28.13
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	6.57
		95% KM (t) UCL	35.23
Assuming Gamma Distribution		95% KM (z) UCL	34.71
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	35.08
Minimum	0.000001	95% KM (bootstrap t) UCL	37.74
Maximum	91.5	95% KM (BCA) UCL	36.04
Mean	22.99	95% KM (Percentile Bootstrap) UCL	34.49
Median	12	95% KM (Chebyshev) UCL	52.54
SD	28.23	97.5% KM (Chebyshev) UCL	64.93
k star	0.203	99% KM (Chebyshev) UCL	89.27
Theta star	113.3		
Nu star	8.519	**Potential UCLs to Use**	
AppChi2	3.039	95% KM (t) UCL	35.23
95% Gamma Approximate UCL (Use when n >= 40)	64.44	95% KM (Percentile Bootstrap) UCL	34.49
95% Adjusted Gamma UCL (Use when n < 40)	70.13		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trichloroethene)

General Statistics

Number of Valid Data	21	Number of Detected Data	19
Number of Distinct Detected Data	19	Number of Non-Detect Data	2
		Percent Non-Detects	9.52%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	7.56	Minimum Detected	2.023
Maximum Detected	13700	Maximum Detected	9.525
Mean of Detected	2432	Mean of Detected	6.108
SD of Detected	3916	SD of Detected	2.175
Minimum Non-Detect	157	Minimum Non-Detect	5.056
Maximum Non-Detect	736	Maximum Non-Detect	6.601
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	13
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	8
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	61.90%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.682	Shapiro Wilk Test Statistic	0.956
5% Shapiro Wilk Critical Value	0.901	5% Shapiro Wilk Critical Value	0.901
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	2221	Mean	6.015
SD	3775	SD	2.099
95% DL/2 (t) UCL	3642	95% H-Stat (DL/2) UCL	28011
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	5.955
		SD in Log Scale	2.122
		Mean in Original Scale	2209
		SD in Original Scale	3781
		95% t UCL	3632
		95% Percentile Bootstrap UCL	3657
		95% BCA Bootstrap UCL	4061
		95% H-UCL	28822
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	0.364	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	6671		
nu star	13.85		
A-D Test Statistic	0.692	**Nonparametric Statistics**	
5% A-D Critical Value	0.825	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.825	Mean	2211
5% K-S Critical Value	0.213	SD	3689
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	827.2
		95% KM (t) UCL	3637
Assuming Gamma Distribution		95% KM (z) UCL	3571
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	3634
Minimum	0.000001	95% KM (bootstrap t) UCL	4805
Maximum	13700	95% KM (BCA) UCL	3763
Mean	2200	95% KM (Percentile Bootstrap) UCL	3663
Median	306	95% KM (Chebyshev) UCL	5816
SD	3787	97.5% KM (Chebyshev) UCL	7377
k star	0.211	99% KM (Chebyshev) UCL	10441
Theta star	10408		
Nu star	8.878	**Potential UCLs to Use**	
AppChi2	3.254	95% KM (Chebyshev) UCL	5816
95% Gamma Approximate UCL (Use when n >= 40)	6003		
95% Adjusted Gamma UCL (Use when n < 40)	6518		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (trichlorofluoromethane (freon 11))

General Statistics			
Number of Valid Data	21	Number of Detected Data	16
Number of Distinct Detected Data	16	Number of Non-Detect Data	5
		Percent Non-Detects	23.81%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	1.8	Minimum Detected	0.588
Maximum Detected	39.2	Maximum Detected	3.669
Mean of Detected	7.229	Mean of Detected	1.561

SD of Detected	9.177	SD of Detected	0.843
Minimum Non-Detect	6.63	Minimum Non-Detect	1.892
Maximum Non-Detect	52.4	Maximum Non-Detect	3.959
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.57	Shapiro Wilk Test Statistic	0.854
5% Shapiro Wilk Critical Value	0.887	5% Shapiro Wilk Critical Value	0.887
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	9.356	Mean	1.782
SD	10.12	SD	0.938
95% DL/2 (t) UCL	13.16	95% H-Stat (DL/2) UCL	15.52
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.529
		SD in Log Scale	0.736
		Mean in Original Scale	6.507
		SD in Original Scale	8.061
		95% t UCL	9.542
		95% Percentile Bootstrap UCL	9.556
		95% BCA Bootstrap UCL	11.58
		95% H-UCL	8.736
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	1.132	Data do not follow a Discernable Distribution (0.05)	
Theta Star	6.386		
nu star	36.22		
A-D Test Statistic	1.342	**Nonparametric Statistics**	
5% A-D Critical Value	0.757	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.757	Mean	6.853
5% K-S Critical Value	0.22	SD	8.49
Data not Gamma Distributed at 5% Significance Level		SE of Mean	2.076
		95% KM (t) UCL	10.43
Assuming Gamma Distribution		95% KM (z) UCL	10.27
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	10.44
Minimum	1.8	95% KM (bootstrap t) UCL	15.13
Maximum	39.2	95% KM (BCA) UCL	10.51
Mean	6.995	95% KM (Percentile Bootstrap) UCL	10.63
Median	3.75	95% KM (Chebyshev) UCL	15.9
SD	7.993	97.5% KM (Chebyshev) UCL	19.82
k star	1.463	99% KM (Chebyshev) UCL	27.51
Theta star	4.782		
Nu star	61.43	Potential UCLs to Use	
AppChi2	44.4	95% KM (BCA) UCL	10.51
95% Gamma Approximate UCL (Use when n >= 40)	9.677		
95% Adjusted Gamma UCL (Use when n < 40)	9.926		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

For additional insight, the user may want to consult a statistician.

Chemical (vinyl chloride)

General Statistics

Number of Valid Data	21	Number of Detected Data	9
Number of Distinct Detected Data	9	Number of Non-Detect Data	12
		Percent Non-Detects	57.14%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	1.45	Minimum Detected	0.372
Maximum Detected	94.5	Maximum Detected	4.549
Mean of Detected	16.77	Mean of Detected	1.934
SD of Detected	29.74	SD of Detected	1.303
Minimum Non-Detect	0.398	Minimum Non-Detect	-0.921
Maximum Non-Detect	329	Maximum Non-Detect	5.796

Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 9 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.552	Shapiro Wilk Test Statistic	0.921
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	17.77	Mean	1.026
SD	39.67	SD	2.076
95% DL/2 (t) UCL	32.7	95% H-Stat (DL/2) UCL	175
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	0.416
		SD in Log Scale	1.666
		Mean in Original Scale	7.541
		SD in Original Scale	20.52
		95% t UCL	15.26
		95% Percentile Bootstrap UCL	16.08
		95% BCA Bootstrap UCL	20.85
		95% H-UCL	23.04

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.53	Data appear Lognormal at 5% Significance Level	
Theta Star	31.63		
nu star	9.545		
A-D Test Statistic	0.757	**Nonparametric Statistics**	
5% A-D Critical Value	0.757	Kaplan-Meier (KM) Method	

K-S Test Statistic	0.757	Mean	8.704
5% K-S Critical Value	0.291	SD	20.26
Data not Gamma Distributed at 5% Significance Level		SE of Mean	4.824
		95% KM (t) UCL	17.02
Assuming Gamma Distribution		95% KM (z) UCL	16.64
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	16.56
Minimum	0.000001	95% KM (bootstrap t) UCL	49.47
Maximum	94.5	95% KM (BCA) UCL	18.53
Mean	7.189	95% KM (Percentile Bootstrap) UCL	17.41
Median	0.000001	95% KM (Chebyshev) UCL	29.73
SD	20.64	97.5% KM (Chebyshev) UCL	38.83
k star	0.11	99% KM (Chebyshev) UCL	56.7
Theta star	65.55		
Nu star	4.606	Potential UCLs to Use	
AppChi2	0.975	95% KM (BCA) UCL	18.53
95% Gamma Approximate UCL (Use when n >= 40)	33.97		
95% Adjusted Gamma UCL (Use when n < 40)	38.69		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

Chemical (xylenes)

General Statistics

Number of Valid Data	21	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	16
		Percent Non-Detects	76.19%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	2.95	Minimum Detected	1.082
Maximum Detected	44.9	Maximum Detected	3.804
Mean of Detected	12.49	Mean of Detected	1.922
SD of Detected	18.15	SD of Detected	1.08
Minimum Non-Detect	1.07	Minimum Non-Detect	0.0677
Maximum Non-Detect	883	Maximum Non-Detect	6.783
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	21
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.606	Shapiro Wilk Test Statistic	0.763
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	

APPENDIX F
ESTIMATION OF REPRESENTATIVE EXPOSURE POINT CONCENTRATIONS
FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL GAS - PROUCL OUTPUT
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Mean	32.13
SD	96.36
95% DL/2 (t) UCL	68.4
Maximum Likelihood Estimate(MLE) Method	N/A
MLE method failed to converge properly	
Gamma Distribution Test with Detected Values Only	
k star (bias corrected)	0.518
Theta Star	24.12
nu star	5.178
A-D Test Statistic	0.905
5% A-D Critical Value	0.692
K-S Test Statistic	0.692
5% K-S Critical Value	0.365
Data not Gamma Distributed at 5% Significance Level	
Assuming Gamma Distribution	
Gamma ROS Statistics using Extrapolated Data	
Minimum	0.000001
Maximum	44.9
Mean	2.974
Median	0.000001
SD	9.776
k star	0.0963
Theta star	30.89
Nu star	4.043
AppChi2	0.739
95% Gamma Approximate UCL (Use when n >= 40)	16.27
95% Adjusted Gamma UCL (Use when n < 40)	18.76

Note: DL/2 is not a recommended method.

Mean	1.487
SD	1.784
95% H-Stat (DL/2) UCL	97.96
Log ROS Method	
Mean in Log Scale	-0.235
SD in Log Scale	1.374
Mean in Original Scale	3.308
SD in Original Scale	9.672
95% t UCL	6.948
95% Percentile Bootstrap UCL	7.41
95% BCA Bootstrap UCL	11.44
95% H-UCL	5.292
Data Distribution Test with Detected Values Only	
Data appear Lognormal at 5% Significance Level	
Nonparametric Statistics	
Kaplan-Meier (KM) Method	
Mean	5.804
SD	9.808
SE of Mean	2.661
95% KM (t) UCL	10.39
95% KM (z) UCL	10.18
95% KM (jackknife) UCL	9.569
95% KM (bootstrap t) UCL	43.47
95% KM (BCA) UCL	13.24
95% KM (Percentile Bootstrap) UCL	11
95% KM (Chebyshev) UCL	17.4
97.5% KM (Chebyshev) UCL	22.42
99% KM (Chebyshev) UCL	32.28
Potential UCLs to Use	
95% KM (BCA) UCL	13.24

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

APPENDIX G

MODELING METHODOLOGIES

APPENDIX G
MODELING METHODOLOGIES

G.1 Introduction

The conceptual Site model for the Phibro-Tech, Inc. Facility, located in Santa Fe Springs, California ("the Site") includes the inhalation of vapor-phase chemicals in indoor and outdoor air, and the inhalation of particulate-phase chemicals in outdoor air as potentially complete exposure pathways to be evaluated in the human health risk assessment (HHRA). These exposure pathways require the transport of chemicals of potential concern (COPCs) from the impacted medium (soil gas or soil) to the exposure medium (indoor or outdoor air), where persons may be potentially exposed to the COPCs via the inhalation route. Given the presence of current onsite and offsite populations, as well as the presence of potential future onsite populations that may be exposed to Site-related chemicals, and the assumption of several potential exposure scenarios, there are three distinct transport pathways that involve the movement of COPCs from one medium to another:

1) transport of vapor-phase COPCs from onsite soil gas to onsite indoor air, where current or future onsite commercial populations may be exposed;
2) transport of vapor-phase COPCs from onsite soil gas to onsite outdoor air where current onsite commercial and offsite residential, and future onsite commercial populations may be exposed; and
3) transport of particulate-phase COPCs from onsite soil to onsite outdoor air, where future onsite commercial populations may be exposed;

To account for the outdoor air vapor inhalation exposure pathway in the development of soil risk-based target concentrations (RBTCs) for volatile chemicals, a fourth distinct transport pathway that involves the transport of vapor-phase COPCs from onsite soil to onsite outdoor air, is also described in this Appendix. This Appendix describes the methodologies employed to model the transport of chemicals from one medium to another for each of the transport pathways listed above.

The subsurface transport of vapor-phase COPCs is governed by soil and source properties and by the physicochemical properties of the chemical. Chemical properties that influence vapor-phase transport include diffusivity in air, diffusivity in water, Henry's law constant, solubility in water, and organic carbon partitioning coefficient. Physicochemical properties for the volatile COPCs in soil and/or soil gas, and the sources for these properties, are documented in Table G-1.

G.2 Vapor-Phase Transport from Onsite Soil Gas to Onsite Indoor Air

Volatile chemicals present in the subsurface beneath the Site have the potential to volatilize from soils and migrate up through the soil column and into the indoor air space of buildings, where current and future onsite commercial populations may be exposed via inhalation. This transport phenomenon is referred to as "vapor intrusion" and is discussed in Section 5.5.2.1.1 of the HHRA.

The transport of a volatile chemical from soil gas to indoor air is represented by the attenuation factor, or alpha (α). By definition, the attenuation factor represents the ratio of the chemical concentration in indoor air (attributable to vapor intrusion) to the chemical concentration in soil gas beneath the building. Thus, the concentration of a volatile chemical in indoor air may be expressed as a function of the chemical concentration in soil gas and the attenuation factor:

$$C_{ia} = C_{sg} \times \alpha \qquad \text{(Eq. G-1)}$$

where:

C_{ia} = chemical concentration in indoor air ($\mu g/m^3$);

C_{sg} = chemical concentration in soil gas ($\mu g/m^3$); and

α = attenuation factor (unitless).

The transport of volatile COPCs from soil gas to indoor air was modeled using the USEPA-recommended Johnson & Ettinger Model for soil gas (SG-SCREEN Version 2.0), as modified by the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) (USEPA, 2004; Cal/EPA, 2011a). As recommended by DTSC (Cal/EPA, 2011b), soil gas, rather than soil or groundwater data were used to evaluate the vapor intrusion pathway, because soil gas data represent a direct measurement of the volatile chemical that has the potential to migrate into indoor air.

Inputs to the Johnson and Ettinger Model include: soil type and lithology, depth of soil gas contamination (depth-specific attenuation factors were calculated for each soil gas sample depth), physicochemical properties of the COPCs, and building parameters.

