

Duncan Ranch 11-89-36 #3-4
(WPU-36 1H)
COGCC Remediation Project #9706
API #05-081-07799-00
Cuttings Analyses
June 21, 2017

Parameter	6/21/17 Results Pile 1	6/21/17 Results Pile 2	6/21/17 Results Pile 3	6/21/17 Results Pile 4	6/21/17 Results Pile 5	6/21/17 Average	6/21/17 Results Bkgrd 1	6/21/17 Results Bkgrd 2	6/21/17 Results Bkgrd 3	6/21/17 Bkgrd Average	Table 910-1 Limit
Organic Compounds in Soil											
TVH-GRO – C6 to C-10m mg/Kg	U	U	U	U	U	U	---	---	---	---	---
TPH-DRO - C10 to C28, mg/Kg	580	440	450	260	390	424	---	---	---	---	500
Benzene, mg/Kg	U	U	U	U	U	U	---	---	---	---	0.17
Toluene, mg/Kg	U	U	U	U	U	U	---	---	---	---	85
Ethylbenzene, mg/Kg	U	U	U	U	U	U	---	---	---	---	100
Xylenes (total) – (mp + o) , mg/Kg	U	U	U	U	U	U	---	---	---	---	175
Inorganics in Soils											
Electrical conductivity (EC), mmhos/cm	14.5	15.7	9.24	20.8	10.4	14.1	---	---	---	---	<4
Sodium Adsorption Ratio (SAR)	7.9	8.9	4.5	11	8.2	8.1	---	---	---	---	<12
pH	7.3	7.3	7.5	7.2	7.5	7.4	---	---	---	---	6-9
Metals in Soils											
Arsenic, mg/Kg	4.0	4.3	4.5	3.9	4.8	4.3	2.3	2.4	2.5	2.4	0.39
Liquid Hydrocarbons in Soils											
Presence of liquid hydrocarbons including condensate and oil	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	None detected visually	Below Detection Limit

<value>: value is above the COGCC Table 910-1 parameter limit

U: less than the Minimum Detection Level, please see analytical results for more detail

---: not analyzed