✓ cc done 8/14/98
✓ Pete Ruggere
✓ Joe Calloda
✓ Mike Wilma

Henshaw Associates, Inc.
Environmental Engineering Services

faxed Pat Geary 8/11/98

KIM DELIVERED COPY TO JESUS ARMAS CITY MANAGER OF HAYWARD.

WHEN COMMENTS MADE COPY & GIVE ED PHILLIPS

July 31, 1998

Mr. Pat Geary
Duc Housing Partners, Inc.
14107 Winchester Boulevard, Suite H
Los Gatos, CA 95032

Re: Draft Soil and Groundwater Quality Investigation Report
Oliver Property, Hayward, California
Project No.: 160.A.01

Dear Pat:

Henshaw Associates, Inc. is pleased to submit a draft of our Soil and Groundwater Quality Investigation report for the Oliver Property in Hayward, California. Subsequent to receiving your review comments, we will issue the report in final form.

We appreciate the opportunity to provide continuing services to you on this project and trust this report meets your needs at this time. Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

Henshaw Associates, Inc.

Dennis Laduzinsky, C.E.G./R.E.A.
Senior Project Manager

Copies: Addressee (1)

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07/31/98

Henshaw Associates, Inc

DRAFT
Soil and Groundwater Quality Investigation
Oliver Property
28905 Hesperian Boulevard
Hayward, California

July __, 1998

Prepared For:

Duc Housing Partners, Inc.
14107 Winchester Boulevard, Suite H
Los Gatos, California 95032

Prepared By:

Henshaw Associates, Inc.
11875 Dublin Boulevard, Suite A-200
Dublin, California 94568

Douglas Bell
Project Engineer

Dennis Laduzinsky, C.E.G./R.E.A.
Senior Project Manager

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

Soil and Groundwater Quality Investigation
Oliver Property
28905 Hesperian Boulevard
Hayward, California

1.0 INTRODUCTION AND SCOPE OF SERVICES

This report presents the results of an investigation of soil and groundwater quality performed at the Oliver property in Hayward California. The site, shown on the Site Location Map (Figure 1) and Site Plan (Figure 2), consists of approximately 300 acres of land divided into an eastern and a western parcel. The eastern parcel is scheduled for commercial development, and the western parcel is scheduled for residential development. The project is associated with two additional parcels of land, an irregular-shaped parcel located along Industrial Boulevard owned by the City of Hayward, and a smaller triangular-shaped parcel located along Alameda Creek owned by Alameda County. No soil and groundwater quality investigation has been conducted on the Alameda County parcel at the time of this report. Results of a soil and groundwater quality investigation performed on the City of Hayward parcel are presented in a separate report.

The purpose of this investigation has been to evaluate potential impacts to on-site soil or groundwater related to historic land uses identified during a Phase I assessment previously performed at the site. This investigation was performed by Kris Larson, Project Geologist, and Douglas Bell, Project Engineer, under the direction of Dennis Laduzinsky, C.E.G/R.E.A. Mr. Laduzinsky is registered by the State of California as an Environmental Assessor. The scope of services for the soil and groundwater quality investigation was presented in our April 16, 1998 proposal. The investigation generally consisted of collection and analysis of soil and groundwater samples for a variety of contaminant compounds and preparation of this report.

2.0 BACKGROUND

2.1 Site Description

The site occupies land in Alameda County west of Interstate 880 and north of the Alameda Creek flood control channel. Hesperian Boulevard forms the eastern property boundary, with vacant land bordering the site on the west. The Alameda Creek flood control channel and a small parcel owned by the County of Alameda form the southern property boundary. A vacant parcel of land owned by the City of Hayward located along Industrial Boulevard and other vacant land border the site on the north. A Southern Pacific Railroad track and a flood-control channel divide the Oliver property into eastern and western parcels (Figure 2).

2.2 Site Topography

According to the U.S. Geologic Survey Topographic Map of the Newark Quadrangle, site elevations measure about five feet above mean sea level. The site is relatively flat; however, a number of elevated berms and drainage channels with standing water are present throughout the site.

2.3 Previous Investigations

In May 1998, Henshaw Associates, Inc. (Henshaw) performed a Phase I preliminary site assessment (PSA) to assess conditions and activities at, and within the immediate vicinity of, the site that could indicate the potential presence of hazardous constituents in the shallow soil and groundwater. The PSA indicated that the Oliver property had been historically used for agriculture and duck hunting. Additionally, the PSA indicated that an underground storage tank was recently removed from a storage shed located in an equipment storage and maintenance area on the eastern portion of the Oliver property. The PSA concluded that these activities represented potential sources of soil and groundwater contamination and specific testing was recommended. The results of the PSA are summarized in Henshaw's report, *Preliminary Site Assessment, Oliver Property, Hayward, California*, dated May 17, 1995.

In May 1996 and December 1997, Berlogar Geotechnical Consultants (Berlogar) conducted geotechnical investigations to evaluate the site soil characteristics for the proposed industrial and residential development. Berlogar characterized the near-surface soils (three to six feet below ground surface, bgs) as generally stiff, silty clays underlain by a layer of soft, compressible Bay Mud ranging in thickness from two to twelve feet. Soils encountered below the Bay Mud layer generally included silty clays and sandy clays interspersed with sand and silt layers. The results of the geotechnical investigation are summarized in Berlogar's report, *Geotechnical Investigation, Oliver Property, Hesperian and Industrial Boulevard, Hayward, California*, dated December 17, 1997.

3.0 FIELD INVESTIGATION METHODS

Information collected during Henshaw's PSA indicated a potential for the presence of on-site soil or groundwater contamination related to the historic uses of the site. A subsurface investigation was performed to evaluate the potential impacts to soil and groundwater quality related to these former land uses. General descriptions of the field investigation methods are presented in the following sections.

For evaluation purposes, the Oliver property was divided into eastern and western parcels, based on historic land use and future development plans. Note that the investigation results for the City

of Hayward parcel are presented under separate cover. No subsurface investigation has been performed at the Alameda County parcel at this time.

3.1 Utility Survey

Prior to drilling and sampling, an underground utility survey was conducted. The survey indicated the presence of a Pacific Gas & Electric high-pressure natural gas pipeline running in a north-south direction through the Alameda County parcel, the eastern parcel of the Oliver property, and the City of Hayward parcel. The survey also located numerous irrigation pipes within the Oliver property.

3.2 Shallow Soil Samples

Site history information collected during the Phase I investigation indicated that the eastern and western parcels of the Oliver property had been historically used for agriculture. As such, soils within the upper foot in these areas were tested for residual pesticides. Soil samples were collected for analysis by excavating soil to a depth of six-inches to one-foot using hand tools and manually filling four-ounce glass jars supplied by the laboratory. Sample jars were labeled and placed in a cooled container for transport to the laboratory under Chain-of-Custody control.

3.3 Exploratory Borings

Exploratory borings were advanced for soil and groundwater sample collection at various locations throughout the site using direct-push sampling methods. Samples were collected for chemical analysis by driving either a Standard-Penetration or a Modified California split-spoon sampler equipped with six-inch long brass or stainless steel liners. The ends of the sample liners were covered with Teflon-lined end caps, labeled, and placed in a cooled container for transport to the laboratory under Chain-of-Custody control. Henshaw field personnel under the supervision of a California-Registered Geologist logged the recovered soil samples in accordance with the United Soils Classification System (USCS). Note that no physical tests were conducted on the soil samples; the information contained in the boring logs (Appendix A) are based exclusively on field observations.

Groundwater grab samples were collected from several open borings using stainless steel bailers. In most instances, sections of clean, slotted poly-vinyl-chloride (PVC) casing were used to keep the borehole open temporarily. After lowering the bailer through the PVC casing or into the open borehole, samples were decanted from the bailer into laboratory-supplied sample containers, labeled, and placed in a cooled container for transport to the laboratory under Chain-of-Custody control. Upon completion of the soil and/or groundwater sampling in each borehole, the PVC casing was removed and the borehole was backfilled with cement grout.

All drilling and sampling equipment was steam-cleaned prior to use at each boring location. All sampling equipment was washed with detergent and rinsed with distilled water between samples.

4.0 FIELD INVESTIGATION RESULTS

4.1 Oliver Property – Eastern Parcel

The eastern parcel of the Oliver property includes the approximate eastern half of the site between the railroad tracks and Hesperian Boulevard, as shown on Figure 2. Available site history information indicated that the eastern parcel of the Oliver property had been historically used for agriculture, including an early history of row crops, followed by later use for cut flowers. An equipment storage and maintenance area is present on this portion of the property. An underground fuel storage tank (UST) has recently been removed from inside the storage shed at this location. It is understood that the eastern parcel of the Oliver property will be developed for light commercial use.

Investigation of the eastern parcel included shallow soil sampling for residual pesticides throughout the area. Exploratory borings were drilled in the area of the storage shed and equipment maintenance area. Soil and groundwater samples collected from these borings were analyzed for fuel hydrocarbons and volatile organic compounds (VOCs).

4.1.1 Subsurface Conditions

Near-surface materials encountered in the eastern parcel generally consisted of silty clay topsoil in the agricultural areas and gravelly to sandy fill in the storage yard and maintenance areas. Borings extended to 10 feet bgs in the storage shed area encountered an underlying layer of native Bay Mud present from 4 to 7 feet bgs to the bottom of the borings. Groundwater in the storage shed area was encountered at depths ranging from 1.5 to 6 feet bgs.

4.1.2 Eastern Parcel – Pesticides

Shallow soil samples were collected from the upper foot of soil at 60 locations throughout the parcel as shown in Figure 3. Samples were combined at the laboratory by adjacent groups of four to form composite samples prior to analysis. Fifteen composite samples from the eastern parcel were analyzed for organochlorine pesticides using EPA method 8080 (Sample 26-A,B,C,D through 40-A,B,C,D). DDT, DDD, and DDE were detected in all 15 of the samples at concentrations ranging from 0.15 to 0.87 parts per million (ppm) total DDT, DDD, and DDE. Other detected compounds included dieldrin (0.01 ppm, Sample 29-A,B,C,D) and endrin aldehyde (0.01 ppm, Sample 40-A,B,C,D).

1995 PRG: (residential)

DDD	1.9	ppm
DDE	1.3	
DDT	1.3	

Five of the composite samples collected from the eastern parcel were additionally analyzed for organophosphate pesticides using EPA Method 8140 (Sample 26-A,B,C,D, 28-A,B,C,D, 32-A,B,C,D, 35-A,B,C,D, and 38-A,B,C,D). None of these samples were found to contain organophosphate pesticides above the laboratory method reporting limits (MRLs). Pesticide analytical results are summarized in Table 1.

4.1.3 Eastern Parcel – Petroleum Hydrocarbons

Five exploratory borings were drilled to approximately 10 feet bgs in the storage shed and equipment storage area as shown on Figure 4. Soil samples collected at approximately 5 and 10 feet bgs at each boring were analyzed for total petroleum hydrocarbons (TPH) as oil, diesel, and gasoline using EPA Method 8015 and purgeable aromatic compounds (benzene, toluene, ethylbenzenes, and total xylenes (BTEX) and methyl tert-butyl ether (MTBE)) using EPA Method 8020. Analytical results are summarized in Table 2 and presented graphically on Figure 5. Results for the majority of constituents were below the MRLs; however, 0.006 ppm of toluene was detected in the 5 and 10-foot samples from boring B3. MTBE was measured at 0.17 ppm and 0.34 ppm, respectively, in the 5 and 11-foot samples from boring B5.

Groundwater grab samples were collected from the five borings advanced in the storage shed and equipment storage area and analyzed for VOCs using EPA Method 8010, BTEX, MTBE, and TPH as gasoline, diesel, and oil. Analytical results are summarized in Table 3 and presented graphically on Figure 5. None of the groundwater samples contained VOCs or BTEX compounds above the laboratory MRLs. TPH as oil was detected at 280 ppb in the sample from B4. TPH as diesel was detected at 1,400 ppb in B1 and 110 ppb in B3. TPH as gasoline was measured at 53 ppb in B4. MTBE was detected at a concentration of 9,700 ppb in the sample from boring B5, and at 7 ppb and 31 ppb, respectively, in borings B1 and B4. The remainder of the analytical results were below the MRLs (Table 2).

4.2 Oliver Property – Western Parcel

The western parcel of the Oliver property includes the area west of the railroad tracks, as shown on Figure 2. Agricultural use of the western parcel has been reportedly less intense than the eastern parcel, consisting mainly of wheat and hay. This portion of the site was reportedly used as a duck hunting club from the 1940s to the late 1980s and included a pond area, which was subsequently drained. In addition, the drainage channel bordering this portion of the site on the north appears to have been used as a general refuse disposal area, and currently contains an abundance of metal, plastic, and wood debris. It is understood that the western parcel of the Oliver property will be developed for residential use.

Investigation of the western parcel included shallow soil sampling for residual pesticides and total lead throughout the area. Exploratory borings were also drilled in the former pond area with soil samples collected for total lead analysis. Additional borings were drilled in the western parcel for collection of water grab samples, with analysis for various constituents including fuel hydrocarbons, dissolved lead, VOCs, and pesticides.

4.2.1 Subsurface Conditions

Materials encountered in the former pond area of the western parcel generally consisted of silty clay topsoil, underlain by native Bay Mud beginning at a depth of approximately 4.5 feet bgs. Exploratory borings drilled elsewhere in the western parcel were advanced only for groundwater grab sampling, and no soil samples were collected for logging purposes. Groundwater in the western parcel was encountered at depths ranging from 4.5 to 14.5 feet bgs. Groundwater was not encountered in one of the borings drilled to more than 10 feet bgs.

4.2.2 Western Parcel – Pesticides

Shallow soil samples were collected from the upper foot of soil at 100 locations throughout the parcel as shown in Figure 3. Samples were combined at the laboratory by adjacent groups of four to form single composite samples prior to analysis. The 25 resulting composite samples from the western parcel were analyzed for organochlorine pesticides using EPA method 8080 (Samples 1-A,B,C,D through 25-A,B,C,D). Pesticide analytical results are summarized in Table 4. DDT, DDD, and DDE were detected in 14 of the 25 samples with results ranging from 0.01 to 0.54 ppm total DDT, DDD, and DDE. The only other detected compound was endrin, reported in three samples at concentrations of 0.03, 0.02, and 0.02 ppm in Samples 4, 7, and 8-A,B,C,D, respectively.

4.2.3 Western Parcel – Lead

The shallow soil samples collected at 100 locations within the western parcel (Figure 3) were analyzed individually for total lead using EPA Method 6010A. Lead analytical results are summarized in Table 5. Total lead results ranged from below the laboratory MRL to 53 ppm. Soil samples collected at depths of one, three, and five feet bgs from exploratory borings drilled in the former pond area (Figure 4) were also analyzed for total lead. Results from these samples ranged from 8 ppm to 22 ppm, with the higher concentrations generally being detected in the upper, one-foot bgs samples.

Four additional exploratory borings (B9, B11, B12, and B13, shown on Figure 4) were drilled to approximately 8-15 feet bgs for collection of groundwater grab samples. Groundwater grab samples collected from borings B9 and B11 were analyzed for dissolved lead using EPA Method

6010A. Analytical results are summarized in Table 6. Lead was not reported present in the samples above the laboratory MRLs. A sufficient volume of water could not be collected from borings B12 and B13 for dissolved lead analysis.

4.2.4 Western Parcel – Petroleum Hydrocarbons

Groundwater grab samples collected on the western parcel (Figure 4) were analyzed for VOCs using EPA Method 8010, BTEX and MTBE using EPA Method 8020, and TPH as gasoline and diesel using the California Leaking Underground Fuel Tank (CA/LUFT) Method. Analytical results are summarized in Table 6.

Samples collected from borings B9, B11 and B12 did not contain VOCs, BTEX, MTBE, or TPH as gasoline above the MRLs. TPH as diesel was not detected above the MRL in B9 and B11; however, a sufficient volume of groundwater could not be collected from boring B12 for TPH as diesel analysis. Groundwater was not encountered in boring B13; consequently, no water samples were collected for organic compound analyses.

