

TABLE 1  
SOIL ANALYTICAL RESULTS

MSW #1 BENEFICIAL REUSE AREA  
WELD COUNTY, COLORADO  
PDC ENERGY, INC.

Parameter	COGCC Table 910-1 Concentration Levels		Units	SS01		SS02		SS03		SS04		SS05		SS06		SS07	
Sample Date				11/4/2016	5/13/2020	11/4/2016	5/13/2020	11/4/2016	5/13/2020	11/4/2016	5/13/2020	11/4/2016	5/13/2020	11/4/2016	5/13/2020	11/4/2016	5/13/2020
Sample Type				Background	Post- incorporation	Background	Post- incorporation	Background	Post- incorporation	Background	Post- incorporation	Background	Post- incorporation	Background	Post- incorporation	Background	Post- incorporation
Depth (feet bgs)				0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5
Benzene	0.17	mg/kg		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Toluene	85	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Ethylbenzene	100	mg/kg		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Xylenes	175	mg/kg		<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.010
TPH-DRO	--	mg/kg		<50	<50	<50	100	<50	68	<50	81	<50	<50	<50	62	<50	<50
TPH-GRO	--	mg/kg		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TPH	500	mg/kg		<50.50	<50.50	<50.50	100	<50.50	68	<50.50	81	<50.50	<50.50	<50.50	62	<50.50	<50.50
Arsenic	0.39	mg/kg		<b>2.37</b>	<b>6.15</b>	<b>4.61</b>	<b>12.0</b>	<b>4.12</b>	<b>11.1</b>	<b>2.7</b>	<b>10.3</b>	<b>3.52</b>	<b>10.5</b>	<b>3.30</b>	<b>10.1</b>	<b>3.30</b>	<b>3.56</b>
Barium	15,000	mg/kg		147	665	175	717	171	800	127	950	138.0	843	135.0	805	121.0	393
Cadmium	70	mg/kg		0.486	1.41	0.54	2.89	0.725	2.47	0.415	2.45	0.326	2.80	0.488	2.54	0.769	0.530
Chromium (III)	120,000	mg/kg		11.6	13.5	15.3	13.7	13.5	15.0	9.92	13.1	10.6	15.3	11.6	15.6	9.92	10.9
Chromium (VI)	23	mg/kg		<0.300	<0.30	<0.300	<0.30	<0.300	<0.30	<0.300	<0.30	<0.300	<0.30	<0.300	<0.30	<0.300	<0.30
Copper	3,100	mg/kg		19.2	27.1	26.2	32.8	28.0	35.8	17.6	30.1	16.1	33.8	20.2	34.2	22.3	15.9
Lead	400	mg/kg		20	17.4	24.1	10.3	30.4	19.2	20.9	15.3	16.2	11.4	21.2	14.8	26.0	13.2
Mercury	23	mg/kg		<0.0551	<0.0580	<0.0569	<0.0580	0.0689	0.0595	<0.0549	<0.0581	<0.561	<0.0581	<0.0573	<0.0580	<0.0549	<0.0566
Nickel	1,600	mg/kg		9.52	19.3	13.0	34.1	11.3	30.8	9.00	29.1	8.32	31.4	9.19	29.0	8.04	10.1
Selenium	390	mg/kg		<0.441	3.06	0.533	5.72	<0.448	4.94	<0.439	4.91	<0.448	5.72	<0.459	5.34	<0.439	1.59
Silver	390	mg/kg		0.197	0.247	0.197	0.190	0.350	0.310	0.170	0.315	0.115	0.193	0.143	0.199	0.332	0.114
Zinc	23,000	mg/kg		85	104	101	111	118	133	72.9	108	67.5	114	81.2	116	98.9	72.0
Acenaphthene	1,000	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Anthracene	1,000	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Benzo (A) anthrac	0.22	mg/kg		0.00624	<0.00500	<0.00500	<0.00500	0.01790	<0.00500	0.0125	<0.00500	<0.00500	<0.00500	0.00675	<0.00500	0.0153	<0.00500
Benzo (B) fluoran	0.22	mg/kg		0.0121	<0.00500	0.00692	<0.00500	0.0285	<0.00500	0.241	0.00901	0.00900	0.00608	0.0114	0.00813	0.0272	<0.00500
Benzo (K) fluoran	2.2	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	0.00978	<0.00500	0.00815	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00883	<0.00500
Benzo (A) pyrene	0.022	mg/kg		0.0088	<0.00500	<0.00500	<0.00500	0.0226	<0.00500	0.0150	0.00501	0.00604	<0.00500	0.00797	<0.00500	0.0194	<0.00500
Chrysene	22	mg/kg		0.00794	0.0178	<0.00500	0.0233	0.0216	0.0253	0.0146	0.0248	<0.00500	0.0293	0.00795	0.0372	0.0177	<0.00500
Dibenzo (A,H) ant	0.022	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Fluoranthene	1,000	mg/kg		0.00798	<0.00500	<0.00500	<0.00500	0.0196	<0.00500	0.0191	0.00754	0.00597	<0.00500	0.00984	0.00514	0.02050	<0.00500
Fluorene	1,000	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Indeno (1,2,3,C,D	0.22	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	0.0103	<0.00500	0.00695	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0	<0.00500
Naphthalene	23	mg/kg		<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0101	<0.00500	0.00587	<0.00500	<0.00500
Pyrene	1,000	mg/kg		0.0100	<0.00500	0.00564	0.00508	0.02830	0.00766	0.0213	0.0124	0.00644	0.00882	0.0110	0.0107	0.0251	<0.00500
EC	4	mmhos/cm		3.33	<b>7.03</b>	2.72	<b>10.3</b>	<b>5.83</b>	<b>7.70</b>	2.39	<b>7.12</b>	<b>7.56</b>	<b>7.56</b>	2.13	<b>9.06</b>	3.95	<b>6.54</b>
pH	6 - 9	SU		7.72	7.75	7.78	7.76	8.02	7.70	7.32	7.74	8.20	7.47	7.78	7.59	7.92	7.87
SAR	12	unitless		2.77	3.23	3.69	4.35	6.77	2.98	3.37	3.47	6.54	3.41	2.67	3.19	5.03	4.11

