



November 11, 2011

Mr. Mike Davis  
Canyon Fuel Company  
Sufco Mine  
597 South SR 24  
Salina, Utah 85654

Received

NOV 21 2011

Canyon Fuel Company  
SUFCO Mine

Dear Mr. Davis:

Enclosed are the results for samples our laboratory received on September 13, 2011. The analyses were completed according to Utah "Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining."

Feel free to contact me at your convenience if you have any questions or concerns.

Sincerely,

Karen Secor  
Mining Soils

xc: File  
Encl



Soil Analysis Report  
Canyon Fuel Company, LLC.

397 South 800 West  
Salina, UT 84654

Report ID: S1109236001

Project: Sufco Mine

Date Received: 9/13/2011

Date Reported: 11/1/2011

Work Order: S1109236

Lab ID	Sample ID	pH	Saturation	Electrical	PE	PE	PE	SAR	PE	Boron	Selenium
		s.u.	%	Conductivity	Calcium	Magnesium	Sodium		Alkalinity		
				dS/m	meq/L	meq/L	meq/L		meq/L		
S1109236-001	3rd Quarter WRDS	7.0	41.7	2.20	21.0	16.9	1.09	0.25	1.50	2.46	0.04

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Canyon Fuel Company  
SUFco Mine

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Sol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor

Karen Secor, Soil Lab Supervisor



Soil Analysis Report  
Canyon Fuel Company, LLC.  
397 South 800 West  
Salina, UT 84654

Report ID: S1109236001

Project: Sufco Mine  
Date Received: 9/13/2011

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Work Order: S1109236

Lab ID	Sample ID	Total	T.S.	Neutral.	T.S.	Sulfate	Pyritic	Organic	PyriticS	PyriticS
		Sulfur	AB	Potential	ABP	Sulfur	Sulfur	Sulfur	AB	ABP
		%	t/1000t	t/1000t	t/1000t	%	%	%	t/1000t	t/1000t
S1109236-001	3rd Quarter WRDS	0.27	8.42	188	180	0.04	0.05	0.18	1.41	187

Received

NOV 21 2011

Canyon Fuel Company  
SUFSCO Mine

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2SO4= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

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Reviewed by: Karen A Secor  
Karen Secor, Soil Lab Supervisor