4.2.5 Western Parcel – Debris-Filled Channel

Groundwater was not encountered in boring B13, located along the north border of the western parcel near the debris-filled channel. In an attempt to characterize water quality in the local area, a surface water sample was collected from the standing water in the channel. The sample (Sample B13, shown on Figure 4) was analyzed for organochlorine pesticides and PCBs using EPA Method 8080, as well as VOCs, BTEX, MTBE, and TPH as gasoline, diesel, and oil. Analytical results are summarized in Table 6. The sample reportedly contained 61 ppb of TPH as oil, 0.01 ppb of DDE, and 0.02 ppb of DDD. TPH as gasoline and diesel, BTEX, MTBE, PCBs, and VOCs were not detected above the MRLs.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Oliver Property – Eastern Parcel

Chemical test results indicate the presence of low levels of DDT and related organochlorine pesticides in shallow soil throughout the eastern parcel of the Oliver property. However, the measured levels of residual pesticides are all below the Total Threshold Limit Concentration (TTLC) of 1 ppm for total DDT, DDE, and DDD, and below the associated Preliminary Remediation Goals (PRGs) for industrial or residential land use promulgated by Region 9 of the United States Environmental Protection Agency (EPA). Organophosphate pesticides were not detected in select samples analyzed for these constituents. In our opinion, the low levels of residual organochlorine pesticides do not represent a significant environmental concern.

Elevated levels of fuel hydrocarbons were detected in groundwater grab samples collected from borings advanced around the former UST location and the equipment storage area. VOCs were not reported present in groundwater above the MRLs. In one sample, MTBE was reported in a concentration that exceeded the California Department of Health Services (DHS) drinking water Action Level as well as the EPA PRG. TPH as gasoline, diesel, and oil were also variously detected in several of the water samples collected in the immediate vicinity of the former UST. Elevated TPH as diesel was detected in one sample collected in the general storage yard area, suggesting the possible presence of other areas of soil or groundwater contamination related to localized spills or releases. However it should be noted that the groundwater samples were collected as grab samples from open boreholes, and are qualitative in nature. The potential for "false-positive" results can be significant when evaluating the presence of diesel- and oil-range hydrocarbons in groundwater samples collected from open boreholes. With the possible exception of the 9,700 ppb of MTBE measured in the boring B5, the petroleum hydrocarbons detected in groundwater around the equipment storage area do not appear to represent a significant environmental concern. In our opinion, notification of the presence of fuel hydrocarbons in groundwater adjacent to the former UST should be provided to the Alameda County Health Services Agency.

5.2 Oliver Property – Western Parcel

Chemical test results indicate the presence of low levels of DDT and related organochlorine pesticides in shallow soil of the western parcel of the Oliver property. However, the measured levels of residual pesticides are all below the TTLC of 1 ppm for total DDT, DDE, and DDD and below the associated EPA PRGs for residential land use. In our opinion, the low levels of residual organochlorine pesticides do not represent a significant environmental concern.

Total lead concentrations detected in the shallow soil samples throughout the parcel generally appear representative of normal background levels for shallow soil throughout the San Francisco Bay Area. All measured results were below the associated TTLC and EPA PRG for lead. These results indicate that former use of the western parcel of the Oliver property as a duck hunting club has not significantly affected shallow soil quality.

Groundwater samples collected from the western Oliver property parcel did not contain fuel hydrocarbons, VOCs, or lead at concentrations above the laboratory MRLs. A surface-water sample collected from the drainage channel bordering the site on the north reportedly contained detectable levels of DDE, DDD, and TPH as oil. In our opinion, these test results appear to represent the general quality of runoff from bay-margin agricultural lands and other urban drainage (it should be noted that our investigation was performed during and following periods

of rainfall). It is recommended that existing debris be removed from the channel as part of the development program.

6.0 LIMITATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/ hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation is thorough enough to describe all geologic/hydrogeologic conditions of interest at a given site. If conditions have not been identified during the study, such a finding should not therefore be construed as a guarantee of the absence of such conditions at the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

REFERENCES

Berlogar Geotechnical Consultants. *Geotechnical Investigation, Oliver Property, Hesperian and Industrial Boulevard, Hayward, California*. December 17, 1997.

Henshaw Associates, Inc. *Preliminary Site Assessment, Oliver Property, Hayward, California*. May 17, 1998.

U.S. Environmental Protection Agency. *Preliminary Remediation Goals*. EPA Region IX. 1996.

U.S. Geologic Survey. *7.5 Minute Topographic Map, Newark, California*. 1959, photorevised 1980.

TABLE 1
Soil Analytical Results - Eastern Parcel Oliver Property
Organochlorine and Organophosphate Pesticides

Sample I.D.	Organochlorine Pesticides - EPA 8080^						Organophosphate Pesticides - EPA 8140^
	DDE	DDD	DDT	Total DDE, DDD, DDT	Dieldrin	Endrin aldehyde	
26-A,B,C,D	0.06	0.03	0.06	0.15	ND	ND	ND
27-A,B,C,D	0.14	0.05	0.1	0.29	ND	ND	--
28-A,B,C,D	0.12	0.04	0.06	0.22	ND	ND	ND
29-A,B,C,D	0.1	0.01	0.05	0.16	0.01	ND	--
30-A,B,C,D	0.25	0.07	0.13	0.45	ND	ND	--
31-A,B,C,D	0.15	0.05	0.1	0.3	ND	ND	--
32-A,B,C,D	0.06	0.03	0.07	0.16	ND	ND	ND
33-A,B,C,D	0.29	0.07	0.13	0.49	ND	ND	--
34-A,B,C,D	0.06	0.04	0.07	0.17	ND	ND	--
35-A,B,C,D	0.43	0.09	0.19	0.71	ND	ND	ND
36-A,B,C,D	0.25	0.07	0.15	0.47	ND	ND	--
37-A,B,C,D	0.5	0.09	0.21	0.8	ND	ND	--
38-A,B,C,D	0.19	0.05	0.09	0.33	ND	ND	ND
39-A,B,C,D	0.4	0.07	0.18	0.65	ND	ND	--
40-A,B,C,D	0.47	0.11	0.29	0.87	ND	0.01	--
TTLC	NA	NA	NA	1	8	NA	NA
PRG	13	19	13	NA	0.19	NA	NA

NOTES

Results reported in parts per million (ppm)

All soil samples collected within 6-12" of ground surface

^: Composite analysis conducted on four adjacent sample locations;
Analyses conducted for entire range of 8080/8140 pesticides, compounds not listed are ND

--: Not analyzed

ND: Not detected at or above the laboratory method reporting limits

NA: Not applicable

TTLC: Total threshold limit concentration

PRG: Preliminary Remediation Goal for industrial land use - EPA Region IX

TABLE 2
Soil Analytical Results - Eastern Parcel Oliver Property
Organic Compounds

Analyte	B1 5'	B1 10'	B2 5'	B2 10'	B3 5'	B3 10'	B4 6'	B4 10'	B5 5'	B5 11'	PRG
TPH as Oil - EPA 8015M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
TPH as Diesel - CA LUFT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
TPH as Gasoline - CA LUFT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Purgeable Aromatics - EPA 8020											
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**
Toluene	ND	ND	ND	ND	**0.006**	**0.006**	ND	ND	ND	ND	**520**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**230**
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	**0.17**	**0.34**	NA

NOTES

Results reported in parts per million (ppm) unless otherwise noted

ND: Not detected at or above the laboratory method reporting limits

NA: Not applicable

TPH: Total petroleum hydrocarbons

PRG: Preliminary Remediation Goal for industrial land use- EPA Region IX

TABLE 3
Groundwater Analytical Results - Eastern Parcel Oliver Property
Organic Compounds

Analyte	B1	B2	B3	B4	B5	MCL	PRG
TPH as Oil - EPA 8015M	ND	ND	ND	280	ND	NA	NA
TPH as Diesel - CA LUFT	1,400	ND	110**	ND	ND	NA	NA
TPH as Gasoline - CA LUFT	ND	ND	ND	53	<200*	NA	NA
Purgeable Aromatics - EPA 8020							
Benzene	ND	ND	ND	ND	<2*	1	0.39
Toluene	ND	ND	ND	ND	<2*	150	720
Ethylbenzene	ND	ND	ND	ND	<2*	700	1,300
Xylenes	ND	ND	ND	ND	<2*	1,750	1,400
MTBE	7	ND	ND	31	9,700	35^	20
VOCs - EPA 8010	ND	ND	ND	ND	ND	NA	NA

NOTES

Results reported in parts per billion (ppb) unless otherwise noted
ND: Not detected at or above the laboratory method reporting limits
TPH: Total petroleum hydrocarbons
NA: Not applicable
MCL: Maximum contaminant level - primary drinking water standard
PRG: Preliminary Remediation Goal for tap water - EPA Region IX
--: Not Analyzed
*: Maximum reportable limit was elevated due to high analyte concentrations
**: Sample contains components in the diesel range,
but the chromatogram does not match the diesel fingerprint
^: California DHS Action Level for drinking water

TABLE 4
Soil Analytical Results - Western Parcel Oliver Property
Organochlorine Pesticides

Sample I.D.	Organochlorine Pesticides - EPA 8080^				
	DDE	DDD	DDT	Total DDE, DDD, DDT	Endrin
1-A,B,C,D	0.44	ND	0.1	0.54	ND
2-A,B,C,D	0.13	0.02	0.07	0.22	ND
3-A,B,C,D	0.07	0.03	0.05	0.15	ND
4-A,B,C,D	0.03	0.03	0.03	0.09	0.03
5-A,B,C,D	0.11	0.04	0.07	0.22	ND
6-A,B,C,D	0.08	0.04	0.04	0.16	ND
7-A,B,C,D	0.03	0.04	0.08	0.15	0.02
8-A,B,C,D	0.03	0.03	0.07	0.13	0.02
9-A,B,C,D	0.05	0.02	0.04	0.11	ND
10-A,B,C,D	ND	ND	ND	ND	ND
11-A,B,C,D	ND	ND	ND	ND	ND
12-A,B,C,D	0.02	ND	ND	0.02	ND
13-A,B,C,D	ND	ND	ND	ND	ND
14-A,B,C,D	ND	ND	ND	ND	ND
15-A,B,C,D	ND	ND	ND	ND	ND
16-A,B,C,D	ND	ND	ND	ND	ND
17-A,B,C,D	ND	ND	ND	ND	ND
18-A,B,C,D	ND	ND	ND	ND	ND
19-A,B,C,D	ND	ND	ND	ND	ND
20-A,B,C,D	ND	ND	ND	ND	ND
21-A,B,C,D	ND	ND	ND	ND	ND
22-A,B,C,D	0.03	ND	0.02	0.05	ND
23-A,B,C,D	0.02	ND	0.01	0.03	ND
24-A,B,C,D	ND	ND	0.01	0.01	ND
25-A,B,C,D	0.02	ND	0.02	0.04	ND
TTLC	NA	NA	NA	1	0.2
PRG	1.7	2.4	1.7	NA	16

NOTES

Results reported in parts per million (ppm)

ND: Not detected at or above the laboratory method reporting limits

NA: Not applicable

All soil samples collected within 6-12" of ground surface

^: Composite analysis conducted on four adjacent sample locations;
Analyses conducted for entire range of 8080 pesticides, compounds not listed are ND

TTLC: Total Threshold Limit Concentration

PRG: Preliminary Remediation Goal for residential land use - EPA Region IX

TABLE 5
Soil Analytical Results - Western Parcel Oliver Property
Total Lead

Sample I.D.	Total Lead EPA 6010A
1A	23
1B	21
1C	21
1D	19
2A	24
2B	18
2C	17
2D	18
3A	24
3B	18
3C	18
3D	17
4A	17
4B	19
4C	18
4D	17
5A	18
5B	21
5C	20
5D	ND
6A	23
6B	19
6C	21
6D	24
7A	21
7B	18
7C	21
7D	21
8A	18
8B	19
TTLC	**1,000**
PRG	**130**

Sample I.D.	Total Lead EPA 6010A
8C	20
8D	19
9A	20
9B	15
9C	29
9D	28
10A	23
10B	24
10C	22
10D	23
11A	30
11B	14
11C	24
11D	ND
12A	17
12B	20
12C	17
12D	26
13A	24
13B	21
13C	34
13D	18
14A	20
14B	21
14C	23
14D	36
15A	29
15B	28
15C	23
15D	22
TTLC	**1,000**
PRG	**130**

Sample I.D.	Total Lead EPA 6010A
16A	27
16B	53
16C	32
16D	34
17A	19
17B	29
17C	17
17D	25
18A	35
18B	22
18C	20
18D	27
19A	18
19B	22
19C	29
19D	21
20A	22
20B	36
20C	28
20D	32
21A	28
21B	22
21C	21
21D	21
22A	22
22B	17
22C	18
22D	18
23A	12
TTLC	**1,000**
PRG	**130**

Sample I.D.	Total Lead EPA 6010A
23B	13
23C	14
23D	17
24A	20
24B	21
24C	20
24D	22
25A	22
25B	24
25C	19
25D	19
B6-0.5*	22
B6-3*	8
B6-5*	8
B7-0.5*	17
B7-3*	16
B7-5*	9
B8-0.5*	20
B8-3*	12
B8-5*	8
B9-0.5*	18
B9-3*	9
B9-5*	6
B10-0.5*	14
B10-3*	11
B10-5*	8
B14-0.5*	17
B14-3*	9
B14-5*	9
TTLC	**1,000**
PRG	**130**

NOTES

Results reported in parts per million (ppm)

All soil samples collected within 6-12" of ground surface unless otherwise noted

*: Samples collected from shallow borings (Sample I.D. indicates boring location and depth, in feet below ground surface)

ND: Not detected at or above the laboratory method reporting limits

TTLC: Total Threshold Limit Concentration

PRG: Preliminary Remediation Goal for residential land use - Modified California PRG

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07/29/98

TABLE 6
Groundwater Analytical Results - Western Parcel Oliver Property
Organic Compounds

Analyte	B9	B11	B12	B13*	MCL	PRG
TPH as Oil - EPA 8015M	--	--	--	61	NA	NA
TPH as Diesel - EPA 8015M/CA LUFT	ND	ND	--	ND	NA	NA
TPH as Gasoline - CA LUFT	ND	ND	ND	ND	NA	NA
Purgeable Aromatics - EPA 8020						
Benzene	ND	ND	ND	ND	1	0.39
Toluene	ND	ND	ND	ND	150	720
Ethylbenzene	ND	ND	ND	ND	700	1,300
Xylenes	ND	ND	ND	ND	1,750	1,400
MTBE	ND	ND	ND	ND	35^^	20
VOCs - EPA 8010	ND	ND	ND	ND	NA	NA
Lead - EPA 6010A	ND	ND	--	--	15	4
PCBs - EPA 608	--	--	--	ND	0.5	0.034
Pesticides - EPA 608^						
DDE	--	--	--	0.01	NA	NA
DDD	--	--	--	0.02	NA	NA

