November 3, 2017

RELEASE CHARACTERIZATION WORK PLAN

Rockcliff Operating New Mexico, LLC (Rockcliff) Onsurez #2
API No.: 30-015-26472
Remediation Case # 2RP-4255
Eddy County, New Mexico

C&S Consulting (C&S) was retained by Rockcliff to establish a release characterization work plan with the ability to satisfy requests of New Mexico Oil Conservation District (NMOCD) staff and NMOCD Conditions of Approval (COA) as previously established for the release that occurred at the Onsurez #2 on June 3, 2017. C&S will address what we interpret to be an appropriate path forward through the bulleted process below:

- Establish Current Conditions

  C&S will compile data completed to date by the previous contractor in an effort to establish a baseline for progress made, and correlate the data gathered to date. Any noted questions from NMOCD correspondence will be addressed in initial reporting, along with background analysis of the Pecos River both upstream and downstream and any gatherable data from nearby monitoring points.

- Complete thirteen (13) borings in and around the Onsurez #2 Well Site as documented on the attached site map.

  C&S proposes that proposed points, provided on Attachment 3 (Proposed Delineation), which include thirteen (13) sample points around and within the documented impacted area, be approved for the next phase of the investigation. Each sample point will be converted to a temporary monitoring well, (including a background location immediately up-gradient of the impacted area) will be completed via Geoprobe and direct push technology, and completed immediately below the first groundwater bearing zone. These locations are dependent upon landowner approval prior to beginning work. C&S will also take care to follow NMOCD guidance as detailed in the COA and regulatory correspondence with any future investigations and reporting.

- Sample Screening and Analytical Methodology

  Each core will be visually and mechanically screened. Each core will also have field notes describing the physical properties of each soil core. Sample locations will include grab samples gathered at 1-foot intervals and analyzed dependent upon factors recorded during the

investigation and accounting for prior analytical data. Analyses for each core will follow COA guidance at a minimum. Analyses will include chlorides (Method 300), benzene, toluene, ethylbenzene, and total xylenes (by either Method 8260 or 8021), and total petroleum hydrocarbons (by Method 8015 extended range including GRO+DRO+MRO; C_6 thru C_{36}), to the depth at the nearest data point where exceedances are documented. Any exceedances noted at the limit of the vadose zone will automatically trigger groundwater analysis of the associated constituent. The standard target concentration for the listed constituents above for onsite soils will be:

- o Benzene – 10 ppm (mg/kg)
- o BTEX – 50 ppm (mg/kg)
- o TPH – 100 ppm (mg/kg)
- o Chlorides – 600 ppm (mg/kg)

- NMOCD Preapproval

  With our general workplan, as stated above, to begin as soon as possible, C&S would like to have concurrence of the regulatory staff prior to mobilization to preclude any potential confusion and/or project oversights.

- Groundwater Recovery and Disposal

  All soil cuttings and recovered groundwater collected and not sampled as part of this assessment will be disposed of according to NMOCD standards and procedures.