Physicochemical properties of the COPCs in soil gas are presented in Table G-1; this table also presents corrected (to soil temperature) Henry's Law constants and effective diffusion coefficients of the COPCs, as calculated by the Johnson and Ettinger Model. USEPA or DTSC default values for soil temperature, dry bulk density, total porosity, and water-filled porosity (USEPA, 2004; Cal/EPA, 2011a) were used as soil input parameters and DTSC defaults for building parameters (Cal/EPA, 2011a, 2011b) were also used. The soil and building parameters used in the Johnson and Ettinger Model are summarized in Table G-2. Due to a lack of uniformity of soil properties across the Site (as described in Section 2.3.1 of the HHRA), default soil parameter values were conservatively used for modeling the transport of vapor-phase COPCs from onsite soil gas to onsite indoor air.

Volatile organic compounds (VOCs) detected in onsite soil gas sampling locations which were included in the Johnson & Ettinger Model analysis of the vapor intrusion pathway are:

- 1,1,1,2-Tetrafluoroethane (Freon 134a)
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1,2-Trichlorotrifluoroethane (Freon 113)
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- 1,2,4-Trichlorobenzene
- 1,2,4-Trimethylbenzene
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,3-Butadiene
- 1,3-Dichlorobenzene
- 1,4-Dioxane
- 1-Butene/Isobutene
- 1-Methylnaphthalene
- 2 & 3-Chlorotoluene
- 2-Butanone (MEK)
- 2-Methylnaphthalene
- 2-Propanol
- 3-Chloropropene
- Acetaldehyde
- Acetone
- Acetonitrile
- Acetylene
- Benzaldehyde
- Benzene
- Butane
- Butyraldehyde
- Carbon Disulfide
- Carbon Tetrachloride
- Chlorobenzene
- Chlorodifluoromethane (Freon 22)
- Chloroethane
- Chloroform
- Chloromethane
- cis-1,2-Dichloroethene
- cis-2-Butene
- Cyclohexane
- Cyclohexanone
- Dichlorodifluoromethane (Freon 12)
- Dichlorofluoromethane
- Ethane
- Ethanol
- Ethene
- Ethylbenzene
- Isobutane
- Isopropylbenzene (Cumene)
- Methylene Chloride
- Naphthalene
- n-Butanol
- n-Hexane
- n-Nonane
- n-Pentane
- Propane
- PropenePropylbenzeneStyrene
- Tetrachloroethene
- Tetrahydrofuran
- Toluene
- Total petroleum hydrocarbons, diesel range (TPH-diesel)
- Total petroleum hydrocarbons, gasoline range (TPH-gasoline)
- trans-1,2-Dichloroethene
- trans-2-Butene
- Trichloroethene
- Trichlorofluoromethane (Freon 11)
- Vinyl Acetate
- Vinyl Chloride
- Xylenes

For these VOCs, the detected concentration at each sampled depth of each soil gas sampling location along with the corresponding chemical- and depth-specific attenuation factor was used to calculate the chemical concentration in indoor air; for sampling locations where a VOC was not detected (but detected elsewhere), one-half the detection limit was used. In this way, worst-case concentrations of chemicals in the indoor air space of future onsite buildings were estimated.

The attenuation factors estimated from the Johnson & Ettinger Model for the onsite commercial scenario are provided in Table G-3 and the chemical concentrations in indoor air for soil gas COPCs are presented in Table 13 of the HHRA for the commercial scenario. Sample Johnson & Ettinger Model input and output sheets, used to estimate the attenuation factor for naphthalene at 22.5 feet bgs, are included in Exhibit A.

G.3 Vapor-Phase Transport from Onsite Soil Gas to Onsite Outdoor Air

Volatile chemicals present in the subsurface beneath the Site have the potential to volatilize from soils and migrate up through the soil column and into outdoor air, where current and future onsite and offsite populations may be exposed via inhalation. As with indoor air, it is preferable to estimate the transport of vapor-phase chemicals from the subsurface to outdoor air using soil gas data (rather than soil or groundwater data), as soil gas data represent the most direct measurement of the contaminants that may potentially migrate to outdoor air; this preferred approach was used in estimating outdoor vapor exposures for all receptors. This transport of onsite soil gas to onsite outdoor air is similar to vapor intrusion, described above in Section G.2, except the chemicals are emitted and dispersed into outdoor air rather than indoor air. COPCs for the soil gas-to-outdoor air pathway are the same as those defined above in Section G.2.

The transport of a volatile chemical from soil gas to outdoor air is represented by the transfer factor (TF). Analogous to the attenuation factor, discussed above, the transfer factor represents the ratio of the chemical concentration in outdoor air (attributable to transport from soil gas) to the chemical concentration in soil gas. Thus, the concentration of a volatile chemical in outdoor air may be expressed as a function of the chemical concentration in soil gas and the transfer factor:

$$C_{OA} = C_{SG} \times TF \qquad \text{(Eq. G-2)}$$

where:

C_{OA} = chemical concentration in outdoor air (µg/m^3);

C_{SG} = chemical concentration in soil gas (µg/m^3); and

TF = transfer factor (unitless).

As described in the following sections below, the transfer factor incorporates two distinct processes: the diffusive transport of volatile chemicals from soil gas to the ground surface; and the dispersion of volatile chemicals from the ground surface into the ambient air. The transfer factors estimated for COPCs in soil gas are provided in Table G-4 and the chemical concentrations in outdoor air for soil gas COPCs are presented in Tables 14 and 15 of the HHRA for commercial and residential scenarios, respectively.

Chemical concentrations in outdoor air were calculated for detected VOCs in soil gas based on the representative concentration across the Site (i.e., the upper confidence limit of the mean [UCL] or the maximum detected concentration)[2] and the chemical-specific transfer factor. .

[2] The UCL was not calculated for datasets with less than five detections or less than eight samples and the maximum detected concentration is used as the representative concentration in soil gas.

G.3.1 Transfer Factor Methodology

The transfer factor incorporates two distinct processes: the diffusive transport (*i.e.*, flux) of volatile chemicals from at-depth soil gas to the ground surface; and the dispersion of volatile chemicals from the ground surface into the ambient air. The steady-state diffusive flux of each COPC from soil gas to the ground surface was estimated using the approach recommended in *Standard Guide for Risk-based Corrective Action Applied at Petroleum Release Sites* (ASTM, 1995):

$$Q_{ss} = \frac{D_{effV} \times C_{SG}}{d} \times CF1 \times CF2 \qquad \text{(Eq. G-3)}$$

where:

- Q_{ss} = steady state flux from subsurface vapor source ($g/m^2/s$);
- D_{effV} = vadose zone effective diffusion coefficient (cm^2/s) (presented for each COPC in soil gas in Table G-1);
- d = depth of soil gas sample (m);
- CF1 = area conversion factor, 10^{-4} m^2/cm^2; and
- CF2 = mass conversion factor, 10^3 g/kg.

This flux model requires that there are no non-aqueous phase liquids (NAPLs) present. If this model were used to estimate the flux of NAPLs, the flux would be overestimated. The presence of NAPLs has not been identified at the Site in the areas where soil gas samples were collected.

The concentration of each COPC in outdoor air was modeled using the "Q over C" dispersion-factor approach recommended in the S*upplemental Guidance for Developing Soil Screening Levels for Superfund Sites* (USEPA, 2002):

$$C_{OA} = \frac{Q_{ss}}{(Q/C)_{vol}} \qquad \text{(Eq. G-4)}$$

where:

- $(Q/C)_{vol}$ = dispersion factor for volatiles ($g/m^2/s$ per kg/m^3).

Combining Equations G-2, G-3, and G-4 yields:

$$TF = \frac{D_{effV}}{d \times (Q/C)_{vol}} \times 10^{-4}\, m^2/cm^2 \times 10^3\, g/kg \qquad \text{(Eq. G-5)}$$

The dispersion factor [$(Q/C)_{vol}$] represents the reciprocal of the ratio of the annual-average geometric mean air concentration at the center of a square source area to the emission flux from that source area. The dispersion factor for the Site was estimated as recommended in the *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites* (USEPA, 2002). The dispersion factor is a function of the source area and of empirical coefficients which are based on air dispersion modeling for specific climate zones (USEPA, 2002). The source area used to estimate the dispersion factor was the Site area of 4.8 acres. Default dispersion coefficients specific to the Site region (Los Angeles area) were used (USEPA, 2002). Calculation of the dispersion factor is documented in Table G-5. Use of the calculated dispersion factor for the offsite residential populations is particularly conservative, given that the simulated dispersion is directly above the source area (USEPA, 2002) and not dispersion to ambient air at a different location entirely. Exposure point concentrations (EPCs) of the soil gas COPCs in ambient air for the current offsite resident are therefore likely to be significantly lower than those estimated using the dispersion factor calculated herein.

G.4 Particulate-Phase Transport from Onsite Soil to Onsite Outdoor Air

Chemicals present in onsite soils (*i.e.*, adhered to soil particles) have the potential to be emitted into the ambient air via wind erosion of impacted soils, where future onsite commercial workers may be exposed via inhalation. As presented in Table 6 of the HHRA, COPCs in soil include: 34 VOCs; 4 total petroleum hydrocarbon (TPH) mixtures; 3 semi-volatile organic compounds (SVOCs); Aroclor 1260; and 17 inorganics.

The transport of particulate-phase chemicals from soil to outdoor air is represented by the particulate emission factor (PEF). The particulate emission factor represents the ratio of the chemical concentration in soil to the chemical concentration in outdoor air (attributable to transport from soil). Thus, the particulate-phase concentration of a chemical in outdoor air may be expressed as a function of the chemical concentration in soil and the particulate emission factor:

$$C_{OA,p} = C_S \times \frac{1}{PEF} \qquad \text{(Eq. G-6)}$$

where:

- $C_{OA,p}$ = particulate-phase chemical concentration in outdoor air (mg/m^3);
- C_S = chemical concentration in soil (mg/kg); and
- PEF = particulate emission factor (m^3/kg).

As defined, the particulate emission factor is effectively equal to the reciprocal of the dust concentration in air. Unlike the attenuation factors and TFs discussed above, the particulate emission factor is not chemical-specific. The particulate emission factor incorporates two distinct processes: the wind erosion of impacted particulate matter (*i.e.*, dust) from the ground surface, and the dispersion of the particulate matter into the ambient air. The particulate emission factor for the Site was estimated using the approach recommended in the *Supplemental Guidance for Developing Soil Screening*

Levels for Superfund Sites (USEPA, 2002). The flux of impacted particulate matter from the ground surface was estimated using USEPA-recommended default values for all input parameters. The dispersion of particulate matter into onsite outdoor air was estimated using a site-specific particulate matter dispersion factor [$(Q/C)_{wind}$], analogous to the volatile dispersion factor discussed above. Calculation of the particulate emission factor is documented in Table G-6 and predicted particulate-phase chemical concentrations in outdoor air for COPCs in onsite soils (0-10 feet below ground surface [bgs]) are presented in Table 6 of the HHRA for the future onsite commercial scenario.

G.5 Vapor-Phase Transport from Onsite Soil to Onsite Outdoor Air

To develop a multi-pathway RBTC for volatile chemicals detected in soil, the transport of vapor-phase COPCs in onsite soils to onsite outdoor air needs to be predicted. The transport of volatile COPCs from soil to outdoor air was modeled as two distinct processes: the volatilization of chemicals from soil to the ground surface, and the dispersion of the chemicals from the ground surface into the ambient air. These two distinct processes are described further below.

G.5.1 Volatilization Flux Methodology

The transport of volatile COPCs from soil into outdoor air was modeled using the approach recommended in the USEPA soil screening guidance (USEPA, 1996) for infinite sources:

$$VF = \frac{Q/C_{vol} \times (3.14 \times D_A \times T)^{1/2} \times 10^{-4}\ (m^2/cm^2)}{2 \times \rho_b \times D_A} \qquad \text{(Eq. G-7)}$$

where:

$$D_A = \frac{[(\theta_a^{10/3} D_i\ H') + (\theta_w^{10/3} D_w)]/\eta^2}{\rho_b Kd + \theta_w + \theta_a H'_{TS}}$$

And where:

VF = volatilization factor (m^3/kg);

Q/C_{vol} = dispersion factor (g/m^2/s per kg/m^3) (discussed in Section G.3.1 above);

T = exposure interval (based on exposure duration) (s);

ρ_b = dry soil bulk density (g/cm^3);

η = total soil porosity (cm^3pore/cm^3soil);

θ_a = air-filled soil porosity (cm^3air/cm^3soil - calculated, η-θ_w);

θ_w = water-filled soil porosity (cm^3water/cm^3soil);

D_i = diffusivity in air (chemical-specific, cm^2/s);

H’ = Henry's Law Constant (chemical-specific, unitless);

D_w = diffusivity in water (chemical-specific, cm^2/s); and

K_d = soil-water partition coefficient (chemical specific, g/cm^3);

where:

$K_d = K_{oc} \times f_{oc}$

And where:

K_{oc} = soil organic carbon partition coefficient (chemical-specific, g/cm^3); and

f_{oc} = fraction organic carbon in soil (g/g).

Chemical-specific physicochemical properties and Cal/EPA- or USEPA-recommended default values for vadose zone soil were used in calculating the volatilization factors (VF). The chemical-specific physicochemical properties for the volatile COPCs in soil are presented in Table G-1. The recommended default values for vadose zone soil are presented in Table G-7 as part of a sample volatilization factor calculation for naphthalene. Table G-8 presents the calculated infinite source VFs for all volatile COPCs in onsite soil for the future commercial worker scenario.