NOTES

Results reported in parts per billion (ppb) unless otherwise noted

ND: Not detected at or above the laboratory method reporting limits

TPH: Total petroleum hydrocarbons

NA: Not applicable

MCL: Maximum Contaminant Level - primary drinking water standard

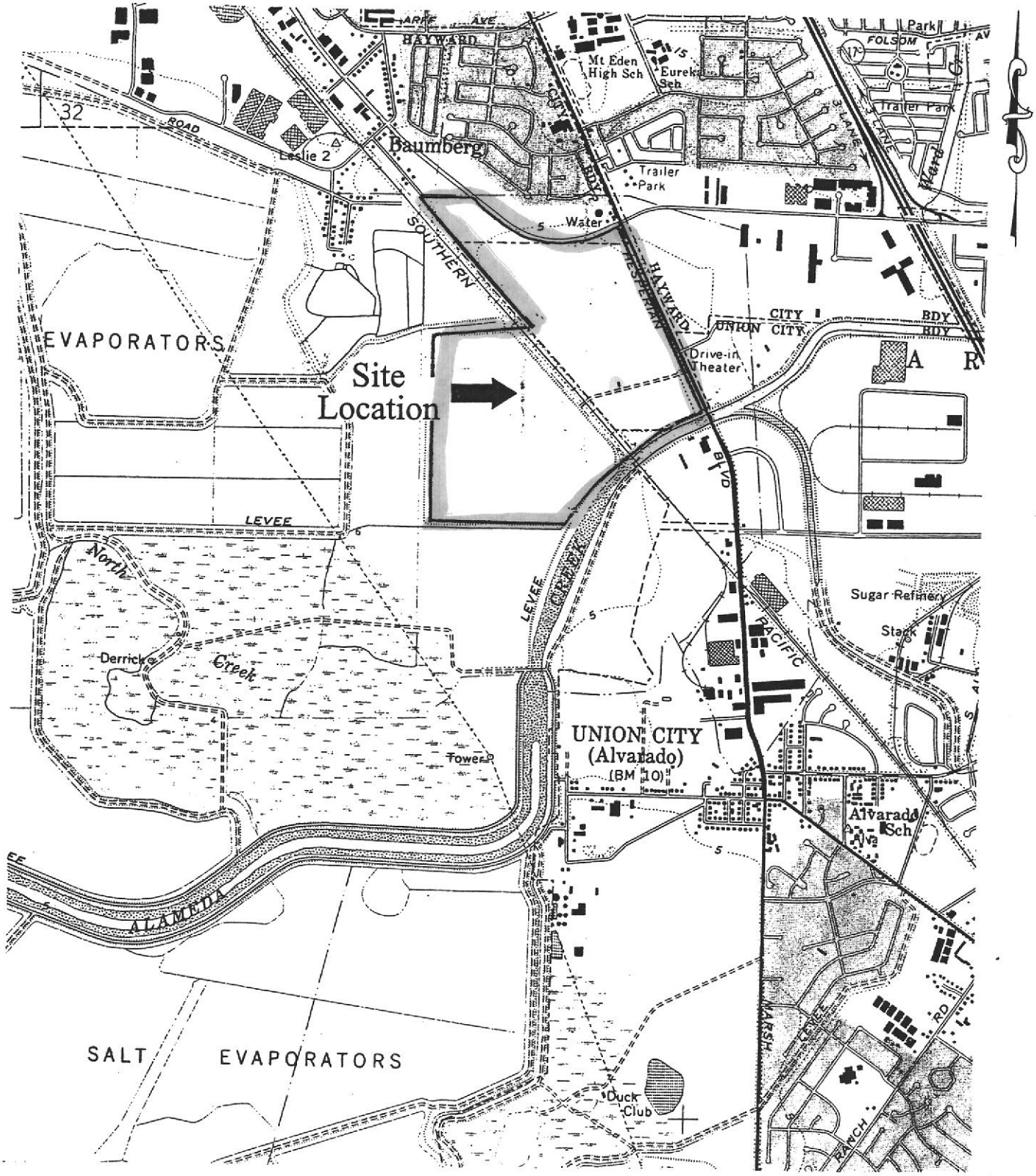
PRG: Preliminary Remediation Goal for tap water - EPA Region IX

--: Not Analyzed

*: Surface water sample from drainage channel; no groundwater encountered in boring B13

^: Analyses conducted for entire range of 608 pesticides, compounds not listed were ND

^^: California DHS Action Level for drinking water



Scale 1:24000

1 1/2 0 1 Mile

1000 0 1000 2000 3000 4000 5000 6000 7000 Feet

1 .5 0 1 Kilometer

Source: U.S.G.S. 7.5-Minute Series (Topographic) Quadrangle , Newark, California

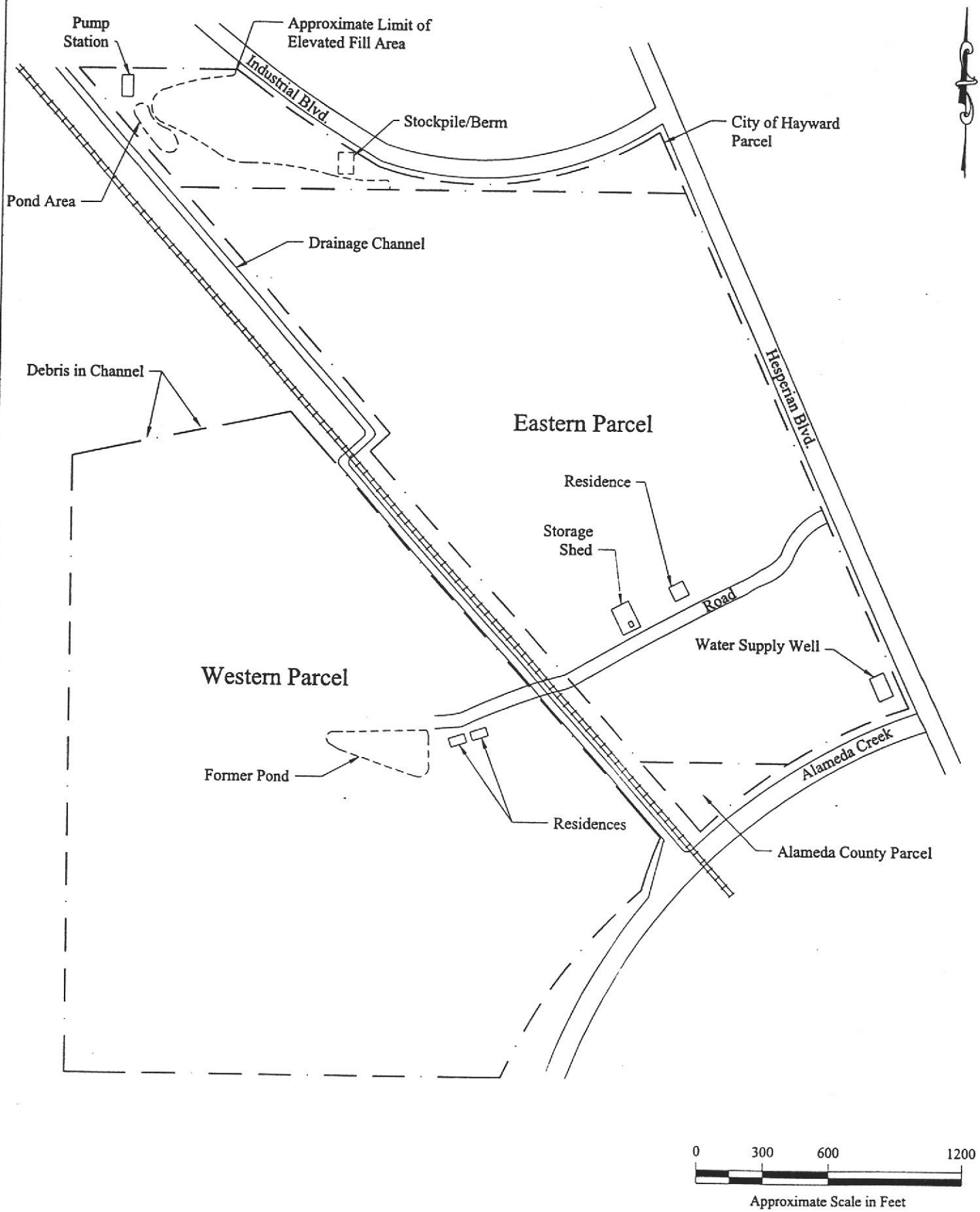
No.	Date	Revision	Approved

Henshaw Associates, Inc.
Environmental Engineering Services
11875 Dublin Blvd., Suite A-200 • Dublin, California 94568

Date:	07/27/98
Designed:	OS
Drawn:	OS
Checked:	DB
DWG file:	5265-98

SITE LOCATION MAP
Oliver Property
28905 Hesperian Blvd.
Hawyard, California 94945

Figure
1
Project
160.A.01



No.	Date	Revision	Approved

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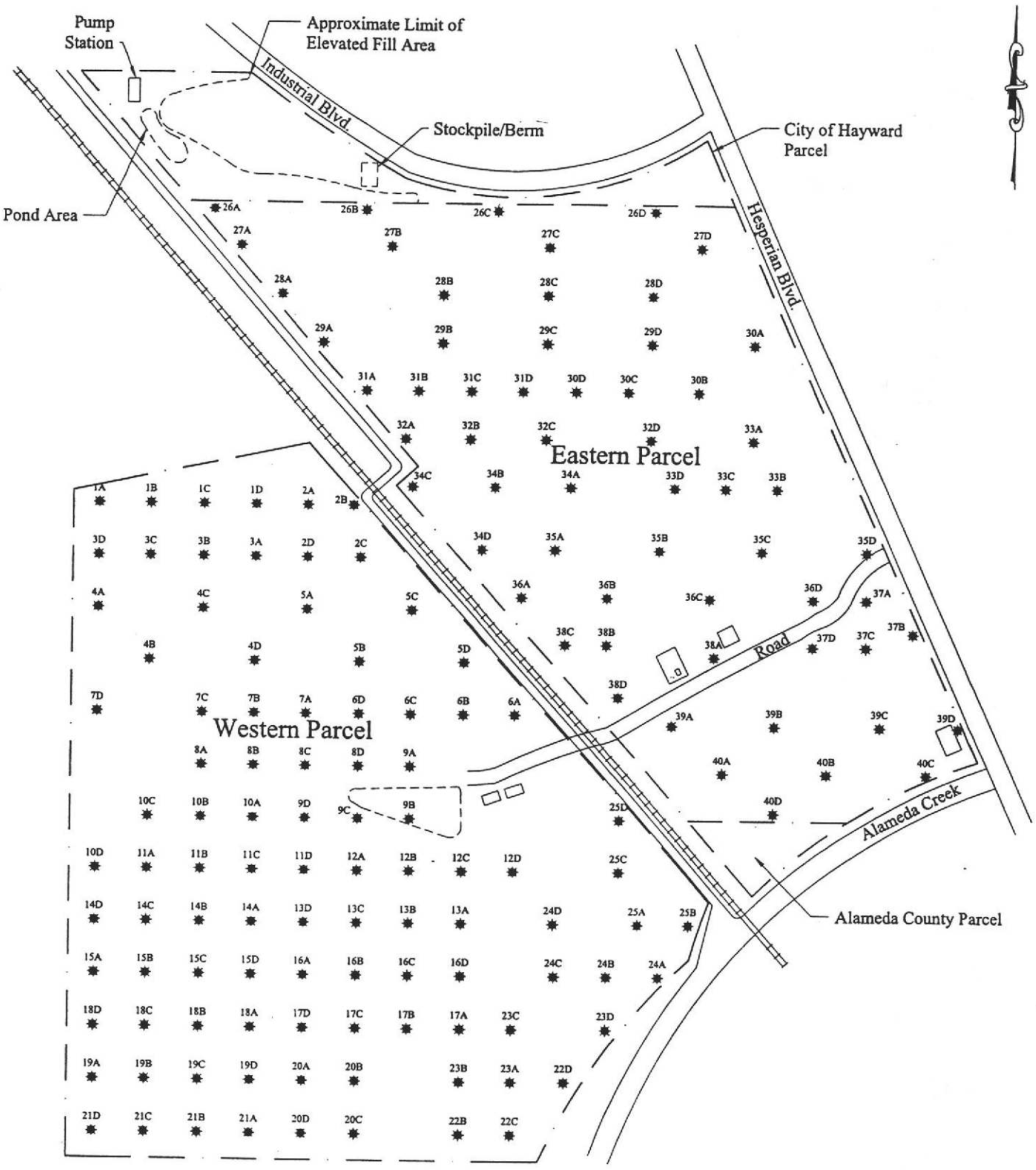
DWG file:	5275-98

SITE PLAN
Oliver Property
28905 Hesperian Blvd.
Hayward, California

Figure 2
Project 160.A.01



Legend

40D ✸ Approximate surface soil sample location (+100 ft)

0 300 600 1200

Approximate Scale in Feet

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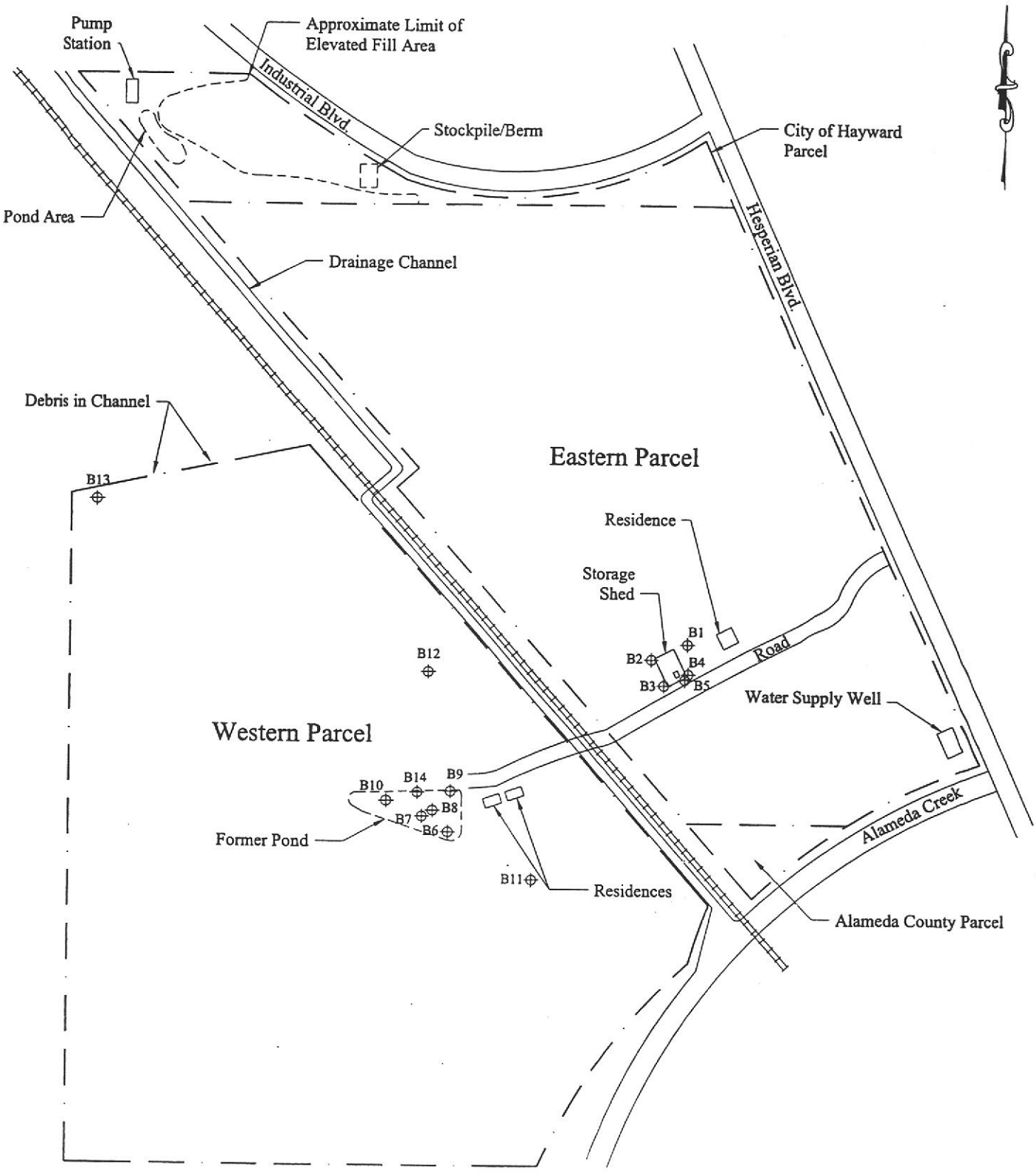
DWG file:	5298-98

SURFACE SOIL SAMPLE LOCATION MAP
Oliver Property
28905 Hesperian Blvd.
Hayward, California

