Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		2/2/2000	3/9/2000	4/7/2000	8/3/2000	10/26/2000	2/7/2001	5/23/2001	9/26/2001	5/10/2011	10/27/2011	6/13/2012
Parameters	Units											
General Chemistry												
Alkalinity, Bicarbonate (as CaCO3)	mg/L	360	390	---	---	471	---	---	376	425	360	370
Alkalinity, Carbonate (as CaCO3)	mg/L	5 U	5 U	---	---	5 U	---	---	5 U	5 U	5 U	5 U
Alkalinity, Total (As CaCO3)	mg/L	360	390	---	---	471	---	---	376	432	360	370
Ammonia	mg/L	1.2	0.8 U	---	---	0.8 U	---	---	0.15	0.1 U	0.12 U	0.14 U
Bromide	mg/L	---	---	---	---	180	---	---	---	0.5 U	1 U	0.5 U
Chemical Oxygen Demand (COD)	mg/L	---	---	---	---	26.3	---	---	---	38.8	28	38
Chloride	mg/L	31 D	35 J	---	---	46.7	---	---	41.6	35.4	16	24
Specific Conductivity	umhos/cm	---	---	---	---	---	---	---	---	5550	4300	4000
Cyanide (free)	mg/L	---	---	---	---	---	---	---	---	---	---	---
Fluoride	mg/L	4.2	3.1	0.4 U	1.8	3.9	2.5	2.3	3.1	---	---	---
Fluoride (dissolved)	mg/L	---	---	---	---	3.1	---	---	---	1.2	1.1 U	1.1
Hardness	mg/L	---	---	---	---	244	---	---	---	1130	770	820
Nitrate (as N)	mg/L	---	---	---	---	19.4	---	---	---	23.1	14	14
Nitrite (as N)	mg/L	---	---	---	---	0.01 U	---	---	---	1.2 U	0.25 U	0.13 U
Oil and Grease, Total	mg/L	---	---	---	---	---	---	---	5 U	---	---	---
Oil and grease (HEM), polar	mg/L	---	---	---	---	---	---	---	---	---	4.7 U	2.4 J
Oil and grease (HEM), total	mg/L	5	2 U	---	---	---	---	---	---	2 J	---	---
pH	s.u.	---	---	---	---	---	---	---	---	7.5 J	7.66 J	7.39 J
Phenolics (Total)	mg/L	0.092	0.05 U	---	---	0.05 U	---	---	0.01 U	0.025	0.01 U	0.01 U
Phosphorus as P, total	mg/L	---	---	---	---	---	---	---	---	0.1 U	0.1 U	0.1 U
Silica	mg/L	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	1200 D	220 J	---	---	1510	---	---	1340	1950	1400	1700
Sulfide	mg/L	---	---	---	---	---	---	---	---	1.8 J	3 U	3 U
Sulfite	mg/L	2 U	2 U J	---	---	2 U	---	---	2 U	---	---	---
Thiocyanate	mg/L	0.4 U	0.4 U	---	---	1 U	---	---	0.7 U	---	---	---
Thiosulfate	mg/L	0.4 U	0.4 U	---	---	1 U	---	---	0.7 U	---	---	---
Total Dissolved Solids (TDS)	mg/L	2170	2770	---	---	2710	---	---	2400	3620	2700	2500
Nitrogen, Total Kjeldahl	mg/L	1.2	1.7	---	---	1.8	---	---	1.7	5 U	5 U	5 U
Total Organic Carbon (TOC)	mg/L	---	---	---	---	---	---	---	---	14.1	11	11
Total Pet_ Hydrocarbons	mg/L	---	---	---	---	---	---	---	---	0.67	0.48 U	0.5 U
Total Suspended Solids (TSS)	mg/L	---	---	---	---	34	---	---	---	9.2	17	40
Dissolved Organic Carbon (DOC)	mg/L	8.3	11 J	---	---	14.2	---	---	10.9	14.4	12	10

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		2/2/2000	3/9/2000	4/7/2000	8/3/2000	10/26/2000	2/7/2001	5/23/2001	9/26/2001	5/10/2011	10/27/2011	6/13/2012
Parameters	Units											
Metals												
Arsenic	ug/L	20	20	20	13	23.2	41	47 U	19.6	14.7	13	15
Arsenic (Dissolved)	ug/L	---	---	---	---	24.9	---	---	---	14.7	14	13
Boron	ug/L	4900	8300	8800	7700	6300 E	2330	6400	5780	---	---	---
Boron (Dissolved)	ug/L	---	---	---	---	6550 E	---	---	---	9590	8200	9700
Cadmium	ug/L	2 U	2 U	0.9 J	2.1 U	0.84	0.73	---	0.51	---	---	---
Cadmium (Dissolved)	ug/L	---	---	---	---	0.49	---	---	---	0.098 J	1 U	1 U
Calcium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Calcium (Dissolved)	ug/L	---	---	---	---	98000	---	---	---	126000	98000	110000
Chromium	ug/L	---	---	---	---	1.4	---	---	---	4.9	3.7	3.2
Chromium (Dissolved)	ug/L	---	---	---	---	1.5	---	---	---	4.6	3.6	2.5
Chromium III	ug/L	---	---	---	---	10 U	---	---	---	---	---	---
Chromium VI	ug/L	---	---	---	---	0.05 U	---	---	---	---	---	---
Copper	ug/L	---	---	---	---	18.9	---	26	---	---	---	---
Copper (Dissolved)	ug/L	---	---	---	---	14.9	---	---	---	6.2	6.5	8.1
Iron	ug/L	---	---	---	---	628 E	---	---	---	198	420	780
Iron (Dissolved)	ug/L	---	---	---	---	369 E	---	---	---	50 U	8.1 J	24 J
Lead	ug/L	---	---	---	59 U	6.9	39.6	59 U	---	---	---	---
Lead (Dissolved)	ug/L	---	---	---	---	7.7	---	---	---	1 U	1 U	1 U
Lithium	ug/L	200 J	620	---	---	337 J	---	---	---	---	---	---
Lithium (Dissolved)	ug/L	---	---	---	---	339 J	---	---	308	264	200	240
Magnesium	ug/L	---	---	---	---	93100 E	---	---	---	---	---	---
Magnesium (Dissolved)	ug/L	---	---	---	---	28.6 U	---	---	---	167000	130000	140000
Manganese	ug/L	---	---	---	---	16.1	---	---	---	---	---	---
Manganese (Dissolved)	ug/L	---	---	---	---	15.1	---	---	---	0.22 J	1.5 J	1 J
Mercury	ug/L	---	---	---	---	0.12 U	---	---	---	---	---	---
Mercury (Dissolved)	ug/L	---	---	---	---	0.12 U	---	---	---	0.2 U	0.2 U	0.2 U
Molybdenum (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---	---
Nickel	ug/L	---	---	---	---	5.2	---	---	---	---	---	---
Nickel (Dissolved)	ug/L	---	---	---	---	7.1	---	---	---	---	---	---
Potassium	ug/L	---	---	---	---	1100000 E	---	---	---	---	---	---
Potassium (Dissolved)	ug/L	---	---	---	---	151000 E	---	---	---	18400	18000	17000

