

Date: 31-Jan-12

## ALS Environmental

Client: Rosewood Resources, Inc.  
 Project: Table 910 - Halde Pit - Block Pit  
 Sample ID: Block Top Soil  
 Collection Date: 1/19/2012 01:00 PM

Work Order: 1201644  
 Lab ID: 1201644-03  
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>TPH AND MISCELLANEOUS GCFID</b>						
DRO (>C10 - C28)	ND		SW8015M	1.8 mg/Kg-dry	1	Prep Date: 1/23/2012 Analyst: KMB 1/24/2012 05:00 PM
Surr: 2-Fluorobiphenyl	76.1		70-130 %REC		1	1/24/2012 05:00 PM
<b>GASOLINE RANGE ORGANICS - SW8015C</b>						
Gasoline Range Organics	ND		SW8015	0.052 mg/Kg-dry	1	Analyst: KKP 1/26/2012 12:54 AM
Surr: 4-Bromofluorobenzene	85.7		70-130 %REC		1	1/26/2012 12:54 AM
<b>TRIVALENT CHROMIUM</b>						
Chromium, Trivalent	ND		CALCULATION	5.20 mg/Kg-dry	1	Analyst: SKS 1/30/2012
<b>MERCURY - SW7471B</b>						
Mercury	ND		SW7471A	0.00370 mg/Kg-dry	1	Prep Date: 1/26/2012 Analyst: JCJ 1/26/2012 06:40 PM
<b>METALS</b>						
Arsenic	0.994		SW6020	0.486 mg/Kg-dry	1	Prep Date: 1/26/2012 Analyst: IGF 1/27/2012 10:24 PM
Barium	90.8			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Cadmium	ND			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Chromium	3.30			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Copper	3.47			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Lead	4.65			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Nickel	3.25			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Selenium	0.632			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Silver	ND			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
Zinc	12.6			0.486 mg/Kg-dry	1	1/27/2012 10:24 PM
<b>LA29B SODIUM ADSORPTION RATIO</b>						
Sodium Adsorption Ratio	0.116		LA29B SAR	0.0100 meq/meq	1	Prep Date: 1/25/2012 Analyst: ALR 1/27/2012
<b>LA 29B - 1:1 SOLUBLE CATIONS FOR SAR</b>						
Calcium	117		LA29B-6020	0.996 mg/L	2	Prep Date: 1/25/2012 Analyst: IGF 1/26/2012 09:33 AM
Magnesium	9.52			0.996 mg/L	2	1/26/2012 09:33 AM
Sodium	4.86			0.996 mg/L	2	1/26/2012 09:33 AM
<b>LOW-LEVEL PAHS</b>						
Acenaphthene	ND		SW8270	0.0069 mg/Kg-dry	1	Prep Date: 1/23/2012 Analyst: ACN 1/24/2012 04:31 PM
Anthracene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Benz(a)anthracene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(a)pyrene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(b)fluoranthene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Benzo(k)fluoranthene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Chrysene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM
Dibenz(a,h)anthracene	ND			0.0069 mg/Kg-dry	1	1/24/2012 04:31 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Fluoranthene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Fluorene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Indeno(1,2,3-cd)pyrene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Naphthalene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Pyrene	ND		0.0069	mg/Kg-dry	1	1/24/2012 04:31 PM
Surr: 2-Fluorobiphenyl	72.9		43-125	%REC	1	1/24/2012 04:31 PM
Surr: 4-Terphenyl-d14	89.3		32-125	%REC	1	1/24/2012 04:31 PM
Surr: Nitrobenzene-d5	70.8		37-125	%REC	1	1/24/2012 04:31 PM
<b>VOLATILES</b>						Analyst: WLR
Benzene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Ethylbenzene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
m,p-Xylene	ND		0.010	mg/Kg-dry	1	1/26/2012 01:05 PM
o-Xylene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Toluene	ND		0.0052	mg/Kg-dry	1	1/26/2012 01:05 PM
Xylenes, Total	ND		0.016	mg/Kg-dry	1	1/26/2012 01:05 PM
Total BTEX	ND		0.021	mg/Kg-dry	1	1/26/2012 01:05 PM
Surr: 1,2-Dichloroethane-d4	89.8		70-128	%REC	1	1/26/2012 01:05 PM
Surr: 4-Bromofluorobenzene	98.4		73-126	%REC	1	1/26/2012 01:05 PM
Surr: Dibromofluoromethane	95.5		71-128	%REC	1	1/26/2012 01:05 PM
Surr: Toluene-d8	99.2		73-127	%REC	1	1/26/2012 01:05 PM
<b>ANIONS</b>						Prep Date: 1/27/2012 Analyst: JKP
Chloride	ND		5.11	mg/Kg-dry	1	1/30/2012 04:15 PM
Sulfate	ND		5.11	mg/Kg-dry	1	1/30/2012 04:15 PM
Surr: Selenate (surr)	95.5		80-120	%REC	1	1/30/2012 04:15 PM
<b>HEXAVALENT CHROMIUM</b>						Prep Date: 1/24/2012 Analyst: TDW
Chromium, Hexavalent	ND		2.07	mg/Kg-dry	1	1/25/2012 05:00 PM
<b>LA29B ELECTRICAL CONDUCTIVITY</b>						Analyst: TDW
Electrical Conductivity @ saturation	2.10		0.0100	mmhos/cm @25	1	1/25/2012 04:00 PM
Electrical Conductivity, 1:1 aqueous	0.694		0.0100	mmhos/cm @25	1	1/25/2012 04:00 PM
Saturation % as decimal	0.331			mmhos/cm @25	1	1/25/2012 04:00 PM
<b>LA29B SATURATION POINT</b>						Analyst: TDW
Saturation Point	0.331		0.100	% Saturation	1	1/26/2012 04:00 PM
<b>MOISTURE</b>						Analyst: KAH
Percent Moisture	3.81		0.0100	wt%	1	1/27/2012 07:10 PM
<b>PH</b>						Analyst: RPM
pH	8.40		0.100	pH Units	1	1/27/2012 01:00 PM

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