Figure 3
Project 160.A.01



Legend

B14 ⊕ Soil sample location

0 300 600 1200

Approximate Scale in Feet

No.	Date	Revision	Approved

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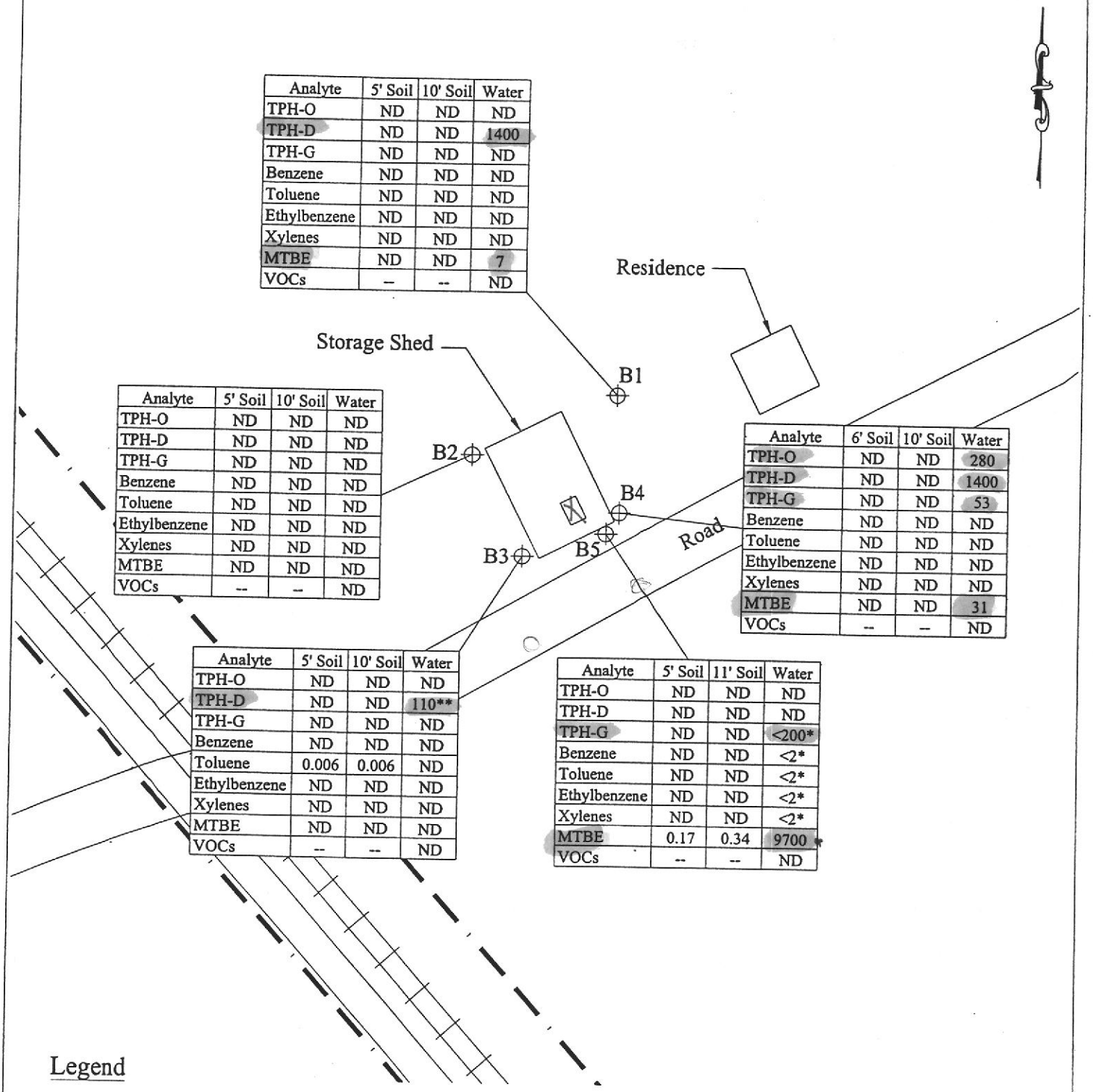
DWG file:	5297-98

BORING LOCATION MAP
Oliver Property PSA
28905 Hesperian Blvd.
Hayward, California

Figure 4
Project 160.A.01



Analyte	5' Soil	10' Soil	Water
TPH-O	ND	ND	ND
TPH-D	ND	ND	1400
TPH-G	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Xylenes	ND	ND	ND
MTBE	ND	ND	7
VOCs	--	--	ND

Analyte	5' Soil	10' Soil	Water
TPH-O	ND	ND	ND
TPH-D	ND	ND	ND
TPH-G	ND	ND	ND
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Xylenes	ND	ND	ND
MTBE	ND	ND	ND
VOCs	--	--	ND

Analyte	6' Soil	10' Soil	Water
TPH-O	ND	ND	280
TPH-D	ND	ND	1400
TPH-G	ND	ND	53
Benzene	ND	ND	ND
Toluene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Xylenes	ND	ND	ND
MTBE	ND	ND	31
VOCs	--	--	ND

Analyte	5' Soil	10' Soil	Water
TPH-O	ND	ND	ND
TPH-D	ND	ND	110**
TPH-G	ND	ND	ND
Benzene	ND	ND	ND
Toluene	0.006	0.006	ND
Ethylbenzene	ND	ND	ND
Xylenes	ND	ND	ND
MTBE	ND	ND	ND
VOCs	--	--	ND

Analyte	5' Soil	11' Soil	Water
TPH-O	ND	ND	ND
TPH-D	ND	ND	ND
TPH-G	ND	ND	<200*
Benzene	ND	ND	<2*
Toluene	ND	ND	<2*
Ethylbenzene	ND	ND	<2*
Xylenes	ND	ND	<2*
MTBE	0.17	0.34	9700 *
VOCs	--	--	ND

Legend

B5 ⊕ Soil boring location

* Method reporting limit was elevated due to high analyte concentrations

** Sample contains components in the diesel range, but the chromatogram does not match the diesel fingerprint

ND Not detected at or above the method reporting limit

-- Not analyzed

TPH-O Total Petroleum Hydrocarbons as Oil

TPH-D Total Petroleum Hydrocarbons as Diesel

TPH-G Total Petroleum Hydrocarbons as Gasoline

MTBE Methyl Tert-Butyl Ether

VOCs Volatile Organic Compounds

0 75 150 300

Approximate Scale in Feet

No.	Date	Revision	Approved

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Environmental Engineering Services
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Date:	07/27/98
Designed:	OS
Drawn:	OS
Checked:	DB
DWG file:	5307-98

STORAGE AREA TEST RESULTS
Oliver Property
28905 Hesperian Blvd.
Hayward, California

Figure 5
Project 160.A.01

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B1**
Project Name: Oliver Property PSA	Location: Eastern Parcel - Storage Shed
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 10; Depth to Water (ft bgs): 1.5
Date Started: 5/26/1998; Date Completed: 5/26/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0					Fill	Gravel Fill			
1					ML	Clayey Silt, brown, no odor, soft	▼		
2									
3									
4					CL	Silt and Clay, gray to brown, some rust mottling, trace dark peat, slight Hydrogen Sulfide odor			
5	B1-5		N/A					N/A	
6									
7									
8					CH	Silty-Clay, bay-mud, black, soft, moist to saturated, moderate Hydrogen Sulfide odor			
9									
10	B1-10					Total Depth 10 feet			
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B2**
Project Name: Oliver Property PSA	Location: Eastern Parcel - Storage Shed
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 10; Depth to Water (ft bgs): 2.5
Date Started: 5/26/1998; Date Completed: 5/26/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0					Fill	Gravelly Fill, brown to gray, coarse gravel (1/8-1/2"dia.), little sand, dry			
1						No soil recovery 1-4' bgs			
2					N/A				
3							▼		
4									
5	B2-5		N/A			Silty-Clay, bay mud, dark gray to black, soft, wet to saturated, trace decaying vegetation, slight Hydrogen Sulfide odor		N/A	
6					CH				
7									
8						Sandy-Silt w/fine layered Silty Sands, dark black, soft, saturated, moderate Hydrogen Sulfide odor			
9					ML/SM				
10	B2-10					Total Depth 10 feet			
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B3**
Project Name: Oliver Property PSA	Location: Eastern Parcel - Storage Shed
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 10; Depth to Water (ft bgs): 2.5
Date Started: 5/26/1998; Date Completed: 5/26/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0					Fill	Gravelly Fill, brown to gray, some sand, coarse gravel (1/2" dia), dry			
1						No Soil recovery 1-4' bgs			
2					N/A		▽		
3									
4						Silty Clay, bay mud, dark gray to black, little rust mottling, trace decaying vegetation, slight Hydrogen Sulfide odor			
5	B3-5		N/A		CH			N/A	
6									
7						Silty Clay, bay mud, dark gray to black, trace rust mottling, slight Hydrogen Sulfide odor			
8					CH				
9									
10	B3-10					Total Depth 10 feet			
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B4**
Project Name: Oliver Property PSA	Location: Eastern Parcel - Storage Shed
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe / Borehole Dia. (in): 3	Total Depth (ft bgs): 10 / Depth to Water (ft bgs): 5
Date Started: 5/27/1998 / Date Completed: 5/27/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0					Fill	Gravelly Fill, brown to gray, little sand, coarse gravel (1/8-1/2" dia.), dry			
1									
					Fill	Sandy Gravel Fill, (1/16-1/8" dia.), brown to dark gray, some Silts and Clay, no odor	▽		
2									
3									
4									
5									
6	B4-6		N/A		CH	Silty Clay, bay mud, dark gray to black, moderate Hydrogen Sulfide odor, trace decaying vegetation, wet		N/A	
7									
8									
9					CH	Silty Clay, bay mud, dark gray, trace Sand and Gravel (1/8" dia.), saturated, slight Hydrogen Sulfide odor			
10	B4-10					Total Depth 10 feet			
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B5**
Project Name: Oliver Property PSA	Location: Eastern Parcel - Storage Shed
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe	Borehole Dia. (in): 3
Total Depth (ft bgs): 12	Depth to Water (ft bgs): 6
Date Started: 5/27/1998	Date Completed: 5/27/1998
Surface Elevation (ft MSL):	
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0					Fill	Gravelly Fill, brown to gray, little Sand, coarse gravel (1/8-1/2"dia.), dry			
1						No Soil recovery 1-5' bgs			
2									
3					N/A				
4									
5	B5-5		N/A			Silty Clay, bay mud, dark gray, trace decaying vegetation, some rust mottling, slight Hydrogen Sulfide odor, moist		N/A	
6					CH		▽		
7						Silty Clay, bay mud, dark gray, saturated, slight Hydrogen Sulfide odor			
8									
9									
10					CH				
11	B5-10								
12						Total Depth 12 feet			
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B6**
Project Name: Oliver Property PSA	Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe	Borehole Dia. (in): 3
Total Depth (ft bgs): 5	Depth to Water (ft bgs): N/A
Date Started: 5/26/1998	Date Completed: 5/26/1998
Surface Elevation (ft MSL):	

Remarks: No water encountered

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
						3" Vegetation mat			
0	B6-0.3				CL	Silty Clay, dark gray, some rust mottling, little decaying vegetation, slight Hydrogen Sulfide odor			
1									
2									
3	B6-3		N/A		CL	Silty Clay, dark brown, some rust mottling, moist, slight Hydrogen Sulfide odor		N/A	
4									
5	B6-5				CH	Silty Clay, bay mud, dark gray to black, moist, strong Hydrogen Sulfide odor			
6						Total Depth 5 feet			
7									
8									
9									
10									
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B7**
Project Name: Oliver Property PSA	Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 5; Depth to Water (ft bgs): N/A
Date Started: 5/26/1998; Date Completed: 5/26/1998	Surface Elevation (ft MSL):

Remarks: No water encountered

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0	B7-0.3					3" Vegetation mat			
1					CL	Silty Clay, dark brown, little decaying vegetation, no odor, moist			
2									
3	B7-3		N/A		CL	Slity Clay, brown to dark gray, some rust mottling, moist, trace decaying vegetation, no odor		N/A	
4									
5	B7-5				CH	Silty Clay, bay mud, dark gray to black, wet, slight Hydrogen Sulfide odor			
						Total Depth 5 feet			
6									
7									
8									
9									
10									
11									
12									
13									

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Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B8**
Project Name: Oliver Property PSA	Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe / Borehole Dia. (in): 3	Total Depth (ft bgs): 5 / Depth to Water (ft bgs): N/A
Date Started: 5/26/1998 / Date Completed: 5/26/1998	Surface Elevation (ft MSL):

Remarks: No water encountered

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0	B8-0.3					3" Vegetation Mat			
1					CL	Silty Clay, dark brown, little decaying vegetation, moist, no odor			
2									
3	B8-3		N/A		CL	Silty Clay, brown, some rust mottling, moist, trace decaying vegetation, no odor		N/A	
4									
5	B8-5				CH	Silty Clay, bay mud, dark gray to black, wet, slight Hydrogen Sulfide odor			
6						Total Depth 5 feet			
7									
8									
9									
10									
11									
12									
13									

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Henshaw Associates, Inc.
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Boring Log

Project Number: 160.A.01			**Boring No.: B9**
Project Name: Oliver Property PSA			Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling			Logged by: Bell, Douglas
Drilling Method: Geo-Probe	Borehole Dia. (in): 3	Total Depth (ft bgs): 8	Depth to Water (ft bgs): 5
Date Started: 5/26/1998	Date Completed: 5/26/1998	Surface Elevation (ft MSL):	
Remarks:			

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0	B9-0.3					3" Vegetation Mat			
1					CL	Silty Clay, dark brown, little decaying vegetation, trace rust mottling, moist, no odor			
2									
3	B9-3		N/A		CL	Silty Clay, brown, trace decaying vegetation, little rust mottling, no odor, wet		N/A	
4									
5	B9-5				CH	Silty Clay, bay mud, dark gray to black, wet, slight Hydrogen Sulfide odor, trace decaying vegetation	▼		
6									
7									
8						Total Depth 8 feet			
9									
10									
11									
12									
13									

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B10**
Project Name: Oliver Property PSA	Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 5; Depth to Water (ft bgs): N/A
Date Started: 5/27/1998; Date Completed: 5/27/1998	Surface Elevation (ft MSL):

Remarks: No water encountered

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0						3" Vegetation Mat			
1	B10-0.3				CL	Silty Clay, dark brown, little decaying vegetation, moist, no odor		N/A	
2									
3	B10-3				CL	Silty Clay, brown, trace decaying vegetation, wet, some rust mottling, no odor			
4									
5	B10-5				CH	Silty Clay, bay mud, dark gray to black, wet, slight Hydrogen Sulfide odor			
6						Total Depth 5 feet			
7									
8									
9									
10									
11									
12									
13									

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B11**
Project Name: Oliver Property PSA	Location: City Parcel West
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 10; Depth to Water (ft bgs): 8
Date Started: 5/27/1998; Date Completed: 5/27/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
1–10						Water grab sample via Geo-Probe, no materials logged	▽		
10–13						Total Depth 10 feet			

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01		Boring No.: B12	
Project Name: Oliver Property PSA		Location: City Parcel West	
Drilling Contractor: Precision Sampling		Logged by: Bell, Douglas	
Drilling Method: Geo-Probe	Borehole Dia. (in): 3	Total Depth (ft bgs): 15	Depth to Water (ft bgs): 14.5
Date Started: 5/27/1998	Date Completed: 5/27/1998	Surface Elevation (ft MSL):	

Remarks: No water encountered during drilling, water level at 14.5 ft bgs after 80 min.

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
1–14						Water grab sample via Geo-Probe, no materials logged	▼		
15						Total Depth 15 feet			
16–20									

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B13**
Project Name: Oliver Property PSA	Location: City Parcel West
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 10; Depth to Water (ft bgs): N/A
Date Started: 5/27/1998; Date Completed: 5/27/1998	Surface Elevation (ft MSL):

Remarks: No water encountered

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
1–10						Water grab sample via Geo-Probe, no material logged			
10–13						Total Depth 10 feet			

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

Henshaw Associates, Inc.
Environmental Engineering Services

Boring Log

Project Number: 160.A.01	**Boring No.: B14**
Project Name: Oliver Property PSA	Location: Western Parcel - Former Duck Pond
Drilling Contractor: Precision Sampling	Logged by: Bell, Douglas
Drilling Method: Geo-Probe; Borehole Dia. (in): 3	Total Depth (ft bgs): 5; Depth to Water (ft bgs): 4.5
Date Started: 5/27/1998; Date Completed: 5/27/1998	Surface Elevation (ft MSL):
Remarks:	

Depth (ft)	Sample No.	Sample Type	Blows/ft	Graphic Log	USCS Code	Material Description	Water Level	Vapor Reading (ppm)	Backfill
0						3" Vegetation Mat			
1	B14-0.3				CL	Silty Clay, dark brown, trace rust mottling, little decaying vegetation, moist, no odor		N/A	
2									
3	B14-3				CL	Silty Clay, brown, some rust mottling, trace decaying vegetation, wet, slight Hydrogen Sulfide odor			
4									
5	B14-5				CH	Silty Clay, bay mud, dark gray, saturated, slight Hydrogen Sulfide odor	▽		
						Total Depth 5 feet			
6									
7									
8									
9									
10									
11									
12									
13									

BORING_LOG 5367-98.GPJ HENSHAW.GDT 7/29/98

APPENDIX B
Laboratory Analytical Reports

Columbia Analytical Services inc.