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		2/2/2000	3/9/2000	4/7/2000	8/3/2000	10/26/2000	2/7/2001	5/23/2001	9/26/2001	5/10/2011	10/27/2011	6/13/2012
Parameters	Units											
Metals												
Selenium	ug/L	---	---	---	---	3.8	---	---	---	---	---	---
Selenium (Dissolved)	ug/L	---	---	---	---	7.1	---	---	---	46.1	37	37
Silicon	ug/L											
Silicon (Dissolved)	ug/L	---	---	---	---	---	---	---	---	6730	6800	7400
Silver	ug/L	5 U	5 U	10 U	---	0.05 U	---	---	10 U	---	---	---
Silver (Dissolved)	ug/L	---	---	---	---	0.03 U	---	---	---	---	---	---
Sodium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Sodium (Dissolved)	ug/L	---	---	---	---	489000	---	---	---	596000	480000	660000
Strontium	ug/L	---	---	---	---	5000 J	---	---	---	---	---	---
Strontium (Dissolved)	ug/L	---	---	---	---	4280 J	---	---	---	4100	3100	4000
Uranium (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---	---
Zinc	ug/L	---	---	---	---	66	---	---	---	---	---	---
Zinc (Dissolved)	ug/L	---	---	---	---	58.4	---	---	---	3.5 J	9.9 U	10
Volatile Organic Compounds - BTEX												
Benzene	ug/L	1 U	1 U	1 U	0.2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	1 U	1 U	1 U	0.2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
Toluene	ug/L	1 U	1 U	1 U	0.2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
Xylenes, Total	ug/L	1 U	1 U	1 U	0.2 U	2 U	2 U	2 U	1 U	3 U	3 U	3 U
Petroleum Products												
Diesel fuel	mg/L	---	---	---	---	0.1 U	---	---	---	---	---	---
TPH - Extractable (DRO)	mg/L	---	---	---	---	---	---	---	---	---	---	---
TPH (non-polar)	mg/L	---	---	---	---	---	---	---	---	0.67	0.48 U	0.5 U
TPH (C21 - C28)	mg/L	---	---	---	---	---	---	---	---	---	---	---
Radiology												
Gross Alpha Analytes	pci/l	53	5	---	---	10 + or - 16	---	---	5 + or - 2	---	---	---
Gross Beta Analytes	pci/l	150	100	---	---	150 + or - 30	---	---	15 + or - 2	---	---	---
Field Parameters												
Specific conductivity, field	umhos/cm	---	---	---	---	---	---	---	---	---	---	---
Dissolved oxygen (DO), field	mg/L	---	---	---	---	---	---	---	---	---	---	---
Oxidation reduction potential (ORP), field	millivolts	---	---	---	---	---	---	---	---	---	---	---
pH, field	s.u.	---	---	---	---	---	---	---	---	---	---	---
Temperature, ambient	Deg C	---	---	---	---	---	---	---	---	---	---	---
Temperature, field	Deg C	---	---	---	---	---	---	---	---	---	---	---
Turbidity, field	NTU	---	---	---	---	---	---	---	---	---	---	---

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		10/25/2012	6/12/2013	10/23/2013	5/21/2014	10/27/2014	5/13/2015	10/19/2015	5/25/2016	10/11/2016	5/2/2017	10/11/2017
Parameters	Units											
General Chemistry												
Alkalinity, Bicarbonate (as CaCO3)	mg/L	380	390	400	420	440 B	470	430	367	351	374	391
Alkalinity, Carbonate (as CaCO3)	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.71 U	2.71 U	2.71 U	2.71 U
Alkalinity, Total (As CaCO3)	mg/L	380	390	400	420	440 B	470	430	367	351	374	391
Ammonia	mg/L	0.32	0.15	0.13 U	0.05 J	0.1 U	0.24	0.1 U	0.038 U	0.038 U	0.0317 U	0.0317 U
Bromide	mg/L	1.3 U	2.5 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.079 U	0.079 U	0.079 U	0.079 U
Chemical Oxygen Demand (COD)	mg/L	18	34	30	33	51	32	28 B	53.1	64.4	34	31.6
Chloride	mg/L	32	27	28	17	22	23	26	20.2	20.7	23.5	23
Specific Conductivity	umhos/cm	4000	4100	4200	---	4100	4000	4400	4160	38300	3850	4030
Cyanide (free)	mg/L	---	---	---	---	---	---	---	---	---	---	---
Fluoride	mg/L	---	---	---	---	---	---	---	1.31	1.37	1.17	1.19
Fluoride (dissolved)	mg/L	1.1	0.41	0.76	0.38	0.87	1.1	1.2	---	---	---	---
Hardness	mg/L	760	1000	1200	990	1100	1100	1100	896	814	907	995
Nitrate (as N)	mg/L	14 J	16	18	18	22 H	21	21 B	16.4	16.4	18	22.7 U
Nitrite (as N)	mg/L	0.13 U J	0.13 U	0.13 U	0.13 U	0.13 UH	0.13 U	U*	0.0277 U	0.0277 U	0.0277 U	0.0277 U
Oil and Grease, Total	mg/L	---	---	---	---	3.4 J	---	---	---	---	---	---
Oil and grease (HEM), polar	mg/L	5.2 U	1.4 J	1.8 J	4.7 U	---	4.5 U	4.5 U	---	---	---	---
Oil and grease (HEM), total	mg/L	---	---	---	---	---	---	---	1.16 U	1.16 U	1.16 U	1.16 U
pH	s.u.	7.74 J	7.79 J	7.52 J	7.93 J	7.5 HF	7.74 J	7.69 HF	7.56 J	7.70 J	7.69 J	7.6 J
Phenolics (Total)	mg/L	0.01 U	0.0077 J	0.01 U	0.01 U	0.01 U	0.015	0.01 U	0.0205 U	0.0179 J	0.0083 U	0.0083 U
Phosphorus as P, total	mg/L	0.058 J	0.1 U	0.1 U	0.017 J	0.1 U	0.1 U	0.1 U	0.035 U	0.035 U	0.0843 U	0.0958 J
Silica	mg/L	---	---	17	---	---	---	---	16.7	15.8	16.7	16.9
Sulfate	mg/L	1600	1900	2100	1800	2100	2000	2200	1800	1700	1820	1790
Sulfide	mg/L	3 U	3 U	3 U	3 U	0.53 J	0.49 J	30 U	0.0065 U	0.0065 U	0.0065 U	0.0065 U
Sulfite	mg/L	---	---	---	---	---	---	---	---	---	---	---
Thiocyanate	mg/L	---	---	---	---	---	---	---	---	---	---	---
Thiosulfate	mg/L	---	---	---	---	---	---	---	---	---	---	---
Total Dissolved Solids (TDS)	mg/L	2500	2600	2700	2800	3000	3500	3600	3360	2240	3020	2900
Nitrogen, Total Kjeldahl	mg/L	1.1 J	3.4 J	3.9 J	7.9	5 U	5 U	3.4 J	1.32	0.847	0.951	0.120 U
Total Organic Carbon (TOC)	mg/L	11	8.5	10	10	12	13	13	89.3	10.3	11.3	11.6
Total Pet_ Hydrocarbons	mg/L	---	---	---	---	---	---	---	---	---	---	---
Total Suspended Solids (TSS)	mg/L	150	24	7.2	6.4	13	---	---	---	---	---	---
Dissolved Organic Carbon (DOC)	mg/L	11	10	11	10	11	13	13	88.4	9.73	11.4	11.9