G.6 References

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APPENDIX G

TABLES

TABLE G-1
Physicochemical Properties for Volatile Chemicals of Potential Concern in Soil and/or Soil Gas
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature, H' (unitless)		Enthalpy of Vaporization at the Normal Boiling Point, $DH_{v,b}$ (cal/mol)		Normal Boiling Point, T_B (K)		Critical Temperature, T_C (K)		Enthalpy of Vaporization at Average Soil Temperature, $DH_{v,TS}$ (cal/mol)		Henry's Law Constant at Average Soil Temperature, H_{TS} ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Average Soil Temperature, H'_{TS} (unitless)		Vadose Zone Effective Diffusion Coefficient, D_{effV} (cm^2/s)	
Volatile Organic Compounds																						
1,1,1,2-Tetrafluoroethane (Freon 134a)	8.2E-02	2	1.1E-05	2	5.0E-02	2	2.0E+00	2	NONE		NONE		NONE		NONE		5.0E-02	J&E	2.1E+00	J&E	6.4E-03	J&E
1,1,1-Trichloroethane	7.8E-02	1	8.8E-06	1	1.7E-02	1	7.0E-01	1	7.1E+03	1	3.5E+02	1	5.5E+02	1	7.7E+03	J&E	1.6E-02	J&E	6.7E-01	J&E	6.1E-03	J&E
1,1,2-Trichloroethane	7.8E-02	1	8.8E-06	1	9.1E-04	1	3.7E-02	1	8.3E+03	1	3.9E+02	1	6.0E+02	1	9.4E+03	J&E	8.6E-04	J&E	3.5E-02	J&E	6.1E-03	J&E
1,1,2-Trichlorotrifluoroethane (Freon 113)	7.8E-02	1	8.2E-06	1	4.8E-01	1	2.0E+01	1	6.5E+03	1	3.2E+02	1	4.9E+02	1	6.8E+03	J&E	4.6E-01	J&E	1.9E+01	J&E	6.1E-03	J&E
1,1-Dichloroethane	7.4E-02	1	1.1E-05	1	5.6E-03	1	2.3E-01	1	6.9E+03	1	3.3E+02	1	5.2E+02	1	7.3E+03	J&E	5.4E-03	J&E	2.2E-01	J&E	5.8E-03	J&E
1,1-Dichloroethene	9.0E-02	1	1.0E-05	1	2.6E-02	1	1.1E+00	1	6.2E+03	1	3.0E+02	1	5.8E+02	1	6.3E+03	J&E	2.5E-02	J&E	1.0E+00	J&E	7.0E-03	J&E
1,2,3-Trichlorobenzene	4.0E-02	2	8.4E-06	2	1.3E-03	2	5.1E-02	2	NONE		4.9E+02	1	NONE		NONE		1.3E-03	J&E	5.1E-02	J&E	3.1E-03	J&E
1,2,4-Trichlorobenzene	3.0E-02	1	8.2E-06	1	1.4E-03	1	5.8E-02	1	1.0E+04	1	4.9E+02	1	7.3E+02	1	1.3E+04	J&E	1.3E-03	J&E	5.4E-02	J&E	2.3E-03	J&E
1,2,4-Trimethylbenzene	6.1E-02	1	7.9E-06	1	6.1E-03	1	2.5E-01	1	9.4E+03	1	4.4E+02	1	6.5E+02	1	1.2E+04	J&E	5.8E-03	J&E	2.4E-01	J&E	4.7E-03	J&E
1,2-Dichlorobenzene	6.9E-02	1	7.9E-06	1	1.9E-03	1	7.8E-02	1	9.7E+03	1	4.5E+02	1	7.1E+02	1	1.2E+04	J&E	1.8E-03	J&E	7.3E-02	J&E	5.4E-03	J&E
1,2-Dichloroethane	1.0E-01	1	9.9E-06	1	9.8E-04	1	4.0E-02	1	7.6E+03	1	3.6E+02	1	5.6E+02	1	8.4E+03	J&E	9.3E-04	J&E	3.8E-02	J&E	8.1E-03	J&E
1,2-Dichloroethene (total)	8.8E-02	2	1.1E-05	2	4.1E-03	2	1.7E-01	2	7.2E+03	1	3.3E+02	1	5.4E+02	1	7.6E+03	J&E	3.9E-03	J&E	1.6E-01	J&E	6.9E-03	J&E
1,3,5-Trimethylbenzene	6.0E-02	1	8.7E-06	1	5.9E-03	1	2.4E-01	1	9.3E+03	1	4.4E+02	1	6.4E+02	1	1.1E+04	J&E	5.5E-03	J&E	2.3E-01	J&E	4.7E-03	J&E
1,3-Butadiene	2.5E-01	1	1.1E-05	1	7.3E-02	1	3.0E+00	1	5.4E+03	1	2.7E+02	1	4.3E+02	1	5.0E+03	J&E	7.1E-02	J&E	2.9E+00	J&E	1.9E-02	J&E
1,3-Dichlorobenzene	6.9E-02	1	7.9E-06	1	3.1E-03	1	1.3E-01	1	9.2E+03	1	4.5E+02	1	6.8E+02	1	1.1E+04	J&E	2.9E-03	J&E	1.2E-01	J&E	5.4E-03	J&E
1,4-Dichlorobenzene	6.9E-02	1	7.9E-06	1	2.4E-03	1	9.8E-02	1	9.3E+03	1	4.5E+02	1	6.8E+02	1	1.1E+04	J&E	2.2E-03	J&E	9.2E-02	J&E	5.4E-03	J&E
1,4-Dioxane	8.7E-02	2	1.1E-05	2	4.8E-06	2	2.0E-04	2	NONE		3.7E+02	1	NONE		NONE		4.8E-06	J&E	2.0E-04	J&E	7.3E-03	J&E
1-Butene/Isobutene	4.8E-02	2	5.6E-06	2	4.6E-07	2	1.9E-05	2	NONE		NONE		NONE		NONE		4.6E-07	J&E	1.9E-05	J&E	6.6E-03	J&E
1-Methylnaphthalene	5.3E-02	2	7.8E-06	2	5.1E-04	2	2.1E-02	2	NONE		5.2E+02	1	NONE		NONE		5.1E-04	J&E	2.1E-02	J&E	4.1E-03	J&E
2 & 3-Chlorotoluene	6.3E-02	2	8.7E-06	2	3.6E-03	2	1.5E-01	2	NONE		4.3E+02	1	NONE		NONE		3.6E-03	J&E	1.5E-01	J&E	4.9E-03	J&E
2-Butanone (MEK)	8.1E-02	1	9.8E-06	1	5.6E-05	1	2.3E-03	1	7.5E+03	1	3.5E+02	1	5.4E+02	1	8.2E+03	J&E	5.3E-05	J&E	2.2E-03	J&E	6.3E-03	J&E
2-Methylnaphthalene	5.2E-02	1	7.8E-06	1	5.2E-04	1	2.1E-02	1	1.3E+04	1	5.1E+02	1	7.6E+02	1	1.6E+04	J&E	4.7E-04	J&E	1.9E-02	J&E	4.1E-03	J&E
2-Propanol	1.0E-01	2	1.1E-05	2	8.1E-06	2	3.3E-04	2	NONE		3.6E+02	1	NONE		NONE		8.1E-06	J&E	3.3E-04	J&E	8.4E-03	J&E
3-Chloropropene	9.4E-02	2	1.1E-05	2	1.1E-02	2	4.5E-01	2	NONE		NONE		NONE		NONE		1.1E-02	J&E	4.5E-01	J&E	7.3E-03	J&E
4-Isopropyltoluene	6.4E-02	3	7.3E-06	4	1.1E-02	3	4.5E-01	3	NONE		4.5E+02	1	NONE		NONE		1.1E-02	J&E	4.5E-01	J&E	5.0E-03	J&E
Acetaldehyde	1.2E-01	1	1.4E-05	1	7.9E-05	1	3.2E-03	1	6.2E+03	1	2.9E+02	1	4.7E+02	1	6.1E+03	J&E	7.6E-05	J&E	3.1E-03	J&E	9.7E-03	J&E
Acetone	1.2E-01	1	1.1E-05	1	3.9E-05	1	1.6E-03	1	7.0E+03	1	3.3E+02	1	5.1E+02	1	7.4E+03	J&E	3.7E-05	J&E	1.5E-03	J&E	9.7E-03	J&E
Acetonitrile	1.3E-01	1	1.7E-05	1	3.5E-05	1	1.4E-03	1	6.2E+03	1	2.9E+02	1	4.7E+02	1	6.1E+03	J&E	1.9E-04	J&E	7.7E-03	J&E	9.7E-03	J&E
Acetylene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Benzaldehyde	7.2E-02	1	9.1E-06	1	2.4E-05	1	9.7E-04	1	1.2E+04	1	4.5E+02	1	7.0E+02	1	1.4E+04	J&E	2.2E-05	J&E	9.0E-04	J&E	5.7E-03	J&E
Benzene	8.8E-02	1	9.8E-06	1	5.5E-03	1	2.3E-01	1	7.3E+03	1	3.5E+02	1	5.6E+02	1	8.0E+03	J&E	5.3E-03	J&E	2.2E-01	J&E	6.9E-03	J&E
Butane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Butylbenzene	5.7E-02	1	8.1E-06	1	1.3E-02	1	5.4E-01	1	9.3E+03	1	4.6E+02	1	6.6E+02	1	1.2E+04	J&E	1.2E-02	J&E	5.0E-01	J&E	4.4E-03	J&E
Butyraldehyde	1.2E-01	1	1.4E-05	1	7.9E-05	1	3.2E-03	1	6.2E+03	1	2.9E+02	1	4.7E+02	1	6.1E+03	J&E	1.9E-04	J&E	7.7E-03	J&E	9.7E-03	J&E
Carbon Disulfide	1.0E-01	1	1.0E-05	1	3.0E-02	1	1.2E+00	1	6.4E+03	1	3.2E+02	1	5.5E+02	1	6.6E+03	J&E	2.9E-02	J&E	1.2E+00	J&E	8.1E-03	J&E
Carbon Tetrachloride	7.8E-02	1	8.8E-06	1	3.0E-02	1	1.2E+00	1	7.1E+03	1	3.5E+02	1	5.6E+02	1	7.7E+03	J&E	2.9E-02	J&E	1.2E+00	J&E	6.1E-03	J&E
Chlorobenzene	7.3E-02	1	8.7E-06	1	3.7E-03	1	1.5E-01	1	8.4E+03	1	4.0E+02	1	6.3E+02	1	9.7E+03	J&E	3.5E-03	J&E	1.4E-01	J&E	5.7E-03	J&E
Chlorodifluoromethane (Freon 22)	1.0E-01	1	1.3E-05	1	2.7E-02	1	1.1E+00	1	4.8E+03	1	2.3E+02	1	3.7E+02	1	3.9E+03	J&E	2.6E-02	J&E	1.1E+00	J&E	7.9E-03	J&E
Chloroethane	2.7E-01	1	1.2E-05	1	8.8E-03	1	3.6E-01	1	5.9E+03	1	2.9E+02	1	4.6E+02	1	5.7E+03	J&E	8.5E-03	J&E	3.5E-01	J&E	2.1E-02	J&E
Chloroform	1.0E-01	1	1.0E-05	1	3.7E-03	1	1.5E-01	1	7.0E+03	1	3.3E+02	1	5.4E+02	1	7.4E+03	J&E	3.5E-03	J&E	1.4E-01	J&E	8.1E-03	J&E
Chloromethane	1.3E-01	1	6.5E-06	1	8.8E-03	1	3.6E-01	1	5.1E+03	1	2.5E+02	1	4.2E+02	1	4.6E+03	J&E	8.6E-03	J&E	3.5E-01	J&E	9.8E-03	J&E
cis-1,2-Dichloroethene	7.4E-02	1	1.1E-05	1	4.1E-03	1	1.7E-01	1	7.2E+03	1	3.3E+02	1	5.4E+02	1	7.6E+03	J&E	3.9E-03	J&E	1.6E-01	J&E	5.7E-03	J&E
cis-2-Butene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Cyclohexane	8.0E-02	2	9.1E-06	2	1.5E-01	2	6.1E+00	2	NONE		3.5E+02	1	NONE		NONE		1.5E-01	J&E	6.2E+00	J&E	6.2E-03	J&E
Cyclohexanone	7.7E-02	2	9.4E-06	2	9.0E-06	2	3.7E-04	2	NONE		NONE		NONE		NONE		9.0E-06	J&E	3.7E-04	J&E	6.2E-03	J&E

