

REPORTS DATE:



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DETUDIE ENERGY CORPORATION

Avalon Hills 7 Fed. COM # 3 Delineation Report OCD Case No. 2R0056



Whole Earth Environmental 2103 Arbor Cove Katy, TX 77494 281.394.2050 whearth@msn.com



Office 405.228.8327 Fax 405.552.7839 Chris.biagi@dvn.com Devon Energy Corporation 20 North Broadway Oklahoma City, Oklahoma 73102-8260

September 8, 2006

New Mexico Oil Conservation Division Attn: Mr. Wayne Price 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

RE: Avalon Hills 7 FED COM 3 Eddy County, New Mexico OCD Case No. 2R0056

Dear Mr. Price:

Enclosed is the Delineation Report for the above referenced site in Eddy County, New Mexico. The report and delineation work were completed for Devon Energy Corporation by Whole Earth Environmental of Katy, Texas. The report summarizes the activities conducted at the site and includes recommendations for future remedial activities. Devon will commence implementation of the remedial plan upon your approval.

Please feel free to contact me either by phone or email to discuss this project or if I can answer any questions you may have regarding our findings. I appreciate your time and thank you for your attention to this project.

Sincerely,

Chris Biagi, REM Senior Remediation Specialist

Enclosure

cc: Mr. Jerry Blakely, U.S. Department of the Interior, Bureau of Land Management, 620 East Greene Street, Carlsbad, New Mexico 88220

Mr. Tim Gum, New Mexico Oil Conservation Division, 1301 West Grand Avenue, Artesia, New Mexico 88210

Mr. Ron Truelove, Devon Energy, Western Division EHS

		Chlorides	6.30	37.90	93.30	97.80	61.80	17.30	42.00	.45.1	17.60	11.80	33.30	02100	48 00	07.01							Chlorides		32.60		43.50	31 10	01.10	30.50		26.50		39.40	39.00	00.00	48.00		72.70		81.90			26.50
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Devon Ener Company Avalon Hills 7'réd. COM # 3

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0.736 1.120 E.C. 0.395 0.756 0.702 0.812 0.750 0.697 0.936 0.964 1.030 26.50 81.90 Q R QN R QN ND ND DN R ND Z 100' 105' 110' 115' 120'

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Devon Energy Company Avalon Hills 7 Fed. COM # 3 Soil Borings Analytical Summary

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E.C. 0.299 0.511 0.354 0.354 0.354 0.354 0.354 0.354 0.352 1.060 1.180	Chlorides 6.06 6.86 6.86 6.86 91.20 91.20 176.00	Toluene ND ND N	BH-4 Ethyl-Benzene ND ND ND ND ND ND ND ND ND ND ND ND ND	Toluene ND ND ND ND ND ND ND ND ND ND ND ND ND	Benzene ND ND ND ND ND ND ND ND ND ND	HAT ON ON ON ON ON ON ON	Depth Depth 5' 5' 5' 30' 35' 33' 35' 33' 35' 33' 36' 35' 37' 35' 36' 50' 55' 30' 35' 30' 36' 50' 55' 50' 55' 50' 55' 50' 55' 50' 55' 50' 90' 90'
1.120	184.00	QN	QN	QN	QN	QN	90' 95'
1.180	189.00	Q	QN	QN	QN	Q	85'
							80'
1.060	176.00	ND	ND	ND	QN	ND	75'
							70,
0.832	91.20	ND	QN	ND	ΩN	QN	65'
							60'
							55'
0.750	26.50	DN	QN	ND	QN	DN	50'
							45'
0.220	QN	QN	DN	ND	DN	QN	40'
							35'
0.354	6.86	QN	QN	ND	QN	ND	30'
							25'
0.511	21.00	QN	QN	QN	QN	QN	20'
							15'
0.299	90.9	QN	QN	ND	ND	ΠN	10'
							5,
E.C.	Chlorides	Toluene	Ethyl-Benzene	Toluene	Benzene	HdT	Depth
			BH-4				

Devon Energy Company Avalon Hills 7 Fed. COM # 3 Munsell Soil Classification Table

BH-1

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Depth	Munsell Color	Soil Texture	HCl
(feet)	(dry)		Reaction
4-6	5YR5/8	Yellowish red silt loam	Yes
14-16	5YR 5/6	Yellowish red silt loam	Yes
18-20	5YR 5/8	Yellowish red clay loam – silty clay loam	Yes
24-26	5YR 6/7	Reddish yellow loam	Yes
28-30	5YR 7/4	Light reddish brown sandy	Yes
		loam	
45	7.5 YR 6/4	Reddish brown sandy loam	Yes
50	7.5YR 6/4	Light brown sandy clay loam	Little
65	10YR 6/4	Light yellowish brown sandy	Little
		loam	
70	10YR 6/4	Light yellowish brown clay	Little
80	7.5 YR 6/4	Light brown loamy sand	No
90	2.5 YR 6/4	Red fine sand	No

BH-3

	Depth	Munsell Color	Soil Texture	HCl
	(feet)	(dry)		Reaction
50		5YR5/6	Yellowish red silty clay	Little
85		7.5 YR 5/6	Brown	
				Little
97			Blocks of dolomite and clay	
			loam	

BH-3A

	Depth	Munsell Color	Soil Texture	HCl
	(feet)	(dry)		Reaction
10			Dolomite	Yes
20		10 YR 8/2	Blocks of dolomite and very pale brown sand	Yes
30		10 YR 8/2	Blocks of dolomite and very pale brown sand	Yes
40		5 YR 4/6	Blocks of dolomite and reddish brown sand	Yes
50			Gravel	
60		10 YR 7/3-6/3	Pale brown loamy sand	Yes
70		5 YR 4/6	Yellowish red silt loam	Little
80		5 YR 5/8	Yellowish red silt clay loam	Very little
90		2.5 YR 6/3	Light yellowish brown clay	No
100		2.5 YR 6/3	Light yellowish brown silt loam	Very little
120		10 YR 5/4	Yellowish brown clay loam	No

BH-4

Depth	Munsell Color	Soil Texture	HCl
(feet)	(dry)		Reaction
10		Dolomite	Yes
-20		Dolomite	Yes
30	10 YR 8/2	Very pale brown very fine sand	Yes
40	10 YR 7/3	Very pale brown loamy sand	Yes
65	2.5 YR 4/6	Red sandy loam	No
75	2.5 Y 6/4	Light yellowish brown silt loam	Little
85	2.5 Y 6/2	Light brownish gray sandy clay loam	No
95	2.5 Y 6/3	Light yellowish brown loamy sand	No

Devon Energy Company Avalon Hills 7 Fed. COM 3 # NM WQCC Groundwater Standards Analysis Summary (mg/L)

Analyte	NM WQCC Std.	BH-1	BH-2	BH-4
Arsenic	0.1000	N/D	N/D	N/D
Barium	1.0000	0.374	0.299	0.075
Cadmium	0.0100	N/D	N/D	N/D
Chromium	0.0500	N/D	N/D	N/D
Cyanide	0.2000	N/T	N/T	N/T
Fluoride	1.6000	N/T	N/T	N/T
Lead	0.0500	N/D	N/D	N/D
Total Mercury	0.0020	N/D	0.0003	0.0003
Nitrate	10.0000	N/T	N/T	N/T
Selenium	0.0500	N/D	N/D	N/D
Silver	0.0500	N/D	N/D	N/D
Uranium	0.0300	N / T	N/T	N/T
Radioactivity	30 pCi/L	N/T	N/T	N/T
Benzene	0.0100	2,540	N/D	N/D
Polychlorinated biphenols	0.0010	N/D	N/D	N/D
Toluene	0.7500	10,200	N/D	N/D
Carbon Tetrachloride	0.0100	N/D	N/D	N/D
1,2-dichloroethane	0.0100	N/D	N/D	N/D
1,1-dichloroethylene	0.0050	N/D	N/D	N/D
1,1,2,2-tetrachloroethylene	0.0200	N/D	N/D	N/D
1,1,2-trichloroethylene	0.1000	N/D	N/D	N/D
Ethylbenzene	0.7500	2,740	N/D	N/D
Total Xylenes	0.6200	17	N/D	N/D
Methylene chloride	0.1000	N/D	N/D	N/D
Chloroform	0.1000	N/D	N/D	N/D
1,1-Dichloroethane	0.0250	N/D	N/D	N/D
Ethylene dibromide	0.0001	N/T	N/T	N / T
1,1,1-Trichloroethane	0.0600	N/D	N/D	N/D
1,1,2-Trichloroethane	0.0100	N/D	N/D	N/D
1,1,2,2-Tetrachloroethane	0.0100	N/D	N/D	N/D
Vinyl chloride	0.0010	N/D	N/D	N/D
Total napthalene + monomethylnapthalenes	0.0300	N/D	N/D	N/D
Benzo-a-pyrene	0.0007	N/D	N/D	N/D
Chloride	250	52,800	372	797
Copper	1.0000	N/T	N/T	N/T
Iron	1.0000	N/T	N/T	N/T
Manganese	0.2000	N/T	_N/T	N/T
Phenols	0.0050	N / T	N / T	N/T
Sulfate	600.0000	N/T	N/T	N/T
TDS	1,000	76,300	3,420	2,540
Zinc	10.0000	N/T	N/T	N/T
pH	6-9	N/T	N/T	N/T
	1		<u> </u>	NI /m
Aluminum	5.0000	N/T	N/T	N/1
Boron	0.7500	N/T	$\frac{N/T}{N/T}$	N/T
Cobalt	0.0500	N/T	N/T	N/T
Molybdenum	1.0000	N/T	$\frac{N/T}{N/T}$	N/T
Nickel	0.2000	<u>N/T</u>	N/T	N/T

Devon Avalon Lake Blowout



Oil Conservation Division

DrawnBy

10/19/2006 2:36:54 PM

Devon Energy Site Avalon Hills Whole Earth Environmental 2103 Arbor Cove Katy, Texas 77494

Boring number	Latitude	Longitude	Mean Sea Level Elevation
BH-1	32° 29.4066656'	104° 13.361357'	3215.23'
BH-2	32° 29.3891898'	104° 13.332315'	3215.49'
BH-3	32° 29.3639943'	104° 13.533745'	3195.37'
BH-4	32° 29.3823505'	104° 23.384612'	3214.63'

Notes:

1.Horizontal Data referenced to United States Coast and Geodetic Survey Tri-Station named "Carlsbad" set in 1922. The Coordinates are given in Latitude and Longitude.

2. Vertical Data referenced to National Geodetic Survey Benchmark designated "D-345".

Vertical Data is NAVD 88 Datum. All elevations taken at land surface at bore hole locations.

Katy, TX 77494 Boring Location	: 07-18-06 (1000) : N32°29.370', W104°13.526'
Lob #: CRDEVON DRI 06 Auger Type	: 1215, R27E, Sec. 07 : 4¼ Hollow
DESCRIPTION	BH-1
Clay, loose red dry	
CL	
Clay w/ caliche, firm, tan & white, dry	
	Grout
	2" Sch. 40 PVC casing
Clay, loose, red, dry	
SS Sandstone, firm, tan, dry	
Sandstone, hard, tan, dry	
ss	
CL Sandy clay w/ cemented gravel, firm	
Sandy clay w/ cemented gravel, firm	
¥∕	u - Silica sand раск
Clay, loose, greyish green, moist	
Clay, stiff, red, moist	
	Bentonite grout
₹∕↓	
Silty sand, loose, reddish tan	
SM SM Stars, 10000, 100001101	
Total Depth 100' Water Level 64'	

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	W	hole 21 K Con	Earth Environmental 103 Arbor Cove aty, TX 77494 ttact: Mike Griffin	Drill Start Drill End Boring Location Site Location	: 07-28-06 (1050) : 08-02-06 : 75'W of Borehole #3 : T21S, R27E, Sec. 07	Logged By	: Mort Bates
	Jo	ob #:	CRDEVON.DRL.06	Auger Type	: Air & auger		
Depth in Feet	GRAPHIC	uscs	DESCR	IPTION	BH-5		
5-	<u>h</u>	15	Caliche w/silty sand, firm, white Broken limestone, bard, grey of	e & tan, dry	———————————————————————————————————————		
10-			Sandstone, hard, vellowish tan	, dry			
15-		55	Conditions hand to de				
20-			Sandstone, nard, tan, dry				
20-		55					
25-			Sandstone w/silty clay, hard, re	ddish tan, dry			
30-		SS					
35-		SS	Sandstone hard red & tan do				
40-	\square	ä	Clay, loose, greenish gray, dar	np			
45-	\square						
50-	4	CL	Clay, loose, red, damp				
55-		SS	Cavernous sandstone, Itm, tai				
60-			May be cavern? Lost drill retur	ns.			
65-			Clay, stiff, red, damp			-Cement grout (borehole plug	iged)
70-	V/						
75-	\vee						
80-	KA		Sandy clay, loose, prevish tan	damp			
85-	\mathbb{V}	CL		r.			
90-	1		Sandy clay, firm, greyish green	, damp			
95-	Λ	CL					
100-	arphi		Silby clay, soft gravish grass	amn			
105-	KA	CL	City day, son, grouteh green, c	dov			
110	M		i onty clay, naro, greyish green,	ury			
115-	\vee						
120-		CL					
125-	$\langle \rangle$						
120-				1,144.p			
135-			Total Depth 130' Borehole dry				
	1		Note: M&M air drill from 0' to 6	5', Atkins auger dril	1		

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Executive Summary Avalon Hills 7 Fed COM # 3 Delineation Project OCD Case No. 2R0056

Location

The Devon Energy Company (Devon) Avalon Hills 7 Fed COM #3 (AH7) site is located on BLM land approximately four miles north of the City of Carlsbad in Eddy County, New Mexico. The primary land use is for cattle grazing. Oil and gas operations are also common in the area. The area is semi-arid with a net precipitation / evaporation amount of -73" per year. The legal description of the AH7 site is Section 7, Township 21 South, Range 27 East at an approximate elevation of 3,200 feet (ft) above mean sea level.





Hydrogeology

The most important aquifer in the area is the Capitan aquifer which provides the water supply for Carlsbad from a well field located west of the Pecos River near the Guadalupe Mountains. The Capitan aquifer is considered a single hydrological unit and consists of the Capitan Reef complex which is composed of the Capitan and Goat Seep Limestones and the Carlsbad facies of the Artesia Group. This Reef complex extends in an arc through southeastern New Mexico and southwestern Texas following the rim of the Delaware Basin. In New Mexico, the arc of the Capitan reef extends from the southwest of Carlsbad to the southeast of Jal (Figure 2). Near Carlsbad, the thickness of the aquifer is about 1600 ft and lies below the alluvium in the valley. The main recharge for the aquifer is from the Guadalupe Mountains and Dark Canyon through fractures and dissolution holes. Secondary recharge also occurs as leakage from Lake Avalon.

The quality of the water in the Capitan aquifer decreases towards the east. Near Carlsbad the chloride content is about 200 mg/l while the North Cedar Hills well, about 1 mile NE from the AH7 site, has a chloride content of 13,800 mg/l (Hiss, 1973). Average hydraulic conductivity in the same area is 2.4 feet/day (Huff, 1997) and aquifer thickness is approximately 2,000 ft (Hiss, 1975).



Figure 2 - Location of the Capitan Aquifer in southeastern New Mexico (Huff, 1997)

Groundwater Flow Direction

The groundwater flow direction is critical for the evaluation of the potential threat to groundwater quality caused by the AH7 well control situation. The overall groundwater flow direction in the Capitan aquifer is towards the east. However, in the Carlsbad area the incision of the Pecos River, the presence of Lake Avalon, the development of petroleum resources and local groundwater withdrawal by pumping have influenced the groundwater flow regime resulting in flow directions ranging from east to southwest (Uliana, 2001).

Results of a review of groundwater data provided by the USGS (Huff, 1997) (Table 1 and Figure 3) and the Office of the State Engineer (Table 2 and Figure 3) was not conclusive, but indicated that the most likely direction of ground water flow at the AH7 site would be between the east and the south.



APPROXIMATE WELL LOCATIONS

Figure 3 - Location of the wells used to determine groundwater flow directions in the area. Black dots are from Groundwater Site Inventory database (Huff, 1997) with water levels from 1978 and 1993. The green squares are from the website of the Office of the State Engineer (Table 2).

All locations are approximate. The red circle is the approximate location of the AH7 well site.

Event History

A loss of pressure control at the AH7 occurred at approximately 11:00 PM on June 19, 2006. Gas pressurized fluids escaped from what is believed to be a damaged section of the intermediate casing string at an approximate depth of 100 ft below ground surface. This resulted in a release of natural gas and minor amounts of drilling mud over an area extending approximately 175 ft south, 150 ft east, 50 ft north and 150 ft west of the AH7 wellhead. The well was brought under control on the morning of June 21, 2006. Plugging and abandonment of the AH7 well was completed on the morning of June 26, 2006.

Approximately 5 to 10 barrels of drilling mud surfaced near the wellhead. No liquid hydrocarbons were observed within the vicinity of the AH7 wellhead.

Investigation Plan Summary

A delineation protocol, PR-54, was submitted to the NMOCD on July 11, 2006 and approved the same day. The plan called for the advancement of several soil borings and the installation, development and sampling of monitor wells surrounding the AH7 wellhead. The plan was later modified to include an additional soil boring and monitor well to be situated between the well and Lake Avalon (west of the site). Soil samples were to be collected at 5 to 10 ft intervals and analyzed for the presence and concentration of BTEX (benzene, toluene, ethylbenzene and xylenes), TPH (total petroleum hydrocarbons) and chlorides. Groundwater was to be further analyzed for RCRA 8 metals, volatile and semi-volatile organic compounds (VOC's and SVOC's), conductivity and total dissolved solids (TDS).

Soil Boring Activities

The soil lithology surrounding the Avalon Hills 7 Fed COM # 3 site are complex and heterogeneous with up to eleven distinct soil types encountered in a single soil boring. Though the majority of the soil boring locations were relatively closely spaced, it is quite difficult to correlate the various strata between each well bore. The Munsell soil classification system was employed to describe and match these various strata within the borings, but little commonality was found (Exhibit 5, Well Boring Lithology).

BH-1

Drilling began on the morning of July 17, 2006 using an Atkins Engineering hollow stem auger rig at a location approximately 25 ft southeast of the wellhead. The first 35 ft of drilling encountered three distinct dry clay layers underlain by a sandstone layer extending to a depth of 50 ft. The sandstone was honeycombed with voids estimated to range from 2" to 24" in size.

Hydrocarbon odors were noted at the interface of the sandstone and the underlying sandy clay zone (additionally containing cemented gravel). The sandy clay extended from 50 ft

to a depth of 72 ft followed by stiff, red clay continuing to the total drilled depth of 100 ft.

BH-2

Soil boring BH-2 was drilled at the extreme southeast corner of the AH7 well pad. The encountered soils in the first 70 ft of BH-2 consisted of stiff, dry clay. The auger rig encountered bit refusal at a depth of 50 ft. To continue advancing the boring required mobilizing an air rig operated by MMX to the site in order to complete the hole.

A thin layer of sandstone was encountered at 70 ft underlain by approximately 13 ft of limestone. Clayey sand was found beneath the limestone continuing to the total drilled depth of 97 ft. No evidence of impact associated with the well control issue was detected during boring activities.

BH-3

Soil boring BH-3 was situated immediately east of the western entrance to the well pad. The borehole was air drilled through alternating layers of sandstone and limestone to a total depth of 110 ft. Beginning at a depth of approximately 75 ft the soil structure became increasingly honeycombed with all returns lost at a depth of 97 ft. With the removal of the drill string, the hole caved to a depth of 67 ft. The boring was subsequently abandoned and grouted to ground surface with cement slurry. No evidence of impact associated with the well control issue was detected during boring activities.

BH-3A

Soil boring BH-3A was located at the extreme southwest corner of the pad in close proximity to abandoned boring location BH-3. The borehole was air and auger drilled through alternating layers of sandstone and limestone to a depth of 130 ft. A cavern was encountered at a depth of approximately 58 ft and extended to an approximate depth of 65 ft. Because of the cavern, the air rig lost all returns and the boring was continued with an auger rig. A complete lack of returns caused abandonment of the hole at the 130 ft depth. The boring was subsequently abandoned and grouted to surface with cement slurry. No evidence of impact associated with the well control issue was detected during boring activities.

BH-4

Soil boring BH-4 is located 700 ft west of the western edge of the pad. The boring was begun with the air rig and drilled through sandstone and limestone to a depth of 38 ft. Upon encountering another cavern and losing returns, the hole was continued with an auger rig through clay to a total depth of 100 ft. The boring location was subsequently completed as a monitoring well. No evidence of impact associated with the well control issue was detected during boring activities.

Monitor Wells

Three monitor wells were completed within boreholes and labeled MW-1, MW-2 and MW-4. These monitoring wells were developed by Atkins Engineering with a minimum of ten bore volumes of fluid removed from each well. The well development fluids were transported to a commercial disposal facility. The construction details for the individual wells are presented in Exhibits 18, 19 and 22.

Corrected for elevation, the water levels in the monitoring wells were 3,151 ft, 3,139 ft and 3,129 ft. above mean sea level respectively. Each well showed chloride and TDS concentrations above New Mexico Water Quality Control Commission (NMWQCC) standards, however, only monitor well MW-1 indicated the presence of any hydrocarbon impact. The water level within MW-1 is approximately 12 ft higher than in MW-2 which is situated approximately 180 ft away. This fact coupled with the extremely slow recharge in MW-1 suggests that the fluid contained within MW-1 may be an artifact of the initial release event and not part of a larger perched groundwater system.

Conclusions and Recommendations

The surface casing compromise resulted in minor amounts of drilling mud and some volumes of dry gas escaping to the ground surface in a zone within 200 ft of the AH7 wellhead. Three soil borings / monitoring wells completed and sampled within 180 ft of the wellhead reveal no hydrocarbons are present within either the water or soil matrixes.

The impact from the well control issue appears to be highly localized around the AH7 wellhead. Impact appears to extend from a depth of approximately 45 ft below ground surface to the top of a red-bed layer at 80 ft. A proposed remediation plan is detailed in Whole Earth protocol PR-69 and is included in this report. Briefly, it is recommended that the fluid contained within MW-1 be pumped and removed for commercial disposal. Any remaining hydrocarbon fractions within the monitoring well fluids can be remediated by microbial inoculation treatment.

References

- Hiss, W.L. 1973. Capitan aquifer observation-well network Carlsbad to Jal, New Mexico Technical Report 38. United States Geological Survey.
- Hiss, W.L. 1975. Thickness of the Permian Guadalupian Capitan aquifer, southeast New Mexico and west Texas. New Mexico Bureau of Mines & Mineral Resources, New Mexico Institute of Mining and Technology, Socorro.
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- Uliana, M.M. 2001. The geology and hydrogeology of the Capitan aquifer: a brief overview, p. 153-166, *In* R. E. Mace, et al., eds. Aquifers of West Texas, Vol. Texas Water Development Board Report 356.



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- 2. USGS 7.5' Map (Zoom Out)
- 3. USGS 7.5' Map (Zoom In)
- 4. Plat Map of Well Pad Showing Borehole / Monitoring Well Locations
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- 8. Orientation of BH-1 / MW-1
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3-D TopoQuads Copyright C 1999 DeLorme Yarmouth, ME 04096 | I mi Scale: 1 : 200,000 Detail: 10-0 Datum: NAD27



J-D TopoQuady Copyright © 1999 DeLorme Yarmouth, ME 04096 2000 ft Scale: 1: 50,000 Detail: 12-0 Datum: NAD27



BH-1 Orientation Detail

:56



BH-2 @ Southeast Corner of Pad 07.18.2006 10:40











BH-3 Well Plugging Detail

08.08.2006 17:55




First Bailed Sample From BH-1

2006

Devon Energy Company Avalon Hills 7 Fed. COM # 3 Munsell Soil Classification Table

BH-1

Depth	Munsell Color	Soil Texture	HCl
(feet)	(dry)		Reaction
4-6	5YR5/8	Yellowish red silt loam	Yes
14-16	5YR 5/6	Yellowish red silt loam	Yes
18-20	5YR 5/8	Yellowish red clay loam – silty clay loam	Yes
24-26	5YR 6/7	Reddish yellow loam	Yes
28-30	5YR 7/4	Light reddish brown sandy loam	Yes
45	7.5 YR 6/4	Reddish brown sandy loam	Yes
50	7.5YR 6/4	Light brown sandy clay loam	Little
65	10YR 6/4	Light yellowish brown sandy loam	Little
70	10YR 6/4	Light yellowish brown clay	Little
80	7.5 YR 6/4	Light brown loamy sand	No
90	2.5 YR 6/4	Red fine sand	No

BH-3

	Depth	Munsell Color	Soil Texture	HCl
	(feet)	(dry)		Reaction
50		5YR5/6	Yellowish red silty clay	Little
85		7.5 YR 5/6	Brown	
				Little
97			Blocks of dolomite and clay	
			loam	

BH-3A

	Depth	Munsell Color	Soil Texture	HCl
	(feet)	(dry)		Reaction
10			Dolomite	Yes
20		10 YR 8/2	Blocks of dolomite and very pale brown sand	Yes
30		10 YR 8/2	Blocks of dolomite and very pale brown sand	Yes
40		5 YR 4/6	Blocks of dolomite and reddish brown sand	Yes
50			Gravel	
60		10 YR 7/3-6/3	Pale brown loamy sand	Yes
70		5 YR 4/6	Yellowish red silt loam	Little
80		5 YR 5/8	Yellowish red silt clay loam	Very little
90		2.5 YR 6/3	Light yellowish brown clay	No
100	I	2.5 YR 6/3	Light yellowish brown silt loam	Very little
120)	10 YR 5/4	Yellowish brown clay loam	No

BH-4

	Depth	Munsell Color	Soil Texture	HCl
	(feet)	(dry)		Reaction
10			Dolomite	Yes
20			Dolomite	Yes
30		10 YR 8/2	Very pale brown very fine sand	Yes
40		10 YR 7/3	Very pale brown loamy sand	Yes
65		2.5 YR 4/6	Red sandy loam	No
75		2.5 Y 6/4	Light yellowish brown silt loam	Little
85		2.5 Y 6/2	Light brownish gray sandy clay loam	No
95		2.5 Y 6/3	Light yellowish brown loamy sand	No





Î TKI. Proj Il'a	iessia. Ier Re	NGIN 1al E) sourc	FERING A SSOCIATES, INC. ngmeering Land Surveying es Environmental Science	l	_og of Borir	ng [Devon Energy Boreh	ole 3
	W	hole 21 K	Earth Environmental 03 Arbor Cove aty, TX 77494	Drill Start Drill End Boring Location	: 07-26-06 (1300 : 07-27-06 (1600 : 200'W of M/W)))) #2	Logged By	: Mort Bates
		Con		Site Location	: T21S, R27E, S	ес. 07 2мл		
	T	JU #.	CRDEVON.DRL.00	Auger Type		×141		
Depth in Feet	GRAPHIC	nscs	DESCR	IPTION	Bł	1-3		
0-			Caliaba fill	<u> </u>				
_			Limestone hard gray dry		1			
5-		LS	Enrosono, nara, gray, ury					
10-			Broken limestone w/ laver of cl	avev sand firm are	<u></u>			
	╞┟╧┙		dry	-, -, -, -, -, -, -, -, -, -, -, -, -, -				
15-								
20-	ЦТ	LS						
20								
25-								
	ÎT	SM	Silty sand, loose, reddish tan, o	ry				
30			Broken limestone, firm, grey, di	у				
35-		LS					-Cement grout (borehole plugge	ed)
-		Sha	Cith and lange coddiab has d		[
40-	ĽΞ	15	Silty sand, loose, reddish tan, d	ry	1 [
45-		CM	Situ cond loose vollowish ton	y day	[8			
		21/1	Sinty sand, loose, yellowish tan,		[5			
50-			Candstone, nara, igni tan, ary					
55-		SS						
60-								
65-			Limestone, hard, grey, dry		[2			
70-	부대	10				X		
		-0				\times		
75-			1		K	KX		
80		18	Limestone w/ silty sand, firm, g	ey & tan, đry	1 6	KX		
					16	K		
85-		_	Sandstone w/ silty sand, firm, re	eddish brown, dry		\mathcal{N}		
00.		SS				\heartsuit	-Hole caved	
30-				in a causer T-le	Þ	\bigotimes		
95-			drill stem to 110' and pulled out	of the hole.	' ↓ ⊳	\bowtie		
400 -	1		•			\bigotimes		
100-						\bigotimes		
105						\mathbb{X}		
_ =						\mathbb{X}		
110-	ļ		Total Depth 110'		V	لىر		
115-			Note: Call bars					
			Excavating. After pulling drill sl	em from the hole. t	he			
400 -	}		hole caved in from 68' to 110'.					

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A TKE Prop Wat	ession er Re:	NGEN val Es sourc	TEERING ALSSOCIATES, INC. ngineering Land Surveying res Environmental Science	L	_og of B	oring [Devon Energy Borel	nole 3A
	W	hole 21 K	Earth Environmental 03 Arbor Cove aty, TX 77494 tart: Mike Griffin	Drill Start Drill End Boring Location Site Location	: 07-28-06 : 08-02-06 : 75'W of : T21S_B	3 (1050) 3 Borehole #3 27E Sec 07	Logged By	: Mort Bates
	Jo	b #:	CRDEVON.DRL.06	Auger Type	: Air & au	jer		
Depth in Feet	GRAPHIC	nscs	DESCR	PTION		BH-5		
5	ĚÅ	19	Caliche w/silty sand, firm, white Broken limostope, bard, grov, g	& tan, dry				
2			Sandstone, hard vellowish top	dov.				
		SS						
15			Sandstone, hard, tan, dry					
20-1		ss						
25				- Armeting and				
30-		~~	Sandstone w/silty clay, hard, re	ddish tan, dry				
35		55						
401		SS	Sandstone, hard, red & tan, dry					
4 2	\square	С	Clay, loose, greenish gray, dan	p				
45	$\angle A$							
50-	4	CL	Clay, loose, red, damp	4				
55-		SS	Cavemous sandstone, nim, tan	, diy				
60			May be cavern? Lost drill retur	IS.			• · · · · · · · ·	
65-			Clay, stiff, red, damp				-Cement grout (borehole plug	ged)
70-1	\backslash	CI						
75-	$\langle \rangle$	02						
80	KA		Sandy alog loose groviet too	dama				
85	\square	CL	Ganuy Gay, iouse, greyish (an,	uamp				
90	\square		Sandy clay, firm, greyish green,	damp				
95-	Λ	CL						
100-	\square							
105		CL	Silty clay, soft, greyish green, d	amp				
	$\overline{\Lambda}$		Silty clay, hard, greyish green, o	Iry				
110-1	\square							
115-1	\square	CL						
120-	$/ \lambda$							
125	$\langle \rangle$							
130-1	Δ		Total Dopth 120					
135-			Borehole dry		_			
140-1			Note: M&M air drill from 0' to 6 from 65' to 130'.	5', Atkins auger drill	I			
140-7								

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W	nole	Earth Environmental	Drill Start	: 07-28-06 (07	50)	Logged By	: Mort Bates
	21 K	03 Arbor Cove atv TX 77494	Drill End Regins Location	: 07-29-06 (15)	00) abala i	#0	
	Con	tact: Mike Griffin	Site Location	: T21S, R27E,	Sec. 0	#3)7	
Jo	b#:	CRDEVON.DRL.06	Auger Type	: Air & auger			
GRAPHIC		DESCR		F	3H-4	4"x4"x5' well cover w/ 2'x2'› 귀	4" concrete pad
	2111	Calicha firm light tan day	MALL OF MALLICE, CITY				
	SS	Sandstone w/caliche, hard, pir	ik, dry				
╘╌╢	LS	Linestone, natu, grey, dry					
┶╍╢		Limestone w/ silty sand, hard,	pink & grey, dry				
	LS						
		Sandstone hard tan day					
	SS SS	Sandstone, caverns, firm, tan,	dry			Cement grout 2" Sch. 40 PVC casing	
7		Clay, stiff, red, damp					
	CL						
Δ	_	Oranda alexa (Contraction of the second			42	Bentonite seal	
$\langle \rangle$		Sandy clay, tim to sort, greyist	i ian, damp			1	
/	sc				E	-Silica sand pack	
						-2" Sch. 40 PVC 0.020 slot s	creen
Î	sм	Silty sand, soft, grey, wet			$\overline{\mathbb{A}}$	Fill (hole caved 98' to 100')	

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Devon Energy Site Avalon Hills Whole Earth Environmental 2103 Arbor Cove Katy, Texas 77494

Boring number	Latitude	Longitude	Mean Sea Level Elevation
BH-1	32° 29.4066656'	104° 13.361357'	3215.23'
BH-2	32° 29.3891898'	104° 13.332315'	3215.49'
BH-3	32° 29.3639943'	104° 13.533745'	3195.37'
BH-4	32° 29.3823505'	104° 23.384612'	3214.63'

Notes:

 Horizontal Data referenced to United States Coast and Geodetic Survey Tri-Station named "Carlsbad" set in 1922. The Coordinates are given in Latitude and Longitude.
 Vertical Data referenced to National Geodetic Survey Benchmark designated "D-345".
 Vertical Data is NAVD 88 Datum. All elevations taken at land surface at bore hole locations. C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations. [2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2.III.3101, 1-15-01]

20.6.2.3102: [RESERVED]

[12-1-95; 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2.111.3102, 1-15-01]

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

	· · · · · · · · · · · · · · · · · · ·	
(1)	Arsenic (As)	0.1 mg/l
(2)	Barium (Ba)	1.0 mg/l
(3)	Cadmium (Cd)	0.01 mg/l
(4)	Chromium (Cr)	0.05 mg/l
(5)	Cyanide (CN)	0.2 mg/l
(6)	Fluoride (F)	1.6 mg/l
(7)	Lead (Pb)	0.05 mg/l
(8)	Total Mercury (Hg)	0.002 mg/l
(9)	Nitrate (NO ₃ as N)	10.0 mg/l
(10)	Selenium (Se)	0.05 mg/l
(11)	Silver (Ag)	0.05 mg/l
(12)	Uranium (U)	0.03 mg/l
(13)	Radioactivity: Combined Radium-226 & Radium-228	
(14)	Benzene	0.01 mg/l
(15)	Polychlorinated biphenyls (PCB's)	0.001 mg/l
(16)	Toluene	0.75 mg/l
(17)	Carbon Tetrachloride	0.01 mg/l
(18)	1,2-dichloroethane (EDC)	0.01 mg/l
(19)	1,1-dichloroethylene (1,1-DCE)	0.005 mg/l
(20)	1,1,2,2-tetrachloroethylene (PCE)	0.02 mg/l
(21)	1,1,2-trichloroethylene (TCE)	0.1 mg/l
(22)	ethylbenzene	0.75 mg/l
(23)	total xylenes	0.62 mg/l
(24)	methylene chloride	0.1 mg/l
(25)	chloroform	0.1 mg/l
(26)	1,1-dichloroethane	0.025 mg/l
(27)	ethylene dibromide (EDB)	0.0001 mg/l
(28)	1,1,1-trichloroethane	0.06 mg/l
(29)	1,1,2-trichloroethane	0.01 mg/l
(30)	1,1,2,2-tetrachloroethane	0.01 mg/l
(31)	vinyl chloride	0.001 mg/l

	(32)	PAHs: total naphthalene plus monomethylnaphthalenes	0.03 mg/l
	(33)	benzo-a-pyrene	0.0007 mg/l
B.		Other Standards for Domestic Water Supply	
	(1)	Chloride (Cl)	250.0 mg/l
	(2)	Copper (Cu)	1.0 mg/l
	(3)	Iron (Fe)	1.0 mg/l
	(4)	Manganese (Mn)	0.2 mg/l
	(6)	Phenols	0.005 mg/l
	(7)	Sulfate (SO ₄)	600.0 mg/l
	(8)	Total Dissolved Solids (TDS)	
	(9)	Zinc (Zn)	10.0 mg/l
	(10)	pH	between 6 and 9
C.	. ,	Standards for Irrigation Use - Ground water shall meet t	he standards of Subsection A, B,

and C of this section unless otherwise provided.

(1)	Aluminum (Al)	5.0 mg/l
(2)	Boron (B)	0.75 mg/l
(3)	Cobalt (Co)	0.05 mg/l
(4)	Molybdenum (Mo)	1.0 mg/l
(5)	Nickel (Ni)	0.2 mg/l
[2-18-77, 1-29-8]	2, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 201	NMAC 6.2.III.3103, 1-15-01; A, 9-26-

04]

[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly of indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20.6.2.3111 NMAC, regarding transfers. [2-18-77, 12-24-87, 12-1-95; Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III.3104, 1-15-01; A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20.6.2.3104 and 20.6.2.3106 NMAC do not apply to the following:

A. Effluent or leachate which conforms to all the listed numerical standards of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/l or less, and does not contain any toxic pollutant. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is discharged from a sewerage system used only for disposal of household and other domestic waste which is designed to receive and which receives 2,000 gallons or less of liquid waste per day;

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section;

F. Those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall

MSN Kome	My MSN Hotmail Shopping Money Pe	ople & Chat	Sign Out	Web Search: Go		
LŨSEI	Notmail Toda	y Mail	Calendar C	ontacts		
whearth@msn	whearth@msn.com					
🚱 Reply 🖗	🖒 Reply All 🟠 Forward 🗙 Delete 🐼 Junk 🖄	› Put in Folde	er 🗸 평 Print Viev	V 🔠 Save Address		
From :	Price, Wayne, EMNRD <wayne.price@state.nm.us></wayne.price@state.nm.us>		⇔ ♡ X	🗀 Devon Aval 🖾 Inbox		
Sent :	Tuesday, July 11, 2006 2:03 PM					
То :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>					
CC :	"Gum, Tim, EMNRD" <tim.gum@state.nm.us>, <chris.biagi@dvn.com>, <mike.dewitt@dvn.com>, <joe.johnston@dvn.com>, <ron.truelove@dvn.com>, <ldeuel@hughes.net></ldeuel@hughes.net></ron.truelove@dvn.com></joe.johnston@dvn.com></mike.dewitt@dvn.com></chris.biagi@dvn.com></tim.gum@state.nm.us>					
Subject :	RE: Devon Avalon Hills Investigation Protocol, PR-54D					

OCD hereby approves of the investigation plan with the following conditions:

- 1. This E-mail approval will be included in the final report.
- 2. Notify the district office.
- 3. All correspondence will include the OCD case # 2R0056

Please be advised that NMOCD approval of this plan does not relieve the owner/operator of responsibility should operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

From: Mike Griffin [mailto:whearth@msn.com]
Sent: Tuesday, July 11, 2006 10:55 AM
To: Price, Wayne, EMNRD
Cc: Gum, Tim, EMNRD; chris.biagi@dvn.com; mike.dewitt@dvn.com; joe.johnston@dvn.com; ron.truelove@dvn.com; Ideuel@hughes.net
Subject: Devon Avalon Hills Investigation Protocol, PR-54D

Good Morning, All:

Attached, please find a copy of the preliminary workplan and investigation protocol for the Devon Avalon Hills 7 Fed. COM # 3 site. Wayne, pending your approval, we've tentatively scheduled Atkins Engineering to start drilling the first monitor well next Monday.

We're not certain as to where the second well will be located as we've got to complete the first before we can really know our gradient. Once determined, we'll get formal permission from the BLM to site a location.

Tim, we plan to be at the location Monday. can this e-mail serve as notice to you that we plan to start taking samples? We will of course encourage and welcome District OCD participation in the activities and very much look forward to working with you guys again.

Mike Griffin



Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

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Protocol

This section contains a copy of PR-54E, the final remediation protocol employed on this project.



Phase II Investigation Protocol Devon Energy Avalon Hills 7 Fed. COM # 3

1.0 Purpose

This protocol is to provide a detailed outline of the steps employed in the delineation of potential environmental impacts resulting from a casing part event associated with the Devon Energy Corporation (Devon) Avalon Hills 7 Fed. COM # 3 site located in Section 7, T21S, R27E of Eddy Co., NM.

2.0 Scope

This protocol is site specific for the Devon Avalon Hills 7 well site.

3.0 Preliminary

Prior to any field operations, Whole Earth Environmental shall conduct the following activities:

3.1 Client Review

- 3.1.1 Whole Earth shall meet with appropriate Devon personnel to review this protocol and make any requested modifications or alterations prior to submittal to the NMOCD and BLM.
- 3.1.2 Changes to this protocol will be documented and submitted to Devon for final review prior to submittal to appropriate agencies.

3.2 Regulatory Review

3.2.1 Upon Devon's approval, this protocol will be submitted to the NMOCD offices in Santa Fe and Artesia along with a copy to the Carlsbad BLM for review and comment. Recommended agency changes will be reviewed by the client prior to implementation.

3.2.2 Any recommended change effecting cost will require a revised quotation to be issued to the client for approval prior to the commencement of any on-site activity.

4.0 Safety

- **4.1** Prior to starting work on the site, Whole Earth shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate Devon personnel, sub-contractors and exchange phone numbers.
- **4.2** A tailgate safety meeting shall be held and documented each day. All subcontractors must attend and sign the daily log in sheet.
- **4.3** Anyone allowed on to location must be wearing appropriate work clothing including steel toed boots and other required personal protective equipment (hardhat, safety glasses and hearing protection). Each vehicle must be equipped with two-way communication capabilities.
- **4.4** Prior to starting any drilling or excavation activities, the area shall be surveyed with a line finder. If lines are discovered within the area to be drilled or excavated, the line traces shall be marked with pin flags on either side of the line at maximum five-foot intervals.

5.0 Surface Delineation

- 5.1 A detailed plat map will be prepared showing the overall pad layout, wellhead location, associated drilling and production features, and the location of any surface expressions of impact resulting from the casing part event at the location. The GPS coordinates of the site will be used to correlate NM State Engineer's, NM Tech. and USGS survey data relating to the soil morphology and known depths to groundwater or distance to surface waters.
- 5.2 Any significant surface stains or areas of interest will be sampled and field tested for the presence and concentrations of TPH and chlorides. Sample collection shall be in accordance with WEQP-96 (Whole Earth Quality Procedure). A minimum of 10% of these samples will be forwarded to Environmental Labs of Texas for confirmation.
- **5.3** Based on the field and laboratory confirmation sampling results, and if required, a detailed remediation protocol will be prepared and included within the Phase II report.

6.0 Sub-surface Investigation

- 6.1 A groundwater monitoring well will be constructed at a maximum distance of 50' southeast (anticipated downgradient of groundwater flow) of the Avalon Hills 7 Fed COM #3 wellhead. If possible, the well will be hollow stem auger drilled to a depth sufficient to determine the lower boundary of the aquifer. The well will be cased, developed and sampled in accordance with NMOCD guidelines. The design of the well shall be 2" diameter (nominal) and shall have a minimum of 10' of slotted screen within the water table and 10' of slotted screen extending above it.
- **6.2** Split spoon samples will be collected at 10' intervals and analyzed in the field for TPH (total petroleum hydrocarbons) and chlorides. Selected soil samples shall be forwarded to Environmental Labs of Texas for the analysis of BTEX (benzene, toluene, ethylbenzene and xylenes), chlorides and TPH. The NMOCD and BLM will be notified at least 48 hours in advance of the subsurface drilling and testing activities.
- **6.3** Additional soil samples from the boring shall be analyzed to determine soil morphology with the results used in the preparation of a HYDRUS 2D contaminant migration model.
- 6.4 The monitoring well depth to water information will be used in conjunction with information from other wells within the immediate area to determine the approximate groundwater flow gradient (anticipated as south to southeast based on regional information).
- 6.5 After monitoring well completion and development, water samples will be collected from the well in accordance with WEQP-77 protocols and analyzed for BTEX, major cations and anions, chlorides, RCRA 8 metals, and bromine.
- **6.6** The nearest existing water well will be located and with landowner permission, sampled. The water will be tested for all the constituents of concern (C of C) described in section 6.6 of this protocol.
- 6.7 Two additional soil borings will be drilleded and completed in accordance with section 6.1 of this protocol. Soil samples will be collected and analyzed in accordance with section 6.2 of this protocol. Water samples (if any) will be collected and analyzed in accordance with section 6.5 of this protocol. The location of the wells will be at the southern corners of the existing well pad.

6.8 A final up-gradient well will be drilled at a location approximately 700' west of the western edge of the existing pad on BLM lands. The well will be drilled and sampled in accordance with sections 6.1 and 6.2 of this protocol. The depth of the well will be 400' or water – whichever is shallower.

7.0 Documentation & Reporting

At the conclusion of the assessment project, Whole Earth will prepare a Phase II report for submittal to the regulatory agencies. The report will include the following information:

- A plat of the location showing the location of the affected area, the location and description of major structures, test hole locations, geo-coordinates and orientation
- Photographs and schematic diagrams of any surface stains
- Field analytical results to include quality assurance and control information.
- Laboratory analytical results to include chain of custody and quality control / assurance information.
- Boring Logs to include depths, soil morphology and analytical information
- If the data shows any issues, a HYDRUS 2D model to include probable contaminant migration path, depth to groundwater and risk assessment calculations
- Well construction details
- Analytical results of water from the nearest existing water well source
- Groundwater flow gradient map
- Remediation plan (if necessary)



Procedures

This section contains copies of the sample collection procedures employed on this project.



QP-76 (Rev. A)

WHOLE EARTH ENVIRONMENTAL QUALITY PROCEDURE

Procedure for Obtaining Water Samples (Cased Wells) Using One Liter Bailer

Completed By:

Approved By:

Effective Date: / /

1.0 Purpose

This procedure outlines the methods to be employed in obtaining water samples from cased monitoring wells.

2.0 Scope

This procedure shall be used for developed, cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Preliminary

- 3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the water. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.
- 3.2 The following table shall be used to select the appropriate sampling container, preservative method and holding times for the various elements and compounds to be analyzed.

Compound to be Analyzed	Sample Container Size	Sample Container Description	Cap Requirements	Preservative	Maximum Hold Time
BTEX	40 ml.	VOA Container	Teflon Lined	HCI	7 days
ТРН	1 liter	clear glass	Teflon Lined	HCI	28 days
PAH	1 liter	clear glass	Teflon Lined	lce	7 days
Cation / Anion	1 liter	clear glass	Teflon Lined	None	48 Hrs.
Metals	1 liter	HD polyethylene	Any Plastic	Ice / HNO ₃	28 Days
TDS	300 ml.	clear glass	Any Plastic	Ice	7 Days

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4.0 Chain of Custody

- 4.1 Prepare a Sample Plan. The plan will list the well identification and the individual tests to be performed at that location. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.
- 4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.
- 4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

5.0 Bailing Procedure

- 5.1 Identify the well from the site schematics. Place pre-labeled jar(s) next to the well. Remove the bolts from the well cover and place the cover with the bolts nearby. Remove the plastic cap from the well bore by first lifting the metal lever and then unscrewing the entire assembly.
- 5.2 The well may be equipped with an individual 1 liter bailing tube. If so, use the tube to bail a volume of water from the well bore equal to 10 liters for each 5' of well bore in the water table. (This assumes a 2" dia. well bore).
- 5.3 Take care to insure that the bailing device and string do not become crosscontaminated. A clean pair of rubber gloves should be used when handling either the retrieval string or bailer. The retrieval string should not be allowed to come into contact with the ground.

6.0 Sampling Procedure

- 6.1 Once the well has been bailed in accordance with 5.2 of this procedure, a sample may be decanted into the appropriate sample collection jar directly from the bailer. The collection jar should be filled to the brim. Once the jar is sealed, turn the jar over to detect any bubbles that may be present. Add additional water to remove all bubbles from the sample container.
- 6.2 Note the time of collection on the sample collection jar with a fine Sharpie.

Page 3

6.3 Place the sample directly on ice for transport to the laboratory. The preceding table shows the maximum hold times between collection and testing for the various analyses.

6.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

7.0 Documentation

7.1 The testing laboratory shall provide the following minimum information:

- A. Client, Project and sample name.
- B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
- C. Results of the requested analyses
- D. Test Methods employed
- E. Quality Control methods and results



WHOLE EARTH ENVIRONMENTAL QUALITY PROCEDURE

Procedure for Obtaining Soil Samples for Transportation to a Laboratory

Completed By:	Approved By:	Effective Date:	/	/

1.0 Purpose

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

3.0 Preliminary

- 3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.
- 3.2 If collecting TPH, BTEX, RCRA 8 metals, cation / anions or O&G, the sample jar may be a clear 4 oz. container with Teflon lid. If collecting PAH's, use an amber 4 oz. container with Teflon lid.

4.0 Chain of Custody

- 4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.
- 4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

5.0 Sampling Procedure

- 5.1 Go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to obtain the soil. Do not touch the soil with your bare hands. Use new latex gloves with each sample to help minimize any cross-contamination. Try to avoid collecting rocks or vegetation.
- 5.2 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.
- 5.3 Place the sample directly on ice for transport to the laboratory.
- 5.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

6.0 Documentation

- 6.1 The testing laboratory shall provide the following minimum information:
 - A. Client, Project and sample name.
 - B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
 - C. Results of the requested analyses
 - D. Test Methods employed
 - E. Quality Control methods and results



Laboratory Analytical Results

This section contains copies of various summaries of the analytical results, chain of custody documents, laboratory analytical results and quality control information for soil samples processed during this project.

All samples were collected and processed in accordance with WEQP-76 and WEQP-77 contained within the procedures section of this report.

