



August 23, 2013

**Rocky Mountain Natural Gas, LLC
Wolf Creek #12 Building Footprint Remediation
HCSI Job #13-113**

Introduction

This comprehensive report presents the site background, remediation, and summary for the Wolf Creek #12 Dehydration Building (dehy building) Demolition. Regarding this report, field work was conducted between the dates of July 22 through July 31, 2013. The purpose of the remediation was to excavate and dispose of the previously characterized area of contaminated soils.

The Wolf Creek #12 pad is located in the NWSE quarter quarter of section 35, township 8S, range 90W of the 6th prime meridian in the White River National Forest of Pitkin County, Colorado (Latitude 39.314382°, Longitude -107.404220°).

Background

HRL Compliance Solutions, Inc. (HCSI) was contacted by Rocky Mountain Natural Gas, LLC to conduct a site characterization pertaining to the demolition of the Wolf Creek #12 dehy building and associated above ground storage tanks (AST's). After site characterization was completed, HCSI recommended that the soil from the contaminated area be excavated and properly disposed. The contaminated area is presented in Appendix A, Figure 1.

Remediation

During remediation, HCSI personnel was onsite at all times. In eight (8) days, four (4) trucks were used to haul approximately 856 tons of contaminated soil from the site to South Canyon Landfill (1205 County Road 134, Glenwood Springs, CO 81601). The remediated (excavated) area encompasses 2,220 ft² with an average depth of 8 feet below ground surface. The remediated area is presented in Appendix A, Figure 1.

Soil samples were homogenized in a plastic tub and field screened using a photoionization detector (PID) and Dextsil PetroFlag® hydrocarbon test unit.

July 22, 2013

HCSI personnel was onsite to oversee excavation, perform field screens of soil, and to distribute waste manifests to truck drivers. Two (2) soil samples were collected from the NE corner of the excavation and field screened utilizing a PID and PetroFlag® hydrocarbon test unit. Field screen readings are presented in Appendix B, Table 1. Background samples were collected off of the pad and submitted July 24, 2013 to ALS Environmental for the analysis of arsenic, electrical conductivity saturation (EC), sodium adsorption ratio (SAR), and pH.

July 23, 2013

HCSI personnel was onsite to oversee excavation, perform field screens of soil, and to distribute waste manifests to truck drivers. During the excavation, contaminated soil was stockpiled in a containment area constructed of a plastic liner covering the ground surrounded by a berm built with clean, native soil. Two (2) samples (North Wall Glycol 4' and Northwest Wall Glycol 4') were collected and submitted on July 23, 2013 to ALS Environmental for the analysis of glycol.

July 24, 2013

HCSI personnel was onsite to oversee excavation, perform field screens of soil, and to distribute waste manifests to truck drivers. Three (3) soil samples were field screened and three (3) confirmation soil samples were collected and submitted on July 24, 2013 to ALS Environmental for the analysis of the complete Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1, glycol, and methanol.

July 25, 2013

HCSI personnel was onsite to oversee excavation, perform field screens of soil, and to distribute waste manifests to truck drivers. Five (5) soil samples were field screened and three (3) confirmation soil samples were submitted on July 25, 2013 for the analysis of the complete COGCC Table 910-1, glycol, and methanol.

July 26, 2013

HCSI personnel was onsite to oversee excavation, perform field screens of soil, and to distribute waste manifests to truck drivers. Four (4) soil samples were field screened.

July 29 – July 31, 2013

HCSI personnel was onsite to oversee excavation and to distribute waste manifests to truck drivers. The excavation and hauling of contaminated soil was completed on July 31, 2013.

