

**TABLE 1
LABORATORY RESULTS SUMMARY TABLE**

**GGU 13-29 EXCAVATION
GARFIELD COUNTY, COLORADO
VANGUARD OPERATING, LLC**

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	N.Wall E.Side @ 9'	E. Wall @ 9'	W. Floor @ 10'	W.Wall @ 8.5'	N. Wall W. Side @ 8.5'	S. Wall E. Side @ 10'	S. Wall W. Side @ 18'	E. Floor @ 26'
Sample Date			7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019	7/25/2019
Arsenic	0.39	mg/kg	4.5	3.6	3.6	3.8	3.2	4.7	4.9	5.3
Barium	15,000	mg/kg	260	260	250	230	190	260	260	200
Cadmium	70	mg/kg	<1.0	<0.86	<0.81	<0.79	<0.91	<0.85	<0.78	<0.78
Chromium (III)	120,000	mg/kg	8.6	7.3	7.2	7.8	8.3	8.5	8.4	7.3
Chromium (VI)	23	mg/kg	<1.3	<1.2	<1.2	<1.2	<1.2	<1.2		<1.2
Copper	3,100	mg/kg	11	10	12	12	12	12	12	12
Lead	400	mg/kg	11	8.3	9.6	8.7	9.7	9.1	9.4	9.1
Mercury	23	mg/kg	<0.020	<0.022	<0.021	<0.020	<0.021	<0.018	<0.020	0.026
Nickel	1,600	mg/kg	9.7	8.9	9.5	10	11	10	10	8.6
Selenium	390	mg/kg	<1.0	<0.86	<0.81	<0.79	<0.91	<0.85	<0.78	<0.78
Silver	390	mg/kg	<0.50	<0.43	<0.41	<0.79	<0.45	<0.43	<0.39	<0.39
Zinc	23,000	mg/kg	45	41	46	44	50	45	46	42
EC	4.0	mmhos/cm	0.65	0.54	0.45	1.1	0.31	0.78	0.90	0.99
pH	6 - 9	SU	8.27	8.50	8.45	8.25	9.01	8.19	8.72	8.80
SAR	12	unitless	0.71	0.68	0.72	0.78	0.30	0.60	0.78	1.5
TPH-GRO		mg/kg	15	<7.2	<6.1	<7.0	<6.6	<6.3	730	1,300
TPH-DRO		mg/kg	<8.2	<11	<5.8	9.2	21	6.0	730	930
TPH	500	mg/kg	15	<11	<6.1	9.2	21	6.0	1,460	2,230
Benzene	0.17	mg/kg	<0.049	<0.043	<0.037	<0.042	<0.040	<0.038	<0.038	0.049
Toluene	85	mg/kg	<0.049	<0.043	<0.037	<0.042	<0.040	<0.038	<0.038	13
Ethylbenzene	100	mg/kg	<0.049	<0.043	<0.037	<0.042	<0.040	<0.038	<0.038	5.6
Total Xylenes	175	mg/kg	<0.15	<0.13	<0.11	<0.13	<0.12	<0.11	<0.11	83
Acenaphthene	1000	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Anthracene	1000	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	0.120	<0.014
Benzo(A)anthracene	0.22	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	0.016
Benzo(B)fluoranthene	0.22	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Benzo(K)fluoranthene	2.2	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Benzo(A)pyrene	0.022	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Chrysene	22	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	0.019
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Fluoranthene	1000	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	0.260	<0.014
Fluorene	1000	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	0.420
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014
Naphthalene	23	mg/kg	<0.0083	<0.014	<0.0078	0.018	<0.017	<0.009	0.600	1.2
Pyrene	1000	mg/kg	<0.0083	<0.014	<0.0078	<0.0076	<0.017	<0.0075	<0.0076	<0.014

NOTES:
 < - less than the stated reporting limit
BOLD - indicates result exceeds the COGCC concentration level
 COGCC - Colorado Oil and Gas Conservation Commission
 EC - electrical conductivity
 mg/kg - milligrams per kilogram
 mmhos/cm - millimhos per centimeter
 SAR - sodium adsorption ratio
 SU - standard unit
 TPH-GRO - total petroleum hydrocarbons-gasoline range organics
 TPH-DRO - total petroleum hydrocarbons-diesel range organics
 TPH - combination of TPH-GRO and TPH-DRO