Devon Energy Company Avalon Hills 7 Fed. COM 3 # NM WQCC Groundwater Standards Analysis Summary (mg/L)

Analyte	NM WQCC Std.	BH-1	BH-2	BH-4
Arsenic	0.1000	N/D	N/D	N/D
Barium	1.0000	0.374	0.299	0.075
Cadmium	0.0100	N/D	N/D	N/D
Chromium	0.0500	N/D	N/D	N/D
Cyanide	0.2000	N/T	N/T	N/T
Fluoride	1.6000	N/T	N/T	N/T
Lead	0.0500	N/D	N/D	N/D
Total Mercury	0.0020	N/D	0.0003	0.0003
Nitrate	10.0000	N/T	N/T	NZT
Selenium	0.0500	N/D	N/D	N/D
Silver	0.0500	N/D	N/D	N/D
Uraman	0.0300	N/T	N/T	N/T
Radioactivity	30 pCi/L	N/T	N/T	N/T
Benzene	0.0100	2,540	N/D	N/D
Polychlorinated biphenols	0.0010	N/D	N/D.	N/D
Toluene	0.7500	10,200	N/D	N/D
Carbon Tetrachloride	0.0100	N/D	N/D	N/D
1,2-dichloroethane	0.0100	N/D	N/D	N/D
1.1-dichloroethylene	0.0050	N/D	N/D	N/D
1,1,2.2-tetrachloroethylene	0.0200	N/D	N/D	N/D
1,1,2-trichloroethylene	0.1000	N/D	N/D	N/D
Ethylbenzene	0.7500	2,740	N/D	N/D
Total Xylenes	0.6200	17	N/D	N/D
Methylene chloride	0.1000	N/D	N/D	N/D
Chloroform	0.1000	N/D	N/D	N/D
1,1-Dichloroethane	0.0250	N/D	N/D	N7D
Ethylene dibromide	0.0001	N/T	N/T	N/T
1.1.1-Trichloroethane	0.0600	N/D	N/D	N/D
1.1.2-Trichloroethane	0.0100	N/D	N/D	N/D
1,1,2,2-Tetrachloroethane	0.0100	N/D.	N/D	N/D
Vinyl chloride	0.0010	N/D	N/D	N/D
Total napthalene + monomethylnapthalenes	0.0300	N/D	N/D	N/D
Benzo-a-pyrene	0.0007	N/D	N/D	N/D
Chloride	250	52,800	372	797
Copper	1 0000	N/T	NIT	N/T
Iron	1.0000	N/T	N/T	NIT
Manuariese	0.2000	N/T	N/T	NIT
Placenols	0.0050	NUT	N/T	N/T
Sulfate	600.0000	N/T	N/T	N/T
TDS	1,000	76,300	3,420	2,540
Zinc	10.0000	N/T	N/T	N/T
pH	6-9	N/T	N/T	N/T
Ahumimum	1 50000	NUT	NZT I	NUT
Baron	0.7500	NUT	NIT	NI/T
Cabade	0.0500	NUT	NIT	NUT
N. Stoffen Antonio	0.0300	287 I	N/T	LIVI I
Photos Contract	0.2000	NCT	MI/T	NIT
(socket	0.2000	017.1	24/1	IN / I



Devon Ener Avalon Hills 7 Fed. COM # 3 Soil Borings Analytical Summary



Depth	HdT	Benzene	Toluene	Ethyl-Benzene	Toluene	Chlorides	E.C.
5							
10,	ND	ND	ND	ND	ND	12.10	0.36
181							
20'	ON.	QN	ND	QN	ND	32.60	0.44
25							
30'	ND	QN	ND/	QN	ND	24.40	0.49
35'							
40,	ND	ND	ND	ND	- QN	14.50	0.43.
45.							
18	ND	QN	ND	ND	QN	12.80	0.53
-55							
60'	QN	ND	- CR	ND	ND	14.30	0.36
65'							
78,	ND	QN	ND	ND	-ND	17.80	0.43
-52							
80'	- QN	QN	ND.	QN	ND	20.60	0.58
85'							
.06	ND	QN	ND	ND	ND	45.60	0.97
951							
100.							
105'							
110'							
115'							
120'							

				BH-2			
Depth	HdT	Benzene	Toluene	F.thyl-Benzene	Toluene	Chlorides	E.C.
5	QN	ND	QN	QN	QN	6.30	0.300
10'	QN	ND	ND	QN	QN	37,90	0.850
15'	ND	ND	QN	QN	R	93.30	0.880
20'	ND	ND	ND	QN	ND	81.00	0.710
25	QN	ND:	ND	ND	QN	08:26	0.924
30'	QN	ND	ND	QN	QN	61,80	1.100
35'	UN	QN	ND	ND	ND	17.30	0:490
40.	QN	QN	QN	ND	R	42.00	0.808
121	QN	QN	QN	QN	QN	195	0.630
50.	ND	- CIN	QN	QN	ND	37.60	0.910
55.	QN	ND	QN	ND	QN	11.80	0.859
60'	QN	ND.	ND	ND	QN	33.30	1 520
65'	QN	ND	ND	QN	Ð	31.800	2.480
70.	QN	ND	ND	QN	R	271.00	3.430
-321	QN	ND	ND	ND	QN.	48.90	0.823
80'							
85.							
.06							
.56							
100'							

Depth	Hd.L	Benzene	Tolarne	Ethyl-Benzene	Tolucne	Chlorides	E.C.
is:							
10'	ND	ND	QN	ND	QN	32.60	0.395
15'							
20'	QN	GN	ND	ND	QN.	43.50	0.756
25'							
30'	GN	ND	ND	ND.	ND	34.40	0.702
35'							
40.	ND	ND	ND	ND	ND	30.50	0.812
45'							
500	ND	ND	ND	QN	(DN	05.92	05210
55							
.09	ND	ND	ND	ND	QN	39.40	0.697
65'							
.02	(UN	ND	ND	ND	dN.	38.00	0.936
121							
80'	QN	QN	ND	QN	GN	48.00	0.736
851							
.96	QN	CIN	QN	ND	ON ND	72.70	0.954
.56							
100*	ND	QN	ND	QN	ND	81.90	1 120
105'	-						
110'							
115'							
128'	ON	ND	QN	ND	QN	26.50	-1.030

RH-3A

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Devon Energy Company Avalon Hills 7 Fed. COM # 3 Soil Borings Analytical Summary

	1 miles	4	4	BH-4	The second s	And a	
Depth	Hat	Benzene	Toluene	Ethyl-Benzette	Tolucine	Chior	500
in			Non and a second	and			1
10,	ND)	QN.	ND	(DN	ND	10	99
151							
20'	ND	ND	QN	(ND)	ND	21	8
35							
30.	ON	ND	ND	ND	ND	6	86
35							1
40*	ND	ND	QN	ND	ND	QN	
45'							
50*	ND	ND	ND	ND	SND	263	8
55							
.09							
65'	QN	ND	ND	CN.	CIN	391	2
70.							
132	0N	GN	- UN	QN	ND	176.	8
80.			and and and				
85.	ND	ND	ND	ND	ND	1881	8
-96							1111
156	GN	GN	ND	QN	QN	184:0	2

Devon Energy Company Avalon Hills 7 Fed. COM # 3 Volatile & Semivolatile Compounds Analysis Summary

Valatile Ory	panie Compo	enda	
Analyte	1017-1	81.2	88.4
Daublingsh finishmethasis	N/D	N/D.	S/D
Chloromethane	N/D	741D	N/D
Veryl Chloride	S/D	N/D	NO
Brownormerthanse	N/D.	N/D	NID
Childronthase	NID	N/D	N/D
Triables/Busicemethane	31/D	N/D	S/D
1.1-Dichlerorthame	N/D	N/D	8/19
Azetone	N/D	NID	N/D
Indonethane	N/D	N/D	ND
Carbon Donifide	5/0	NID	N/D
Metholene chimide	N/D	N/D	NOD
trans. J. 7. Physics and the set	N/D	5/0	NIN
Manhol tech limit of effort	8/15	8/15	N/D
Read and the	20/10	10/10	10.25
I I The data second	N 10	24 / 67	241 M
A STATUTE OF STREET, S	NID	NICO	N/12
V stort acctude	3/0	N/ D	14.7.62
Dis-1_2-DicMercethane	N/D	24/10	24.7 D
2-Bignatione	8/D	NID	N/D
IN course for state that we	N/D	N/D	74 (D)
Chowleyn	N/D	N/D	ND
1.1.1-Trafilmonthem	NID	N/D	N/D
22-Dichlangripate	N/D	N/D	N-D
Carbon terrachilorida	N/D	NID	N/D
2.2-Dichlorogenpaint	N/D	NID	N/D
Carbon intractionale	NID	NID	NUD
1.1.Dichloropropene	N/D	NUD	N/D
1.2-Dichimpethane	N/D	N/D	N/D
Hannan	2.644	NO	N/D
Trackingsoftware	N/D	No. Ph	1 10
1 T. PACIFIC MARKED	11.10	N / 14	
1.2-Cochioroproprint	78710	247.00	St / D .
Othermemethane	N/D	N/13	N/D.
thromoductuloromethane	N/D	N(D	5 (D
2-Chlorouthylyanyl ethar	NUD	N(D)	NID
cm-1_1-Dichloropsopene	24710	S/D:	87D
4-Methyl-2-pentissione	N/D.	N/D	NO DO
Toluene	10,280	N/B	N.D.
mann-T.3-Diafalaroproprint	N/D	N/D	-N/D
2-Besannise	N/D	N/0	N/D
Tetrachicepethered	N/D	N2D	N/40
1,5-Outlikerophispine	N7D	N/D	N/D
Difectional and and and	N/D	N/D	N/D
1.2-Didenteethane	N/D	N/D	N/D
Chliechesiume	N/D	N/D	N/D
1113 Town Montheast	N/D	N/D	NUD
Fully Demonstra	2,478	N/D	%/D
and the second second	22. 100	1/10	
and the second s	1.000	NO COL	CT 1 87
e chaine	200	N 107	74/67
Source	26710.	24/10	N/D.
Brome Arest.	N/D	N/13	N/D
trans-1.4 Dicklinty-7-buttone	N/D	N/D.	N/D
hatgergy/ benatie	794	N/D :	N/D
1.2.3-Trublergroupate	N.D	N/D	N/D/
1.1.2.2-Tetrachilorethane	N/D	N/D/	N/D.
Bernjuchenzene	N/D	N/D	NoD.
n-Chlorobilume	913	N/35	NID
1.3.5-Termentlylbenaene	N/D	N/D	ND
4-Chiligentidueng	N/D/	N/13	N/D
bert Blart, Burtanese	NZD	N/D	N/D
1.2.8. Tromathalban inter	N/D	24/13	91.119
ner But Benners	N/D	14/12	N/Th
1 LThebloochenseen	N/T	N/Th	N/D
C. Incompany Building	443	- Martin	81.153
C. & Flackboucher	44.0	N/10	10/10
- Dichiorobenaver	M(10)	74/12	NOD.
n-truty them one	397	N/D	N(D)
1.2-Dichleroberation	NAB	N/D	N/D
2-Dilesmo-3-chioroprepase	NO	N/D	N/D 2
1,2.4-Trachildrobenzene	N/D	N/D	ND
Berner Bloud Andre Brite	87.15%	N/D	NO
of a second in other school	78.7.1.8.2		
Napthalene	130	N/D.	N/D

Semivolatile O	rganic Com	pusada et i	
Analyte	1111-1	101-1	1111-4
Pyratus	N/D	N/DA	N/D
N. Nitroducer(hylamine	NID	N/D	N7D
Andine	N/D.	N/D.	N/D
Phenol	N/B/	N/33	N/D
BioC-chilecoethyDether	NID	N/DO	_N/D
2-Chilorophenoil	N/D	N/D	N/D
1,3-Dicklorybenzene	NID	N/D.	N/D.
4-Dichini Benarese	N/(D)	N/D	N/D
1.2-Dicklorubesine	NID	N/D	N/D.
Renard about	N/D	SID.	NED
Bis(2-chlorninopeopy()ether	N(D)	N(D)	N(D)
2-Methylpheisol	N-113	N/23	N/13
N.Nimuscali n-progyfamune	87D	NID	N/D
4-Methylphaneil	N/D	N(D)	N/D
Herschlerwethane	N/D	N/D	N/D
Natobenzasie	N/D)	N/D:	N/D
hopficmer	N(10)	N/D	NO
2-Neughanisk	NID	N/D	810
2,4-Dimethylphenol	N/D	N/D	N/D
Big 2-chilly orthony journame	N/D	NUD	N/D
2,4-Dicklorophenid	N/D	N/10	N/D
Benatist Acid	N/D	N/D	N/D
1.2.4-Tischlorsibetrene	29.730	N7D	N/D
Napiludene	18	N/D	NID
44 Moreanitine	N/D	N/D	N.D
Heyachimohidadama	N2 / R1	N/D	N/10
4.Chicare Langthe balanced	N/D	N/D	N/D
7. Marinela antial cost	34.1	N/D	N/15
The article sector is sector the	N/Th	N/D	N/ / Ph
TACTION PRODUCTS	CLAP.	3/2	NIN.
2,4,0 Friendorophenos	247 47 -	ALL DO	PH / MA
2.4.2-1 rochiorophenon	267.62	767.07	PULD
2-Chlorisiagettailene	N/D	N/D-	N/D;
2-Nitroanaline	NID	N/D	21/12
Domethys philiadure	N/D	N / 13	N/D
2.0-Democratureme	76/ D	N/ D/	N/D/
Acenaththylene	8/12	N/D	NUDE
3-Nettensensitme	N/D/	N/D	N/D
Acenaphthese	N/D	N/D -	N/D-
2.4-Deutrophenid	N/D	N(D)	N/D
4-Nitrophenel	NO	N(D)	N/D
Debenacifaran	NID	N/D	N/D
2.4 Dantesk frame	N/D	N/D	N/D
2,3.4,5-Tetrachierophenol	N/D.	NID	N/D
Durity's platialists	NID	N/D	N/D
Planetse	N/D	N/D	N/D
4-Chlorophenyl phenyl other	N/D	N/D.	N/D
4-Nercanalize	N/D	N/D	N/D
Apphenoise	N/10	N/D.	N/D
4.6-Disatory 2-methylobeaul	N/D	N/D	367 D
N-Netwoodlybertylateout	N(D)	N/D	N/D
4-Detenophenyl phenyl other	N/D	N/D	N/D
Hexachior/bename	N/D	N/D	N/D
Pestahiomphand	N/D-	N/D	N/D
Phenantheme	N/D	NOD	NUD
Authenenter	N/D	N/D	N/D
Carbarrida	34/13	N/D	N (D)
Disc buryl sindhaliate	N/88	N/D	31/10
December	N7D	N/10	N/D
Benduling	N/D	N/D	N/D
Person	10/22	56 / 25	54 / 94
Trand housed adobuted	NUN	N/10	NO
New yor Link antifusion of the	10/10	No. CT	No. 10
N S. Physical Surveyor Comp.	N 183	N. D.	No. CO.
Charlestone -	14/11	N. D	10
the Control of the second second	14/10	N/D	14/10
ries announces philliplate	16.3	14/10	N/D
racial conditional state	19/10	N/D	87.0
UNIVERS (1,2,3-ed) pyrene	NOD	N/D	N/D
(benance) (b) fluce and bend	74/10	N/D	N/D
Denzer (4). Buce antheme	N/D	N/D	N/D
Denzei (a) pyrune	N/D	N/D	N/D
Deleman (A,h) anthenceror	N/D	N/0	78/D
Massained in the 12 manufal areas	NUD	34 . 13	N/123





Devon Energy Company Avalon Hills 7 Fed COM # 3 Metals Analysis Summary

- -

Analyte	BH-1	BH-2	BH-4
Chloride	52,800	372	797
E.C. (mmhos/cm)	106	4	4
TDS	76,300	3,420	2,540
		THET TH	
Mercury	N / D	0.0003	0.0003
Chromium	N/D	N/D	N/D
Arsenic	N / D	N/D	N/D
Selenium	N/D	N/D	N/D
Silver	N/D	N/D	N / D
Cadmium	N/D	N / D	N / D
Barium	0.374	0.299	0.075
Lead	N/D	N / D	N/D



Analytical Report

Prepared for:

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G20003

Report Date: 07/27/06

WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 5'	6G20003-01	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 10'	6G20003-02	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 15'	6G20003-03	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 20'	6G20003-04	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 25'	6G20003-05	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 30'	6G20003-06	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 35'	6G20003-07	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 45'	6G20003-08	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 50'	6G20003-09	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 55'	6G20003-10	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 65'	6G20003-11	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 70'	6G20003-12	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 80'	6G20003-13	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 90'	6G20003-14	Soil	07/17/06 00:00	07/20/06 10:20
BH-1 100'	6G20003-15	Soil	07/17/06 00:00	07/20/06 10:20



WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 5' (6G20003-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/20/06	EPA 8021B	
Toluene	ND	0.0250	11	н	"	n	"	n	
Ethylbenzene	ND	0.0250	n ¹	"	"	11	19	91	
Xylene (p/m)	ND	0.0250	'n	0	11	"		н	
Xylene (o)	ND	0.0250	*	"	"	u	11	u	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62121	07/21/06	07/21/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	н	R	"	n	**	91	
Carbon Ranges C28-C35	ND	25.0	"	11	u	"	۳	11	
Total Hydrocarbon nC6-nC35	ND	25.0	"	н	н	**			
Surrogate: 1-Chlorooctane		108 %	70-1	130	"	"	· "	"	
Surrogate: 1-Chlorooctadecane		130 %	70-1	130	"	"	"	11	
BH-1 10' (6G20003-02) Soil									
Barrene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/20/06	EPA 8021B	
1 ne	ND	0.0250	11	11	11	"	"		
Ethylbenzene	ND	0.0250		*	n	н	н	"	
Xylene (p/m)	ND	0.0250	"	n	11	н	11	n	
Xylene (o)	ND	0.0250		19		u	"	н	
Surrogate: a,a,a-Trifluorotoluene		100 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80	120	· //	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62121	07/21/06	07/21/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11	n	н	"	n	n	
Carbon Ranges C28-C35	ND	25.0	It	"		u	n	"	
Total Hydrocarbon nC6-nC35	ND	25.0		U		*1	11	ņ	
Surrogate: 1-Chlorooctane		108 %	70-	130	"	"	"	"	·
Surrogate: 1-Chlorooctadecane		128 %	70-	130	"	"	".	"	

Environmental Lab of Texas

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WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 15' (6G20003-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/20/06	EPA 8021B	
Toluene	ND	0.0250	"	11		н	n	u	
Ethylbenzene	ND	0.0250	n	н	"	11	"	"	
Xylene (p/m)	ND	0.0250	"	"	**	"	**	91	
Xylene (o)	ND	0.0250	"	"	11	11	"	n	
Surrogate: a,a,a-Trifluorotoluene		96.2 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/25/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	11	"	"	17	
Carbon Ranges C28-C35	ND	25.0	"	u	"	n	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	N	"	"	"	
Surrogate: 1-Chlorooctane		110 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		79.2 %	70-1	130	"	"	"	"	
BH-1 20' (6G20003-04) Soil									
Bene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/20/06	EPA 8021B	
The ene	ND	0.0250		н	0	11	и	IF	
Ethylbenzene	ND	0.0250	0	"	11	11	n	"	
Xylene (p/m)	ND	0.0250	11		н	11	"	n	
Xylene (o)	ND	0.0250			в	u	н	н	
Surrogate: a,a,a-Trifluorotoluene		99.0 %	80	120	"	"	"	"	· · · · · · · · · · · · · · · · · · ·
Surrogate: 4-Bromofluorobenzene		93.8 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/25/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11	"	n	u	n	"	
Carbon Ranges C28-C35	ND	25.0	14	"	B	H	n	u	
Total Hydrocarbon nC6-nC35	ND	25.0	11		14		"	"	
Surrogate: 1-Chlorooctane		109 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		82.0 %	70	130	n	"	"	"	

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WHOLE EARTH ENVIRONMENTAL

Katy TX, 77494

2103 Arbor Cove

Project: Avalon Hills Project Number: None Given

Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC . - . e m

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 25' (6G20003-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/21/06	EPA 8021B	
Toluene	ND	0.0250	11		н	ų	n	11	
Ethylbenzene	ND	0.0250		n	"	b	11		
Xylene (p/m)	ND	0.0250	h	*1	"	'n	n	17	
Xylene (0)	ND	0.0250	11	**	"	h	n	11	
Surrogate: a,a,a-Trifluorotoluene		84.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-1	20	"	"	"	11	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	I	EG62603	07/25/06	07/25/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11	"	11	"	n	n	
Carbon Ranges C28-C35	ND	25.0	11	11	H	"	· ••	n	
Total Hydrocarbon nC6-nC35	ND	25.0	N	11	"	"	U	11	
Surrogate: 1-Chlorooctane		107 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		81.8 %	70-1	30	"	"	"	"	
BH-1 30' (6G20003-06) Soil									
Persene	ND	0.0250	mg/kg dry	25	EG61808	07/20/06	07/21/06	EPA 8021B	
1 dene	ND	0.0250		n	11	11	"	н	
Ethylbenzene	ND	0.0250	"	"	"	"	11	11	
Xylene (p/m)	ND	0.0250	"	11	"	и.	11	"	
Xylene (o)	ND	0.0250	н	11	11	U	u ,	n	
Surrogate: a,a,a-Trifluorotoluene		90.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	11	u	"	n		
Carbon Ranges C28-C35	ND	25.0	"	"	H	**	11	u	
Total Hydrocarbon nC6-nC35	ND	25.0	"	W			n	"	
Surrogate: 1-Chlorooctane		99.2 %	70-1	130	"	"	"	"	

80.8 %

Environmental Lab of Texas

Surrogate: 1-Chlorooctadecane

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70-130

WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

7

Project: Avalon Hills. Project Number: None Given Project Manager: Mike Griffin

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 35' (6G20003-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
Toluene	ND	0.0250	"	19	n	"	u	"	
Ethylbenzene	ND	0.0250	II.	n	H	и .	u	н	
Xylene (p/m)	ND	0.0250	4	"	"	. u	Ħ	"	
Xylene (o)	ND	0.0250	h	11	ti	11	"	"	
Surrogate: a,a,a-Trifluorotoluene		87.2 %	80-2	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	н	*	"		14	
Carbon Ranges C28-C35	ND	25.0	"	н	"	"	11	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	. ¹¹	"	"	"	
Surrogate: 1-Chlorooctane		99.8 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		83.0 %	70	130	и .	"	"		
BH-1 45' (6G20003-08) Soil									
Benene	ND	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
1 dene	ND	0.0250	11	, u	11	u	91	11	
Ethylbenzene	ND	0.0250	"	н	u	11	"	н	
Xylene (p/m)	ND	0.0250	11	"	н	н	"	n	
Xylene (o)	ND	0.0250	11	"	*1	W	и.	u	
Surrogate: a,a,a-Trifluorotoluene		92.2 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	**	. "	11	н	11	H	
Carbon Ranges C28-C35	ND	25.0	u		u	н	"	N	
Total Hydrocarbon nC6-nC35	ND	25.0	"		"	"	11	H	
Surrogate: 1-Chlorooctane		101 %	70-	130	"	"		"	······
Surrogate: 1-Chlorooctadecane		83.8 %	70-	130	"	"	"	"	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC

Env	'lr	onm	ental	Lab	01	I exas

J		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 50' (6G20003-09) Soil									
Benzene	18.6	0.500	mg/kg dry	500	EG62120	07/21/06	07/24/06	EPA 8021B	
Toluene	227	0.500	11	U	11	11	11	"	
Ethylbenzene	48.8	0.500	'n	"	11	11	"	11	
Xylene (p/m)	360	0.500	11	"	11	11 .	"	n	
Xylene (0)	106	0.500	"	"	"	"	11	"	
Surrogate: a,a,a-Trifluorotoluene		935 %	80	120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		139 %	80-	120	."	"	"	"	S-04
Carbon Ranges C6-C12	4340	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	1440	25.0	н	11	N	11	. 11	u.	
Carbon Ranges C28-C35	38.2	25.0	11	11	н	n	"	0	
Total Hydrocarbon nC6-nC35	5820	25.0	ti	**	H	· n	17	11	
Surrogate: 1-Chlorooctane		177 %	70-	130	"	"	"	"	S-04
Surrogate: 1-Chlorooctadecane	. •	95.2 %	70-	130	n	"	"	"	
BH-1 55' (6G20003-10) Soil									
Benene	0.148	0.0250	mg/kg dry	25	EG62120	07/21/06	07/24/06	EPA 8021B	
Tene	0.671	0.0250	"		"	11	U	"	
Ethylbenzene	0.125	0.0250	11	"	u	11	u	n	
Xylene (p/m)	1.05	0.0250	**	"	8	11	U	н	
Xylene (0)	0.289	0.0250		**	n	Ħ	"	U.	
Surrogate: a,a,a-Trifluorotoluene		114 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	J [9.19]	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	J
Carbon Ranges C12-C28	J [6.79]	25.0	u	"		"	u	"	J
Carbon Ranges C28-C35	ND	25.0		n	u	n	"	II.	
Total Hydrocarbon nC6-nC35	ND	25.0	"	4	"	"	н	"	
Surrogate: 1-Chlorooctane		105 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		82.4 %	5 70-	130	"	"	"	"	

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Katy TX, 77494

Pro

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 65' (6G20003-11) Soil									
Benzene	0.113	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
Toluene	0.726	0.0250		11		11	"	11	
Ethylbenzene	0.117	0.0250		· "	"	*	*	11	
Xylene (p/m)	0.866	0.0250		"	"	n	n	"	
Xylene (0)	0.269	0.0250	"	"	H	"	11	"	
Surrogate: a,a,a-Trifluorotoluene		109 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	80	120	"	"	11	"	
Carbon Ranges C6-C12	J [12.9]	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	J
Carbon Ranges C12-C28	J [6.84]	25.0		п	11	"	"	11	J
Carbon Ranges C28-C35	ND	25.0		"	"	u	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	"	"	11	
Surrogate: I-Chlorooctane		106 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		92.0 %	70	130	"	"	"	и.,	
BH-1 70' (6G20003-12) Soil						,			
Benene	0.299	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
There	3.10	0.0250	"			u	11	*	
Ethylbenzene	1.01	0.0250	11	"	U	u	u	11	
Xylene (p/m)	6.87	0.0250	11	n	"	н		n	
Xylene (0)	1.80	0.0250	n	11	"	"	"		
Surrogate: a,a,a-Trifluorotoluene		213 %	80-	120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		152 %	80-	120	"	"	"	"	S-04
Carbon Ranges C6-C12	59.3	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	52.9	25.0	"	8		H		u.	
Carbon Ranges C28-C35	ND	25.0	"	n	a	14	"	n	
Total Hydrocarbon nC6-nC35	112	25.0	"	"	u	n		11	
Surrogate: 1-Chlorooctane		107 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.6 %	70-	130	"	"	, , , , , , , , , , , , , , , , , , , ,	"	

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WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

Project Number: None Given Project Manager: Mike Griffin

Project: Avalon Hills

Fax: (281) 394-2051

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 80' (6G20003-13) Soil							· · · · · · · · · · · · · · · · · · ·		
Benzene	0.134	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
Toluene	1.05	0.0250	"	n	IF	11	н	"	
Ethylbenzene	0.249	0.0250	n	"	п	۳.	11		
Xylene (p/m)	1.70	0.0250	"	**	"	n	U	u	
Xylene (0)	0.394	0.0250	n	11	17	11	11	"	
Surrogate: a,a,a-Trifluorotoluene		110 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	113	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	84.2	25.0	"	н		11	н		
Carbon Ranges C28-C35	ND	25.0	H	n	"	11	11	"	
Total Hydrocarbon nC6-nC35	197	25.0	17	"		"	u	n	
Surrogate: 1-Chlorooctane		110 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-1	130	"	"	"	"	
BH-1 90' (6G20003-14) Soil									
Bengene	ND	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
The	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250		n	"	u	11	*1	
Xylene (p/m)	ND	0.0250	"	"	"	"	11	"	
Xylene (o)	ND	0.0250	n	17	и	u	"	11	
Surrogate: a,a,a-Trifluorotoluene		96.0 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.0 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11	"	"	"	. "	H	
Carbon Ranges C28-C35	ND	25.0	11	11	n	u	U	u	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"		11	"	"	
Surrogate: 1-Chlorooctane		116 %	70-	130	"	"	"		
Surrogate: 1-Chlorooctadecane		104 %	70	130	"	"	"		

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC

Environmental Lab of Texas

Analysis	Dogult	Reporting	Unita			D			
Analyte	Result		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 100' (6G20003-15) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62120	07/21/06	07/21/06	EPA 8021B	
Toluene	ND	0.0250	n	11	10	"	"	n	
Ethylbenzene	ND	0.0250	n	n	11	n	"	11	
Xylene (p/m)	ND	0.0250	**	*	u	u	"	11	
Xylene (o)	ND	0.0250	"	11	n	n	н	"	
Surrogate: a,a,a-Trifluorotoluene		86.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.5 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	"	0		0	
Carbon Ranges C28-C35	ND	25.0	"	н	11	0	"	n	
Total Hydrocarbon nC6-nC35	ND	25.0	"	n	"	11	n		
Surrogate: 1-Chlorooctane		113 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-1	130	"	"	"	"	



Environmental Lab of Texas

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 5' (6G20003-01) Soil									
Chloride	118	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1000	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	5.5	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 10' (6G20003-02) Soil									
Chloride	113	10.0	mg/kg	20	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1190	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	5.3	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 15' (6G20003-03) Soil									
Chloride	106	10.0	mg/kg	20	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1180	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	5.7	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 20' (6G20003-04) Soil									
ride	50.8	10.0	mg/kg	20	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1080	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	2.5	0.1	%	۱ '	EG62111	07/20/06	07/21/06	% calculation	
BH-1 25' (6G20003-05) Soil			•						
Chloride	100	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	913	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	4.2	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 30' (6G20003-06) Soil									
Chloride	50.4	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	473	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	1.9	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Anglute	Result	Reporting	Units	Dilution	Datah	Dronoro -1	Anologia	Mathad	
DIL 1. 251 ((C20002.07) S-1				Dilution	Batch	Frepared	Analyzed	Method	Notes
DH-1 35' (0G20003-07) Soll	<u>.</u>								
Chloride	84.7	10.0	mg/kg	20 -	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1830	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	5.6	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 45' (6G20003-08) Soil									
Chloride	2280	50.0	mg/kg	100	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	6970	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	4.2	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 50' (6G20003-09) Soil									
Chloride	27300	500	mg/kg	1000	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	80900	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	19.9	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 55' (6G20003-10) Soil									
Tide	17700	500	mg/kg	1000	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	54700	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	26.1	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 65' (6G20003-11) Soil									
Chloride	7390	200	mg/kg	400	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	23100	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	17.9	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 70' (6G20003-12) Soil									
Chloride	1510	50.0	mg/kg	100	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	9400	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	22.3	0.1	%	. 1	EG62111	07/20/06	07/21/06	% calculation	

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 80' (6G20003-13) Soil									·
Chloride	1710	25.0	mg/kg	50	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	5890	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	· ·
% Moisture	19.7	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 90' (6G20003-14) Soil									
Chloride	108	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	962	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	11.2	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH-1 100' (6G20003-15) Soil									
Chloride	282	10.0	mg/kg	20	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	2000	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	12.5	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	



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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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Organics by GC - Quality Control

Environmental Lab of Texas

	. .	Reporting		Spike	Source	0/000	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG61808 - EPA 5030C (GC)										
Blank (EG61808-BLK1)				Prepared:	07/18/06	Analyzed	: 07/19/06			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250								
Ethylbenzene	ND	0.0250	н							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	37.9		ug/kg	40.0		94.8	80-120		_,,	
Surrogate: 4-Bromofluorobenzene	36.9		"	40.0		92.2	80-120			
LCS (EG61808-BS1)				Prepared:	07/18/06	Analyzed	: 07/19/06			
Benzene	1.35	0.0250	mg/kg wet	1.25		108	80-120			
Toluene	1.34	0.0250	"	1.25		107	80-120			
Ethylbenzene	1.26	0.0250		1.25		101	80-120			
Xylene (p/m)	2.86	0.0250	"	2.50		114	80-120			
Xylene (o)	1.43	0.0250	н	1.25		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.9		ug/kg	40.0		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	40.6		"	40.0		102	80-120			
cartion Check (EG61808-CCV1)				Prepared:	07/18/06	Analyzed	: 07/21/06	•		
Benne	0.0513		mg/kg wet	0.0500		103	80-120			
Toluene	0.0559		"	0.0500		112	80-120			
Ethylbenzene	0.0537		"	0.0500		107	80-120			
Xylene (p/m)	0.115		"	0.100		115	80-120			
Xylene (o)	0.0567		"	0.0500		113	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.0		ug/kg	40.0		102	80-120		······	
Surrogate: 4-Bromofluorobenzene	37.0		"	40.0		92.5	80-120			
Matrix Spike (EG61808-MS1)	So	urce: 6G180	009-13	Prepared:	07/18/06	Analyzed	: 07/21/06	5		
Benzene	1.48	0.0250	mg/kg dry	1.36	ND	109	80-120			·····
Toluene	1.47	0.0250	11	1.36	ND	108	80-120			
Ethylbenzene	1.43	0.0250	R	1.36	ND	105	80-120			
Xylene (p/m)	3.16	0.0250	11	2.71	ND	117	80-120			
Xylene (0)	1.52	0.0250	n	1.36	ND	112	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.4		ug/kg	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	40.9		"	40.0		102	80-120			

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte ·	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EG61808 - EPA 5030C (GC)

Matrix Spike Dup (EG61808-MSD1)	Sou	rce: 6G180	09-13	Prepared:	07/18/06	Analyzed	: 07/20/06			
Benzene	1.44	0.0250	mg/kg dry	1.36	ND	106	80-120	2.79	20	
Toluene	1.45	0.0250	a	1.36	ND	107	80-120	0.930	20	
Ethylbenzene	1.37	0.0250	н	1.36	ND	101	80-120	3.88	20	
Xylene (p/m)	3.15	0.0250	u	2.71	ND	116	80-120	0.858	20	
Xylene (0)	1.49	0.0250	n	1.36	ND	110	80-120	1.80	20	
Surrogate: a,a,a-Trifluorotoluene	41.1		ug/kg	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	40.9		"	40.0		102	80-120			

Batch EG62120 - EPA 5030C (GC)

Blank (EG62120-BLK1)		Prepared & Analyzed: 07/21/06										
Benzene	ND	0.0250	mg/kg wet									
Toluene	ND	0.0250										
Ethylbenzene	ND	0.0250	"									
Xylene (p/m)	ND	0.0250	"									
Xylene (0)	ND	0.0250	11									
Surrogate: a,a,a-Trifluorotoluene	41.2		ug/kg	40.0	103	80-120						
Sumate: 4-Bromofluorobenzene	34.1		"	40.0	85.2	80-120						
LCS (EG62120-BS1)				Prepared & An	alyzed: 07/21/0)6						
Benzene	1.38	0.0250	mg/kg wet	1.25	110	80-120						
Toluene	1.37	0.0250	n	1.25	110	80-120						
Ethylbenzene	1.32	0.0250	n	1.25	106	80-120		1				
Xylene (p/m)	2.99	0.0250	W	2.50	120	80-120						
Xylene (o)	1.41	0.0250	11	1.25	113	80-120						
Surrogate: a,a,a-Trifluorotoluene	43.1		ug/kg	40.0	108	80-120						
Surrogate: 4-Bromofluorobenzene	38.6		"	40.0	<i>96.5</i>	80-120						

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte Batch EG62120 - EPA 5030C (GC) Calibration Check (EG62120-CCV1) Benzene Tolugne	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG62120 - EPA 5030C (GC) Calibration Check (EG62120-CCV1) Benzene Toluene										
Calibration Check (EG62120-CCV1) Benzene Toluene										
Benzene				Prepared	& Analyze	d: 07/21/0)6			_
Toluene	50.9		ug/kg	50.0		102	80-120			
1 0100410	50.6		и	50.0		101	80-120			
Ethylbenzene	49.4		n	50.0		98.8	80-120			
Xylene (p/m)	106		"	100		106	80-120			
Xylene (o)	52.6 ·		"	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.6		"	40.0		91.5	80-120			
Surrogate: 4-Bromofluorobenzene	37.6		"	40.0		94.0	80-120			
Matrix Spike (EG62120-MS1)	Sou	rce: 6G200	14-01	Prepared	& Analyze	ed: 07/21/0)6			
Benzene	1.59	0.0250	mg/kg dry	1.52	ND	105	80-120			
Toluene	1.61	0.0250		1.52	ND	106	80-120			
Ethylbenzene	1.51	0.0250	R	1.52	ND	99.3	80-120			
Xylene (p/m)	3.60	0.0250	"	3.03	ND	119	80-120			
Xylene (o)	1.74	0.0250	u	1.52	ND	114	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.6		ug/kg	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	45.0		"	40.0		112	80-120			
Menix Spike Dup (EG62120-MSD1)	Sou	rce: 6G200)14-01	Prepared	& Analyze	ed: 07/21/0)6			
Bene	1.63	0.0250	mg/kg dry	1.52	ND	107	80-120	1.89	20	
Toluene	1.65	0.0250		1.52	ND	109	80-120	2.79	20	
Ethylbenzene	1.61	0.0250		1.52	ND	106	80-120	6.53	20	
Xylene (p/m)	3.56	0.0250	u	3.03	ND	117	80-120	1.69	20	
Xylene (o)	1.72	0.0250	19	1.52	ND	113	80-120	0.881	20	
Surrogate: a,a,a-Trifluorotoluene	41.9		ug/kg	40.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	40.8		"	40.0		102	80-120			
Batch EG62121 - Solvent Extraction (C	GC)									
Blank (EG62121-BLK1)				Prepared	& Analyze	ed: 07/21/0)6			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0								
Carbon Ranges C28-C35	ND	25.0	"							
Total Hydrocarbon nC6-nC35	ND	25.0	11							
Surrogate: 1-Chlorooctane	47.9		mg/kg	50.0		95.8	70-130			
Surrogate: I-Chlorooctadecane	45.6		"	50.0		91.2	70-130			

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

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	-	Reporting		Spike	Source	(/DDC	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG62121 - Solvent Extraction	(GC)									·
LCS (EG62121-BS1)				Prepared	& Analyz	ed: 07/21/	06			
Carbon Ranges C6-C12	451	25.0	mg/kg wet	500		90.2	75-125			
Carbon Ranges C12-C28	487	25.0		500		97.4	75-125			
Carbon Ranges C28-C35	ND	25.0		0.00			75-125			
Total Hydrocarbon nC6-nC35	938	25.0	11	1000		93.8	75-125			
Surrogate: 1-Chlorooctane	63.3		mg/kg	50.0		127	70-130			
Surrogate: 1-Chlorooctadecane	55.2		· <i>п</i>	50.0		110	70-130			
Calibration Check (EG62121-CCV1)				Prepared	& Analyz	ed: 07/21/	06			
Carbon Ranges C6-C12	203		mg/kg	250		81.2	80-120			
Carbon Ranges C12-C28	271		U	250		108	80-120			
Total Hydrocarbon nC6-nC35	474		**	500		94.8	80-120			
Surrogate: 1-Chlorooctane	58.5		"	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	61.8		"	50.0		124	70-130			
Matrix Spike (EG62121-MS1)	So	urce: 6G20(014-01	Prepared	& Analyz	ed: 07/21/	06			
Carbon Ranges C6-C12	550	25.0	mg/kg dry	607	ND	90.6	75-125			
Carbon Ranges C12-C28	587	25.0	n	607	ND	96.7	75-125			
m Ranges C28-C35	ND	25.0	U	0.00	ND		75-125			
Hydrocarbon nC6-nC35	1140	25.0	a	1210	ND	94.2	75-125			
Surrogate: 1-Chlorooctane	71.7		mg/kg	100		71.7	70-130			
Surrogate: 1-Chlorooctadecane	72.6		"	100		72.6	70-130			
Matrix Spike Dup (EG62121-MSD1)	So	urce: 6G200)14-01	Prepared	& Analyz	ed: 07/21/	06			
Carbon Ranges C6-C12	552	25.0	mg/kg dry	607	ND	90.9	75-125	0.363	20	
Carbon Ranges C12-C28	593	25.0	10	607	ND	97.7	75-125	1.02	20	
Carbon Ranges C28-C35	ND	25.0	n	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1140	25.0	"	1210	ND	94.2	75-125	0.00	20	
Surrogate: 1-Chlorooctane	71.5		mg/kg	100		71.5	70-130			
Surrogate: 1-Chlorooctadecane	76.7		. "	100		76.7	70-130			

Environmental Lab of Texas

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62603 - Solvent Extraction	(GC)									
Blank (EG62603-BLK1)	<u>. </u>			Prepared:	07/25/06	Analyzed	: 07/26/06			_
Carbon Ranges C6-C12	ND	25.0	mg/kg wet	•						
Carbon Ranges C12-C28	ND	25.0								
Carbon Ranges C28-C35	ND	25.0								
Total Hydrocarbon nC6-nC35	ND	25.0	"							
Surrogate: 1-Chlorooctane	51.6		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	48.6		"	50.0		97.2	70-130			
LCS (EG62603-BS1)				Prepared	<u>& A</u> nalyze	:d: 07/25/0	06			
Carbon Ranges C6-C12	471	25.0	mg/kg wet	500		94.2	75-125			
Carbon Ranges C12-C28	406	25.0	ń,	500		81.2	75-125			
Carbon Ranges C28-C35	ND	25.0		0.00			75-125			
Total Hydrocarbon nC6-nC35	876	25.0	11	1000		87.6	75-125			
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	70-130	····		
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130			
Calibration Check (EG62603-CCV1)				Prepared:	07/25/06	Analyzed	1: 07/26/06			
Carbon Ranges C6-C12	235		mg/kg	250		94.0	80-120			
n Ranges C12-C28	276		n	250		110	80-120			
Hydrocarbon nC6-nC35	511		"	500		102	80-120			
Surrogate: 1-Chlorooctane	56.4		"	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	55.1		"	50.0		110	70-130			
Matrix Spike (EG62603-MS1)	So	urce: 6G200)03-03	Prepared	: 07/25/06	Analyzed	1: 07/26/06	I		
Carbon Ranges C6-C12	527	25.0	mg/kg dry	530	ND	99.4	75-125			
Carbon Ranges C12-C28	449	25.0	11	530	ND	84.7	75-125			
Carbon Ranges C28-C35	ND	25.0	н	. 0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	976	25.0	"	1060	ND	92.1	75-125			
Surrogate: 1-Chlorooctane	50.9		mg/kg	50.0	•	102	70-130			
Surrogate: 1-Chlorooctadecane	42.6		"	50.0		85 2	70-130			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting	l Inits	Spike	Source	%RFC	%REC	חקק	RPD Limit	Notes
Patch EC(2(02) Solvent Extraction (C(7)		Onto							Hotes

Matrix Spike Dup (EG62603-MSD1)	Sour	ce: 6G200	03-03	Prepared: 07/25/06 Analyzed: 07/26/06									
Carbon Ranges C6-C12	529	25.0	mg/kg dry	530	ND	99.8	75-125	0.379	20				
Carbon Ranges C12-C28	430	25.0	U	530	ND	81.1	75-125	4.32	20				
Carbon Ranges C28-C35	ND	25.0		0.00	ND		75-125		20				
Total Hydrocarbon nC6-nC35	958	25.0	11	1060	ND	90.4	75-125	1.86	20				
Surrogate: 1-Chlorooctane	50.7	·····	mg/kg	50.0		101	70-130						
Surrogate: 1-Chlorooctadecane	43.0		"	50.0		86.0	70-130						

Environmental Lab of Texas

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

General Chemis	stry Paran	neters by	EPA /	Standar	d Meth	ods - Q	uality (Contro	1	
	ŀ	Environm	ental I	Lab of To	exas	_	÷			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62111 - General Preparation	n (Prep)									
Blank (EG62111-BLK1)				Prepared:	07/20/06	Analyzed	: 07/21/06	•		
% Solids	100		%							
Duplicate (EG62111-DUP1)	So	urce: 6G2000	01-01	Prepared:	07/20/06	Analyzed	: 07/21/06			
% Solids	95.9		%		95.9			0.00	20	
Duplicate (EG62111-DUP2)	So	urce: 6G2000	03-15	Prepared	& Analyze	ed: 07/21/0)6			
% Solids	88.0		%		87.5			0.570	20	
Duplicate (EG62111-DUP3)	So	urce: 6G2003	14-09	Prepared	& Analyze	ed: 07/21/0	06			
% Solids	86.7		%		0.00	20				
Duplicate (EG62111-DUP4)	So	urce: 6G200	Prepared	& Analyze						
% Solids	93.6		%	93.6				0.00	20	
Batch EG62409 - General Preparatio	n (WetCher	n)								
Blank (EG62409-BLK1)				Prepared	& Analyze	ed: 07/24/0	06			
Chloride	ND	0.500	mg/kg							
L <u>CS (EG62409-BS1)</u>				Prepared	& Analyze	ed: 07/24/0	06			
d e s ie	9.18	0.500	mg/kg	10.0		91.8	80-120	······		
Calibration Check (EG62409-CCV1)				Prepared	& Analyze	ed: 07/24/0	06			
Chloride	9.97		mg/L	10.0		99.7	80-120			
Duplicate (EG62409-DUP1)	So	urce: 6G200	01-01	Prepared	& Analyze					
Chloride	575	20.0	mg/kg		613			6.40	20	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting	Unite	Spike	Source	%REC	%REC	R PL)	RPD Limit	Notes
	ittoult		Units	LUVU	ncoun	701CLC	Linits		Chill	notes
Batch EG62409 - General Preparation (V	VetChem)								
Duplicate (EG62409-DUP2)	Sou	rce: 6G2000	03-10	Prepared	& Analyze	ed: 07/24/0	6			· · · · · · · · · · · · · · · · · · ·
Chloride	17100	500	mg/kg		17700			3.45	20	
Matrix Spike (EG62409-MS1)	Sou	Prepared	& Analyze	ed: 07/24/0						
Chloride	1080	20.0	mg/kg	400	613	117	80-120			
Matrix Spike (EG62409-MS2)	Source: 6G20003-10 F			Prepared	& Analyze	ed: 07/24/0	6			
Chloride	27400	500	mg/kg	10000	17700	97.0	80-120			
Batch EG62414 - General Preparation (WetChem)								
Calibration Check (EG62414-CCV1)	·			Prepared:	07/21/06	Analyzed:	07/24/06			
Specific Conductance (EC)	1380	· · · · <u>-</u> ··	umhos/cm				80-120			
Duplicate (EG62414-DUP1)	Sou	rce: 6G200	03-01	Prepared:	07/21/06	Analyzed:	07/24/06			
Specific Conductance (EC)	1000	10.0	umhos/cm		1000			0.00	20	
Duplicate (EG62414-DUP2)	Sou	rce: 6G200	03-11	Prepared:	07/21/06	Analyzed	07/24/06			
Specific Conductance (EC)	23300	10.0	umhos/cm		23100			0.862	20	



Environmental Lab of Texas

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Dup Duplicate

alanck Jul) 7-31-06 Report Approved By: Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

of Texas, Inc	ne: 915-663-1800 x: 915-563-1713
ntal Lab	Pho Fa
Envireme	(2600 West I-20 East Ddessa, Texas 79763



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager.	M. Griffin		
Company Name	Whole Earth Environmental, Inc.		
Company Address.	2103 Arbor Cove		
City/State/Zip	Katy, TX 77494		
Telephone No:	281.394.2050	Fax No:	281.394.20

Sampler Signature:

alon mus				
Project Name: A	Project #:	Project Loc:	HO 4	

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I Lab of Texas, In Phone: 915-663-1800



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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Analytical Report

Prepared for:

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G20004

Report Date: 07/27/06

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 2 Surface	6G20004-01	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 5'	6G20004-02	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 10'	6G20004-03	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 15'	6G20004-04	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 20'	6G20004-05	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 25'	6G20004-06	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 30'	6G20004-07	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 35'	6G20004-08	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 40'	6G20004-09	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 45'	6G20004-10	Soil	07/18/06 00:00	07/20/06 10:20
BH 2 50'	6G20004-11	Soil	07/18/06 00:00	07/20/06 10:20

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prenared	Analyzed	Method	Noter
BH 2 Surface (6G20004-01) Soil					Daten	першец	Allalyzeu	MCHIOU	110105
Benzene	ND	0.0250	mg/kg drv	25	EG62407	07/24/06	07/24/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	u		н	н	n	
Xvlene (n/m)	ND	0.0250	н		"	u	17	*1	
Xylene (o)	ND	0.0250	н	11	"	11	U	н	
Surrogate: a,a,a-Trifluorotoluene		94.8 %	80-1	20	"	"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	*1	n	11	19	
Carbon Ranges C28-C35	ND	25.0	W			"	11	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	"	11	11	
Surrogate: 1-Chlorooctane		111%	70-1	30	n	"	"	"	
Surrogate: 1-Chlorooctadecane		98.6 %	70-1	30	"	"	"	"	
BH 2 5' (6G20004-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
ene	ND	0.0250		11	n	n	"	н	
Ethylbenzene	ND	0.0250	".	"	"	"	11	n	
Xylene (p/m)	ND	0.0250		"	"	U	"	"	
Xylene (o)	ND	0.0250	u		U	"	n	"	
Surrogate: a,a,a-Trifluorotoluene		92.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"		0	*		н .	
Carbon Ranges C28-C35	ND	25.0	11	H			n		
Total Hydrocarbon nC6-nC35	ND	25.0	"	н	в	11	n	W	
Surrogate: 1-Chlorooctane	4 ; 2 ; 2 ; 2 ; 3 ; 5 ; 5 ; 5 ; 4 ; 5 ; 5 ; 5 ; 5 ; 5 ; 5	118 %	7 0	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-	130	"	"	"	"	

nvironmental Lab of Texas

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494 Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 10' (6G20004-03) Soil				-					
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
Toluene	ND	0.0250		"	۳.	11	"	11	
Ethylbenzene	ND	0.0250	H	**	11	**	11		
Xylene (p/m)	ND	0.0250	"	"		*		*	
Xylene (o)	ND	0.0250	*	"		11	н	"	
Surrogate: a,a,a-Trifluorotoluene		97.0 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.5 %	80-1	20	"	"	"	<i>".</i>	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	0	**	n	11	н		
Carbon Ranges C28-C35	ND -	25.0	"	"	11	**	"	17	
Total Hydrocarbon nC6-nC35	ND	25.0	"	*	11	"	"	11	
Surrogate: 1-Chlorooctane		106 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		98.2 %	70-1	30	"	"	"	"	
BH 2 15' (6G20004-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
ne	ND	0.0250	μ	"	11	u	"	н	
Ethylbenzene	ND	0.0250		u	n	11	11	It	
Xylene (p/m)	ND	0.0250	н	11	n	"	"	U	
Xylene (o)	ND	0.0250	н	11	"	0	u	ti	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	U	n	U	"	н	I	
Carbon Ranges C28-C35	ND	25.0	"	"	"	97		11	
Total Hydrocarbon nC6-nC35	ND	25.0	**	11	"	n	11	"	
Surrogate: 1-Chlorooctane		116 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		104 %	70-1	130	"	"	11	"	

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Page 3 of 17

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prenared	Analyzed	Method	Notad
BH 2 20' (6G20004-05) Soil				Ditution	Datti	Tepared	Anaryzeu		indles
Denzene		0.0250	ma/lea dai	25	EC(2407	07/04/07	07/24/07	EDA 9021D	· ,
Taluana	ND	0.0250	mg/kg ury	23	EG02407	07/24/06	07/24/06	EPA 8021B	
Ethylkonzona	ND	0.0250	я						
	ND	0.0250							
Xylene (p/m)	ND	0.0250	в						
Xylene (o)	ND	0.0250			. "				
Surrogate: a,a,a-Trifluorotoluene		103 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0		"	n	"	"	U	
Carbon Ranges C28-C35	ND	25.0	"	**	*	"	n	"	
Total Hydrocarbon nC6-nC35	ND	25.0		n	11	u	"	*	
Surrogate: 1-Chlorooctane		113 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		102 %	70	130	"	"	"	"	
BH 2 25' (6G20004-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
1 ne	ND	0.0250			11	U	U U	u	
Ethylbenzene	ND	0.0250	"	۳.	"	u	"	11	
Xylene (p/m)	ND	0.0250			11	"	"	11	
Xylene (o)	ND	0.0250	"	"	н	"	"	11	
Surrogate: a,a,a-Trifluorotoluene		94.5 %	80-	120	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		92.0 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	н		н	"	
Carbon Ranges C28-C35	ND	25.0	11	,,	"		U	"	
Total Hydrocarbon nC6-nC35	ND	25.0	11	0	п	u	u		
Surrogate: 1-Chlorooctane	· · · ·	113 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	- 70-	130	"	"	"	"	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prenared	Analyzed	Method	Noter
BH 2 30' (6C20004-07) Soil					Batch	. repared	Anaryzeu	Melliou	indles
Banzono	ND	0.0250	ma/ka dn/	25	EC62407	07/24/06	07/24/06	EDA 8021D	
Teluene	ND	0.0250	mg/kg uiy	2 <i>5</i> 11	EG02407	07724700	07/24/00	LFA 8021B	
Ethulhengene	ND	0.0250			9	·	11	11	
Ethylbenzene Verlag (n/m)	ND	0.0250						11	
Xylene (p/m)	ND	0.0250	"		11	R		11	
	ND	0.0250							
Surrogate: a,a,a-Trifluorotoluene		97.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.8 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62603	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	u	"	11	n	"	n	
Carbon Ranges C28-C35	ND	25.0	н	"	"		11	U	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	n	H	19	"	
Surrogate: 1-Chlorooctane		119 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-1	130	"	"	"	"	
BH 2 35' (6G20004-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
- Andrea - A	ND	0.0250	"	"	11	**	"		
Ethylbenzene	ND	0.0250	n	"	**	11	11	u	
Xylene (p/m)	ND	0.0250	н	"		U	"	11	
Xylene (0)	ND	0.0250	H	"		11	**	11	
Surrogate: a,a,a-Trifluorotoluene	· · · · · · · · · · · · · · · · · · ·	94.0 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.2 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62601	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"		11	U	n	11	
Carbon Ranges C28-C35	ND	25.0	"	"	"	u	· • •	"	
Total Hydrocarbon nC6-nC35	ND	25.0	P	n	0	n	"	11	
Surrogate: 1-Chlorooctane		118 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		125 %	70	130	"	"	"	"	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 40' (6G20004-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
Toluene	ND	0.0250	u	11	"	п	*	81	
Ethylbenzene	ND	0.0250	11	"	"	"	н	It	
Xylene (p/m)	ND	0.0250		"	н	"	11	11	
Xylene (o)	ND	0.0250	11	11	11	"	n	11	
Surrogate: a,a,a-Trifluorotoluene		98.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	80-2	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62601	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	*		"	"	"	11	
Carbon Ranges C28-C35	ND	25.0	"	n	**	n	u	"	
Total Hydrocarbon nC6-nC35	ND	25.0	0	*1	u	11	"	10	
Surrogate: 1-Chlorooctane		128 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane	×	128 %	70	130	"	"	"	. "	
BH 2 45' (6G20004-10) Soil									
Prozene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
lene	ND	0.0250			14	u	u	n	
Ethylbenzene	ND	0.0250	11	n	11	и			
Xylene (p/m)	ND	0.0250	"	"		u	ti	11	
Xylene (o)	ND	0.0250	*	11	"		μ		
Surrogate: a,a,a-Trifluorotoluene		106 %	80-	120	"	"	"		
Surrogate: 4-Bromofluorobenzene		83.0 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62601	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	91	**	"		11		
Carbon Ranges C28-C35	ND	25.0	н	n [.]	n	"	"	11	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	เม่	IJ	"	11	
Surrogate: 1-Chlorooctane		126 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		128 %	70-	130	"	"	"	"	