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		10/25/2012	6/12/2013	10/23/2013	5/21/2014	10/27/2014	5/13/2015	10/19/2015	5/25/2016	10/11/2016	5/2/2017	10/11/2017
Parameters	Units											
Metals												
Arsenic	ug/L	15	12	14	14	14	13	16	21.5	14.5	384	13
Arsenic (Dissolved)	ug/L	11	12	19	15	13	13	15	15.2	13.8	15.3	14.3
Boron	ug/L	---	---	---	---	---	11000	12000	---	---	---	---
Boron (Dissolved)	ug/L	7900	11000	11000	12000	10000	---	---	8450	9720	12800	10600
Cadmium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Cadmium (Dissolved)	ug/L	0.099 J	0.14 J	0.85 J	1 U	0.081 J	1 U	1.5	0.220 U	0.220 U	0.220 U	0.22 U
Calcium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Calcium (Dissolved)	ug/L	78000	130000	170000	130000	130000	120000	150000 B	115000	121000	141000	139000
Chromium	ug/L	2.5	2.5	2.6	4.9	3.6	3.2	4.7	6.26	2.94	118	3.47
Chromium (Dissolved)	ug/L	1.1 J	2.6	4 J	4.9	3.2	2.9	4.3	4.44	2.98	4.52	3.39
Chromium III	ug/L	---	---	---	---	---	---	---	---	---	---	---
Chromium VI	ug/L	---	---	---	---	---	---	---	---	---	---	---
Copper	ug/L	---	---	---	---	---	---	---	---	---	---	---
Copper (Dissolved)	ug/L	6	7	12	5.5	6	5.6	9.8	5.83	6.92	18.3	11.2
Iron	ug/L	1900	340	160	64	240	350	120	98.8 J	133	2630	22.7 J
Iron (Dissolved)	ug/L	22 J	5.3 J	250 U	50 U	11 J	30 J	50 U	65.9 J	15.0 U	15.0 U	15 U
Lead	ug/L	---	---	---	---	---	---	---	---	---	---	---
Lead (Dissolved)	ug/L	0.14 J	0.57 J	5 U	1 U	0.074 J	1 U	0.9 J	0.260 U	0.260 U	0.260 U	0.26 U
Lithium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Lithium (Dissolved)	ug/L	250	240	240	230	250	250	270	286	255	323	243
Magnesium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Magnesium (Dissolved)	ug/L	97000	150000	210000	160000	160000	150000	170000	125000	128000	152000	155000
Manganese	ug/L	---	---	---	---	---	---	---	---	---	---	---
Manganese (Dissolved)	ug/L	13	5 U	0.46 J	0.32 J	0.87 JB	0.2 J	0.42 J	2.07 J	0.510 U	0.510 U	0.51 U
Mercury	ug/L	---	---	---	---	---	---	---	---	---	---	---
Mercury (Dissolved)	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.0490 U	0.0490 U	0.0490 U	0.049 U
Molybdenum (Dissolved)	ug/L	---	---	570	---	---	---	---	---	---	---	---
Nickel	ug/L	---	---	---	---	---	---	---	---	---	---	---
Nickel (Dissolved)	ug/L	---	---	4.5 J	---	---	---	---	---	---	---	---
Potassium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Potassium (Dissolved)	ug/L	13000	19000	28000	22000	21000	20000	21000	18300	17200	21500	20600

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		10/25/2012	6/12/2013	10/23/2013	5/21/2014	10/27/2014	5/13/2015	10/19/2015	5/25/2016	10/11/2016	5/2/2017	10/11/2017
Parameters	Units											
Metals												
Selenium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Selenium (Dissolved)	ug/L	17	40	52	49	46	49	60	42.7	41.1	52.1	45.6
Silicon	ug/L								7810	7410	7810	7880
Silicon (Dissolved)	ug/L	6000	6500	8100	8000	6600	6700	7600	---	---	---	---
Silver	ug/L	---	---	---	---	---	---	---	---	---	---	---
Silver (Dissolved)	ug/L	---	---	5 U	---	---	---	---	---	---	---	---
Sodium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Sodium (Dissolved)	ug/L	630000	540000	720000	610000	600000	550000	720000	556000	576000	649000	631000
Strontium	ug/L	---	---	---	---	---	---	---	---	---	---	---
Strontium (Dissolved)	ug/L	2800	4400	6200	4100	4500	3700	4600	3380	3590	4650	4710
Uranium (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---	---
Zinc	ug/L	---	---	---	---	---	---	---	---	---	---	---
Zinc (Dissolved)	ug/L	9.9	15	25 U	5 U	7.7 B	1.9 J	17 B	3.21 U	1.91 U	9.69 J	7.22 U
Volatile Organic Compounds - BTEX												
Benzene	ug/L	1 U	1 U	1 U	1 U	1 U	5 U	5 U	0.331 U	0.331 U	0.331 U	0.331 U
Ethylbenzene	ug/L	1 U	1 U	1 U	1 U	1 U	5 U	5 U	0.384 U	0.384 U	0.384 U	0.384 U
Toluene	ug/L	1 U	1 U	1 U	1 U	1 U	5 U	5 U	0.780 U	0.780 U	0.412 U	0.412 U
Xylenes, Total	ug/L	3 U	3 U	3 U	3 U	3 U	10 U	10 U	1.06 U	1.06 U	1.06 U	1.06 U
Petroleum Products												
Diesel fuel	mg/L	0.51 U	0.48 U	0.49 U	0.52 U	0.54:U	0.5 U	0.33 J	0.148	0.0247 U	0.067 U	0.113
TPH - Extractable (DRO)	mg/L	---	---	---	---	---	---	---	---	---	---	---
TPH (non-polar)	mg/L	---	---	---	---	---	---	---	---	---	---	---
TPH (C21 - C28)	mg/L	---	---	---	---	---	---	---	---	---	---	---
Radiology												
Gross Alpha Analytes	pci/l	---	---	---	---	---	---	---	---	---	---	---
Gross Beta Analytes	pci/l	---	---	---	---	---	---	---	---	---	---	---
Field Parameters												
Specific conductivity, field	umhos/cm	---	---	4265	4007	4177	4227	4515	4164	3669	3884	4052
Dissolved oxygen (DO), field	mg/L	---	---	6.80	9.52	6.34	7.39	9.14	8.02	8.84	9.53	73.4
Oxidation reduction potential (ORP), field	millivolts	---	---	203.7	213.6	162.3	252	198.8	173.5	313.6	209.2	75.7
pH, field	s.u.	---	---	7.45	7.41	6.34	7.37	6.91	7.73	6.49	7.67	6.07
Temperature, ambient	Deg C	---	---	12.7	18.3	10.0	18	---	---	---	15.6	15.6
Temperature, field	Deg C	---	---	8.72	8.48	9.69	8.7	9.07	8.09	9.26	9	9.3
Turbidity, field	NTU	---	---	9.67	5.43	10.30	23.51	3.46	16.78	4.56	9.46	1.65