If you have any questions or require additional information, please contact me at 903-988-8642 or DHenderson@cslease.com.
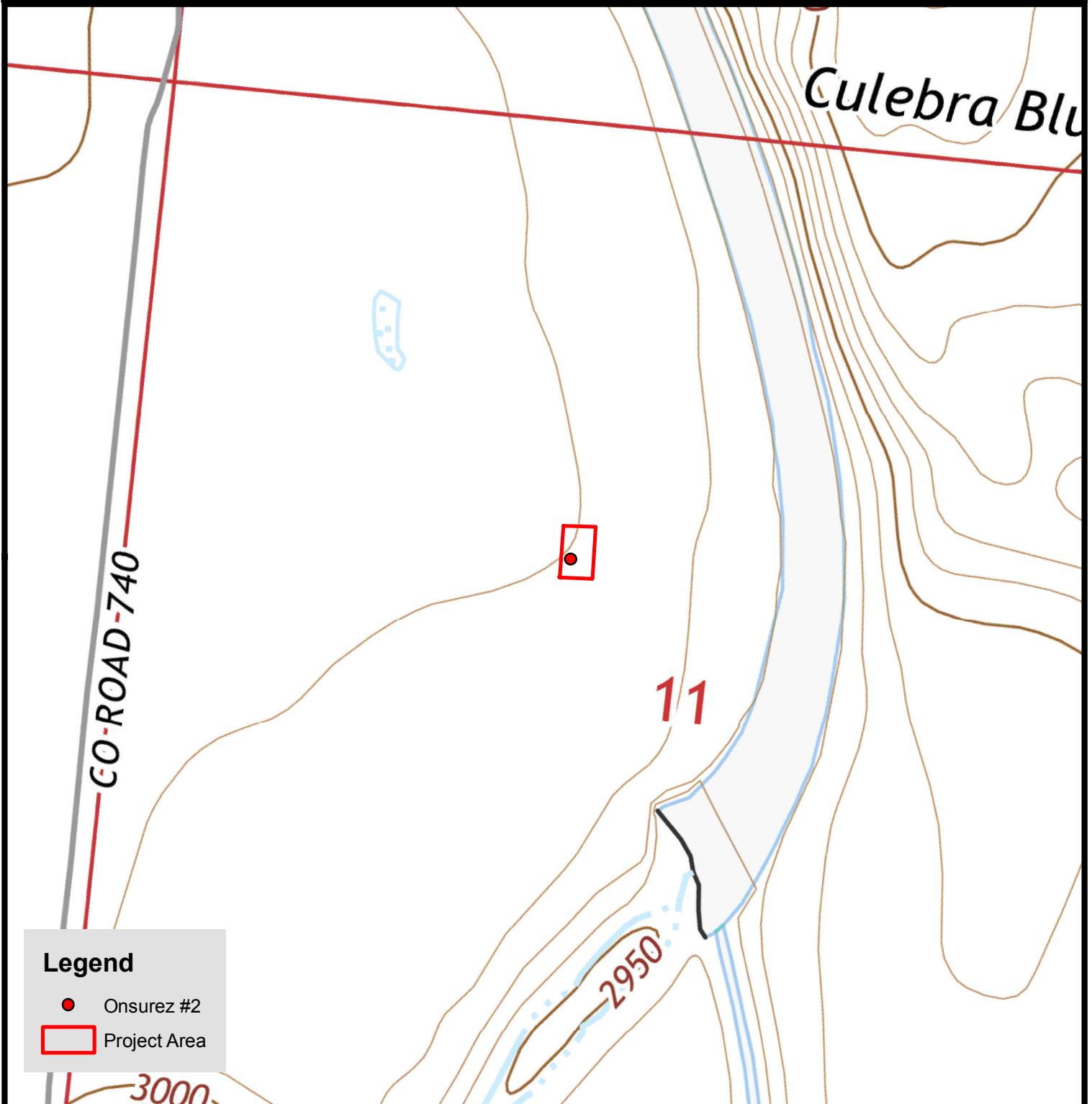
Sincerely,

Dustin Henderson, P. G.
C&S Consulting

Enclosures

Attachments

Figure 1: Topographic Site Vicinity Location

Culebra Blu

CO-ROAD-740

11

2950

3000

Legend

- Onsurez #2
- ☐ Project Area

Rockcliff Energy, LLC

Onsurez #2
Eddy County, NM
C&S Job #ROC1702
October 2017

N
W — E
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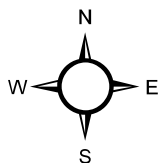
Source: BING

0   500   1,000 Feet

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Figure 2: Aerial Site Photograph

**Sample Locations are estimated from locations noted in previous reporting completed by Kane Environmental
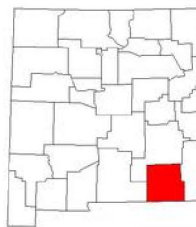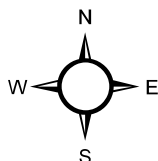
Rockcliff Energy, LLC

Onsurez #2
Eddy County, NM
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October 2017

Source: BING

0   75   150 Feet

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Figure 3: Proposed Delineation

North Delineation (ND)
ES1
Northwest Delineation (NWD)
ES2   OS3
ES14   Northeast Delineation (NED)
North Excavated
Area (NEA)
ES3
ES13
ES12
Background
Temporary Well
WHDN
ES10
Background
WHDE
West Delineation
OS1/ES11
ES9
(WD)
WHDS
East Delineation (ED)
OS2
ONSUREZ
#2
ES4
ES8
OS4
South Excavated Area (SEA)
ES5   ES7
OS5
ES6   Southeast Delineation (SED)
Southwest Delineation (SWD)

Rockcliff Energy, LLC

Onsurez #2
Eddy County, NM
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October 2017

N
W   E
S

Source: BING

0   50   100 Feet

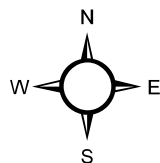**C&S** CONSULTING
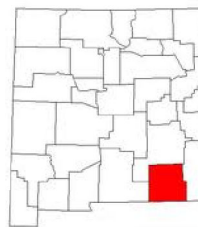
Analytical Data