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC **Environmental Lab of Texas**

	<u></u>	Reporting	<u> </u>						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 50' (6G20004-11) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62407	07/24/06	07/24/06	EPA 8021B	
Toluene	ND	0.0250	н	u		"	11	n	
Ethylbenzene	ND	0.0250	"	11	H	н		"	
Xylene (p/m)	ND	0.0250		"	"	"	"	H	
Xylene (o)	ND	0.0250		11		. н	R	"	
Surrogate: a,a,a-Trifluorotoluene		98.8 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62601	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	"	н	"	"	
Carbon Ranges C28-C35	ND	25.0	н	"	и	0	n	*1	
Total Hydrocarbon nC6-nC35	ND	25.0	n	11	11	11		n	
Surrogate: 1-Chlorooctane		127 %	70-1	30	"	"	. "	"	
Surrogate: 1-Chlorooctadecane		129 %	70-1	30	"	"	"	"	



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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Recult	Reporting	Units	Dilution	Datah	Dronorod	Analyzed	Mathad	Notor
PH 2 Surface (6C20004 01) Soil				Difution	Batch	riepared	Anaryzeu	Method	
BH 2 Surface (6G20004-01) Soli									
Chloride	J [3.44]	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	J
Specific Conductance (EC)	532	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	21.3	0.1	%	. 1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 5' (6G20004-02) Soil									
Chloride	6.34	5.00	mg/kg	10	EG62409	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	303	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	18.8	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 10' (6G20004-03) Soil									
Chloride	37.9	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	854	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	18.9	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 15' (6G20004-04) Soil									
Chloride	93.3	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
ific Conductance (EC)	879	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	9.1	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 20' (6G20004-05) Soil									
Chloride	81.0	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	711	10.0	umhos/cm	2	EG62414	07/21/06	07/24/06	EPA 9050A	
% Moisture	22.9	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 25' (6G20004-06) Soil									
Chloride	97.8	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	924	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	10.2	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 30' (6G20004-07) Soil	· · · · · · · · · · · · · · · · · · ·								
Chloride	61.8	10.0	mg/kg	20	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	1100	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	7.3	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 35' (6G20004-08) Soil									
Chloride	17.2	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	490	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	14.8	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 40' (6G20004-09) Soil									
Chloride	42.0	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	808	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	7.1	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 45' (6G20004-10) Soil									
Chloride	45.1	5.00	mg/kg	10	EG62419	07/24/06	07/24/06	EPA 300.0	
fic Conductance (EC)	630	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	4.7	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	
BH 2 50' (6G20004-11) Soil									
Chloride	17.6	10.0	mg/kg	20	EG62419	07/24/06	07/24/06	EPA 300.0	
Specific Conductance (EC)	910	10.0	umhos/cm	2	EG62415	07/19/06	07/24/06	EPA 9050A	
% Moisture	22.1	0.1	%	1	EG62111	07/20/06	07/21/06	% calculation	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62407 - EPA 5030C (GC)										
Blank (EG62407-BLK1)				Prepared	& Analyze	ed: 07/24/0)6			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	41.3		ug/kg	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	35.2		"	40.0		88.0	80-120			
LCS (EG62407-BS1)				Prepared	& Analyze	ed: 07/24/	06			
Benzene	1.33	0.0250	mg/kg wet	1.25		106	80-120			
Toluene	1.32	0.0250		1.25		106	80-120			
Ethylbenzene	1.20	0.0250	"	1.25		96.0	80-120			
Xylene (p/m)	2.85	0.0250	"	2.50		114	80-120			
Xylene (o)	1.37	0.0250	11	1.25		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.3		ug/kg	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	38.8		"	40.0		97.0	80-120			
Generation Check (EG62407-CCV1)				Prepared	& Analyz	ed: 07/24/	06			
ene	49.4		ug/kg	50.0		98.8	80-120			
Toluene	53.1		"	50.0		106	80-120			
Ethylbenzene	50.8		u	50.0		102	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	53.6		"	50.0		107	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.8		"	40.0		99.5	80-120			·
Surrogate: 4-Bromofluorobenzene	37.5		"	40.0		93.8	80-120			
Matrix Spike (EG62407-MS1)	So	urce: 6G200	004-01	Prepared	& Analyz	ed: 07/24/	06			
Benzene	1.66	0.0250	mg/kg dry	1.59	ND	104	80-120			
Toluene	1.73	0.0250	н	1.59	ND	109	80-120			
Ethylbenzene	1.62	0.0250	"	1.59	ND	102	80-120			
Xylene (p/m)	3.62	0.0250	u	3.18	ND	114	80-120			
Xylene (o)	1.77	0.0250	"	1.59	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.1		ug/kg	40.0		97.8	80-120	-		
Surrogate: 4-Bromofluorobenzene	41.2		"	40.0		103	80-120			

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%RFC	%REC Limits	RPD	RPD Limit	Notes
	ivesuit		Juito			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Batch EG62407 - EPA 5030C (GC)										
Matrix Spike Dup (EG62407-MSD1)	So	urce: 6G200	04-01	Prepared	& Analyze	ed: 07/24/	06			
Benzene	1.69	0.0250	mg/kg dry	1.59	ND	106	80-120	1.90	20	· · · · · · · · · · · · · · · · · · ·
Toluene	1.68	0.0250	11	1.59	ND	106	80-120	2.79	20	
Ethylbenzene	1.68	0.0250	11	1.59	ND	106	80-120	3.85	20	
Xylene (p/m)	3.66	0.0250	"	3.18	ND	115	80-120	0.873	20	
Xylene (o)	1.75	0.0250	"	1.59	ND	110	80-120	0.905	20	
Surrogate: a,a,a-Trifluorotoluene	37.6		ug/kg	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	40.5		"	40.0		101	80-120	•		
Batch EG62601 - Solvent Extraction	(GC)									
Blank (EG62601-BLK1)		Prepared & Analyzed: 07/25/06								
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	N						•	
Carbon Ranges C28-C35	ND	25.0								
Total Hydrocarbon nC6-nC35	ND	25.0	11							
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	41.4		"	50.0		82.8	70-130			
(EG62601-BS1)				Prepared	& Analyz	ed: 07/25/	06			
Carbon Ranges C6-C12	492	25.0	mg/kg wet	500		98.4	75-125			
Carbon Ranges C12-C28	506	25.0	u	500		101	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	999	25.0		1000		99.9	75-125			
Surrogate: 1-Chlorooctane	61.6		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	51.0		"	50.0		102	70-130			
Calibration Check (EG62601-CCV1)				Prepared	: 07/25/06	Analyzed	1: 07/26/06	5		
Carbon Ranges C6-C12	214		mg/kg wet	250		85.6	80-120			
Carbon Ranges C12-C28	280		u	250		112	80-120			
Total Hydrocarbon nC6-nC35	495		"	500		99.0	80-120			
Surrogate: 1-Chlorooctane	55.4		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	48.5		"	50.0		97.0	70-130			

Environmental Lab of Texas

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EG62601 - Solvent Extraction (GC)

Matrix Spike (EG62601-MS1)	Sour	ce: 6G25014	4-01	Prepared:	07/25/06	Analyzed	1: 07/26/06			
Carbon Ranges C6-C12	598	25.0 n	ng/kg dry	631	ND	94.8	75-125			
Carbon Ranges C12-C28	651	25.0		631	NĎ	103	75-125			
Carbon Ranges C28-C35	ND	25.0	*	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1250	25.0	•	1260	ND	99.2	75-125			
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	64.2		"	50.0		128	70-130			
Matrix Spike Dup (EG62601-MSD1)	Sour	ce: 6G2501	4-01	Prepared:	07/25/06	Analyzed	1: 07/26/06			
Carbon Ranges C6-C12	583	25.0 m	ng/kg dry	631	ND	92.4	75-125	2.54	20	
Carbon Ranges C12-C28	647	25.0	11	631	ND	103	75-125	0.616	20	
Carbon Ranges C28-C35	ND	25.0	u	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1230	25.0	11	1260	ND	97.6	75-125	1.61	20	
Surrogate: 1-Chlorooctane	56.5		mg/kg	50.0		113	70-130		<u> </u>	
Surrogate: 1-Chlorooctadecane	59.7		"	50.0		119	70-130			

Batch EG62603 - Solvent Extraction (GC)

Blank (EG62603-BLK1)	Prepared: 07/25/06 Analyzed: 07/26/06								
on Ranges C6-C12	ND	25.0 n	ng/kg wet						
Carbon Ranges C12-C28	ND	25.0	"						
Carbon Ranges C28-C35	ND	25.0	11						
Total Hydrocarbon nC6-nC35	ND	25.0							
Surrogate: 1-Chlorooctane	51.6		mg/kg	50.0		103	70-130		
Surrogate: 1-Chlorooctadecane	48.6		"	50.0		<i>97.2</i>	70-130		
LCS (EG62603-BS1)				Prepared &	Analyzed	: 07/25/	/06		
Carbon Ranges C6-C12	471	25.0 r	ng/kg wet	500		94.2	75-125		
Carbon Ranges C12-C28	406	25.0	11	500		81.2	75-125		
Carbon Ranges C28-C35	ND	25.0	н	0.00			75-125		
Total Hydrocarbon nC6-nC35	876	25.0	11	1000		87.6	75-125		
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	70-130		
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130		

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62603 - Solvent Extraction	(GC)				····			······································		
Calibration Check (EG62603-CCV1)				Prepared:	07/25/06	Analyzed	07/26/06			
Carbon Ranges C6-C12	235		mg/kg	250		94.0	80-120	·		
Carbon Ranges C12-C28	276		11	250		110	80-120			
Total Hydrocarbon nC6-nC35	511		"	500		102	80-120			
Surrogate: 1-Chlorooctane	56.4	·	"	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	55.1		"	50.0		110	70-130			
Matrix Spike (EG62603-MS1)	So	urce: 6G200()3-03	Prepared:	07/25/06	Analyzed	07/26/06			
Carbon Ranges C6-C12	527	25.0	mg/kg dry	530	ND	99.4	75-125			
Carbon Ranges C12-C28	449	25.0	и	530	ND	84.7	75-125			
Carbon Ranges C28-C35	ND	25.0	N	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	976	25.0	н	1060	ND	92.1	75-125	-		
Surrogate: 1-Chlorooctane	50.9		mg/kg	50.0		102	70-130			
Surrogate: 1-Chlorooctadecane	42.6		"	50.0		85.2	70-130			
Matrix Spike Dup (EG62603-MSD1)	So	urce: 6G200	03-03	Prepared	: 07/25/06	Analyzed	07/26/06			
Carbon Ranges C6-C12	529	25.0	mg/kg dry	530	ND	99.8	75-125	0.379	20	
Carbon Ranges C12-C28	430	25.0		530	ND	81.1	75-125	4.32	20	
Compon Ranges C28-C35	ND	25.0	"	0.00	ND		75-125		20	
Hydrocarbon nC6-nC35	958	25.0	u	1060	ND	90.4	75-125	1.86	20	
Surrogate: 1-Chlorooctane	50.7		mg/kg	50.0		101	70-130			
Surrogate: 1-Chlorooctadecane	43.0 .		"	50.0		86.0	70-130			

Environmental Lab of Texas

	····					······					
General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas											
	.				схаз 					·	
Analyte	Result	Limit	Units	Level	Result	%REC	%REC Limits	RPD	Limit	Notes	
Batch EG62111 - General Preparatio	n (Prep)										
Blank (EG62111-BLK1)		-		Prepared:	07/20/06	Analyzed	l: 07/21/06	5			
% Solids	100		%	•							
Duplicate (EG62111-DUP1)	Sou	urce: 6G2000	01-01	Prepared:	07/20/06	Analyzed	I: 07/21/06)			
% Solids	95.9	~~~	%	^	95.9			0.00	20		
Duplicate (EG62111-DUP2)	Soi	urce: 6G2000	03-15	Prepared	& Analyze	ed: 07/21/0	06				
% Solids	88.0		%	A	87.5			0.570	20		
Duplicate (EG62111-DUP3)	Soi	urce: 6G200	14-09	Prepared	& Analyz	ed: 07/21/	06				
% Solids	86.7		%		86.7			0.00	20		
Duplicate (EG62111-DUP4)	So	urce: 6G200	13-04	Prepared	& Analyz	ed: 07/21/	06				
% Solids	93.6		%		93.6		_	0.00	20		
Batch EG62409 - General Preparatio	on (WetChen	n)									
Blank (EG62409-BLK1)				Prepared	& Analyz	ed: 07/24/	06				
Chloride	ND	0.500	mg/kg		<u>_</u>						
L <u>C</u> S (EG62409-BS1)				Prepared	& Analyz	ed: 07/24/	06				
ide	9.18	0.500	mg/kg	10.0		91.8	80-120				
Calibration Check (EG62409-CCV1)				Prepared	& Analyz	ed: 07/24/	06				
Chloride	9.97		mg/L	10.0		99.7	80-120				
Duplicate (EG62409-DUP1)	So	urce: 6G200	01-01	Prepared	& Analyz	ed: 07/24/	06				
Chloride	575	20.0	mg/kg		613			6.40	20		

Environmental Lab of Texas

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General Chemis	stry Paramo	eters by	EPA/S	Standar	d Meth	ods - Q	uality C	Contro	1		
Environmental Lab of Texas											
Analyte	Result	Reporting	Units	Spike	Source	%RFC	%REC	RPD	RPD Limit	Notes	
Patch EC(2400 Concert Properties	- (WetChem)		Onits		Result		Linits			140103	
Batch EG02409 - General Preparatio	n (weiChem)			~ .				<u> </u>			
Duplicate (EG62409-DUP2)	Sour	ce: 6G200	03-10	Prepared	& Analyze	ed: 07/24/0)6				
Chloride	17100	500	mg/kg		17700			3.45	20		
Matrix Spike (EG62409-MS1)	Sour	ce: 6G200	01-01	Prepared & Analyzed: 07/24/06			06				
Chloride	1080	20.0	mg/kg	400	613	117	80-120				
Matrix Spike (EG62409-MS2)	Sour	ce: 6G200	03-10	Prepared	& Analyzo	ed: 07/24/0	06				
Chloride	27400	500	mg/kg	10000	17700	97.0	80-120				
Batch EG62414 - General Preparatio	n (WetChem)										
Calibration Check (EG62414-CCV1)				Prepared:	07/21/06	Analyzed	: 07/24/06				
Specific Conductance (EC)	1380		umhos/cm				80-120				
Duplicate (EG62414-DUP1)	Sour	ce: 6G200	03-01	Prepared:	07/21/06	Analyzed	: 07/24/06				
Specific Conductance (EC)	1000	10.0	umhos/cm		1000			0.00	20		
Duplicate (EG62414-DUP2)	Sour	ce: 6G200	03-11	Prepared:	07/21/06	Analyzed	l: 07/24/06				
Specific Conductance (EC)	23300	10.0	umhos/cm	•	23100			0.862	20		
Batch EG62415 - General Preparatio	on (WetChem))									
oration Check (EG62415-CCV1)				Prepared:	07/19/06	Analyzed	1: 07/24/06				
Specific Conductance (EC)	1400	····.	umhos/cm	1410		99.3	80-120				
Duplicate (EG62415-DUP1)	Sour	·ce: 6G200	04-06	Prepared:	07/19/06	Analyzed	1: 07/24/06				
Specific Conductance (EC)	925	10.0	umhos/cm		924	•		0.108	20		

Environmental Lab of Texas

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62419 - General Preparatio	n (WetChen	n)								
Blank (EG62419-BLK1)				Prepared	& Analyz	ed: 07/24/	06			
Chloride	ND	0.500	mg/kg		·····					
LCS (EG62419-BS1)				Prepared	& Analyz	ed: 07/24/	06			
Chloride	9.63	0.500	mg/kg	10.0		96.3	80-120			
Calibration Check (EG62419-CCV1)				Prepared	& Analyze	ed: 07/24/	06			
Chloride	9.22		mg/L	10.0		92.2	80-120			
Duplicate (EG62419-DUP1)	So	urce: 6G200	04-11	Prepared	& Analyz	ed: 07/24/				
Chloride	18.4	10.0	mg/kg		17.6			4.44	20	
Matrix Spike (EG62419-MS1)	Source: 6G20004-11			Prepared & Analyzed: 07/24/06						
Chloride	231	10.0	mg/kg	200	17.6	107	80-120			

wironmental Lab of Texas

WHOLE	EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Ar	bor Cove	Project Number:	None Given	
Katy TX	, 77494			
•		Notes and De	finitions	
J	Detected but below the Reporting Lin	nit; therefore, result is an e	stimated concentration (CLP J-Flag).	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the	e reporting limit		
NR	Not Reported			
dry	Sample results reported on a dry weight b	asis		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			
Dup	Duplicate			

Report Approved By:

langk Jurils Date: 7-28-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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environmental Lab of Texas
nvirgmental	Lab of lexas, In	jC.
0 West I-20 East	Phone: 915-563-1800	
ssa, Texas 79763	Fax: 915-563-1713	





CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Initial Arbon Cove Parameter (17.11) Product (17.11) Up Kany, TX 77494 Parameter (17.11) Product (17.11) Dia Sanoi 281.394.3050 Parameter (17.11) Product (17.11) Dia Sanoi 281.394.3051 Parameter (17.11) Product (17.11) Product (17.11) Dia Sanoi Dia Sanoi Dia Sanoi Dia Dia Sanoi Dia Sanoi Dia Dia Dia Dia Sanoi Dia Dia Dia Dia Dia Dia Sanoi Dia Dia Dia Dia Dia Dia Dia Dia	ny Name Wh	ole Earth Environmental, I	Inc.					f 1	Project	roject #	e l								ľ I
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BH 2 Surface 07/18/06 1 X		FIELD CODE	beigme2 eteC	Time Sampled No. of Containers	на *0NH 55-9 6-247 ма	*OS ^E H HO®N	Ogaet (Specify)	genge Avalue Avalue	Oliher (shecily)	1,814 HTT 1,814	DROADRA METOR HIT	Adatas As Ag Ba Cd Cr Pa H	eelitatovame3	10000001200 V710	84.8	нd		siuberto2-erg) TAT H&US	TAT brebnet2
BH 25 07/18/06 1 X <t< td=""><td></td><td>BH 2 Surface</td><td>07/18/06</td><td>1</td><td>×</td><td></td><td></td><td></td><td></td><td>×</td><td></td><td>-</td><td></td><td>XX</td><td></td><td>×</td><td></td><td>_</td><td></td></t<>		BH 2 Surface	07/18/06	1	×					×		-		XX		×		_	
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BH 2 15 07/18/06 1 X		BH 2 10'	07/18/08	+-	×				~	×		_		××		×			
BH 2 20' 07/18/06 1 X		BH 2 15'	07/18/06	*	×				_	×		_		XX		×			
BH 2 25 07/18/06 1 X <		BH 2 20'	07/18/06	+	×					×		_		××		×			
BH 2 30' 07/18/06 1 X		BH 2 25	07/18/06	*	×			~		×		-		XX		×			
BH 2 35 07/18/06 1 X		BH 2 30'	07/18/08	-	×					×		-		××		×			
BH 2 40' 07/18/06 1 X		BH 2 35	07/18/06	+	×					×		-		××		×			
BH 2 45 07/18/06 1 X X X X X X X X X X X X X X X X X X		BH 2 40'	07/18/08	1	×	_		Î		×		-		××		×			
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Analytical Report

Prepared for:

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G25009

Report Date: 08/01/06

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-2 55'	6G25009-01	Soil	2006-07-20 00:00	2006-07-25 13:00
BH-2 60'	6G25009-02	Soil	2006-07-20 00:00	2006-07-25 13:00
BH-2 65'	6G25009-03	Soil	2006-07-20 00:00	2006-07-25 13:00
BH-2 70'	6G25009-04	Soil	2006-07-20 00:00	2006-07-25 13:00
BH-2 75'	6G25009-05	Soil	2006-07-20 00:00	2006-07-25 13:00

WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC

Environmental Lab of Texas

Analyta	Pecult	Reporting	Unita	D'I d'	D . 1	ъ.			
Anaiyte	Kesun		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-2 55' (6G25009-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62806	07/28/06	07/31/06	EPA 8021B	
Toluene	ND	0.0250		"	"	<u>,</u> 0	н	10	
Ethylbenzene	ND	0.0250			"	"	"	"	
Xylene (p/m)	ND	0.0250	**	"	u	**	"	u	
Xylene (o)	. ND	0.0250	n 	19		**	"	U	
Surrogate: a,a,a-Trifluorotoluene		94.8 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62602	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	n	**	n	n	n	n	
Carbon Ranges C28-C35	ND	25.0	11	11	"	n	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	11	"	n	
Surrogate: 1-Chlorooctane		83.4 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.6 %	70-1	130	н	"	"	"	
BH-2 60' (6G25009-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62806	07/28/06	07/31/06	EPA 8021B	
Tine	ND	0.0250		"	n	u	u	11	
Ethylbenzene	ND	0.0250	Ħ	*	"		U	n	
Xylene (p/m)	ND	0.0250	11	"	"	"	н.	u	
Xylene (o)	ND	0.0250	H		U	n	н	N	
Surrogate: a,a,a-Trifluorotoluene		95.0 %	80	120	"	11	"	"	
Surrogate: 4-Bromofluorobenzene		85.2 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	J [13.5]	25.0	mg/kg dry	1	EG62602	07/25/06	07/26/06	TX 1005	J
Carbon Ranges C12-C28	ND	25.0	"	"	R	0	n	n	
Carbon Ranges C28-C35	ND	25.0	11	"	н	u	ti	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	0	U	и,	
Surrogate: 1-Chlorooctane		93.2 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		111 %	70	130	"	"	"	"	

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WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prenared	Analyzed	Method	Note
BH-2 65' (6G25009-03) Soil					Daten				
Benzene	ND	0.0250	mg/kg dry	25	EG62806	07/28/06	07/31/06	EPA 8021B	
Toluene	ND	0.0250	"		"	"	"	"	
Ethylbenzene	ND	0.0250	"	"		**		"	
Xylene (p/m)	ND	0.0250	"		"	"	*	"	
Xylene (o)	ND	0.0250	"	11	"	u	"	H	
Surrogate: a,a,a-Trifluorotoluene		86.8 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	80-1	120	"	"	"	"	,
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62602	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	n	"	"	н	"	19	
Carbon Ranges C28-C35	ND	25.0	"	"	"	. "	11	и	
Total Hydrocarbon nC6-nC35	ND	25.0	U	U		n	"	"	
Surrogate: 1-Chlorooctane		88.6 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		104 %	70-1	130	"	"	"	n	
BH-2 70' (6G25009-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62806	07/28/06	07/31/06	EPA 8021B	·····
r ne	ND	0.0250	"	"	"	n	II.	11	
Ethylbenzene	ND	0.0250		"	н	11	*	11	
Xylene (p/m)	ND	0.0250			n		11	11	

Xylene (p/m)	ND	0.0250							
Xylene (o)	ND	0.0250	11	n ·	"	u	u –	υ.	
Surrogate: a,a,a-Trifluorotoluene		96.5 %	80-120		"	"	"	u	
Surrogate: 4-Bromofluorobenzene		88.0 %	80-120	I	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62602	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	н	"	11	n	
Carbon Ranges C28-C35	ND	25.0	u	v		"	ti	"	
Total Hydrocarbon nC6-nC35	ND	25.0	11		н	U	"	"	
Surrogate: 1-Chlorooctane		106 %	70-130		и	**	53	11	
Surrogate: 1-Chlorooctadecane		123 %	70-130	1	"	"	"	"	

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WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-2 75' (6G25009-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EG62806	07/28/06	07/31/06	EPA 8021B	
Toluene	ND	0.0250	11	u		n	"	n	
Ethylbenzene	ND	0.0250	"		н	11		n	
Xylene (p/m)	ND	0.0250	"	11	IF.	"	"	n	
Xylene (o)	ND	0.0250	"	11	11	u	"		
Surrogate: a,a,a-Trifluorotoluene		93.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.8 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG62602	07/25/06	07/26/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0		11	11	"	"	n	
Carbon Ranges C28-C35	ND	25.0		u	n	н	**	"	
Total Hydrocarbon nC6-nC35	ND	25.0	u	n	"	n	11	"	
Surrogate: 1-Chlorooctane		89.2 %	70-1	30	"	"	"	11	
Surrogate: 1-Chlorooctadecane		103 %	70-1	30	"	"	"	"	



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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	•	Notes
BH-2 55' (6G25009-01) Soil										
Chloride	11.8	5.00	mg/kg	10	EG62612	07/26/06	07/26/06	EPA 300.0		
Specific Conductance (EC)	859	5.00	umhos/cm	1	EG62707	07/26/06	07/26/06	EPA 9050A		
% Moisture	11.1	0.1	%	**	EG62605	07/25/06	07/26/06	% calculation		
BH-2 60' (6G25009-02) Soil										
Chloride	33.3	10.0	mg/kg	20	EG62612	07/26/06	07/26/06	EPA 300.0		
Specific Conductance (EC)	1520	5.00	umhos/cm	1	EG62707	07/26/06	07/26/06	EPA 9050A		
% Moisture	4.9	0.1	%	"	EG62605	07/25/06	07/26/06	% calculation		
BH-2 65' (6G25009-03) Soil										
Chloride	31.8	10.0	mg/kg	20	EG62612	07/26/06	07/26/06	EPA 300.0		_
Specific Conductance (EC)	2480	5.00	umhos/cm	1	EG62707	07/26/06	07/26/06	EPA 9050A		
% Moisture	6.3	0.1	%	"	EG62605	07/25/06	07/26/06	% calculation		
BH-2 70' (6G25009-04) Soil										
Chloride	271	10.0	mg/kg	20	EG62612	07/26/06	07/26/06	EPA 300.0		
fic Conductance (EC)	3430	5.00	umhos/cm	1	EG62707	07/26/06	07/26/06	EPA 9050A		
% Moisture	5.5	.0.1	%	H	EG62605	07/25/06	07/26/06	% calculation		
BH-2 75' (6G25009-05) Soil										
Chloride	48.9	5.00	mg/kg	10	EG62612	07/26/06	07/26/06	EPA 300.0		
Specific Conductance (EC)	823	5.00	umhos/cm	1	EG62707	07/26/06	07/26/06	EPA 9050A		
% Moisture	5.5	0.1	%	"	EG62605	07/25/06	07/26/06	% calculation		

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC - Quality Control

Environmental Lab of Texas

Anglyta	Recult	Reporting	Unite	Spike	Source	%PEC	%REC	רוממ	RPD Limit	Notes
	Result			Level		MEC				notes
Batch EG62602 - Solvent Extraction ((GC)									
Blank (EG62602-BLK1)				Prepared:	07/25/06	Analyzed	I: 07/26/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	11							
Carbon Ranges C28-C35	ND	25.0	"							
Total Hydrocarbon nC6-nC35	ND	25.0	"							
Surrogate: 1-Chlorooctane	46.0		mg/kg	50.0		92.0	70-130			
Surrogate: 1-Chlorooctadecane	37.2		"	50.0		74.4	70-130			
LCS (EG62602-BS1)				Prepared:	07/25/06	Analyzed	l: 07/26/06			
Carbon Ranges C6-C12	492	25.0	mg/kg wet	500		98.4	75-125			
Carbon Ranges C12-C28	529	25.0	υ.	500		106	75-125			
Carbon Ranges C28-C35	ND	25.0		0.00			75-125			
Total Hydrocarbon nC6-nC35	1020	25.0		1000		102	75-125			
Surrogate: 1-Chlorooctane	57.4	·	mg/kg	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	41.2		"	50.0		82.4	70-130			
Calibration Check (EG62602-CCV1)				Prepared	: 07/25/06	Analyzed	1: 07/26/06			
Carbon Ranges C6-C12	208		mg/kg wet	250		83.2	80-120			
General Ranges C12-C28	293			250		117	80-120			
Hydrocarbon nC6-nC35	501		н	500		100	80-120			
Surrogate: 1-Chlorooctane	59.7		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	56.1		"	50.0		112	70-130			
Matrix Spike (EG62602-MS1)	So	ource: 6G200	009-01	Prepared	: 07/25/06	Analyzed	i: 07/26/06			
Carbon Ranges C6-C12	476	25.0	mg/kg dry	515	ND	92.4	75-125			
Carbon Ranges C12-C28	520	25.0		515	ND	101	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	996	25.0	н	1030	ND	96.7	75-125			
Surrogate: 1-Chlorooctane	57.9		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	58.1		"	50.0		116	70-130			

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WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EG62602 - Solvent Extraction (GC)

Matrix Spike Dup (EG62602-MSD1)	Sour	ce: 6G200	009-01	Prepared:	07/25/06	Analyze	d: 07/26/06			
Carbon Ranges C6-C12	481	25.0	mg/kg dry	515	ND	93.4	75-125	1.04	20	
Carbon Ranges C12-C28	528	25.0	и	515	ND	103	75-125	1.53	20	
Carbon Ranges C28-C35	ND	25.0	и	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1010	25.0	"	1030	ND	98.1	75-125	1.40	20	
Surrogate: 1-Chlorooctane	57.3		mg/kg	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	57.3		n	50.0		115	70-130			

Batch EG62806 - EPA 5030C (GC)

Blank (EG62806-BLK1)				Prepared: 07/2	8/06 Analyzed	: 07/31/06	
Benzene	ND	0.0250	mg/kg wet				
Toluene	ND	0.0250	н				
Ethylbenzene	ND .	0.0250	"				
Xylene (p/m)	ND	0.0250	11				
Xylene (o)	ND	0.0250	"				
Surrogate: a,a,a-Trifluorotoluene	36.8		ug/kg	40.0	92.0	80-120	
Surrogate: 4-Bromofluorobenzene	33.3		"	40.0	83.2	80-120	
1 (C(2906 BS1)				Droporod & A	alurade 07/29/	04	

4	EG02800-DS1)	Frepared & Analyzed: 07/28/00								
Bu	le	1.03	0.0250	mg/kg wet	1.25	82.4	80-120			
Toluen	e	1.08	0.0250	Ħ	1.25	86.4	80-120			
Ethylb	enzene	1.03	0.0250	**	1.25	82.4	80-120			
Xylene	(p/m)	2.36	0.0250	n	2.50	94.4	80-120			
Xylene	(0)	1.15	0.0250	"	1.25	92.0	80-120			
Surrog	ate: a,a,a-Trifluorotoluene	32.2		ug/kg	40.0	80.5	80-120			
Surrog	ate: 4-Bromofluorobenzene	34.7		"	40.0	86.8	80-120			

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WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EG62806 - EPA 5030C (GC)

Calibration Check (EG62806-CCV1)				Prepared:	07/28/06	Analyzed	: 07/31/06			
Benzene	0.0513		mg/kg wet	0.0500		103	80-120			
Toluene	0.0498		0	0.0500		99.6	80-120			
Ethylbenzene	0.0520		и	0.0500		104	80-120			
Xylene (p/m)	0.103		H	0.100		103	80-120			
Xylene (0)	0.0508		"	0.0500		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.0		ug/kg	40.0		92.5	80-120			
Surrogate: 4-Bromofluorobenzene	35.2		"	40.0		88.0	80-120			
Matrix Spike (EG62806-MS1)	Se	ource: 6G260	01-01	Prepared:	07/28/06	Analyzed	: 07/31/06			
Benzene	1.33	0.0250	mg/kg dry	1.32	ND	101	80-120			
Toluene	1.33	0.0250	"	1.32	ND	101	80-120			
Ethylbenzene	1.32	0.0250	0	1.32	ND	100	80-120			
Xylene (p/m)	2.89	0.0250	0	2.63	ND	110	80-120			
Xylene (0)	1.43	0.0250	u	1.32	ND	108	80-120			
Surrogate: a,a,a-Trifluorotoluene	34.4		ug/kg	40.0		86.0	80-120			
Surrogate: 4-Bromofluorobenzene	38.2		"	40.0		95.5	80-120			
Metrix Spike Dup (EG62806-MSD1)	S	ource: 6G260	01-01	Prepared:	07/28/06	Analyzed	: 07/31/06			
ne ne	1.26	0.0250	mg/kg dry	1.32	ND	95.5	80-120	5.60	<u>2</u> 0	
Toluene	1.26	0.0250	11	1.32	ND	95.5	80-120	5.60	20	
Ethylbenzene	1.29	0.0250		1.32	ND	97.7	80-120	2.33	20	
Xylene (p/m)	2.79	0.0250	н	2.63	ND	106	80-120	3.70	20	
Xylene (o)	1.39	0.0250		1.32	ND	105	80-120	2.82	20	
Surrogate: a,a,a-Trifluorotoluene	35.5		ug/kg	40.0		88.8	80-120			
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102	80-120			

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General Chemist	ry Paran	neters by	EPA/	Standar	d Meth	ods - Q	uality (Contro	1	
•	E	nvironm	ental L	ab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62605 - General Preparation	(Prep)									
Blank (EG62605-BLK1)				Prepared:	07/25/06	Analyzed	: 07/26/06			
% Solids	100		%							
Duplicate (EG62605-DUP1)	Sou	irce: 6G250	03-01	Prepared:	07/25/06	Analyzed	l: 07/26/06			
% Solids	98.2		%		98.1			0.102	20	
Batch EG62612 - General Preparation	(WetChem	ı) -								
Blank (EG62612-BLK1)				Prepared	& Analyze	ed: 07/26/	06			
Chloride	ND	0.500	mg/kg							
LCS (EG62612-BS1)				Prepared	& Analyze	ed: 07/26/	06			
Chloride	8.82	0.500	mg/kg	10.0		88.2	80-120			
Calibration Check (EG62612-CCV1)				Prepared	& Analyze	ed: 07/26/	06			
Chloride	9.03		mg/L	10.0		90.3	80-120			
Duplicate (EG62612-DUP1)	Sou	ırce: 6G250	09-05	Prepared	& Analyze	ed: 07/26/	06			
Chloride	48.5	5.00	mg/kg		48.9			0.821	20	
Matrix Spike (EG62612-MS1)	Soi	ırce: 6G250	09-05	Prepared	& Analyze	ed: 07/26/	06			
de	152	. 5.00	mg/kg	100	48.9	103	80-120			
Batch EG62707 - Water Extraction										
Calibration Check (EG62707-CCV1)				Prepared	& Analyze	ed: 07/26/	06			
Specific Conductance (EC)	1390		umhos/cm	1410		98.6	80-120			

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Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Environmental Lab of Texas

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62707 - Water Extraction	n								
Duplicate (EG62707-DUP1)	Sour	ce: 6G25009-01	Prepared	& Analyze	ed: 07/26/0)6			
Specific Conductance (EC)	861	5.00 umhos/cm		859			0.233	20	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Ralandk Juli Date: 8-01-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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b of Texas	Phone: 915-563-1800
mental La	East
Enviro	2600 West I-20

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ager: M. Griffin	vame Whole Earth Environmental, In	ress: 2103 Arbor Cove	aZip: Katy, TX 77494	e No: 281.394.2050	ture:			FIELD CODE	BH 2 58" 55	BH 2 60'	BH 2 65'	BH 2 70'	BH 2.75			Dute Time 7/23/2006	Caste Time
	с.			Fax No:				beigmui? shuD beigmui? smiT	07/20/06	07/20/06	07/20/06	07/20/06	07/20/06			Received by	Harmaghy Elge 12
				281.394.2051		נשבו	OD Preservative	Mo. of Containers 40 2 HC HC HC HC HC HC HC HC HC HC HC HC HC	1 X	- ×	1 X	1 X	1 X				and .
1	1	1	1	1	1		Matrix	SAE Studie Other (Specify)	×	×	×	×	*			Crate	7/25/06
Project Name: AV	Project #:	Project Loc:	FO #			TCUP.		DBH (060000) 102 \C1 \2M8 \E0 102 \C1 \2M8 \E0 D2 \C1 \2M8 \E0 102 \C1 \2M8 \C1 \2M8 \E0 102 \C1 \2M8 \C1 \Z1 \\X1 \X1 \X1 \X1 \X1 \X1 \X1 \X1 \X1 \	×	×	×	*	*		Sample Tempe Labora	Time	13.00
alon Hill					1 A M	-Canor	-	Volume Volume Sectors Volume			-			-	Containers rature Upon ttory Comm		
					a Par			BTEX BOTIBADDO Comment B.A.B B.A.B B.H B.H B.H B.H B.H B.H B.H B.H B.H B	× × ×	××××	×××	× ×	××××	9	Receipt U	5	
					Г	F		elubert52-erq) TAT H2UA TAT bisbrist2							" Jos)	



Analytical Report

Prepared for:

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

Lab Order Number: 6G31006

Report Date: 08/11/06

WHOLE EARTH ENVIRONMENTAL	Project: Avalon Hills	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	
Katy TX, 77494	Project Manager: Mike Griffin	

ANALYTICAL REPORT FOR SAMPLES

Sample 1D	Laboratory ID	Matrix	Date Sampled	Date Received
ВН-1	6G31006-01	Water	07/31/06 00:00	07-31-2006 14:15
BH-2	6G31006-02	Water	07/31/06 00:00	07-31-2006 14:15
BH-4	6G31006-03	Water	07/31/06 00:00	07-31-2006 14:15

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

								~~~~	
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (6G31006-01) Water									
Chloride	52800	2500	mg/L	5000	EH60306	08/03/06	08/03/06	EPA 300.0	
Specific Conductance (EC)	106000	5.00	umhos/cm	1	EH60317	08/03/06	08/03/06	EPA 120.1	
Total Dissolved Solids	76300	10.0	mg/L	H	EH60901	08/04/06	08/08/06	EPA 160.1	
BH-2 (6G31006-02) Water									
Chloride	372	25.0	mg/L	50	EH60306	08/03/06	08/03/06	EPA 300.0	
Specific Conductance (EC)	4410	5.00	umhos/cm	1	EH60317	08/03/06	08/03/06	EPA 120.1	
Total Dissolved Solids	3420	10.0	mg/L	*	EH60901	08/04/06	08/08/06	EPA 160.1	
BH-4 (6G31006-03) Water									
Chloride	797	25.0	mg/L	50	EH60306	08/03/06	08/03/06	EPA 300.0	
Specific Conductance (EC)	4490	5.00	umhos/cm	1	EH60317	08/03/06	08/03/06	EPA 120.1	
Total Dissolved Solids	2540	10.0	mg/L	"	EH60901	08/04/06	08/08/06	EPA 160,1	





WHOLE EARTH ENVIRONMENTAL
2103 Arbor Cove
Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Total Metals by EPA / Standard Methods

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (6G31006-01) Water	, <u> </u>								
Mercury	ND	0.000250	mg/L	1	EH60211	08/01/06	08/02/06	EPA 7470A	
Chromium	ND	0.0698		100	EH60210	08/01/06	08/02/06	EPA 6020A	
Arsenic	J [0.0469]	0.170	"	"	n		*		j
Selenium	ND	0.300		"	"	"		"	
Silver	ND	0.0405	"		n	Ħ	*	*	
Cadmium	ND	0.0692	"	**		"	*	*	
Barium	0.374	0.0489	"	"	"	n	Ŧ		
Lead	ND	0.0296	"	Π	"	"		11	
BH-2 (6G31006-02) Water									
Mercury	0.000290	0.000250	mg/L	1	EH60211	08/01/06	08/02/06	EPA 7470A	
Chromium	ND	0.0698	**	100	EH60210	08/01/06	08/02/06	EPA 6020A	
Arsenic	ND	0.170	"	"	M	n	n	"	
Selenium	ND	0.300				"	Π	n	
Silver	ND	0.0405		n		*		*	
Cadmium	ND	0.0692	"	"	**		n	n	
Barium	0.299	0.0489	"	"	"		n		
Lead	ND	0.0296	n	"	"	"	**	n	
BH-4 (6G31006-03) Water									
Mercury	0.000290	0.000250	mg/L	1	EH60211	08/01/06	08/02/06	EPA 7470A	
Chromium	ND	0.0698	"	100	EH60210	08/01/06	08/02/06	EPA 6020A	
Arsenic	ND	0.170	"	"	*	"	n	h	
Selenium	ND	0.300		"	"		71	11	
Silver	ND	0.0405	"	51	"	"		n	
Cadmium	ND	0.0692		"		"		*	
Barium	0.0753	0.0489			*	"		11	
Lead	ND	0.0296	"	۳	"	19	n	*	

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

		Reporting	. —						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (6G31006-01) Water								·	
Dichlorodifluoromethane	ND	100	ug/l	100	EG62611	08/01/06	08/01/06	EPA 8260B	
Chloromethane	ND	100	"	"		"	H.	"	
Vinyl chloride	ND	100	**	"	"	n	*		
Bromomethane	ND	100		H	n		"	n	
Chloroethane	ND	100	"			"	•	n	
Trichlorofluoromethane	ND	100	"	"		**	"	"	
1,1-Dichloroethene	ND	100			"	*	"	"	
Acetone	ND	500		"	*		n	n	
Iodomethane	ND	100		"	*	*	"	n	
Carbon disulfide	ND	100	•			*		Ħ	
Methylene chloride	ND	100	*		n	•	*		
trans-1,2-Dichloroethene	ND	100				11	*	n	
Methyl tert-butyl ether	ND	100		-	*	n	*	"	
Acrylonitrile	ND	100	"	'n	"	"	**	"	
1,1-Dichloroethane	ND	100	"	"	*	**	n	n	
Vinyl acetate	ND	100	"	"	"		r		
s-1,2-Dichloroethene	ND	100		-	"	**		n	
2-Butanone	ND	100	۳	۳			*	11	
Bromochloromethane	ND	100		"	"	**		H	
Chloroform	ND	100		n	n	**	n		
1,1,1-Trichloroethane	ND	100	"		"	"		n	
2,2-Dichloropropane	ND	100	n	"		"	**	n	
Carbon tetrachloride	ND	100	-	*		*	n	n	
1,1-Dichloropropene	ND	100		"	n	**	n	n	
1,2-Dichloroethane	ND	100		"	•		19	"	
Benzene	2540	100	Ħ	"			"	n	
Trichloroethene	ND	100	"	*	•	"		π	
1,2-Dichloropropane	ND	100	=			*	*	"	
Dibromomethane	ND	100		"	*			n	
Bromodichloromethane	ND	100			۳	۲	"		
2-Chloroethylvinyl ether	ND	100		"	*			"	
cis-1,3-Dichloropropene	ND	100	-			**		*	
4-Methyl-2-pentanone	ND	100		"	•	**		"	
Toluene	10200	100	"	*	n	**	"	"	
trans-1,3-Dichloropropene	ND	100		"	"	11	*	n	
1,1,2-Trichloroethane	ND	100	"	"	"	*	*	h	
2-Hexanone	ND	100	"	•	"		"	n	
Tetrachloroethene	ND	100	"	"	•		n	n	

Environmental Lab of Texas

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 (6G31006-01) Water									
1,3-Dichloropropane	ND	100	ug/l	100	EG62611	08/01/06	08/01/06	EPA 8260B	
Dibromochloromethane	ND	100	"	"	**			**	
1,2-Dibromoethane (EDB)	ND	100	"	H	"		"	"	
Chlorobenzene	ND	100	"	n	n	۳	π	**	
1,1,1,2-Tetrachloroethane	ND	100		*	"			11	
Ethylbenzene	2470	100	"	"		"	11	н	
m,p-Xylene	11400	100	"			-	11		
o-Xylene	5690	100	"	"	"	n	11	*	
Styrene	ND	100	"	•	n	*	•	n	
Bromoform	ND	100	"	n	"	n	*	*	
trans-1,4-Dichloro-2-butene	ND	100		Ħ		n	*	*	
Isopropylbenzene	706	100	"			"	"	n	
1,2,3-Trichloropropane	ND	100	"	n	"			*	
1,1,2,2-Tetrachloroethane	ND	100	н	"	"	"			
Bromobenzene	ND	100	n	n	*	n	*	**	
n-Propylbenzene	913	100	"	n	"	"	*	n	
Chlorotoluene	ND	100	"	"		"		Ħ	
1,3,5-Trimethylbenzene	3870	100	#	"		"	**	n	
4-Chlorotoluene	ND	100		"	*	"	*	**	
tert-Butylbenzene	J [78.2]	100	"	"	"	"	۳		J
1,2,4-Trimethylbenzene	4750	100	n	"		"	"	n	
sec-Butylbenzene	373	100					"	n	
1,3-Dichlorobenzene	ND	100		n	"		n	n	
p-Isopropyltoluene	442	100	"	*	"	**	"	*	
1,4-Dichlorobenzene	ND	100	*		P	*	*	**	
n-Butylbenzene	592	100	"	"		n	**	"	
1,2-Dichlorobenzene	ND	100	11		*		**	"	
1,2-Dibromo-3-chloropropane	ND	100	*	*	"	"		*	
1,2,4-Trichlorobenzene	ND	100			*	n	*	"	
Hexachlorobutadiene	ND	100	**	*	n	"	"	"	
Naphthalene	120	100	"	"		"	*	Ħ	
1,2,3-Trichlorobenzene	ND	100		"	n			"	
Surrogate: Dibromofluoromethane		<b>99</b> .2 %	68-12	9	"	"	~	"	
Surrogate: 1,2-Dichloroethane-d4		86.4 %	72-13	2	"	"	"	11	
Surrogate: Toluene-d8		84.4 %	74-11	8	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		77.2%	65-14	0	"	"	"	"	

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-2 (6G31006-02) Water									
Dichlorodifluoromethane	ND	1.00	ug/l	1	EG62611	08/01/06	08/01/06	EPA 8260B	
Chloromethane	ND	1.00	n	Ħ		**	"	*	
Vinyl chloride	ND	1.00	n	**	"	•	**	**	
Bromomethane	ND	1.00	Ħ	•	"	"	•	tr	
Chloroethane	ND	1.00	n	"		19	*	"	
Trichlorofluoromethane	ND	1.00	n	"	"		"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	**	n	*	
Acetone	ND	5.00	"	"	"	**	19	te	
Iodomethane	ND	1.00		"	"	"	•	n	
Carbon disulfide	ND	1.00	n	"		**	*		
Methylene chloride	ND	1.00	"	"			*	11	
trans-1,2-Dichloroethene	ND	1.00	n	"	a	"	"	*	
Methyl tert-butyl ether	ND	1.00			"	**	"	۳	
Acrylonitrile	ND	1.00				"		59	
1,1-Dichloroethane	ND	1.00	"	•	"	*	11	n	
Vinyl acetate	ND	1.00	*	-	*				
ls-1,2-Dichloroethene	ND	1.00	н	"	"	#		*	
2-Butanone	ND	1.00		"	*	**	n	"	
Bromochloromethane	ND	1.00		"		*	n	n	
Chloroform	ND	1.00	"	"	"	"	"		
1,1,1-Trichloroethane	ND	1.00	Π	"		H	'n	n	
2,2-Dichloropropane	ND	1.00	n	"	*	"	n	**	
Carbon tetrachloride	ND	1.00	n	"	"		"	n	
1,1-Dichloropropene	ND	1.00	*	"	#		H		
1,2-Dichloroethane	ND	1.00	"	"		*	t <del>ı</del>	π	
Benzene	ND	1.00	*	"	"	**	Ħ	"	
Trichloroethene	ND	1.00	<b>\$</b> 7		"	**	"	n .	
1,2-Dichloropropane	ND	1.00	n	n		*	11	n	
Dibromomethane	ND	1.00		۳		•	*	n	
Bromodichloromethane	ND	1.00		"	"	**	n	"	
2-Chloroethylvinyl ether	ND	1.00	•			*	**	"	
cis-1,3-Dichloropropene	ND	1.00	"	"	"	*	n	"	
4-Methyl-2-pentanone	ND	1.00	"	"		**			
Toluene	J [0.740]	1.00		*		n	"	n	J
trans-1,3-Dichloropropene	ND	1.00			"			n	
1,1,2-Trichloroethane	ND	1.00	18	"	۲	H	n	n	
2-Hexanone	ND	1.00	"	"	"	*	*	"	
Tetrachloroethene	ND	1.00	"	"	"		**		

Environmental Lab of Texas

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Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-2 (6G31006-02) Water									
1,3-Dichloropropane	ND	1.00	ug/I	1	EG62611	08/01/06	08/01/06	EPA 8260B	
Dibromochloromethane	ND	1.00	"			"			
1,2-Dibromoethane (EDB)	ND	1.00	"	*		Ħ	"		
Chlorobenzene	ND	1.00	-	"	"		, <b>n</b>	*	
1,1,1,2-Tetrachloroethane	ND	1.00	"			*	"		
Ethylbenzene	ND	1.00	n	"		'n			
m,p-Xylene	ND	1.00	*			17	**		
o-Xylene	ND	1.00	"	"	n	*	"	**	
Styrene	ND	1.00	"	•	*	'n	•		
Bromoform	ND	1.00	"			"	"		
trans-1,4-Dichloro-2-butene	ND	1.00		*		"	"	**	
lsopropylbenzene	ND	1.00	n	*	"	"	"	*	
1,2,3-Trichloropropane	ND	1.00	-	*		"	n	"	
1,1,2,2-Tetrachloroethane	ND	1.00	"			"	"	п	
Bromobenzene	ND	1.00		**	n	"	"	**	
n-Propylbenzene	ND	1.00	"	*		"	n	79	
-Chlorotoluene	ND	1.00	"	19		"	"	n	
1,3,5-Trimethylbenzene	ND	1.00	"	*	"	"	"	"	
4-Chlorotoluene	ND	1.00		**	"	"	n		
tert-Butylbenzene	ND	1.00		Ħ		"		**	
1,2,4-Trimethylbenzene	ND	1.00	"	n		"	"	Ħ	
sec-Butylbenzene	ND	1.00		"	*		п		
1,3-Dichlorobenzene	ND	1.00		*	**	п	n	53	
p-Isopropyltoluene	ND	1.00	"	••	n	"		"	
1,4-Dichlorobenzene	ND	1.00	"	*	*	"	"		
n-Butylbenzene	ND	1.00	"	"	*	"	11		
1,2-Dichlorobenzene	ND	1.00	"	**	*	"	*	H.	
1,2-Dibromo-3-chloropropane	ND	1.00		"	n	"			
1,2,4-Trichlorobenzene	ND	1.00		"	n	"	Π	**	
Hexachlorobutadiene	ND	1.00		**		"	"	n	
Naphthalene	ND	1.00	"	"	n	"	"	*	
1,2,3-Trichlorobenzene	ND	1.00	"		"	"	"	*	
Surrogate: Dibromofluoromethane		103 %	68-1	29	17	n	"	n	
Surrogate: 1,2-Dichloroethane-d4		85.8 %	72-1	32	"	"	"	n	
Surrogate: Toluene-d8		85.8 %	74-1	18	"	n	"	17	
Surrogate: 4-Bromofluorobenzene		78.0 %	65-1	40	"	n	"	#	