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		6/4/2018	11/13/2018	05/29/2019	10/14/2019	5/26/2020	10/7/2020	5/5/2021	10/21/2021
Parameters	Units								
General Chemistry									
Alkalinity, Bicarbonate (as CaCO3)	mg/L	432	411	395	369	418	379	429	419
Alkalinity, Carbonate (as CaCO3)	mg/L	20 U	2.71 U	2.71 U	2.71 U	8.45 U	8.45 U	8.45 U	8.45 U
Alkalinity, Total (As CaCO3)	mg/L	432	411	395	369	418	379	429	419
Ammonia	mg/L	0.1 U	0.0317 U	0.0317 U	0.0317 U	0.117 U	0.117 U	0.117 U	0.117 U
Bromide	mg/L	1 U	1.58 U	0.079 U	0.079 U	17.6 U	35.3 U	3.53 U	3.53 U
Chemical Oxygen Demand (COD)	mg/L	56.8	33	32.8	---	---	---		
Chloride	mg/L	25.2	28.1	17.9	18.7	23.1	24.5	27.1	23.7
Specific Conductivity	umhos/cm	3510	4240	3970	3280	4090	3970	4290	4000
Cyanide (free)	mg/L	---	---	---	---	---	---		
Fluoride	mg/L	1.11	1.28	---	---	---	---		
Fluoride (dissolved)	mg/L	---	---	1.48	1.47	1.1	1.19	1.25 J	1.55
Hardness	mg/L	1070	935	629	756 B	1060	985	1090	
Nitrate (as N)	mg/L	16.6	19	15.3	16.1	17.8 T8	15.3	17.8	20.8
Nitrite (as N)	mg/L	0.1 U	0.0277 U	0.0277 U	0.0277 U	0.042 U,T8	0.042 U	0.42 U	0.42 U
Oil and Grease, Total	mg/L	---	---	1.35 U	1.29 U	1.32 U			
Oil and grease (HEM), polar	mg/L	---	---	---	---	---	---		
Oil and grease (HEM), total	mg/L	5.56 U	1.29 U	---	---	---	---		
pH	s.u.	7.70 T8	7.65 J	7.92 J	7.88 T8	7.84 T8	7.69 T8	7.68 T8	8 T8
Phenolics (Total)	mg/L	0.0126 J	0.0083 U	0.0083 U	0.026 J	0.0083 U	0.0083 U	0.0083 UJ6	0.0083 U
Phosphorus as P, total	mg/L	0.1 U	0.0621 U	0.036 J	0.052 B	0.035 U	0.035 U	0.035 U	0.0564 BJ
Silica	mg/L	23.6	14.7	17.1	15.5	15.1	15	17.9	18.1
Sulfate	mg/L	2030	2000	1780	1560	1900	1850	1910	1870
Sulfide	mg/L	0.05 U	0.0065 U	0.0065 U	0.0065 U	0.025 U	0.025 U	0.025 U	0.025 U
Sulfite	mg/L	---	---	---	---	---	---		
Thiocyanate	mg/L	---	---	---	---	---	---		
Thiosulfate	mg/L	---	---	---	---	---	---		
Total Dissolved Solids (TDS)	mg/L	2790	3320	2760	2490	2610 J3	3100	3180	3110
Nitrogen, Total Kjeldahl	mg/L	1.1 J6	1.2	0.522	---	---	---		
Total Organic Carbon (TOC)	mg/L	11.7	13.6	13	10.8	13	9.81	11.4	9.87
Total Pet_ Hydrocarbons	mg/L	---	---	---	---	---	---		
Total Suspended Solids (TSS)	mg/L	---	---	---	4.4	1.6 J	1.1 J	25.5	4.3
Dissolved Organic Carbon (DOC)	mg/L	10.9	12.5	12.7	---	---	---		