TABLE G-1
Physicochemical Properties for Volatile Chemicals of Potential Concern in Soil and/or Soil Gas
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Diffusivity in air, D_a (cm^2/s)		Diffusivity in water, D_w (cm^2/s)		Henry's Law Constant at Reference Temperature (25° C), H ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Reference Temperature, H' (unitless)		Enthalpy of Vaporization at the Normal Boiling Point, $DH_{v,b}$ (cal/mol)		Normal Boiling Point, T_B (K)		Critical Temperature, T_C (K)		Enthalpy of Vaporization at Average Soil Temperature, $DH_{v,TS}$ (cal/mol)		Henry's Law Constant at Average Soil Temperature, H_{TS} ($atm\text{-}m^3/mol$)		Dimensionless Henry's Law Constant at Average Soil Temperature, H'_{TS} (unitless)		Vadose Zone Effective Diffusion Coefficient, D_{effV} (cm^2/s)	
Dichlorodifluoromethane (Freon 12)	6.7E-02	1	9.9E-06	1	3.4E-01	1	1.4E+01	1	9.4E+03	1	2.4E+02	1	3.8E+02	1	8.0E+03	J&E	3.3E-01	J&E	1.3E+01	J&E	5.2E-03	J&E
Dichlorofluoromethane	9.2E-02	3	NONE		1.1E-02	3	4.4E-01	3	NONE		2.8E+02	1	NONE		NONE		1.1E-02	J&E	4.4E-01	J&E	7.2E-03	J&E
Ethane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Ethanol	1.2E-01	3	1.3E-05	4	5.0E-06	3	2.1E-04	3	NONE		3.5E+02	1	NONE		NONE		5.0E-06	J&E	2.1E-04	J&E	1.0E-02	J&E
Ethene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Ethylbenzene	7.5E-02	1	7.8E-06	1	7.9E-03	1	3.2E-01	1	8.5E+03	1	4.1E+02	1	6.2E+02	1	1.0E+04	J&E	7.4E-03	J&E	3.0E-01	J&E	5.9E-03	J&E
Isobutane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Isopropylbenzene (Cumene)	6.5E-02	1	7.1E-06	1	1.2E+00	1	4.7E+01	1	1.0E+04	1	4.3E+02	1	6.3E+02	1	1.2E+04	J&E	1.1E+00	J&E	4.4E+01	J&E	5.1E-03	J&E
Methylene Chloride	1.0E-01	1	1.2E-05	1	2.2E-03	1	9.0E-02	1	6.7E+03	1	3.1E+02	1	5.1E+02	1	6.9E+03	J&E	2.1E-03	J&E	8.6E-02	J&E	7.9E-03	J&E
Naphthalene	5.9E-02	1	7.5E-06	1	4.8E-04	1	2.0E-02	1	1.0E+04	1	4.9E+02	1	7.5E+02	1	1.3E+04	J&E	4.5E-04	J&E	1.8E-02	J&E	4.6E-03	J&E
n-Butanol	9.0E-02	2	1.0E-05	2	8.8E-06	2	3.6E-04	2	NONE		NONE		NONE		NONE		8.8E-06	J&E	3.6E-04	J&E	7.3E-03	J&E
n-Hexane	2.0E-01	1	7.8E-06	1	1.7E+00	1	6.8E+01	1	6.9E+03	1	3.4E+02	1	5.1E+02	1	7.5E+03	J&E	1.6E+00	J&E	6.5E+01	J&E	1.6E-02	J&E
n-Nonane	5.1E-02	2	6.8E-06	2	3.4E+00	2	1.4E+02	2	NONE		NONE		NONE		NONE		3.4E+00	J&E	1.4E+02	J&E	4.0E-03	J&E
n-Pentane	8.2E-02	2	8.8E-06	2	1.3E+00	2	5.1E+01	2	NONE		NONE		NONE		NONE		1.3E+00	J&E	5.1E+01	J&E	6.4E-03	J&E
Propane	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Propene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		2.3E+02	1	NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Propylbenzene	6.0E-02	1	7.8E-06	1	1.1E-02	1	4.4E-01	1	9.1E+03	1	4.3E+02	1	6.3E+02	1	1.1E+04	J&E	1.0E-02	J&E	4.1E-01	J&E	4.7E-03	J&E
sec-Butylbenzene	5.7E-02	1	8.1E-06	1	1.4E-02	1	5.7E-01	1	8.9E+04	1	4.5E+02	1	6.8E+02	1	1.1E+05	J&E	7.6E-03	J&E	3.1E-01	J&E	4.4E-03	J&E
Styrene	7.1E-02	1	8.0E-06	1	2.7E-03	1	1.1E-01	1	8.7E+03	1	4.2E+02	1	6.4E+02	1	1.0E+04	J&E	2.6E-03	J&E	1.1E-01	J&E	5.5E-03	J&E
Tetrachloroethene	7.2E-02	1	8.2E-06	1	1.8E-02	1	7.5E-01	1	8.3E+03	1	3.9E+02	1	6.2E+02	1	9.4E+03	J&E	1.7E-02	J&E	7.1E-01	J&E	5.6E-03	J&E
Tetrahydrofuran	9.5E-02	2	1.1E-05	2	7.1E-05	2	2.9E-03	2	NONE		3.4E+02	1	NONE		NONE		7.1E-05	J&E	2.9E-03	J&E	7.5E-03	J&E
Toluene	8.7E-02	1	8.6E-06	1	6.6E-03	1	2.7E-01	1	7.9E+03	1	3.8E+02	1	5.9E+02	1	9.0E+03	J&E	6.3E-03	J&E	2.6E-01	J&E	6.8E-03	J&E
TPH-Diesel	7.0E-02	5	1.0E-05	5	7.2E-01	5	3.2E+01	5	NONE		NONE		NONE		NONE		7.2E-01	J&E	3.0E+01	J&E	5.5E-03	J&E
TPH-Gasoline	7.0E-02	5	1.0E-05	5	8.0E-01	5	3.3E+01	5	NONE		NONE		NONE		NONE		8.0E-01	J&E	3.3E+01	J&E	5.5E-03	J&E
trans-1,2-Dichloroethene	7.1E-02	1	1.2E-05	1	9.4E-03	1	3.8E-01	1	6.7E+03	1	3.2E+02	1	5.2E+02	1	7.0E+03	J&E	9.0E-03	J&E	3.7E-01	J&E	5.5E-03	J&E
trans-2-Butene	1.1E-01	2	1.1E-05	2	2.0E-01	2	8.0E+00	2	NONE		NONE		NONE		NONE		2.0E-01	J&E	8.0E+00	J&E	8.6E-03	J&E
Trichloroethene	7.9E-02	1	9.1E-06	1	1.0E-02	1	4.2E-01	1	7.5E+03	1	3.6E+02	1	5.4E+02	1	8.4E+03	J&E	9.8E-03	J&E	4.0E-01	J&E	6.2E-03	J&E
Trichlorofluoromethane (Freon 11)	8.7E-02	1	9.7E-06	1	9.7E-02	1	4.0E+00	1	6.0E+03	1	3.0E+02	1	4.7E+02	1	6.0E+03	J&E	9.4E-02	J&E	3.8E+00	J&E	6.8E-03	J&E
Vinyl Acetate	8.5E-02	1	9.2E-06	1	5.1E-04	1	2.1E-02	1	7.8E+03	1	3.5E+02	1	5.2E+02	1	8.6E+03	J&E	4.9E-04	J&E	2.0E-02	J&E	6.6E-03	J&E
Vinyl Chloride	1.1E-01	1	1.2E-05	1	2.7E-02	1	1.1E+00	1	5.3E+03	1	2.6E+02	1	4.3E+02	1	4.8E+03	J&E	2.6E-02	J&E	1.1E+00	J&E	8.3E-03	J&E
Xylenes	8.5E-02	2	9.9E-06	2	5.2E-03	2	2.1E-01	2	NONE		NONE		NONE		NONE		5.2E-03	J&E	2.1E-01	J&E	6.6E-03	J&E

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J&E = Calculated by Johnson & Ettinger model

TABLE G-2
Johnson & Ettinger Model Input Data: Commercial Scenario
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Parameter	Symbol	Value	Units	Reference
Building Properties				
Depth below grade to bottom of enclosed space floor	L_F	15	cm	DTSC/HERO default (Cal/EPA, 2011a)
Building ventilation rate[1]	Q_b	6.8E+04	cm^3/s	Calculated: $A_{b,sg}$ x AXR_b x H
Area of enclosed space below grade[2]	$A_{b,sg}$	1.0E+06	cm^2	DTSC/HERO default (Cal/EPA, 2011a)
Building air exchange rate[2]	AXR_b	1.0	hr^{-1}	DTSC default (Cal/EPA, 2011b)
Building height[2]	H	244	cm	DTSC/HERO default (Cal/EPA, 2011a)
Vapor flow rate into building	Q_{soil}	5	L/min	DTSC/HERO default (Cal/EPA, 2011a)
Soil Properties				
Average soil temperature	T_s	24	^oC	DTSC/HERO default (Cal/EPA, 2011a)
SCS soil type		Default	--	
Dry bulk density	ρ_b	1.5	g/cm^3	Default (USEPA, 2004)
Total porosity	η	0.43	cm^3/cm^3	Default (USEPA, 2004)
Water-filled porosity	θ_w	0.15	cm^3/cm^3	DTSC/HERO default (Cal/EPA, 2011a)

Notes:

1 Building ventilation rate is provided as input to the Johnson & Ettinger model in the 'Intermediate Calculations Sheet.' All other input parameters are provided as input in the 'Data Entry Sheet.'

2 Area of enclosed space below grade, building exchange rate, and building height are not provided as input to the Johnson & Ettinger model. These parameters are used to calculate building ventilation rate, which is provided as input to the Johnson & Ettinger model.

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Cal/EPA. 2011a. Johnson and Ettinger SG-SCREEN Model, EPA Version 2.0, dated April 2003, as modified by Department of Toxic Substances Control (DTSC)/Office of Human and Ecological Risk (HERO). December 2.

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TABLE G-3
Attenuation Factors: Commercial Scenario
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Attenuation Factor at 22.5 ft bgs	Attenuation Factor at 23 ft bgs	Attenuation Factor at 24 ft bgs	Attenuation Factor at 24.5 ft bgs	Attenuation Factor at 25 ft bgs	Attenuation Factor at 27 ft bgs	Attenuation Factor at 27.5 ft bgs	Attenuation Factor at 28 ft bgs	Attenuation Factor at 28.5 ft bgs	Attenuation Factor at 29 ft bgs	Attenuation Factor at 30 ft bgs	Attenuation Factor at 31.5 ft bgs	Attenuation Factor at 35 ft bgs
Volatile Organic Compounds													
1,1,1,2-Tetrafluoroethane (Freon 134a)	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.7E-05	9.3E-05	8.4E-05
1,1,1-Trichloroethane	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.7E-05	9.5E-05	9.2E-05	8.8E-05	8.0E-05
1,1,2-Trichloroethane	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.7E-05	9.5E-05	9.2E-05	8.8E-05	8.0E-05
1,1,2-Trichlorotrifluoroethane (Freon 113)	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.7E-05	9.5E-05	9.2E-05	8.8E-05	8.0E-05
1,1-Dichloroethane	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.7E-05	9.6E-05	9.4E-05	9.3E-05	9.1E-05	8.8E-05	8.4E-05	7.6E-05
1,1-Dichloroethene	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.1E-05
1,2,4-Trichlorobenzene	4.9E-05	4.8E-05	4.6E-05	4.5E-05	4.5E-05	4.1E-05	4.1E-05	4.0E-05	3.9E-05	3.9E-05	3.7E-05	3.6E-05	3.2E-05
1,2,4-Trimethylbenzene	9.6E-05	9.4E-05	9.0E-05	8.8E-05	8.7E-05	8.1E-05	7.9E-05	7.8E-05	7.7E-05	7.5E-05	7.3E-05	7.0E-05	6.3E-05
1,2-Dichlorobenzene	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.8E-05	9.1E-05	8.9E-05	8.8E-05	8.7E-05	8.5E-05	8.2E-05	7.9E-05	7.1E-05
1,2-Dichloroethane	1.6E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.0E-04
1,3-Butadiene	3.2E-04	3.1E-04	3.0E-04	3.0E-04	2.9E-04	2.8E-04	2.7E-04	2.7E-04	2.6E-04	2.6E-04	2.5E-04	2.4E-04	2.2E-04
1,3-Dichlorobenzene	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.8E-05	9.1E-05	9.0E-05	8.8E-05	8.7E-05	8.5E-05	8.3E-05	7.9E-05	7.1E-05
1,4-Dioxane	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.5E-05
1-Butene/Isobutene	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.5E-05	8.6E-05
1-Methylnaphthalene	8.4E-05	8.3E-05	7.9E-05	7.8E-05	7.6E-05	7.1E-05	7.0E-05	6.8E-05	6.7E-05	6.6E-05	6.4E-05	6.1E-05	5.5E-05
2 & 3-Chlorotoluene	9.9E-05	9.7E-05	9.3E-05	9.2E-05	9.0E-05	8.4E-05	8.2E-05	8.1E-05	7.9E-05	7.8E-05	7.6E-05	7.2E-05	6.5E-05
2-Butanone (MEK)	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.9E-05	9.6E-05	9.2E-05	8.3E-05
2-Methylnaphthalene	8.4E-05	8.2E-05	7.9E-05	7.7E-05	7.6E-05	7.0E-05	6.9E-05	6.8E-05	6.7E-05	6.6E-05	6.3E-05	6.1E-05	5.5E-05
2-Propanol	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04
3-Chloropropene	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.5E-05
Acetaldehyde	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.2E-04
Acetone	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.2E-04
Acetonitrile	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.3E-04	1.2E-04
Acetylene	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Benzaldehyde	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.6E-05	9.5E-05	9.3E-05	9.2E-05	9.0E-05	8.7E-05	8.3E-05	7.5E-05
Benzene	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.9E-05	8.9E-05
Butane	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Butyraldehyde	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.3E-04	1.2E-04
Carbon Disulfide	1.6E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.0E-04
Carbon Tetrachloride	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.7E-05	9.5E-05	9.2E-05	8.8E-05	8.0E-05
Chlorobenzene	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.6E-05	9.4E-05	9.3E-05	9.1E-05	9.0E-05	8.7E-05	8.3E-05	7.5E-05
Chlorodifluoromethane (Freon 22)	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.0E-04
Chloroethane	3.4E-04	3.3E-04	3.2E-04	3.2E-04	3.1E-04	2.9E-04	2.9E-04	2.9E-04	2.8E-04	2.8E-04	2.7E-04	2.6E-04	2.4E-04

TABLE G-3
Attenuation Factors: Commercial Scenario
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Attenuation Factor at 22.5 ft bgs	Attenuation Factor at 23 ft bgs	Attenuation Factor at 24 ft bgs	Attenuation Factor at 24.5 ft bgs	Attenuation Factor at 25 ft bgs	Attenuation Factor at 27 ft bgs	Attenuation Factor at 27.5 ft bgs	Attenuation Factor at 28 ft bgs	Attenuation Factor at 28.5 ft bgs	Attenuation Factor at 29 ft bgs	Attenuation Factor at 30 ft bgs	Attenuation Factor at 31.5 ft bgs	Attenuation Factor at 35 ft bgs
Volatile Organic Compounds													
Chloroform	1.6E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.0E-04
Chloromethane	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.2E-04
cis-1,2-Dichloroethene	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.7E-05	9.5E-05	9.3E-05	9.2E-05	9.0E-05	8.8E-05	8.4E-05	7.6E-05
cis-2-Butene	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Cyclohexane	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.9E-05	9.8E-05	9.4E-05	9.0E-05	8.2E-05
Cyclohexanone	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.9E-05	9.8E-05	9.4E-05	9.0E-05	8.2E-05
Dichlorodifluoromethane (Freon 12)	1.0E-04	1.0E-04	9.8E-05	9.6E-05	9.5E-05	8.8E-05	8.6E-05	8.5E-05	8.4E-05	8.2E-05	8.0E-05	7.6E-05	6.9E-05
Dichlorofluoromethane	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.3E-05
Ethane	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Ethanol	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.7E-04	1.6E-04	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.3E-04
Ethene	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Ethylbenzene	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	9.8E-05	9.7E-05	9.5E-05	9.3E-05	9.2E-05	8.9E-05	8.5E-05	7.7E-05
Isobutane	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Isopropylbenzene (Cumene)	1.0E-04	1.0E-04	9.6E-05	9.4E-05	9.3E-05	8.6E-05	8.5E-05	8.3E-05	8.2E-05	8.0E-05	7.8E-05	7.4E-05	6.7E-05
Methylene Chloride	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.0E-04
Naphthalene	9.4E-05	9.2E-05	8.8E-05	8.6E-05	8.5E-05	7.9E-05	7.7E-05	7.6E-05	7.5E-05	7.4E-05	7.1E-05	6.8E-05	6.1E-05
n-Butanol	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.5E-05
n-Hexane	2.7E-04	2.6E-04	2.5E-04	2.5E-04	2.5E-04	2.3E-04	2.3E-04	2.2E-04	2.2E-04	2.2E-04	2.1E-04	2.0E-04	1.9E-04
n-Nonane	8.2E-05	8.1E-05	7.7E-05	7.6E-05	7.4E-05	6.9E-05	6.8E-05	6.7E-05	6.6E-05	6.5E-05	6.2E-05	6.0E-05	5.4E-05
n-Pentane	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.7E-05	9.3E-05	8.4E-05
Propane	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Propylbenzene	9.5E-05	9.3E-05	9.0E-05	8.8E-05	8.6E-05	8.0E-05	7.9E-05	7.7E-05	7.6E-05	7.5E-05	7.2E-05	6.9E-05	6.2E-05
Propene	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Styrene	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.3E-05	9.2E-05	9.0E-05	8.9E-05	8.7E-05	8.5E-05	8.1E-05	7.3E-05
Tetrachloroethene	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.5E-05	9.3E-05	9.1E-05	9.0E-05	8.9E-05	8.6E-05	8.2E-05	7.4E-05
Tetrahydrofuran	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	9.7E-05
Toluene	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.8E-05	8.8E-05
TPH-Diesel	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.2E-05	9.1E-05	8.9E-05	8.8E-05	8.6E-05	8.4E-05	8.0E-05	7.2E-05
TPH-Gasoline	1.1E-04	1.1E-04	1.0E-04	1.0E-04	9.9E-05	9.2E-05	9.1E-05	8.9E-05	8.8E-05	8.6E-05	8.4E-05	8.0E-05	7.2E-05
trans-1,2-Dichloroethene	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.3E-05	9.2E-05	9.0E-05	8.8E-05	8.7E-05	8.4E-05	8.0E-05	7.3E-05
trans-2-Butene	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.1E-04
Trichloroethene	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.8E-05	9.6E-05	9.3E-05	8.9E-05	8.1E-05
Trichlorofluoromethane (Freon 11)	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	9.8E-05	8.8E-05