June 1, 1998

Service Request No.: S9801275

Dennis Laduzinsky
HENSHAW & ASSOCIATES, INC.
11872 Dublin Bld. Ste. A200
Dublin, CA 94568

RE: OLIVER PROP/160.A.01

Dear Mr. Laduzinsky:

The following pages contain analytical results for sample(s) received by the laboratory on May 22, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 52, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: 5/21/98
Date Received: 5/22/98

Total Metals
Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
1A	S9801275-001	5	1	5/22/98	5/26/98	23	
1B	S9801275-002	5	1	5/22/98	5/26/98	21	
1C	S9801275-003	5	1	5/22/98	5/26/98	21	
1D	S9801275-004	5	1	5/22/98	5/26/98	19	
2A	S9801275-005	5	1	5/22/98	5/26/98	24	
2B	S9801275-006	5	1	5/22/98	5/26/98	18	
2C	S9801275-007	5	1	5/22/98	5/26/98	17	
2D	S9801275-008	5	1	5/22/98	5/26/98	18	
3A	S9801275-009	5	1	5/22/98	5/26/98	24	
3B	S9801275-010	5	1	5/22/98	5/26/98	18	
3C	S9801275-011	5	1	5/22/98	5/26/98	18	
3D	S9801275-012	5	1	5/22/98	5/26/98	17	
4A	S9801275-013	5	1	5/22/98	5/26/98	17	
4B	S9801275-014	5	1	5/22/98	5/26/98	19	
4C	S9801275-015	5	1	5/22/98	5/26/98	18	
4D	S9801275-016	5	1	5/22/98	5/26/98	17	
5A	S9801275-017	5	1	5/22/98	5/26/98	18	
5B	S9801275-018	5	1	5/26/98	5/26/98	21	
5C	S9801275-019	5	1	5/26/98	5/26/98	20	
5D	S9801275-020	5	1	5/26/98	5/26/98	ND	
Method Blank	S980522-MB	5	1	5/22/98	5/26/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: 5/21/98
Date Received: 5/22/98

Total Metals
Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
6A	S9801275-021	5	1	5/26/98	5/26/98	23	
6B	S9801275-022	5	1	5/26/98	5/26/98	19	
6C	S9801275-023	5	1	5/26/98	5/26/98	21	
6D	S9801275-024	5	1	5/26/98	5/26/98	24	
7A	S9801275-025	5	1	5/26/98	5/26/98	21	
7B	S9801275-026	5	1	5/26/98	5/26/98	18	
7C	S9801275-027	5	1	5/26/98	5/26/98	21	
7D	S9801275-028	5	1	5/26/98	5/26/98	21	
8A	S9801275-029	5	1	5/26/98	5/26/98	18	
8B	S9801275-030	5	1	5/26/98	5/26/98	19	
8C	S9801275-031	5	1	5/26/98	5/26/98	20	
8D	S9801275-032	5	1	5/26/98	5/26/98	19	
9A	S9801275-033	5	1	5/26/98	5/26/98	20	
9B	S9801275-034	5	1	5/26/98	5/26/98	15	
9C	S9801275-035	5	1	5/26/98	5/26/98	29	
9D	S9801275-036	5	1	5/26/98	5/26/98	28	
10A	S9801275-037	5	1	5/26/98	5/26/98	23	
10B	S9801275-038	5	1	5/26/98	5/26/98	24	
10C	S9801275-039	5	1	5/26/98	5/26/98	22	
10D	S9801275-040	5	1	5/26/98	5/27/98	23	
Method Blank	S980526-MB	5	1	5/26/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: 5/21/98
Date Received: 5/22/98

Total Metals
Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
11A	S9801275-041	5	1	5/26/98	5/27/98	30	
11B	S9801275-042	5	1	5/26/98	5/27/98	14	
11C	S9801275-043	5	1	5/26/98	5/27/98	24	
11D	S9801275-044	5	1	5/26/98	5/27/98	ND	
12A	S9801275-045	5	1	5/26/98	5/27/98	17	
12B	S9801275-046	5	1	5/26/98	5/27/98	20	
12C	S9801275-047	5	1	5/26/98	5/27/98	17	
12D	S9801275-048	5	1	5/26/98	5/27/98	26	
13A	S9801275-049	5	1	5/26/98	5/27/98	24	
13B	S9801275-050	5	1	5/26/98	5/27/98	21	
13C	S9801275-051	5	1	5/26/98	5/27/98	34	
13D	S9801275-052	5	1	5/26/98	5/27/98	18	
14A	S9801275-053	5	1	5/26/98	5/27/98	20	
14B	S9801275-054	5	1	5/26/98	5/27/98	21	
14C	S9801275-055	5	1	5/26/98	5/27/98	23	
14D	S9801275-056	5	1	5/26/98	5/27/98	36	
15A	S9801275-057	5	1	5/26/98	5/27/98	29	
15B	S9801275-058	5	1	5/26/98	5/27/98	28	
15C	S9801275-059	5	1	5/26/98	5/27/98	23	
15D	S9801275-060	5	1	5/26/98	5/27/98	22	
Method Blank	S980526B-MB	5	1	5/26/98	5/27/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Total Metals
Lead

Prep Method:	EPA 3050BM	Units:	mg/Kg (ppm)
Analysis Method:	6010A	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
16A	S9801275-061	5	1	5/27/98	5/29/98	27	
16B	S9801275-062	5	1	5/27/98	5/29/98	53	
16C	S9801275-063	5	1	5/27/98	5/29/98	32	
16D	S9801275-064	5	1	5/27/98	5/29/98	34	
17A	S9801275-065	5	1	5/27/98	5/29/98	19	
17B	S9801275-066	5	1	5/27/98	5/29/98	29	
17C	S9801275-067	5	1	5/27/98	5/29/98	17	
17D	S9801275-068	5	1	5/27/98	5/29/98	25	
18A	S9801275-069	5	1	5/27/98	5/29/98	35	
18B	S9801275-070	5	1	5/27/98	5/29/98	22	
18C	S9801275-071	5	1	5/27/98	5/29/98	20	
18D	S9801275-072	5	1	5/27/98	5/29/98	27	
19A	S9801275-073	5	1	5/27/98	5/29/98	18	
19B	S9801275-074	5	1	5/27/98	5/29/98	22	
19C	S9801275-075	5	1	5/27/98	5/29/98	29	
19D	S9801275-076	5	1	5/27/98	5/29/98	21	
20A	S9801275-077	5	1	5/27/98	5/29/98	22	
20B	S9801275-078	5	1	5/27/98	5/29/98	36	
20C	S9801275-079	5	1	5/27/98	5/29/98	28	
20D	S9801275-080	5	1	5/27/98	5/29/98	32	
Method Blank	S980527-MB	5	1	5/27/98	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: 5/21/98
Date Received: 5/22/98

Total Metals
Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
21A	S9801275-081	5	1	5/27/98	5/29/98	28	
21B	S9801275-082	5	1	5/27/98	5/29/98	22	
21C	S9801275-083	5	1	5/27/98	5/29/98	21	
21D	S9801275-084	5	1	5/27/98	5/29/98	21	
22A	S9801275-085	5	1	5/27/98	5/29/98	22	
22B	S9801275-086	5	1	5/27/98	5/29/98	17	
22C	S9801275-087	5	1	5/27/98	5/29/98	18	
22D	S9801275-088	5	1	5/27/98	5/29/98	18	
23A	S9801275-089	5	1	5/27/98	5/29/98	12	
23B	S9801275-090	5	1	5/27/98	5/29/98	13	
23C	S9801275-091	5	1	5/27/98	5/29/98	14	
23D	S9801275-092	5	1	5/27/98	5/29/98	17	
24A	S9801275-093	5	1	5/27/98	5/29/98	20	
24B	S9801275-094	5	1	5/27/98	5/29/98	21	
24C	S9801275-095	5	1	5/27/98	5/29/98	20	
24D	S9801275-096	5	1	5/27/98	5/29/98	22	
25A	S9801275-097	5	1	5/27/98	5/29/98	22	
25B	S9801275-098	5	1	5/27/98	5/29/98	24	
25C	S9801275-099	5	1	5/27/98	5/29/98	19	
25D	S9801275-100	5	1	5/27/98	5/29/98	19	
Method Blank	S980527B-MB	5	1	5/27/98	5/29/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 1-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-101	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.44	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.1	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 2-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-102	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.13	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.02	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.07	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 3-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-103	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.07	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.05	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 4-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-104	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 5-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-105	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.11	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.04	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.07	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 6-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-106	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.08	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.04	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.04	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
			0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 7-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-107	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.02	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.04	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.08	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 8-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-108	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.02	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.03	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	0.07	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 9-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-109	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	0.05	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	0.02	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	0.04	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 10-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-110	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 11-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-111	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 12-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-112	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	0.02	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 13-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-113	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 14-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-114	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 15-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-115	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 16-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-116	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 17-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-117	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 18-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-118	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 19-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-119	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 20-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-120	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/27/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/27/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/27/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/27/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 21-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-121	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 22-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-122	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.03	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.02	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 23-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-123	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.02	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.01	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 24-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-124	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.01	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

IS44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/21/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 25-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-125	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.02	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.02	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 26-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-186	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.06	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.03	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.06	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 27-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-187	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.14	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.05	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.10	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 28-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-188	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.12	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.04	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.06	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 29-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-189	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.10	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.01	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.01	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.05	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 30-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-190	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.25	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.13	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 31-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-191	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.15	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.05	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.10	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 32-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-192	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.06	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.03	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 33-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-193	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.29	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.13	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 34-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-194	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.06	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.04	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1844/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 35-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-195	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.43	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.09	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.19	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 36-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-196	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.25	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.15	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 37-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-197	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.50	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.09	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.21	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 38-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-198	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.19	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.05	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.09	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 39-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-199	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.40	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.07	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.18	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	5/22/98
Sample Matrix:	Soil	**Date Received:**	5/22/98

Organochlorine Pesticides

Sample Name:	Comp 40-(A-D)	Units:	mg/Kg (ppm)
Lab Code:	S9801275-200	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.47	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.11	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.29	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	0.01	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	Units:	mg/Kg (ppm)
Lab Code:	S980523-MB	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/23/98	5/26/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/23/98	5/26/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/23/98	5/26/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/23/98	5/26/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/23/98	5/26/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801275
Project:	OLIVER PROP/160.A.01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	Units:	mg/Kg (ppm)
Lab Code:	S980526-MB	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	5/26/98	5/28/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Aldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	5/26/98	5/28/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	5/26/98	5/28/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	5/26/98	5/28/98	ND	
Chlordane	EPA 3550	8080	0.1	1	5/26/98	5/28/98	ND	

IS44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Organochlorine Pesticides

Prep Method: EPA 3550
Analysis Method: 8080

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery Decachlorobiphenyl
Comp 1-(A-D)	S9801275-101		93
Comp 2-(A-D)	S9801275-102		96
Comp 3-(A-D)	S9801275-103		91
Comp 4-(A-D)	S9801275-104		91
Comp 5-(A-D)	S9801275-105		95
Comp 6-(A-D)	S9801275-106		94
Comp 7-(A-D)	S9801275-107		91
Comp 8-(A-D)	S9801275-108		99
Comp 9-(A-D)	S9801275-109		95
Comp 10-(A-D)	S9801275-110		87
Comp 11-(A-D)	S9801275-111		95
Comp 12-(A-D)	S9801275-112		102
Comp 13-(A-D)	S9801275-113		89
Comp 14-(A-D)	S9801275-114		89
Comp 15-(A-D)	S9801275-115		92
Comp 16-(A-D)	S9801275-116		92
Comp 17-(A-D)	S9801275-117		97
Comp 18-(A-D)	S9801275-118		98
Comp 19-(A-D)	S9801275-119		88
Comp 20-(A-D)	S9801275-120		83
Comp 21-(A-D)	S9801275-121		74
Comp 22-(A-D)	S9801275-122		81
Comp 23-(A-D)	S9801275-123		79
Comp 24-(A-D)	S9801275-124		72
Comp 25-(A-D)	S9801275-125		77
		CAS Acceptance Limits:	53-120

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: OLIVER PROP/160.A.01
Sample Matrix: Soil

Service Request: S9801275
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Organochlorine Pesticides

Prep Method: EPA 3550
Analysis Method: 8080

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery Decachlorobiphenyl
Comp 26-(A-D)	S9801275-186		80
Comp 27-(A-D)	S9801275-187		78
Comp 28-(A-D)	S9801275-188		70
Comp 29-(A-D)	S9801275-189		77
Comp 30-(A-D)	S9801275-190		81
Comp 31-(A-D)	S9801275-191		82
Comp 32-(A-D)	S9801275-192		81
Comp 33-(A-D)	S9801275-193		77
Comp 34-(A-D)	S9801275-194		88
Comp 35-(A-D)	S9801275-195		74
Comp 36-(A-D)	S9801275-196		85
Comp 37-(A-D)	S9801275-197		80
Comp 38-(A-D)	S9801275-198		67
Comp 39-(A-D)	S9801275-199		76
Comp 40-(A-D)	S9801275-200		82
Method Blank	S980523-MB		91
Method Blank	S980526-MB		82

CAS Acceptance Limits: 53-120

SUR3/052595

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m PEST
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801275 P.O.# PAGE 1 OF 5

PROJECT NAME 160-A-01 / OLIVER PROP
PROJECT MGR. DENNIS LADZINSKI
COMPANY HONSHAW
ADDRESS 11875 DUBLIN BLVD
DUBLIN, CA PHONE 925-551-7272
FAX
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS
1A,1B,1C,1D	5/21		1-4	SOIL	4
2A,2B,2C,2D			5-8		
3A,3B,3C,3D			9-12		
4A,4B,4C,4D			13-16		
5A,5B,5C,5D			17-20		
6A,6B,6C,6D			21-24		
7A,7B,7C,7D			25-28		
8A,8B,8C,8D			29-32		
9A,9B,9C,9D			33-36		
10A,10B,10C,10D			37-40		

ANALYSIS REQUESTED

PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				
Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX MTBE ☐ DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	TOTAL LEAD				
				X									X					

REMARKS
8080
NO PCB'S
SAMPLES ~~8080~~
COMPOSITE FOR 8080
INDIVIDUAL
SAMPLES FOR TOTAL LEAD

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Printed Name KRIS LARSON	Printed Name CAS	Printed Name	Printed Name
Firm ~~HS~~ HONSHAW	Firm CAS	Firm	Firm
Date/Time 5/22/98 8:45	Date/Time 5/22/98 8:45	Date/Time	Date/Time

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time
Shipped Via/Tracking #	

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due 6/1/98

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

SAMPLE RECEIPT: Condition Custody Seals

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

Storage: R8/D3

DISTRIBUTION: WHITE - return to originator; YELLOW - Laboratory; PINK -

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801275 P.O.# ______ PAGE 2 OF 15

PROJECT NAME ~~Hanshaw~~ OLIVER # 160-A-01
PROJECT MGR. DENNIS LADUZINSKY
COMPANY HOWSHAW
ADDRESS 11875 DUBLIN BLVD
PHONE 925-551-7272
FAX ______
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

Preservatives: HCl, HCl, HCl, NP, NP, NP, HCl, HCl, HNO_3, NP, H_2SO_4, H_2SO_4, H_2SO_4, NaOH