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		6/4/2018	11/13/2018	05/29/2019	10/14/2019	5/26/2020	10/7/2020	5/5/2021	10/21/2021
Parameters	Units								
Metals									
Arsenic	ug/L	13.4	12.6	12.6	---	---	---		
Arsenic (Dissolved)	ug/L	13.6	13	14.4	12.3	12.6	13.1	12.7	13.3
Boron	ug/L	---	---	---	---	---	---		
Boron (Dissolved)	ug/L	10700	9890	9700	10200 V	11900	11800	11100	11200
Cadmium	ug/L	---	---	---	---	---	---		
Cadmium (Dissolved)	ug/L	1.00 U	0.220 U	0.352 J	116000	---	---		
Calcium	ug/L	---	---	---	---	142000	134000	149000	
Calcium (Dissolved)	ug/L	159000	148000	162000	---	148000	130000	149000	151000
Chromium	ug/L	3.61	2.52	3.21	---	---	---		
Chromium (Dissolved)	ug/L	3.15	3.22	4.04	---	---	---		
Chromium III	ug/L	---	---	---	---	---	---		
Chromium VI	ug/L	---	---	---	---	---	---		
Copper	ug/L	---	---	---	---	---	---		
Copper (Dissolved)	ug/L	13	10.7	7.36	---	---	---		
Iron	ug/L	83.8 J	27.1 J	96.6 J	---	---	---		
Iron (Dissolved)	ug/L	100 U	15.0 U	82.9 U	15.0 U	44.7 U	200	44.7 U	44.7 U
Lead	ug/L	---	---	---	---	---	---		
Lead (Dissolved)	ug/L	0.357 J	0.260 U	0.388 J	---	---	---		
Lithium	ug/L	---	---	---	---	---	---		
Lithium (Dissolved)	ug/L	248	256	303	---	---	---		
Magnesium	ug/L	---	---	---	---	172000	158000	175000	
Magnesium (Dissolved)	ug/L	158000	173000	184000	128000	155000 V	153000	171000	155000
Manganese	ug/L	---	---	---	---	---	---		
Manganese (Dissolved)	ug/L	5.00 U	0.510 U	86.8	---	---	---		
Mercury	ug/L	---	---	---	---	---	---		
Mercury (Dissolved)	ug/L	0.200 U	0.0490 U	0.0490 U	---	---	---		
Molybdenum (Dissolved)	ug/L	---	---	---	---	---	---		
Nickel	ug/L	---	---	---	---	---	---		
Nickel (Dissolved)	ug/L	---	---	---	---	---	---		
Potassium	ug/L	---	---	---	---	---	---		
Potassium (Dissolved)	ug/L	21500	21000	21800	16900	19600	17900	19000	21200

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A	LWCW-1A
SampleDate		6/4/2018	11/13/2018	05/29/2019	10/14/2019	5/26/2020	10/7/2020	5/5/2021	10/21/2021
Parameters	Units								
Metals									
Selenium	ug/L	---	---	---	---	---	---		
Selenium (Dissolved)	ug/L	47.1	48.4	54.1	44.0	45	47	46.6	46.4
Silicon	ug/L	11000	6890	7980	7270	7070	6990	8380	8460
Silicon (Dissolved)	ug/L	---	---	---	---	---	---		
Silver	ug/L	---	---	---	---	---	---		
Silver (Dissolved)	ug/L	---	---	---	---	---	---		
Sodium	ug/L	---	---	---	---	---	---		
Sodium (Dissolved)	ug/L	582000	647000	692000	547000	549000 V	628000	612000	548000
Strontium	ug/L	---	---	---	---	---	---		
Strontium (Dissolved)	ug/L	4660	4360	4560	---	---	---		
Uranium (Dissolved)	ug/L	---	---	---	---	---	---		
Zinc	ug/L	9.96 J	9.49 J	---	---	---	---		
Zinc (Dissolved)	ug/L	---	---	15.1	---	---	---		
Volatile Organic Compounds - BTEX									
Benzene	ug/L	1.00 U	0.331 U	0.331 U	0.331 U	0.0941 U	0.0941 U	0.0941	0.0941 U
Ethylbenzene	ug/L	1.00 U	0.384 U	0.384 U	0.384 U	0.137 U	0.137 U	0.137	0.137 U
Toluene	ug/L	1.00 U	0.412 U	0.412 U	0.412 U	0.278 U	0.278 U	0.278	0.278 U
Xylenes, Total	ug/L	3.00 U	1.06 U	1.06 U	1.06 U	0.174 U	0.174 U	0.174	0.432 J
Petroleum Products									
Diesel fuel	mg/L	0.198	0.159	0.0835 U	0.119	0.0317 J	136 B	0.15	0.109
TPH - Extractable (DRO)	mg/L	---	---	---	---	---	---		
TPH (non-polar)	mg/L	---	---	---	---	---	---		
TPH (C21 - C28)	mg/L	---	---	---	---	---	---		
Radiology									
Gross Alpha Analytes	pci/l	---	---	---	---	---	---		
Gross Beta Analytes	pci/l	---	---	---	---	---	---		
Field Parameters									
Specific conductivity, field	umhos/cm	4281	4185	3692	3737	4044	4035	4073	3964
Dissolved oxygen (DO), field	mg/L	9.82	7.00	13.44	6.03	6.22	9.69	10.56	10.07
Oxidation reduction potential (ORP), fielc	millivolts	93.1	126.1	17	8.3	49.5	58.3	-1	48.8
pH, field	s.u.	6.89	8.77	6.52	7.09	5.91	7.57	7.51	7.14
Temperature, ambient	Deg C	---	---	60	60	60	60	60	50
Temperature, field	Deg C	10.06	8.7	10.98	9.92	13.17	10.5	12.5	9.1
Turbidity, field	NTU	70.4	3.73	7.84	12.69	6.23	6.23	21.67	10