TABLE G-3
Attenuation Factors: Commercial Scenario
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Attenuation Factor at 22.5 ft bgs	Attenuation Factor at 23 ft bgs	Attenuation Factor at 24 ft bgs	Attenuation Factor at 24.5 ft bgs	Attenuation Factor at 25 ft bgs	Attenuation Factor at 27 ft bgs	Attenuation Factor at 27.5 ft bgs	Attenuation Factor at 28 ft bgs	Attenuation Factor at 28.5 ft bgs	Attenuation Factor at 29 ft bgs	Attenuation Factor at 30 ft bgs	Attenuation Factor at 31.5 ft bgs	Attenuation Factor at 35 ft bgs
Volatile Organic Compounds													
Vinyl Acetate	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.6E-05	8.7E-05
Vinyl Chloride	1.6E-04	1.6E-04	1.5E-04	1.5E-04	1.4E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.1E-04
Xylenes	1.3E-04	1.3E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04	1.0E-04	1.0E-04	9.5E-05	8.6E-05

Notes:

[1] By definition, the attenuation factor (α) is the ratio of the chemical concentration in indoor air to the chemical concentration in soil gas beneath the building:

$\alpha = C_{IA} / C_{SG}$

where C_{IA} is the chemical concentration in indoor air and C_{SG} is the chemical concentration in soil gas.

[2] Attenuation factors at depth are calculated with the USEPA-recommended Johnson & Ettinger Model for soil gas (SG-SCREEN Version 2.0), as modified by DTSC/HERO (Johnson and Ettinger, 1991; USEPA, 2004; Cal/EPA, 2011), and as modified by Iris Environmental.

References:

Cal/EPA. 2011. Johnson and Ettinger SG-SCREEN Model, EPA Version 2.0, dated April 2003, as modified by Department of Toxic Substances Control (DTSC)/Office of Human and Ecological Risk (HERO). December 2.

Johnson, P.C., and R.A. Ettinger. 1991. Heuristic model for predicting the intrusion rate of contaminant vapors in buildings. Environ. Sci. Technol. 25: 1445-1452.

USEPA. 2004. User’s Guide for Evaluating Subsurface Vapor Intrusion into Buildings. Office of Emergency and Remedial Response Washington, D.C. Revised February 22, 2004.

TABLE G-4

Transfer Factors from Soil Gas to Ambient Air
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Transfer Factor at 22.5 ft bgs
Volatile Organic Compounds	
1,1,1,2-Tetrafluoroethane (Freon 134a)	2.0E-06
1,1,1-Trichloroethane	1.9E-06
1,1,2-Trichloroethane	1.9E-06
1,1,2-Trichlorotrifluoroethane (Freon 113)	1.9E-06
1,1-Dichloroethane	1.8E-06
1,1-Dichloroethene	2.2E-06
1,2,4-Trichlorobenzene	7.5E-07
1,2,4-Trimethylbenzene	1.5E-06
1,2-Dichlorobenzene	1.7E-06
1,2-Dichloroethane	2.6E-06
1,3-Butadiene	6.1E-06
1,3-Dichlorobenzene	1.7E-06
1,4-Dioxane	8.8E-06
1-Butene/Isobutene	3.8E-05
1-Methylnaphthalene	1.3E-06
2 & 3-Chlorotoluene	1.5E-06
2-Butanone (MEK)	2.5E-06
2-Methylnaphthalene	1.3E-06
2-Propanol	6.8E-06
3-Chloropropene	2.3E-06
Acetaldehyde	3.6E-06
Acetone	4.0E-06
Acetonitrile	3.4E-06
Acetylene	2.7E-06
Benzaldehyde	3.0E-06
Benzene	2.2E-06
Butane	2.7E-06
Butyraldehyde	3.3E-06
Carbon Disulfide	2.5E-06
Carbon Tetrachloride	1.9E-06
Chlorobenzene	1.8E-06
Chlorodifluoromethane (Freon 22)	2.5E-06
Chloroethane	6.6E-06
Chloroform	2.6E-06
Chloromethane	3.1E-06
cis-1,2-Dichloroethene	1.8E-06
cis-2-Butene	2.7E-06
Cyclohexane	2.0E-06
Cyclohexanone	5.1E-06
Dichlorodifluoromethane (Freon 12)	1.6E-06
Dichlorofluoromethane	2.3E-06

TABLE G-4

Transfer Factors from Soil Gas to Ambient Air
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemical of Potential Concern	Transfer Factor at 22.5 ft bgs
Ethane	2.7E-06
Ethanol	1.1E-05
Ethene	2.7E-06
Ethylbenzene	1.8E-06
Isobutane	2.7E-06
Isopropylbenzene (Cumene)	1.6E-06
Methylene Chloride	2.5E-06
Naphthalene	1.5E-06
n-Butanol	5.7E-06
n-Hexane	4.9E-06
n-Nonane	1.3E-06
n-Pentane	2.0E-06
Propane	2.7E-06
Propylbenzene	1.5E-06
Propene	2.7E-06
Styrene	1.7E-06
Tetrachloroethene	1.8E-06
Tetrahydrofuran	2.8E-06
Toluene	2.1E-06
TPH-Diesel	1.7E-06
TPH-Gasoline	1.7E-06
trans-1,2-Dichloroethene	1.7E-06
trans-2-Butene	2.7E-06
Trichloroethene	1.9E-06
Trichlorofluoromethane (Freon 11)	2.1E-06
Vinyl Acetate	2.1E-06
Vinyl Chloride	2.6E-06
Xylenes	2.1E-06

Notes:

[1] The methodology used in the calculation of transfer factors, the ratios of the chemical concentration in outdoor air to the chemical concentration in soil gas, is presented in the text of Appendix G.

TABLE G-5
Dispersion Factor Calculation for Volatile Compounds
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Site-specific Dispersion Factor for Volatiles (USEPA 2002, Equation D-1)

$Q/C_{vol} = A \exp[(\ln A_{site} - B)^2 (1/C)]$ = **46.25** $(g/m^2\text{-}s) / (kg/m^3)$

where:

A_{site}	4.80	acres	areal extent of the Site
Location	LA	--	General location (USEPA 2002)
A	11.9110	--	constant, default value presented in Exhibit D-3 (USEPA, 2002)
B	18.4385	--	constant, default value presented in Exhibit D-3 (USEPA, 2002)
C	209.7845	--	constant, default value presented in Exhibit D-3 (USEPA, 2002)

References:
USEPA. 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.* Office of Solid Waste and Emergency Response. Washington, D.C., December.

TABLE G-6
Particulate Emission Factor Equations and Parameters
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Particulate Emission Factor (PEF), (USEPA 2002, Equation 4-5)

$$PEF\ (m^3/kg) = \frac{Q/C \times 3600\ s/h}{0.036 \times (1-V) \times (U_m/U_t)^3 \times F(x)} = \mathbf{6.7E{+}08}\ m^3/kg$$

where:

Q/C_{wind}	46.25	$(g/m^2\text{-}s) / (kg/m^3)$	dispersion factor (calculated)
V	0.5	unitless	fraction veg. cover (default from USEPA, 2002)
U_m	4.69	m/s	mean annual windspeed (default from USEPA, 2002)
U_t	11.32	m/s	threshold value of windspeed at 7 m (default from USEPA, 2002)
F(x)	0.194	unitless	function dependent on U_m/U_t (default from USEPA, 2002)

References:

USEPA. 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.* Office of Solid Waste and Emergency Response. Washington, D.C., December.

TABLE G-7
Volatilization Factor Equations and Sample Calculations
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Outdoor Air Volatilization Factor (VF) Calculated for Naphthalene, (USEPA, 2002, Equation 4-8)
Future Commercial Scenario

$$VF = \frac{Q/C_{vol} \times (3.14 \times D_A \times T)^{1/2} \times 10^{-4} (m^2/cm^2)}{2 \times \rho_b \times D_A} = \mathbf{3.6E{+}04}\ m^3/kg$$

Consistent with USEPA 1996, the larger VF is used to evaluate air concentrations.

where:

$$D_A = \frac{[(\theta_a^{3.33} D_i H') + (\theta_w^{3.33} D_w)]/\eta^2}{\rho_b K_d + \theta_w + \theta_a H'}$$

and:

D_A	4.7E-06	cm^2/s	apparent diffusivity (calculated using equation cited above)
Q/C_{vol}	46.25	$(g/m^2\text{-}s) / (kg/m^3)$	dispersion factor (calculated, see below)
T	7.9E+08	s	exposure interval (based on exposure duration of 25 years)
ρ_b	1.5	g/cm^3	dry soil bulk density (default; USEPA, 2002)
η	0.43	cm^3_{pore}/cm^3_{soil}	total soil porosity (default; USEPA, 2002)
θ_w	0.15	cm^3_{water}/cm^3_{soil}	water-filled soil porosity (default; USEPA, 2002)
θ_a	0.28	cm^3_{air}/cm^3_{soil}	air-filled soil porosity (calculated, n-θ_w)
D_i	5.9E-02	cm^2/s	diffusivity in air (chemical-specific, see Table G-1)
H'_{TS}	1.8E-02	unitless	Henry's Law Constant (chemical-specific, see Table G-1)
D_w	7.5E-06	cm^2/s	diffusivity in water (chemical-specific, value in Table G-1)
$K_d = K_{oc} \times f_{oc}$	12	cm^3/g	soil-water partition coefficient (calculated using equation provided)
K_{oc}	2000	cm^3/g	soil organic carbon partition coefficient (chemical-specific, see Table 7 of HHRA)
f_{oc}	0.006	g/g	fraction organic carbon in soil (default; USEPA, 2002)

References:

U.S. Environmental Protection Agency (USEPA). 1996. *Soil Screening Guidance: User's Guide* . Office of Solid Waste and Emergency Response. EPA/540/R-96/018. July.

USEPA. 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.* Office of Soild Waste and Emergency Response. Washington, D.C., December.

TABLE G-8
Soil to Outdoor Air Volatilization Factor
Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Chemicals	Infinite Source Volatilization Factor (m^3/kg)
Future Onsite Commercial Scenario	
1,1,1-Trichloroethane	1.4E+03
1,1,2-Trichloroethane	4.1E+03
1,1-Dichloroethane	1.5E+03
1,1-Dichloroethene	8.9E+02
1,2,3-Trichlorobenzene	2.2E+04
1,2,4-Trichlorobenzene	2.7E+04
1,2,4-Trimethylbenzene	8.1E+03
1,2-Dichlorobenzene	9.3E+03
1,2-Dichloroethane	2.5E+03
1,2-Dichloroethene (total)	1.8E+03
1,3,5-Trimethylbenzene	8.3E+03
1,3-Dichlorobenzene	1.3E+04
1,4-Dichlorobenzene	8.2E+03
2-Butanone (MEK)	8.5E+03
2-Chlorotoluene	5.5E+03
4-Isopropyltoluene	1.1E+04
Acetone	7.9E+03
Benzene	1.7E+03
Butylbenzene	5.2E+03
Chlorobenzene	3.9E+03
Chloroform	1.7E+03
cis-1,2-Dichloroethene	1.8E+03
Ethylbenzene	3.4E+03
Isopropylbenzene (Cumene)	6.7E+02
Methylene Chloride	1.6E+03
Naphthalene	3.6E+04
Propylbenzene	4.0E+03
sec-Butylbenzene	6.2E+03
Tetrachloroethene	1.6E+03
Toluene	2.5E+03
trans-1,2-Dichloroethene	1.4E+03
Trichloroethene	2.0E+03
Vinyl Chloride	6.4E+02
Xylenes	3.9E+03
TPH-Gasoline	1.4E+03
1,2,4-Trichlorobenzene	2.7E+04
2-Methylnaphthalene	4.4E+04

Notes:
m^3/kg = cubic meter per kilogram

APPENDIX G

EXHIBIT A

DATA ENTRY SHEET

SG-SCREEN
PA Version 2.0; 04/

Reset to Defaults

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 12/6/2011)

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
91203	1.00E+00			Naphthalene

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 (^oC)	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	685.8	24			

MORE ↓

ENTER Vandose zone SCS soil type (Lookup Soil Parameters)	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)
	1.5	0.43	0.15	5

MORE ↓

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)
70	25	25	250

END

DATA ENTRY SHEET

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 (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Unit risk factor, URF ($(\mu g/m^3)^{-1}$)	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)
5.90E-02	7.50E-06	4.82E-04	25	10,373	491.14	748.40	3.4E-05	3.0E-03	128.18

END

DATA ENTRY SHEET

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)
670.8	0.280	#N/A	#N/A	#N/A	#N/A	4,000	1.00E+00	6.78E+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	12,768	4.48E-04	1.84E-02	1.80E-04	4.61E-03	670.8

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, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)
15	1.00E+00	1.25	8.33E+01	4.61E-03	5.00E+03	5.18E+15	9.36E-05	9.36E-05

Unit risk factor, URF ($\mu g/m^3$)$^{-1}$	Reference conc., RfC (mg/m^3)
3.4E-05	3.0E-03

END

APPENDIX H

DETERMINATION OF TOTAL PETROLEUM HYDROCARBON TOXICITY VALUES

APPENDIX H
DERIVATION OF TOTAL PETROLEUM HYDROCARBON TOXICITY VALUES

H.1 Introduction

As indicated in Section 6.2.1 of the human health risk assessment (HHRA), noncancer toxicity criteria were developed for four total petroleum hydrocarbon (TPH) mixtures in soil and two TPH mixtures in soil gas at the Phibro-Tech, Inc. (PTI) Facility (the “Site”). The methodology for the development of these criteria is presented below.

