

WELLINGTON OPERATING COMPANY
WELL 20-3 LABORATORY SUMMARY

		Sample Location										
Contaminant of Concern	Concentration	Well 20-3 Background	Well 20-3 Pad Surface	Well 20-3 Well Head @ 8'	Well 20-3 Test @ 10'	FL East End	Well 20-3 S Wall @ 8'	Well 20-3 W Wall @ 8'	Well 20-3 N Wall @ 8'	Well 20-3 E Wall @ 8'	Well 20-3 WH FL @ 7'	
Soil TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons)	500 mg/kg	72.2	42.9	9021.3	195.2	ND	ND	173.7	19.9	97.4	46.5	
Motor Oil Range (C24-C36)		57.4	42.9	4760	97.4	< 10.7	< 10.7	108	19.9	63.6	35.3	
TPH-DRO (C10-C28)		14.8	< 10.9	4240	94.6	< 10.7	< 10.7	65.7	< 10.9	33.8	11.2	
Gasoline Range Organics (C6-C10)		< 2.9	< 3.3	21.3	3.2	< 1.8	< 2.0	< 2.3	< 2.2	< 2.5	< 1.9	
Soils and Groundwater - liquid hydrocarbons including condensate and oil	below visual detection limits	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Electrical conductivity (EC) (by saturated paste method)1,2	< 4mmhos/cm	0.694	0.806	0.381	0.153	0.527	0.241	0.549	0.419	0.637	0.245	
Sodium adsorption ratio (SAR) (by saturated paste method)1,2,3	<6	0.141	0.155	0.193	2.74	0.172	1.14	2.37	1.42	2.19	0.924	
pH (by saturated paste method)1,2	6-8.3	7.55	7.70	7.61	8.69	8.12	8.36	8.39	8.26	8.13	8.34	
boron (hot water soluble soil extract)1,2,3	2 mg/l	1.95	1.82	1.17	0.237	0.273	0.296	0.586	0.589	0.573	0.323	
	Residential Soil Screening Level Concentrations (mg/kg)7	Protection of Groundwater Soil Screening Level Concentrations (mg/kg) Risk Based (R) and MCL Based (M)7,8										
benzene	1.2	0.0026 (M)	< 0.128	< 0.125	< 0.0108	< 0.0133	< 0.0082	< 0.0074	< 0.0111	< 0.0129	< 0.0092	< 0.0086
toluene	490	0.69 (M)	< 0.0319	< 0.0312	< 0.027	< 0.0332	< 0.0205	< 0.0186	< 0.0277	< 0.0323	< 0.0231	< 0.0215
ethylbenzene	5.8	0.78 (M)	< 0.0319	< 0.0312	< 0.027	< 0.0332	< 0.0205	< 0.0186	< 0.0277	< 0.0323	< 0.0231	< 0.0215
xylenes (sum of o-, m- and p- isomers = total xylenes)	58	9.9 (M)	< 0.0958	< 0.0935	< 0.081	< 0.0996	< 0.0615	< 0.0557	< 0.083	< 0.097	< 0.0693	< 0.0645
1,2,4-trimethylbenzene	30	0.0081 (R)	< 0.0319	< 0.0312	< 0.027	< 0.0332	< 0.0205	< 0.0186	< 0.0277	< 0.0323	< 0.0231	< 0.0215
1,3,5-trimethylbenzene	27	0.0087 (R)	< 0.0319	< 0.0312	< 0.027	< 0.0332	< 0.0205	< 0.0186	< 0.0277	< 0.0323	< 0.0231	< 0.0215
acenaphthene	360	0.55 (R)	< 0.108	< 0.0109	0.564	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
anthracene	1800	5.8 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
benzo(a)anthracene	1.1	0.011 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
benzo(b)fluoranthene	1.1	0.3 (R)	< 0.108	< 0.0109	0.1910	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
benzo(k)fluoranthene	11	2.9 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
benzo(a)pyrene	0.11	0.24 (M)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
chrysene	110	9 (R)	< 0.108	< 0.0109	0.687	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
dibenzo(a,h)anthracene	0.11	0.096 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
fluoranthene	240	8.9 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
fluorene	240	0.54 (R)	< 0.108	< 0.0109	1.48	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
indeno(1,2,3-cd)pyrene	1.1	0.98 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
1-methylnaphthalene	18	0.006 (R)	< 0.108	< 0.0109	4.46	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
2-methylnaphthalene	24	0.019 (R)	< 0.108	< 0.0109	0.85	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
naphthalene	2	0.0038 (R)	< 0.108	< 0.0109	< 0.0552	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
pyrene	180	1.3 (R)	< 0.108	< 0.0109	0.355	< 0.0114	< 0.0106	< 0.0106	< 0.0111	< 0.0108	< 0.0109	< 0.0108
	Residential Soil Screening Level Concentrations (mg/kg)7	Residential / Protection of Groundwater										
Metals in Soils 1, 6, 9, 10, 11												
arsenic	0.68	0.29 (M)	4.1	4.2	3.5	3	3.8	2.8	4	4.9	3.8	2.5
barium	15000	82 (M)	93.4	96.7	178	56.3	107	123	136	136	153	103
cadmium	71	0.38 (M)	0.53	0.54	0.32	< 0.16	0.53	0.31	0.43	0.6	0.38	0.22
chromium (VI)	0.3	0.0067 (R)	< 1.09	< 1.09	< 1.10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
copper	3100	46(M)	11.1	11.7	8.1	5.7	7.4	6.7	8.9	9.7	8.7	6
lead	400	14 (M)	8.3	8.9	8.0	7.1	5.8	4.9	7	7	6.8	4.2
nickel	1500	26 (R)	10.8	11.3	8.9	9.8	8.1	7.3	9.7	11.1	9.8	6.7
selenium	390	0.26 (M)	< 1.1	< 1.0	< 1.0	< 1.1	< 1.1	< 1.1	< 1.1	< 1.0	< 1.0	< 1.0
silver	390	0.8 (R)	< 0.53	< 0.51	< 0.56	< 0.53	< 0.54	< 0.53	< 0.55	< 0.52	< 0.52	< 0.050
zinc	23000	370 (R)	38.7	41.7	2.2	41.7	27.8	23.8	30.5	34.5	30.7	21.5