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A
SampleDate		5/13/2015	10/15/2015	5/24/2016	10/5/2016	5/3/2017	10/10/2017	5/23/2018	10/31/2018	05/20/2019
Parameters	Units									
General Chemistry										
Alkalinity, Bicarbonate (as CaCO3)	mg/L	520	480 B	412	435	448	451	338 J3	436	455
Alkalinity, Carbonate (as CaCO3)	mg/L	5 U	5 U	2.71 U	2.71 U	2.71 U	2.71 U	20 U	2.71 U	2.71 U
Alkalinity, Total (As CaCO3)	mg/L	520	480 B	412	435	448	451	338 J3	436	455
Ammonia	mg/L	0.1 U	0.1 U	0.038 U	0.038 U	0.0317 U	0.0317 U	0.1 U	0.0317 U	0.0317 U
Bromide	mg/L	0.5 U	1.3 U	0.079 U	0.079 U	0.079 U	0.079 U	1 U	0.395 U	1.58 U
Chemical Oxygen Demand (COD)	mg/L	9.4 J	11	10.9	26.8	20.7	14.4	12.7	9.08 J	13.5
Chloride	mg/L	15	14	16.7	16.9	15.9	15.5	14.9	14.8	15.2
Specific Conductivity	umhos/cm	2400	2500	37600	2750	1430	2500	2390	2500	2410
Cyanide (free)	mg/L	---	---	---	---	---	---	---	---	---
Fluoride	mg/L	---	---	0.679	0.683	0.603	0.611	0.568	0.66	---
Fluoride (dissolved)	mg/L	0.66	0.56	---	---	---	---	---	---	0.656
Hardness	mg/L	870	900	924	930	970	861	825000 B	832	919
Nitrate (as N)	mg/L	8.3	9.3	6.76	7.81	8.91	6.65	7.36	8.62	8.36
Nitrite (as N)	mg/L	0.05 U	0.13 U	0.0277 U	0.0277 U	0.0277 U	0.0277 U	0.1 U	0.0277 U	0.0277 U
Oil and Grease, Total	mg/L	---	---	---	---	---	---	---	---	1.29 U
Oil and grease (HEM), polar	mg/L	4.3 U	4.5 U	---	---	---	---	---	---	---
Oil and grease (HEM), total	mg/L	---	---	1.16 U	1.16 U	1.16 U	1.16 U	5.56 U	1.16 U	---
pH	s.u.	7.62 J	7.39 HF	7.44 J	7.70 J	8.42 J	7.53 J	7.41 T8	7.52 J	7.54 J
Phenolics (Total)	mg/L	0.01 U	0.014	0.015 J	0.0207 U	0.0083 U	0.0083 U	0.0443	0.0083 U	0.0083 U
Phosphorus as P, total	mg/L	0.1 U	0.1 U	0.0414 U	0.035 U	0.0693 J	0.0748 U	0.0558 JB	0.165 U	0.396 J
Silica	mg/L	---	---	17.9	20.8	25	18.6	25.9	21	20.2
Sulfate	mg/L	950	910	986	1100	1030	880	1020	993	982
Sulfide	mg/L	3 U	7.5	0.0065 U	0.0065 U	0.0065 U	0.0065 U	0.05 U	0.0065 U	0.0065 U
Sulfite	mg/L	---	---	---	---	---	---	---	---	---
Thiocyanate	mg/L	---	---	---	---	---	---	---	---	---
Thiosulfate	mg/L	---	---	---	---	---	---	---	---	---
Total Dissolved Solids (TDS)	mg/L	1900	2000	1730	1840 J	1970	1900	1650	1850	2010
Nitrogen, Total Kjeldahl	mg/L	5 U	5 U	0.633	0.608	0.208 J	0.035 U	0.25 U	0.55	0.35 U
Total Organic Carbon (TOC)	mg/L	5.3	5.6	92.8	5.5	5.91	5.73	---	---	5.44
Total Pet_ Hydrocarbons	mg/L									---
Total Suspended Solids (TSS)	mg/L	---	---	---	---	---	---	5.23	5.59	---
Dissolved Organic Carbon (DOC)	mg/L	12	5.5	96.1	5.13	5.65	6.45	5.22	5.25	5.46

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A
SampleDate		5/13/2015	10/15/2015	5/24/2016	10/5/2016	5/3/2017	10/10/2017	5/23/2018	10/31/2018	05/20/2019
Parameters	Units									
Metals										
Arsenic	ug/L	2.4	2.5	2.14	1.92	2.5	2.47	3.46	2.49	0.930 J
Arsenic (Dissolved)	ug/L	0.92 J	1.9	1.97	1.78	1.15	1.24	1.96	1.09	2.09
Boron	ug/L	2200	2600	---	---	---	---	---	---	---
Boron (Dissolved)	ug/L	---	---	1720	2380	2590	2850	2960	2690	2550
Cadmium	ug/L	---	---	---	---	---	---	---	---	---
Cadmium (Dissolved)	ug/L	1 U	0.28 J	0.220 U	0.220 U	0.220 U	0.22 U	1.00 U	0.220 U	0.220 U
Calcium	ug/L	---	---	---	---	---	---	---	---	---
Calcium (Dissolved)	ug/L	110000	140000 B	145000	162000	149000	140000	148000	136000	157000
Chromium	ug/L	0.78 J	1.5 J	1.34	0.460 U	1.7 U	0.958 J	1.13 B	0.830 J	0.320 U
Chromium (Dissolved)	ug/L	2 U	0.97 J	1.18	1.29 U	0.320 U	0.342 J	0.602 B J	0.320 U	1.30
Chromium III	ug/L	---	---	---	---	---	---	---	---	---
Chromium VI	ug/L	---	---	---	---	---	---	---	---	---
Copper	ug/L	---	---	---	---	---	---	---	---	---
Copper (Dissolved)	ug/L	1.8 J	3	2.63	2.44 U	4.03	3.47	4.4	3.34	3.18
Iron	ug/L	1900	5200	3620	1430	2960	3820	4210	3340	77.2 J
Iron (Dissolved)	ug/L	55	180	3340	812	116	136	157 B	182	76.6 J
Lead	ug/L	---	---	---	---	---	---	---	---	---
Lead (Dissolved)	ug/L	1 U	0.064 J	0.351 J	0.260 U	0.260 U	0.26 U	1.00 U	0.260 U	0.535 J
Lithium	ug/L	---	---	---	---	---	---	---	---	---
Lithium (Dissolved)	ug/L	110	110	123	114	131	107	112	118	112
Magnesium	ug/L	---	---	---	---	---	---	---	---	---
Magnesium (Dissolved)	ug/L	97000	110000	119000	130000	127000	122000	133000	126000	135000
Manganese	ug/L	---	---			---	---	---	---	---
Manganese (Dissolved)	ug/L	16	9.5	28.3	10.2	9.72	11.7	23.8	28.4	35.6
Mercury	ug/L	---	---			---	---	---	---	---
Mercury (Dissolved)	ug/L	0.2 U	0.031 JB	0.0490 U	0.0490 U	0.0490 U	0.049 U	0.200 U	0.0490 U	0.0490 U
Molybdenum (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---
Nickel	ug/L	---	---	---	---	---	---	---	---	---
Nickel (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---
Potassium	ug/L	---	---	---	---	---	---	---	---	---
Potassium (Dissolved)	ug/L	3400	4100	4190	4440	4180	4340	4470	3940	4620