H.2 Methodology

Noncancer toxicity criteria were developed for TPH in the gasoline range (TPH-g) (C5-C10), TPH in the diesel range (TPH-d) (C10-C24), extractable TPH (TPH-e), and extractable fuel hydrocarbons (EFH) (C23-C40) in soil, and TPH-g (C5-C10) and TPH-d (C10-C24) in soil gas using United States Environmental Protection Agency (USEPA) provisional peer-reviewed toxicity values (PPRTVs) (USEPA, 2009) for the following groups of aliphatic and aromatic hydrocarbons:

- C5-C8 aliphatics
- C6-C8 aromatics
- C9-C18 aliphatics
- C9-C16 aromatics
- C19-C32 aliphatics
- C17-C32 aromatics

USEPA PPRTVs for these specific aliphatic and aromatic hydrocarbon range groups were used over slightly older (and less conservative) criteria from the Massachusetts Department of Environmental Protection (MADEP; 2002) and Total Petroleum Hydrocarbon Working Group (TPHCWG; 1997). Selecting USEPA PPRTVs is essentially consistent with standard State of California risk assessment protocol, i.e., drawing upon PPRTVs as a second tier resource after the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment’s (OEHHA) on-line toxicity criteria database (Cal/EPA, 2013) and USEPA’s Integrated Risk Information System (IRIS) on-line database (USEPA, 2013). For one of the specific aliphatic and aromatic hydrocarbon range groups, C5-C8 aliphatics, the MADEP chronic reference dose (RfD) was selected since there is no chronic RfD for this group from the PPRTV documentation, only a subchronic RfD. Contributions from C6-C8 aromatic hydrocarbons were excluded from the TPH mixture toxicity criteria development, relying on individual constituents within that group exclusively that have their own toxicity criteria (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX], others). Selected toxicity criteria for the aliphatic and aromatic hydrocarbon groups are presented in Tables

H-1 and H-2 for the development of toxicity criteria for the TPH mixtures in soil and soil gas, respectively.

As described herein, noncancer toxicity criteria were developed for the TPH mixtures in soil and soil gas at the Site by: 1) determining percentages and weight fractions of the aforementioned specific groups of aliphatic and aromatic hydrocarbon range groups associated with each mixture; and 2) using this information to calculate weighted criteria for the mixtures from the criteria for the specific aliphatic and aromatic hydrocarbon range groups.

Development of Weighted Noncancer Toxicity Values for TPH Mixtures in Soil

The process followed to develop noncancer toxicity criteria for the TPH mixtures in soil involved the following steps:

1. *Estimate percentages of aliphatics/aromatics in each TPH mixture*. Percentages of aliphatics associated with each TPH mixture in soil were determined from composition information on gasoline and diesel provided by the Agency for Toxic Substances and Disease Registry (ATSDR) toxicological profile for total petroleum hydrocarbons (ATSDR, 1999) and composition information on lubricating and motor oils provided by the TPHCWG (1998) as applicable to EFH (C23-C40). Gasoline and diesel are described by ATSDR (1999) as being approximately 65% aliphatics, 35% aromatics; lubricating and motor oils are described by the TPHCWG as being approximately 73% aliphatics, 22% aromatics, and 5% other constituents (i.e., metals, chlorinated solvents), which normalizes to 77% aliphatics, 23% aromatics. In the absence of composition information for TPH-e from ATSDR (1999) or TPHCWG (1998), averages of the provided composition information for TPH-d and EFH (C23-C40) were used (71% aliphatics, 29% aromatics). Furthermore, a total hydrocarbon range of C10-C40 was assumed for TPH-e, based on information provided for the analyte by USEPA SW-846 8015B.

2. *Estimate percentage weights of the aliphatic/aromatic hydrocarbon range groups with toxicity criteria in each TPH mixture*. Percentage weights of the aliphatic/aromatic hydrocarbon range groups with toxicity criteria in each TPH mixture were calculated using the aliphatic/aromatic percentages described above and weight fractions of hydrocarbons. Weight fractions of hydrocarbons within TPH-g and TPH-d were obtained from Metcalf & Eddy (1993). Weight fractions of hydrocarbons within TPH-e were estimated based on the relative mass of TPH-d and EFH (C23-C40) in 2007 soil samples (see Appendix D, Table D-3), and assumptions regarding the fraction of C10-C16 and C10-C18 hydrocarbons in the TPH-d (C10-C24) mass. The weight fractions of hydrocarbons within each TPH mixture, and the estimated percentage weights for each aliphatic/aromatic hydrocarbon range group, are presented in Table H-1.

3. *Calculate weighted RfDs and RfCs for each TPH mixture*. In the final step, the weighted RfDs and RfCs were estimated for each TPH mixture using the following equation:

$$Weighted\ RfD = \frac{1}{\sum (P_x \ / \ RfD_x)} \qquad (1)$$

Where:

	Weighted RfD	=	RfD (or RfC) for TPH mixture (milligrams per kilogram per day [mg/kg-day]) (or milligrams per cubic meter [mg/m^3] for RfC)
	P_x	=	Percentage of hydrocarbon group occurring in the TPH mixture
	RfD_x	=	RfD (or RfC) for hydrocarbon group (mg/kg-day or mg/m^3)

The RfDs and RfCs estimated for each TPH mixture in soil are presented in Table H-1.

<u>Development of Weighted Noncancer Toxicity Values for TPH Mixtures in Soil Gas</u>

The process followed to develop noncancer toxicity criteria (i.e., RfCs) for the TPH mixtures in soil gas involved the following steps:

1. *Estimate percentage weights of the aliphatic/aromatic hydrocarbon range groups with toxicity criteria in each TPH mixture*. In addition to TPH-g and TPH-d, collected soil gas samples at the Site were also analyzed for concentrations of specific aliphatic and aromatic hydrocarbon ranges, C5-C6 aliphatics, >C6-C8 aliphatics, >C8-C10 aliphatics, >C10-C12 aliphatics, >C8-C10 aromatics, and >C10-C12 aromatics (Appendix D, Table D-5). The analytical results for these small hydrocarbon ranges were used to determine percentage weights, in TPH-g and TPH-d, of the larger hydrocarbon range groups with toxicity criteria, C5-C8 aliphatics, C9-C18 aliphatics, and C9-C16 aromatics. Percentage weights of C5-C8 aliphatics, C9-C18 aliphatics, and C9-C16 aromatics in TPH-g and TPH-d were estimated on a sample-by-sample basis, and then an overall average weight percentage was determined for each group as presented in Table H-3.

2. *Calculate weighted RfCs for each TPH mixture*. Weighted RfCs were estimated for TPH-g and TPH-d in soil gas using Equation #1 above, the average percentage weights of C5-C8 aliphatics, C9-C18 aliphatics, and C9-C16 aromatics estimated for TPH-g and TPH-d (Table H-3), and the USEPA (2009) RfCs for these hydrocarbon range groups. The resulting RfCs are presented in Table H-2.

H.3 References

Agency for Toxic Substances Disease Registry (ATSDR). 1999. *Toxicological Profile for Total Petroleum Hydrocarbons (TPH)*. U.S. Department of Health and Human Services. September.

California Environmental Protection Agency (Cal/EPA). 2013. *Toxicity Criteria Database*. Maintained on-line at http://www.oehha.ca.gov/tcdb/index.asp. Office of Environmental Health Hazard Assessment (OEHHA).

Massachusetts Department of Environmental Protection (MADEP). 2002. *Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MADEP VPH/EPH Approach. Final Policy*. October.

Metcalf & Eddy, Inc. 1993. *Chemical and Physical Characteristics of Crude Oil, Gasoline and Diesel Fuel: A Comparative Study*. Santa Barbara, California. September 17.

Total Petroleum Hydrocarbon Working Group (TPHCWG). 1998. *Volume 2. Composition of Petroleum Mixtures*. Amherst Scientific Publishers, Amherst, MA.

Total Petroleum Hydrocarbon Working Group (TPHCWG). 1997. *Volume 4. Development of Fraction Specific Reference Doses (RfD) and Reference Concentrations (RfC) for Total Petroleum Hydrocarbons (TPH)*. Amherst Scientific Publishers, Amherst, MA.

U.S. Environmental Protection Agency (USEPA). 2013. *Integrated Risk Information System (IRIS)*. http://www.epa.gov/iris/

U.S. Environmental Protection Agency (USEPA). 2009. *Provisional Peer-Reviewed Toxicity Values for Complex Mixtures of Aliphatic and Aromatic Hydrocarbons. Final*. Superfund Health Risk Technical Support Center, National Center for Environmental Assessment. September 30.

APPENDIX H

TABLES

TABLE H-1
WEIGHTED TOXICITY CRITERIA FOR TPH MIXTURES IN SOIL
Phibro-Tech, Inc. Facility

Santa Fe Springs, California

Hydrocarbon Range	RfD Value (mg/kg-day)	RfD Source	RfC Value (mg/m^3)	RfC Source
C5-C8 aliphatics	0.04	MADEP (2002)	0.6	USEPA (2009)
C9-C18 aliphatics	0.01	USEPA (2009)	0.1	USEPA (2009)
C19-C32 aliphatics	3	USEPA (2009)	10.5	route[1]
C6-C8 aromatics	-- [2]	--	-- [2]	--
C9-C16 aromatics	0.03 [3]	USEPA (2009)	0.1	USEPA (2009)
C17-C32 aromatics	0.04	USEPA (2009)	0.14	route[1]

Chemical	Carbon chains (total number of carbons [HC])	Aliphatic/Aromatic Percentages[5]		Percentage Weights for Each Hydrocarbon Range (P_x)[6]					**Weighted RfDo[7] (mg/kg-day)**	**Weighted RfC[7] (mg/m^3)**
		Percent aliphatics	Percent aromatics	C5-C8 aliphatics	C9-C18 aliphatics	C19-C32 aliphatics	C9-C16 aromatics	C17-C32 aromatics		
TPH mixtures in soil										
TPH-g	C5-C10 (6)	65%	35%	49%	16%	0%	9%	0%	**0.032**	**0.3**
TPH-d	C10-C24 (15)	65%	35%	0%	59%	7%	26%	9%	**0.014**	**0.11**
EFH (C23-C40)	C23-C40 (18)	77%	23%	0%	0%	77%	0%	23%	**0.17**	**0.58**
TPH-e	C10-C40 (31)[4]	71%	29%	0%	14%	57%	5%	24%	**0.05**	**0.27**

Notes:

1. RfCs have not been recommended by USEPA (2009) for C19-C32 aliphatics and C17-C32 aromatics as these hydrocarbon fractions are not considered volatile. However, to enable an evaluation of potential human health risks via particulate inhalation for these non-volatile fractions, RfCs were calculated via route-extrapolation from their respective RfDos using the following equation:
   RfC (mg/m^3) = RfD (mg/kg-day) x 70 kg / 20 m^3/day
2. Contributions from C6-C8 aromatic hydrocarbons are excluded from weighted toxicity criteria development. Individual C6-C8 aromatic hydrocarbon compounds, including benzene, toluene, ethylbenzene, and xylenes (BTEX), will be used to evaluate the potential human health risks associated with this fraction of total petroleum hydrocarbon mixtures (i.e., TPH-g).
3. For C9-C16 aromatics, oral RfDs of 0.03 mg/kg-day, 0.02 mg/kg-day, and 0.004 mg/kg-day are recommended by USEPA (2009) as developed for high flash aromatic naphtha, naphthalene, and 2-methylnaphthalene, respectively. 2-methylnaphthalene has only been detected in one of 12 samples collected from on-site soils (0 to 10 feet bgs), with the only detected amount, 26 mg/kg, accounting for less than 1 percent of the extractable TPH mass in the same sample (4,200 mg/kg, sample ID SB08; see Appendix D, Table D-3). As a result, the oral RfD for high flash aromatic naphtha, 0.03 mg/kg-day, was considered appropriate to evaluate the potential human health risks associated with oral exposures for the C9-C16 aromatic hydrocarbon fraction.
4. Carbon chain size associated with TPH-e is approximate, based on information provided by USEPA SW-846 8015B.

TABLE H-1

WEIGHTED TOXICITY CRITERIA FOR TPH MIXTURES IN SOIL

Phibro-Tech, Inc. Facility

Santa Fe Springs, California

Notes (continued):

5. Aliphatic/aromatic percentages associated with each TPH mixture determined as follows:
   TPH-g - composition provided by ATSDR (1999): "...a general hydrocarbon distribution consisting of 4-8% alkanes, 2-5% alkenes, 25-40% isoalkanes, 3-7% cycloalkanes, 1-4% cycloalkenes, and 20-50% aromatics." Assumed 35% aromatic composition as a mid-point.
   TPH-d - composition provided by ATSDR (1999): "The composition consists of approximately 64% aliphatic hydrocarbons (straight chain alkanes and cycloalkanes), 1-2% unsaturated hydrocarbons (alkenes), and 35% aromatic hydrocarbons (including alkylbenzenes and 2-, 3-ring aromatics)."
   EFH (C23-C40) - based on average weight composition information provided by TPHCWG (1998) for lubricating and motor oils (C18 through >C34): 29% total cycloalkanes, 44% total straight-chain and branched alkanes, 22% total aromatics, 5% other constituents (i.e., metals, chlorinated solvents), which normalizes to 77% aliphatics, 23% aromatics.
   TPH-e - No composition information provided by ATSDR (1999) or TPHCWG (1998). Used the average of composition information for TPH-d and EFH (C23-C40).
6. Percentage weights for each aliphatic/aromatic hydrocarbon range calculated using the aliphatic/aromatic percentages described in footnote 5 above and the following weight fractions of hydrocarbons for each TPH mixture:
   TPH-g - 75% C5-C8, used to calculate the percentage weight of C5-C8 aliphatics, and 25% C9-C10, used to calculate the percentage weight of C9-C18 aliphatics and C9-C16 aromatics. Hydrocarbon weight percents obtained from Figure 3-1 of Metcalf & Eddy, Inc., 1993.
   TPH as diesel - 90% C10-C18 and 10% C19-C24, used to calculate the percentage weight of C9-C18 aliphatics and C19-C32 aliphatics, respectively. 75% C10-C16 and 25% C17-C24, used to calculate the percentage weight of C9-C16 aromatics and C17-C32 aromatics, respectively. Hydrocarbon weight percents obtained from Figure 3-3 of Metcalf & Eddy, Inc., 1993.
   EFH (C23-C40) - 100% C23-C40, used to calculate the percentage weight of C19-C32 aliphatics and C17-C32 aromatics.
   TPH-e - 20% C10-C18 and 80% C19-C40, used to calculate the percentage weight of C9-C18 aliphatics and C19-C32 aliphatics, respectively. 18% C10-C16 and 82% C17-C40, used to calculate the percentage weight of C9-C16 aromatics and C17-C32 aromatics, respectively. Hydrocarbon weight percents estimated based on relative mass of TPH-d and EFH (C23-C40) in 2007 soil samples. In the majority of these samples, TPH-d accounted for approximately 35% of the mass of TPH-d + EFH (C23-C40). Assumed approximately half of the TPH-d (C10-C24) mass (18%) consisted of C10-C16 hydrocarbons and slightly more than half (20%) consisted of C10-C18 hydrocarbons.
7. Weighted RfDs and RfCs calculated as follows:

$$Weighted\ RfD = \frac{1}{\sum (P_x / RfD_x)} \qquad Weighted\ RfC = \frac{1}{\sum (P_x / RfC_x)}$$

Abbreviations:

EFH (C23-C40) = extractable fuel hydrocarbons as specific hydrocarbon ranges C23-C40
RfC = reference concentration
RfD = reference dose
TPH-d = total petroleum hydrocarbons in the diesel range
TPH-e = total extractable petroleum hydrocarbons
TPH-g = total petroleum hydrocarbons in the gasoline range

References:

Agency for Toxic Substances Disease Registry (ATSDR). 1999. Toxicological Profile for Total Petroleum Hydrocarbons (TPH). U.S. Department of Health and Human Services. September.