Onsurez #2 Analytical Table to Date

** Data obtained from Kane Environmental sampling completed to date

ONSUREZ #2									
Sample	Benzene	Touene	Ethylbenzene	Xylenes	BTEX	Chlorides	TPH-GRO	TPH-DRO	TPH-ORO
NMOCD Cleanup Limit	10 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	250 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
OS 1-1'	<0.050	<0.050	<0.050	<0.150	<0.300	1800	<10.0	<10.0	-
OS 1-3'	<0.050	<0.050	<0.050	<0.150	<0.300	1120	<10.0	<10.0	-
OS 1-5'	<0.050	<0.050	<0.050	<0.150	<0.300	2080	<10.0	<10.0	-
OS 2-1'	0.475	5.84	6.42	25.8	38.5	5520	1630	14700	-
OS 2-3'	<0.050	<0.050	0.053	<0.150	<0.300	22000	<10.0	20.7	-
OS 2-5'	<0.050	<0.050	<0.050	<0.150	<0.300	2240	<10.0	<10.0	-
OS 2-8'	<0.050	<0.050	<0.050	<0.150	<0.300	192	<10.0	<10.0	-
OS 3-1'	<0.050	<0.050	<0.050	<0.150	<0.300	1920	<10.0	<10.0	-
OS 3-3'	<0.050	<0.050	<0.050	<0.150	<0.300	112	<10.0	<10.0	-
OS 3-5'	<0.050	<0.050	<0.050	<0.150	<0.300	96	<10.0	<10.0	-
OS 4-1'	<0.050	<0.050	<0.050	<0.150	<0.300	3040	<10.0	11.3	-
OS 4-3'	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	-
OS 4-5'	<0.050	<0.050	<0.050	<0.150	<0.300	96	<10.0	<10.0	-
OS 5-1'	2.17	26.6	23.4	73.9	126	448	3760	12,400	-
OS 5-3'	<0.050	0.178	0.393	0.963	1.53	992	28.2	291	-
OS 5-5'	<0.050	<0.050	<0.050	<0.150	<0.300	464	<10.0	<10.0	-
Background	<0.050	<0.050	<0.050	<0.150	<0.300	176	<10.0	<10.0	-
River	-	-	-	-	-	1320	-	-	-
ES1-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	352	<10.0	59.4	24.8
ES1-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	160	<10.0	<10.0	<10.0
ES2-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	208	<10.0	<10.0	<10.0
ES2-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	928	<10.0	<10.0	<10.0
ES3-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	5100	<10.0	159	42.7
ES3-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	3680	<10.0	<10.0	<10.0
ES4-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	3200	<10.0	666	171
ES4-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	2640	<10.0	768	197
ES-4A 3 ft	-	-	-	-	-	336	<10.0	<10.0	<10.0
ES-4A 8 ft	-	-	-	-	-	272	<10.0	<10.0	<10.0
ES-4A 13 ft	-	-	-	-	-	304	<10.0	<10.0	<10.0
ES5-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	1100	<10.0	<10.0	11.5
ES5-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	1230	<10.0	12.4	<10.0
ES6-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	1460	<10.0	75.3	20.5
ES6-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	1600	<10.0	<10.0	<10.0
ES7-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	1800	<10.0	<10.0	<10.0
ES7-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	272	<10.0	<10.0	<10.0
ES8-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	592	<10.0	<10.0	<10.0
ES8-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	96	<10.0	<10.0	<10.0
ES9-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	224	<10.0	<10.0	<10.0
ES9-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	112	<10.0	<10.0	<10.0
ES10-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	2280	<10.0	<10.0	<10.0
ES10-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	832	<10.0	<10.0	<10.0
ES11-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	7060	<10.0	<10.0	<10.0
ES11-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	512	<10.0	<10.0	<10.0
ES12-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	992	<10.0	<10.0	<10.0
ES12-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	112	<10.0	<10.0	<10.0
ES13-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	688	<10.0	<10.0	<10.0

ES13-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	**2160**	<10.0	<10.0	<10.0
ES-13A 3 ft	-	-	-	-	-	224	-	-	-
ES-13A 8 ft	-	-	-	-	-	**368**	-	-	-
ES-13A 13 ft	-	-	-	-	-	**352**	-	-	-
ES14-SIDEWALL	<0.050	<0.050	<0.050	<0.150	<0.300	48	<10.0	**171**	54.7
ES14-BOTTOM	<0.050	<0.050	<0.050	<0.150	<0.300	**368**	<10.0	**101**	34.7

Notes:
All data are assumed mg/L (ppm).
Red and bolded data above limits as established by NMOCD
"-" - Not Analyzed