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A	LW-22A
SampleDate		5/13/2015	10/15/2015	5/24/2016	10/5/2016	5/3/2017	10/10/2017	5/23/2018	10/31/2018	05/20/2019
Parameters	Units									
Metals										
Selenium	ug/L	---	---	---	---	---	---	---	---	---
Selenium (Dissolved)	ug/L	15	19	18.4	20.5	20.5	19.2	22.1	18.5	22.6
Silicon	ug/L	---	---	8360	9740	11700	8700	12100	9800	9420
Silicon (Dissolved)	ug/L	6500	8100	---	---	---	---	---	---	---
Silver	ug/L	---	---	---	---	---	---	---	---	---
Silver (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---
Sodium	ug/L	---	---	---	---	---	---	---	---	---
Sodium (Dissolved)	ug/L	210000	250000	257000	276000	272000	257000	296000	281000	303000
Strontium	ug/L	---	---	---	---	---	---	---	---	---
Strontium (Dissolved)	ug/L	2200	2700	3060	3170	3370	3630	3390	2960	3550
Uranium (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---
Zinc	ug/L	---	---	---	---	---	---	---	---	---
Zinc (Dissolved)	ug/L	15	23 B	36.2	25.4	12.2	2.23 U	17	6.64 J	26.4
Volatile Organic Compounds - BTEX										
Benzene	ug/L	5 U	5 U	0.331 U	0.331 U	0.331 U	0.331 U	1.00 U	0.331 U	0.331 U
Ethylbenzene	ug/L	5 U	5 U	0.384 U	0.384 U	0.384 U	0.384 U	1.00 U	0.384 U	0.384 U
Toluene	ug/L	5 U	5 U	0.780 U	0.780 U	0.412 U	0.412 U	1.00 U	0.412 U	0.412 U
Xylenes, Total	ug/L	10 U	10 U	1.06 U	1.06 U	1.06 U	1.06 U	3.00 U	1.06 U	1.06 U
Petroleum Products										
Diesel fuel	mg/L	0.46 U	0.25 J	0.289	24.7 U	0.0517 U	0.0247 U	0.0293 J	0.0362 J	0.0471 J
TPH - Extractable (DRO)	mg/L	---	---	---	---	---	---	---	---	---
TPH (non-polar)	mg/L	---	---	---	---	---	---	---	---	---
TPH (C21 - C28)	mg/L	---	---	---	---	---	---	---	---	---
Radiology										
Gross Alpha Analytes	pci/l	---	---	---	---	---	---	---	---	---
Gross Beta Analytes	pci/l	---	---	---	---	---	---	---	---	---
Field Parameters										
Specific conductivity, field	umhos/cm	1700	1844	1935	1814	2559	2436	2548	2455	2451
Dissolved oxygen (DO), field	mg/L	6.16	7.5	---	6.92	7.88	6.54	7.42	6.46	1.84
Oxidation reduction potential (ORP), field	millivolts	22.9	59.0	10.7	75.3	38.8	19.7	-14.0	87.5	37.4
pH, field	s.u.	7.28	7.32	7.44	7.19	7.39	7.31	6.89	6.95	7.12
Temperature, ambient	Deg C	21	24	---	---	15.6	10	---	---	60
Temperature, field	Deg C	11	11.05	11.1	10.38	11.2	11.0	11.1	11.3	11.35
Turbidity, field	NTU	57.37	21.52	34.8	23.4	52.6	47.00	70.4	43.18	22.51

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-BIG SEEP	LW-Research Trib
SampleDate		5/12/2015	10/14/2015	5/23/2016	10/4/2016	5/1/2017	10/11/2017	5/29/2018	10/22/2018	05/22/2019	5/12/2015
Parameters	Units										
General Chemistry											
Alkalinity, Bicarbonate (as CaCO3)	mg/L	240	260 B	288	228	243	252	257	246	260	280
Alkalinity, Carbonate (as CaCO3)	mg/L	36	16	2.71 U	17.4 J	7.72 J	7.98 J	15.8 J	8.18 J	12.8 J	32
Alkalinity, Total (As CaCO3)	mg/L	280	280 B	290	246 J	251	260	273	254	272	320
Ammonia	mg/L	0.1 U	0.1 U	0.038 U	0.038 U	0.059 U	0.0317 U	0.1 U	0.0317 U	0.0317 U	0.1 U
Bromide	mg/L	0.5 U	0.5 U	0.079 U	R	1.58 U	0.079 U	1 U	0.79 U	0.79 U	0.5 U
Chemical Oxygen Demand (COD)	mg/L	15	2.7 J	12.2	54.6	4.94 J	10.6	6.66 J	3 U	5.35 J	10 U
Chloride	mg/L	7.2	7.8	7.85	8.98	10	11.3	11.9	10.6	7.57	50
Specific Conductivity	umhos/cm	1400	1700	1400	1620	1560	1920	1980	9030	1320	1600
Cyanide (free)	mg/L	---	---	---	---	---	---	---	---	---	---
Fluoride	mg/L	---	---	0.0895 J	0.0538 J	0.0733 J	0.0689 J	0.111	0.122	---	---
Fluoride (dissolved)	mg/L	0.14	0.086 J	---	---	---	---	---	---	0.102	0.2
Hardness	mg/L	600	720	561	605	673	832	757	698	535	660
Nitrate (as N)	mg/L	0.53	0.07 J	0.511	0.276	0.454 UJ	0.291	0.1 U	0.214	0.395	2.2
Nitrite (as N)	mg/L	0.05 U	0.05 U	0.0277 U	0.0277 U	0.0277 U	0.0277 U	0.1 U	0.0277 U	0.0277 U	0.05 U
Oil and Grease, Total	mg/L	---	---	---	---	---	---	---	---	1.16 U	---
Oil and grease (HEM), polar	mg/L	4.3 U	4 U	---	---	---	---	---	---	---	4.5 U
Oil and grease (HEM), total	mg/L	---	---	1.16 U	1.16 U	1.16 U	1.16 U	5.05 U	1.16 U	---	---
pH	s.u.	8.57 J	8.52 HF	7.72 J	8.55 J	8.35 J	8.4 J	8.45 T8	8.38 J	8.57	8.55 J
Phenolics (Total)	mg/L	0.01 U	0.01 U	0.0083 U	0.013 U	0.0083 U	0.0083 U	0.04	0.0083 U	0.0164 U	0.01 U
Phosphorus as P, total	mg/L	0.1 U	0.1 U	0.048 J	0.035 U	0.0362 J	2.96	0.1 U	0.0473 U	0.035 U	0.1 U
Silica	mg/L	---	---	18.5	17.9	18.9	20.3	20.3	17.5	15	---
Sulfate	mg/L	580	630	472	704	607	755	1080	849	461	580
Sulfide	mg/L	3 U	1.2 J	0.0065 U	0.030 J	0.0065 U	0.0065 U	0.05 U	0.0065 U	0.014 J	0.7 J
Sulfite	mg/L	---	---	---	---	---	---	---	---	---	---
Thiocyanate	mg/L	---	---	---	---	---	---	---	---	---	---
Thiosulfate	mg/L	---	---	---	---	---	---	---	---	---	---
Total Dissolved Solids (TDS)	mg/L	1100	1400	1100	1110	1170	1530 0	1480	1450	956	1300
Nitrogen, Total Kjeldahl	mg/L	2.7 J	5 U	0.444	0.255	0.101 J	0.259 U	0.190 J6	0.254 J	0.211 U	3.3 J
Total Organic Carbon (TOC)	mg/L	3.6	3	43.4	3.23	2.87	3.47 0	---	---	3.65	11
Total Pet_ Hydrocarbons	mg/L									---	
Total Suspended Solids (TSS)	mg/L	---	---	---	---	---	---	3.78	3.5	---	---
Dissolved Organic Carbon (DOC)	mg/L	9.5	3.7	22.5	3.38	3.13	3.62	3.53	3.74	3.57	16