Massachusetts Department of Environmental Protection (MADEP). 2002. Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MADEP VPH/EPH Approach. Final Policy. October.

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TABLE H-2
WEIGHTED TOXICITY CRITERIA FOR TPH MIXTURES IN SOIL GAS

Phibro-Tech, Inc. Facility

Santa Fe Springs, California

Hydrocarbon Range	RfC[1] (mg/m^3)
C5-C8 aliphatics	0.6
C9-C18 aliphatics	0.1
C19-C32 aliphatics	--
C6-C8 aromatics	-- [2]
C9-C16 aromatics	0.1
C17-C32 aromatics	--

Chemical	Carbon chains (total number of carbons [HC])	Percentage Weights for Each Hydrocarbon Range (P_x)[3]					**Weighted RfC[4] (mg/m^3)**
		C5-C8 aliphatics	C9-C18 aliphatics	C19-C32 aliphatics	C9-C16 aromatics	C17-C32 aromatics	
TPH mixtures in soil gas							
TPH-g	C5-C10 (6)	31%	54%	0%	15%	0%	**0.13**
TPH-d	C10-C24 (15)	0%	75%	0%	25%	0%	**0.10**

Notes:

1. RfCs from USEPA (2009).
2. Contributions from C6-C8 aromatic hydrocarbons are excluded from weighted toxicity criteria development. Individual C6-C8 aromatic hydrocarbon compounds, including benzene, toluene, ethylbenzene, and xylenes (BTEX), will be used to evaluate the potential human health risks associated with this fraction of total petroleum hydrocarbon mixtures (i.e., TPH-g).
3. Percentages for each hydrocarbon range associated with TPH-g and TPH-d estimated based on analytical results for specific aliphatic and aromatic hydrocarbon ranges (see Table H-3).
4. Weighted RfCs calculated as follows:

$$Weighted\ RfC = \frac{1}{\sum (P_x / RfC_x)}$$

Abbreviations:

RfC = reference concentration
TPH-d = total petroleum hydrocarbons in the diesel range
TPH-g = total petroleum hydrocarbons in the gasoline range

References:

U.S. Environmental Protection Agency (USEPA). 2009. Provisional Peer-Reviewed Toxicity Values for Complex Mixtures of Aliphatic and Aromatic Hydrocarbons. Final. Superfund Health Risk Technical Support Center, National Center for Environmental Assessment. September 30.

TABLE H-3
PERCENTAGE HYDROCARBON RANGE CALCULATIONS FOR TPH MIXTURES IN SOIL GAS

Phibro-Tech, Inc. Facility
Santa Fe Springs, California

Analytical Results of C5-C6 aliphatics, >C6-C8 aliphatics, >C8-C10 aliphatics, >C10-C12 aliphatics, >C8-C10 aromatics, and >C10-C12 aromatics in Soil Gas											Percentage Weights for Each Hydrocarbon Range (P_x) in TPH-g[1]			Percentage Weights for Each Hydrocarbon Range (P_x) in TPH-d[2]	
LocationID	SampleID	Depth (feet bgs)	Sample Date	Unit	C5-C6 Aliphatic Hydrocarbons (ref_ to Pentane + Hexane)	>C6-C8 Aliphatic Hydrocarbons (ref_ to Heptane)	>C8-C10 Aliphatic Hydrocarbons (ref_ to Decane)	>C10-C12 Aliphatic Hydrocarbons (ref_ to Dodecane)	>C8-C10 Aromatic Hydrocarbons (ref_ to 1,2,3-TMB)	>C10-C12 Aromatic Hydrocarbons (ref_ to 1,2,4,5-TMB)	C5-C8 aliphatics	C9-C18 aliphatics	C9-C16 aromatics	C9-C18 aliphatics	C9-C16 aromatics
PZ-01	PZ-01-11142012	35	14-Nov-12	ug/m^3	<68 U	<86 U	<120 U	<140 U	<100 U	<110 U	41.2%	32.1%	26.7%	55.3%	44.7%
PZ-02	PZ-02-11152012	24	15-Nov-12	ug/m^3	<160 U	<210 U	<300 U	<360 U	<250 U	<280 U	40.2%	32.6%	27.2%	55.5%	44.5%
PZ-03	PZ-03-11152012	22.5	15-Nov-12	ug/m^3	420	1400	1800	12000	<100 U	<110 U	49.6%	49.0%	1.4%	99.2%	0.8%
SMP-01A	SMP-01A-11142012	29	14-Nov-12	ug/m^3	<69 U	<87 U	<120 U	<150 U	<100 U	<120 U	41.5%	31.9%	26.6%	55.1%	44.9%
SMP-02A	SMP-02A-11152012	24.5	15-Nov-12	ug/m^3	<160 U	<210 U	<300 U	<360 U	<250 U	<280 U	40.2%	32.6%	27.2%	55.5%	44.5%
SMP-03A	SMP-03-11152012	25	15-Nov-12	ug/m^3	<220 U	<280 U	730	<480 U	<340 U	<370 U	21.7%	63.5%	14.8%	73.2%	26.8%
SMP-04A	SMP-04A-11152012	25	15-Nov-12	ug/m^3	1500	5600	190000	390000	<400 U	1000	3.6%	96.3%	0.1%	99.8%	0.2%
SMP-05A	SMP-05A-11152012	29	15-Nov-12	ug/m^3	<66 U	<84 U	<120 U	<140 U	<100 U	<110 U	40.5%	32.4%	27.0%	55.3%	44.7%
SMP-06	SMP-06-11142012	23	14-Nov-12	ug/m^3	1400	47000	110000	8900	<140 U	<160 U	30.5%	69.4%	0.0%	99.9%	0.1%
SMP-07A	SMP-07A-11142012	27	14-Nov-12	ug/m^3	4700	1000000	2300000	690000	<2200 U	<2400 U	30.4%	69.6%	0.0%	99.9%	0.1%
SMP-08A	SMP-08A-11142012	27	14-Nov-12	ug/m^3	4400	100000	760000	430000	<2100 U	<2400 U	12.1%	87.8%	0.1%	99.8%	0.2%
SMP-09A	SMP-09A-11152012	25	15-Nov-12	ug/m^3	<68 U	<86 U	<120 U	<140 U	<100 U	<110 U	41.2%	32.1%	26.7%	55.3%	44.7%
SMP-10A	SMP-10A-11142012	25	14-Nov-12	ug/m^3	<70 U	<88 U	<120 U	<150 U	<110 U	<120 U	40.7%	30.9%	28.4%	54.0%	46.0%
SMP-11A	SMP-11A-11142012	25	14-Nov-12	ug/m^3	<69 U	<87 U	<120 U	<150 U	<100 U	<120 U	41.5%	31.9%	26.6%	55.1%	44.9%
SVE-01A	SVE-1A-071812	29	18-Jul-12	ug/m^3	1900	58000	590000	310000	<280 U	<310 U	9.2%	90.8%	0.0%	100.0%	0.0%
SVE-02A	SVE-2A-071812	28.5	18-Jul-12	ug/m^3	<310 U	<390 U	<550 U	<660 U	<460 U	<520 U	43.5%	28.0%	28.6%	53.1%	46.9%
SVE-03A	SVE-3A-071812	27.5	18-Jul-12	ug/m^3	3200	320000	2500000	350000	<2500 U	<2800 U	11.4%	88.5%	0.0%	99.9%	0.1%
SVE-04A	SVE-4-11152012	28	15-Nov-12	ug/m^3	350	4800	49000	35000	<100 U	350	9.5%	90.4%	0.1%	99.5%	0.5%
SVE-05A	SVE-5-11142012	30	14-Nov-12	ug/m^3	<70 U	<88 U	<120 U	<150 U	<110 U	<120 U	40.7%	30.9%	28.4%	54.0%	46.0%
SVE-06A	SVE-6-11142012	31.5	14-Nov-12	ug/m^3	<68000 U	<86000 U	<120000 U	<140000 U	<100000 U	<110000 U	--[3]	--	--	--	--
SVE-07A	SVE-7-11152012	28	15-Nov-12	ug/m^3	<11000 U	<14000 U	<20000 U	<24000 U	<17000 U	<19000 U	--	--	--	--	--
										Average	31%	54%	15%	75%	25%

Notes:

1. The percentage weights (P_x) of C5-C8 aliphatics, C9-C18 aliphatics, and C9-C16 aromatics in TPH-g were estimated for each soil gas sample as follows:
   $P_{C5\text{-}C8\ aliphatics}$ = (sum of C5-C6 aliphatics and >C6-C8 aliphatics concentrations) / (sum of C5-C6 aliphatics, >C6-C8 aliphatics, >C8-C10 aliphatics, and >C8-C10 aromatics concentrations)
   $P_{C9\text{-}C18\ aliphatics}$ = (concentration of >C8-C10 aliphatics) / (sum of C5-C6 aliphatics, >C6-C8 aliphatics, >C8-C10 aliphatics, and >C8-C10 aromatics concentrations)
   $P_{C9\text{-}C16\ aromatics}$ = (concentration of >C8-C10 aromatics) / (sum of C5-C6 aliphatics, >C6-C8 aliphatics, >C8-C10 aliphatics, and >C8-C10 aromatics concentrations)
   For non-detect results, one-half the reporting limit value was used as a surrogate concentration in each percentage weight calculation.
2. The percentage weights (Px) of C9-C18 aliphatics and C9-C16 aromatics in TPH-d were estimated for each soil gas sample as follows:
   $P_{C9\text{-}C18\ aliphatics}$ = (sum of >C8-C10 aliphatics and >C10-C12 aliphatics concentrations) / (sum of >C8-C10 aliphatics, >C10-C12 aliphatics, >C8-C10 aromatics, and >C10-C12 aromatics concentrations)
   $P_{C9\text{-}C16\ aromatics}$ = (sum of >C8-C10 aromatics and >C10-C12 aromatics concentrations) / (sum of >C8-C10 aliphatics, >C10-C12 aliphatics, >C8-C10 aromatics, and >C10-C12 aromatics concentrations)
   For non-detect results, one-half the reporting limit value was used as a surrogate concentration in each percentage weight calculation.
3. -- = Percentage weights not estimated for hydrocarbon ranges in SVE-6 and SVE-7 soil gas samples. All hydrocarbon range results for these samples were non-detect with elevated reporting limits.

Abbreviations:

TPH-d = total petroleum hydrocarbons in the diesel range
TPH-g = total petroleum hydrocarbons in the gasoline range
U = constituent was not detected above the reporting limit given.

APPENDIX I

UNCERTAINTIES IN THE RISK ASSESSMENT

APPENDIX I
UNCERTAINTIES IN THE RISK ASSESSMENT

I.1 Introduction

Risk assessment includes several uncertainties that warrant discussion. Many of the assumptions used in this human health risk assessment (HHRA) for the Phibro-Tech, Inc. (PTI) Facility in Santa Fe Springs, California (the “Site”) regarding the representativeness of sampling data, human exposures, fate and transport modeling, and chemical toxicity are conservative, following agency guidance, and reflect a 90th or 95th percentile value, rather than a typical or average value. The use of several conservative exposure and toxicity assumptions can introduce considerable uncertainty into the risk assessment. By using conservative exposure or toxicity estimates, the assessment can develop a significant conservative bias that may result in the calculation of significantly higher cancer risk or noncancer hazard than is actually posed by the chemicals present in soils, soil gas, and groundwater at the Site. A discussion of the key uncertainties used in this evaluation for the Site is discussed below.

I.2 Uncertainties in the Exposure Assumptions

As described below, numerous assumptions were made in order to estimate potential human exposure to the chemicals of potential concern (COPCs) at the Site.

Exposure Assumptions and Pathways

Consistent with California Environmental Protection Agency (Cal/EPA)-recommended default exposure assumptions for resident and commercial/industrial worker scenarios (Cal/EPA, 2011a), it was assumed that current and future onsite commercial worker and current offsite resident populations examined in this HHRA are potentially exposed to the COPCs in Site soils for a continual 25-year or 30-year exposure period, respectively. The assumed exposure durations used in this HHRA represent upper-bound estimates of the total amount of time that an individual may be working or residing in one location. As the average commercial exposure duration in one location is actually less than 25 years, and the average residential exposure duration in one location is actually less than 30 years, the cumulative exposures and risks presented in this HHRA may represent overestimates of the more typical exposures that might be incurred in commercial or residential settings.

Additionally, the estimates of potential health risks for future onsite commercial workers do not account for potential clean soil cover, grass, asphalt, buildings, or other covering that would reduce exposure below that assumed in this analysis. Thus, actual exposures to soils at the Site under potential future commercial use would probably be much lower than what has been estimated in this assessment.

The selection of complete exposure pathways is another area of uncertainty in all risk assessments. In general, this HHRA has quantified all potentially complete exposure pathways through which individuals could become exposed to chemicals present in onsite soil, soil gas, and groundwater. Accordingly, the exposure pathways quantified in this HHRA are believed to capture the range of theoretical current and future exposures, and thus provide a conservative estimate of long-term exposures that could occur at (or near) the Site.

Bioavailability of Chemicals in Soil

Another exposure factor that has not been taken into account in this assessment is the bioavailability of chemicals in soil. Studies support that certain organic compounds, particularly highly lipophilic compounds such as polychlorinated biphenyls (PCBs), tend to be tightly bound to soil (Sklarew and Girvin, 1987). This phenomenon can substantially reduce the bioavailability of chemicals to people exposed to chemicals in soils. A reduction in the bioavailability of the chemicals adsorbed to soil would reduce the projected health risk associated with exposure to these soils. Low bioavailability could substantially reduce estimated risks below levels calculated using the default assumption that all chemicals are 100% bioavailable.