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

1		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-4 (6G31006-03) Water									
Dichlorodifluoromethane	ND	1.00	ug/l	1	EG62611	08/01/06	08/03/06	EPA 8260B	
Chloromethane	ND	1.00	"	"		**	*	"	
Vinyl chloride	ND	1.00	"	*	•		"	"	
Bromomethane	ND	1.00	"			**	*	*	
Chloroethane	ND	1.00		"		"	"	"	
Trichlorofluoromethane	ND	1.00	"		"	**	"	"	
1,1-Dichloroethene	ND	1.00	"			*	r	n	
Acetone	ND	5.00	"		"		n	"	
Iodomethane	ND	1.00	"			*	*	**	
Carbon disulfide	ND	1.00	"	•	n			*	
Methylene chloride	ND	1.00	n	"	**		*	•	
trans-1,2-Dichloroethene	ND	1.00					Ħ	n	
Methyl tert-butyl ether	ND	1.00	*7	"			*	n	
Acrylonitrile	ND	1.00		"			n	*	
1,1-Dichloroethane	ND	1.00		*	"			"	
Vinyl acetate	ND	1.00		19	*	*	"	"	
is-1,2-Dichloroethene	ND	1.00		"	"	**	**	"	
2-Butanone	ND	1.00	н	Ħ	"	"		"	
Bromochloromethane	ND	1.00	*		"	11	n	**	
Chloroform	ND	1.00	R	"	"		n	"	
1,1,1-Trichloroethane	ND	1.00	"	•	n		"	"	
2,2-Dichloropropane	ND	1.00		"	"	"	39	**	
Carbon tetrachloride	ND	1.00	"	۳	"		n	n	
1,1-Dichloropropene	ND	1.00	"	**	*	**	п	n	
1,2-Dichloroethane	ND	1.00		"	"	*		n	
Benzene	ND	1.00		"	"			*	
Trichloroethene	ND	1.00		*	n		n	11	
1,2-Dichloropropane	ND	1.00	n	*		-		ħ	
Dibromomethane	ND	1.00	"	17		•	*	n	
Bromodichloromethane	ND	1.00	-	"		•	"	**	
2-Chloroethylvinyl ether	ND	1.00		"	"	n		*	
cis-1,3-Dichloropropene	ND	1.00	"	"	"		*	*	
4-Methyl-2-pentanone	ND	1.00	"	"	"		*	*	
Toluene	ND	1.00	"	"	"	"		۳	
trans-1,3-Dichloropropene	ND	1.00	"	"	n		*	"	
1,1,2-Trichloroethane	ND	1.00	"	11			**	"	
2-Hexanone	ND	1.00	n	"	n	"	*	n	
Tetrachloroethene	ND	1.00	n	"	n	"	"	n	

Environmental Lab of Texas

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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# Volatile Organic Compounds by EPA Method 8260B

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prenared	Analyzed	Method	Notes
BH-4 (6G31006-03) Water									
1,3-Dichloropropane	ND	1.00	ug/l	1	EG62611	08/01/06	08/03/06	EPA 8260B	
Dibromochloromethane	ND	1.00		n	"	"	"		
1,2-Dibromoethane (EDB)	ND	1.00	· •	"		*	"		
Chlorobenzene	ND	1.00		π			"	*	
1,1,1,2-Tetrachloroethane	ND	1.00	n			*	"	H	
Ethylbenzene	ND	1.00		n		**	۳	11	
m,p-Xylene	ND	1.00		*		•	"	"	
o-Xylene	ND	1.00	"	"	11	*	"	**	
Styrene	ND	1.00	"	"		*	"	n	
Bromoform	ND	1.00	n	"					
trans-1,4-Dichloro-2-butene	ND	1.00	ю	<b>n</b>	n	"	"	10	
Isopropylbenzene	ND	1.00	Ħ		n	"	**	n	
1,2,3-Trichloropropane	ND	1.00		u.	**	n	19	n	
1,1,2,2-Tetrachloroethane	ND	1.00	"		"	**	17	**	
Bromobenzene	ND	1.00	"	"	w	**	*	2	
n-Propylbenzene	ND	1.00	"	*			*	n	
Chlorotoluene	ND	1.00	•	"	"	"	n	n	
1,3,5-Trimethylbenzene	ND	1.00	*	**	n		n	41	
4-Chlorotoluene	ND	1.00	"			"	H	Ħ	
tert-Butylbenzene	ND	1.00	"	"	"	*	"		
1,2,4-Trimethylbenzene	ND	1.00		Ħ	n		n	57	
sec-Butylbenzene	ND	1.00	"				*	"	
1,3-Dichlorobenzene	ND	1.00		n		"			
p-Isopropyltoluene	ND	1.00		#		**	n	54	
1,4-Dichlorobenzene	ND	1.00	-		"		H	Ħ	
n-Butylbenzene	ND	1.00	•		"		"	n	
1,2-Dichlorobenzene	ND	1.00		*	n	*		10	
1,2-Dibromo-3-chloropropane	ND	1.00			"	*	n	**	
1,2,4-Trichlorobenzene	ND	1.00	۳	"	"	T	n		
Hexachlorobutadiene	ND	1.00	"	**	11	"		π	
Naphthalene	ND	1.00	"			*	"		
1,2,3-Trichlorobenzene	ND	1.00	"		"		**	Ħ	
Surrogate: Dibromofluoromethane		97.0%	68-12	<u>19</u>	"	"	'n		<u></u>
Surrogate: 1,2-Dichloroethane-d4		84.4 %	72-13	32	n	n	n	"	
Surrogate: Toluene-d8		86.0 %	74-11	'8	"	"	n	"	
Surrogate: 4-Bromofluorobenzene		79.4 %	65-14	10	n	#	"	"	



WHOLE EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Arbor Cove	Project Number:	None Given	
Katy TX, 77494	Project Manager:	Mike Griffin	

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

				C II	<u></u>		6/DEC			-, <u>-</u>
Analyte	Result	Reporting Limit	Units	Spike Level	Result	%REC	%REC Limits	RPD	Limit	Notes
Batch EH60306 - General Preparation (W	etChem)									
Blank (EH60306-BLK1)				Prepared &	Analyzed:	08/03/06				
Chloride	ND	0.500	mg/L							
LCS (EH60306-BS1)				Prepared &	Analyzed:	08/03/06				
Chloride	9.71	0.500	mg/L	10.0		97.1	80-120			
Calibration Check (EH60306-CCV1)				Prepared &	Analyzed:	08/03/06				
Chloride	9.89		mg/L	10.0		98.9	80-120		*	
Duplicate (EH60306-DUP1)	Sou	rce: 6H02012	-01	Prepared &	Analyzed:	08/03/06				
Chloride	ND	0.500	mg/L		ND				20	
Matrix Spike (EH60306-MS1)	Sou	rce: 6H02012	-01	Prepared &	z Analyzed:	08/03/06				
Chloride	10.2	0.500	mg/L	10.0	ND	102	80-120			
Batch EH60317 - General Preparation (W	etChem)									
Calibration Check (EH60317-CCV1)				Prepared &	z Analyzed:	08/03/06				
Specific Conductance (EC)	1380		umhos/cm	1410		97.9	80-120		~	
Puplicate (EH60317-DUP1)	Sou	rce: 6G31006	-01RE1	Prepared &	Analyzed:	08/03/06				
specific Conductance (EC)	1130	5.00	umhos/cm		1150			1.75	20	
Batch EH60901 - Filtration Preparation										
Blank (EH60901-BLK1)				Prepared: (	)8/04/06 A	nalyzed: 08	3/08/06			
Total Dissolved Solids	ND	10.0	mg/L		<u>_</u>					



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WHOLE EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Arbor Cove	Project Number:	None Given	
Katy TX, 77494	Project Manager:	Mike Griffin	

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EH60901 - Filtration Preparation</b>										
Duplicate (EH60901-DUP1)	Sou	rce: 6H03002-	•01	Prepared: (	08/04/06 A	nalyzed: 08	/08/06			
Total Dissolved Solids	470	10.0	mg/L		444			5.69	5	R.



WHOLE EARTH ENVIRONMENTAL	Project: Avalon Hills	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	
Katy TX, 77494	Project Manager: Mike Griffin	

# Total Metals by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60210 - EPA 3005A										
				Prepared: (	)8/01/06 Ar	nalyzed: 08	/02/06			
Chromium	ND	0.000698	mg/L						····	
Arsenic	ND	0.00170	н							
Selenium	ND	0.00300	"							
Silver	ND	0.000405	*							
Cadmium	ND	0.000692	*							
Barium	ND	0.000489								
ead	ND	0.000296	"							
LCS (EH60210-BS1)				Prepared: (	0 <b>8</b> /01/06 A1	nalyzed: 08	/02/06			
Chromium	0.200	0.000698	mg/L	0.200		100	85-115			
Arsenic	0.750	0.00170		0.800		93.8	85-115			
Selenium	0.418	0.00300		0.400		104	85-115			
Silver	0.104	0.000405		0.100		104	85-115			
Cadmium	0.205	0.000692	+	0.200		102	85-115			
Barium	0.204	0.000489	"	0.200		102	85-115			
Lead	1.09	0.000296	Ħ	1.10		99.1	85-115			
CS Dup (EH60210-BSD1)				Prepared: (	08/01/06 Ai	nalyzed: 08	/02/06			
hromium	0.200	0.000698	mg/L	0.200		100	85-115	0.00	20	·····
Arsenic	0.718	0.00170	u	0.800		89.8	85-115	4.36	20	
Selenium	0.401	0.00300		0.400		100	85-115	4.15	20	
Silver	0.101	0.000405	۳	0.100		101	85-115	2.93	20	
Cadmium	0.201	0.000692	"	0.200		100	85-115	1.97	20	
Barium	0.209	0.000489		0.200		104	85-115	2.42	20	
Lead	1.09	0.000296	"	1.10		99.1	85-115	0.00	20	
Calibration Check (EH60210-CCV1)				Prepared: (	08/01/06 A	nalyzed: 08	/02/06			
Chromium	0.0486		mg/L	0.0500		97.2	90-110			
Arsenic	0.0512		"	0.0500		102	90-110			
Selenium	0.0521		"	0.0500		104	90-110			
Silver	0.0513			0.0500		103	90-110			
Cadmium	0.0508		"	0.0500		102	90-110			
Barium	0.0514		"	0.0500		103	90-110			
Lead	0.0486		"	0.0500		97.2	90-110			

Environmental Lab of Texas

# Project: Avalon Hills Project Number: None Given

Project Manager: Mike Griffin

### Total Metals by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EH60210 - EPA 3005A

Matrix Spike (EH60210-MS1)	Sou	rce: 6G31004-	-01	Prepared:	08/01/06 An	alyzed: 0	8/02/06			
Chromium	0.202	0.00174	mg/L	0.200	0.0281	87.0	75-125			
Arsenic	0.767	0.00426		0.800	ND	95.9	75-125			
Selenium	0.248	0.00751	"	0.400	0.00435	60.9	75-125			MS-4
Silver	0.0847	0.00101	n	0.100	0.00436	80.3	75-125			
Cadmium	0.185	0.00173		0.200	ND	92.5	75-125			
Barium	0.206	0.00122		0.200	0.0250	90.5	75-125			
Lead	0.973	0.000740	"	1.10	0.00239	88.2	75-125			
Matrix Spike Dup (EH60210-MSD1)	Sou	rce: 6G31004-	·01	Prepared:	08/01/06 An	alyzed: 0	8/02/06			
Chromium	0.202	0.00174	mg/L	0.200	0.0281	87.0	75-125	0,00	20	
Arsenic	0.769	0.00426	"	0.800	ND	96.1	75-125	0.260	20	
Selenium	0.255	0.00751	m	0.400	0.00435	62.7	75-125	2.78	20	MS-4
Silver	0.0852	0.00101		0.100	0.00436	80.8	75-125	0.589	20	
Cadmium	0.184	0.00173		0.200	ND	92.0	75-125	0.542	20	
Barium	0.206	0.00122	"	0.200	0.0250	90.5	75-125	0.00	20	
Lead	0.978	0.000740		1.10	0.00239	88.7	75-125	0.513	20	
Post Spike (EH60210-PS1)	Sou	rce: 6G31004-	-01	Prepared:	08/01/06 An	alyzed: 0	8/02/06			
elenium	5.66	0.0376	mg/L	5.00	0.00435	113	85-115			
Batch EH60211 - EPA 7470A					<u> </u>					
Blank (EH60211-BLK1)				Prepared:	08/01/06 Ar	nalyzed: 0	8/02/06			
Mercury	ND	0.000250	mg/L							
LCS (EH60211-BS1)				Prepared:	08/01/06 Ar	nalvzed: 0	8/02/06			

LCS (EH60211-BS1)								
Mercury	0.00100	0.000250	mg/L	0.00100	100	85-115	 	



WHOLE EARTH ENVIRONMENTAL
2103 Arbor Cove
Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Total Metals by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

A										
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60211 - EPA 7470A										
LCS Dup (EH60211-BSD1)				Prepared:	08/01/06 Ai	nalyzed: 08	3/02/06			
Mercury	0.000950	0.000250	mg/L	0.00100		95.0	85-115	5.13	20	
Calibration Check (EH60211-CCV1)				Prepared:	08/01/06 Ai	nalyzed: 08	3/02/06			
Mercury	0.00100	· <u>·················</u>	mg/L	0.00100		100	90-110			
Matrix Spike (EH60211-MS1)	Sou	rce: 6G31004	-01	Prepared: (	08/01/06 Ai	nalyzed: 08	3/02/06			
Mercury	0.000790	0.000250	mg/L	0.00100	0.000460	33.0	75-125			PS-1
Post Spike (EH60211-PS1)	Sou	rce: 6G31004	-01	Prepared:	08/01/06 A	nalyzed: 08	3/02/06			
Mercury	0.000980	0.000250	mg/L	0.00100	0.000460	52.0	85-115		·····	PS-1



#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

Blank (EG62611-BLK1)				Prepared: 07/26/06 Analyzed; 07/28/06
Dichlorodifluoromethane	ND	1.00	ug/l	
Chloromethane	ND	1.00	"	
Vinyl chloride	ND	1.00		
Bromomethane	ND	1.00	"	
Chloroethane	ND	1.00	*	
Trichlorofluoromethane	ND	1.00		
l,1-Dichloroethene	ND	1.00	"	
Acetone	ND	5.00	"	
lodomethane	ND	1.00		
Carbon disulfide	ND	1.00	"	
Methylene chloride	ND	1.00	"	
trans-1,2-Dichloroethene	ND	1.00	n	
Methyl tert-butyl ether	ND	1.00		
Acrylonitrile	ND	1.00	н	
1,1-Dichloroethane	ND	1.00	n	
Vinyl acetate	ND	1.00		
cis-1,2-Dichloroethene	ND	1.00	*	
Butanone	ND	1.00		
Bromochloromethane	ND	1.00	"	
Chloroform	ND	1.00	*	
1,1,1-Trichloroethane	ND	1.00	"	
2,2-Dichloropropane	ND	1.00		
Carbon tetrachloride	ND	1.00		
1,1-Dichloropropene	ND	1.00		
1,2-Dichloroethane	ND	1.00	**	
Benzene	ND	1.00	"	
Trichloroethene	ND	1.00	*	
1,2-Dichloropropane	ND	1.00		
Dibromomethane	ND	1.00		
Bromodichloromethane	ND	1.00		
2-Chloroethylvinyl ether	ND	1.00	н	
cis-1,3-Dichloropropene	ND	1.00	н	
4-Methyl-2-pentanone	ND	1.00		
Toluene	ND	1.00	н	
trans-1,3-Dichloropropene	ND	1.00		
1,1,2-Trichloroethane	ND	1.00		
2-Hexanone	ND	1.00	*	
Tetrachloroethene	ND	1.00		
1,3-Dichloropropane	ND	1.00	"	
Dibromochloromethane	ND	1.00		
1,2-Dibromoethane (EDB)	ND	1.00	"	
Chlorobenzene	ND	1.00		

Environmental Lab of Texas

WHOLE EARTH ENVIRONMENTAL
2103 Arbor Cove
Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

Blank (EG62611-BLK1)				Prepared: 07/26/06 Analyzed: 07/28/06
1,1,1,2-Tetrachloroethane	ND	1.00	ug/l	
Ethylbenzene	ND	1.00	*	
m,p-Xylene	ND	1.00		
o-Xylene	ND	1.00	н	
Styrene	ND	1.00		
Bromoform	ND	1.00	"	
trans-1,4-Dichloro-2-butene	ND	1.00	н	
Isopropyibenzene	ND	1.00	*	
1,2,3-Trichloropropane	ND	1.00	۳	
1,1,2,2-Tetrachloroethane	ND	1.00	"	
Bromobenzene	ND	1.00	n	
n-Propylbenzene	ND	1.00		
2-Chiorotoluene	ND	1.00		
1,3,5-Trimethylbenzene	ND	1.00		
4-Chlorotoluene	ND	1.00		
tert-Butylbenzene	ND	1.00	n	
1,2,4-Trimethylbenzene	ND	1.00		
ec-Butylbenzene	ND	1.00	n	
1,3-Dichlorobenzene	ND	1.00	"	
p-Isopropyltoluene	ND	1.00	*	
1,4-Dichlorobenzene	NĎ	1.00		
n-Butylbenzene	ND	1.00		
1,2-Dichlorobenzene	ND	1.00		
1,2-Dibromo-3-chloropropane	ND	1.00	"	
1,2,4-Trichlorobenzene	ND	1.00	*	
Hexachlorobutadiene	ND	1.00	*	
Naphthalene	ND	1.00	"	
1,2,3-Trichlorobenzene	ND	1.00	"	
Surrogate: Dibromofluoromethane	50.1		n	50.0 100 68-129
Surrogate: 1,2-Dichloroethane-d4	45.4		"	50.0 90.8 72-132
Surrogate: Toluene-d8	42.4		"	50.0 84.8 74-118
Surrogate: 4-Bromofluorobenzene	38.0		"	50.0 76.0 65-140

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

LCS (EG62611-BS1)				Prepared: 07/2	6/06 Analyzed: 07	/28/06	
1,1-Dichloroethene	28.2	1.00	ug/l	25.0	113	60-140	
Methylene chloride	23.2	1.00	"	25.0	92.8	60-140	
trans-1,2-Dichloroethene	25.0	1.00	"	25.0	100	60-140	
1,1-Dichloroethane	23.7	1.00	n	25.0	94.8	60-140	
cis-1,2-Dichloroethene	24.8	1.00		25.0	99.2	60-140	
Bromochloromethane	22.9	1.00	n	25.0	91.6	60-140	
Chloroform	24.8	1.00	"	25.0	99.2	60-140	
1,1,1-Trichloroethane	25.3	1.00	"	25.0	101	60-140	
2,2-Dichloropropane	27.3	1.00	11	25.0	109	60-140	
Carbon tetrachloride	23.9	1.00		25.0	95.6	60-140	
1,1-Dichloropropene	23.7	1.00	H	25.0	94.8	60-140	
1,2-Dichloroethane	24.7	1.00	"	25.0	98.8	60-140	
Benzene	22.2	1.00		25.0	88.8	60-140	
Trichloroethene	23.7	1.00		25.0	94.8	60-140	
1,2-Dichloropropane	20.8	1.00	*	25.0	83.2	60-140	
Dibromomethane	22.6	1.00	*	25.0	90.4	60-140	
Bromodichloromethane	22.8	1.00	N	25.0	91.2	60-140	
is-1,3-Dichloropropene	23.5	1.00	11	25.0	94.0	60-140	
Toluene	23.8	1.00		25.0	95,2	60-140	
trans-1,3-Dichloropropene	27.0	1.00	*	25.0	108	60-140	
1,1,2-Trichloroethane	24,4	1.00		25.0	97.6	60-140	
Tetrachloroethene	17.4	1.00	"	25.0	69.6	60-140	
1,3-Dichloropropane	22.5	1.00		25.0	90.0	60-140	
Dibromochloromethane	24.2	1.00	*	25.0	96.8	60-140	
1,2-Dibromoethane (EDB)	25.8	1.00	n	25.0	103	60-140	
Chlorobenzene	25.7	1.00		25.0	103	60-140	
1,1,1,2-Tetrachloroethane	26.3	1.00	"	25.0	105	60-140	
Ethylbenzene	25.2	1.00	"	25.0	101	60-140	
m,p-Xylene	46.0	1.00	"	50.0	92.0	60-140	
o-Xylene	24.8	1.00	"	25.0	99.2	60-140	
Styrene	21.3	1.00		25.0	85.2	60-140	
Bromoform	23.0	1.00		25.0	92.0	60-140	
Isopropylbenzene	27.6	1.00	"	25.0	110	60-140	
1,1,2,2-Tetrachloroethane	21.9	1.00		25.0	87.6	60-140	
Bromobenzene	22.6	1.00	*	25.0	90.4	60-140	
n-Propylbenzene	23.5	1.00		25.0	94.0	60-140	
2-Chlorotoluene	23.4	1.00	"	25.0	93.6	60-140	
1,3,5-Trimethylbenzene	24.3	1.00	"	25.0	97.2	60-140	
4-Chlorotoluene	24.0	1.00		25.0	96.0	60-140	
tert-Butylbenzene	25.4	1.00	"	25.0	102	60-140	
1.2.4 Trimethylbenzene							
1,2,4-11Intentyrochizene	23.8	1.00	"	25.0	95.2	60-140	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety.

received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

	······					·				v.
Analysis	D	Reporting	T for the	Spike	Source	9/DEC	%REC	ריחס	RPD	Made
Глианую	Kesult	Limit	Units	Level	Result	701CEC		KCD		Note
Batch EG62611 - EPA 5030C (GCMS)								<u></u>		
LCS (EG62611-BS1)				Prepared: (	07/26/06 A	nalyzed: 07	/28/06			
1,3-Dichlorobenzene	26.5	1.00	ug/l	25.0		106	60-140			
p-Isopropyltoluene	26.0	1.00		25.0		104	60-140			
1,4-Dichlorobenzene	24.9	1.00	"	25.0		99.6	60-140			
n-Butylbenzene	24.4	1.00	"	25.0		97.6	60-140			
1,2-Dichlorobenzene	26.3	1.00		25.0		105	60-140			
1,2-Dibromo-3-chloropropane	22.2	1.00	"	25.0		88.8	60-140			
1,2,4-Trichlorobenzene	27.8	1.00	"	25.0		111	60-140			
Hexachlorobutadiene	29.4	1.00	"	25.0		118	60-140			
Naphthalene	23.2	1.00	"	25.0		92.8	60-140			
1,2,3-Trichlorobenzene	27.2	1.00	"	25.0		109	60-140			
Surrogate: Dibromofluoromethane	46.1		п	50.0		92.2	68-129			
Surrogate: 1,2-Dichloroethane-d4	45.2		"	50.0		90.4	72-132			
Surrogate: Toluene-d8	43.5		n	50.0		87.0	74-118			
Surrogate: 4-Bromofluorobenzene	39.8		"	50.0		79.6	65-140			
Calibration Check (EG62611-CCV1)				Prepared:	07/26/06 A	nalyzed: 07	/28/06			
Vinyl chloride	42.0		ug/l	50.0		84.0	70-130			
, 1-Dichloroethene	50.2			50.0		100	70-130			
Chloroform	43.7		"	50.0		87.4	70-130			
1,2-Dichloropropane	36.8			50.0		73.6	70-130			
Toluene	40.2		•	50.0		80.4	70-130			
Ethylbenzene	41.2		n	50.0		82.4	70-130			
Surrogate: Dibromofluoromethane	46.0		H	50.0		92.0	68-129			
Surrogate: 1,2-Dichloroethane-d4	41.9			50.0		83.8	72-132			
Surrogate: Toluene-d8	43.7			50.0		87.4	74-118			
Surrogate: 4-Bromofluorobenzene	38.9			50.0		77.8	65-140			
Matrix Spike (EG62611-MS1)	Sou	rce: 6G24001	-05	Prepared:	07/26/06 A	nalyzed: 08	3/03/06			
1,1-Dichloroethene	27.7	1.00	ug/l	25.0	ND	111	61-145		<u></u>	
Methylene chloride	24.0	1.00		25.0	ND	96.0	60-140			
trans-1,2-Dichloroethene	25.0	1.00	-	25.0	ND	100	60-140			
1,1-Dichloroethane	24.5	1.00		25.0	ND	98.0	60-140			
cis-1,2-Dichloroethene	26.1	1.00	"	25.0	ND	104	60-140			
Bromochloromethane	24.7	1.00		25.0	ND	98.8	60-140			
Chloroform	26.2	1.00		25.0	ND	105	60-140			
1,1,1-Trichloroethane	24.7	1.00		25.0	ND	98.8	60-140			
2,2-Dichloropropane	22.1	1.00		25.0	ND	88.4	60-140			
Carbon tetrachloride	22.2	1.00		25.0	ND	88.8	60-140			

Environmental Lab of Texas

1,1-Dichloropropene

1,2-Dichloroethane

Trichloroethene

1,2-Dichloropropane

Benzene

The results in this report apply to the samples analyzed in accordance with the samples

85.6

99.6

85.2

90.4

81.6

60-140

60-140

76-127

71-120

60-140

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25.0

25.0

25.0

25.0

25.0

ND

ND

ND

ND

ND

21.4

24.9

21.3

22.6

20.4

1.00

1.00

1.00

1.00

1.00

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

Matrix Spike (EG62611-MS1)	Source: 6G	24001-0	5	Prepared: 0'	7/26/06 An	alyzed: 08	/03/06
Dibromomethane	22.4	1.00	ug/l	25.0	ND	89.6	60-140
Bromodichloromethane	22.9	1.00		25.0	ND	91.6	60-140
cis-1,3-Dichloropropene	22.9	1.00	"	25.0	ND	91.6	60-140
Toluene	22.8	1.00	•	25.0	ND	91.2	76-125
trans-1,3-Dichloropropene	25.4	1.00	*1	25.0	ND	102	60-140
1,1,2-Trichloroethane	24.7	1.00		25.0	ND	<b>98.8</b>	60-140
Tetrachloroethene	15.9	1.00	**	25.0	ND	63.6	60-140
1,3-Dichloropropane	22.5	1.00		25.0	ND	90.0	60-140
Dibromochloromethane	24.4	1.00	۳	25.0	ND	97.6	60-140
1,2-Dibromoethane (EDB)	25.6	1.00		25.0	ND	102	60-140
Chlorobenzene	25.1	1.00		25.0	ND	100	75-130
1,1,1,2-Tetrachloroethane	26.0	1.00		25.0	ND	104	60-140
Ethylbenzene	23.6	1.00	#	25.0	ND	94.4	60-140
tn,p-Xylene	43.0	1.00		50.0	ND	86.0	60-140
o-Xylene	23.7	1.00		25.0	ND	94.8	60-140
Styrene	15.0	1.00		25.0	ND	60.0	60-140
Bromoform	22.7	1.00		25.0	NÐ	90.8	60-140
lopropylbenzene	26.1	1.00		25.0	ND	104	60-140
1,1,2,2-Tetrachloroethane	22.0	1.00	*	25.0	ND	88.0	60-140
Bromobenzene	21.6	1.00		25.0	ND	86.4	60-140
n-Propylbenzene	21.1	1.00		25.0	ND	84.4	60-140
2-Chlorotoluene	22.2	1.00		25.0	ND	88.8	60-140
1,3,5-Trimethylbenzene	22.6	1.00	•	25.0	ND	90.4	60-140
4-Chlorotoluene	22.2	1.00		25.0	ND	88.8	60-140
tert-Butylbenzene	25.1	1.00		25.0	ND	100	60-140
1,2,4-Trimethylbenzene	21.5	1.00		25.0	ND	86.0	60-140
sec-Butylbenzene	21.1	1.00		25.0	ND	84.4	60-140
1,3-Dichlorobenzene	24.3	1.00		25.0	ND	97.2	60-140
p-Isopropyltoluene	24.4	1.00		25.0	ND	97.6	60-140
1,4-Dichlorobenzene	24.8	1.00		25.0	ND	99.2	60-140
n-Butylbenzene	22.1	1.00		25.0	ND	88.4	60-140
1,2-Dichlorobenzene	25.7	1.00		25.0	ND	103	60-140
1,2-Dibromo-3-chloropropane	22.0	1.00	"	25.0	ND	88,0	60-140
1,2,4-Trichlorobenzene	26.8	1.00		25.0	ND	107	60-140
Hexachlorobutadiene	26.5	1.00	"	25.0	ND	106	60-140
Naphthalene	23.4	1.00	"	25.0	ND	93.6	60-140
1,2,3-Trichlorobenzene	27.3	1.00	Ħ	25.0	ND	109	60-140
Surrogate: Dibromofluoromethane	50.5		n	50.0		101	68-129
Surrogate: 1,2-Dichloroethane-d4	45.9		"	50.0		91.8	72-132
Surrogate: Toluene-d8	43.2		"	50.0		86.4	74-118
Surrogate: 4-Bromofluorobenzene	40.2		"	50.0		80.4	65-140 ·

Environmental Lab of Texas

# Project: Avalon Hills Project Number: None Given

Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

<b>F</b>										
		Reporting		Spike	Source		%REC		RPD	ł
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

11-Decharcemene200100ug/l200ND11.611.46.14454.901411-Decharcemene12.21.00-7250ND98.86.1401.2120trans-12-Dicharcecheme23.81.00-7250ND98.86.1402.5020trans-12-Dicharcecheme23.81.00-7250ND98.86.1403.5120Renonshizementame23.51.00-7250ND91.06.1404.5420Choordem23.51.00-7250ND91.06.1404.54202.1-Dichorochane23.61.00-7250ND95.66.1407.3202.1-Dichorochane23.71.00-7250ND95.66.1406.33202.1-Dichorochane23.71.00-7250ND95.66.1406.34202.1-Dichorochane23.71.00-7250ND95.66.1406.34202.1-Dichorochane23.71.00-7250ND95.66.1406.34202.1-Dichorochane23.71.00-7250ND95.66.1406.34202.1-Dichorochane23.71.00-7250ND95.66.1401.35202.1-Dichorochane23.71.00-7250ND95.66.1401.3520<	Matrix Spike Dup (EG62611-MSD1)	Source: 60	524001-05	5	Prepared: 07	/26/06 An	alyzed: 08	/03/06		
Methylen albride12.210.0125.0ND97.860-1403.1012.012.01.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1,1-Dichloroethene	29.0	1.00	ug/l	25.0	ND	116	61-145	4.59	14
trans-1.2-bickhorechane21,010,010,010,082,060-1402.90201,1-Dickhorechane23,510010601402.9020Bronnschkorechane23,510010601404.8120Choroform23,510010601404.81201,1-Drickhorechane23,510010601404.81202,2-Dickhorechane24,610010601404.94202,2-Dickhorechane24,61001025,0ND94,6601404.34201,1-Drickhorechane24,61001025,0ND94,8601404.34201,1-Drickhorechane24,71001025,0ND94,8601404.34201,1-Drickhorechane20,41001025,0ND94,8601401.35201,1-Drickhorechane20,41001025,0ND84,661401.32201,1-Drickhorechane20,41001025,0ND84,661401.32201,1-Drickhorechane21,41001025,0ND84,661401.32201,1-Drickhorechane21,41001025,0ND84,661401.32201,1-Drickhorechane21,41001025,0ND84,661401.32201,1-Drickhorechane25	Methylene chloride	23.2	1.00		25.0	ND	92.8	60-140	3.39	20
1,1-Dialborentame2,81,00*2,00ND9,200,0402,300,0Bremochlorenchane2,521,00*2,50ND9,006,1404,5820Cheroform2,531,00*2,50ND1016,1404,58201,1-Trichlorenchane2,531,00*2,50ND9,416,1404,58202,2-Dialborgroppac2,641,00*2,50ND9,426,1404,53201,2-Dialborgroppac2,811,00*2,50ND9,456,1404,53201,2-Dialborgroppac2,141,00*2,50ND9,456,1404,53201,2-Dialborgroppac2,141,00*2,50ND8,456,1401,32201,2-Dialborgroppac2,141,00*2,50ND8,456,1401,32201,2-Dialborgroppac2,141,00*2,50ND8,456,1401,32201,2-Dialborgroppac2,261,00*2,50ND9,456,1401,32201,2-Dialborgroppac2,261,00*2,50ND9,456,1401,32201,2-Dialborgroppac2,261,00*2,50ND9,456,1401,31201,1-Dialborgroppac2,41,00*2,50ND9,456,1401,3120<	trans-1,2-Dichloroethene	24.7	1.00	•	25.0	ND	98.8	60-140	1.21	20
cir.1.2-bicklorectheme251.002250ND94064.104.912.01Brancacklorenehane2.531.002250ND10164.103.001.1.1-Ticklorechane2.531.002250ND91364.101.0002.2-bicklorepropene2.61.002250ND95.664.107.8002.2-bicklorepropene2.81.002250ND95.664.107.801.1-bicklorechane2.71.002250ND95.664.104.902.2-bicklorepropene2.81.002250ND85.676.120.468111.1-bicklorechane2.01.002.50ND8.1660.100002.2-bicklorepropene2.41.0022.50ND8.460.101.3201.1-bicklorepropene2.61.002.50ND8.460.101.3201.2-bicklorepropene2.61.002.50ND9.460.101.3201.1-bicklorepropene2.61.002.50ND9.6460.101.1201.1-bicklorepropene2.81.002.50ND9.6460.101.1201.1-bicklorepropene2.81.002.50ND9.6460.102.0201.1-bicklorepropene2.8 </td <td>1,1-Dichloroethane</td> <td>23.8</td> <td>1.00</td> <td>Ħ</td> <td>25.0</td> <td>ND</td> <td>95.2</td> <td>60-140</td> <td>2.90</td> <td>20</td>	1,1-Dichloroethane	23.8	1.00	Ħ	25.0	ND	95.2	60-140	2.90	20
Beamselsementance251.00-250ND94060-104.9820Chioraform2531.00-250ND10160-100.201,1-Trichlovershane2.61.00-250ND9.460-100.202,2-Dichloropropane2.61.00-2.50ND9.460-100.201,1-Dichloropropane2.81.00-2.50ND9.260-100.201,2-Dichloropropane2.141.00-2.50ND8.4560-140.43.201,2-Dichloropropane2.141.00-2.50ND8.1660-140.20.20Dirbonomschane2.141.00-2.50ND8.1660-140.12.20Dirbonomschane2.141.00-2.50ND9.460-140.12.20Dirbonomschane2.141.00-2.50ND9.460-140.12.20Notoschane2.141.00-2.50ND9.460-140.12.20Notoschane2.141.00-2.50ND9.460-140.13.20Notoschane2.141.00-2.50ND9.460-140.14.20Notoschane2.141.00-2.50ND9.460-140.13.20Notoschane2.511.00-2.50ND	cis-1,2-Dichloroethene	25.2	1.00		25.0	ND	101	60-140	3.51	20
Choordering25.31.00*25.0NDND10160-1403.50201,1,1-Trichlorcerhane25.81.00*25.0ND98.460-1407.3820Carbon ternshloride25.91.00*25.0ND98.460-1407.38201,1-Dichlorcyopane22.81.00*25.0ND91.860-1407.38201,1-Dichlorcyopane23.71.00*25.0ND91.860-1407.38201,2-Dichlorcyopane23.01.00*25.0ND94.860-1407.35141,2-Dichlorcyopane23.01.00*25.0ND94.860-1401.3220Normodichloromethane23.01.00*25.0ND94.460-1401.3220Normodichloromethane22.61.00*25.0ND94.460-1401.3220Normodichloromethane22.61.00*25.0ND94.460-1401.3220Normodichloromethane24.11.00*25.0ND94.460-1401.3220Normodichloromethane24.11.00*25.0ND94.460-1401.3220Normodichloromethane24.11.00*25.0ND94.460-1401.3220Normodichloromethane25.11.00*25.0ND<	Bromochloromethane	23.5	1.00	•	25.0	ND	94.0	60-140	4.98	20
1,1,1-Trichlorophane281,00*25.0NDND98.460-1407.38202,3-Dichloropropane23.9100*25.0ND95.660-1407.38201,1-Dichloropropane22.8100*25.0ND91.260-1404.34201,2-Dichloropropane22.8100*25.0ND81.660-1404.34201,2-Dichloropropane21.4100*25.0ND81.660-1401.3201,2-Dichloropropane21.4100*25.0ND81.660-1401.3220Dichonopropane22.610.0*25.0ND81.660-1401.3220Dichonopropane22.610.0*25.0ND81.460-1401.3220Dichonopropane22.610.0*25.0ND94.460-1401.3220Dichonopropane23.010.0*25.0ND94.460-1401.3220Taina-1-Dichoropropane23.010.0*25.0ND94.460-1401.3220Taina-1-Dichoropropane23.010.0*25.0ND94.460-1401.3220Taina-1-Dichoropropane24.110.0*25.0ND95.460-1401.31201,2-Dichoropropane25.110.0*25.0ND96.8	Chloroform	25.3	1.00	"	25.0	ND	101	60-140	3.50	20
22-Dickloorpopane24.61.00"25.0ND98.460-1010.720Carbon ternshlorde23.91.00-25.0ND95.660-1407.38201.1-Dickloorpopane23.71.00'25.0ND94.860-1404.9420Razane21.41.00'25.0ND94.876-1270.46811Tricklorochane23.01.00'25.0ND85.667-1400.0020Dikromoschane23.01.00'25.0ND88.460-1401.3220Dikromoschane26.61.00'25.0ND90.460-1401.3220Endockpoppene26.61.00'25.0ND90.460-1401.3220Endockporpopene26.71.00'25.0ND90.460-1401.3220Takas1.30-Likoorpopene26.71.00'25.0ND90.460-1401.3220Takas1.30-Likoorpopene27.71.00'25.0ND90.460-1401.32201.3-Dickloorpopane26.71.00'25.0ND90.460-1401.32201.3-Dickloorpopane26.71.00'25.0ND91.660-1401.3520Dikromoschare25.21.00'25.0ND95.860-1401.53<	1,1,1-Trichloroethane	25.8	1.00		25.0	ND	103	60-140	4.36	20
Carbon ternahlarida23.91.00*25.0ND95.66.1407.38201.1Dichloropropene23.71.00*25.0ND91.260-1406.3320Lobchlorochane23.71.00*25.0ND95.860-1406.3420Barzaen21.41.00*25.0ND85.660-1400.0020Trichlorochane20.41.00*25.0ND85.660-1401.3220Dibromosthane22.11.00*25.0ND85.460-1401.3220Intradictorpropene26.61.00*25.0ND90.460-1401.3220Touse23.01.00*25.0ND90.460-1401.3220Touse23.01.00*25.0ND90.460-1401.3220Touse23.01.00*25.0ND90.460-1401.3220Touse23.01.00*25.0ND96.460-1404.3120Touse23.11.00*25.0ND96.460-1404.3120Touse23.11.00*25.0ND96.860-1403.1620Touse23.11.00*25.0ND96.860-1403.1620Ly-Toritorochane24.21.00*25.0<	2,2-Dichloropropane	24.6	1.00	*	25.0	ND	98.4	60-140	10.7	20
1,1-Dickloropopane22.81,00*25.0ND91.26.1006.33201,2-Dickloropopane21.41,00*25.0ND85.667-1270.6481Tricklorophane23.01,00*25.0ND81.667-1270.64811,2-Dickloropopane23.01,00*25.0ND81.667-1270.75141,2-Dickloropopane23.01,00*25.0ND81.667-1400.0020Dibromonethane21.11,00*25.0ND81.667-1401.3220In-13-Dickloropopane26.01,00*25.0ND90.467-101.3220Inus-13-Dickloropopane23.01,00*25.0ND90.467-102020Tousae23.01,00*25.0ND90.467-10202020Tousae23.11,00*25.0ND96.466-1402.462020Dibromonethane24.21,00*25.0ND96.466-1402.620Dibromonethane24.21,00*25.0ND96.866-1403.620Dibromonethane24.21,00*25.0ND96.866-1403.620Dibromonethane25.11,00*25.0ND96.866-1403.620 <td>Carbon tetrachloride</td> <td>23.9</td> <td>1.00</td> <td></td> <td>25.0</td> <td>ND</td> <td>95.6</td> <td>60-140</td> <td>7.38</td> <td>20</td>	Carbon tetrachloride	23.9	1.00		25.0	ND	95.6	60-140	7.38	20
1.2-Dickloreethane23.71.00"25.0ND94.860-1404.0020Banzane21.41.00"25.0ND85.676-1270.46811Trickloreethane20.41.00"25.0ND81.660-1400.0020Dibromoethane22.11.00"25.0ND84.460-1401.3220Bromoethane22.61.00"25.0ND90.460-1401.3220Tolucore23.01.00"25.0ND90.460-1401.3220Tolucore23.01.00"25.0ND90.460-1401.3220Tolucore23.01.00"25.0ND90.460-1401.3220Tolucore23.01.00"25.0ND64.460-1401.3220Tolucore23.01.00"25.0ND64.460-1401.4320Totachorethane24.11.00"25.0ND64.460-1402.420Totachorethane24.21.00"25.0ND64.460-1401.820Totachorethane25.21.00"25.0ND64.460-1401.820Totachorethane25.21.00"25.0ND10175.1300.398131,2-Trichorechane25.21.00	1,1-Dichloropropene	22.8	1.00	Ħ	25.0	ND	91.2	60-140	6.33	20
Benzene21.41.00*25.0ND85.67-1270.46811Trichloroptene23.01.00*25.0ND81.660-1400.0020Dibromonethane22.11.00*25.0ND84.460-1401.3220a-1.3-Dichloropropene22.61.00*25.0ND90.460-1401.3220a-1.3-Dichloropropene22.61.00*25.0ND90.460-1401.3220Tenna-1-3-Dichloropropene25.71.00*25.0ND90.460-1401.3220Tenna-1-3-Dichloropropene25.71.00*25.0ND60.461.401.32201,1.2-Trichloroethane25.71.00*25.0ND66.460-1402.40201,2-Dichloropropane21.81.00*25.0ND66.460-1404.31201,2-Dichloropropane21.81.00*25.0ND61.860-1404.31201,2-Dichloropropane25.21.00*25.0ND96.860-1401.8201,2-Dichloropropane25.21.00*25.0ND96.860-1401.8201,2-Dichloropropane25.21.00*25.0ND96.860-1401.8201,2-Dichloropropane25.21.00*25.0ND97.2	1,2-Dichloroethane	23.7	1.00	n	25.0	ND	94.8	60-140	4.94	20
Tricklorechene   23.0   1.00   *   25.0   ND   92.0   71-120   1.75   14     1.2-Dicklorepropane   20.4   1.00   *   25.0   ND   81.6   60-140   1.32   20     Bromodickloremethane   22.6   1.00   *   25.0   ND   92.4   60-140   1.32   20     Follomethane   22.6   1.00   *   25.0   ND   92.0   76-125   0.873   13     Follomethane   22.6   1.00   *   25.0   ND   92.0   76-125   0.873   13     Tricklorepropene   23.0   1.00   *   25.0   ND   96.4   60-140   1.32   20     1,12-Tricklorepropene   24.1   1.00   *   25.0   ND   66.4   60.140   4.31   20     1,3-Dicklorepropene   21.8   1.00   *   25.0   ND   101   66.140   1.32   20     Diversorchiremethane   21.8   1.00   *   25.0   ND   101   60.140   1.32   20	Benzene	21.4	1.00		25.0	ND	85.6	76-127	0.468	11
1.2-Dickloroprepane   20.4   1.00   "   25.0   ND   81.6   60-140   0.00   20     Dhromomethane   22.1   1.00   "   25.0   ND   84.4   60-140   1.32   20     Promodichloroprepene   22.6   1.00   "   25.0   ND   90.4   60-140   1.32   20     Toluzne   23.0   1.00   "   25.0   ND   92.0   76-125   0.873   13     Tarns.1-3-Dichloroprepene   25.7   1.00   "   25.0   ND   60-140   1.17   20     1,1.2-Trichlorochtne   16.6   1.00   "   25.0   ND   66.4   0.823   20     1,3-Dichloropropane   21.8   1.00   "   25.0   ND   81.6   60-140   4.31   20     Diromochloromethane (EDB)   25.3   1.00   "   25.0   ND   96.8   60-140   1.32   20     Li/L2-Tertachloroethane   25.4   1.00   "   25.0   ND   96.4   60-140   2.3   20	Trichloroethene	23.0	1.00		25.0	ND	92.0	71-120	1.75	14
Dibromomethane     22,1     1,00     '     25.0     ND     88.4     60-140     1.35     20       bromodiciboromethane     22.6     1,00     '     25.0     ND     90.4     60-140     1.32     20       br-1,3-Dichloropropene     22.6     1,00     '     25.0     ND     90.4     60-140     1.32     20       truns-1,3-Dichloropropene     23.0     1,00     '     25.0     ND     96.4     60-140     2.6     20       1,1,2-Trichlorocthane     24.1     1.00     '     25.0     ND     96.4     60-140     2.6     20       1,3-Dichloropropane     21.8     1.00     '     25.0     ND     87.4     60-140     8.22     20       1,2-Dirohoropropane     21.8     1.00     '     25.0     ND     96.8     60-140     8.23     20       1,2-Dirohoropropane     25.2     1.00     '     25.0     ND     101     75.13     0.33     20       LiA-Diroborochane (EDB)	1,2-Dichloropropane	20.4	1.00		25.0	ND	81.6	60-140	0.00	20
Bromodichloromethane   22.6   1.00   2.50   ND   90.4   60-140   1.32   20     In-1.3-Dichloropropene   22.6   1.00   25.0   ND   90.4   60-140   1.32   20     Toluene   23.0   1.00   25.0   ND   90.4   60-140   1.32   20     Inan-1.3-Dichloropropene   23.0   1.00   25.0   ND   90.4   60-140   2.4   20     1,12-Trichloroethane   24.1   1.00   25.0   ND   96.4   60-140   4.31   20     1,3-Dichloropropane   21.8   1.00   25.0   ND   66.4   60-140   4.31   20     1,3-Dichloropropane   21.8   1.00   25.0   ND   66.4   60-140   4.31   20     Dibromochromethane   25.2   1.00   2   25.0   ND   101   60-140   1.18   20     Dibromochromethane   25.2   1.00   2   25.0   ND   101   63-140   7.00   20     1,1,1.2-Tertachoroethane   25.2   1.00	Dibromomethane	22.1	1.00	n	25.0	ND	88.4	60-140	1.35	20
1.3-Dichloropropene   22.6   1.00   "   25.0   ND   90.4   60-140   1.32   20     Tolune   23.0   1.00   "   25.0   ND   92.0   76-125   0.87.3   1.3     trans-1.3-Dichloropropene   25.7   1.00   "   25.0   ND   96.4   60-140   2.4   20     1,1.2-Trichloroethane   16.6   1.00   "   25.0   ND   96.4   60-140   4.31   20     1.3-Dichloroptopanc   21.8   1.00   "   25.0   ND   96.8   60-140   0.823   20     1.3-Dichloroptopanc   25.3   1.00   "   25.0   ND   101   75.130   0.398   13     1.4-Diroboromethane (EDB)   25.3   1.00   "   25.0   ND   101   75.130   0.398   13     1.1,1.2-Terrachloroethane   26.4   1.00   "   25.0   ND   101   75.130   0.398   13     1.1,1.2-Terrachloroethane   26.4   1.00   "   25.0   ND   106   60-140	Bromodichloromethane	22.6	1.00	n	25.0	ND	90.4	60-140	1.32	20
Toluane23.01.00*25.0ND92.076-1250.87313trans.1-> Dichloropropen25.71.00*25.9ND10.360-1401.17201,1,2-Trichlorochane24.11.00*25.0ND86.460-1404.31201,3-Dichloropropan16.61.01*25.0ND87.260-1404.31201,3-Dichloropropan24.21.00*25.0ND87.860-1400.823201,1-Dictomochane (EDB)25.31.00*25.0ND10.161-1401.820Chlorobazzne24.21.00*25.0ND10.161-1401.820L1,1-Zretrachlorochane25.21.00*25.0ND10.161-1401.820Chlorobazzne24.21.00*25.0ND10.161-1401.820L1,1-Zretrachlorochane24.21.00*25.0ND10.161-1401.820Styme24.21.00*25.0ND96.861-1402.502020Styme24.21.00*25.0ND96.861-1407.820Styme24.21.00*25.0ND96.861-1407.820Styme25.21.00*25.0ND96.861-1407.820Styme <td>is-1,3-Dichloropropene</td> <td>22.6</td> <td>1.00</td> <td>11</td> <td>25.0</td> <td>ND</td> <td>90.4</td> <td>60-140</td> <td>1.32</td> <td>20</td>	is-1,3-Dichloropropene	22.6	1.00	11	25.0	ND	90.4	60-140	1.32	20
trans-13-Dicklaropropene25.71.00'25.0ND10360-1001.17201,1,2-Trickloroethane24.11.00'25.0ND96.460-1002.4620Tetrachloroethane16.61.00'25.0ND66.460-1002.46201,3-Dichloropropane21.81.00'25.0ND87.260-1003.1620Dibromochloroentane (EDB)25.31.00'25.0ND10160-1001.18201,1,1-Zetrackloroethane26.41.00'25.0ND10160-1401.3320Ethylbenzene26.41.00'25.0ND10160-1401.5320Lyl,yl-Zetrackloroethane26.41.00'25.0ND88.060-1402.5120Mp-Xylene24.31.00'25.0ND88.060-1402.5020Np-Xylene24.31.00'25.0ND88.060-1402.5020Styrene1621.00'25.0ND88.060-1407.6920Styrene25.71.00'25.0ND91.660-1407.6920Styrene25.71.00'25.0ND91.660-1407.6920Ingrowohrman25.71.00'25.0ND91.660-1407.6420 <td< td=""><td>Toluene</td><td>23.0</td><td>1.00</td><td></td><td>25.0</td><td>ND</td><td>92.0</td><td>76-125</td><td>0.873</td><td>13</td></td<>	Toluene	23.0	1.00		25.0	ND	92.0	76-125	0.873	13
1,1,2-Trichloroethane24.11.0025.0ND96.460-1402.4620Tetrachloroethane16.61.0025.0ND66.460-1404.31201,3-Dichloropropane21.81.0025.0ND95.860-1408.2320Dibromoethane (EDB)25.31.0025.0ND96.860-1401.820Chlorobenzene25.21.0025.0ND10160-1401.820Chlorobenzene25.21.0025.0ND10660-1401.5320Ly,1,2-Tetrachloroethane26.41.0025.0ND10660-1401.5320Ehylbenzene24.21.0025.0ND96.860-1402.5120m,p-Xylene44.01.0025.0ND96.860-1402.5020c>Xylene4.31.0025.0ND97.260-1402.5020Styrene16.21.0025.0ND97.260-1407.6920Styrene25.21.0025.0ND91.660-1407.6920Ingrophlenzene27.91.0025.0ND91.660-1407.6920Ingrophlenzene27.91.0025.0ND91.660-1406.6720I,1,2-Tetrachloroethane23.61.0025.0ND91.660-1406.6420I,1,2-Tetrachlor	trans-1,3-Dichloropropene	25.7	1.00	=	25.0	ND	103	60-140	1.17	20
Tetrachloropehane   16.6   1.00   *   25.0   ND   66.4   60.10   4.31   20     1,3-Dichloropropane   21.8   1.00   *   25.0   ND   87.2   60.10   0.823   20     Dibronochloromethane   24.2   1.00   *   25.0   ND   96.8   60.10   0.823   20     1,1-Dibronochloromethane (EDB)   25.3   1.00   *   25.0   ND   101   60.140   1.18   20     Chlorobarzane   25.2   1.00   *   25.0   ND   106   60.140   1.53   20     Li,1,2-Tetrachlorochane   26.4   1.00   *   25.0   ND   96.8   60.140   2.50   20     mp-Xylene   44.0   1.00   *   50.0   ND   96.8   60.140   2.50   20     Syrene   16.2   1.00   *   25.0   ND   97.2   60.140   8.85   20     Jopropylbenzene   25.0   ND   112   60.140   1.35   20     Syrene   25.0	1,1,2-Trichloroethane	24.1	1.00		25.0	ND	96.4	60-140	2.46	20
1,3-Dichloropropane21.81.0025.0ND87.260-1403.1620Dibromochloromethane24.21.0025.0ND96.860-1400.823201,2-Dibromoethane (EDB)25.31.0025.0ND10160-1401.1820Chlorobenzene25.21.0025.0ND10175-1300.398131,1,2-Tetrachloroethane26.41.0025.0ND10660-1401.5320Ethylbenzene24.21.0025.0ND96.860-1402.5120n.p-Xylene24.31.0025.0ND96.860-1402.5020o-Xylene24.21.0025.0ND97.260-1402.5020Styrene16.21.0025.0ND97.260-1402.5020Styrene25.51.0025.0ND90.060-1402.5020Styrene25.21.0025.0ND90.060-1402.5420Isopropylbenzene27.91.0025.0ND91.660-1403.5420Isopropylbenzene23.11.0025.0ND91.660-1405.8420Isopropylbenzene23.71.0025.0ND91.660-1405.8420Isopropylbenzene25.71.0025.0ND94.860-1405.8420Isopropylbenzene </td <td>Tetrachloroethene</td> <td>16.6</td> <td>1.00</td> <td></td> <td>25.0</td> <td>ND</td> <td>66.4</td> <td>60-140</td> <td>4.31</td> <td>20</td>	Tetrachloroethene	16.6	1.00		25.0	ND	66.4	60-140	4.31	20
Dibromochloromethane24.21.00*25.0ND96.860-1400.823201,2-Dibromocthane (EDB)25.31.00*25.0ND10160-1401.1820Chlorobenzene25.21.00*25.0ND10175-1300.398131,1,1.2-Tetrachloroethane26.41.00*25.0ND10660-1401.5320Ethylbenzene24.21.00*25.0ND96.860-1402.5120m.p-Xylene44.01.00*50.0ND96.860-1402.5020o-Xylene24.31.00*50.0ND96.860-1402.5020o-Xylene16.21.00*25.0ND96.860-1402.5020Styrene16.21.00*25.0ND96.860-1402.6020Styrene22.51.00*25.0ND90.060-1408.8520Isopropylbenzene22.91.00*25.0ND91.660-1408.84201,1,2.2-Tetrachloroethane22.91.00*25.0ND91.660-1405.84201,2,2-Tetrachloroethane23.71.00*25.0ND91.660-1405.84201,3.5-Trimethylbenzene23.81.00*25.0ND91.660-1405.8420	1,3-Dichloropropane	21.8	1.00		25.0	ND	87.2	60-140	3.16	20
1,2-Dibromoethane (EDB)25.31.00"25.0ND10160-1401.1820Chlorobenzene25.21.00"25.0ND10175-1300.398131,1,2-Tetrachloroethane26.41.00"25.0ND10660-1401.5320Ethylbenzene24.21.00"25.0ND96.860-1402.5120m,p-Xylene24.31.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND90.060-1402.5020Styrene16.21.00"25.0ND90.060-1407.6920Isopropylbenzene22.51.00"25.0ND90.060-1408.8520Isopropylbenzene27.91.00"25.0ND91.660-1408.8520I,1,2-Tetrachloroethane22.31.00"25.0ND91.660-1408.8420I,1,2-Tetrachloroethane23.71.00"25.0ND91.660-1408.8420I,1,2-Tetrachloroethane23.71.00"25.0ND91.660-1405.8420I,1,2-Tetrachloroethane23.71.00"25.0ND91.660-1405.8420 <td>Dibromochloromethane</td> <td>24.2</td> <td>1.00</td> <td>"</td> <td>25.0</td> <td>ND</td> <td>96.8</td> <td>60-140</td> <td>0,823</td> <td>20</td>	Dibromochloromethane	24.2	1.00	"	25.0	ND	96.8	60-140	0,823	20
Chlorobenzene   25.2   1.00   "   25.0   ND   101   75-130   0.398   13     l,l,l.2-Tetrachloroethane   26.4   1.00   "   25.0   ND   166   60-140   1.53   20     Ethylbenzene   24.2   1.00   "   25.0   ND   96.8   60-140   2.51   20     n.p-Xylene   44.0   1.00   "   50.0   ND   97.2   60-140   2.50   20     o-Xylene   16.2   1.00   "   25.0   ND   64.8   60-140   7.69   20     Styrene   16.2   1.00   "   25.0   ND   64.8   60-140   7.69   20     Isopropylbenzene   25.5   1.00   "   25.0   ND   90.0   60-140   6.67   20     Isopropylbenzene   22.3   1.00   "   25.0   ND   91.6   60-140   5.84   20     I,1,2-Tetrachloroethane   22.9   1.00   "   25.0   ND   91.6   60-140   5.84   20	1,2-Dibromoethane (EDB)	25.3	1.00	*	25.0	ND	101	60-140	1.18	20
1,1,2-Tetrachloroethane26.41.00"25.0ND10660-1401.5320Ethylbenzene24.21.00"25.0ND96.860-1402.5120m,p-Xylene44.01.00"50.0ND88.060-1402.3020o-Xylene24.31.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND64.860-1407.6920Bromoform22.51.00"25.0ND90.060-1400.88520Isopropylbenzene27.91.00"25.0ND11260-1406.6720I,1,2,2-Tetrachloroethane22.31.00"25.0ND12.660-1405.8420I,2,2-Tetrachloroethane22.91.00"25.0ND91.660-1405.8420I-Propylbenzene22.61.00"25.0ND91.660-1405.8420I-Propylbenzene22.61.00"25.0ND94.860-1405.8420I-Stronobenzene23.71.00"25.0ND95.260-1405.1720I-Stronobenzene23.81.00"25.0ND91.660-1405.1720I-Stronobenzene25.51.00"25.0ND92.460-1405.1720I-S	Chlorobenzene	25.2	1.00		25.0	ND	101	75-130	0.398	13
Ethylbenzene24.21.00"25.0ND96.860-1402.5120m,p-Xylene44.01.00"50.0ND88.060-1402.3020o-Xylene24.31.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND64.860-1407.6920Bromoform22.51.00"25.0ND90.060-1400.88520Isopropylbenzene27.91.00"25.0ND11260-1406.67201,1,2,2-Tetrachloroethane22.31.00"25.0ND91.660-1405.8420Propylbenzene22.91.00"25.0ND91.660-1405.84201,3,5-Trimethylbenzene22.61.00"25.0ND91.660-1405.84202-Chlorotoluene23.71.00"25.0ND91.660-1405.84201,3,5-Trimethylbenzene23.81.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene25.51.00"25.0ND91.660-1405.17201,2,4-Trimethylbenzene25.51.00"25.0ND91.660-1405.84201,2,4-Trimethylbenzene25.51.00"25.0ND91.660-1405.8420 <td>1,1,1,2-Tetrachloroethane</td> <td>26.4</td> <td>1.00</td> <td>"</td> <td>25.0</td> <td>ND</td> <td>106</td> <td>60-140</td> <td>1.53</td> <td>20</td>	1,1,1,2-Tetrachloroethane	26.4	1.00	"	25.0	ND	106	60-140	1.53	20
n.pXylene44.01.00"50.0ND88.060-1402.3020o-Xylene24.31.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND64.860-1407.6920Bromoforn22.51.00"25.0ND90.060-1400.85520Ispropylbenzene27.91.00"25.0ND11260-1406.6720Indonezene22.31.00"25.0ND91.660-1405.8420Bromobenzene22.91.00"25.0ND91.660-1405.8420Propylbenzene22.61.00"25.0ND91.660-1405.84201.35Trimethylbenzene23.71.00"25.0ND91.660-1405.84202.411.521.00"25.0ND91.660-1405.84202.511.00"25.0ND94.860-1405.84203.511.511.00"25.0ND95.260-1405.17204-Chlorotoluene25.51.00"25.0ND91.660-1401.58201.24-Trimethylbenzene25.11.00"25.0ND92.460-1401.58201.24-Trimethylbenzene21.91.00" <td>Ethylbenzene</td> <td>24.2</td> <td>1.00</td> <td>#</td> <td>25.0</td> <td>ND</td> <td>96.8</td> <td>60-140</td> <td>2.51</td> <td>20</td>	Ethylbenzene	24.2	1.00	#	25.0	ND	96.8	60-140	2.51	20
o-Xylene24.31.00"25.0ND97.260-1402.5020Styrene16.21.00"25.0ND64.860-1407.6920Bromoform22.51.00"25.0ND90.060-1400.88520Isopropylbenzene77.91.00"25.0ND11260-1406.6720I,1,2,2-Tetrachloroethane22.31.00"25.0ND89.260-1401.3520Bromobenzene22.91.00"25.0ND91.660-1405.8420-Propylbenzene22.61.00"25.0ND91.660-1406.86202-Chlorotoluene23.71.00"25.0ND91.660-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND91.660-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1405.17204-Chlorotoluene23.81.00"25.0ND91.660-1403.10204-Chlorotoluene25.51.00"25.0ND91.660-1401.58204-Chlorotoluene25.11.00"25.0ND91.660-1403.10204-Chlorotoluene25.11.00"25.0ND92.460-1401.58204.24-Tr	m,p-Xylene	44.0	1.00		50.0	ND	88.0	60-140	2.30	20
Styrene16.21.00"25.0ND64.860-1407.6920Bromoform22.51.00"25.0ND90.060-1400.88520Isopropylbenzene27.91.00"25.0ND11260-1406.67201,1,2,2-Tetrachloroethane22.31.00"25.0ND89.260-1401.3520Bromobenzene22.91.00"25.0ND91.660-1405.8420n-Propylbenzene22.61.00"25.0ND90.460-1406.86202-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND91.660-1405.17204-Chlorotoluene25.51.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND91.660-1403.10201,2,4-Trimethylbenzene23.11.00"25.0ND91.660-1403.10201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.722	o-Xylene	24.3	1.00	*	25.0	ND	97.2	60-140	2.50	20
Bromoform22.51.00"25.0ND90.060-1400.88520Isopropylbenzene27.91.00"25.0ND11260-1406.67201,1,2,2-Tetrachloroethane22.31.00"25.0ND89.260-1401.3520Bromobenzene22.91.00"25.0ND91.660-1405.8420n-Propylbenzene22.61.00"25.0ND90.460-1406.86202-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1405.17201,3,5-Trimethylbenzene23.81.00"25.0ND91.660-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.10204-Chlorotoluene23.11.00"25.0ND91.660-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	Styrene	16.2	1.00		25.0	ND	64.8	60-140	7.69	20
Isopropylbenzene27.91.00"25.0ND11260-1406.67201,1,2,2-Tetrachloroethane22.31.00"25.0ND89.260-1401.3520Bromobenzene22.91.00"25.0ND91.660-1405.8420n-Propylbenzene22.61.00"25.0ND90.460-1406.66202-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1405.17201,3,5-Trimethylbenzene23.81.00"25.0ND91.660-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.10201,2,4-Trimethylbenzene25.51.00"25.0ND91.660-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	Bromoform	22.5	1.00	۳	25.0	ND	90.0	60-140	0.885	20
1,1,2,2-Tetrachloroethane22.31.00"25.0ND89.260-1401.3520Bromobenzene22.91.00"25.0ND91.660-1405.8420u-Propylbenzene22.61.00"25.0ND90.460-1406.86202-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	Isopropylbenzene	27.9	1.00		25.0	ND	112	60-140	6.67	20
Bromobenzene   22.9   1.00   "   25.0   ND   91.6   60-140   5.84   20     n-Propylbenzene   22.6   1.00   "   25.0   ND   90.4   60-140   6.86   20     2-Chlorotoluene   23.7   1.00   "   25.0   ND   94.8   60-140   6.54   20     1,3,5-Trimethylbenzene   23.8   1.00   "   25.0   ND   94.8   60-140   5.17   20     4-Chlorotoluene   23.8   1.00   "   25.0   ND   91.6   60-140   5.17   20     4-Chlorotoluene   22.9   1.00   "   25.0   ND   91.6   60-140   3.10   20     tert-Butylbenzene   25.5   1.00   "   25.0   ND   91.6   60-140   1.58   20     1,24-Trimethylbenzene   23.1   1.00   "   25.0   ND   92.4   60-140   7.17   20     sec-Butylbenzene   21.9   1.00   "   25.0   ND   87.6   60-140   3.72   20 </td <td>1,1,2,2-Tetrachloroethane</td> <td>22.3</td> <td>1.00</td> <td></td> <td>25.0</td> <td>ND</td> <td>89.2</td> <td>60-140</td> <td>1.35</td> <td>20</td>	1,1,2,2-Tetrachloroethane	22.3	1.00		25.0	ND	89.2	60-140	1.35	20
n-Propylbenzene22.61.00"25.0ND90.460-1406.86202-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	Bromobenzene	22.9	1.00	•	25.0	ND	91.6	60-140	5.84	20
2-Chlorotoluene23.71.00"25.0ND94.860-1406.54201,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	n-Propylbenzene	22.6	1.00	n	25.0	ND	90.4	60-140	6.86	20
1,3,5-Trimethylbenzene23.81.00"25.0ND95.260-1405.17204-Chlorotoluene22.91.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	2-Chlorotoluene	23.7	1.00		25.0	ND	94.8	60-140	6.54	20
4-Chlorotoluene22.91.00"25.0ND91.660-1403.1020tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	1,3,5-Trimethylbenzene	23.8	1.00		25.0	ND	95.2	60-140	5.17	20
tert-Butylbenzene25.51.00"25.0ND10260-1401.58201,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	4-Chlorotoluene	22.9	1.00	"	25.0	ND	91.6	60-140	3.10	20
1,2,4-Trimethylbenzene23.11.00"25.0ND92.460-1407.1720sec-Butylbenzene21.91.00"25.0ND87.660-1403.7220	tert-Butylbenzene	25.5	1.00	"	25.0	ND	102	60-140	1.58	20
sec-Butylbenzene 21.9 1.00 " 25.0 ND 87.6 60-140 3.72 20	1,2,4-Trimethylbenzene	23.1	1.00	n	25.0	ND	92.4	60-140	7.17	20
	sec-Butylbenzene	21.9	1.00	"	25.0	ND	87.6	60-140	3.72	20