Analyses: Volatile Organics GC/MS 624/8240/8260; Halogenated or Aromatic Volatiles 601/8010 602/8020; TPH as Gas/BTEX MTBE DHS LUFT / 8020; TPH as Diesel/HBHC DHS LUFT; Base/Neu/Acid Organics GC/MS 625/8270; Pesticides / ~~PCBs~~ NO PCBs 608/8080; TRPH - 418.1; Oil and Grease Method; Metals (total or dissolved) List Below; pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle); NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle); Total Organic Carbon TOC; Total Phenols; Cyanide; TOTAL LEAD

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Pesticides / PCBs 608/8080	TOTAL LEAD	REMARKS
11A, 11B, 11C, 11D	5/21		41-44	SOIL	4	✓	✓	8080 ON PCBs
12A, 12B, 12C, 12D	↓		45-48	↓	↓	↓	↓	SAMPLES COMPOSITE
13A, 13B, 13C, 13D			49-52					FOR 8080
14A, 14B, 14C, 14D			53-56					INDIVIDUAL SAMPLES
15A, 15B, 15C, 15D			57-60					ANALYZED FOR LEAD
16A, 16B, 16C, 16D			61-64					
17A, 17B, 17C, 17D			65-68					
18A, 18B, 18C, 18D			69-72					
19A, 19B, 19C, 19D			73-76					
20A, 20B, 20C, 20D			77-80					

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name KRIS LARSON	Printed Name HOSSEIN ISRAELI	Printed Name	Printed Name
Firm HONSHAW	Firm CAS	Firm	Firm
Date/Time 5/22 - 8:45	Date/Time 5/22/98 8:45	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due 6/1/98

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking #

SAMPLE RECEIPT: Condition ______ Custody Seals ______

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Storage: R8 D3

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801275 P.O.# ____ PAGE 3 OF 5

PROJECT NAME OLIVER # 160-A-01
PROJECT MGR. DENNIS LADUZINSKY
COMPANY HONSHAW
ADDRESS 11875 DUBLIN BLVD
PHONE 925-551-7272
FAX ____
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

	SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260 (HCl)	Halogenated or Aromatic Volatiles 601/8010 602/8020 (HCl)	TPH as Gas/BTEX 602/8020 MTBE (HCl)	TPH as Diesel/HBHC DHS LUFT (NP)	Base/Neu/Acid Organics GC/MS 625/8270 (NP)	Pesticides/PCBs 608/8080 NO PCBS (NP)	TRPH - 418.1 (HCl)	Oil and Grease Method (HCl)	Metals (total or dissolved) List Below (HNO_3)	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle) (NP)	NH_3-N, COD, Total-P, TKN, NO_3/NO_2 (circle) (H_2SO_4)	Total Organic Carbon TOC (H_2SO_4)	Total Phenols (H_2SO_4)	Cyanide (NaOH)	TOTAL LEAD			REMARKS
1	21A, 21B, 21C, 21D	5/21		81-84	SOIL	4					X										X			8080 ONLY NO PCBS!
2	22A, 22B, 22C, 22D	↓		85-88	↓	↓					↓										↓			SAMPLES COMPOSITE
3	23A, 23B, 23C, 23D			89-92																				FOR 8080, INDIVIDUAL ~~COMPOSITES~~ ~~SAMPLES~~
4	24A, 24B, 24C, 24D			93-93																				SAMPLES ANALYZED
5	25A, 25B, 25C, 25D			97-100																				FOR LEAD

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name KRIS LARSON	Printed Name [illegible]	Printed Name	Printed Name
Firm HONSHAW	Firm CAS	Firm	Firm
Date/Time 5/22/98 8:45	Date/Time 5/22/98 8:45	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due 6/1/98

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time
Shipped Via/Tracking #	

SAMPLE RECEIPT: Condition ____ Custody Seals ____

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Storage: R8 03

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801275 / S9801289 (8140's) P.O.#____ PAGE ~~1~~ 4 OF ~~7~~ 5

PROJECT NAME OLIVER # 160A-01

PROJECT MGR. DENNIS LADUZINSKY

COMPANY 11875 DUBLIN BLVD STE A200

ADDRESS HENSHAW

PHONE 925-551-7777

FAX____

SAMPLER'S SIGNATURE____

ANALYSIS REQUESTED

	Sample I.D.	Date	Time	Lab I.D.	Sample Matrix	Number of Containers	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX 8020 MTBE ☐ DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / ~~PCBs~~ NO PCBs 608/8080	TRPH - 418.1	Oil and Grease Method____	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	EPA organophosphate 8140 pesticides			Remarks
	Preservative						HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				
6	26A, 26B, 26C, 26D (126, 127, 128, 129)	5/22		126-129	SOIL	4						X									X			NO PCBS COMPOSITE
7	27A, 27B, 27C, 28C (130, 131, 132, 133)	↓		130-133	↓	↓						↓									X			SAMPLES
8	28A, 28B, 28C, 28D (134, 135, 136, 137)	↓		134-137	↓	↓						↓												
9	29A, 29B, 29C, 29D (138, 139, 140, 141)	↓		138-141	↓	↓						↓									X			
0	30A, 30B, 30C, 30D (142, 143, 144, 145)	↓		142-145	↓	↓						↓									X			
1	31A, 31B, 31C, 31D (146, 147, 148, 149)	↓		146-149	↓	↓						↓												
2	32A, 32B, 32C, 32D (150, 151, 152, 153)	↓		150-153	↓	↓						↓												
3	33A, 33B, 33C, 33D (154, 155, 156, 157)	↓		154-157	↓	↓						↓									X			
4	34A, 34B, 34C, 34D (158, 159, 160, 161)	↓		158-161	↓	↓						↓									X			
5	35A, 35B, 35C, 35D (162, 163, 164, 165)	↓		162-165	↓	↓						↓									X			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name KRIS LARSON	Printed Name GREG ANDERSON	Printed Name	Printed Name
Firm HENSHAW	Firm CAS	Firm	Firm
Date/Time 5/22/98 3:30	Date/Time 5/22 3:30 pm	Date/Time	Date/Time

TURNAROUND REQUIREMENTS

__ 1 day __ 2 day __ 3 day

X 5 day __ Other

__ Standard (10 working days)

Results Due____

REPORT REQUIREMENTS

__ I. Routine Report

__ II. Report (includes MS, MSD, as required, may be charged as samples)

__ III. Data Validation Report (includes All Raw Data)

__ MDLs/PQLs/Trace #

__ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking #

SAMPLE RECEIPT: Condition____ Custody Seals____

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Storage: R8 / D3

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801275 / S9801289 (S1402s) P.O.# ______ PAGE 5 OF 5

PROJECT NAME: OLIVER PROP # 160-A-01
PROJECT MGR.: DENNIS LADUZINSKY
COMPANY: HENSHAW 11875 DUBLIN BLVD A-200
ADDRESS: DUBLIN, CA
PHONE: 925-551-7272
FAX: ______
SAMPLER'S SIGNATURE: ______

ANALYSIS REQUESTED

PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				

	SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020 MTBE ☐	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080 NO PCBS	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	EPA 8140 Organophosphorus pesticides			REMARKS
6	36A,36B,36C,36D (166, 167, 168, 169)	5/22		166-169	SOIL	4						X									X			NO PCBS
97	37A,37B,37C,37D (170, 171, 172, 173)	5/22		170-173	↓	↓						↓												COMPOSITE
98	38A,38B,38C,38D (174, 175, 176, 177)	5/22		174-177	↓	↓						↓									X			SAMPLES
19	39A,39B,39C,39D (178, 179, 180, 181)	5/22		178-181	↓	↓						↓									X			
100	40A,40B,40C,40D (182, 183, 184, 185)	5/22		182-185	↓	↓						↓												

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature	Signature
Printed Name: KRIS LARSON	Printed Name: [signature]	Printed Name	Printed Name
Firm: HENSHAW	Firm: CAS	Firm	Firm
Date/Time: 5/22/98 3:30	Date/Time: 5/22 3:30 pm	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due ______

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking # ______

SAMPLE RECEIPT: Condition ______ Custody Seals ______

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Storage: R8 / D3

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

Columbia Analytical Services inc.

June 4, 1998

Service Request No.: S9801289

Dennis Laduzinsky
HENSHAW & ASSOCIATES, INC.
11875 Dublin Bld. Ste A200
Dublin, CA 94568

RE: Oliver/160-A-01

Dear Mr. Laduzinsky:

The following pages contain analytical results for sample(s) received by the laboratory on May 22, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

3334 Victor Court ▪ Santa Clara, CA 95054 ▪ Telephone (408) 437-2400 ▪ Fax (408) 437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue
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Phone (209) 572-0900
FAX (209) 572-0916

CERTIFICATE OF ANALYSIS
8140

Report # J152-05
Columbia Analytical Services
3334 Victor Court
Santa Clara, Ca 95054

Date Sampled 05/22/98

Date of Report: 06/02/98
Date Received: 06/01/98
Date Started : 06/01/98
Date Completed: 06/02/98

Project Name:
Project # S9801289
Sample ID: Comp 26-(A-D)
Lab ID: J20738

Method	Detection Limit	Analyte	Results	Units µg/Kg
8140	100	(TEPP)	ND	
	100	Dichlorvos	ND	
	100	Phosdrin	ND	
	100	Prophos	ND	
	100	Phorate	ND	
	100	Dibrom	ND	
	100	Demeton	ND	
	100	Diazinon	ND	
	100	Disulfoton	ND	
	100	Fenchlorphos	ND	
	100	m-Parathion	ND	
	100	Malathion	ND	
	100	Chlorpyriphos	ND	
	100	Parathion	ND	
	100	Fenthion	ND	
	100	Merphos	ND	
	100	Stirophos	ND	
	100	Sulprofos	ND	
	100	Fensulfothion	ND	
	100	EPN	ND	
	100	Guthion	ND	
	100	Coumaphos	ND	

Gregory Merciadis
Chemist

Certification # 1157

Donna Keller
Laboratory Director

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CERTIFICATE OF ANALYSIS
8140

Report # J152-05
Columbia Analytical Services
3334 Victor Court
Santa Clara, Ca 95054

Date Sampled 05/22/98

Date of Report: 06/02/98
Date Received: 06/01/98
Date Started : 06/01/98
Date Completed: 06/02/98

Project Name:
Project # S9801289
Sample ID: Comp 28-(A-D)
Lab ID: J20739

Method	Detection Limit	Analyte	Results	Units µg/Kg
8140	100	(TEPP)	ND	
	100	Dichlorvos	ND	
	100	Phosdrin	ND	
	100	Prophos	ND	
	100	Phorate	ND	
	100	Dibrom	ND	
	100	Demeton	ND	
	100	Diazinon	ND	
	100	Disulfoton	ND	
	100	Fenchlorphos	ND	
	100	m-Parathion	ND	
	100	Malathion	ND	
	100	Chlorpyriphos	ND	
	100	Parathion	ND	
	100	Fenthion	ND	
	100	Merphos	ND	
	100	Stirophos	ND	
	100	Sulprofos	ND	
	100	Fensulfothion	ND	
	100	EPN	ND	
	100	Guthion	ND	
	100	Coumaphos	ND	

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CERTIFICATE OF ANALYSIS
8140

Report # J152-05

Columbia Analytical Services
3334 Victor Court
Santa Clara, Ca 95054

Date Sampled 05/22/98

Date of Report: 06/02/98
Date Received: 06/01/98
Date Started : 06/01/98
Date Completed: 06/02/98

Project Name:
Project # S9801289
Sample ID: Comp 32-(A-D)
Lab ID: J20740

Method	Detection Limit	Analyte	Results	Units µg/Kg
8140	100	(TEPP)	ND	
	100	Dichlorvos	ND	
	100	Phosdrin	ND	
	100	Prophos	ND	
	100	Phorate	ND	
	100	Dibrom	ND	
	100	Demeton	ND	
	100	Diazinon	ND	
	100	Disulfoton	ND	
	100	Fenchlorphos	ND	
	100	m-Parathion	ND	
	100	Malathion	ND	
	100	Chlorpyriphos	ND	
	100	Parathion	ND	
	100	Fenthion	ND	
	100	Merphos	ND	
	100	Stirophos	ND	
	100	Sulprofos	ND	
	100	Fensulfothion	ND	
	100	EPN	ND	
	100	Guthion	ND	
	100	Coumaphos	ND	

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CERTIFICATE OF ANALYSIS
8140

Report # J152-05

Columbia Analytical Services
3334 Victor Court
Santa Clara, Ca 95054

Date Sampled 05/22/98

Date of Report: 06/02/98
Date Received: 06/01/98
Date Started : 06/01/98
Date Completed: 06/02/98

Project Name:
Project # S9801289
Sample ID: Comp 35-(A-D)
Lab ID: J20741

Method	Detection Limit	Analyte	Results	Units µg/Kg
8140	100	(TEPP)	ND	
	100	Dichlorvos	ND	
	100	Phosdrin	ND	
	100	Prophos	ND	
	100	Phorate	ND	
	100	Dibrom	ND	
	100	Demeton	ND	
	100	Diazinon	ND	
	100	Disulfoton	ND	
	100	Fenchlorphos	ND	
	100	m-Parathion	ND	
	100	Malathion	ND	
	100	Chlorpyriphos	ND	
	100	Parathion	ND	
	100	Fenthion	ND	
	100	Merphos	ND	
	100	Stirophos	ND	
	100	Sulprofos	ND	
	100	Fensulfothion	ND	
	100	EPN	ND	
	100	Guthion	ND	
	100	Coumaphos	ND	

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Chemist

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CERTIFICATE OF ANALYSIS
8140

Report # J152-05

Columbia Analytical Services
3334 Victor Court
Santa Clara, Ca 95054

Date Sampled 05/22/98

Date of Report: 06/02/98
Date Received: 06/01/98
Date Started : 06/01/98
Date Completed: 06/02/98

Project Name:
Project # S9801289
Sample ID: Comp 38-(A-D)
Lab ID: J20742

Method	Detection Limit	Analyte	Results	Units µg/Kg
8140	100	(TEPP)	ND	
	100	Dichlorvos	ND	
	100	Phosdrin	ND	
	100	Prophos	ND	
	100	Phorate	ND	
	100	Dibrom	ND	
	100	Demeton	ND	
	100	Diazinon	ND	
	100	Disulfoton	ND	
	100	Fenchlorphos	ND	
	100	m-Parathion	ND	
	100	Malathion	ND	
	100	Chlorpyriphos	ND	
	100	Parathion	ND	
	100	Fenthion	ND	
	100	Merphos	ND	
	100	Stirophos	ND	
	100	Sulprofos	ND	
	100	Fensulfothion	ND	
	100	EPN	ND	
	100	Guthion	ND	
	100	Coumaphos	ND	

Gregory Merciadis
Chemist

Certification # 1157

Donna Keller
Laboratory Director

Columbia Analytical Services inc.