Calculation of Soil Exposure Point Concentrations

In accordance with United States Environmental Protection Agency (USEPA) guidance (USEPA, 2010), upper confidence limits (UCLs) of arithmetic means were not calculated for datasets with less than five detections or less than eight samples. Although the USEPA guidance (USEPA, 2010) recommends either the use of the mean or the median in these cases, the maximum detected concentration was conservatively used as the representative exposure point concentration (EPC). The use of maximum concentrations of COPCs detected in soil as representative EPCs likely overestimated associated cancer risks and noncancer hazards. In this HHRA, the majority of the volatile organic compounds (VOCs) detected in onsite soils 0-10 feet below ground surface (bgs) were detected in fewer than five samples; thus, maximum detected concentrations were conservatively used for these VOCs as representative EPCs. The resulting health risks associated with these VOCs, contributed less than 0.4% to the overall estimated total cancer risk and less than 0.2% to the overall estimated noncancer hazard for the future onsite commercial worker (Tables 11 and 12 of the HHRA). Therefore, the use of maximum detected concentrations as representative EPCs for these VOCs does not materially impact the conclusions of the HHRA.

As discussed in Section 4.1 of the HHRA, some historic soil sample results presented in the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) report (CDM, 1991) did not have reporting limits available for non-detects (ND). These data were excluded from the quantitative HHRA. As the results are ND, provided the reporting limits were not elevated, including these data would likely result in even lower EPCs for COPCs in soil. Further, except for Aroclor 1254, bis(2-ethylhexyl)phthalate, and dibutyl phthalate, more recent data were available in the vicinity of the historic samples for all chemicals analyzed for in soil. . Assuming Aroclor 1254, bis(2-ethylhexyl)phthalate, and dibutyl phthalate may be present in soil at the Site at concentrations below historic reporting limits, it is not anticipated that the exclusion of these compounds at such levels would materially impact the conclusions of the HHRA. Estimated total incremental cancer risk and total noncancer HI from COPCs in onsite soils for the future onsite commercial worker are already well in excess of acceptable thresholds (the acceptable risk range of 1 x 10^{-6} to 1 x 10^{-4}; the acceptable HI of 1).

Calculation of Soil Gas Exposure Point Concentrations

As discussed in Section 5.5.2.1.1 of the HHRA, potential vapor intrusion into current commercial buildings (i.e., maintenance and laboratory buildings) and hypothetical future buildings was modeled on an individual soil gas sample basis, i.e., the transport of COPCs from relevant boring locations and sampling depths was evaluated separately. For current buildings, only soil gas samples collected from within approximately 100 feet of each building were evaluated. Sampling locations within approximately 100 feet of the maintenance building include SMP-07A; sampling locations within approximately 100 feet of the laboratory building include PZ-01 and SMP-10A. For hypothetical future buildings, all soil gas sample results were evaluated. Maximum incremental cancer risks and noncancer hazard indices from the sample-specific calculations were then used to represent the potential vapor intrusion risks for current and future onsite commercial workers. Use of the maximum cancer risks and HIs likely overestimate actual cancer risks and noncancer hazards for these receptors as individuals inside a building are more likely exposed to an average concentration (e.g., UCL) rather than concentrations of COPCs from individual soil gas samples.

As discussed in Section 5.5.2.1.2 of the HHRA, potential risks associated with inhalation of VOCs in outdoor air for current and future onsite commercial workers and current offsite residents were evaluated using estimated UCLs for the COPCs in soil gas, or maximum detected concentrations in instances where UCLs were not calculated (i.e., for datasets with less than five detections or less than eight samples). The use of maximum concentrations of COPCs detected in soil gas as representative ECs likely overestimated associated cancer risks and noncancer hazards. In this HHRA, nearly one-third of the COPCs in soil gas were either detected in fewer than five samples or were analyzed for in less than eight samples; thus, maximum detected concentrations were conservatively used for these COPCs as representative ECs for the inhalation of VOCs in outdoor air pathway. However, estimated cancer risks for the current/future onsite commercial worker and current offsite resident for this pathway were well below the lower end of the acceptable range of 1 x 10^{-6} to 1 x 10^{-4}, and estimated noncancer hazards for these receptors were well below the acceptable HI of 1 (Tables 14 and 15 of the HHRA). Therefore, the use of maximum detected concentrations as representative ECs for select COPCs in soil gas for the inhalation of VOCs in outdoor air pathway does not materially impact the conclusions of the HHRA.

Fate and Transport Modeling Associated with Volatile Compounds in Soil Gas

Soil Gas to Indoor Air

As recommended by Cal/EPA (2011b), the Johnson and Ettinger SG-SCREEN Model for soil gas was used to estimate potential vapor intrusion risks for current and future onsite commercial populations in this HHRA. The modeling is based on the assumptions that the source of contamination is infinite and fixed in place. Both of these assumptions are conservative for soil sources. First, the actual source of contamination is likely finite and will deplete over time, as volatile chemicals migrate upward through the soil column. This depletion can be further accelerated by biodegradation. Second, as the contamination is depleted, the distance between the source and the building will increase, resulting in decreased transport into the indoor environment. Thus, the actual long-term exposures that may occur at the Site are likely significantly lower than assumed in the calculation of future potential health risks, especially if biodegradation is occurring.

The Johnson and Ettinger model is sensitive to the soil property inputs. Therefore, obtaining a site conceptual framework that accurately describes site lithology is critical to generating accurate modeling results. As described in Section 2.3.1 of the HHRA, however, the Site geology suggests a lack of uniformity in soil properties across the Site; thus default soil parameter values were conservatively used for modeling the transport of vapor-phase COPCs from onsite soil gas to onsite indoor and outdoor air. These conservative source and model assumptions incorporated into the model result in an overestimate of exposure concentrations and actual long-term exposures that may occur at the Site are likely significantly lower than assumed in the calculation of current and future potential risks. The conservative default modeling soil property assumptions used as inputs to the model are presented in Table G-2 of Appendix G, Modeling Methodologies.

As discussed in Section 5.3.1, consistent with Cal/EPA risk assessment guidance and the DTSC-approved HRA Workplan (Iris Environmental, 2013), potential exposure to volatile constituents in Site groundwater via the outdoor/indoor vapor inhalation pathway was evaluated using Site soil gas data. However, as there is a known VOC-impacted groundwater plume underneath the Site, a sensitivity analysis of the vapor intrusion pathway was conducted to compare potential exposures based on groundwater concentrations versus potential exposures based on soil gas concentrations.[1] TCE was selected as a representative COPC for this sensitivity analysis as TCE is consistently detected in all onsite and offsite wells during quarterly monitoring events (it is expected that TCE contamination is due to a regional TCE plume, which originates up-gradient of the Site) and TCE has been detected in soil gas. As shown in Table 13 of the HHRA, the estimated maximum cancer risk and noncancer HI for TCE in soil gas under a commercial land use scenario are $5.7x\ 10^{-7}$ and 0.18, respectively (SMP-3 at 25 feet bgs,

[1] A sensitivity analysis was not conducted for the outdoor pathway as estimated average incremental cancer risk and noncancer HI from VOCs in outdoor air for all receptors are well below acceptable risk and HI levels (see Section 7.2 of the HHRA).

sampled on 11/15/2012). Comparable groundwater data (i.e., sample collected around the same time as the soil gas data and from the uppermost aquifers) was used to model vapor intrusion of TCE from groundwater. The maximum concentration of TCE from the October 2012 sampling event, the sampling event closest in time to when SMP-3 was sampled and from the uppermost aquifer, was 370 µg/l (MW-19S). As recommended by Cal/EPA (2011b), the Johnson and Ettinger GW-SCREEN Model for groundwater was used to estimate potential vapor intrusion risks for commercial populations.[2] Results of the GW-SCREEN printouts are included in Exhibit A. As presented in Exhibit A, the estimated cancer risk for TCE from the vapor intrusion pathway is 1.7×10^{-7} and the hazard quotient is 0.057. These results based on groundwater data are lower to the estimated maximum cancer risk and noncancer HI calculated using soil gas data. Therefore use of groundwater data to estimate potential exposures to COPCs via vapor intrusion will likely not materially change the conclusions of the HHRA.

Soil Gas to Outdoor Air

Many of the uncertainties associated with the fate and transport modeling conducted to estimate the predicted outdoor air concentrations for VOCs are similar to those associated with modeling of indoor air concentrations. As in the indoor air modeling, the modeling assumes that VOCs in soil are not undergoing biodegradation and the modeling is based on the assumption that there is an infinite source of contamination. Additionally, the modeling of outdoor air concentrations is based on the assumption that only a single chemical is present in the subsurface. When many chemicals are present, these chemicals can interact in ways that reduce the vapor pressure of VOCs available for transport through the vadose zone. These assumptions are all likely conservative.

I.3 Uncertainties in the Toxicity Assessment

Uncertainty in the toxicity assessment arises for those chemicals which rely on animal studies as the basis for determining the appropriate toxicity value. All risk assessments assume that adverse effects observed in animal toxicity experiments would also be observed in humans (animal-to-human extrapolation), and that the toxic effect observed after exposure by one route would occur following exposure by a different route (route-to-route extrapolation).

In order to adjust for uncertainties that arise from the use of animal data, regulatory agencies often base the reference dose for noncarcinogenic effects on the most sensitive animal species (i.e., the species that experiences adverse effects at the lowest dose) and adjust the dose via the use of safety or uncertainty factors. The adjustment compensates for the lack of knowledge regarding interspecies extrapolation and possibility that

[2] The Johnson and Ettinger groundwater model is used to model the equilibrium partitioning of volatile chemicals between groundwater and soil gas and the upwards diffusion of the volatile chemicals through the vadose zone to the ground surface.

humans are more sensitive than the most sensitive experimental animal species tested. The use of uncertainty factors is considered to be health protective.

Second, when route-specific toxicity data were unavailable, data were derived by route-to-route extrapolation, and equal absorption rates for both routes were assumed (i.e., oral to inhalation and inhalation to oral). This may or may not reflect the actual differences in toxicity that can be associated with the route of exposure, but is considered to be a conservative and health-protective assumption. For dermal exposure to soil, chemical-specific absorption data generally were not available. Instead, dermal absorption rates, which were based on the default assumptions provided by the Cal/EPA (2013), were assumed.

Cal/EPA has published a cancer potency factor for naphthalene. The cancer potency factor was based on inhalation studies with rats, conducted by the National Toxicology Program. According to Cal/EPA, the results of these inhalation studies show clear evidence of respiratory epithelial adenomas and olfactory epithelial neuroblastomas in male and female rats. As the studies are focused on the inhalation route of exposure, and as the cancers observed in these studies are associated with the respiratory system, it is possible that the observed carcinogenicity is route-specific, and would not be observed if exposures were to occur via the oral route. Nonetheless, as a conservative screening-level approach, the cancer potency factor for naphthalene developed by Cal/EPA has been applied to the oral and dermal routes of exposure in this HHRA. Accordingly, the cancer risk for naphthalene estimated in this HHRA is based on the assumption that inhalation, oral and dermal exposure to naphthalene present in soils could result in cancer effects.

I.4 Uncertainties Associated with Risk Characterization

Chemical Interactions

One source of uncertainty that is unique to risk characterization is the assumption that the total risk associated with exposure to multiple chemicals is equal to the sum of the individual risks for each chemical (i.e., the risks are additive). Other possible interactions include synergism, where the total risk is higher than the sum of the individual risks, and antagonism, where the total risk is lower than the sum of the individual risks. Relatively little data are available regarding potential chemical interactions following environmental exposure to chemical mixtures. Some studies have been carried out in rodents given simultaneous doses of multiple chemicals. The results of these studies indicated that no interactive effects were observed for mixtures of chemicals affecting different target organs (i.e., each chemical acted independently), whereas antagonism was observed for mixtures of chemicals affecting the same target organ, but by different mechanisms (Risk Commission, 1997).

While there are no data on chemical interactions in humans exposed to chemical mixtures at the dose levels typically observed in environmental exposures, animal studies suggest that synergistic effects will not occur at levels of exposure below their individual effect levels (Seed et al., 1995). As exposure levels approach the individual effect levels, a variety of interactions may occur, including those that are additive, synergistic and antagonistic (Seed et al., 1995).

Current USEPA guidance for risk assessment of chemical mixtures (USEPA, 1989) recommends assuming an additive effect following exposure to multiple chemicals. Subsequent recommendations by other parties, such as the National Research Council (1988) and the Presidential/Congressional Commission on Risk Assessment and Risk Management (Risk Commission, 1997) have also advocated a default assumption of additivity. As currently practiced, risk assessments of chemical mixtures generally sum cancer risks regardless of tumor type, and sum noncancer hazard indices regardless of toxic endpoint or mode of action. Given the available experimental data, this approach likely overestimates potential risks associated with simultaneous exposure to multiple chemicals.

Total Petroleum Hydrocarbons

Risks to human health associated with the presence of TPH mixtures is typically evaluated by evaluating the significance of individual chemical constituents within the TPH mixtures (e.g., benzene, toluene, ethylbenzene, and xylenes [BTEX]; polycyclic aromatic hydrocarbons). However, for this HHRA, at the request of the DTSC, TPH product mixtures reported in soil and soil gas were also separately evaluated. The approach followed to evaluate the health risks associated with the TPH mixtures involved an examination of each mixture as the sum of several smaller subsets, defined by specific carbon ranges and structural classes referred to as fractions. Surrogate toxicity values (i.e. toxicity values derived using toxicity data for mixtures or toxicity values for indicator compounds within certain fractions) were used to evaluate health risks associated with the individual fractions. There is uncertainty associated with the use of these surrogate approaches in estimating the toxicity of TPH mixtures at the Site because the true composition of weathered TPH in the gasoline, diesel, and motor oil ranges (TPH-g, TPH-d, and TPH-mo) present at the Site is not known. In addition, the recommended surrogate toxicity values for the TPH fractions are often based on animal studies in which the animals are exposed to fresh petroleum product streams and/or mixtures (e.g., USEPA-recommended toxicity value for C9-C18 aliphatics is based on various petroleum stream studies on rodents); such studies are arguably not appropriate and/or relevant for evaluating the toxicity of weathered releases, which is the type of TPH present at the Site.

I.5 References

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APPENDIX I

EXHIBIT A

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 12/6/2011)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (μg/L)	Chemical
79016	3.70E+02	Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	1833.067	C	24	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm²)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm³)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm³/cm³)
		1.00E-08		1.5	0.43	0.15

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	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)
1.0E-06	1	70	25	25	250

Used to calculate risk-based groundwater concentration.