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG62611 - EPA 5030C (GCMS)

Matrix Spike Dup (EG62611-MSD1)	Sourc	e: 6G24001-	05	Prepared: 0	)7/26/06 A	nalyzed: 0	8/03/06		
1,3-Dichlorobenzene	25.5	1.00	ug/l	25.0	ND	102	60-140	4.82	20
p-Isopropyltoluene	24.7	1.00	"	25.0	ND	98.8	60-140	1.22	20
1,4-Dichlorobenzene	25.3	1.00	41	25.0	ND	101	60-140	2.00	20
n-Butylbenzene	22.1	1.00		25.0	ND	88.4	60-140	0.00	20
1,2-Dichlorobenzene	26.4	1.00	*	25.0	ND	106	60-140	2.69	20
1,2-Dibromo-3-chloropropane	23.3	1.00		25.0	ND	93.2	60-140	5.74	20
1,2,4-Trichlorobenzene	27.1	1.00	17	25.0	NĎ	108	60-140	1.11	20
Hexachlorobutadiene	23.6	1.00		25.0	ND	94.4	60-140	11.6	20
Naphthalene	26.1	1.00	۳	25.0	ND	104	60-140	10.9	20
1,2,3-Trichlorobenzene	27.6	1.00	"	25.0	ND	110	60-140	1.09	20
Surrogate: Dibromofluoromethane	47.3		"	50.0		94.6	68-129	<u></u>	
Surrogate: 1,2-Dichloroethane-d4	43.2		"	50.0		86.4	72-132		
Surrogate: Toluene-d8	42.3		"	50.0		84.6	74-118		
Surrogate: 4-Bromofluorobenzene	40.3		"	50.0		80.6	65-140		




#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Notes and Definitions**

R5 RPD is outside of historic values

- PS-1 Matix spike recoveries were outside method and/or historical control limits due to matrix interference. Interference was confirmed by similar results from a post matrix spike.
- MS-4 Matrix spike and/or matrix spike duplicate outside 75-125% acceptance limits. Serial dilution (x5) within10% RPD limits. Post spike on serial dilution sample within 75-125% recovery limits indicating matrix interference.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Environmental Lab of Texas

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

Date:

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

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If you have received this material in error, please notify us immediately at 432-563-1800.

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8/11/2006

WHOLE EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Arbor Cove	Project Number:	None Given	
Katy TX, 77494	Project Manager:	Mike Griffin	



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# Analytical Report

## **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G31007

Report Date: 08/04/06

#### WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove .

### Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 85'	6G31007-01	Soil	2006-07-26 00:00	2006-07-31 14:15
BH 97'	6G31007-02	Soil	2006-07-26 00:00	2006-07-31 14:15

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 85' (6G31007-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60114	08/01/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	"	"	11	"	"	"	
Ethylbenzene	ND	0.0250		"	n	"	11	н	
Xylene (p/m)	ND	0.0250	17	14	17	U	n	"	
Xylene (o)	ND	0.0250	11	**	"	"	11	"	
Surrogate: a,a,a-Trifluorotoluene		84.8 %	80-1	20	"	"	11	11	
Surrogate: 4-Bromofluorobenzene		80.2 %	80-1	20	"	"	'n	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"		"	IF.	и	n	
Carbon Ranges C28-C35	ND	25.0	"	"	n	"	л	11	
Total Hydrocarbon nC6-nC35	ND	25.0	0	u	"		n	"	
Surrogate: 1-Chlorooctane		86.2 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.0 %	70-1	30	"	"	"	"	
BH 97' (6G31007-02) Soil									
Perzene	ND	0.0250	mg/kg dry	25	EH60114	08/01/06	08/03/06	EPA 8021B	
lene	ND	0.0250	u	U			1	и .	
Ethylbenzene	ND	0.0250	"	н	"		11	11	
Xylene (p/m)	ND	0.0250	11	*1	н	*1	ч	11	
Xylene (o)	ND	0.0250	ti	"	"	"	11		
Surrogate: a,a,a-Trifluorotoluene		98.5 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	. 80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11		"	u	11	U	
Carbon Ranges C28-C35	ND	25.0	"		"	"	ņ	"	
Total Hydrocarbon nC6-nC35	ND	25.0		"		11	п	"	
Surrogate: 1-Chlorooctane		90.6 %	70	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	70-	130	"	"	"	"	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 85' (6G31007-01) Soil									
Chloride	39.4	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	962	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	10.6	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 97' (6G31007-02) Soil									
Chloride	54.4	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	1420	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	12.5	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## **Organics by GC - Quality Control**

## **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63122 - Solvent Extraction	(GC)									
Blank (EG63122-BLK1)				Prepared:	: 07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet	•						
Carbon Ranges C12-C28	ND	25.0	*1							
Carbon Ranges C28-C35	ND	25.0	11							
Total Hydrocarbon nC6-nC35	ND	25.0	u							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EG63122-BS1)				Prepared	: 07/31/06	Analyzed	l: 08/01/06			
Carbon Ranges C6-C12	500	25.0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	564	25.0	н	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	19	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0	U	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
Calibration Check (EG63122-CCV1)				Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			** * *
Common Ranges C12-C28	258		U.	250		103	80-120			
Hydrocarbon nC6-nC35	474		"	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		"	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	So	ource: 6G31	012-03	Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	11	506	49.1	101	75-125			
Carbon Ranges C28-C35	· ND	25.0	н	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0		1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3	•••••	mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

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## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

#### Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG63122 - Solvent Extraction (	<u>(GC)</u>									
Matrix Spike Dup (EG63122-MSD1)	Sour	ce: 6G310	12-03	Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	"	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	I	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	"	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			

#### Prepared: 08/01/06 Analyzed: 08/02/06 Blank (EH60114-BLK1) Benzene ND 0.0250 mg/kg wet Toluene ND 0.0250 " ND 0.0250 Ethylbenzene Xylene (p/m) ND 0.0250 11 ND 0.0250 u Xylene (o) Surrogate: a,a,a-Trifluorotoluene 35.5 40.0 ug/kg 88.8 80-120 Surrogate: 4-Bromofluorobenzene 33.2 40.0 83.0 80-120 (EH60114-BS1) Prepared: 08/01/06 Analyzed: 08/02/06 1.20 В 0.0250 mg/kg wet 1.25 96.0 80-120 ene Toluene 1.27 0.0250 в 1.25 102 80-120 0 Ethylbenzene 1.13 0.0250 1.25 90.4 80-120 . Xylene (p/m) 2.68 0.0250 2.50 107 80-120 11 Xylene (o) 1.33 0.0250 1.25 106 80-120 Surrogate: a,a,a-Trifluorotoluene 41.7 ug/kg 40.0 104 80-120

40.0

97.0

80-120

38.8

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Surrogate: 4-Bromofluorobenzene

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60114 - EPA 5030C (GC)										
Calibration Check (EH60114-CCV1)				Prepared	: 08/01/06	Analyzed	: 08/02/06	· · · · · · · · · · · · · · · · · · ·		
Benzene	53.8		ug/kg	50.0		108	80-120			
Toluene	54.3			50.0		109	80-120			
Ethylbenzene	51.0		u	50.0		102	80-120			
Xylene (p/m)	110		"	100		110	80-120			
Xylene (o)	54.8			50.0		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.1		"	40.0		92.8	80-120			
Surrogate: 4-Bromofluorobenzene	33.0		"	40.0		82.5	80-120			
Matrix Spike (EH60114-MS1)	So	urce: 6G280	10-01	Prepared	: 08/01/06	Analyzed	: 08/02/06			
Benzene	1.43	0.0250	mg/kg dry	1.39	ND	103	80-120			
Toluene	1.44	0.0250	11	1.39	ND	104	80-120			
Ethylbenzene	1.37	0.0250	"	1.39	ND	98.6	80-120			
Xylene (p/m)	3.09	0.0250	n	2.78	ND	111	80-120			
Xylene (o)	1.51	0.0250	H	1.39	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.9		ug/kg	40.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	36.9		"	40.0		92.2	80-120			
Metrix Spike Dup (EH60114-MSD1)	So	ource: 6G280	10-01	Prepared	: 08/01/06	Analyzed	l: 08/02/06			
ne	1.30	0.0250	mg/kg dry	1.39	ND	93.5	80-120	9.67	20	
Toluene	1.37	0.0250	H.	1.39	ND	98.6	80-120	5.33	20	
Ethylbenzene	1.29	0.0250	n	1.39	ND	92.8	80-120	6.06	20	
Xylene (p/m)	2.88	0.0250		2.78	ND	104	80-120	6.51	20	
Xylene (o)	1.42	0.0250	n	1.39	ND	102	80-120	6.64	20	
Surrogate: a,a,a-Trifluorotoluene	32.7		ug/kg	40.0		81.8	80-120			
Surrogate: 4-Bromofluorobenzene	37.0		"	40.0		92.5	80-120			

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60103 - General Preparation	(Prep)									
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	100		%							
Duplicate (EH60103-DUP1)	So	urce: 6G3100	03-01	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	95.1		%		94.7			0.421	20	
Duplicate (EH60103-DUP2)	So	urce: 6G3101	10-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%		93.4			1.08	20	
Batch EH60203 - Water Extraction										
Blank (EH60203-BLK1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	ND	0.500	mg/kg							
LCS (EH60203-BS1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	9.31	0.500	mg/kg	10.0		93.1	80-120			
Calibration Check (EH60203-CCV1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	9.97		mg/L	10.0	•	99.7	80-120			
Duplicate (EH60203-DUP1)	So	urce: 6G310	07-01	Prepared	& Analyze	ed: 08/02/	06			
ide	38.5	5.00	mg/kg		39.4			2.31	20	
Duplicate (EH60203-DUP2)	So	urce: 6G310	09-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	13.2	5.00	mg/kg		14.3			8.00	20	
Matrix Spike (EH60203-MS1)	So	urce: 6G310	07-01	Prepared	& Analyze	ed: 08/02/	06			
Chloride	139	5.00	mg/kg	100	39.4	99.6	80-120			

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 7 of 9

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60203 - Water Extraction										
Matrix Spike (EH60203-MS2)	Sou	irce: 6G310	09-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	114	5.00	mg/kg	100	14.3	99.7	80-120			
Batch EH60318 - Water Extraction					<u> </u>					
Calibration Check (EH60318-CCV1)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120			
Calibration Check (EH60318-CCV2)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1380		umhos/cm	1410	-	97.9	80-120			
Calibration Check (EH60318-CCV3)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1400		umhos/cm	1410		99.3	80-120			
Calibration Check (EH60318-CCV4)				Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1410		umhos/cm	1410		100	80-120			
Duplicate (EH60318-DUP1)	So	urce: 6G280	07-01	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20	
Duplicate (EH60318-DUP2)	So	urce: 6G310	08-02	Prepared	& Analyz	ed: 08/03/	06			
fic Conductance (EC)	450	10.0	umhos/cm		442			1.79	20	
Duplicate (EH60318-DUP3)	So	urce: 6G310	10-03	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	712	10.0	umhos/cm		702			1.41	20	
Duplicate (EH60318-DUP4)	So	urce: 6G310	11-05	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	988	20.0	umhos/cm		1030			4.16	20	

vironmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

Kalandk J. Date: 8-04-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

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ab of Texas, Ir	Phone: 915-563-1800	Fav. D16.461.4743
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## Analytical Report

## **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G31008

Report Date: 08/04/06

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 3 10'	6G31008-01	Soil	2006-07-26 00:00	2006-07-31 14:15
BH 3 20'	6G31008-02	Soit	2006-07-26 00:00	2006-07-31 14:15
BH 3 30'	6G31008-03	Soil	2006-07-26 00:00	2006-07-31 14:15
BH 3 40'	6G31008-04	Soil	2006-07-26 00:00	2006-07-31 14:15

## WHOLE EARTH ENVIRONMENTAL

Katy TX, 77494

2103 Arbor Cove

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	. Notes
BH 3 10' (6G31008-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60114	08/01/06	08/03/06	EPA 8021B	<u> </u>
Toluene	ND	0.0250	"	n	. 11	н	*1		
Ethylbenzene	ND	0.0250	"	n	H	n	"	и	
Xylene (p/m)	ND	0.0250	"	H	0	и	"	н	
Xylene (o)	ND	0.0250	11	11	"	"	"	0	
Surrogate: a,a,a-Trifluorotoluene		86.0 %	80-1	20	"	"	11	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	80-i	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	J [3.29]	25.0		11	"	н	n	19	J
Carbon Ranges C28-C35	ND	25.0	0	11	11	U	"	n	
Total Hydrocarbon nC6-nC35	ND	25.0	11	"	R	u	n	n	
Surrogate: 1-Chlorooctane		83.8 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.4 %	70-1	130	"	"	"	"	
BH 3 20' (6G31008-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60114	08/01/06	08/03/06	EPA 8021B	
ene	ND	0.0250	"	11	11	u			
Ethylbenzene	ND	0.0250			*	11	11	"	
Xylene (p/m)	ND	0.0250		R	"	11	"		
Xylene (0)	ND	0.0250	"	н	"				
Surrogate: a,a,a-Trifluorotoluene		91.2 %	80-1	120	"	"	11	"	
Surrogate: 4-Bromofluorobenzene		89.5 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	U	н	n	и	
Carbon Ranges C28-C35	ND	25.0	"	11	"	11		11 ·	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	*	"	II.	
Surrogate: 1-Chlorooctane		130 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70	130	"	"	"	"	

vironmental Lab of Texas

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 30' (6G31008-03) Soil								·····	
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	"	н	11	If	11		
Ethylbenzene	ND	0.0250	n	"	"	u	11		
Xylene (p/m)	ND	0.0250	H	"	ti	"	"	"	
Xylene (o)	ND	0.0250	H	"	"	"	11	11	
Surrogate: a,a,a-Trifluorotoluene		85.0 %	80-1	20	. "	"	ļ	"	
Surrogate: 4-Bromofluorobenzene		88.5 %	80-1	20	"	"		"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	*1	*1	н	11	н	
Carbon Ranges C28-C35	ND	25.0	u	н	n		n	υ.	
Total Hydrocarbon nC6-nC35	ND	25.0		"	11	11	u	"	
Surrogate: 1-Chlorooctane		125 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		102 %	70-1	130	"	"	"	"	
BH 3 40' (6G31008-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
ene	ND	0.0250	и	0	"		u		
Ethylbenzene	ND	0.0250		"	"	0	U		
Xylene (p/m)	ND	0.0250	"	11	"	11	n.		
Xylene (o)	ND	0.0250	"	"	"	*1	*1	"	
Surrogate: a,a,a-Trifluorotoluene		. 93.2 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.0 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	ł	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"		n '	"	н	u	
Carbon Ranges C28-C35	ND	25.0		"	n	"		и	
Total Hydrocarbon nC6-nC35	ND	25.0	11	"	U	"	п	. 11	
Surrogate: 1-Chlorooctane		130 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane.		98.6 %	70	130	"	"	"		

Environmental Lab of Texas

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

	<b>—</b> 1.	Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 10' (6G31008-01) Soil									
Chloride	12.1	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	366	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.0	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 20' (6G31008-02) Soil									
Chloride	32.6	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	442	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	0.9	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 30' (6G31008-03) Soil									
Chloride	24.4	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	496	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	0.8	0.1	%	I	EH60103	07/31/06	08/01/06	% calculation	
BH 3 40' (6G31008-04) Soil									
Chloride	14.5	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
fic Conductance (EC)	432	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.0	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting	Unite	Spike	Source Result	%REC	%REC	<b>B</b> bD	RPD Limit	Notes
Potch EC(2122 Solvert Entry offer	(((())))									
Batch EG05144 - Solvent Extraction										
Blank (EG63122-BLK1)		······		Prepared:	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	"							
Carbon Ranges C28-C35	ND	25.0	"							
Total Hydrocarbon nC6-nC35	ND	25.0	11							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EG63122-BS1)				Prepared:	07/31/06	Analyzed	l: 08/01/06			
Carbon Ranges C6-C12	500	25.0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	564	25.0	0	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	ĸ	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0	11	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
Calibration Check (EG63122-CCV1)				Prepared:	07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
Anges C12-C28	258		U	250		103	80-120			
Hydrocarbon nC6-nC35	474		"	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		"	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	So	urce: 6G310	)12-03	Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	11	506	49.1	101	75-125			
Carbon Ranges C28-C35	ND	25.0		0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0	11	1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		п	50.0		79.8	70-130			

## WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63122 - Solvent Extraction (	GC)									
Matrix Spike Dup (EG63122-MSD1)	So	urce: 6G310	12-03	Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	"	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	n	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	"	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0	···	mg/kg	50.0	· · · · · ·	124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			
Batch EH60114 - EPA 5030C (GC)										
Blank (EH60114-BLK1)				Prepared:	08/01/06	Analyzed	: 08/02/06			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	n							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	н							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	35.5		ug/kg	40.0	······	88.8	80-120			
Surrogate: 4-Bromofluorobenzene	33.2		"	40.0		83.0	80-120	*		
(EH60114-BS1)				Prepared	: 08/01/06	Analyzed	I: 08/02/06			
Benzene	1.20	0.0250	mg/kg wet	1.25		96.0	80-120	· · · · · · · · · · · · · · · · · · ·		
Toluene	1.27	0.0250	11	1.25		102	80-120			
Ethylbenzene	1.13	0.0250	If	1.25		90.4	80-120			
Xylene (p/m)	2.68	0.0250	n	2.50		107	80-120			
Xylene (o)	1.33	0.0250	"	1.25		106	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.7		ug/kg	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	38.8		"	40.0		97.0	80-120			

ironmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Unite	Spike Level	Source Result	%RFC	%REC	RPD	RPD Limit	Notes
riidy to			Onto			/01/12/	Linns			
Batch EH60114 - EPA 5030C (GC)				<u> </u>	·······					
Calibration Check (EH60114-CCV1)				Prepared	08/01/06	Analyzed	I: 08/02/06	_		
Benzene	53.8		ug/kg	50.0		108	80-120			
Toluene	54.3	•	"	50.0		109	80-120			
Ethylbenzene	51.0		11	50.0		102	80-120			
Xylene (p/m)	110			100		110	80-120			
Xylene (o)	54.8		11	50.0		110	80-120		•	
Surrogate: a,a,a-Trifluorotoluene	37.1		"	40.0		92.8	80-120			
Surrogate: 4-Bromofluorobenzene	33.0		"	40.0		82.5	80-120			
Matrix Spike (EH60114-MS1)	So	urce: 6G280	10-01	Prepared	: 08/01/06	Analyzed	I: 08/02/06			
Benzene	1.43	0.0250	mg/kg dry	1.39	ND	103	80-120			
Toluene	1.44	0.0250	11	1.39	ND	104	80-120			
Ethylbenzene	1.37	0.0250	*	1.39	ND	98.6	80-120			
Xylene (p/m)	3.09	0.0250	n	2.78	ND	111	80-120			
Xylene (o)	1.51	0.0250	"	1.39	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.9		ug/kg	40.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	36.9		u	40.0		92.2	80-120		,	
Matrix Spike Dup (EH60114-MSD1)	So	urce: 6G28(	)10-01	Prepared	: 08/01/06	Analyzed	1: 08/02/06			
ene	1.30	0.0250	mg/kg dry	1.39	ND	93.5	80-120	9.67	20	
Toluene	1.37	0.0250	N	1.39	ND	98.6	80-120	5.33	20	
Ethylbenzene	1.29	0.0250	"	1.39	ND	92.8	80-120	6.06	20	
Xylene (p/m)	2.88	0.0250	н	2.78	ND	104	80-120	6.51	20	
Xylene (o)	1.42	0.0250	"	1.39	ND	102	80-120	6.64	20	
Surrogate: a,a,a-Trifluorotoluene	32.7		ug/kg	40.0		81.8	80-120			
Surrogate: 4-Bromofluorobenzene	37.0		"	40.0		92.5	80-120			
Batch EH60303 - EPA 5030C (GC)										
Blank (EH60303-BLK1)				Prepared	& Analyz	ed: 08/03/	06			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	11							•
Ethylbenzene	ND	0.0250	ti.							
Xylene (p/m)	ND	0.0250	11							
Xylene (0)	ND	0.0250	11							
Surrogate: a,a,a-Trifluorotoluene	39.1		ug/kg	40.0		97.8	80-120			

Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

80-120

88.8

40.0

35.5

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting	Unite	Spike	Source Result	%REC	%REC	RBD	RPD	Notes
лланую			onts	Level	Result	/ulec	Linits	N°D		indles
Batch EH60303 - EPA 5030C (GC)			<b>-</b>							
LCS (EH60303-BS1)				Prepared	& Analyzo	ed: 08/03/	06			
Benzene	1.25	0.0250	mg/kg wet	1.25		100	80-120			
Toluene	1.26	0.0250	"	1.25		101	80-120			
Ethylbenzene	1.22	0.0250	"	1.25		97.6	80-120			
Xylene (p/m)	2.76	0.0250	n	2.50		110	80-120			
Xylene (o)	1.38	0.0250	11	1.25		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.3		ug/kg	40.0		95.8	80-120			
Surrogate: 4-Bromofluorobenzene	37.1		"	40.0		<i>92.8</i>	80-120			
Calibration Check (EH60303-CCV1)				Prepared	& Analyz	ed: 08/03/	06			
Benzene	54.2		ug/kg	50.0		108	80-120			
Toluene	52.6		".	50.0		105	80-120			
Ethylbenzene	51.9		n	50.0		104	80-120			
Xylene (p/m)	109		11	100		109	80-120			
Xylene (o)	54.1		*1	50.0		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.2		"	40.0	·	95.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.6		"	40.0		81.5	80-120			
Matrix Spike (EH60303-MS1)	So	urce: 6H02	011-01	Prepared	& Analyz	ed: 08/03/	06			
ene	1.31	0.0250	mg/kg dry	1.36	ND	96.3	80-120			
Toluene	1.35	0.0250	n	1.36	ND	99.3	80-120			
Ethylbenzene	1.27	0.0250	U	1.36	ND	93.4	80-120			
Xylene (p/m)	2.94	0.0250		2.72	ND	108	80-120			
Xylene (o)	1.48	0.0250	"	1.36	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		ug/kg	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	40.2		"	40.0		100	80-120			
Matrix Spike Dup (EH60303-MSD1)	So	ource: 6H02	011-01	Prepared	& Analyz	ed: 08/03/	′06			
Benzene	1.33	0.0250	mg/kg dry	1.36	ND	97.8	80-120	1.55	20	
Toluene	1.36	0.0250		1.36	ND	100	80-120	0.702	20	
Ethylbenzene	1.30	0.0250		1.36	ND	95.6	80-120	2.33	20	
Xylene (p/m)	2.97	0.0250	**	2.72	ND	109	80-120	0.922	20	
Xylene (o)	1.48	0.0250	) "	1.36	ND	109	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	40.1		ug/kg	40.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		<i>98.2</i>	80-120			

Environmental Lab of Texas

General Chemis	try Param	neters by	EPA /	Standar	d Meth	ods - Q	uality (	Contro	1	
	E	Invironm	ental I	Lab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60103 - General Preparation	ı (Prep)									
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			•
% Solids	100		%							
Duplicate (EH60103-DUP1)	Sou	rce: 6G310	03-01	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	95.1		%		94.7			0.421	20	
Duplicate (EH60103-DUP2)	Sou	irce: 6G310	10-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%		93.4			1.08	20	
Batch EH60203 - Water Extraction										
Blank (EH60203-BLK1)				Prepared	& Analyz	ed: 08/02/0	06			
Chloride	ND	0.500	mg/kg							
LCS (EH60203-BS1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	9.31	0.500	mg/kg	10.0		93.1	80-120			<u> </u>
Calibration Check (EH60203-CCV1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	9.97		mg/L	10.0		99.7	80-120			
Duplicate (EH60203-DUP1)	Sou	ırce: 6G310	07-01	Prepared	& Analyz	ed: 08/02/	06			
( ) e	38.5	5.00	mg/kg		39.4			2,31	20	
Duplicate (EH60203-DUP2)	Sou	ırce: 6G310	09-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	13.2	5.00	mg/kg		14.3			8.00	20	
Matrix Spike (EH60203-MS1)	Sou	urce: 6G310	07-01	Prepared	& Analyz	ed: 08/02/	06			
Chloride	139	5.00	mg/kg	100	39.4	99.6	80-120		······	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60203 - Water Extraction										
Matrix Spike (EH60203-MS2)	So	arce: 6G310	09-02	Prepared	& Analyze	d: 08/02/	06		•	
Chloride	114	5.00	mg/kg	100	14.3	99.7	80-120			
Batch EH60318 - Water Extraction										
Calibration Check (EH60318-CCV1)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1420		umhos/cm	1410-		101	80-120			
Calibration Check (EH60318-CCV2)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1380		umhos/cm	1410	÷	97.9	80-120			
Calibration Check (EH60318-CCV3)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1400		umhos/cm	1410		99.3	80-120			
Calibration Check (EH60318-CCV4)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1410		umhos/cm	1410		100	80-120			
Duplicate (EH60318-DUP1)	So	urce: 6G280	07-01	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20	
Duplicate (EH60318-DUP2)	So	urce: 6G310	08-02	Prepared	& Analyze	ed: 08/03/	06			
ic Conductance (EC)	450	10.0	umhos/cm	<b>-</b>	442			1.79	20	
Duplicate (EH60318-DUP3)	So	urce: 6G310	10-03	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	712	10.0	umhos/cm		702			1.41	20	
Duplicate (EH60318-DUP4)	So	urce: 6G310	11-05	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	988	20.0	umhos/cm		1030			. 4.16	20	

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WHOLE 2103 Arb Katy TX,	EARTH ENVIRONMENTAL oor Cove 77494	Project: Project Number: Project Manager:	Fax: (281) 394-2051	
		Notes and De	finitions	
J	Detected but below the Reporting Lin	mit; therefore, result is an e	stimated concentration (CLP J-Flag	:).
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the	e reporting limit		
NR	Not Reported			
dry	Sample results reported on a dry weight l	oasis		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike		5	
Dup	Duplicate		-	

alandk Joul Report Approved By: Date: 8-04.06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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Environmental Lab of Texas

Inc.		
b of Texas,	Phone: 915-563-1800	Fax: 915-563-1713
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Envin	12600 West I-20 I	Odessa. Texas 7



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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# Analytical Report

## **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

Lab Order Number: 6G31009

Report Date: 08/04/06

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 3 50'	6G31009-01	Soil	2006-07-27 00:00	2006-07-31 14:15
BH 3 60'	6G31009-02	Soil	2006-07-27 00:00	2006-07-31 14:15
BH 3 70'	6G31009-03	Soil	2006-07-27 00:00	2006-07-31 14:15
BH 3 80'	6G31009-04	Soil	2006-07-27 00:00	2006-07-31 14:15
BH 3 90'	6G31009-05	Soil	2006-07-27 00:00	2006-07-31 14:15

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC** Anl Tak of T

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 50' (6G31009-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	*1	"	"	"	11	H	
Ethylbenzene	ND	0.0250	. "	н	11	u	*1	11	
Xylene (p/m)	ND	0.0250		н	11	"	U	n	
Xylene (o)	ND	0.0250	"	"	11	n		11	
Surrogate: a,a,a-Trifluorotoluene		100 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.8 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	J [7.63]	25.0	"	"	**	"	н	*1	J
Carbon Ranges C28-C35	ND	25.0		14	R	11	"	n	
Total Hydrocarbon nC6-nC35	ND	25.0	H	"	11	11	н	n	
Surrogate: 1-Chlorooctane		124 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		112 %	70	130	"	"	"	"	
BH 3 60' (6G31009-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
ene	ND	0.0250	ĸ	**	n	'n	n	11	
Ethylbenzene	ND	0.0250	11	*	"	"	"	"	
Xylene (p/m)	ND	0.0250	11	"	"	"	n	н	
Xylene (o)	ND	0.0250	11	11	"		11	n	
Surrogate: a,a,a-Trifluorotoluene		93.0 %	80-	120	"	"	"	**	
Surrogate: 4-Bromofluorobenzene		94.5 %	80	120	"	<i>"</i>	"	n	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	J [7.81]	25.0	n	"	n	"		11	J
Carbon Ranges C28-C35	ND	25.0	"	"	н				
Total Hydrocarbon nC6-nC35	ND	25.0	11	11	"	"	"	н	
Surrogate: 1-Chlorooctane		105 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		83.0 %	70	130	"	"	"	"	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 70' (6G31009-03) Soil						•			<u> </u>
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	,
Toluene	ND	0.0250	н	19	н	"	11		
Ethylbenzene	ND	0.0250		"	н	"	11	"	
Xylene (p/m)	ND	0.0250	11	"	"	"	11	н .	
Xylene (o)	ND	0.0250	11	11	"	n	11	н	
Surrogate: a,a,a-Trifluorotoluene		88.5 %	80-1	120	"	11	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	11	"	н	u	н	н	
Carbon Ranges C28-C35	ND	25.0	11	*1		u	п	n	
Total Hydrocarbon nC6-nC35	ND	25.0	n	11	u	"	. 11	"	
Surrogate: 1-Chlorooctane		104 %	70	130	"	"	"	, ,,	
Surrogate: 1-Chlorooctadecane		83.0 %	70	130	"	"	"	· "	
BH 3 80' (6G31009-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
ene	ND	0.0250	11	"		"	n	**	
Ethylbenzene	ND	0.0250	n	н		**	н	н	
Xylene (p/m)	ND	0.0250	11	"	"	"	n		
Xylene (o)	ND	0.0250	11	n		u	u		
Surrogate: a,a,a-Trifluorotoluene		92.2 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.2 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	'n	11	"	n	n	n	
Carbon Ranges C28-C35	ND	25.0	"	11	"	11	н	11	
Total Hydrocarbon nC6-nC35	ND	25.0	"	11	"	n	н	11	
Surrogate: 1-Chlorooctane		100 %	70-	130	"	"		"	
Surrogate: 1-Chlorooctadecane		78.8 %	70-	130	11	"	"		

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## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 90' (6G31009-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	н	"		"	**	11	
Ethylbenzene	ND	0.0250	"	н	"	, u	n	11	
Xylene (p/m)	ND	0.0250	"	*1	"	"		U	·
Xylene (o)	ND	0.0250	n	н	11	н	"	11	
Surrogate: a,a,a-Trifluorotoluene		92.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	μ	н	**	H	н	n	
Carbon Ranges C28-C35	ND	25.0	11	"	**	"		"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	n	H	n	"	n	
Surrogate: 1-Chlorooctane		87.0 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		72.2 %	70-1	130	11	"	"		

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting					<u>**</u>		
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3 50' (6G31009-01) Soil									
Chloride	12.8	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	537	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.8	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 60' (6G31009-02) Soil									
Chloride	14.3	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	367	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.1	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 70' (6G31009-03) Soil									
Chloride	17.8	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	434	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.8	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 80' (6G31009-04) Soil									
Chloride	20.6	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
ific Conductance (EC)	585	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	2.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3 90' (6G31009-05) Soil				_					
Chloride	45.6	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	972	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	5.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG63122 - Solvent Extraction	(GC)									
Blank (EG63122-BLK1)				Prepared:	07/31/06	Analyzed	l: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	"							
Carbon Ranges C28-C35	ND	25.0	11							
Total Hydrocarbon nC6-nC35	ND	25.0	n							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EG63122-BS1)				Prepared:	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	500	. 25.0	mg/kg wet	500		100	75-125	,		
Carbon Ranges C12-C28	564	25.0	"	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	u	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0	11	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		.80.2	70-130			
Calibration Check (EG63122-CCV1)				Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
Compon Ranges C12-C28	258		11	250		103	80-120			
Hydrocarbon nC6-nC35	474		U	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		"	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	So	ource: 6G310	012-03	Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	n	506	49.1	101	75-125			
Carbon Ranges C28-C35	ND	25.0	0	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0	и	1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		н .	50.0		79.8	70-130			

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 6 of 11

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG63122 - Solvent Extraction (GC)

Matrix Spike Dup (EG63122-MSD1)	Sour	ce: 6G310	12-03	Prepared:	07/31/06	Analyze	d: 08/01/06			
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	H	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	n.	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	11	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			

#### Batch EH60303 - EPA 5030C (GC)

Blank (EH60303-BLK1)				Prepared & Ar	nalyzed: 08/03/0	06	
Benzene	ND	0.0250	mg/kg wet				 
Toluene	ND	0.0250	u.				
Ethylbenzene	ND	0.0250	14				
Xylene (p/m)	ND	0.0250	11				
Xylene (o)	ND	0.0250	**			•	
Surrogate: a,a,a-Trifluorotoluene	39.1		ug/kg	40.0	97.8	80-120	 
Surrogate: 4-Bromofluorobenzene	35.5		"	40.0	88.8	80-120	
(EH60303-BS1)				Prepared & Ar	nalyzed: 08/03/	06	
Benzene	1.25	0.0250	mg/kg wet	1.25	100	80-120	 
Toluene	1.26	0.0250	H	1.25	101	80-120	
Ethylbenzene	1.22	0.0250	41	1.25	97.6	80-120	
Xylene (p/m)	2.76	0.0250	n	2.50	110	80-120	
Xylene (o)	1.38	0.0250	"	1.25	110	80-120	
Surrogate: a,a,a-Trifluorotoluene	38.3		ug/kg	40.0	95.8	80-120	 

40.0

92.8

80-120

Surrogate: a,a,a-Trifluorotoluene38.3Surrogate: 4-Bromofluorobenzene37.1

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## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60303 - EPA 5030C (GC)										
Calibration Check (EH60303-CCV1)				Prepared & Analyzed: 08/03/06						
Benzene	54.2		ug/kg	50.0		108	80-120			
Toluene	52.6		"	50.0		105	80-120			
Ethylbenzene	51.9		11	50.0		104	80-120			
Xylene (p/m)	109		H	100		109	80-120			
Xylene (o)	54.1		u	50.0		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.2		"	40.0		95.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.6		"	40.0		81.5	80-120			
Matrix Spike (EH60303-MS1)	Source: 6H02011-01			Prepared & Analyzed: 08/03/06						
Benzene	1.31	0.0250	mg/kg dry	1.36	ND	96.3	80-120			
Toluene	1.35	0.0250		1.36	ND	99.3	80-120			
Ethylbenzene	1.27	0.0250	u	1.36	ND	93.4	80-120			
Xylene (p/m)	2.94	0.0250	"	2.72	ND	108	80-120			
Xylene (o)	1.48	0.0250	u	1.36	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		ug/kg	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	40.2		"	40.0		100	80-120			
htrix Spike Dup (EH60303-MSD1)	Source: 6H02011-01			Prepared & Analyzed: 08/03/06						
ene	1.33	0.0250	mg/kg dry	1.36	ND	97.8	80-120	1.55	20	
Toluene	1.36	0.0250	"	1.36	ND	100	80-120	0.702	20	
Ethylbenzene	1.30	0.0250	11	1.36	ND	95.6	80-120	2.33	20	
Xylene (p/m)	2.97	0.0250	н	2.72	ND	109	80-120	0.922	20	
Xylene (o)	1.48	0.0250	"	1.36	ND	109	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	40.1		ug/kg	40.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		98.2	80-120			

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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#### General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas** Reporting Spike %REC RPD Source Result Limit Units Level Result %REC Limits RPD Limit Notes Analyte **Batch EH60103 - General Preparation (Prep)** Prepared: 07/31/06 Analyzed: 08/01/06 Blank (EH60103-BLK1) % Solids 100 % Source: 6G31003-01 Prepared: 07/31/06 Analyzed: 08/01/06 Duplicate (EH60103-DUP1) 95.1 % 94.7 % Solids 0.421 20 Prepared: 07/31/06 Analyzed: 08/01/06 Source: 6G31010-04 Duplicate (EH60103-DUP2)

%

93.4

92.4

#### Batch EH60203 - Water Extraction

% Solids

Blank (EH60203-BLK1)	Prepared & Analyzed: 08/02/06											
Chloride	ND	0.500	mg/kg									
LCS (EH60203-BS1)				Prepared	& Analyze	ed: 08/02/	06					
Chloride	9.31	0.500	mg/kg	10.0		93.1	80-120					
Calibration Check (EH60203-CCV1)			Prepared & Analyzed: 08/02/06									
Chloride	9.97		mg/L	10.0		99.7	80-120					
Duplicate (EH60203-DUP1)	Sour	ce: 6G310	07-01	Prepared	& Analyze	ed: 08/02/	06					
lide	38.5	5.00	mg/kg		39.4			2.31	20			
Duplicate (EH60203-DUP2)	Sour	ce: 6G310	09-02	Prepared	& Analyze	ed: 08/02/	'06					
Chloride	13.2	5.00	mg/kg		14.3			8.00	20			
Matrix Spike (EH60203-MS1)	Sour	ce: 6G310	07-01	Prepared	& Analyze	ed: 08/02/	'06					
Chloride	139	5.00	mg/kg	100	39.4	99.6	80-120					