June 4, 1998

Service Request No.: S9801314

Dennis Laduzinsky
HENSHAW & ASSOCIATES, INC.
11875 Dublin Bld. Ste. A200
Dublin, CA 94568

RE: 160-A-01

Dear Mr. Laduzinsky:

The following pages contain analytical results for sample(s) received by the laboratory on May 27, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 51, following, have been thoroughly reviewed and *approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.*

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Bernadette T Cox for

Steven L. Green
Project Chemist

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: L9801682
Date Collected: 5/26/98
Date Received: 5/27/98

Lead, Total

Prep Method: EPA 3050B
Analysis Method: 6010B
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
B6-0.5	L9801682-001	5	1	5/28/98	5/29/98	22	
B6-3	L9801682-002	5	1	5/28/98	5/29/98	8	
B6-5	L9801682-003	5	1	5/28/98	5/29/98	8	
B7-0.5	L9801682-004	5	1	5/28/98	5/29/98	17	
B7-3	L9801682-005	5	1	5/28/98	5/29/98	16	
B7-5	L9801682-006	5	1	5/28/98	5/29/98	9	
B8-0.5	L9801682-007	5	1	5/28/98	5/29/98	20	
B8-3	L9801682-008	5	1	5/28/98	5/29/98	12	
B8-5	L9801682-009	5	1	5/28/98	5/29/98	8	
B9-0.5	L9801682-010	5	1	5/28/98	5/29/98	18	
B9-3	L9801682-011	5	1	5/28/98	5/29/98	9	
B9-5	L9801682-012	5	1	5/28/98	5/29/98	6	
B10-0.5	L9801682-013	5	1	5/28/98	5/29/98	14	
B10-3	L9801682-014	5	1	5/28/98	5/29/98	11	
B10-5	L9801682-015	5	1	5/28/98	5/29/98	8	
B14-0.5	L9801682-017	5	1	5/28/98	5/29/98	17	
B14-3	L9801682-018	5	1	5/28/98	5/29/98	9	
B14-5	L9801682-019	5	1	5/28/98	5/29/98	9	
Method Blank	L980528-MB2	5	1	5/28/98	5/29/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	L9801682
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample Name: B13
Lab Code: L9801682-016
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Gamma-BHC (Lindane)	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Beta-BHC	METHOD	608	0.04	1	5/28/98	5/30/98	ND	
Heptachlor	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Delta-BHC	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Aldrin	METHOD	608	0.02	1	5/28/98	5/30/98	ND	
Heptachlor Epoxide	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Endosulfan I	METHOD	608	0.1	1	5/28/98	5/30/98	ND	
4,4'-DDE	METHOD	608	0.01	1	5/28/98	5/30/98	0.01	
Dieldrin	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
Endrin	METHOD	608	0.05	1	5/28/98	5/30/98	ND	
4,4'-DDD	METHOD	608	0.01	1	5/28/98	5/30/98	0.02	
Endosulfan II	METHOD	608	0.01	1	5/28/98	5/30/98	ND	
4,4'-DDT	METHOD	608	0.02	1	5/28/98	5/30/98	ND	
Endrin Aldehyde	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Endosulfan Sulfate	METHOD	608	0.5	1	5/28/98	5/30/98	ND	
Methoxychlor	METHOD	608	0.5	1	5/28/98	5/30/98	ND	
Toxaphene	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Chlordane	METHOD	608	0.1	1	5/28/98	5/30/98	ND	
Aroclor 1016	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1221	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1232	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1242	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1248	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1254	METHOD	608	1.0	1	5/28/98	5/30/98	ND	
Aroclor 1260	METHOD	608	1.0	1	5/28/98	5/30/98	ND	

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	L9801682
Project:	160-A-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	L980528-MB	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Gamma-BHC (Lindane)	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Beta-BHC	METHOD	608	0.04	1	5/28/98	5/29/98	ND	
Heptachlor	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Delta-BHC	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Aldrin	METHOD	608	0.02	1	5/28/98	5/29/98	ND	
Heptachlor Epoxide	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Endosulfan I	METHOD	608	0.1	1	5/28/98	5/29/98	ND	
4,4'-DDE	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Dieldrin	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Endrin	METHOD	608	0.05	1	5/28/98	5/29/98	ND	
4,4'-DDD	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
Endosulfan II	METHOD	608	0.01	1	5/28/98	5/29/98	ND	
4,4'-DDT	METHOD	608	0.02	1	5/28/98	5/29/98	ND	
Endrin Aldehyde	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Endosulfan Sulfate	METHOD	608	0.5	1	5/28/98	5/29/98	ND	
Methoxychlor	METHOD	608	0.5	1	5/28/98	5/29/98	ND	
Toxaphene	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Chlordane	METHOD	608	0.1	1	5/28/98	5/29/98	ND	
Aroclor 1016	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1221	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1232	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1242	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1248	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1254	METHOD	608	1.0	1	5/28/98	5/29/98	ND	
Aroclor 1260	METHOD	608	1.0	1	5/28/98	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	L9801682
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Hydrocarbon Scan / Fuel Characterization

Sample Name:	B13	Units:	ug/L (ppb)
Lab Code:	L9801682-016	Basis:	NA
Test Notes:	X5		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	5/28/98	5/29/98	ND	
C23 - C32 HRO	EPA 3510M	8015M	50	1	5/28/98	5/29/98	61	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	50	1	5/28/98	5/29/98	61	
Fuel Characterization	EPA 3510M	8015M						T3

GRO	Gasoline Range Organics
DRO	Diesel Range Organics
HRO	Heavy Oil Range Organics
X5	Quantified with diesel fuel
T3	Chromatogram fingerprint is not characteristic of any particular fuel type; however, hydrocarbons eluting within the stated carbon range were detected.

IS22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	L9801682
Project:	160-A-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Hydrocarbon Scan / Fuel Characterization

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	L980528-MB	Basis:	NA
Test Notes:	X5		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
C13 - C22 DRO	EPA 3510M	8015M	50	1	5/28/98	5/29/98	ND	
C23 - C32 HRO	EPA 3510M	8015M	50	1	5/28/98	5/29/98	ND	
Total Petroleum Hydrocarbons	EPA 3510M	8015M	50	1	5/28/98	5/29/98	ND	
Fuel Characterization	EPA 3510M	8015M					NA	

GRO	Gasoline Range Organics
DRO	Diesel Range Organics
HRO	Heavy Oil Range Organics
X5	Quantified with diesel fuel

IS22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: 5/27/98
Date Received: 5/27/98

Dissolved Metals
Lead

Prep Method: NONE
Analysis Method: 6010A
Test Notes:

Units: mg/L (ppm)
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
B9	S9801314-022	0.05	1	NA	5/27/98	ND	
B11	S9801314-023	0.05	1	NA	5/27/98	ND	
Method Blank	S980527-MB	0.05	1	NA	5/27/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: 5/26 - 5/27/98
Date Received: 5/27/98

TPH as Diesel

Prep Method: EPA 3510
Analysis Method: CA/LUFT
Test Notes:

Units: ug/L (ppb)
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
B1	S9801314-001	50	1	5/28/98	5/29/98	1400	
B2	S9801314-002	50	1	5/28/98	5/29/98	ND	
B3	S9801314-003	50	1	5/28/98	5/29/98	110	D1
B9	S9801314-022	50	1	5/28/98	5/29/98	ND	
B11	S9801314-023	50	1	5/28/98	5/29/98	ND	
B4	S9801314-029	50	1	5/28/98	5/29/98	ND	
B5	S9801314-030	50	1	5/28/98	5/29/98	ND	
Method Blank	S980528-MB	50	1	5/28/98	5/29/98	ND	

D1 Quantitated as diesel. The sample contains components that eluted in the diesel range, but the chromatogram does not match the typical diesel fingerprint.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: 5/26 - 5/27/98
Date Received: 5/27/98

TPH as Motor Oil

Prep Method: EPA 3510
Analysis Method: 8015 Modified
Test Notes:

Units: ug/L (ppb)
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
B1	S9801314-001	250	1	5/28/98	5/29/98	ND	
B2	S9801314-002	250	1	5/28/98	5/29/98	ND	
B3	S9801314-003	250	1	5/28/98	5/29/98	ND	
B9	S9801314-022	250	1	5/28/98	5/29/98	ND	
B11	S9801314-023	250	1	5/28/98	5/29/98	ND	
B4	S9801314-029	250	1	5/28/98	5/29/98	280	
B5	S9801314-030	250	1	5/28/98	5/29/98	ND	
Method Blank	S980528-MB	250	1	5/28/98	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B1	Units:	ug/L (ppb)
Lab Code:	S9801314-001	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	7	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B2	Units:	ug/L (ppb)
Lab Code:	S9801314-002	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B3	Units:	ug/L (ppb)
Lab Code:	S9801314-003	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B9	Units:	ug/L (ppb)
Lab Code:	S9801314-022	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B11	Units:	ug/L (ppb)
Lab Code:	S9801314-023	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B13	Units:	ug/L (ppb)
Lab Code:	S9801314-027	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B12	Units:	ug/L (ppb)
Lab Code:	S9801314-028	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B4	Units:	ug/L (ppb)
Lab Code:	S9801314-029	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/29/98	53	
Benzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/29/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/29/98	31	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B5	Units:	ug/L (ppb)
Lab Code:	S9801314-030	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	4	NA	5/29/98	<200	C1
Benzene	EPA 5030	8020	0.5	4	NA	5/29/98	<2	C1
Toluene	EPA 5030	8020	0.5	4	NA	5/29/98	<2	C1
Ethylbenzene	EPA 5030	8020	0.5	4	NA	5/29/98	<2	C1
Xylenes, Total	EPA 5030	8020	0.5	4	NA	5/29/98	<2	C1
Methyl tert-Butyl Ether	EPA 5030	8020	3	1000	NA	6/4/98	9700	

C1 The MRL was elevated due to high analyte concentration requiring sample dilution.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S980528-WB1
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	5/28/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	5/28/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	5/28/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	5/28/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	5/28/98	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	3	1	NA	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: S9801314
Date Collected: 5/26 - 5/27/98
Date Received: 5/27/98

TPH as Diesel

Prep Method: LUFT
Analysis Method: California DHS LUFT
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
B1-5	S9801314-004	1	1	5/28/98	5/28/98	ND	
B1-10	S9801314-005	1	1	5/28/98	5/28/98	ND	
B2-5	S9801314-006	1	1	5/28/98	5/28/98	ND	
B2-10	S9801314-007	1	1	5/28/98	5/28/98	ND	
B3-5	S9801314-008	1	1	5/28/98	5/28/98	ND	
B3-10	S9801314-009	1	1	5/28/98	5/28/98	ND	
B4-6	S9801314-031	1	1	5/28/98	5/28/98	ND	
B4-10	S9801314-032	1	1	5/28/98	5/28/98	ND	
B5-5	S9801314-033	1	1	5/28/98	5/28/98	ND	
B5-11	S9801314-034	1	1	5/28/98	5/29/98	ND	
Method Blank	S980528-MB	1	1	5/28/98	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: S9801314
Date Collected: 5/26 - 5/27/98
Date Received: 5/27/98

TPH as Motor Oil

Prep Method: LUFT
Analysis Method: 8015 Modified
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
B1-5	S9801314-004	5	1	5/28/98	5/28/98	ND	
B1-10	S9801314-005	5	1	5/28/98	5/28/98	ND	
B2-5	S9801314-006	5	1	5/28/98	5/28/98	ND	
B2-10	S9801314-007	5	1	5/28/98	5/28/98	ND	
B3-5	S9801314-008	5	1	5/28/98	5/28/98	ND	
B3-10	S9801314-009	5	1	5/28/98	5/28/98	ND	
B4-6	S9801314-031	5	1	5/28/98	5/28/98	ND	
B4-10	S9801314-032	5	1	5/28/98	5/28/98	ND	
B5-5	S9801314-033	5	1	5/28/98	5/28/98	ND	
B5-11	S9801314-034	5	1	5/28/98	5/29/98	ND	
Method Blank	S980528-MB	5	1	5/28/98	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B1-5	Units:	mg/Kg (ppm)
Lab Code:	S9801314-004	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B1-10	Units:	mg/Kg (ppm)
Lab Code:	S9801314-005	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/28/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: S9801314
Date Collected: 5/26/98
Date Received: 5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name: B2-5
Lab Code: S9801314-006
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/28/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/28/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/28/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B2-10	Units:	mg/Kg (ppm)
Lab Code:	S9801314-007	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B3-5	Units:	mg/Kg (ppm)
Lab Code:	S9801314-008	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	0.006	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1522/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B3-10	Units:	mg/Kg (ppm)
Lab Code:	S9801314-009	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	0.006	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B4-6	Units:	mg/Kg (ppm)
Lab Code:	S9801314-031	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B4-10	Units:	mg/Kg (ppm)
Lab Code:	S9801314-032	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B5-5	Units:	mg/Kg (ppm)
Lab Code:	S9801314-033	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	0.17	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Soil	**Date Received:**	5/27/98

BTEX, MTBE and TPH as Gasoline

Sample Name:	B5-11	Units:	mg/Kg (ppm)
Lab Code:	S9801314-034	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	0.34	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	mg/Kg (ppm)
Lab Code:	S980528-SB1	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	5/28/98	5/29/98	ND	
Benzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Toluene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	5/28/98	5/29/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	5/28/98	5/29/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B1	Units:	ug/L (ppb)
Lab Code:	S9801314-001	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/27/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/27/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/26/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B2	Units:	ug/L (ppb)
Lab Code:	S9801314-002	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: 5/26/98
Date Received: 5/27/98

Halogenated Volatile Organic Compounds

Sample Name: B3
Lab Code: S9801314-003
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/27/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/27/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B9	Units:	ug/L (ppb)
Lab Code:	S9801314-022	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/27/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/27/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B11	Units:	ug/L (ppb)
Lab Code:	S9801314-023	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B13	Units:	ug/L (ppb)
Lab Code:	S9801314-027	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

IS44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B12	Units:	ug/L (ppb)
Lab Code:	S9801314-028	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Henshaw & Associates	**Service Request:**	S9801314
Project:	160-A-01	**Date Collected:**	5/27/98
Sample Matrix:	Water	**Date Received:**	5/27/98

Halogenated Volatile Organic Compounds

Sample Name:	B4	Units:	ug/L (ppb)
Lab Code:	S9801314-029	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: 5/27/98
Date Received: 5/27/98

Halogenated Volatile Organic Compounds

Sample Name: B5
Lab Code: S9801314-030
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/28/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/28/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/28/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/28/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/28/98	ND	

1S44/111296

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: NA
Date Received: NA

Halogenated Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: S980527-WB2
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8010	1	1	NA	5/27/98	ND	
Chloromethane	EPA 5030	8010	1	1	NA	5/27/98	ND	
Vinyl Chloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromomethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorofluoromethane (CFC 11)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichlorotrifluoroethane (CFC 113)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Methylene Chloride	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,2-Dichloroethene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chloroform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,1-Trichloroethane (TCA)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Carbon Tetrachloride	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Trichloroethene (TCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,2-Dichloropropane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromodichloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
2-Chloroethyl Vinyl Ether	EPA 5030	8010	5	1	NA	5/27/98	ND	
trans-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
cis-1,3-Dichloropropene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2-Trichloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Tetrachloroethene (PCE)	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Dibromochloromethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Chlorobenzene	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
Bromoform	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,1,2,2-Tetrachloroethane	EPA 5030	8010	0.5	1	NA	5/27/98	ND	
1,3-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,4-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	
1,2-Dichlorobenzene	EPA 5030	8010	1	1	NA	5/27/98	ND	

1544/111296

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: L9801682
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Prep Method: METHOD
Analysis Method: 608

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery Tetrachloro-m-xylene
B13	L9801682-016		51
Method Blank	L980528-MB		72

CAS Acceptance Limits: 45-140

SUR1/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: L9801682
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Hydrocarbon Scan / Fuel Characterization

Prep Method: EPA 3510M
Analysis Method: 8015M

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery *p*-Terphenyl
B13	L9801682-016		62
Method Blank	L980528-MB		129

CAS Acceptance Limits: 50-140

SUR1/061197p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
TPH as Diesel

Prep Method: EPA 3510
Analysis Method: CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery p-Terphenyl
B1	S9801314-001		104
B2	S9801314-002		48
B3	S9801314-003		108
B9	S9801314-022		102
B11	S9801314-023		114
B4	S9801314-029		111
B5	S9801314-030		113
Method Blank	S980528-MB		87

CAS Acceptance Limits: 41-140

SUR1/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8020 CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
B1	S9801314-001		107	102
B2	S9801314-002		107	105
B3	S9801314-003		104	101
B9	S9801314-022		107	104
B11	S9801314-023		108	96
B13	S9801314-027		108	102
B12	S9801314-028		109	86
B4	S9801314-029		89	115
B5	S9801314-030		102	94
Method Blank	S980528-WB1		100	99
CAS Acceptance Limits:			69-116	69-116

SUR2/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: S9801314
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
TPH as Diesel

Prep Method: LUFT
Analysis Method: California DHS LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery p-Terphenyl
B1-5	S9801314-004		72
B1-10	S9801314-005		76
B2-5	S9801314-006		73
B2-10	S9801314-007		71
B3-5	S9801314-008		68
B3-10	S9801314-009		61
B4-6	S9801314-031		78
B4-10	S9801314-032		68
B5-5	S9801314-033		55
B5-11	S9801314-034		60
Method Blank	S980528-MB		74

CAS Acceptance Limits: 41-140

SUR1/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Soil

Service Request: S9801314
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8020 CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
B1-10	S9801314-005		92	89
B2-5	S9801314-006		89	77
B2-10	S9801314-007		95	76
B3-5	S9801314-008		91	99
B3-10	S9801314-009		89	100
B4-6	S9801314-031		105	99
B4-10	S9801314-032		101	97
B5-5	S9801314-033		104	100
B5-11	S9801314-034		108	96
Method Blank	S980528-SB1		93	89
B1-5	S9801314-004		98	90

CAS Acceptance Limits: 51-137 51-137

SUR2/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Henshaw & Associates
Project: 160-A-01
Sample Matrix: Water

Service Request: S9801314
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds

Prep Method: EPA 5030
Analysis Method: 8010

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene
B1	S9801314-001		113
B2	S9801314-002		110
B3	S9801314-003		117
B9	S9801314-022		109
B11	S9801314-023		110
B13	S9801314-027		112
B12	S9801314-028		108
B4	S9801314-029		104
B5	S9801314-030		110
Method Blank	S980527-WB2		113

CAS Acceptance Limits: 74-125

SUR3/052595

GC VOA, M(LLAB), Sct, GCMS-SEMA, TPH
PC, F

Columbia Analytical Services inc.