NOTES:

**BOLD** - indicates result exceeds the COGCC Table 910-1 Concentration Level

bgs - below ground surface

COGCC - Colorado Oil and Gas Conservation Commission

DRO - diesel range organics

EC - electrical conductivity

GRO - gasoline range organics

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

SAR - sodium adsorption ratio

SU - standard unit

TPH - total petroleum hydrocarbons

-- - not analyzed/no standard

< - less than the stated laboratory analytical reporting limit



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MSW #1 BENEFICIAL REUSE AREA  
WELD COUNTY, COLORADO  
PDC ENERGY, INC.

Parameter	COGCC Table 910-1 Concentration Levels		Units	SS08	SS09	SS10	SS11	SS12	SS13	SS14
Sample Date				11/4/2016	11/4/2016	11/4/2016	11/4/2016	11/4/2016	11/4/2016	11/4/2016
Sample Type				Background	Background	Background	Background	Background	Background	Background
Depth (feet bgs)				0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5
Benzene	0.17	mg/kg	--	--	--	--	--	--	--	--
Toluene	85	mg/kg	--	--	--	--	--	--	--	--
Ethylbenzene	100	mg/kg	--	--	--	--	--	--	--	--
Total Xylenes	175	mg/kg	--	--	--	--	--	--	--	--
TEPH-DRO	--	mg/kg	--	--	--	--	--	--	--	--
TVPH-GRO	--	mg/kg	--	--	--	--	--	--	--	--
TPH Total	500	mg/kg	--	--	--	--	--	--	--	--
Arsenic	0.39	mg/kg	<b>1.97</b>	<b>1.40</b>	<b>3.41</b>	<b>3.18</b>	<b>3.66</b>	<b>3.18</b>	<b>2.61</b>	
Barium	15,000	mg/kg	--	--	--	--	--	--	--	--
Cadmium	70	mg/kg	--	--	--	--	--	--	--	--
Chromium (III)	120,000	mg/kg	--	--	--	--	--	--	--	--
Chromium (VI)	23	mg/kg	--	--	--	--	--	--	--	--
Copper	3,100	mg/kg	--	--	--	--	--	--	--	--
Lead	400	mg/kg	--	--	--	--	--	--	--	--
Mercury	23	mg/kg	--	--	--	--	--	--	--	--
Nickel	1,600	mg/kg	--	--	--	--	--	--	--	--
Selenium	390	mg/kg	--	--	--	--	--	--	--	--
Silver	390	mg/kg	--	--	--	--	--	--	--	--
Zinc	23,000	mg/kg	--	--	--	--	--	--	--	--
Acenaphthene	1,000	mg/kg	--	--	--	--	--	--	--	--
Anthracene	1,000	mg/kg	--	--	--	--	--	--	--	--
Benzo (A) anthracene	0.22	mg/kg	--	--	--	--	--	--	--	--
Benzo (B) fluoranthene	0.22	mg/kg	--	--	--	--	--	--	--	--
Benzo (K) fluoranthene	2.2	mg/kg	--	--	--	--	--	--	--	--
Benzo (A) pyrene	0.022	mg/kg	--	--	--	--	--	--	--	--
Chrysene	22	mg/kg	--	--	--	--	--	--	--	--
Dibenzo (A,H) anthracene	0.022	mg/kg	--	--	--	--	--	--	--	--
Fluoranthene	1,000	mg/kg	--	--	--	--	--	--	--	--
Fluorene	1,000	mg/kg	--	--	--	--	--	--	--	--
Indeno (1,2,3,C,D) pyrene	0.22	mg/kg	--	--	--	--	--	--	--	--
Naphthalene	23	mg/kg	--	--	--	--	--	--	--	--
Pyrene	1,000	mg/kg	--	--	--	--	--	--	--	--
EC	4	mmhos/cm	--	--	--	--	--	--	--	--
pH	6 - 9	SU	--	--	--	--	--	--	--	--
SAR	12	unitless	--	--	--	--	--	--	--	--

NOTES:  
**BOLD** - indicates result exceeds the COGCC Table 910-1 Concentration Level  
bgs - below ground surface  
COGCC - Colorado Oil and Gas Conservation Commission  
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mg/kg - milligrams per kilogram  
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SAR - sodium adsorption ratio  
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