Environmental Lab of Texas

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemis	try Param	eters by ]	EPA / S	Standar	d Meth	ods - Q	uality	Contro	l	
•	E	nvironmo	ental L	ab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60203 - Water Extraction										
Matrix Spike (EH60203-MS2)	Sou	rce: 6G3100	9-02	Prepared	& Analyze	ed: 08/02/0	06			
Chloride	114	5.00	mg/kg	100	14.3	99.7	80-120			
Batch EH60318 - Water Extraction										
Calibration Check (EH60318-CCV1)				Prepared	& Analyze	ed: 08/03/0	06			
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120			
Calibration Check (EH60318-CCV2)				Prepared	& Analyze	ed: 08/03/0	06			
Specific Conductance (EC)	1380	1	umhos/cm	1410		97.9	80-120			
Calibration Check (EH60318-CCV3)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1400	1	umhos/cm	1410		99.3	80-120			
Calibration Check (EH60318-CCV4)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1410		umhos/cm	1410		100	80-120			
Duplicate (EH60318-DUP1)	Sou	rce: 6G2800	7-01	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20	
Duplicate (EH60318-DUP2)	Sou	rce: 6G3100	8-02	Prepared	& Analyze	ed: 08/03/	06			
fic Conductance (EC)	450	10.0	umhos/cm		442			1.79	20	
Duplicate (EH60318-DUP3)	Sou	rce: 6G3101	0-03	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	712	10.0	umhos/cm	<u>^</u>	702			1.41	20	
Duplicate (EH60318-DUP4)	Sou	rce: 6G3101	1-05	Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	988	20.0	umhos/cm	4	1030			4.16	20	

ironmental Lab of Texas

WHOLE I	EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Arbo	or Cove	Project Number:	None Given	· · · · ·
Katy TX, '	77494	Project Manager:	Mike Griffin	
		Notes and De	finitions	· · · · · · · · · · · · · · · · · · ·
J	Detected but below the Reporting Lin	mit; therefore, result is an e	stimated concentration (CLP J-Flag)	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the	e reporting limit		
NR	Not Reported			
dry	Sample results reported on a dry weight l	pasis		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			•
MS	Matrix Spike			
Dup	Duplicate			

Kalandkjul Report Approved By: 8-04-06 Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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# Analytical Report

### **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G31010

Report Date: 08/04/06

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 3A 10'	6G31010-01	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 3A 20'	6G31010-02	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 3A 30'	6G31010-03	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 3A 40'	6G31010-04	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 3A 50'	6G31010-05	Soil	2006-07-28 00:00	2006-07-31 14:15

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 10' (6G31010-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	n	11	"	н	11	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"		
Xylene (p/m)	ND	0.0250	n	17	"	11	"	II.	
Xylene (o)	ND	0.0250	11	H	19	"	ri	11	
Surrogate: a,a,a-Trifluorotoluene		88.8 %	80	120	. "	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	и	"	"	18	и	
Carbon Ranges C28-C35	ND	25.0	"	"	*1	It	11	N	
Total Hydrocarbon nC6-nC35	ND	25.0	*1	"	11	H	н	п	
Surrogate: 1-Chlorooctane		98.6 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		78.6 %	70	130	"	"	"	"	
BH 3A 20' (6G31010-02) Soil									
Perzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
ene	ND	0.0250	11	"	н	11	"		
Ethylbenzene	ND	0.0250	11	n	ч		"	"	
Xylene (p/m)	ND	0.0250	. 11	"	н		"		
Xylene (o)	ND	0.0250	"	"	11	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		93.8 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	J [5.05]	25.0	91		и	11	N	0	J
Carbon Ranges C28-C35	ND	25.0	n	ti	u	"	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	n	"	u	"	н	11	
Surrogate: 1-Chlorooctane		91.2 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		94.6 %	70-	130	"	"	'n	"	

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### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC

### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	1	Votes
BH 3A 30' (6G31010-03) Soil								_		·
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B		
Toluene	ND	0.0250	II.	"	n	11	11	11		
Ethylbenzene	ND	0.0250	11			"	"	H		
Xylene (p/m)	ND	0.0250	"	"	"	u	"	11		
Xylene (o)	ND	0.0250	11	n	n	n	0	n		
Surrogate: a,a,a-Trifluorotoluene		83.5 %	80-1	20	"	"	"	"		
Surrogate: 4-Bromofluorobenzene		91.8 %	80-1	20	"	"	"	"		
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005		
Carbon Ranges C12-C28	J [18.8]	25.0		"	11	11	n	W		J
Carbon Ranges C28-C35	J [1.94]	25.0	۳.	"	11	n	IJ	. "		J
Total Hydrocarbon nC6-nC35	ND	25.0		17	11	u	"			
Surrogate: 1-Chlorooctane		89.6 %	70-1	130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		95.4 %	70-,	130	"	"	"	"		
BH 3A 40' (6G31010-04) Soil										
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B		
ene	ND	0.0250	u		"		u	17		
Ethylbenzene	ND	0.0250	u	**	n	n	n	n		
Xylene (p/m)	ND	0.0250	11	"	11	H	I	"		
Xylene (0)	ND	0.0250	11	"	11	"	11	N		
Surrogate: a,a,a-Trifluorotoluene		88.2 %	80-	120	"	11	H	"		
Surrogate: 4-Bromofluorobenzene		95.5 %	80	120	"	"	"	"		
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005		
Carbon Ranges C12-C28	ND	25.0	U	"	11	н	n	11		
Carbon Ranges C28-C35	ND	25.0	11		"	U	0	ri		
Total Hydrocarbon nC6-nC35	ND	25.0	Ħ	11	11	11	U	U		
Surrogate: 1-Chlorooctane	······	95.0 %	70	130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		95.8 %	7 <b>0-</b> .	130	"	"	"	"		

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 50' (6G31010-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
Toluene	ND	0.0250	"	n		*	"	"	
Ethylbenzene	ND	0.0250			"	11	17	"	
Xylene (p/m)	ND	0.0250		"	"	11	11	"	
Xylene (o)	ND	0.0250		н		*1	"	11	,
Surrogate: a,a,a-Trifluorotoluene		88.8 %	80-1	20	"	"	"	"	•
Surrogate: 4-Bromofluorobenzene		90.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"		"	U		n	
Carbon Ranges C28-C35	ND	25.0	"	"	94	"		IF	
Total Hydrocarbon nC6-nC35	ND	25.0	R	11	"	14	"	и	
Surrogate: 1-Chlorooctane		102 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-1	130	"	**	**	"	



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### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 10' (6G31010-01) Soil								· · ·	
Chloride	32.6	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	395	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	0.8	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 20' (6G31010-02) Soil									
Chloride	45.3	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	756	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 30' (6G31010-03) Soil						-			
Chloride	31.1	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	702	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	0.9	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 40' (6G31010-04) Soil									
<u>Shio</u> ride	30.5	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Eific Conductance (EC)	812	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	6.6	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 50' (6G31010-05) Soil									
Chloride	26.5	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	750	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	4.6	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

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### WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

### Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyta	Pacult	Reporting	Unite	Spike	Source	%DEC	%REC	חממ	RPD Limit	Noter
	Kesuit		Units	Level	Result	70REC	Linus	KrD		Notes
Batch EG63122 - Solvent Extraction	(GC)									
Blank (EG63122-BLK1)				Prepared	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	н							
Carbon Ranges C28-C35	ND	25.0	11							
Total Hydrocarbon nC6-nC35	ND	25.0	"							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EG63122-BS1)				Prepared	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	500	25.0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	564	25.0	0	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	11	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0		1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
Calibration Check (EG63122-CCV1)				Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
mon Ranges C12-C28	258		11	250		103	80-120			
Hydrocarbon nC6-nC35	474		n	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		H	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	Se	ource: 6G31	012-03	Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	It	506	49.1	101	75-125			
Carbon Ranges C28-C35	ND	25.0	, P	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0	*	1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

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### Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63122 - Solvent Extraction (	GC)									
Matrix Spike Dup (EG63122-MSD1)	So	urce: 6G310	12-03	Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	"	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	11	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	"	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			
Batch EG63125 - Solvent Extraction (	GC)									
Blank (EG63125-BLK1)				Prepared	& Analyze	ed: 07/31/	06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet		·					
Carbon Ranges C12-C28	ND	25.0	"							
Carbon Ranges C28-C35	ND	25.0	n							
Total Hydrocarbon nC6-nC35	ND	25.0	11							
Surrogate: 1-Chlorooctane	45.5		mg/kg	50.0		91.0	70-130		·	· · · · · · · · · · · · · · · · · · ·
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			
L <u>C</u> S (EG63125-BS1)				Prepared	& Analyze	ed: 07/31/	06			
n Ranges C6-C12	566	25.0	mg/kg wet	500		113	75-125			
Carbon Ranges C12-C28	419	25.0		500		83.8	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	985	25.0	It	1000		98.5	75-125			
Surrogate: 1-Chlorooctane	49.7		mg/kg	50.0		99.4	70-130			
Surrogate: 1-Chlorooctadecane	46.9		"	50.0		93.8	70-130			
Calibration Check (EG63125-CCV1)				Prepared	: 07/31/06	Analyzed	l: 08/01/06	I		
Carbon Ranges C6-C12	292		mg/kg	250		117	80-120			
Carbon Ranges C12-C28	215		n	250		86.0	80-120			
Total Hydrocarbon nC6-nC35	507		"	500		101	80-120			
Surrogate: 1-Chlorooctane	63.1		"	50.0		126	70-130			
Surrogate: 1-Chlorooctadecane	63.9		"	50.0		128	70-130			

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### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG63125 - Solvent Extraction (GC)

Matrix Spike (EG63125-MS1)	Sour	ce: 6G31003-02	Prepared	& Analyze	ed: 07/31/	06			
Carbon Ranges C6-C12	629	25.0 mg/kg	dry 529	ND	119	75-125			
Carbon Ranges C12-C28	475	25.0 "	529	ND	89.8	75-125			
Carbon Ranges C28-C35	ND	25.0 "	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1100	25.0 "	1060	ND	104	75-125			
Surrogate: 1-Chlorooctane	52.0	mg/l	ig 50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	50.4		50.0		101	70-130			
Matrix Spike Dup (EG63125-MSD1)	Sour	ce: 6G31003-02	Prepared:	07/31/06	Analyzed	i: 08/01/06			
Carbon Ranges C6-C12	627	25.0 mg/kg	dry 529	ND	119	75-125	0.318	20	
Carbon Ranges C12-C28	473	25.0 "	529	ND	89.4	75-125	0.422	20	
Carbon Ranges C28-C35	ND	25.0 "	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1100	25.0 "	1060	ND	104	75-125	0.00	20	
Surrogate: 1-Chlorooctane	53.0	mg/l	kg 50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	51.4	"	50.0		103	70-130			

#### Batch EH60303 - EPA 5030C (GC)

Blank (EH60303-BLK1)	Prepared & Analyzed: 08/03/06									
ene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	н							
Ethylbenzene	ND	0.0250	11							
Xylene (p/m)	ND	0.0250	IF.							
Xylene (o)	ND	0.0250								
Surrogate: a,a,a-Trifluorotoluene	39.1		ug/kg	40.0	97.8	80-120				
Surrogate: 4-Bromofluorobenzene	35.5		"	40.0	88.8	80-120	•			
LCS (EH60303-BS1)				Prepared & An	nalyzed: 08/03/	06				
Benzene	1.25	0.0250	mg/kg wet	1.25	100	80-120	· · · · ·			
Toluene	1.26	0.0250	91	1.25	101	80-120				
Ethylbenzene	1.22	0.0250	9	1.25	97.6	80-120				
Xylene (p/m)	2.76	0.0250		2.50	110	80-120				
Xylene (o)	1.38	0.0250		1.25	110	80-120				
Surrogate: a,a,a-Trifluorotoluene	38.3		ug/kg	40.0	95.8	80-120				
Surrogate: 4-Bromofluorobenzene	37.1		"	40.0	92.8	80-120				

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60303 - EPA 5030C (GC)										
Calibration Check (EH60303-CCV1)				Prepared	& Analyze	ed: 08/03/0	06			
Benzene	54.2		ug/kg	50.0		108	80-120			
Toluene	52.6		n	50.0		105	80-120			
Ethylbenzene	51.9		"	50.0		104	80-120			
Xylene (p/m)	109		۳	100		109	80-120			
Xylene (o)	54.1		11	50.0		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.2		"	40.0		95.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.6		"	40.0		81.5	80-120			
Matrix Spike (EH60303-MS1)	Sou	Source: 6H02011-01				ed: 08/03/	06			
Benzene	1.31	0.0250	mg/kg dry	1.36	ND	96.3	80-120			
Toluene	1.35	0.0250	н	1.36	ND	99.3	80-120			
Ethylbenzene	1.27	0.0250	н	1.36	ND	93.4	80-120			
Xylene (p/m)	2.94	0.0250	и	2.72	ND	108	80-120			
Xylene (o)	1.48	0.0250	R	1.36	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		ug/kg	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	40.2		"	40.0		100	80-120			
Frix Spike Dup (EH60303-MSD1)	Sou	rce: 6H020	11-01	Prepared	& Analyze	ed: 08/03/	06			
ene	1.33	0.0250	mg/kg dry	1.36	ND	97.8	80-120	1.55	20	
Toluene	1.36	0.0250		1.36	ND	100	80-120	0.702	20	
Ethylbenzene	1.30	0.0250	11	1.36	ND	95.6	80-120	2.33	20	
Xylene (p/m)	2.97	0.0250	*	2.72	ND	109	80-120	0.922	20	
Xylene (o)	1.48	0.0250	"	1.36	ND	109	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	40.1		ug/kg	40.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		<i>98.2</i>	80-120			

Environmental Lab of Texas

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

General Chemistry Parameters by EPA / Standard Methods - Quality Control										
	E	nvironm	ental I	Lab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60103 - General Preparation	ı (Prep)			<u></u>						
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	100		%							
Duplicate (EH60103-DUP1)	Sou	rce: 6G310	03-01	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	95.1		%		94.7			0.421	20	
Duplicate (EH60103-DUP2)	Sou	rce: 6G310	10-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%		93.4			1.08	20	
Batch EH60203 - Water Extraction										
Blank (EH60203-BLK1)				Prepared	& Analyz	ed: 08/02/0	06			
Chloride	ND	0.500	mg/kg							
LCS (EH60203-BS1)				Prepared	& Analyz	ed: 08/02/0	06			
Chloride	9.31	0.500	mg/kg	10.0	·	93.1	80-120			
Calibration Check (EH60203-CCV1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	9.97	······	mg/L	10.0	Charles Country 1	99.7	80-120			
Duplicate (EH60203-DUP1)	Sou	rce: 6G310	07-01	Prepared	& Analyz	ed: 08/02/	06			
de	38.5	5.00	mg/kg		39.4			2.31	20	
Duplicate (EH60203-DUP2)	Sou	rce: 6G310	09-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	13.2	5.00	mg/kg		14.3	· · · · · · · · · · · · · · · · · · ·		8.00	20	
Matrix Spike (EH60203-MS1)	Sou	rce: 6G310	07-01	Prepared	& Analyz	ed: 08/02/	06			
Chloride	139	5.00	mg/kg	100	39.4	99.6	80-120			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas												
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch EH60203 - Water Extraction				۰								
Matrix Spike (EH60203-MS2)	Soi	urce: 6G310	09-02	Prepared	& Analyz	ed: 08/02/	06					
Chloride	114	5.00	mg/kg	100	14.3	99.7	80-120					
Batch EH60318 - Water Extraction												
Calibration Check (EH60318-CCV1)				Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120					
Calibration Check (EH60318-CCV2)				Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	1380		umhos/cm	1410		97.9	80-120					
Calibration Check (EH60318-CCV3)				Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	1400		umhos/cm	1410	£	99.3	80-120					
Calibration Check (EH60318-CCV4)				Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	1410		umhos/cm	1410		100	80-120					
Duplicate (EH60318-DUP1)	So	urce: 6G28(	07-01	Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20			
Duplicate (EH60318-DUP2)	So	urce: 6G31(	08-02	Prepared	& Analyz	ed: 08/03/	06					
fic Conductance (EC)	450	10.0	umhos/cm	••	442			1.79	20			
Duplicate (EH60318-DUP3)	So	urce: 6G31(	)10-03	Prepared	& Analyz	ed: 08/03/	06					
Specific Conductance (EC)	712	10.0	umhos/cm		702			1.41	20			
Duplicate (EH60318-DUP4)	So	urce: 6G31(	)11-05	Prepared	& Analvz	ed: 08/03/	06					
Specific Conductance (EC)	988	20.0	umhos/cm	1	1030			4.16	20			

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WHOLE E	EARTH ENVIRONMENTAL	Project:	Avalon Hills	Fax: (281) 394-2051
2103 Arbo	or Cove	Project Number:	None Given	
Katy TX, '	77494	Project Manager:	Mike Griffin	
		Notes and De	efinitions	
J	Detected but below the Reporting Lin	nit; therefore, result is an e	estimated concentration (CLP J-Flag).	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the	e reporting limit		
NR	Not Reported			,
dry	Sample results reported on a dry weight h	pasis		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			
Dup	Duplicate			

Raland K July Report Approved By: Date: 04-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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Lab	Hd	**
Enviremental	12600 West I-20 East	Odessa, Texas 79763

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Avalon Hills	Project #:	Project Loc:	PO #:	15	Analvze For	TOLP	TOTAL	Matrix 56	bH E C Cypordoex 2 A, R B C B C Cypordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybordoex Cybo	
				Fax No: 281.394.205				Preservative	Time Sampled No. of Containers HNO, HCI HCI HCI	
	d, Inc.								baiqme2 ateQ	
4. Griffin	Vhole Earth Environmenta	103 Arbor Cove	(aty, TX 77494	281.394.2050					FIELD CODE	and a set of a
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# Analytical Report

### **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G31011

Report Date: 08/07/06

WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 3A 70'	6G31011-01	Soil	2006-07-30 00:00	2006-07-31 14:15
BH 3A 80'	6G31011-02	Soil	2006-07-30 00:00	2006-07-31 14:15
BH 3A 90'	6G31011-03	Soil	2006-07-30 00:00	2006-07-31 14:15
BH 3A 100'	6G31011-04	Soil	2006-07-30 00:00	2006-07-31 14:15
BH 3A 120'	6G31011-05	Soil	2006-07-31 00:00	2006-07-31 14:15
BH 3A 60'	6G31011-06	Soil	2006-07-30 00:00	2006-07-31 14:15

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 70' (6G31011-01) Soil	· · · · · · · · · · · · · · · · · · ·					<u></u>			
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	······
Toluene	ND	0.0250	"	"	19	"	"	"	
Ethylbenzene	ND	0.0250	n	"	"	tt.	"	*	
Xylene (p/m)	ND	0.0250	"	n	"	н	"	"	
Xylene (o)	ND	0.0250	"	"	u	. н		11	
Surrogate: a,a,a-Trifluorotoluene		83.2 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	I	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	н	`• н	"	u	"	**	
Carbon Ranges C28-C35	ND	25.0	*1	f1	"	"	11		
Total Hydrocarbon nC6-nC35	ND	25.0	n	"		n	"	n	
Surrogate: 1-Chlorooctane		100 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-1	30	"	"	"	"	
BH 3A 80' (6G31011-02) Soil									
Bernene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/03/06	EPA 8021B	
î Ene	ND	0.0250	н	"	n	11	11	и	
Ethylbenzene	ND	0.0250		ų ,	"	"	*1	16	
Xylene (p/m)	ND	0.0250	u	0	н	0	"	п	
Xylene (o)	ND	0.0250		II.	11	0	n	U	
Surrogate: a,a,a-Trifluorotoluene		90.2 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	u	· •	н	"	11	11	
Carbon Ranges C28-C35	ND	25.0	U		14	n	*1	N	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	"	"	u	0 ·	
Surrogate: 1-Chlorooctane		98.4 %	70	130	"	11	"	"	
Surrogate: 1-Chlorooctadecane		99.2 %	70-1	130	"	"	"	"	

E. ronmental Lab of Texas

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 90' (6G31011-03) Soil									
Benzene	ND	0.0250	mg/kg dry	. 25	EH60303	08/03/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	11	"	"	"			
Ethylbenzene	ND	0.0250	11	n		"	"	н	
Xylene (p/m)	ND	0.0250	"	H	"	u	*1	11	
Xylene (o)	ND	0.0250	19	0	"	11	19	n	
Surrogate: a,a,a-Trifluorotoluene		87.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.2 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	11	"	IF	"	It	
Carbon Ranges C28-C35	ND	25.0	"	"	N		"	н	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"		н	11	**	
Surrogate: I-Chlorooctane		103 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		104 %	70-1	130	"	"	"	"	
BH 3A 100' (6G31011-04) Soil				•					
Benzene	ND	0.0250	mg/kg dry	25	EH60303	08/03/06	08/04/06	EPA 8021B	
1 ne	ND	0.0250	н	"	н			"	
Ethylbenzene	ND	0.0250	"	"	11	"	"	н	
Xylene (p/m)	ND	0.0250	19	u	11	11	"	"	
Xylene (o)	ND	0.0250	H		"	"	u		
Surrogate: a,a,a-Trifluorotoluene		84.0 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.2 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	11	U	U	n	
Carbon Ranges C28-C35	ND	25.0		11	"	. "	"		
Total Hydrocarbon nC6-nC35	ND	25.0	n	Ħ	ч	H	n		
Surrogate: 1-Chlorooctane		105 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70	130	"	"	"	"	

E. ronmental Lab of Texas

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

		Or	ganics b	y GC					
		Environ	nental L	ab of ]	lexas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 120' (6G31011-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	"	п	"		11	n	
Ethylbenzene	ND	0.0250	и	"		"	"	н	
Xylene (p/m)	ND	0.0250	*1	н		"	.,	"	
Xylene (o)	ND	0.0250	"	ч	"	U	11	H .	
Surrogate: a,a,a-Trifluorotoluene		92.5 %	80-1	120	"	"	"	11	
Surrogate: 4-Bromofluorobenzene		86.0 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63125	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	*1	"		n	n	n	
Carbon Ranges C28-C35	ND	25.0	0	U	11	u	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	n	"	11	U	
Surrogate: 1-Chlorooctane		100 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-1	130	"	"	"	"	
BH 3A 60' (6G31011-06) Soil									_
Perzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
ne zne	ND	0.0250	н	"	11	U	11	0	
Ethylbenzene	ND	0.0250	н	"	"	U	"		
Xylene (p/m)	ND	0.0250	н	"	*1		11	I	
Xylene (o)	ND	0.0250	n	"	"	"	**	"	
Surrogate: a,a,a-Trifluorotoluene		89.8 %	80-	120	"	"	11	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EH60107	08/01/06	08/02/06	TX 1005	
Carbon Ranges C12-C28	J [16.9]	25.0		и	It	0	н	o	J
Carbon Ranges C28-C35	ND	25.0	"	"	n	"	*	11	
Total Hydrocarbon nC6-nC35	ND	25.0	a	u	n	"	U	n	
Surrogate: 1-Chlorooctane		94.0 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		74.6%	70-	130	"	"	"	"	

Environmental Lab of Texas

#### Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 3A 70' (6G31011-01) Soil							Anaryzeu		
Chloride	38.0	5.00	mg/kg	10	EH60203	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	936	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	10.1	0,1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 80' (6G31011-02) Soil									
Chloride	48.0	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	736	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	9.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 90' (6G31011-03) Soil						_			
Chloride	72.7	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	964	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	16.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 100' (6G31011-04) Soil									
Cimride	81.9	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
fic Conductance (EC)	1120	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	10.6	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 120' (6G31011-05) Soil									
Chloride	83.5	• 5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	1030	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	18.7	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 3A 60' (6G31011-06) Soil									
Chloride	39.4	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	697	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	2.4	0.1	%	1	EH60202	08/01/06	08/02/06	% calculation	

Environmental Lab of Texas

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63125 - Solvent Extraction	(GC)									
Blank (FG63125-BLK1)				Prepared	& Analyz	ed: 07/31/	06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet	Trepared	æ i marj 2					
Carbon Ranges C12-C28	ND	25.0								
Carbon Ranges C28-C35	ND	25.0	H							
Total Hydrocarbon nC6-nC35	ND	25.0	11							
Surrogate: 1-Chlorooctane	45.5		mg/kg	50.0		91.0	70-130			
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			
LCS (EG63125-BS1)				Prepared	& Analyz	ed: 07/31/	06			
Carbon Ranges C6-C12	566	25.0	mg/kg wet	500		113	75-125			
Carbon Ranges C12-C28	419	25.0		500		83.8	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	985	25.0	"	1000		98.5	75-125			
Surrogate: 1-Chlorooctane	49.7		mg/kg	50.0		99.4	70-130			
Surrogate: 1-Chlorooctadecane	46.9		"	50.0	•	<i>93</i> .8	70-130			
Calibration Check (EG63125-CCV1)				Prepared:	07/31/06	Analyzed	l: 08/01/06			
Carbon Ranges C6-C12	292		mg/kg	250		117	80-120			
n Ranges C12-C28	215		и	250		86.0	80-120			
Total Hydrocarbon nC6-nC35	507		и	500		101	80-120			
Surrogate: 1-Chlorooctane	63.1		"	50.0		126	70-130			
Surrogate: 1-Chlorooctadecane	63.9		"	50.0		128	70-130			
Matrix Spike (EG63125-MS1)	So	ource: 6G310	003-02	Prepared	& Analyz	ed: 07/31/	06			
Carbon Ranges C6-C12	629	25.0	mg/kg dry	529	ND	119	75-125			
Carbon Ranges C12-C28	475	25.0	11	529	ND	89.8	75-125			
Carbon Ranges C28-C35	ND	25.0	11	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1100	25.0	a	1060	ND	104	75-125			
Surrogate: 1-Chlorooctane	52.0		mg/kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	50.4		"	50.0		101	70-130			

Environmental Lab of Texas

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EG63125 - Solvent Extraction (	GC)									
Matrix Spike Dup (EG63125-MSD1)	So	urce: 6G310	03-02	Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	627	25.0	mg/kg dry	529	ND	119	75-125	0.318	20	
Carbon Ranges C12-C28	473	25.0	11	529	ND	89.4	75-125	0.422	20	
Carbon Ranges C28-C35	ND	25.0	u	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1100	25.0	n	1060	ND	104	75-125	0.00	20	
Surrogate: 1-Chlorooctane	53.0		mg/kg	50.0	···	106	70-130			
Surrogate: 1-Chlorooctadecane	51.4		"	50.0		103	70-130			
Batch EH60107 - Solvent Extraction	(GC)									
Blank (EH60107-BLK1)				Prepared	: 08/01/06	Analyzed	l: 08/02/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	"							
Carbon Ranges C28-C35	ND	25.0	*1							
Total Hydrocarbon nC6-nC35	ND	25.0	*1							
Surrogate: 1-Chlorooctane	49.6	······	mg/kg	50.0		99.2	70-130			
Surrogate: 1-Chlorooctadecane	36.7		u	50.0		73.4	70-130			
L <u>CS</u> (EH60107-BS1)				Prepared	: 08/01/06	Analyzed	1: 08/02/06	,		
Ranges C6-C12	536	25.0	mg/kg wet	500		107	75-125			
Carbon Ranges C12-C28	572	25.0	11	500		114	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	1110	25.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	59.9		mg/kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	40.4		53	50.0		80.8	70-130			
Calibration Check (EH60107-CCV1)				Prepared	: 08/01/06	Analyzed	1: 08/02/06	5		
Carbon Ranges C6-C12	220		mg/kg	250		88.0	80-120			
Carbon Ranges C12-C28	274		"	250		110	80-120			
Total Hydrocarbon nC6-nC35	494		"	500		98.8	80-120			
Surrogate: 1-Chlorooctane	58.8		"	50.0		118	70-130			
Surrogate: 1-Chlorooctadecane	49.3		"	50.0		98.6	70-130			

Environmental Lab of Texas

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60107 - Solvent Extractio	on (GC)					<u> </u>				

#### Prepared: 08/01/06 Analyzed: 08/02/06 Matrix Spike (EH60107-MS1) Source: 6G31011-06 ND Carbon Ranges C6-C12 600 512 117 75-125 25.0 mg/kg dry 536 25.0 512 16.9 101 75-125 Carbon Ranges C12-C28 Carbon Ranges C28-C35 ND 25.0 0.00 ND 75-125 1140 25.0 1020 Total Hydrocarbon nC6-nC35 ND 112 75-125 57.1 Surrogate: 1-Chlorooctane mg/kg 50.0 114 70-130 41.0 50.0 Surrogate: 1-Chlorooctadecane 82.0 70-130 Matrix Spike Dup (EH60107-MSD1) Source: 6G31011-06 Prepared: 08/01/06 Analyzed: 08/02/06 Carbon Ranges C6-C12 584 ND 20 25.0 mg/kg dry 512 114 75-125 2.70 Carbon Ranges C12-C28 592 25.0 512 16.9 112 9.93 20 н 75-125 8.28 25.0 ND Carbon Ranges C28-C35 0.00 75-125 20 J Total Hydrocarbon nC6-nC35 1180 25.0 н 1020 ND 116 75-125 3.45 20 63.9 Surrogate: 1-Chlorooctane 50.0 128 70-130 mg/kg Surrogate: 1-Chlorooctadecane 51.0 50.0 102 70-130

### Batch EH60303 - EPA 5030C (GC)

Blank (EH60303-BLK1)	Prepared & Analyzed: 08/03/06											
E	ND	0.0250	mg/kg wet				······································					
Toluene	ND	0.0250	*1									
Ethylbenzene	ND	0.0250	u									
Xylene (p/m)	ND	0.0250	н									
Xylene (o)	ND	0.0250	н				,					
Surrogate: a,a,a-Trifluorotoluene	39.1		ug/kg	40.0	97.8	80-120						
Surrogate: 4-Bromofluorobenzene	35.5		"	40.0	88.8	80-120						
LCS (EH60303-BS1)				Prepared & An	alyzed: 08/03/	06						
Benzene	1.25	0.0250	mg/kg wet	1.25	100	80-120		-				
Toluene	1.26	0.0250	u.	1.25	101	80-120						
Ethylbenzene	1.22	0.0250	"	1.25	97.6	80-120						
Xylene (p/m)	2.76	0.0250	U	2.50	110	80-120						
Xylene (o)	1.38	0.0250	"	1.25	110	80-120						
Surrogate: a,a,a-Trifluorotoluene	38.3	· · · · · ·	ug/kg	40.0	95.8	80-120	· · · · · · · · · · · · · · · · · · ·					
Surrogate: 4-Bromofluorobenzene	37.1		"	40.0	92.8	80-120						

En-monmental Lab of Texas

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60303 - EPA 5030C (GC)										
Calibration Check (EH60303-CCV1)				Prepared	& Analyze	ed: 08/03/	06			
Benzene	54.2		ug/kg	50.0		108	80-120			
Toluene	52.6		и	50.0		105	80-120			
Ethylbenzene	51.9		"	50.0		104	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	54.1		R	50.0		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.2		"	40.0		95.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.6		"	40.0		81.5	80-120			
Matrix Spike (EH60303-MS1)	Sou	irce: 6H020	11-01	Prepared	& Analyz	ed: 08/03/	06			
Benzene	1.31	0.0250	mg/kg dry	1.36	ND	96.3	80-120			
Toluene	1.35	0.0250	"	1.36	ND	99.3	80-120			
Ethylbenzene	1.27	0.0250	**	1.36	ND	93.4	80-120			
Xylene (p/m)	2.94	0.0250	н	2.72	ND	108	80-120			
Xylene (o)	1.48	0.0250	N	1.36	ND	109	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		ug/kg	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	40.2		"	40.0		100	80-120			
Manaja Spike Dup (EH60303-MSD1)	Sou	irce: 6H020	11-01	Prepared	& Analyz	ed: 08/03/	06			
B he	1.33	0.0250	mg/kg dry	1.36	ND	97.8	80-120	1.55	20	
Toluene	1.36	0.0250	11	1.36	ND	100	80-120	0.702	20	
Ethylbenzene	1.30	0.0250	11	1.36	ND	95.6	80-120	2.33	20	
Xylene (p/m)	2.97	0.0250	н	2.72	ND	109	80-120	0.922	20	
Xylene (o)	1.48	0.0250	17	1.36	ND	109	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	40.1		ug/kg	40.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		98.2	80-120			
Batch EH60402 - EPA 5030C (GC)						_				
Blank (EH60402-BLK1)				Prepared	& Analyz	ed: 08/04/	06			
Benzene	ND	0.0250	mg/kg wet						······································	
Toluene	ND	0.0250	11							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	н							
Surrogate: a.a.a-Trifluorotoluene	34.6	· · · · · · · · · · · · · · · · · · ·	ug/kg	40.0		86.5	80-120			

Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene

E. Aronmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

80-120

92.0

"

40.0

36.8

## WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove

### Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60402 - EPA 5030C (GC)										
LCS (EH60402-BS1)	····		····	Prepared	& Analyz	ed: 08/04/0				
Benzene	1.14	0.0250	mg/kg wet	1.25		91.2	80-120			
Toluene	1.17	0.0250		1.25		93.6	80-120			
Ethylbenzene	1.15	0.0250		1.25		92.0	80-120			
Xylene (p/m)	2.57	0.0250	17	2.50		103	80-120			
Xylene (0)	1.28	0.0250		1.25		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.3		ug/kg	40.0		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120			
Calibration Check (EH60402-CCV1)				Prepared	: 08/04/06	Analyzed	: 08/06/06			
Benzene	50.6		ug/kg	50.0		101	80-120			
Toluene	49.6		11	50.0		99.2	80-120			
Ethylbenzene	48.4		u	50.0		96.8	80-120			
Xylene (p/m)	103		u	100		103	80-120		•	
Xylene (o)	51.5		п	50.0		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.6		"	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	39.2		"	40.0		98.0	80-120			
Menix Spike (EH60402-MS1)	So	urce: 6G31(	011-06	Prepared	: 08/04/06	Analyzed	: 08/07/06			
Bene	1.20	0.0250	mg/kg dry	1.28	ND	93.8	80-120			
Toluene	1.21	0.0250	"	1.28	ND	94.5	80-120			
Ethylbenzene	1.24	0.0250	"	1.28	ND	96.9	80-120			
Xylene (p/m)	2.67	0.0250	19	2.56	ND	104	80-120			
Xylene (0)	1.30	0.0250	R	1.28	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.2		ug/kg	40.0		88.0	80-120			
Surrogate: 4-Bromofluorobenzene	36.3 _.		"	40.0		90.8	80-120			
Matrix Spike Dup (EH60402-MSD1)	So	urce: 6G31	011-06	Prepared	: 08/04/06	Analyzed	l: 08/07/06			
Benzene	1.23	0.0250	mg/kg dry	1.28	ND	96.1	80-120	2.42	20	
Toluene	1.25	0.0250	R	1.28	ND	97.7	80-120	3.33	20	
Ethylbenzene	1.25	0.0250	н	1.28	ND	97.7	80-120	0.822	20	
Xylene (p/m)	2.90	0.0250	н	2.56	ND	113	80-120	8.29	20	
Xylene (0)	1.38	0.0250	u	1.28	ND	108	80-120	5.71	20	
Surrogate: a,a,a-Trifluorotoluene	40.7		ug/kg	40.0	<u> </u>	102	80-120			
Surrogate: 4-Bromofluorobenzene	39.2		"	40.0		98.0	80-120			

Environmental Lab of Texas

WHOLE EARTH ENVIRONMENTAL
2103 Arbor Cove
Katy TX, 77494

### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

### Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60103 - General Preparation (	(Prep)									
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	100		%							
Duplicate (EH60103-DUP1)	Se	ource: 6G3100	03-01	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	95.1		%	·	94.7			0.421	20	
Duplicate (EH60103-DUP2)	Se	ource: 6G3101	10-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%	de mare	93.4			1.08	20	
Batch EH60202 - General Preparation	(Prep)	. <u></u>	····							
Blank (EH60202-BLK1)				Prepared:	08/01/06	Analyzed	: 08/02/06			
% Solids	100		%							
Duplicate (EH60202-DUP1)	S	ource: 6G3101	11-06	Prepared:	08/01/06	Analyzed	: 08/02/06			
% Solids	96.3		%		97.6			1.34	20	
Duplicate (EH60202-DUP2)	S	ource: 6H010(	07-09	Prepared:	08/01/06	Analyzed	: 08/02/06			
% Solids	89.9		%		90.8			0.996	20	
<b>Batch EH60203 - Water Extraction</b>										
Brank (EH60203-BLK1)				Prepared	& Analyz	ed: 08/02/0	)6			
Chloride	ND	. 0.500	mg/kg							
LCS (EH60203-BS1)				Prepared	& Analyz	ed: 08/02/0	)6			
Chloride	9.31	0.500	mg/kg	10.0		93.1	80-120			

Environmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60203 - Water Extraction								<u> </u>		
Calibration Check (EH60203-CCV1)				Prepared	& Analyz	ed: 08/02/	06			, M
Chloride	9.97		mg/L	10.0		99.7	80-120			
Duplicate (EH60203-DUP1)	Sou	rce: 6G310(	07-01	Prepared	& Analyze	ed: 08/02/	06			
Chloride	38.5	5.00	mg/kg		39.4			2.31	20	
Duplicate (EH60203-DUP2)	Sou	rce: 6G310(	)9-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	13.2	5.00	mg/kg		14.3			8.00	20	
Matrix Spike (EH60203-MS1)	Sou	rce: 6G310(	07-01	Prepared	& Analyz	ed: 08/02/	06			
Chloride	139	5.00	mg/kg	100	39.4	99.6	80-120			
Matrix Spike (EH60203-MS2)	Sou	rce: 6G310(	)9-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	114	5.00	mg/kg	100	14.3	99.7	80-120			
Batch EH60204 - Water Extraction										
Blank (EH60204-BLK1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	ND	0.500	mg/kg							
LGS (EH60204-BS1)				Prepared	& Analyz	ed: 08/02/	06			
ide	9.70	0.500	mg/kg	10.0	<b>-</b>	97.0	80-120		<del> </del>	
Calibration Check (EH60204-CCV1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride .	9.83		mg/L	10.0		98.3	80-120			
Duplicate (EH60204-DUP1)	Sou	rce: 6G310	11-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	47.1	5.00	mg/kg		48.0			1.89	20	

Environmental Lab of Texas

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60204 - Water Extraction										
Duplicate (EH60204-DUP2)	Sour	·ce: 6G310	13-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	173	5.00	mg/kg	•	176			1.72	20	
Matrix Spike (EH60204-MS1)	Sou	rce: 6G310	11-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	152	5.00	mg/kg	100	48.0	104	80-120			
Matrix Spike (EH60204-MS2)	Sou	rce: 6G310	13-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	285	5.00	mg/kg	100	176	109	80-120			
Batch EH60318 - Water Extraction									<u> </u>	
Calibration Check (EH60318-CCV1)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120			
Calibration Check (EH60318-CCV2)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1380		umhos/cm	1410	· · · ·	97.9	80-120			
Calibration Check (EH60318-CCV3)				Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1400		umhos/cm	1410	<b>č</b>	99.3	80-120			
Calibration Check (EH60318-CCV4)				Prepared	& Analyz	ed: 08/03/	06			
s c Conductance (EC)	1410		umhos/cm	1410		100	80-120			
Duplicate (EH60318-DUP1)	Sou	rce: 6G280	07-01	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20	
Duplicate (EH60318-DUP2)	Sou	rce: 6G310	08-02	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	450	10.0	umhos/cm		442			1.79	20	·····

Environmental Lab of Texas

WHOLE EARTH ENVIRONMENTAL
2103 Arbor Cove
Katy TX 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

<b>General</b> Chem	istry Parameters	by EPA / Stand	lard Methods -	<b>Ouality Control</b>

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60318 - Water Extraction									
Duplicate (EH60318-DUP3)	Sour	-ce: 6G31010-03	Prepared	& Analyze	ed: 08/03/0	6			
Specific Conductance (EC)	712	10.0 umhos/cm		702			1.41	20	
Duplicate (EH60318-DUP4)	Sour	·ce: 6G31011-05	Prepared	& Analyze	ed: 08/03/0	6			
Specific Conductance (EC)	988	20.0 umhos/cm		1030			4.16	20	

E. ...ronmental Lab of Texas

WHOLE E 2103 Arbo Katy TX, 7	CARTH ENVIRONMENTAL r Cove 77494	Project: Project Number: Project Manager:	Avalon Hills None Given Mike Griffin	Fax: (281) 394-2051
		Notes and De	finitions	
J	Detected but below the Reporting Limit;	therefore, result is an e	stimated concentration (CLP J-Flag).	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the re	porting limit		
NR	Not Reported			
dry	Sample results reported on a dry weight basis	5		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			
Dup	Duplicate			

Report Approved By:

al ar 8-07-06 Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

ronmental Lab of Texas

Inc.		
Lab of Texas,	Phone: 915-563-1800	Fax: 915-563-1713
Enviremental	12600 West I-20 East	Odessa, Texas 79763

Project Manager. M. Griffin

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

pary Name Whole Earth Environmental, Inc.	y Address: 2103 Arbor Cove	y/State/Zip: Katy, TX 77494	lephone No: 281.394.2050 Fax No:
			281.394.2051

Hills	
Avalon	
Project Name:	
	ľ

Project #:

Project Loc:	PO #:
1	

Analyze For

Sampler Signature:

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9	BH 3A 70'		07/30/06		***	×				-	-		×				×	-	-	_	×	×		×				1
Th	BH 3A 80		07/30/06		-	×							×				×		_	_	×	×		×				
da a	BH 3A 90'		07/30/06		+	×					-		×				×	_	-		×	×	_	×				
40	BH 3A 100'		07/30/06		1	×				_			×				×	-	_	_	×	×		×				
50-	BH3A 120'		7-31-06		-	X				-			X	_		3	X				X	5		X				
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## Analytical Report

### **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

Lab Order Number: 6G31012

Report Date: 08/07/06
#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 4 10'	6G31012-01	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 4 20'	6G31012-02	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 4 30'	6G31012-03	Soil	2006-07-28 00:00	2006-07-31 14:15
BH 4 40'	6G31012-04	Soil	2006-07-28 00:00	2006-07-31 14:15

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
BH 4 10' (6G31012-01) Soil					······.				
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	"		"	11	н	۰.	
Ethylbenzene	ND	0.0250	"	"	"	n	u	"	
Xylene (p/m)	ND	0.0250		"	11	"	11		
Xylene (o)	ND	0.0250	"	"	**	"	n		
Surrogate: a,a,a-Trifluorotoluene		90.5 %	80-1	120	"	'n	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	н.	u	U	12	
Carbon Ranges C28-C35	ND	25.0	n	61	n	11	н	"	
Total Hydrocarbon nC6-nC35	ND	25.0		и	11	"	H	"	
Surrogate: 1-Chlorooctane	and the second	85.6 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.8 %	70-1	130	"	"	"	"	
BH 4 20' (6G31012-02) Soil									
Renzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
ene	ND	0.0250		u	"	U	u	н	
Ethylbenzene	ND	0.0250	"	*	н	11	R	87	
Xylene (p/m)	ND	0.0250	n		. "	U	"	"	
Xylene (o)	ND	0.0250	**	11	11	u.	**	N	
Surrogate: a,a,a-Trifluorotoluene		88.5 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	ų	n	"		11		
Carbon Ranges C28-C35	ND	25.0	n	"	11	"	"	u	
Total Hydrocarbon nC6-nC35	ND	25.0	H	11	"	n	"	11	
Surrogate: 1-Chlorooctane		111%	70-	130	"	"	"		
Surrogate: 1-Chlorooctadecane		88.0 %	70-	130	"	"	"	"	

ronmental Lab of Texas

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Page 2 of 10

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin Fax: (281) 394-2051

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 30' (6G31012-03) Soil							· · · · · · · ·		
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	u	"	"	"	"	0	
Ethylbenzene	ND	0.0250	"	н	11	U	"	U	
Xylene (p/m)	ND	0.0250		U	"	n	"	U	
Xylene (o)	ND	0.0250	u	"	H	H	"	. H	
Surrogate: a,a,a-Trifluorotoluene		88.0 %	80-1	120	"	"	"	11	
Surrogate: 4-Bromofluorobenzene		85.5 %	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	49.1	25.0	u	н	"	11	"	11	
Carbon Ranges C28-C35	ND	25.0	"	"	"	"	11	"	
Total Hydrocarbon nC6-nC35	49.1	25.0	"	Ħ	41	H	u	<b>11</b>	
Surrogate: 1-Chlorooctane		99.6 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		78.6 %	70	130	"	"	"	"	
BH 4 40' (6G31012-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
1 ne	ND	0.0250	"	19	"	0		11	
Ethylbenzene	ND	0.0250	n	u	۳.	"	11	u	
Xylene (p/m)	ND	0.0250	н	**	"	н	*	"	
Xylene (o)	ND	0.0250	н	"	11	"		11	
Surrogate: a,a,a-Trifluorotoluene		88.5 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	39.1	25.0	"			"	11	н	
Carbon Ranges C28-C35	ND	25.0	11	11	"	H	*	н	
Total Hydrocarbon nC6-nC35	39,1	25.0	u	n	"	*		н.	
Surrogate: 1-Chlorooctane		94.6 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.0 %	70-	130	"	. 11	"	"	

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 3 of 10

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

		Reporting	** *.						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 10' (6G31012-01) Soil									
Chloride	6.06	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	299	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	15.9	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 20' (6G31012-02) Soil									
Chloride	21.0	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	511	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	2.1	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 30' (6G31012-03) Soil					r				
Chloride	6.86	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	353	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	1.1	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 40' (6G31012-04) Soil									
Chloride	J [1.82]	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	J
fic Conductance (EC)	220	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	18.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

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Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

	<b>.</b> .	Reporting	<b>1</b> • •	Spike	Source	0/852	%REC	DDD	RPD	<b>XT</b> -
Analyte	Result	Limit	Units	Level	Kesult	%KEC	Limits	KPD	Limit	NOTES
Batch EG63122 - Solvent Extraction	(GC)									
Blank (EG63122-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0								
Carbon Ranges C28-C35	ND	25.0	D.							
Total Hydrocarbon nC6-nC35	ND	25.0	U							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EG63122-BS1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
Carbon Ranges C6-C12	500	25.0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	564	25.0	ti	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
Calibration Check (EG63122-CCV1)			=	Prepared:	07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
Ranges C12-C28	258		а	250		103	80-120			
Hydrocarbon nC6-nC35	474		*1	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		11	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	So	urce: 6G31	012-03	Prepared:	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	. 11	506	49.1	101	75-125			
Carbon Ranges C28-C35	ND	25.0	. 11	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0		1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

ronmental Lab of Texas

## WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63122 - Solvent Extraction (	GC)									
Matrix Spike Dup (EG63122-MSD1)	So	urce: 6G310	012-03	Prepared:	: 07/31/06	Analyzed	: 08/01/06	,		
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	u	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	H	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	и	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		, "	50.0		89.4	70-130			
Batch EH60402 - EPA 5030C (GC)										
Blank (EH60402-BLK1)				Prepared	& Analyz	ed: 08/04/	06			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	U							
Ethylbenzene	ND	0.0250	0							
Xylene (p/m)	ND	0.0250	н							
Xylene (o)	ND	0.0250								
Surrogate: a,a,a-Trifluorotoluene	34.6		ug/kg	40.0		86.5	80-120			······
Surrogate: 4-Bromofluorobenzene	36.8		,	40.0		92.0	80-120			
EH60402-BS1)				Prepared	& Analyz	ed: 08/04/	06			
Benzene	1.14	0.0250	mg/kg wet	1.25		91.2	80-120			
Toluene	1.17	0.0250	11	1.25		93.6	80-120			
Ethylbenzene	1.15	0.0250	"	1.25		92.0	80-120			
Xylene (p/m)	2.57	0.0250	"	2.50		103	80-120			
Xylene (o)	1.28	0.0250	11	1.25		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.3		ug/kg	40.0		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120			

ronmental Lab of Texas

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60402 - EPA 5030C (GC)										
Calibration Check (EH60402-CCV1)				Prepared:	08/04/06	Analyzed	: 08/06/06			
Benzene	50.6		ug/kg	50.0		101	80-120			
Toluene	49.6			50.0		<b>99.2</b>	80-120			
Ethylbenzene	48.4		"	50.0		96.8	80-120			
Xylene (p/m)	103		"	100		103	80-120			
Xylene (o)	51.5			50.0		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.6		"	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	39.2		"	40.0		98.0	80-120			
Matrix Spike (EH60402-MS1)	So	urce: 6G310	11-06	Prepared:	08/04/06	Analyzed	: 08/07/06			
Benzene	1.20	0.0250	mg/kg dry	1.28	ND	93.8	80-120			
Toluene	1.21	0.0250	н	1.28	ND	94.5	80-120			
Ethylbenzene	1.24	0.0250	U	1.28	ND	96.9	80-120			
Xylene (p/m)	2.67	0.0250		2.56	ND	104	80-120			
Xylene (o)	1.30	0.0250	"	1.28	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.2		ug/kg	40.0		88.0	80-120			
Surrogate: 4-Bromofluorobenzene	36.3		"	40.0		90.8	80-120			
Metrix Spike Dup (EH60402-MSD1)	So	urce: 6G310	11-06	Prepared:	: 08/04/06	Analyzed	: 08/07/06			
he	1.23	0.0250	mg/kg dry	1.28	ND	96.1	80-120	2.42	20	
Toluene	1.25	0.0250	н	1.28	ND	97.7	80-120	3.33	20	
Ethylbenzene	1.25	0.0250	u	1.28	ND	97.7	80-120	0.822	20	
Xylene (p/m)	2.90	0.0250	"	2.56	ND	113	80-120	8.29	20	
Xylene (0)	1.38	0.0250	"	1.28	ND	108	80-120	5.71	20	
Surrogate: a,a,a-Trifluorotoluene	40.7		ug/kg	40.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	39.2		"	40.0		98.0	80-120			

ronmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

## **Environmental Lab of Texas**

	<b>P</b> 1:	Reporting		Spike	Source	0/000	%REC	DDD	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	Notes
<b>Batch EH60103 - General Preparation</b>	(Prep)									
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	100		%							
Duplicate (EH60103-DUP1)	So	urce: 6G3100	)3-01	Prepared:	07/31/06	Analyzed	l: 08/01/06			
% Solids	95.1		%		94.7			0.421	20	
Duplicate (EH60103-DUP2)	So	urce: 6G3101	10-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%		93.4			1.08	20	
Batch EH60204 - Water Extraction		<u> </u>							<u> </u>	
Blank (EH60204-BLK1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	ND	0.500	mg/kg							
LCS (EH60204-BS1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	9.70	0.500	mg/kg	10.0		97.0	80-120			
Calibration Check (EH60204-CCV1)				Prepared	& Analyze	ed: 08/02/	06			
Chloride	9.83		mg/L	10.0		98.3	80-120			
Duplicate (EH60204-DUP1)	So	urce: 6G310	11-02	Prepared	& Analyz	ed: 08/02/	06			
ide	47.1	5.00	mg/kg		48.0			1.89	20	
Duplicate (EH60204-DUP2)	So	urce: 6G310	13-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	173	5.00	mg/kg		176			1.72	20	
Matrix Spike (EH60204-MS1)	So	urce: 6G310	11-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	152	5.00	mg/kg	100	48.0	104	80-120			

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General Chemis	try Paran	neters by	EPA/S	Standar	d Meth	ods - Q	uality (	Contro	ļ	
	E	Environm	iental L	ab of T	exas		- •			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60204 - Water Extraction										
Matrix Spike (EH60204-MS2)	Sou	ırce: 6G310	13-02	Prepared	& Analyze	ed: 08/02/	06			
Chloride	285	5.00	mg/kg	100	176	109	80-120			
Batch EH60318 - Water Extraction										
Calibration Check (EH60318-CCV1)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120	· · · · · · · · · · · · · · · · · · ·		
Calibration Check (EH60318-CCV2)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1380		umhos/cm	1410		97.9	80-120			
Calibration Check (EH60318-CCV3)				Prepared	& Analyze	ed: 08/03/	06			
Specific Conductance (EC)	1400		umhos/cm	1410		99.3	80-120			
Calibration Check (EH60318-CCV4)				Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1410		umhos/cm	1410	-	100	80-120			
Duplicate (EH60318-DUP1)	Sou	urce: 6G280	07-01	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0	umhos/cm		1520			0.00	20	
Duplicate (EH60318-DUP2)	Soi	urce: 6G310	08-02	Prepared	& Analyz	ed: 08/03/	06			
S C Conductance (EC)	450	10.0	umhos/cm		442			1.79	20	
Duplicate (EH60318-DUP3)	Soi	urce: 6G310	10-03	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	712	10.0	umhos/cm	<u> </u>	702			1.41	20	
Duplicate (EH60318-DUP4)	So	urce: 6G310	11-05	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	988	20.0	umhos/cm		1030		· · · · · · · · · · · · · · · · · · ·	4.16	20	