Summary

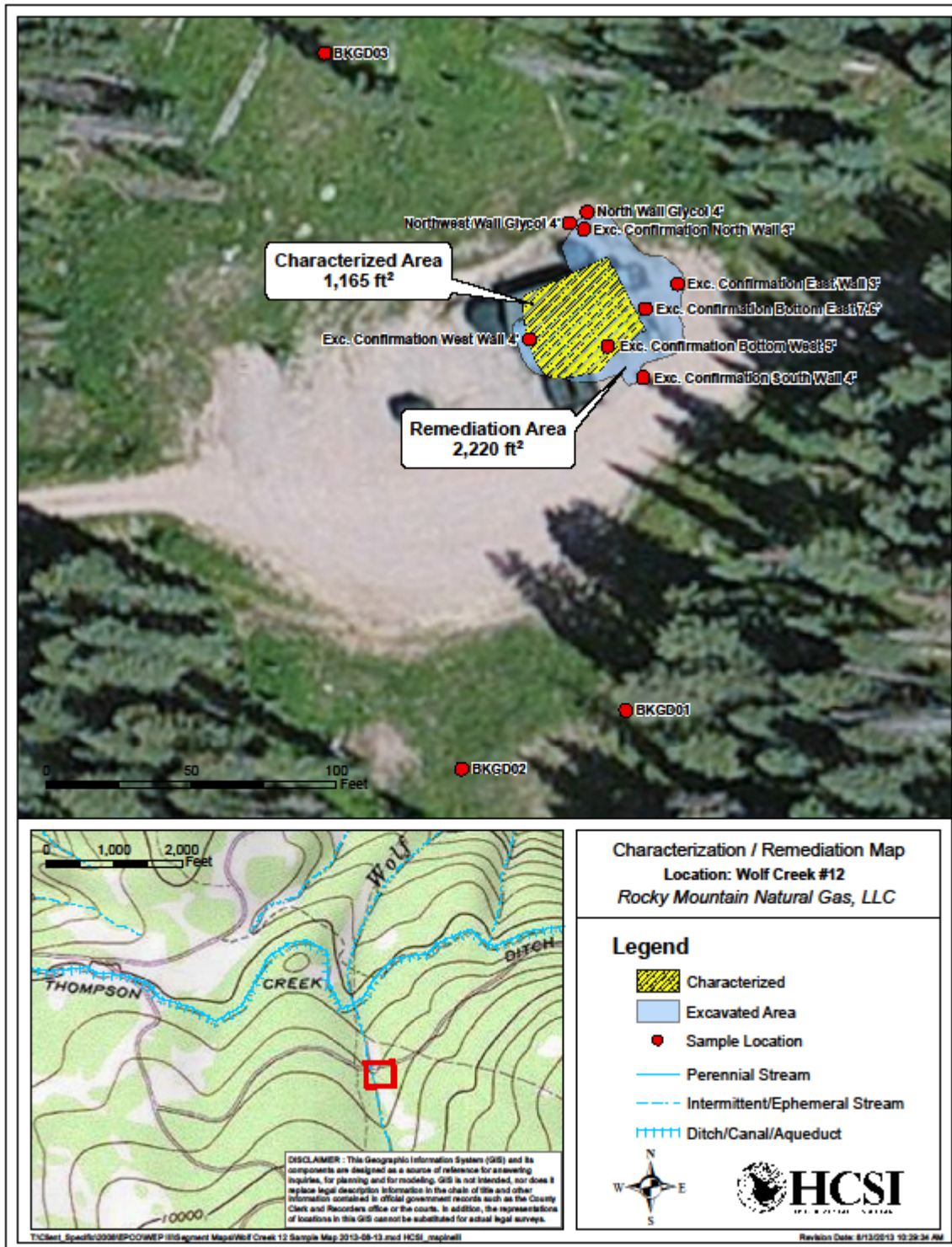
A total of eight (8) confirmation soil samples and three (3) background samples were collected and submitted to ALS Environmental. With the exception of inorganics (arsenic and pH), analytical laboratory results indicate that the analyzed constituents do not exceed any COGCC Table 910-1 or Colorado Department of Public Health and Environment (CDPHE) Colorado Soil Evaluation Values (CSEV) Table 1 (July, 2011) standards for soil. Analytical laboratory results are presented in Appendix B, Table 2.

Based on the analytical laboratory results of the confirmation soil samples, this phase of remediation has been completed.

Appendix A

Figure 1: Characterization/Remediation Map

Figure1. Characterization/Remediation map.



Appendix B

Table 1: Field Screen Results

Table 2: Analytical Laboratory Results

Table 1. Field screen results.

Wolf Creek #12 Field Screen Results								
Location	Latitude	Longitude	Date	Depth (ft.) from bgs	PID Reading (ppm)	PetroFlag Reading (ppm)	Sampled (Y/N)	Notes
NE Corner	-	-	7/22/2013	4.0	13.4	108.0	N	-
NE Corner	-	-	7/22/2013	6.0	6.6	8.0	N	Water @ 6 ft. Clean soil.
Exc. Confirmation Bottom East	-	-	7/23/2013	bottom	0.3	71.0	N	-
Exc. Confirmation North Wall 3'	-	-	7/23/2013	3.0	0.4	481.0	N	May be false; need to homogenize samples.
Exc. Confirmation Bottom East 7.6'	39.314485	-107.403942	7/24/2013	7.6	0.0	0.0	Y	-
Exc. Confirmation East Wall 3'	39.314510	-107.403907	7/24/2013	3.0	1.3	44.0	Y	-
Exc. Confirmation North Wall 3'	39.314559	-107.404018	7/24/2013	3.0	0.2	27.0	Y	-
Exc. Confirmation Bottom West 9'	39.314451	-107.403985	7/25/2013	9.0	1.1	0.0	Y	-
Exc. Confirmation South Wall 3'	-	-	7/25/2013	3.0	1.5	207.0	N	South wall.
Exc. Confirmation South Wall 3'	-	-	7/25/2013	3.0	3.1	239.0	N	2nd test. 1 hr. volatilize.
Exc. Confirmation South Wall 4'	39.314422	-107.403943	7/25/2013	4.0	3.1	240.0	Y	New sample.
Exc. Confirmation West Wall 4'	39.314453	-107.404079	7/25/2013	4.0	25.7	1147.0	Y	-
West Wall Middle 4'	-	-	7/26/2013	4.0	8.2	233	N	-
West Wall 5'	-	-	7/26/2013	5.0	2.0	148	N	5' native gray soil.
West Wall Middle 3'	-	-	7/26/2013	3.0	12.1	572	N	orange-stained glycols.
Exc. Confirmation West Wall 5'	-	-	7/26/2013	5	6.6	180	Y	Sampled but not analyzed.