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801314 P.O.# 160-A-01 PAGE 1 OF 4

PROJECT NAME 160-A-01 #

PROJECT MGR. DENNIS LADUZINSKY

COMPANY HENSHAW ASSOCIATES

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DUBLIN, CA 94568 PHONE (925) 551-7272
FAX (925) 551-7464

SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☑ 602/8020 ☐	TPH as Gas/BTEX MTBE ☐ DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide				REMARKS
PRESERVATIVE						HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				
B1	5-26-98	13:55	1	WATER	5		X	X	X														①
B2	5-26	14:40	2	WATER	5		X	X	X														①
B3	5-26	16:00	3	WATER	5		X	X	X														①
B1-5	5-26	13:30	4	SOIL	1			X	X														
B1-10	5-26	13:40	5	SOIL	1			X	X														
B2-5	5-26	14:20	6	SOIL	1			X	X														
B2-10	5-26	14:30	7	SOIL	1			X	X														
B3-5	5-26	15:25	8	SOIL	1			X	X														
B3-10	5-26	15:40	9	SOIL	1			X	X														
B6-0.5	5-26	17:20	10	SOIL	1									X									

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name DOUGLAS BELL	Printed Name Moises Tirade	Printed Name	Printed Name
Firm HENSHAW ASSOC.	Firm CAS	Firm	Firm
Date/Time 5/27/98 16:50	Date/Time 5/27/98 16:54	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ✓ 2 day ___ 3 day
___ 5 day ___ Other
~~Standard (10 working days)~~
Results Due 5-29-98

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking # LAB COURIER

SAMPLE RECEIPT: Condition ___ Custody Seals ___

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As (Pb) Se Tl Hg

~~TOTAL~~ TOTAL LEAD FOR SOIL SAMPLES

① POTENTIAL PRESERVATIVE LOSS IN 40-ml VOAs - ANALYZE ASAP

Storage: R11 D1, D3,

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

Columbia Analytical Services inc. 3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

MET (Leads) Ext, TPH, Glass Susp
RC: F

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801314 P.O.# 160-A-01 PAGE 2 OF 4

PROJECT NAME #160-A-01
PROJECT MGR. DENNIS LADUZINSKY
COMPANY HENSHAW ASSOCIATES
ADDRESS 11875 DUBLIN BLVD. STE. A-200
DUBLIN, CA 94568
PHONE (925) 551-7272
FAX (925) 551-7464
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED — Preservative: Volatile Organics GC/MS 624/8240/8260 (HCl); Halogenated or Aromatic Volatiles 601/8010 602/8020 (HCl); TPH as Gas/BTEX DHS LUFT / 8020 MTBE (HCl); TPH as Diesel/HBHC DHS LUFT (NP); Base/Neu/Acid Organics GC/MS 625/8270 (NP); Pesticides / PCBs 608/8080 (NP); TRPH - 418.1 (HCl); Oil and Grease Method (HCl); Metals (total or dissolved) List Below (HNO_3); pH, Cond, Cl, SO_4, F, TDS, TSS, Alk, NO_3, NO_2 (circle) (NP); NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle) (H_2SO_4); Total Organic Carbon TOC (H_2SO_4); Total Phenols (H_2SO_4); Cyanide (NaOH)

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Metals (total or dissolved) List Below	REMARKS
B6-3	5-26-98	17:25	11	SOIL	1	X	
B6-5	5-26	17:30	12	SOIL	1	X	
B7-0.5	5-26	17:45	13	SOIL	1	X	
B7-3	5-26	17:50	14	SOIL	1	X	
B7-5	5-26	17:55	15	SOIL	1	X	
B8-0.5	5-26	18:10	16	SOIL	1	X	
B8-3	5-26	18:15	17	SOIL	1	X	
B8-5	5-26	18:20	18	SOIL	1	X	
B9-0.5	5-27-98	7:40	19	SOIL	1	X	
B9-3	5-27-98	7:45	20	SOIL	1	X	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name DOUGLAS BELL	Printed Name Moises Elvardo	Printed Name	Printed Name
Firm HENSHAW ASSOC.	Firm CAS	Firm	Firm
Date/Time 5/27/98 16:50	Date/Time 5/27/98 16:53	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ✓ 2 day ___ 3 day
___ 5 day ~~Other~~
~~Standard (10 working days)~~
Results Due 5-29-98

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking # LAB COURIER

SAMPLE RECEIPT: Condition ______ Custody Seals ______

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As (Pb) Se Tl Hg

TOTAL LEAD FOR SOIL SAMPLES

Storage: R11/D1, D2, D3

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

Col[illegible] Analytical Services inc.

' [illegible] M(LLAB), TRH, CXT; GCMS-SUCA PC; F

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

SERVICE REQUEST NO. S9801314 P.O.# 160-A-01 PAGE 3 OF 4

PROJECT NAME # 160-A-01

PROJECT MGR. DENNIS LADUZINSKY

COMPANY HENSHAW ASSOCIATES

ADDRESS 11875 DUBLIN BLVD. STE. A-200
DUBLIN, CA 94568

PHONE (925) 551-7272

FAX (925) 551-7464

SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☑ 602/8020 ☐	TPH as Gas/BTEX MTBE ☐ DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method ___	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide				REMARKS
PRESERVATIVE						HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				
B9-5	5-27-98	7:50	21	SOIL	1									X									
B9	5-27-98	8:15	22	WATER	4		X	X	X					X									
B11	5-27-98	9:40	23	WATER	4		X	X	X					X									③ ④
B-10-0.5	5-27-98	8:25	24	SOIL	1									X									① ③ ④
B10-3	5-27-98	8:30	25	SOIL	1									X									
B10-5	5-27-98	8:35	26	SOIL	1									X									
B13	5-27-98	12:15	27	WATER	6		X	X	X		X												
B12	5-27-98	12:40	28	WATER	2		X	X															②
B4	5-27-98	~~15:~~ 14:45	29	WATER	6		X	X	X														④
B5	5-27-98	16:05	30	WATER	5		X	X	X														①

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name DOUGLAS BELL	Printed Name HORACE ESTRADA	Printed Name	Printed Name
Firm HENSHAW ASSOC.	Firm CAS	Firm	Firm
Date/Time 5/27/98 16:50	Date/Time 5/27/98 16:52	Date/Time	Date/Time

TURNAROUND REQUIREMENTS

___ 1 day ✓ 2 day ___ 3 day

___ 5 day ___ Other

✓ Standard (10 working days)

Results Due 5-29-98

REPORT REQUIREMENTS

✓ I. Routine Report

___ II. Report (includes MS, MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ MDLs/PQLs/Trace #

___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking # LAB COURIER

SAMPLE RECEIPT: Condition ___ Custody Seals ___

SPECIAL INSTRUCTIONS/COMMENTS: ② SURFACE WATER SAMPLES; ③ FILTER AND ACIDIFY UPON RECEIPT ④ ANALYZE BY 8010 IF SUFFICIENT VOLUME

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As (Pb) Se Tl Hg

TOTAL LEAD FOR SOIL SAMPLES

DISSOLVED LEAD FOR WATER SAMPLES

① POTENTIAL PRESERVATIVE LOSS IN 40-ml VOAs — ANALYZE ASAP

Storage: K11 | D1, D3

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - [illegible]

Analytical Services Inc.
3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

PROJECT NAME # 160-A-01
PROJECT MGR. DENNIS LADUZINSKY
COMPANY HENSHAW ASSOCIATES
ADDRESS 11875 DUBLIN BLVD. STE. A-200
DUBLIN, CA 94568 PHONE (925) 551-7272
SAMPLER'S SIGNATURE FAX (925) 551-7464

SERVICE REQUEST NO. S980314 P.O.# 160-A-01 PAGE 4 OF 4

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH	REMARKS
						Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020 MTBE ☐	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide			
B4-6	5-27-98	14:25	31	SOIL	1		X	X													
B4-10	5-27-98	14:35	32	SOIL	1		X	X													
B4 B5-5	5-27-98	15:35	33	SOIL	1		X	X													
B5-11	5-27-98	15:50	34	SOIL	1		X	X													
B14-0.5	5-27-98	16:30	35	SOIL	1		X	X													
B14-3	5-27-98	16:30	36	SOIL	1							X									
B14-5	5-27-98	16:36	37	SOIL	1							X									

RELINQUISHED BY:
Signature
DOUGLAS BELL
Printed Name
HENSHAW ASSOC.
Firm
5/27/98 16:50
Date/Time

RECEIVED BY:
Signature
Printed Name
CAS
Firm
5/27/98 16:52
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

Shipped Via/Tracking # LAB COURIER

TURNAROUND REQUIREMENTS
___ 1 day ✓ 2 day ___ 3 day
___ 5 day ___ Other
___ Standard (10 working days)
Results Due 5-29-98

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

SAMPLE RECEIPT: Condition ___ Custody Seals ___

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al (Sb) Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As (Pb) Se Tl Hg
TOTAL LEAD FOR SOIL SAMPLES (B14 SERIES)

DISTRIBUTION: WHITE

Columbia Analytical Services, Inc.
3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. J152-05 P.O.# 59801289 PAGE 1 OF 1

PROJECT NAME _____ # 59801289
PROJECT MGR. Steve Green
COMPANY Columbia Analytical Services
ADDRESS _____
PHONE _____
FAX _____
SAMPLER'S SIGNATURE _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH			REMARKS
						Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020 MTBE ☐	TPH as Diesel/HBHC DHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3/NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	EPA 8140 Organo Phosphate Pesticides			
Comp 26-(A-D)	5/22/98			Soil	1														X			J20738
Comp 28-(A-D)																			X			J20739
Comp 32-(A-D)																			X			J20740
Comp 35-(A-D)																			X			J20741
Comp 38-(A-D)	↓			↓	↓														X			J20742

RELINQUISHED BY:
Signature: Ruben N
Printed Name: _____
Firm: CAS
Date/Time: 5-27-98 1200

RECEIVED BY:
Signature: _____
Printed Name: _____
Firm: _____
Date/Time: _____

RELINQUISHED BY:
Signature: _____
Printed Name: _____
Firm: _____
Date/Time: _____

RECEIVED BY:
Signature: _____
Printed Name: _____
Firm: _____
Date/Time: _____

RELINQUISHED BY:
Signature: Fed-X
Printed Name: _____
Firm: _____
Date/Time: _____

RECEIVED BY:
Signature: Karen Cole
Printed Name: KAREN COLE
Firm: GeoAnalytical Lab
Date/Time: 6/1/98 1020AM

Shipped Via/Tracking # _____

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
___ Standard (10 working days)
Results Due 6/5/98

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

SAMPLE RECEIPT: Condition _____ Custody Seals _____

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

SUB - NORTHCOAST

Storage: _____

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK -

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services, Inc.
3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

SERVICE REQUEST NO. 5980289 P.O.# _____ PAGE 1 OF 2

PROJECT NAME QUUR . 160A-01
PROJECT MGR. DENNIS LADZINSKY
COMPANY 11875 DUBLIN BLVD STE A200
ADDRESS HOUSMAN
PHONE 925 551-7555
FAX _____
SAMPLER'S SIGNATURE _____

	SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	REMARKS
21	Z6A,Z6B,Z6C,Z6D	5/12		1-4	SOIL	4	NOTE BC SAMPLES
	Z7A,Z7B,Z7C,Z7D						SAMPLES
22	Z8A,Z8B,Z8C,Z8D			5-8			
	Z9A,Z9B,Z9C,Z9D						
	30A,30B,30C,30D						
	31A,31B,31C,31D						
23	32A,32B,32C,32D			9-12			
	33A,33B,33C,33D						
	34A,34B,34C,34D						
24	35A,35B,35C,35D			13-16			

ANALYSIS REQUESTED

PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH			
Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX MTBE ☐ OHS LUFT / 8020	TPH as Diesel/HVOC OHS LUFT	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond., Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	CAM 17 Metals 6010/7000			
					X									X			
														X			
														X			
														X			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Printed Name KRIS LAWSON	Printed Name GREG ANDERSON	Printed Name	Printed Name
Firm CAS 5/22 3:10	Firm CAS 5/22 3:30pm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due 6/1/98

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Statewide Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time
Shipped Via/Tracking #	

SAMPLE RECEIPT: Condition _____ Custody Seals _____

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

Storage:

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400-5

Henshaw Associates, Inc.
Environmental Engineering Services

FAX COVER SHEET

DATE:05/24/98 6:27 PM

TOTAL NUMBER OF PAGES (including this page): 2

TO:	Steve Green
COMPANY:	CAS
PHONE:	408-437-2400
FAX:	408-437-9356
FROM:	**Kris Larson**
EMAIL:	
COMPANY:	Henshaw Associates, Inc.
PHONE:	(925) 551-7272
FAX:	(925) 551-7464

COMMENTS: **Please note the change in the Chain of Custody for EPA 8140 analysis for organophosphate pesticides as indicated on the attached COC's. You'll notice originally 10 samples were to be analyzed for 8140, we would now prefer to have only 5 samples analyzed for 8140. The samples that we would like to have analyzed are marked with an X, while the former samples to be analyzed were blacked out.**

Columbia Analytical Services Inc.
3334 Victor Court • Santa Clara, CA 95054 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9801289 P.O.# ______ PAGE 2 OF 2

PROJECT NAME Olivier Prop. 100A.01
PROJECT MGR Dennis Laduzinsky
COMPANY Hinshaw 11875 Dublin Blvd A-200
ADDRESS Dublin, CA
PHONE 925 551-7771
FAX
SAMPLER'S SIGNATURE

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX OHS LUFT / 8020	TPH as Diesel/HBHC OHS LUFT MTBE ☐	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides / PCBs 608/8080 (NO PCBS)	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO_4, F, TDS, TSS, Alk, NO_3, NO_2 (circle)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle)	Total Organic Carbon TOC	Total Phenols	Cyanide	[handwritten column]			REMARKS
PRESERVATIVE						HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO_3	NP	H_2SO_4	H_2SO_4	H_2SO_4	NaOH				
36A 36B 36C 36D	5/22			Soil	4						X												NO PCBS
37A 37B 37C 37D	5/22			↓	↓						↓												COMPOSITE
25 38A 38B 38C 38D	5/22		17-20	↓	↓						↓									X			SAMPLES
39A 39B 39C 39D	5/22			↓	↓						↓												
40A 40B 40C 40D	5/22			↓	↓						↓												

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Kris Larson	Printed Name [illegible]	Printed Name	Printed Name
Firm Hinshaw	Firm CAS	Firm	Firm
Date/Time 5/22/98 2:30	Date/Time 5/22 3:30 pm	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
X 5 day ___ Other
___ Standard (10 working days)
Results Due 6/1/98

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ MDLs/PQLs/Trace #
___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Shipped Via/Tracking #

SAMPLE RECEIPT: Condition __________ Custody Seals __________

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Storage:

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400-5