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WHOLE I 2103 Arbo Katy TX,	EARTH ENVIRONMENTAL or Cove 77494	Project: Project Number: Project Manager:	Avalon Hills None Given Mike Griffin	Fax: (281) 394-2051
		Notes and De	efinitions	
J	Detected but below the Reporting Limit;	therefore, result is an e	estimated concentration (CLP J-Flag).	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the re	porting limit		
NR	Not Reported			
dry	Sample results reported on a dry weight basis	5		
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			
Dup	Duplicate			

Report Approved By:

Roland & twee

Date: 8-07-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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Inc.		
b of Texas,	Phone: 915-563-1800	Fax: 915-563-1713
Enviremental La	2600 West I-20 East	Ddessa, Texas 79763



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:	M. Griffin			Project Name: Availo	on Hills
Company Name	Whole Earth Environmental, Inc.			Project #:	
Company Address:	2103 Arbor Cove			Project Loc:	
City/State/Zip:	Katy, TX 77494			NOR.	
Telephone No:	281,394,2050	Fax No:	281.394.2051		
Sampler Signature:					
					Analyza
				10.04	

Analyze For

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					Presa	vative		-	2	atrix		-	_		21	-	-	_		-	-	_	-	1	
Ed OQ Berto use only	FIELD CODE	beigme2 eted	beigmuit2 emiT		HOT HOT	*OS*H	940%	(Appells ) sharp)	adpres	105	(Apoech) skap)	102/CF12MH1EC	9001/9001 X1 Hd1	DHOIDED WELDHOL	THE REAL OF STREET, ST	THERE AND A	B1EX 90548/2000	. reported	HW(8	03	на		alubario2-an9) TAT H2UR	TAT brebnet2	
9	BH 4 10'	07/28/06		1 X		_			_	×		-	×			-	×	×		×					
-02	BH 4 20'	07/28/08		×						×			×				×	×		×					
63	BH 4 30'	07/28/06		X						×		-	×			-	×	×		×		_	_		
- PA	BH 4 40'	07/28/08		X				-	-	×		-	×		-	-	×	×		×	-	-	_		
pecial Instructions:		and the second sec							3			1 1 1 1	Saw Lat	uple notes	Cont Cont	C Doo	a Inte	H Cold		00		× ×			
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elinquished by	Date To	Received by EL	i lees	V			-		12	9	177	21			Ĵ.	8	0								



# Analytical Report

## **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6G31013

Report Date: 08/07/06

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 4 65'	6G31013-01	Soil	2006-07-29 00:00	2006-07-31 14:15
BH 4 75'	6G31013-02	Soil	2006-07-29 00:00	2006-07-31 14:15
BH 4 85'	6G31013-03	Soil	2006-07-29 00:00	2006-07-31 14:15
BH 4 95'	6G31013-04	Soil	2006-07-29 00:00	2006-07-31 14:15

Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 65' (6G31013-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	0	"	11	"	н	н	
Ethylbenzene	ND	0.0250		н	11	0	"	II.	
Xylene (p/m)	ND	0.0250	п	"	11	"		H.	
Xylene (o)	ND	0.0250		IT	It	u	"	н	
Surrogate: a,a,a-Trifluorotoluene		89.8 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %	80	120	. "	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	n	۳		"	u	
Carbon Ranges C28-C35	ND	25.0	11		"	H	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	"	п	U	11		
Surrogate: 1-Chlorooctane		90.2 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	70-	130	"	"	"	"	
BH 4 75' (6G31013-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
The	ND	0.0250	"	11	"	n	"	н	
Ethylbenzene	ND	0.0250	11	n	"	R	11	"	
Xylene (p/m)	ND	0.0250	н	"	11		"	н	
Xylene (o)	ND	0.0250	"	"	11	11	17	n	
Surrogate: a,a,a-Trifluorotoluene		91.2 %	80-	120	u	"	**	**	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-	120	"	"	"	н	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	*1	"	U	*1	11	н	
Carbon Ranges C28-C35	ND	25.0	"	n	n	"	н	"	
Total Hydrocarbon nC6-nC35	ND	25.0	11	n	11	"	"	n	
Surrogate: 1-Chlorooctane		115 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		91.0 %	70-	130	"	"	"	"	

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Katy TX, 77494

Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 85' (6G31013-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
Toluene	ND	0.0250	"	11	61	U U	"	19	
Ethylbenzene	ND	0.0250	".	*1	**	n	н	v	
Xylene (p/m)	ND	0.0250	"			11	n	"	
Xylene (o)	ND	0.0250	и	н	u	"	11	"	
Surrogate: a,a,a-Trifluorotoluene		86.8 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.5 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	**	н :	"	68	
Carbon Ranges C28-C35	ND	25.0	"	н	н	n	n	19	
Total Hydrocarbon nC6-nC35	ND	25.0	ìt	11	11	н	"	n	
Surrogate: 1-Chlorooctane		102 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		76.4 %	70-1	130	"	"	"	"	
BH 4 95' (6G31013-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH60402	08/04/06	08/04/06	EPA 8021B	
i ene	ND	0.0250	"	n	"		"	U	
Ethylbenzene	ND	0.0250	"	"		n	11	"	
Xylene (p/m)	ND	0.0250	11 -	"	"		11	"	
Xylene (0)	ND	0.0250	11	"	u	u	U	n	
Surrogate: a,a,a-Trifluorotoluene		88.2 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.2 %	80-	120	"	"	"	"	
Carbon Ranges C6-C12	ND	25.0	mg/kg dry	1	EG63122	07/31/06	08/01/06	TX 1005	
Carbon Ranges C12-C28	ND	25.0	"	"	0	11	"	0	
Carbon Ranges C28-C35	ND	25.0	"	11	11	н	"	"	
Total Hydrocarbon nC6-nC35	ND	25.0	"	'n	"	H	н	n	
Surrogate: 1-Chlorooctane		92.0 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	<i>70-</i>	130	"	"	"	"	

ironmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

	D14	Reporting	TT:4-			_			
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 65' (6G31013-01) Soil									
Chloride	91.2	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	832	20.0	umhos/cm	4	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	11.3	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 75' (6G31013-02) Soil	_								
Chloride	176	5.00	mg/kg	10	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	1060	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	9.4	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 85' (6G31013-03) Soil									
Chloride	189	10.0	mg/kg	20	EH60204	08/02/06	08/02/06	EPA 300.0	
Specific Conductance (EC)	1180	. 10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	
% Moisture	10.4	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	
BH 4 95' (6G31013-04) Soil									
Charide	184	10.0	mg/kg	20	EH60204	08/02/06	08/02/06	EPA 300.0	
Source (EC)	1120	10.0	umhos/cm	2	EH60318	08/03/06	08/03/06	EPA 9050A	•
% Moisture	13.2	0.1	%	1	EH60103	07/31/06	08/01/06	% calculation	

Ironmental Lab of Texas

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Patak EC(2122 Salvant Entraction	(CC)	<u>Linin</u>			result					
Batch EG03122 - Solvent Extraction	(GC)									
Blank (EG63122-BLK1)				Prepared:	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	ND	25.0	mg/kg wet							
Carbon Ranges C12-C28	ND	25.0	R							
Carbon Ranges C28-C35	ND	25.0	0							
Total Hydrocarbon nC6-nC35	ND	25.0	"							
Surrogate: 1-Chlorooctane	49.0		mg/kg	50.0		98.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130	'		
LCS (EG63122-BS1)				Prepared:	07/31/06	Analyzed	1: 08/01/06			
Carbon Ranges C6-C12	500	25.0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	564	25.0	0	500		113	75-125			
Carbon Ranges C28-C35	ND	25.0	11	0.00			75-125			
Total Hydrocarbon nC6-nC35	1060	25.0	n	1000		106	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
Calibration Check (EG63122-CCV1)				Prepared:	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	216		mg/kg	250		86.4	80-120			
Com Ranges C12-C28	258		и	250		103	80-120			
T Aydrocarbon nC6-nC35	474		и	500		94.8	80-120			
Surrogate: 1-Chlorooctane	59.9		"	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			
Matrix Spike (EG63122-MS1)	So	ource: 6G310	012-03	Prepared	: 07/31/06	Analyzed	1: 08/02/06			
Carbon Ranges C6-C12	566	25.0	mg/kg dry	506	ND	112	75-125			
Carbon Ranges C12-C28	559	25.0	0	506	49.1	101	75-125			
Carbon Ranges C28-C35	ND	25.0	n	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1120	25.0	н	1010	49.1	106	75-125			
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	39.9		"	50.0		79.8	70-130			

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 5 of 10

Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EG63122 - Solvent Extraction (GC)

Matrix Spike Dup (EG63122-MSD1)	Sour	ce: 6G310	12-03	Prepared:	07/31/06	Analyzed	d: 08/01/06			
Carbon Ranges C6-C12	551	25.0	mg/kg dry	506	ND	109	75-125	2.69	20	
Carbon Ranges C12-C28	567	25.0	۲.	506	49.1	102	75-125	1.42	20	
Carbon Ranges C28-C35	ND	25.0	11	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1120	25.0	'n	1010	49.1	106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	62.0		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	44.7		"	50.0		89.4	70-130			

#### Batch EH60402 - EPA 5030C (GC)

Blank (EH60402-BLK1)				Prepared & Ar	nalyzed: 08/04/	06	
Benzene	ND	0.0250	mg/kg wet		· · · · · · · · · · · · · · · · · · ·		
Toluene	ND	0.0250	11				
Ethylbenzene	ND	0.0250					÷
Xylene (p/m)	ND	0.0250					
Xylene (o)	ND	0.0250	н				
Surrogate: a,a,a-Trifluorotoluene	34.6		ug/kg	40.0	86.5	80-120	
Surrogate: 4-Bromofluorobenzene	36.8		"	40.0	92.0	80-120	
EH60402-BS1)				Prepared & Ai	nalyzed: 08/04/	06	
Benzene	1.14	0.0250	mg/kg wet	1.25	91.2	80-120	14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-

Surrogate: 4-Bromofluorobenzene	39.0		"	40.0	97.5	80-120	
Surrogate: a,a,a-Trifluorotoluene	37.3		ug/kg	40.0	93.2	80-120	 
Xylene (o)	1.28	0.0250	H	1.25	102	80-120	
Xylene (p/m)	2.57	0.0250	"	2.50	103	80-120	
Ethylbenzene	1.15	0.0250	и	1.25	92.0	80-120	
loluene	1.17	0.0250		1.25	93.6	80-120	

ronmental Lab of Texas

## WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Organics by GC - Quality Control**

### **Environmental Lab of Texas**

	-				слаб					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60402 - EPA 5030C (GC)										
Calibration Check (EH60402-CCV1)				Prepared	08/04/06	Analyzed	: 08/06/06			
Benzene	50.6		ug/kg	50.0		101	80-120			
Toluene	49.6			50.0		99.2	80-120			
Ethylbenzene	48.4		11	50.0		96.8	80-120			
Xylene (p/m)	103		*1	100		103	80-120			
Xylene (o)	51.5		11	50.0		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.6		"	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	39.2		"	40.0		98.0	80-120			
Matrix Spike (EH60402-MS1)	So	urce: 6G310	11-06	Prepared	: 08/04/06	Analyzed	: 08/07/06			
Benzene	1.20	0.0250	mg/kg dry	1.28	ND	93.8	80-120			
Toluene	1.21	0.0250	11	1.28	ND	94.5	80-120			
Ethylbenzene	1.24	0.0250	и	1.28	ND	96.9	80-120			
Xylene (p/m)	2.67	0.0250	n	2.56	ND	104	80-120			
Xylene (o)	1.30	0.0250	"	1.28	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.2		ug/kg	40.0		88.0	80-120			
Surrogate: 4-Bromofluorobenzene	36.3		"	40.0		90.8	80-120			
Markix Spike Dup (EH60402-MSD1)	So	urce: 6G310	)11-06	Prepared	: 08/04/06	Analyzed	l: 08/07/06			
E he	1.23	0.0250	mg/kg dry	1.28	ND	96.1	80-120	2.42	20	
Toluene	1.25	0.0250	и	1.28	ND	97.7	80-120	3.33	20	
Ethylbenzene	1.25	0.0250	U	1.28	ND	97.7	80-120	0.822	20	
Xylene (p/m)	2.90	0.0250	**	2.56	ND	113	80-120	8.29	20	
Xylene (o)	1.38	0.0250	"	1.28	ND	108	80-120	5.71	20	
Surrogate: a a a-Trifluorotoluene	40.7		ug/kg	40.0		102	80-120		· · · ·	

"

40.0

98.0

80-120

39.2

Surrogate: a,a,a-1 riftuorototuene Surrogate: 4-Bromofluorobenzene

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EH60103 - General Preparation (	(Prep)							· · · · · ·		<u> </u>
Blank (EH60103-BLK1)				Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	100		%							
Duplicate (EH60103-DUP1)	So	urce: 6G3100	3-01	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	95.1		%		94.7			0.421	20	
Duplicate (EH60103-DUP2)	So	ource: 6G3101	0-04	Prepared:	07/31/06	Analyzed	: 08/01/06			
% Solids	92.4		%		93.4			1.08	20	
Batch EH60204 - Water Extraction										
Blank (EH60204-BLK1)				Prepared	& Analyz	ed: 08/02/0	06			
Chloride	ND	0.500	mg/kg							
LCS (EH60204-BS1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	9.70	0.500	mg/kg	10.0		97.0	80-120		// · · · · · · · · · · · · · · · · · ·	
Calibration Check (EH60204-CCV1)				Prepared	& Analyz	ed: 08/02/	06			
Chloride	9.83		mg/L	10.0		98.3	80-120			
Dunlicate (EH60204-DUP1)	Se	ource: 6G3101	11-02	Prepared	& Analyz	ed: 08/02/	06			
de	47.1	5.00	mg/kg		48.0			1.89	20	
Duplicate (EH60204-DUP2)	Se	ource: 6G3101	13-02	Prepared	& Analyz	ėd: 08/02/	06			
Chloride	173	5.00	mg/kg	······	176			1.72	20	
Matrix Spike (EH60204-MS1)	Sc	ource: 6G3101	11-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	152	5.00	mg/kg	100	48.0	104	80-120			

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General Chemis	try Param	eters by EPA	/ Standar	rd Meth	ods - Q	Quality (	Contro	1	
· ·	E.	nvironmental	Lab of 1	exas					
Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60204 - Water Extraction									
Matrix Spike (EH60204-MS2)	Sour	-ce: 6G31013-02	Prepared	& Analyz	ed: 08/02/	06			
Chloride	285	5.00 mg/kg	100	176	109	80-120			
Batch EH60318 - Water Extraction									
Calibration Check (EH60318-CCV1)			Prepared	& Analyz	ed: 08/03/	06	·		
Specific Conductance (EC)	1420	umhos/	m 1410	ž	101	80-120			
Calibration Check (EH60318-CCV2)			Prepared	& Analyz	ed: 08/03/	06	•		
Specific Conductance (EC)	1380	umhos/	m 1410	<u>-</u>	97.9	80-120			
Calibration Check (EH60318-CCV3)			Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1400	umhos/	cm 1410		99.3	80-120			
Calibration Check (EH60318-CCV4)			Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1410	umhos/	cm 1410		100	80-120			
Duplicate (EH60318-DUP1)	Sou	rce: 6G28007-01	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	1520	10.0 umhos/	cm	1520			0.00	20	
Duplicate (EH60318-DUP2)	Sou	rce: 6G31008-02	Prepared	& Analyz	ed: 08/03/	06			
ic Conductance (EC)	450	10.0 umhos/		442			1.79	20	
Duplicate (EH60318-DUP3)	Sou	rce: 6G31010-03	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	712	10.0 umhos/	cm	702			1.41	20	
Duplicate (EH60318-DUP4)	Sou	rce: 6G31011-05	Prepared	& Analyz	ed: 08/03/	06			
Specific Conductance (EC)	988	20.0 umhos/		1030			4.16	20	

ironmental Lab of Texas

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Kalanck July Report Approved By: Date: 8-07-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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ronmental Lab of Texas

Lab of Texas, Inc.	Phone: 915-563-1800	Fax: 915-563-1713
Enviremental	2600 West I-20 East	dessa, Texas 79763



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Company Name Whole Earth Environmental, Inc. Project #   Company Address: 2103 Arbor Cove Project Loc:   Chy/State/Zip: Katy, TX 77494 Project Loc:   Chy/State/Zip: 281.394.2050 Fax No:   Telephone No: 281.394.2050 Fax No:   Sampler Signature: 281.394.2051 PO #:	Project Manager.	M. Griffin			Project Name: Avalon Hills
Company Address: 2103 Arbor Cove Project Loc:   City/State/Zip: Katy, TX 77494 PO #:   Telephone No: 281.394.2050 Fax No: 281.394.2051   Sampler Signature: Fax No: 281.394.2051	Company Name	Whole Earth Environmental, Inc.			Project #.
City/State/Zip: Katy, TX 77494 Po #: Po #: 71494 Po #: 7146phone No: 281.394.2050 Fax No: 281.394.2051 Sampler Signature: 281.394.2051	Company Address:	2103 Arbor Cove			Project Loc:
Telephone No:     281.394.2050     Fax No:     281.394.2051       Sampler Signature: <t< td=""><td>City/State/Zip:</td><td>Katy, TX 77494</td><td></td><td></td><td>PO #:</td></t<>	City/State/Zip:	Katy, TX 77494			PO #:
Sampler Signature:	Telephone No:	281.394.2050	Fax No:	281.394.2051	
	Sampler Signature:				

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# Analytical Report

## **Prepared for:**

Mike Griffin WHOLE EARTH ENVIRONMENTAL 2103 Arbor Cove Katy, TX 77494

> Project: Avalon Hills Project Number: None Given Location: None Given

> Lab Order Number: 6H02003

Report Date: 08/08/06

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

#### **ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH 1	6H02003-01	Water	2006-08-01 15:22	2006-08-02 10:10
BH 2	6H02003-02	Water	2006-08-01 15:15	2006-08-02 10:10
BH 4	6H02003-03	Water	2006-08-01 15:10	2006-08-02 10:10

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

Fax: (281) 394-2051

## Semivolatile Organic Compounds by EPA Method 8270C

**Environmental Lab of Texas** 

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 1 (6H02003-01) Water									
Pyridine	ND	5.30	ug/l	1.06	EH60817	08/04/06	08/05/06	EPA 8270C	
N-Nitrosodimethylamine	ND	5.30	H	н	"	"	"	11	
Aniline	ND	5.30	R	"	ŧ	U	"	11	
Phenol	ND	5.30	H	11	U		"	R	
Bis(2-chloroethyl)ether	ND	5.30	n	0	U	"	u	н	
2-Chlorophenol	ND	5.30	"		U	"	n	**	
1,3-Dichlorobenzene	ND	5.30	"	n	н	"	n	n	
1,4-Dichlorobenzene	ND	5.30	"	n	н		. 0	U	
1,2-Dichlorobenzene	ND	5.30	u	n	н	"		n	
Benzyl alcohol	ND	5.30	"	*1	**	n	и	11	
Bis(2-chloroisopropyl)ether	ND	5.30	n	"	**	"	u	W	
2-Methylphenol	ND	5.30	"	"	**	"	n	l)	
N-Nitrosodi-n-propylamine	ND	5.30	"	"	17	"	"	n	
4-Methylphenol	ND	5.30	11	"	11	11	· 0	11	
Hexachloroethane	ND	5.30	"	"	*	"	n	lt It	
Nitrobenzene	ND	5.30	"	"	11	11		H	
phorone	ND	5.30	"	"		n	P		
z-Nitrophenol	ND	5.30	"	"	11	"	11	n	
2,4-Dimethylphenol	ND	5.30	"	"	11	н	11	**	
Bis(2-chloroethoxy)methane	ND	5.30	a	"	n	n	n	n	
2,4-Dichlorophenol	ND	5.30	"		ti .	n	"	H	
Benzoic acid	ND	5.30	U	"	U.	"	11	H	
1,2,4-Trichlorobenzene	ND	5.30	"	"	H	u.	H	и	
Naphthalene	15.0	5.30	"	"	"	"	n	н	
4-Chloroaniline	ND	5.30	"	"	"	17	14	"	
Hexachlorobutadiene	ND	5.30	"	11	"		0.	н	
4-Chloro-3-methylphenol	ND	5.30	11	**	"		11	u	
2-Methylnaphthalene	36.1	5.30	11	"	H	*1	n	И	
Hexachlorocyclopentadiene	ND	5.30	11	"	**	"	8	u	
2,4,6-Trichlorophenol	ND	5.30	II	н	**	"	n	U	
2,4,5-Trichlorophenol	ND	5.30	"	н	11	"	u	"	
2-Chloronaphthalene	ND	5.30	"		11	n	u	11	
2-Nitroaniline	ND	5.30	н	н	11	"	U	. н	
Dimethyl phthalate	ND	5.30	и,	н	"	17	u	n	
2,6-Dinitrotoluene	ND	5.30	"	11	"	11	"	n	
Acenaphthylene	ND	5.30	"	"	"	11	"	0	
3-Nitroaniline	ND	5.30	"	11	n	11	, U	н	
Acenaphthene	ND	5.30	. 11	н	"	It	u	я	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Semivolatile Organic Compounds by EPA Method 8270C

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 1 (6H02003-01) Water									
2,4-Dinitrophenol	ND	5.30	ug/l	1.06	EH60817	08/04/06	08/05/06	EPA 8270C	
4-Nitrophenol	ND	5.30	"	n	и	н	"	**	
Dibenzofuran	ND	5.30	11	"	u	11		**	
2,4-Dinitrotoluene	ND	5.30		H		11	"		
2,3,4,6-Tetrachlorophenol	ND	5.30	"	и	"	н	"	н	
Diethyl phthalate	ND	5.30	н	н	и	H	11	n	
Fluorene	ND	5.30	u	н	H	u		n	
4-Chlorophenyl phenyl ether	ND	5.30	n	11	п	It		n	
4-Nitroaniline	ND	5.30	U	11	11	"	*	n	
Azobenzene	ND	5.30	u	11	"	"	"	. н	
4,6-Dinitro-2-methylphenol	ND	5.30	n	"	"	n	"	"	
N-Nitrosodiphenylamine	ND	5.30		"	"	0	"	"	
4-Bromophenyl phenyl ether	ND	5.30	R	"		n	"	*1	
Hexachlorobenzene	ND	5.30		и		u	*	"	
Pentachlorophenol	ND	5.30			18	u	n	11	
Phenanthrene	J [2.79]	5.30		*1	u	"	11		J
hracene	ND	5.30	11	11	н	U	"	"	
arbazole	ND	5.30				u	"	"	
Di-n-butyl phthalate	J [0.750]	5.30	14		"		"	и	O-09, J
Fluoranthene	ND	5.30	н		*	υ.	u	0	
Benzidine	ND	21.2		"	"		"		
Pyrene	ND	5.30	n	п	"	n.	11	n	
Butyl benzyl phthalate	ND	5.30	11	"	"		"	."	
Benzo (a) anthracene	ND	5.30		"	"	19			
3,3'-Dichlorobenzidine	ND	5.30	ч	"	"	"	н		
Chrysene	ND	5.30	n	u	"	*1	н	11	
Bis(2-ethylhexyl)phthalate	163	5.30	"	и			n		
Di-n-octyl phthalate	ND	5.30	"			"	11	11	
Indeno (1,2,3-cd) pyrene	ND	5.30	n		"	U	"	n	
Benzo (b) fluoranthene	ND	5.30	н	u	"	u	U	*	
Benzo (k) fluoranthene	ND	5.30	"	"	11	n	n		
Benzo (a) pyrene	ND	5.30	n	11	11	u	8	n	
Dibenzo (a,h) anthracene	ND	5.30	n	"	"	н	н	"	
Benzo (g,h,i) perylene	ND	5.30	11	Ħ	"	и	н	"	
Surrogate: 2-Fluorophenol		26.9 %	21-	110	"	"	"	"	
Surrogate: Phenol-d5		20.8 %	10-	110	"	"	"	"	
Surrogate: Nitrobenzene-d5		80.1 %	35-	114	"	"	"	"	
Surrogate: 2-Fluorobiphenvl		65.6%	43-	116	"	"	11	н	
G									

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Katy TX, 77494

#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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	Semivolatile C	)rganic Co Environm	mpou iental l	nds by H Lab of 'I	EPA Me Texas	thod 827	0C		
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
BH 1 (6H02003-01) Water								· · · · · · · · · · · · · · · · · · ·	
Surrogate: 2,4,6-Tribromophenol		75.6%	10-	-123	EH60817	08/04/06	08/05/06	EPA 8270C	
Surrogate: p-Terphenyl-d14		/4.0 %	33-	-141	,,	"	"	"	
BH 2 (6H02003-02) Water									
Pyridine	ND	5.55	ug/l	1.11	EH60817	08/04/06	08/05/06	EPA 8270C	
N-Nitrosodimethylamine	ND	5.55	R	"	0	"	Н	"	
Aniline	ND	5.55	n '			n	"		
Phenol	ND	5.55	11	"	11	U	"	11	
Bis(2-chloroethyl)ether	ND	5.55	"	н	11	"	u	"	
2-Chlorophenol	ND	5.55	11		11	н.	n	II.	
1,3-Dichlorobenzene	ND	5.55	17	U	"	"	11	"	
1,4-Dichlorobenzene	ND	5.55	IF		"	"	U	"	
1,2-Dichlorobenzene	ND	5.55		11	"	11	It	11	
Benzyl alcohol	ND	5.55	0	"	n	"	*	**	
Bis(2-chloroisopropyl)ether	ND	5.55	w	n	n	n	w	n	
2-Methylphenol	ND	5.55	, и	н	11	"		H	
Vitrosodi-n-propylamine	ND	5.55	"	u	u	"	"	11	
Methylphenol	ND	5.55			11	U	"	n	
Hexachloroethane	ND	5.55		11	"	"	11	n	
Nitrobenzene	ND	5.55			"	IT	и		
Isophorone	ND	5.55	и	n	н	"	۳.,	11	
2-Nitrophenol	ND	5.55			11	u	"	"	
2,4-Dimethylphenol	ND	5.55	n	**	"	"	"	19	
Bis(2-chloroethoxy)methane	ND	5.55	"	"	н	11		11	
2,4-Dichlorophenol	ND	5.55	*1	n	н	"	н	"	
Benzoic acid	ND	5.55	"	"	"		н	"	
1,2,4-Trichlorobenzene	ND	5.55	14		11	n	u	n	
Naphthalene	ND	5.55	n	"	11	"	14	"	
4-Chloroaniline	ND	5.55	*1	п	"	11	"	11	
Hexachlorobutadiene	ND	5.55	u	n	11	u	п	n	
4-Chloro-3-methylphenol	ND	5.55	11		11		n	"	
2-Methylnaphthalene	ND	5.55	u	11	**	w	n	n	
Hexachlorocyclopentadiene	ND	5.55	u	11	U	"	11	11	
2,4,6-Trichlorophenol	ND	5.55		U	n	8	и.		
2,4,5-Trichlorophenol	ND	5.55		11	н		"		
2-Chloronaphthalene	ND	1 5 55	11	u	n	11			
2-Nitroaniline	ND	5.55	"	n	It	"	11		
Dimethyl phthalate	ND	5.55	Ħ	11	11	0	"	H	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Semivolatile Organic Compounds by EPA Method 8270C

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 (6H02003-02) Water									
2,6-Dinitrotoluene	ND	5.55	ug/l	1.11	EH60817	08/04/06	08/05/06	EPA 8270C	
Acenaphthylene	ND	5.55	10	u	"	u	"	"	
3-Nitroaniline	ND	5.55	"		н.	u	n	11	
Acenaphthene	ND	5.55	"	11			н	"	
2,4-Dinitrophenol	ND	5.55	n	n	n	11	n	n	
4-Nitrophenol	ND	5.55	"	11	*1	"	11	11	
Dibenzofuran	ND	5.55	u	*1	<b>t</b> 1	R	14	п	
2,4-Dinitrotoluene	ND	5.55	"	"	11	n		"	
2,3,4,6-Tetrachlorophenol	ND	5.55	"	"	*1	R	"	"	
Diethyl phthalate	ND	5.55	<b>H</b> ·	n	91	11	н		
Fluorene	ND	5.55	u	п	"	n	n	u	
4-Chlorophenyl phenyl ether	ND	5.55	и	н	N	"	n	"	
4-Nitroaniline	ND	5.55		"	"	"	"	11	
Azobenzene	ND	5.55	н	n	0	n	u	"	
4,6-Dinitro-2-methylphenol	ND	5.55	*1	"	"	"	н	n	
N-Nitrosodiphenylamine	ND	5.55	u	ч	n	n	w	**	
romophenyl phenyl ether	ND	5.55			н	U	"	"	
exachlorobenzene	ND	5.55	0			n	n	"	
Pentachlorophenol	ND	5.55		11		"	н	11	
Phenanthrene	ND	5.55		"	н	11	11	"	
Anthracene	ND	5.55	"	•	n	"	н	н	
Carbazole	ND	5.55		"		. N	н		
Di-n-butyl phthalate	ND	5.55	"			H	п	n	
Fluoranthene	ND	5.55	"	"	"	11	и.	10	
Benzidine	ND	22.2	"	"	"	"	. "	17	
Pyrene	ND	5.55	**	*	"	n	11	"	
Butyl benzyl phthalate	ND	5.55	"	H	11	n	u	"	
Benzo (a) anthracene	ND	5.55	н		11	и	"	11	
3,3'-Dichlorobenzidine	ND	5.55	"	U	11	n	11	11	
Chrysene	ND	5.55	11	п	"	н	n	"	
Bis(2-ethylhexyl)phthalate	J [2.86]	5.55	н	11		н	"	*1	O-09, .
Di-n-octyl phthalate	ND	5.55	n	"	*1	11	. "	"	
Indeno (1,2,3-cd) pyrene	ND ·	5.55	11	11	11	. 11	11	u	
Benzo (b) fluoranthene	ND	5.55	Ħ	11	"	11		"	
Benzo (k) fluoranthene	ND	5.55	11	11	п	н		n	
Benzo (a) pyrene	ND	5.55	"	11	11	u		u	
Dibenzo (a,h) anthracene	ND	5.55	"	10	11	u	"	u	
Benzo (g,h,i) perylene	ND	5.55	"	"	11	n	п		

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

## Semivolatile Organic Compounds by EPA Method 8270C

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 2 (6H02003-02) Water									
Surrogate: 2-Fluorophenol		17.1 %	21-1	10	EH60817	08/04/06	08/05/06	EPA 8270C	S-08
Surrogate: Phenol-d5		12.8 %	10-1	10	"	· "	"	"	
Surrogate: Nitrobenzene-d5		33.6%	35-1	14	"	"	"	"	S-08
Surrogate: 2-Fluorobiphenyl		46.8 %	43-1	16	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		53.6 %	10-12	23	"	"	"	"	
Surrogate: p-Terphenyl-d14		63.5 %	33-1-	41	"	"	"	"	

#### BH 4 (6H02003-03) Water

Pyridine	ND	5.25	ug/l	1.05	EH60817	08/04/06	08/05/06	EPA 8270C	
N-Nitrosodimethylamine	ND	5.25		n	и	н	"	u	
Aniline	ND	5.25	и	н	н	н	11	u	
Phenol	ND	5.25	u	"		u –	*1	u	
Bis(2-chloroethyl)ether	ND	5.25	11	п	п	11	"	n	
2-Chlorophenol	ND	5.25	0	"	11	"	11	n	
1,3-Dichlorobenzene	ND	5.25	**	n	"	Ħ	н	Ņ	
1,4-Dichlorobenzene	ND	5.25	*1	11	"	n	н	н	
Dichlorobenzene	ND	5.25	*1	н	"	"	"	"	
Denzyl alcohol	ND	5.25	"	н	н	"	н	"	
Bis(2-chloroisopropyl)ether	ND	5.25	"	н	11	"		11	
2-Methylphenol	ND	5.25				11	11	"	
N-Nitrosodi-n-propylamine	ND	5.25	U	u	0	11	W	H	
4-Methylphenol	ND	5.25		"	н	11	n	u	
Hexachloroethane	ND	5.25	**	8	**		11	в	
Nitrobenzene	ND	5.25			11	"	н	"	
Isophorone	ND	5.25	17	"		u		"	
2-Nitrophenol	ND	5.25	11			"	u	"	
2,4-Dimethylphenol	ND	5.25	н	"		"	"	**	
Bis(2-chloroethoxy)methane	ND	5.25	ų	"	0	"	"	11	
2,4-Dichlorophenol	ND	5.25	"	"	n	"	11	"	
Benzoic acid	ND	5.25	N	"	u	"	"	11	
1,2,4-Trichlorobenzene	ND	5.25	*1	"	U	"	"	11	
Naphthalene	ND	5.25	11	"	"	*	n	"	
4-Chloroaniline	ND	5.25	11	"	"	n	"	"	
Hexachlorobutadiene	ND	5.25	11	"	"	n	0	n	
4-Chloro-3-methylphenol	ND	5.25	н	11		u	"	*1	
2-Methylnaphthalene	ND	5.25	W	19	11	".	*	14	
Hexachlorocyclopentadiene	ND	5.25	и	"	"	n	"		
2,4,6-Trichlorophenol	ND	5.25	8	n	n	"	"	u	

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## Semivolatile Organic Compounds by EPA Method 8270C

**Environmental Lab of Texas** 

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 (6H02003-03) Water									
2,4,5-Trichlorophenol	ND	5.25	ug/l	1.05	EH60817	08/04/06	08/05/06	EPA 8270C	
2-Chloronaphthalene	ND	5.25	n	"	U	"	It	0	
2-Nitroaniline	ND	5.25	"		0	n	"	n	
Dimethyl phthalate	ND	5.25	"	U	U	"	11	"	
2,6-Dinitrotoluene	ND	5.25	U	n	u	R	н	".	
Acenaphthylene	ND	5.25	H	"	11	H	н	н	
3-Nitroaniline	ND	5.25	"	"	u	H	**	"	
Acenaphthene	ND	5.25	"	"	*1	n	н	11	
2,4-Dinitrophenol	ND	5.25	**	"	11	"	н	11	
4-Nitrophenol	ND	5.25	"	"	"	n	"	н	
Dibenzofuran	ND	5.25	11	"	"	n	и	11	
2,4-Dinitrotoluene	ND	5.25	11	н	н	"	n	11	
2,3,4,6-Tetrachlorophenol	ND	5.25	"	и			"	n	
Diethyl phthalate	ND	5.25	"			0	"	n	
Fluorene	ND	5.25	п	п		"	"	"	
4-Chlorophenyl phenyl ether	ND	5.25	"	**	"	"	"	"	
litroaniline	ND	5.25	"	11	"	19		0	
zobenzene	ND	5.25		"	14	u		n	
4,6-Dinitro-2-methylphenol	ND	5.25	•	"	11	n	"	"	
N-Nitrosodiphenylamine	ND	5.25	11	IJ	10	n	"		
4-Bromophenyl phenyl ether	ND	5.25	ч	"	"	n	"	"	
Hexachlorobenzene	ND	5.25	н	n	11	н.	"	"	
Pentachlorophenol	ND	5.25	8	"	u	11	"	п	
Phenanthrene	ND	5.25	11	"	"	"	"	11	
Anthracene	ND	5.25	0	"	"	"		11	
Carbazole	ND	5.25	11	n	"	**	n	11	
Di-n-butyl phthalate	J [2.12]	5.25	n	11	11	11	**	n	O-09, J
Fluoranthene	ND	5.25	н	"	**	"	н	14	
Benzidine	ND	21.0	"	"	11	"			
Pyrene	ND	5.25	"	11	"	11	n	u	
Butyl benzyl phthalate	ND	5.25	u	n	n	n	n	n	
Benzo (a) anthracene	ND	5.25	"	"	"	"	"	**	
3,3'-Dichlorobenzidine	ND	5.25	H	"	н	"	n	11	
Chrysene	ND	5.25	п		н	8			
Bis(2-ethylhexyl)phthalate	J [4.12]	5.25	11	п		11	"	11	O-09. J
Di-n-octyl phthalate	ND	5.25	"	н	11	11		U	,-
Indeno (1,2,3-cd) pyrene	ND	5.25	11	ч	11	"		u	
Benzo (b) fluoranthene	ND	5.25	11	"	u	n	u	n	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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## Semivolatile Organic Compounds by EPA Method 8270C

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH 4 (6H02003-03) Water							r		,
Benzo (k) fluoranthene	ND	5.25	ug/l	1.05	EH60817	08/04/06	08/05/06	EPA 8270C	
Benzo (a) pyrene	ND	5.25	"	"	"	n	n	н	
Dibenzo (a,h) anthracene	ND	5.25	"	**	Η.	n	"	0	
Benzo (g,h,i) perylene	ND	5.25	"	11	"	"	19	· U	
Surrogate: 2-Fluorophenol		19.0 %	21-1	10	"	"	"	"	S-08
Surrogate: Phenol-d5		15.8 %	10-1	10	"	"	"		
Surrogate: Nitrobenzene-d5		40.8 %	35-1	14	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		54.1 %	43-1	16	"	"	" ;	"	
Surrogate: 2,4,6-Tribromophenol		58.6 %	10-1	23	"	"	"	"	
Surrogate: p-Terphenyl-d14		66.6 %	33-1	41	"	"	"	"	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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## Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60817 - EPA 3510C										
Blank (EH60817-BLK1)				Prepared:	08/04/06	Analyzed	: 08/05/06			
Pyridine	ND	5.00	ug/l							
N-Nitrosodimethylamine	ND	5.00								
Aniline	ND	5.00	8							
Phenol	ND	5.00	*1							
Bis(2-chloroethyl)ether	ND	5.00	11							
2-Chlorophenol	ND	5.00	н							
1,3-Dichlorobenzene	ND	5.00	"							
1,4-Dichlorobenzene	ND	5.00	n							
1,2-Dichlorobenzene	ND	5.00	۹							
Benzyl alcohol	ND	5.00	ŧI							
Bis(2-chloroisopropyl)ether	ND	5.00	"							
2-Methylphenol	ND	5.00	н							
N-Nitrosodi-n-propylamine	ND	5.00								
4-Methylphenol	ND	5.00	"							
Hexachloroethane	ND	5.00								
Nitrobenzene	ND	5.00	"							
Isophorone	ND	5.00	*				•			
itrophenol	ND	5.00								
Dimethylphenol	ND	5.00	U							
Bis(2-chloroethoxy)methane	ND	5.00	u							
2 4-Dichlorophenol	ND	5.00	- 18							
Benzoic acid	ND	5.00								
1.2.4-Trichlorobenzene	ND	5.00								
Nanhthalene	ND	5.00	u							
A-Chloroaniline	ND	5.00	н							
Hexachlorobutadiene	ND	5.00								
A-Chloro-3-methylphenol	ND	5.00	н							
2 Methylnenhthelene		5.00	я							
		5.00	11							
2.4.6 Trichlorophenol		5.00								
2,4,6-Trichlorophenol		5.00								
2,4,5-Inchorophenor		5.00								
2-Cinoronaphinaiene	ND	5.00								
2-Nitroannine	ND	5.00	н							
2 ( Divitestaliuses	ND	5.00	н							
		5.00								
Acchaphinylene		5.00	 H							
3-INITROANIIINE	ND	5.00								
Acenaphthene	ND	5.00								
2,4-Dinitrophenol	ND	5.00	"							
4-Nitrophenol	ND	5.00	. "							
Dibenzoturan	ND	5.00	IT .							
2,4-Dinitrotoluene	ND	5.00	"							

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60817 - EPA 3510C										
Blank (EH60817-BLK1)				Prepared	: 08/04/06	Analyzed	1: 08/05/06	•		
2,3,4,6-Tetrachlorophenol	ND	5.00	ug/l							
Diethyl phthalate	ND	5.00	"							
Fluorene	ND	5.00	W							
4-Chlorophenyl phenyl ether	ND	5.00	U							
4-Nitroaniline	ND	5.00	ŧr							
Azobenzene	ND	5.00	11							
4,6-Dinitro-2-methylphenol	ND	5.00	91							
N-Nitrosodiphenylamine	ND	5.00	"							
4-Bromophenyl phenyl ether	ND	5.00								
Hexachlorobenzene	ND	5.00	"							
Pentachlorophenol	ND	5.00								
Phenanthrene	ND	5.00								
Anthracene	ND	5.00	"							
Carbazole	ND	5.00	11							
Di-n-butyl phthalate	1.32	5.00								O-09,
Fluoranthene	ND	5.00	u							
Benzidine	ND	20.0	11							
ene	ND	5.00	19							
yl benzyl phthalate	ND	5.00	11							
Benzo (a) anthracene	ND	5.00	n							
3,3'-Dichlorobenzidine	ND	5.00	11							
Chrysene	ND	5.00	17							
Bis(2-ethylhexyl)phthalate	4.43	5.00	"							O-09,
Di-n-octyl phthalate	ND	5.00								
Indeno (1,2,3-cd) pyrene	ND	5.00	н							
Benzo (b) fluoranthene	ND	5.00	н							
Benzo (k) fluoranthene	ND	5.00	19							
Benzo (a) pyrene	ND	5.00	н							
Dibenzo (a,h) anthracene	ND	5.00								
Benzo (g,h,i) perylene	ND	5.00	и							
Surrogate: 2-Fluorophenol	25.4		"	80.0		31.8	21-110			
Surrogate: Phenol-d5	18.4		"	80.0		23.0	10-110			
Surrogate: Nitrobenzene-d5	47.8		"	80.0		59.8	35-114			
Surrogate: 2-Fluorobiphenyl	54.5		"	80.0		68.1	43-116			
Surrogate: 2,4,6-Tribromophenol	71.0		н	80.0		88.8	10-123			
Surrogate: p-Terphenyl-d14	72.4		"	80.0		90.5	33-141			

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EH60817 - EPA 3510C											
LCS (EH60817-BS1)				Prepared:	08/04/06	Analyzed	1: 08/05/06				
N-Nitrosodimethylamine	26.6	5.00	ug/l	100		26.6	5-112				
Phenol	21.4	5.00	"	100		21.4	12-110				
Bis(2-chloroethyl)ether	49.4	5.00	11	100		49.4	12-158				
2-Chiorophenol	43.5	5.00	v	100		43.5	27-123				
1,3-Dichlorobenzene	40.5	5.00	r	100		40.5	0.36-127				
1,4-Dichlorobenzene	42.5	5.00	91	100		42.5	36-97				
1,2-Dichlorobenzene	46.8	5.00	11	100		46.8	32-129				
Bis(2-chloroisopropyl)ether	43.2	5.00	"	100		43.2	36-166				
2-Methylphenol	45.1	5.00	и	100		45.1	5-112				
N-Nitrosodi-n-propylamine	50.7	5.00	n	100		50.7	41-116				
4-Methylphenol	35.5	5.00	u	100		35.5	5-112				
Nitrobenzene	48.3	5.00	11	100		48.3	35-180				
Isophorone	50.4	5.00	14	100		50.4	21-196				
2-Nitrophenol	48.7	5.00	11	100		48.7	29-182				
2,4-Dimethylphenol	38.6	5.00	11	100		38.6	32-119				
Bis(2-chloroethoxy)methane	53.0	5.00		100		53.0	33-184				
2,4-Dichlorophenol	49.5	5.00	11	100		49.5	39-135				
4-Trichlorobenzene	54.8	5.00	н	100		54.8	39-98				
ohthalene	52.0	5.00	9	100		52.0	21-133				
Hexachlorobutadiene	48.8	5.00	11	100		48.8	24-116				
4-Chloro-3-methylphenol	49.8	5.00	"	100		49.8	23-97				
2-Methylnaphthalene	57.3	5.00	н	100		57.3	21-133				
Hexachlorocyclopentadiene	17.3	5.00	n	100		17.3	0-116				
2,4,6-Trichlorophenol	59.7	5.00	н	100		59.7	37-144				
2,4,5-Trichlorophenol	66.4	5.00		100		66.4	37-144				
2-Nitroaniline	48.9	5.00	u	100		48.9	35-180				
Dimethyl phthalate	58.6	5.00		100		58.6	0.49-112				
2,6-Dinitrotoluene	57.4	5.00	11	100		57.4	50-158				
Acenaphthylene	57.0	5.00	"	100		57.0	33-145				
3-Nitroaniline	36.8	5.00	0	100		36.8	35-180				
Acenaphthene	60.0	5.00	"	100		60.0	46-118				
2,4-Dinitrophenol	34.2	5.00		100		34.2	1.19-191				
4-Nitrophenol	14.4	5.00	, п	100		14.4	10-80				
Dibenzofuran	56.8	5.00	"	100		56.8	46-118				
2,4-Dinitrotoluene	58.6	5.00	"	100		58.6	24-96				
Diethyl phthalate	61.3	5.00		100		61.3	3.73-114				
Fluorene	61.6	5.00	н	100		61.6	59-121				
4-Chlorophenyl phenyl ether	65.8	5.00		100		65.8	25-158				
4-Nitroaniline	. 38.4	5.00		100		38.4	35-180				
4,6-Dinitro-2-methylphenol	58.3	5.00	"	100		58.3	1.45-181				
4-Bromophenyl phenyl ether	74.6	5.00	п	100		74.6	53-127				
Hexachlorobenzene	71.6	5.00		100		71.6	0 38-152				
		2.00					0.00 104				

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

### Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch FH60817 - FDA 3510C										
					00/04/07		1 00/05/06		<u></u>	
LCS (EH60817-BS1)	40.2	5.00		Prepared:	08/04/06	Analyzed	0.102			
Pentachiorophenol	49.3	5.00	ug/I	100		49.5	9-103			
Anthropose	/1./	5.00		100		66.9	34-120			
Anthracene	59.2	5.00	19	100		58.2	27-133			
Carbazole	38.2	5.00	n	100		JO.Z	1 110			
Di-n-butyi phinalate	08.4	5.00		100		08.4	1-118			
Fluorantnene	65.8	5.00	11	100		65.0	20-137			
Pyrene	65.8	5.00		100		05.8	20-127			
Butyl benzyl phthalate	63.4	5.00		, 100		03.4	0.38-152			
Benzo (a) anthracene	49.4	5.00		100	•	49.4	33-143			
Chrysene	64.4	5.00		100		64.4	17-168			
Bis(2-ethylhexyl)phthalate	66.6	5.00		100		66.6	8-158			
Di-n-octyl phthalate	57.7	5.00		100		57.7	8-158			
Indeno (1,2,3-cd) pyrene	19.7	5.00		100		19.7	5-171			
Benzo (b) fluoranthene	75.0	5.00	"	100		75.0	24-159			
Benzo (k) fluoranthene	78.7	5.00	"	100		78.7	11-162			
Benzo (a) pyrene	60.6	5.00	*1	100		60.6	17-163			
Dibenzo (a,h) anthracene	39.0	5.00	"	100		39.0	5-227			
zo (g,h,i) perylene	36.5	5.00	"	100		36.5	5-219			
rogate: 2-Fluorophenol	22.0		н	80.0		27.5	21-110			
Surrogate: Phenol-d5	19.2		"	80.0		24.0	10-110			
Surrogate: Nitrobenzene-d5	38.6		"	80.0		48.2	35-114			
Surrogate: 2-Fluorobiphenyl	48.5			80.0		60.6	43-116			
Surrogate: 2,4,6-Tribromophenol	56.4		u	80.0		70.5	10-123			
Surrogate: p-Terphenyl-d14	57.4		"	80.0		71.8	33-141			
LCS Dup (EH60817-BSD1)			•	Prepared	: 08/04/06	Analyze	d: 08/05/06			
N-Nitrosodimethylamine	27.1	5.00	ug/l	100		27.1	5-112	1.86	22.6	
Phenol	21.6	5.00	u	100		21.6	12-110	0.930	42	
Bis(2-chloroethyl)ether	51.0	5.00	n	100		51.0	12-158	3.19	55	
2-Chlorophenol	43.6	5.00	U	100		43.6	27-123	0.230	40	
1,3-Dichlorobenzene	40.3	5.00	*	100		40.3	0.36-127	0.495	41.7	
1,4-Dichlorobenzene	42.2	5.00	11	100		42.2	36-97	0.708	28	
1,2-Dichlorobenzene	47.4	5.00	41	100		47.4	32-129	1.27	30.9	
Bis(2-chloroisopropyl)ether	44.3	5.00	."	100		44.3	36-166	2.51	46.3	
2-Methylphenol	45.8	5.00	H	100		45.8	5-112	1.54	22.6	
N-Nitrosodi-n-propylamine	53.0	5.00	H	100		53.0	41-116	4.44	38	
4-Methylphenol	36.7	5.00	н	100		36.7	5-112	3.32	22.6	
Nitrobenzene	48.9	5.00		100		48.9	35-180	1.23	39.3	
Isophorone	51.0	5.00	'n	100		51.0	21-196	1.18	63.3	
2-Nitrophenol	49.5	5.00	u	100		49.5	29-182	1.63	35.2	
2,4-Dimethylphenol	39.0	5.00	u	100		39.0	32-119	1.03	26.1	
Bis(2-chloroethoxy)methane	54.0	5.00	11	100		54.0	33-184	1.87	34.5	
2,4-Dichlorophenol	50.1	5.00	18	100		50.1	39-135	1.20	26.4	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

# Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## **Environmental Lab of Texas**

A nalvte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
	Result	<u>Danit</u>				Juneo				
Batch EH60817 - EPA 3510C		<del>, .</del>								
LCS Dup (EH60817-BSD1)				Prepared:	08/04/06	Analyzed	1: 08/05/06			
1,2,4-Trichlorobenzene	54.9	5.00	ug/l	100		54.9	39-98	0.182	28	
Naphthalene	51.9	5.00		100		51.9	21-133	0.192	30.1	
Hexachlorobutadiene	48.1	5.00	*	100		48.1	24-116	1.44	26.3	
4-Chloro-3-methylphenol	51.8	5.00	0	100		51.8	23-97	3.94	42	
2-Methylnaphthalene	57.6	5.00	*1	100		57.6	21-133	0.522	30.1	
Hexachlorocyclopentadiene	ND	5.00	н	100			0-116		26.3	
2,4,6-Trichlorophenol	59.7	5.00	n	100		59.7	37-144	0.00	31.7	
2,4,5-Trichlorophenol	66.7	5.00	11	100		66.7	37-144	0.451	31.7	
2-Nitroaniline	50.0	5.00	"	100		50.0	35-180	2.22	39.3	
Dimethyl phthalate	59.4	5.00	*1	100		59.4	0.49-112	1.36	23.2	•
2,6-Dinitrotoluene	58.7	5.00		100		58.7	50-158	2.24	29.6	
Acenaphthylene	57.6	5.00	11	100		57.6	33-145	1.05	40.2	
3-Nitroaniline	37.3	5.00	U	100		37.3	35-180	1.35	39.3	
Acenaphthene	60.0	5.00	"	100		60.0	46-118	0.00	31	
2,4-Dinitrophenol	35.6	5.00	"	100		35.6	1.19-191	4.01	49.8	
4-Nitrophenol	12.7	5.00	۳	100		12.7	10-80	12.5	50	
Dibenzofuran	57.0	5.00		100		57.0	46-118	0.351	31	
Dinitrotoluene	59.4	5.00	U	100		59.4	24-96	1.36	38	
thyl phthalate	62.3	5.00	11	100		62.3	3.73-114	1.62	26.5	
Fluorene	62.6	5.00	u.	100		62.6	59-121	1.61	20.7	
4-Chlorophenyl phenyl ether	66.6	5.00	u	100		66.6	25-158	1.21	33.4	
4-Nitroaniline	37.7	5.00	11	100		37.7	35-180	1.84	39.3	
4,6-Dinitro-2-methylphenol	62.5	5.00	II.	100		62.5	1.45-181	6.95	93.2	
4-Bromophenyl phenyl ether	74.5	5.00	19	100		74.5	53-127	0.134	23	
Hexachlorobenzene	71.4	5.00	"	100		71.4	0.38-152	0.280	24.9	
Pentachlorophenol	51.2	5.00		100		51.2	9-103	3.78	50	
Phenanthrene	70.9	5.00		100		70.9	54-120	1.12	20.6	
Anthracene	66.5	5.00	н	100		66.5	27-133	0.450	32	
Carbazole	58.0	5.00	19	100		58.0	27-133	0 344	32	
Di-n-butyl phthalate	68.4	5.00		100		68.4	1-118	0.00	167	
Fluoranthene	67.3	5.00		100		67.3	26-137	0.00	328	
Pyrene	65.4	5.00		100		65.4	26-137	0.740	21	
Butyl benzyl obthalate	63.0	5.00	11	100		63.0	0.38-152	0.010	22 1	
Benzo (a) anthracene	49.2	5.00		100		10.2	22 1/2	0.055	23.4	
Chrysene	49.2 66 0	5.00	11	100		<del>4</del> 9.2	17 160	2.400	49.2	
Bis(2-ethylheyyl)nhthalate	66.7	5.00		100		66.7	0 150	2.45	40.5	
Di-n-octyl phthalate	50.7	5.00	11	100		50.7	0-150	0.150	41.1	
Indeno (1,2,3, cd) nurene	10.8	5.00	11	100		10.9	6 171	2.57	41.1	
Denzo (h) fluoronthone	19.8	5.00		100		19.8	5-1/1	0.506	44.6	
Denzo (U) hugranmene	/0.0	5.00		100		70.0	24-159	2.11	38.8	
Benzo (k) Huorantnene	/4./	5.00		100		/4.7 (0.5	11-162	5.22	32.3	
Denzo (a) pyrene	60.5	5.00		100		00.5	17-163	0.165	39	
Dibenzo (a,n) anthracene	36.7	5.00	••	100		36.7	5-227	6.08	70	

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

# Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

# Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60817 - EPA 3510C										
LCS Dup (EH60817-BSD1)				Prepared:	08/04/06	Analyzed	: 08/05/06			
Benzo (g,h,i) perylene	33.9	5.00	ug/l	100		33.9	5-219	7.39	58.9	
Surrogate: 2-Fluorophenol	21.8		"	80.0		27.2	21-110			
Surrogate: Phenol-d5	17.5		"	80.0		21.9	10-110			•
Surrogate: Nitrobenzene-d5	38.6		"	80.0		48.2	35-114			
Surrogate: 2-Fluorobiphenyl	48.6		"	80.0		60.8	43-116			
Surrogate: 2,4,6-Tribromophenol	56.7		"	80.0		70.9	10-123			
Surrogate: p-Terphenyl-d14	57.5		"	80.0		71.9	33-141			
Calibration Check (EH60817-CCV1)				Prepared	& Analyz	ed: 08/04/0	06			
Phenol	35.1		ug/l	50.0		70.2	70-130			
2-Nitrophenol	41.1		*	50.0		82.2	70-130			
2,4-Dichlorophenol	41.0		n	50.0		82.0	70-130			
4-Chloro-3-methylphenol	40.7		n	50.0		81.4	70-130			
2,4,6-Trichlorophenol	45.4		u	50.0		90.8	70-130			
Pentachlorophenol	44.5		"	50.0		89.0	70-130			
Surrogate: 2-Fluorophenol	70.7		11	80.0		88.4	21-110			
Surrogate: Phenol-d5	71.7		u	80.0		89.6	10-110			
rogate: Nitrobenzene-d5	72.5		"	80.0		90.6	35-114			
rogate: 2-Fluorobiphenyl	75.9		"	80.0		94.9	43-116			
Surrogate: 2,4,6-Tribromophenol	<i>93.3</i>		"	80.0		117	10-123			
Surrogate: p-Terphenyl-d14	88.7		"	80.0		111	33-141			
Calibration Check (EH60817-CCV2)				Prepared	& Analyz	ed: 08/04/	06			
1,4-Dichlorobenzene	45.1		ug/l	50.0		90.2	70-130			
Hexachlorobutadiene	53.0		"	50.0		106	70-130			
Acenaphthene	45.1		10	50.0		<b>90.2</b>	70-130			
N-Nitrosodiphenylamine	52.5		u.	50.0		105	70-130			
Fluoranthene	50.0		9	50.0		100	70-130			
Di-n-octyl phthalate	43.4		"	50.0		86.8	70-130			
Benzo (a) pyrene	46.1		18	50.0		92.2	70-130			
Surrogate: 2-Fluorophenol	70.2		"	80.0		87.8	21-110			
Surrogate: Phenol-d5	70.1		"	80.0		87.6	10-110			
Surrogate: Nitrobenzene-d5	66.9		"	80.0		83.6	35-114			
Surrogate: 2-Fluorobiphenyl	80.2		"	80.0		100	43-116			
Surrogate: 2,4,6-Tribromophenol	68.0		"	80.0		85.0	10-123			
Surrogate: p-Terphenyl-d14	81.8		"	80.0		102	33-141			

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## Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

# Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60817 - EPA 3510C										
Matrix Spike (EH60817-MS1)	Śo	urce: 6H02003	3-01	Prepared:	08/04/06	Analyzed	1: 08/05/06			
N-Nitrosodimethylamine	19.6	5.30	ug/l	100	ND	19.6	5-112			
Phenol	15.0	5.30		100	ND	15.0	12-110			
Bis(2-chloroethyl)ether	37.6	5.30	н	100	ND	37.6	12-158			
2-Chlorophenol	27.8	5.30	*1	100	ND	27.8	27-123			
1,3-Dichlorobenzene	36.9	5.30	n	100	ND	36.9	0.36-127			
1,4-Dichlorobenzene	39.7	5.30	н	100	ND	39.7	36-97			
1,2-Dichlorobenzene	43.7	5.30	н	100	ND	43.7	32-129			
Bis(2-chloroisopropyl)ether	32.6	5.30	11	100	ND	32.6	36-166			QM-05
2-Methylphenol	41.8	5.30	91	100	ND	41.8	5-112			
N-Nitrosodi-n-propylamine	38.8	5.30		100	ND	38.8	41-116			QM-05
4-Methylphenol	27.9	5.30	n	100	ND	27.9	5-112			
Nitrobenzene	71.6	5.30	11	100	ND	71.6	35-180			
Isophorone	40.8	5.30	11	100	ND	40.8	21-196			
2-Nitrophenol	49.6	5.30	u	100	ND	49.6	29-182			
2,4-Dimethylphenol	40.9	5.30	*1	100	ND	40.9	32-119			
Bis(2-chloroethoxy)methane	49.0	5.30	11	100	ND	49.0	33-184			
2,4-Dichlorophenol	104	5.30	0	100	ND	104	39-135			
4-Trichlorobenzene	48.9	5.30	0	100	ND	48.9	39-98			
hthalene	67.2	5.30	"	100	15.0	52.2	21-133			
Hexachlorobutadiene	75.1	5.30		100	ND	75.1	24-116			
4-Chloro-3-methylphenol	42.4	5.30	и	100	ND	42.4	23-97			
2-Methylnaphthalene	104	5.30		100	36.1	67.9	21-133			
Hexachlorocyclopentadiene	17.4	5.30		100	ND	17.4	0-116			
2,4,6-Trichlorophenol	45.6	5.30		100	ND	45.6	37-144			
2,4,5-Trichlorophenol	60.5	5.30		100	ND	60.5	37-144			
2-Nitroaniline	46.8	5.30		100	ND	46.8	35-180			
Dimethyl phthalate	48.2	5.30	n	100	ND	48.2	0.49-112			
2,6-Dinitrotoluene	51.3	5.30		100	ND	51.3	50-158			
Acenaphthylene	44.4	5,30	"	100	ND	44.4	33-145			
3-Nitroaniline	18.4	5.30	4	100	ND	18.4	35-180			OM-0
Acenaphthene	53.4	5.30	18	100	ND	53.4	46-118			<b>X</b>
2,4-Dinitrophenol	30.2	5.30	10	100	ND	30.2	1.19-191			
4-Nitrophenol	92.9	5.30	11	100	ND	92.9	10-80			OM-0
Dibenzofuran	48.8	5.30	n	100	ND	48.8	46-118			<b>x</b>
2,4-Dinitrotoluene	52.0	5.30	n,	100	ND	52.0	24-96			
Diethyl phthalate	51.7	5.30	11	100	ND	51.7	3.73-114			
Fluorene	66.0	5.30	14	100	ND	66.0	59-121			
4-Chlorophenyl phenyl ether	60.9	5.30	н	100	ND	60.9	25-158			
4-Nitroaniline	17.1	5.30	19	100	ND	17.1	35-180			OM-0
4,6-Dinitro-2-methylphenol	50.2	5.30	11	100	ND	50.2	1.45-181			× 0
4-Bromophenyl phenyl ether	71.1	5.30	11	100	ND	71.1	53-127			
Hexachlorobenzene	71.5	5.30	n	100	ND	71.5	0.38-152			
							0.00 102			

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

# Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

## Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
Batch EH60817 - EPA 3510C	Tesut									

Source:	6H02003	3-01	Prepared:	08/04/06	Analyzed	l: 08/05/06		
8.8	5.30	ug/l	100	ND	58.8	9-103		
4.0	5.30	19	100	2.79	71.2	54-120		
8.8	5.30	a	100	ND	68.8	27-133		
4.6	5.30	11	100	ND	54.6	27-133		
3.4	5.30		100	0.750	62.6	1-118		
3.2	5.30	11	100	ND	63.2	26-137		
8.9	5.30		100	ND	58.9	26-127		
0.7	5.30	"	100	ND	40.7	0.38-152		
4.9	5.30	н	100	ND	44.9	33-143		
1.0	5.30	н	100	ND	61.0	17-168		
299	5.30	н	100	163	136	8-158		
9.7	5.30	*1	100	ND	49.7	8-158		
7.5	5.30	11	100	ND	17.5	5-171		
3.4	5.30	н	100	ND	63.4	24-159		
3.6	5.30	n	100	ND	73.6	11-162		
6.0	5.30	11	100	ND	56.0	17-163		
0.0	5.30	и	100	ND	30.0	5-227		
0.8	5.30	n	100	ND	30.8	5-219		
5.6		"	80.0		19.5	21-110		S-04
0.3		"	80.0		25.4	10-110		
3.3		"	80.0		91.6	35-114		
2.1		"	80.0		52.6	43-116		
5.4		"	80.0		56.8	10-123		
0.9		"	80.0		63.6	33-141		
	Source: 8.8 4.0 8.8 4.6 3.4 3.2 8.9 0.7 4.9 1.0 299 9.7 7.5 3.4 3.6 6.0 0.0 0.8 5.6 0.3 3.3 (2.1 (5.4 0.9 )	Source:         6H02000           8.8         5.30           4.0         5.30           4.0         5.30           8.8         5.30           4.6         5.30           3.4         5.30           3.2         5.30           8.9         5.30           0.7         5.30           1.0         5.30           9.7         5.30           3.4         5.30           3.4         5.30           9.7         5.30           3.4         5.30           3.6         5.30           0.0         5.30           0.0         5.30           5.6         0.3           7.5         4.30           5.6         1.30           5.6         1.30           5.4         1.30	Source:         6H02003-01           8.8         5.30         ug/l           4.0         5.30         "           8.8         5.30         "           8.8         5.30         "           3.4         5.30         "           3.2         5.30         "           8.9         5.30         "           9.7         5.30         "           9.7         5.30         "           3.4         5.30         "           9.7         5.30         "           9.7         5.30         "           3.4         5.30         "           9.7         5.30         "           3.4         5.30         "           3.4         5.30         "           3.4         5.30         "           3.6         5.30         "           0.0         5.30         "           0.8         5.30         "           7.5         5.30         "           7.6	Source: 6H02003-01         Prepared:           8.8         5.30         ug/l         100           4.0         5.30         "         100           8.8         5.30         "         100           8.8         5.30         "         100           8.8         5.30         "         100           3.4         5.30         "         100           3.4         5.30         "         100           3.2         5.30         "         100           8.9         5.30         "         100           0.7         5.30         "         100           1.0         5.30         "         100           9.9         5.30         "         100           9.7         5.30         "         100           3.4         5.30         "         100           3.4         5.30         "         100           3.4         5.30         "         100           3.6         5.30         "         100           3.6         5.30         "         100           5.6         "         80.0           7.3	Source: 6H02003-01         Prepared: 08/04/06           8.8         5.30         ug/l         100         ND           4.0         5.30         "         100         2.79           8.8         5.30         "         100         ND           4.6         5.30         "         100         ND           3.4         5.30         "         100         ND           3.4         5.30         "         100         ND           8.9         5.30         "         100         ND           8.9         5.30         "         100         ND           4.9         5.30         "         100         ND           209         5.30         "         100         ND           7.5         5.30         "         100         ND           3.4         5.30         "         100         ND           3.4         5.30         "         100         ND           6.0         5.30         "         100         ND           3.4         5.30         "         100         ND           6.0         5.30         "         100         ND </td <td>Source: 6H02003-01         Prepared: 08/04/06         Analyzed           8.8         5.30         ug/l         100         ND         58.8           4.0         5.30         "         100         2.79         71.2           8.8         5.30         "         100         ND         68.8           4.6         5.30         "         100         ND         68.8           4.6         5.30         "         100         ND         54.6           3.4         5.30         "         100         ND         62.6           3.2         5.30         "         100         ND         63.2           8.9         5.30         "         100         ND         58.9           0.7         5.30         "         100         ND         44.9           1.0         5.30         "         100         ND         45.0           9.7         5.30<td>Source: 6H02003-01Prepared: $08/04/06$Analyzed: $08/05/06$8.85.30ug/l100ND$58.8$9-1034.05.30"100ND$58.8$9-1038.85.30"100ND$68.8$$27-133$4.65.30"100ND$54.6$$27-133$3.45.30"100ND$63.2$$26-137$8.95.30"100ND$63.2$$26-137$8.95.30"100ND$44.9$$33-143$1.05.30"100ND$44.9$$33-143$1.05.30"100ND$41.9$$33-143$1.05.30"100ND$49.7$$8-158$9.75.30"100ND$49.7$$8-158$9.75.30"100ND$63.4$$24-159$3.65.30"100ND$63.4$$24-159$3.65.30"100ND$73.6$$11-162$6.05.30"100ND$30.0$$5-227$0.8$5.30$"100ND$30.8$$5-219$$5.6$"$80.0$$25.4$$10-110$$7.3$"$80.0$$56.8$$10-123$$6.9$"$80.0$$56.8$$10-123$$6.9$"$80.0$$56.6$$33-141$</td><td>Source: 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        100         ND         62.6           3.2         5.30         "         100         ND         63.2           8.9         5.30         "         100         ND         58.9           0.7         5.30         "         100         ND         44.9           1.0         5.30         "         100         ND         45.0           9.7         5.30 <td>Source: 6H02003-01Prepared: $08/04/06$Analyzed: $08/05/06$8.85.30ug/l100ND$58.8$9-1034.05.30"100ND$58.8$9-1038.85.30"100ND$68.8$$27-133$4.65.30"100ND$54.6$$27-133$3.45.30"100ND$63.2$$26-137$8.95.30"100ND$63.2$$26-137$8.95.30"100ND$44.9$$33-143$1.05.30"100ND$44.9$$33-143$1.05.30"100ND$41.9$$33-143$1.05.30"100ND$49.7$$8-158$9.75.30"100ND$49.7$$8-158$9.75.30"100ND$63.4$$24-159$3.65.30"100ND$63.4$$24-159$3.65.30"100ND$73.6$$11-162$6.05.30"100ND$30.0$$5-227$0.8$5.30$"100ND$30.8$$5-219$$5.6$"$80.0$$25.4$$10-110$$7.3$"$80.0$$56.8$$10-123$$6.9$"$80.0$$56.8$$10-123$$6.9$"$80.0$$56.6$$33-141$</td> <td>Source: 6H02003-01Prepared: 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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

#### **Notes and Definitions**

- S-08 Value outside Laboratory historical or method prescribed QC limits.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were QM-05 within acceptance limits showing that the laboratory is in control and the data is acceptable.
- This compound is a common laboratory contaminant. Compound also present in method blank. O-09
- Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). I
- DET Analyte DETECTED
- Analyte NOT DETECTED at or above the reporting limit ND
- Not Reported NR
- Sample results reported on a dry weight basis dry
- Relative Percent Difference RPD
- LCS Laboratory Control Spike
- MS Matrix Spike
- Duplicate Dup

Kalande Just Report Approved By:

8-09-06 Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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#### Project: Avalon Hills Project Number: None Given Project Manager: Mike Griffin

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# Protocol

This section contains a copy of PR-69, the proposed remediation protocol to be employed on the perched groundwater surrounding BH-1.



# Remediation Protocol Devon Energy Company Avalon Hills 7 Fed. COM # 3

# 1.0 Purpose

This protocol provides an outline of the steps to be employed in the remediation and final closure of the Devon Energy Corporation (Devon) Avalon Hills 7 Fed COM # 3 well control related impact project in Eddy County, New Mexico.

# 2.0 Scope

This protocol is site specific for the remediation and closure of the above stated site.

#### 3.0 Preliminary

Prior to beginning any field operations, Whole Earth Environmental will complete the following tasks:

Whole Earth will meet with Devon personnel to review this protocol.

After Devon's review, this protocol will be submitted to the New Mexico Oil Conservation Division (NMOCD) for review and approval. Any NMOCD requested revisions will be documented prior to the initiation of any field work.

## 4.0 Safety

Prior to beginning work on the site, Whole Earth will confirm the location and phone number of the nearest emergency medical treatment facility.

Anyone allowed on location must be informed of the tasks being performed along with any associated hazards. All workers and visitors must wear a hard hat, steel-toed boots, safety glasses, a sleeved shirt and long pants. Each vehicle must be equipped with two-way communication capabilities.

# 5.0 Fluid Removal

Utilizing a stainless steel Grunfos pump, fluid contained in MW-1 and the surrounding soil will be recovered in batches of approximately 500 gallons.

Each batch of recovered fluid will temporarily be stored in portable storage vessels for analytical testing and manifesting prior to disposal.

Each 500 gallon batch of fluid will be field tested in accordance with WEQP-76 until a chloride concentration of 1,000 ppm or less has been reached.

A confirmation sample from the final batch of recovered fluid will be collected in accordance with WEQP-76 and transported to a laboratory under Chain of Custody (COC) protocols for chloride and TDS (total dissolved solids) analysis.

Upon reaching a chloride concentration of 1,000 ppm or less, a fluid sample will be collected and analyzed for the presence of BTEX. Should the BTEX concentration exceed NMWQCC standards, inoculants consisting of Environoc 101 and water will be introduced into the monitoring well in sufficient volumes biodegrade the BTEX and achieve compliance with NMWQCC standards

After treatment is completed, a confirmation fluid sample will be collected in accordance with WEQP-76 and sent to a laboratory under COC protocols for chloride, TDS and BTEX analysis.

If a 1,000 ppm chloride concentration cannot be reached following implementation of these protocols, Devon and Whole Earth will contact the NMOCD to determine if an alternative approach is appropriate.

The temporarily stored fluid will be transported to a commercial disposal facility. A disposal manifest will be generated for each load of recovered fluid to be transported for disposal.

## 6.0 Documentation & Reporting

At the conclusion of the project, all monitoring wells associated with the site will be abandoned and Whole Earth will prepare a closure report to include the following information:

- A brief summary of the activities conducted at the site.
- The disposal manifests for each batch of recovered fluid.
- Laboratory analytical results for each batch of recovered fluid and the final confirmation sample collected after remedial activities have been completed.



New

# PRELIMINARY WORKPLAN FOR THE DETERMINATION OF POTENTIAL THREAT TO GROUND WATER QUALITY DUE TO DEVON WELL CONTROL SITUATION

#### Purpose

On June 19, 2006, a "well control situation" took place at a Devon drilling rig north east of Carlsbad directly east of Lake Avalon and State Highway 206¹. The "well control situation" involved gas escaping from the well. The purpose of this report is to assess hydrogeological information from libraries and the internet in order to draft a preliminary workplan to delineate the boundaries of any potential problem and to determine what if any contaminants may impair ground water quality at the site.

#### Site Description

No coordinates are yet available for the site except that the well is located at Avalon Hills 7 com #3 within section 7 of township T21S R27E, Eddy County. The elevation of the site is approximately 3200 feet above sea level. Figure 1 shows the approximate location of the site approximately 4 miles north of Carlsbad, New Mexico, and east of Lake Avalon.



Figure 1. Location of the well approximately 4 miles north of Carlsbad and east of Lake Avalon.

¹ No injuries from well blowout, By Kyle Marksteiner, Current-Argus Staff Writer, Jun 21, 2006, 04:22 am

#### Hydrogeology

The most important aquifer of the area is the Capitan aquifer which provides the water supply for Carlsbad from a well field located west of the Pecos River near the Guadalupe Mountains. The Capitan aquifer is considered a single hydrological unit that consists of the Capitan Reef complex which is composed of the Capitan and Goat Seep Limestones and the Carlsbad facies of the Artesia Group. This Reef complex extends as an arc through southeastern New Mexico and southwestern Texas following the rim of the Delaware Basin. In New Mexico, the arc of the Capitan reef extends from the southwest of Carlsbad to the southeast of Jal (Figure 2). Near Carlsbad the thickness of the aquifer is about 1600 feet and lies below the alluvium in the valley. The main recharge to the aquifer is coming from Guadalupe Mountains and Dark Canyon through fractures and dissolution holes. Secondary recharge also occurs as leakage from Lake Avalon.

The quality of the water in the Capitan aquifer decreases towards the east. Near Carlsbad the chloride content is about 200 mg/l while the well North Cedar Hills about 1 mile NE from the "well control situation" site has a chloride content of 13,800 mg/l (Hiss, 1973). Average hydraulic conductivity in the same area is 2.4 feet/day (Huff, 1997) and aquifer thickness approximately 2,000 feet (Hiss, 1975).



Figure 2. Location of the Capitan Aquifer in southeastern New Mexico (Huff, 1997).

The Capitan aquifer is mostly confined in the area of interest. The depth of its top is approximately 750 feet (Hiss, 1973; Hiss, 1976). Due to its depth and confined nature the Capitan aquifer is at no to little risk for contamination due to the failure of the well casing at depth 80 or 220 feet. adjust to

The hydrogeology at shallow depths of the "well control situation" is not well known. A well log obtained approximately one mile northeast of the site indicates that the Capitan Limestone is overlain by the Yates Formation (506-748 feet depth) and the Rustler Formation (0-506 feet depth). The hydrogeology at the site is probably quite similar. The Yates Formation consists of alterating beds of sandstone and dolomite in the carbonate facies and gypsum, red clay and silt, and sandstone in the evaporative facies. North of the site between Lake McMillan and Lake Avalon near the Pecos River this formation yields water to stock wells. The Rustler Formation consists of anhydrite, gypsum, red clay and sand, and two dolimite beds. The lower Culebra Dolomite bed is the principal water-bearing zone but the water is highly mineralized. The principal salt is calcium sulphate while its chloride content is relatively low. In a few cases it has been used for livestock watering (Cox, 1967; United States. National Resources Planning Board, 1942).

#### **Groundwater Flow Direction**

The ground water flow direction is critical for the evaluation of the potential threat to ground water quality caused by the "well control situation". The overall flow direction in the Capitan aquifer is towards the east. However, in the Carlsbad area the incision of the Pecos River, the presence of Lake Avalon, and the development of petroleum resources as well as ground water pumping have influenced the ground water flow regime resulting in flow directions from east to southwest (Uliana, 2001).

An analysis of ground water data provided by the USGS (Huff, 1997) (see Table 1 and Figure 3) and the Office of the State Engineer (see Table 2 and Figure 3) was not conclusive but indicated the most likely direction of ground water flow in the Capitan aquifer at the "well control situation" to be between the east and the south.

In the 1940s ground water in the Rustler Formation and alluvium north and northeast of Lake Avalon moved southeastward into playas east of Lake Avalon where it was discharged by evapotranspiration, or it continued underground and was discharged into the Pecos River downstream from Carlsbad Springs (Cox, 1967). Therefore, it is expected that ground water flow in the Rustler Formation at the site is approximately towards the southeast.

new

New



APPROXIMATE WELL LOCATIONS

Figure 3. Location of the wells used to determine groundwater flow directions in the area. Black dots are from Ground Water Site Inventory data base (Huff, 1997) with water levels of 1978 and 1993. The green squares are from the website of the Office of the State Engineer (see Table 2); locations are approximate. The red circle is the approximate location of the "well control situation".

#### Preliminary Immediate Work Plan

- Use well logs and the piezometer to be drilled to evaluate the hydrogeological situation at the "well control situation". Of special interest are: (1) Is there a shallow aquifer located in the Rustler Formation above the Capitan aquifer?; (2) What is the ground water table depth of this shallow aquifer?; (3) What is the composition of the geological layers at the site?
- Measure water levels in wells surrounding the "well control situation" to obtain reliable information about local ground water flow direction and ground water gradient in the shallow aquifer.
- 3. Sample soil and ground water at the site of the "well control situation" to determine extent of possible contamination, specifically concentrations and types of contaminants. It is especially important to analyze for Cl and Br in each sample so that the Cl/Br ratio can be used to trace the origins of the contaminants.
- 4. Analyze all new information to assess how to proceed.

Table 1. Groundwater depths south of the "well control situation" near Carlsbad used to estimate ground water flow direction and ground water table depth at the site (Huff, 1997).

Well Number		Location	Groundwater depth	Groundwater depth
		(Section #)	(feet ) 1978	(feet ) 1993
	2	21S26E231333	43.35	43.56
	3	21S26E244233	56.26	54.53
	4	21S26E251142	71.15	
	5	21S26E251424		49.9
	7	21S26E254343	23.56	
	8	21S26E312434		194.37
	9	21S26E331122	166.02	
	11	21S26E362211	20.18	22.39
	12	21S27E193341	35.36	35.02
	13	21S27E304243	14.81	
	16	21S27E321124	14.33	14.18
	17	21S28E173444		47.13
	18	22S26E012333	37.09	35.04
	19	22S26E022424	60.2	
	21	22S26E033444	83.61	82.12
	22	22S26E043442	125.8	
	23	22S26E121121	38.1	
	24	22S26E123414	34.24	33.09
	25	22S26E143223	101.44	101.14
	26	22S26E154220	155.28	153.69
	27	22S26E203141	221.03	221.56
	29	23S25E024432	405.5	
	30	23S25E123322	403.71	
	31	24S25E342211	823.2	

Table 2. Wells within two miles radius around the "well control situation" obtained from the data base on the website of the Office of the State Engineer.

Well Number	Easting	Northing	Elevation (feet)	GW depth (feet)	GW elevation (feet)	Year of Measurement
1	574170	3596843	3333	350	2983	1966
2	572559	3597412	3195	175	3020	2005
3	570964	3596813	3169	89	3080	2000
4	570695	3593499	3270	170	3100	1975
5	575701	3592110	3180	75	3105	1971



# References

- Cox, E.R. 1967. Geology and hydrology between Lake McMillan and Carlsbad Springs, Eddy County, New Mexico. U.S. Govt Print. Off., Washington.
- Hiss, W.L. 1973. Capitan aquifer observation-well network Carlsbad to Jal, New Mexico Technical Report 38. United States Geological Survey.
- Hiss, W.L. 1975. Thickness of the Permian Guadalupian Capitan aquifer, southeast New Mexico and west Texas. New Mexico Bureau of Mines & Mineral Resources, New Mexico Institute of Mining and Technology, Socorro.
- Hiss, W.L. 1976. Structure of the Permian Guadalupian Capitan aquifer, southeast New Mexico and west Texas. New Mexico Bureau of Mines & Mineral Resources, New Mexico Institute of Mining and Technology, Socorro.
- Huff, G.F. 1997. Summary of available hydrogeologic data collected between 1973 and 1995 and information on all permeability data and aquifer tests for the Capitan aquifer, Eddy and Lea counties, New Mexico. U.S Geological Survey. Open File Report 97-370. United States Geological Survey.
- Uliana, M.M. 2001. The geology and hydrogeology of the Capitan aquifer: a brief overview, p. 153-166, *In* R. E. Mace, et al., eds. Aquifers of West Texas, Vol. Texas Water Development Board Report 356.
- United States. National Resources Planning Board. 1942. The Pecos River joint investigation: reports of the participating agencies. U.S.G.P.O., Washington.









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From :	Biagi, Chris <chris.biagi@dvn.com> 🕹   🌣   🗙   🖾 Inbox</chris.biagi@dvn.com>
Sent :	Tuesday, July 11, 2006 7:32 AM
To :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>
CC :	"Truelove, Ron" <ron.truelove@dvn.com></ron.truelove@dvn.com>
Subject :	Avalon Hill protocol

U Attachment : PR-54CDevonAvalonPhaseII-cbwRDTcomments7-10-06.doc (0.05 MB)

Mike – Ron and I have reviewed the protocol document, tweaked it somewhat and attached it back for you. Take a look at this version, if it looks alright to you, would you move ahead with adjusting the cost estimate so we can forward it to our operations folks. Also, I will be trying to locate an access agreement that we can use with the BLM (or do they have a document they prefer?). Also, I have a quick question regarding the chlorides analysis – is this a true total chloride analysis or a TDS measurement to indicate chlorides content? I know we are looking at anions/cations in the water, so was curious about the chlorides. Not picking on this, but it has been a point of discussion around here for a while and we can't find a good answer. Thanks and I am in the office all day if you need to reach me. CB

# <<PR-54C Devon Avalon Phase II - cb w RDT comments 7-10-06.doc>>

Chris Biagi, REM Senior Remediation Specialist Devon Energy Corporation 405.228.8327 - office 405.850.2649 - cell 405.552.7839 - fax

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From :	Graciela Hendrickx <graciela_hendrickx@msn.com></graciela_hendrickx@msn.com>	🖧   🗇   🗙   🗀 Devon Aval   🗟 Inbox
Sent :	Saturday, July 8, 2006 1:14 PM	
To :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>	
To : Subject :	"Mike Griffin" <whearth@msn.com> Re: Avalon Protocol &amp; Estimate</whearth@msn.com>	

Mike:

I have found some more relevant information from a well log about 1 mile northeast of the section of the site. It is clear now that the principal risk is not in the Capitan aquifer but in the Rustler Formation. The literature review indicates that water in this formation is located in the lower Dolomite bed. It has a rather high salt content. I don't know how much concern there is for contaminating this formation. If I need to do some modeling we still need to know the lithology in the well, Cl and Br, water content, and other contaminant analyses.

I have put all this info in my revised report that is attached.

Kind Regards, Graciela.

----- Original Message -----From: Mike Griffin To: Ron.Truelove@dvn.com Cc: graciela_hendrickx@msn.com Sent: Thursday, July 06, 2006 4:38 PM Subject: RE: Avalon Protocol & Estimate

It's always a risk to drill to groundwater & I was hoping that through advancing two comparatively shallow sampling bores & tying them into HYDRUS 2D we could prepare a cogent explanation to the OCD of the observed effects.

Our hydrologist has indicated that the water well data for the area is extremely sparse and quite erratic as to depths (350', 175', 170' & 89' within the section). The 89' well is probably set in the gravel layer - almost certainly a perched table. We do not yet have accurate geocoordinates of the site. Depending on where it is located we may have to sink as many as three monitor wells to accurately determine gradient. At around \$25.00 per foot I was really hoping to be able to avoid it.

I believe that Wayne at the OCD is prepared to consider this a relatively minor event and will agree to the limited plan described within the existing protocol. The auger rig would be hard pressed to reach 170', If it is necessary to actually reach the aquifer, (that is, if we show elevated chlorides within the deeper profile below the gravel layer) we can come back into the auger holes with an air rig, forgo samples below auger depth and drill to water.

Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Truelove, Ron" <Ron.Truelove@dvn.com> To: "Mike Griffin" <whearth@msn.com> CC: "Biagi, Chris" <Chris.Biagi@dvn.com> Subject: RE: Avalon Protocol & Estimate Date: Thu, 6 Jul 2006 16:31:01 -0500

Did you see my comment related to the depth... Some of our tech folks believe that the casing parted at approx. 100 feet. Others believe it parted at approx. 200 feet. Should we be going to 200-250 feet instead of just 100 feet? Your thoughts?

Thanks,

Ron

From: Mike Griffin [mailto:whearth@msn.com] Sent: Thursday, July 06, 2006 2:51 PM To: Truelove, Ron Subject: RE: Avalon Protocol & Estimate

All good suggestions!

Attached, please find the modified protocol.

Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Truelove, Ron" <Ron. Truelove@dvn.com> To: "Mike Griffin" <whearth@msn.com>, "Biagi, Chris" <Chris. Biagi@dvn.com>, "Johnston, Joe" <Joe. Johnston@dvn.com> CC: <ldeuel@hughes.net>, <graciela_hendrickx@msn.com> Subject: RE: Avalon Protocol & Estimate Date: Thu, 6 Jul 2006 14:08:29 -0500

Mike,

Please see my comments on the attached.

Due to vacations and days off, our group cannot meet until Monday. Please hold off until you hear from us.

Thanks,

Ron

From: Mike Griffin [mailto:whearth@msn.com] Sent: Thursday, July 06, 2006 8:02 AM To: Truelove, Ron; Biagi, Chris; Johnston, Joe Cc: Ideuel@hughes.net; graciela_hendrickx@msn.com Subject: Avalon Protocol & Estimate

OK, this time <u>WITH</u> the attachments...

Good Morning, All:

Attached, please find a copy of our proposed Phase II investigation protocol for the Avalon site along with our estimate of costs all related costs. If all goes well, we should have the drilling completed by the end of next week with a formal report following approximately two weeks later.

Our initial review of water well data is rather promising. There are very few wells even drilled in the immediate area and the depths of such wells are significantly below our 220' event horizon.

Please review & advise of any proposed changes.

Mike Griffin

Whole Earth Environmental, Inc.

Phone: 281.394.2050

MSN Hotmail - Message

# FAX: 281.394.2051

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Sent :	Saturday, July 8, 2006 11:16 AM	
To :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>	
Subject :	Avaion	

U Attachment : InsituLeachforSalinePit.doc (0.06 MB)

# Mike,

**B**IBIB

I liked her report. I am wondering if soil vapor analyses can track blowout plume. Chloride and other constituents should be inside the gas plume. Perhaps even a few strategically placed soil gas monitoring wells to demonstrate dissipation of methane.

Sending Insitu Leach Paper for your information. Lloyd



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From :	Graciela Hendrickx <graciela_hendrickx@msn.com></graciela_hendrickx@msn.com>	습   🏹   🗙   🖾 Inbox	
Sent :	Saturday, July 8, 2006 10:29 AM		
To :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>		
Subject :	piezometer placement		
Mike:			

The least expensive option at this moment is:

Step 1. Drill one piezometer as close as possible to the "well control situation" until you reach the ground water table of the unconfined aquifer and -if possible- to a depth below the blowout of the casing. We need to know whether (1) there is an unconfined aquifer, (2) what is the depth from the surface to the water table, and (3) the depth of contamination. Without unconfined aquifer the contaminants will be located in the vadose zone and probably move rather slowly. If there is an unconfined aquifer some of the contaminants will dissolve and may move away from the site. Again have all samples you take analyzed for texture, Cl and Br, water content, and other contaminants you deem necessary.

Step 2. Locate nearby wells (within 1 to 2 miles) where the water level can be measured. This will give us information about the hydraulic gradient and the flow direction of the ground water.

Good luck with rewriting the protocol.

Kind Regards, Graciela.

From: Mike Griffin

To: Ron.Truelove@dvn.com Cc: graciela_hendrickx@msn.com Sent: Thursday, July 06, 2006 4:38 PM Subject: RE: Avalon Protocol & Estimate

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# Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

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Ron

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All good suggestions!

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Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Truelove, Ron" <Ron. Truelove@dvn.com> To: "Mike Griffin" <whearth@msn.com>, "Biagi, Chris" <Chris. Biagi@dvn.com>, "Johnston, Joe" <Joe.Johnston@dvn.com> CC: <ldeuel@hughes.net>, <graciela_hendrickx@msn.com> Subject: RE: Avalon Protocol & Estimate Date: Thu, 6 Jul 2006 14:08:29 -0500

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Thanks,

Ron

From: Mike Griffin [mailto:whearth@msn.com]
Sent: Thursday, July 06, 2006 8:02 AM
To: Truelove, Ron; Biagi, Chris; Johnston, Joe
Cc: Ideuel@hughes.net; graciela_hendrickx@msn.com
Subject: Avalon Protocol & Estimate

OK, this time WITH the attachments...

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Our initial review of water well data is rather promising. There are very few wells even drilled in the immediate area and the depths of such wells are significantly below our 220' event horizon.

Please review & advise of any proposed changes.

Mike Griffin

Whole Earth Environmental, Inc.

Phone: 281.394.2050

FAX: 281.394.2051

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From :	Graciela Hendriickx <graciela_hendrickx@msn.com> $2$   $2$   $1$   $1$ Inbox</graciela_hendrickx@msn.com>		
Sent :	Thursday, July 6, 2006 9:51 AM		
То :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>		
Subject :	Re: groundwatter depth		
good morr In the dat T21SR27E T21SR27E T21SR26E T21SR26E Graciela Origin	ning Mike, a base of the State Engineer I found 4 wells with groundwater depths within a radio of 1 mile from the section 7: 05 350 feet 06 175 feet 01 89 feet 13 170 feet		
	From: Mike Griffin To: graciela_hendrickx@msn.com Sent: Thursday, July 06, 2006 6:07 AM Subject: Re: Devon Blowout Wow, you were sure up late last night		
1	Thanks tons for the update.		
t I	We hit a minor glitch last night in that Devon Corporate wants a meeting with the Operations Dept. to approve the work plan & burdget. Do we have any idea yet as to the depth to groundwater of the nearest known well? If greater than 250° or so, the contaminate migration model should be pretty much a snap - all we would have to do is show a likely pathway to the surface that replicates the field findings.		
1	I'm really trying to get away from the necessity of having to drill monitor wells.		
1	Hope you got some rest. I'll forward the Phase II protocol to you upon completion this morning.		
1	Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051		
	From: <i>"Graciela Hendrickx" <graciela_hendrickx@msn.com></graciela_hendrickx@msn.com></i> To: <i>"Mike Griffin" <whearth@msn.com></whearth@msn.com></i> Subject: <i>Re: Devon Blowout</i> Date: <i>Wead, 5 Jul 2006 21:58:38 -0600</i> Good Moaming Mike: Thank you for this information. I am preparing a preliminary report for you to assist with the		
	work plam. I have a good idea of the overall hydrogeology but it is not so easy to determine with certainty the direction of ground water flow at the site due to a lack of wells with measurements. At least in the usgs report from 1995 there is no information; almost all information is about the wells west of Carlsbad. In addition, ground water flow is not only affected by the regional hydrogeology but also by local pumping operations in the oilfields. So, an inventory of new wells that are not yet reported will be useful. Otherwise new monitoring wells need to be installed surrounding the site. At least three wells are needed to determine approximately the direction of ground water flow.		

The OSE has a Carlsbad Area Ground Water model (CAGW) which simulates the water levels in the Capitan aquifer and the alluvial aquifer surrounding Carlsbad. Jan knows two of the developers of this model. If you like, he could contact these colleagues to find out how CAGW could help evaluate the situation of the site. It seems best to use a model developed by the OSE to prepare a report for the NMOCD. You can contact Jan to discuss this further.

I expect of finish my preliminary report by Friday. Please, let me know if I need to address any other issues than the ones discussed above.

Kind Regards, Graciela.

----- Original Message -----From: Mike Griffin To: gratiela_hendrich:@msn.com Sent: Wednesday, July 05, 2006 1:38 PM Subject: Re: Devon Blowout

I checked with Devon this morning & found that they didn't employ a mud man during the spudding. The only descriptions we've got are by the tool pusher & they're not anything we can use. I will be at the site next Monday & will call you with the geocoordinates as soon as I arrive.

I spoke to the Production Super & the guy that drew the sketch I forwarded to you. They think that the hole is fine below 220'. They believe that the surface casing let go @ that depth & the gas & mud went outside of the casing until it reached the gravel layer. Once there, it went laterally. Nice theory...

I'm going to drill some core samples about 50' from the wellhead to a depth that gets me below the gravel. We've on-site instruments so we can tell where the contamination stops. If our field results match the theory, I'll move the it over to a location just outside of the widest surface crack & once again drill to the gravel.

We'll confer before we drill any more than two holes.

I do need to give Devon some budget numbers today. Do you think you can do the preliminary modeling in forty hours? If you need more time, it will be mo problem to get it.

Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Graciela Hendrickx" <graciela_hendrickx@msn.com> To: "Mike Griffin" <whearth@msn.com> Subject: Re: Devon Blowout Date: Wed, 5 Jul 2006 06:58:22 -0600

Good Morning Mike:

I want to give you a quick update of my progress. I have borrowed several books and reports from the library at NMT. I also could download USGS reports from the web. I have enough information now about the general geohydrological situation. What I need from you if possible is the following: 1. The exact coordinates of the well; 2. The well log.

Kind Regards, Graciela.

----- Original Message -----From: Mike Griffin Fo: graciela_hendrickx@msn.com Cc: kk5lg@aol.com; dev:s@hughes.net; dwis.biagi@dvn.com Sent: Monday, July 03, 2006 6:24 AM Subject: Devon Blowout

Good Morning, Graciela:

Dur initial assignment is to delineate the ooundaries of any potential problem and o determine what (if any) C of C's may pose a threat to the environment.

Ve've a few facts to work with. We know hat there is a gravel layer at about 80'. The drilling crew had a very difficult time etting the surface casing through this ayer & I presume that it's quite porous. We can look at the drilling logs and pounty soil maps to better determine the subsurface morphology.

Ve have a rough sketch of where the gas and mud came to surface. Based on his we can get a pretty good idea of the probable lateral extent of surfaced contamination. Ideally, you can construct a model of events that closely mirrors he actual ground observations though t will probably require that you work packwards from the sketch.

Before we start drilling expensive delineation bores, we should have a good theoretical concept of what probably happened. The casing parted at depth of approx. 220' and surfaced as described by the sketch. We need to now where the various aquifers are situated, and what soil porosities and permeablities lie above the 220' depth. This is your first and most critical task.

rom your theoretical model, we can hen design a sampling protocol that will have the objective of defining the ocation and concentrations of the C of C's. When we have the actual lab results n hand we can finally assess the otential threat to groundwater and if necessary come up with an abatement plan. While the boring operations are going on, one of our guys will be assessing the surface damage and preparing a surface remediation plan. This part of the project will probably be quite straightforward.

III call you later in the day & kick it around a bit further.

like Griffin

Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

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From : Sent : To : Subject :	Biagi, Chris <chris.biagi@dvn.com> Friday, June 30, 2006 11:20 AM "Mike Griffin" <whearth@msn.com> Location</whearth@msn.com></chris.biagi@dvn.com>
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graciela@Hendrickx@msn.com

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	devon Energy
Memo	· · ·
To: GERALD BROCKMAN ; BILL DOUG From: MIKE DEWITT CC: Date: June 30, 2006	GHERTY 11: PM 6-19 11: PM 7-10
Re: INCIDENT ;( KICK ) ON AVALON	HILLS 7 FED COM #3

- 1. Most of the gas to surface was around the back yard area [ mud pumps ; pre mix tank area. This is @ 125' east of well bore .
- 2. The reserve pit had gas vapors coming out from under pit liner on north east corner of pit. @ 150' north east of well bore.
- 3. Gas and a small stream of drilling mud @ 5-10 bbls mud ran from east side of location @ 150' east of wellbore ; south175' to Rains Road .Mud ran down bar ditch beside Rains Road east @ 150' 200'.
- 4. Spider web like cracks appeared from well bore to @ 145' south east of well bore toward trailer houses most of the cracks had gas vapors seeping or spewing from them no fluid . Cracks to numerous to count .
- 5. Rains road @ 175'-190' from well bore to the south had gas seeping from cracks in the pavement . @ 175'-190' south of well bore and east on Rains Road @ 100'- 200'. It appeared to have 3 -4-main cracks in the pavement close to the middle @ 8' from either side of the pavement.
- 6. Drainage ditches on south side of sub had gas seeping from them. @75' long . Starting from vee door end of sub to the east to the west.

7. From intersection of co. road 206 and rains road location @ 1/10 mile east.

Thanks Mike DeWitt

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From :	Graciela Hendrickx <graciela_hendrickx@msn.com></graciela_hendrickx@msn.com>	수   🏷   🗡   🖾 Inbox
Sent :	Monday, July 10, 2006 8:00 AM	
То:	"Mike Griffin" <whearth@msn.com></whearth@msn.com>	
Subject :	Re: Capitan aquifer	

Hi Mike,

The depth of the groundwater (100-200 feet ) is for the Capitan aquifer. Since it is confined the water is under pressure and this is the reason it is above the top of the aquifer. It does not mean that the aquifer is contaminated by the blow out. The Rustler formation is overlying the Yates formation and the Capitan aquifer. So far this is the formation were the casing rupture occurs. In this formation the reported saline aquifer used for stock is in the dolomite layer at the bottom of the formation. It is possible to have local layers with perched water tables. We will know if there is any perched water table and how deep from the information obtain from the piezometer. Graciela.

----- Original Message -----From: Mike Griffin To: Ron.Truelove@dvn.com Cc: graciela_hendrickx@msn.com Sent: Thursday, July 06, 2006 4:38 PM Subject: RE: Avalon Protocol & Estimate

It's always a risk to drill to groundwater & I was hoping that through advancing two comparatively shallow sampling bores & tying them into HYDRUS 2D we could prepare a cogent explanation to the OCD of the observed effects.

Our hydrologist has indicated that the water well data for the area is extremely sparse and quite erratic as to depths (350', 175', 170' & 89' within the section). The 89' well is probably set in the gravel layer - almost certainly a perched table. We do not yet have accurate geocoordinates of the site. Depending on where it is located we may have to sink as many as three monitor wells to accurately determine gradient. At around \$25.00 per foot I was really hoping to be able to avoid it.

I believe that Wayne at the OCD is prepared to consider this a relatively minor event and will agree to the limited plan described within the existing protocol. The auger rig would be hard pressed to reach 170', If it is necessary to actually reach the aquifer, (that is, if we show elevated chlorides within the deeper profile below the gravel layer) we can come back into the auger holes with an air rig, forgo samples below auger depth and drill to water.

Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Truelove, Ron" <Ron.Truelove@dvn.com> To: "Mike Griffin" <whearth@msn.com> CC: "Biagi, Chris" <Chris.Biagi@dvn.com> Subject: RE: Avalon Protocol & Estimate Date: Thu, 6 Jul 2006 16:31:01 -0500

Did you see my comment related to the depth... Some of our tech folks believe that the casing parted at approx. 100 feet. Others believe it parted at approx. 200 feet. Should we be going to 200-250 feet instead of just 100 feet? Your thoughts?

Thanks,

Ron

From: Mike Griffin [mailto:whearth@msn.com] Sent: Thursday, July 06, 2006 2:51 PM To: Truelove, Ron Subject: RE: Avalon Protocol & Estimate

All good suggestions!

Attached, please find the modified protocol.

Mike Griffin Whole Earth Environmental, Inc. Phone: 281.394.2050 FAX: 281.394.2051

From: "Truelove, Ron" <Ron. Truelove@dvn.com> To: "Mike Griffin" <whearth@msn.com>, "Biagi, Chris" <Chris. Biagi@dvn.com>, "Johnston, Joe" <Joe.Johnston@dvn.com> CC: <ldeuel@hughes.net>, <graciela_hendrickx@msn.com> Subject: RE: Avalon Protocol & Estimate Date: Thu, 6 Jul 2006 14:08:29 -0500

Mike,

Please see my comments on the attached.

Due to vacations and days off, our group cannot meet until Monday. Please hold off until you hear from us.

Thanks,

Ron

From: Mike Griffin [mailto:whearth@msn.com]
Sent: Thursday, July 06, 2006 8:02 AM
To: Truelove, Ron; Biagi, Chris; Johnston, Joe
Cc: Ideuel@hughes.net; graciela_hendrickx@msn.com
Subject: Avalon Protocol & Estimate

OK, this time WITH the attachments...

Good Morning, All:

Attached, please find a copy of our proposed Phase II investigation protocol for the Avalon site along with our estimate of costs all related costs. If all goes well, we should have the drilling completed by the end of next week with a formal report following approximately two weeks later.

Our initial review of water well data is rather promising. There are very few wells even drilled in the immediate area and the depths of such wells are significantly below our 220' event horizon.

Please review & advise of any proposed changes.

Mike Griffin

Whole Earth Environmental, Inc.

Phone: 281.394.2050

FAX: 281.394.2051

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From :	Graciela Hendrickx <graciela_hendrickx@msn.com> ↔   ♡   X   応 Inbox</graciela_hendrickx@msn.com>
Sent :	Monday, July 10, 2006 8:15 AM
То :	"Mike Griffin" <whearth@msn.com></whearth@msn.com>
Subject :	Capitan aquifer
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**QP-96** 

# WHOLE EARTH ENVIRONMENTAL **QUALITY PROCEDURE**

# **Sampling and Testing Protocol Chloride Titration Using .1 Normal Silver Nitrate Solution**

Completed By:	Approved By:	Effective Date:	7	1
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### **1.0 Purpose**

This procedure is to be used to determine the concentrations of chlorides in soils.

### 2.0 Scope

This procedure is to be used as the standard field measurement for soil chloride concentrations.

## **3.0 Sample Collection and Preparation**

- 3.1 Collect at least 80 g. of soil from the sample collection point. Take care to insure that the sample is representative of the general background to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample of soils obtained at several points in the sample area. Take care to insure that no loose vegetation, rocks or liquids are included in the sample(s).
- 3.2 The soil sample(s) shall be immediately inserted into a one quart or larger polyethylene freezer bag. Care should be taken to insure that no cross-contamination occur between the soil sample and the collection tools or sample processing equipment.
- 3.3 The sealed sample bag should be massaged to break up any clods.

#### **4.0 Sample Preparation**

- 4.1 Tare a plastic cup having a minimum six-ounce capacity. Add between 80-120 grams of the soil sample and record the weight.
- 4.2 Add the same weight of distilled water to the soil sample and stir thoroughly using a glass or plastic stir stick.
- 4.3 Allow the sample to set for a period of thirty minutes. The sample should be stirred at least three times before fluid extraction.
- 4.4 Carefully pour off the free liquid from the sample through a paper filter into a clean plastic cup.

## **5.0 Titration Procedure**

- 5.1 Using a graduated pipette, remove 10 ml extract and dispense into a clean plastic cup.
- 5.2 Add 2-3 drops potassium chromate (K₂CrO₄) to mixture.
- 5.3 If the sample contains any sulfides (hydrogen or iron sulfides are common to oilfield soil samples) add 2-3 drops of hydrogen peroxide (H₂O₂) to mixture. Allow the mixture to set for a minimum of five minutes.
- 5.4 Using a 1 ml pipette, carefully add .1 normal silver nitrate solution to sample until solution turns salmon red when viewed with yellow goggles. Be consistent with endpoint recognition.

### **6.0 Calculation**

Multiply the amount of silver nitrate used in step 5.4 by 354.5 to obtain the chloride concentration in mg/L.