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID		LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-Big Seep	LW-BIG SEEP	LW-Research Trib
SampleDate		5/12/2015	10/14/2015	5/23/2016	10/4/2016	5/1/2017	10/11/2017	5/29/2018	10/22/2018	05/22/2019	5/12/2015
Parameters	Units										
Metals											
Arsenic	ug/L	4.5	4.3	3.9	3.9	4.44	4.68	5.55	5.28	3.48	4.2
Arsenic (Dissolved)	ug/L	5	4.1	3.55	3.75	6.15	6.1	5.59	4.87	3.99	4.4
Boron	ug/L	48	70	---	---	---	---	---	---	---	100
Boron (Dissolved)	ug/L	---	---	89.6	74.9	624	93 J	111	153 J	172 J	---
Cadmium	ug/L	---	---	---	---	---	---	---	---	---	---
Cadmium (Dissolved)	ug/L	1 U	1 U	0.220 U	0.220 U	0.220 U	0.22 U	1.00 U	0.220 U	0.220 U	1 U
Calcium	ug/L	---	---	---	---	---	---	---	---	---	---
Calcium (Dissolved)	ug/L	87000	95000 B	95000	112000	98900	106000	112000	116000	99500	110000
Chromium	ug/L	0.46 J	0.76 J	1.18	1.02 U	0.320 U	0.701 J	0.441 J	0.840 J	1.17	0.74 J
Chromium (Dissolved)	ug/L	0.52 J	0.89 J	1.01	1.20 U	0.704 J	0.686 J	0.572 J	0.471 U	1.26	0.58 J
Chromium III	ug/L	---	---	---	---	---	---	---	---	---	---
Chromium VI	ug/L	---	---	---	---	---	---	---	---	---	---
Copper	ug/L	---	---	---	---	---	---	---	---	---	---
Copper (Dissolved)	ug/L	1.7 J	2.2	1.4	1.26	8.95	2.5	3.33	1.82	2.20	3.4
Iron	ug/L	15 J	50 U	15.0 U	74.6 J	15.0 U	15 U	100 U	121	39.1 J	120
Iron (Dissolved)	ug/L	10 J	50 U	15.0 U	15.0 U	15.0 U	15 U	100 U	15.0 U	15.0 U	12 J
Lead	ug/L	---	---	---	---	---	---	---	---	---	---
Lead (Dissolved)	ug/L	1 U	0.066 J	0.260 U	0.260 U	0.260 U	0.26 U	1.00 U	0.260 U	0.260 U	1 U
Lithium	ug/L	---	---	---	---	---	---	---	---	---	---
Lithium (Dissolved)	ug/L	44 J	51	53	53.3	58.4	56.1	66.3	59.7	42.1	35 J
Magnesium	ug/L	---	---	---	---	---		---	---	---	---
Magnesium (Dissolved)	ug/L	69000	89000 B	75600	104000	103000	117000	133000	121000	76400	78000
Manganese	ug/L	---	---	---	---	---	---	---	---	---	---
Manganese (Dissolved)	ug/L	0.9 J	0.11 JB	0.611 J	1.11 J	0.510 U	0.561 J	5.00 U	44.8	0.510 U	1.3 J
Mercury	ug/L	---	---	---	---	---	---	---	---	---	---
Mercury (Dissolved)	ug/L	0.2 U	0.2 U	0.0490 U	0.0490 U	0.0490 U	0.049 U	0.0614 B J	0.0490 U	0.341	0.2 U
Molybdenum (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---
Nickel	ug/L	---	---	---	---	---	---	---	---	---	---
Nickel (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---
Potassium	ug/L	---	---	---	---	---	---	---	---	---	---
Potassium (Dissolved)	ug/L	950	1200	1070	1040	1550	1470	1350	2040	1170	1600

Table 11. Logan Wash Monitoring Well Analytical Data

SampleID SampleDate Parameters	Units	LW-Big Seep 5/12/2015	LW-Big Seep 10/14/2015	LW-Big Seep 5/23/2016	LW-Big Seep 10/4/2016	LW-Big Seep 5/1/2017	LW-Big Seep 10/11/2017	LW-Big Seep 5/29/2018	LW-Big Seep 10/22/2018	LW-BIG SEEP 05/22/2019	LW-Research Trib 5/12/2015
Metals											
Selenium	ug/L	---	---	---	---	---	---	---	---	---	---
Selenium (Dissolved)	ug/L	3.5 J	1.9 J	2.56	1.80 J	1.73 J	1.74 J	1.88 J	1.56 J	2.21	7.7
Silicon	ug/L	---	---	8620	8350	8850	9470	9480	8170	7000	---
Silicon (Dissolved)	ug/L	7200	7800	---	---	---	---	---	---	---	8200
Silver	ug/L	---	---	---	---	---	---	---	---	---	---
Silver (Dissolved)	ug/L	---	---	---	---	---	---	---	---	---	---
Sodium	ug/L	---	---	---	---	---	---	---	---	---	---
Sodium (Dissolved)	ug/L	100000	120000	114000	138000	144000	148000	182000	166000	120000	110000
Strontium	ug/L	---	---	---	---	---	---	---	---	---	---
Strontium (Dissolved)	ug/L	3800	4500	3970	5450	5680	5830	6320	5050	4250	3000
Uranium (Dissolved)	ug/L	---	---	---	---	---		---	---	---	---
Zinc	ug/L	---	---	---	---	---		---	---	---	---
Zinc (Dissolved)	ug/L	0.94 J	1.5 JB	2.51 U	4.00 J	2.83 J	2.52 U	10.0 U	12.2	3.07 J	0.43 J
Volatile Organic Compounds - BTEX											
Benzene	ug/L	5 U	5 U	0.331 U	0.331 U	0.331 U	0.331 U	1.00 U	0.331 U	0.331 U	5 U
Ethylbenzene	ug/L	5 U	5 U	0.384 U	0.384 U	0.384 U	0.384 U	1.00 U	0.384 U	0.384 U	5 U
Toluene	ug/L	5 U	5 U	0.780 U	0.780 U	0.412 U	0.412 U	1.00 U	0.412 U	0.412 U	5 U
Xylenes, Total	ug/L	10 U	10 U	1.06 U	1.06 U	1.06 U	1.06 U	3.00 U	1.06 U	1.06 U	10 U
Petroleum Products											
Diesel fuel	mg/L	0.48 U	0.22 J	0.0526 J	0.0458 J	0.0781 J	0.0247 U	0.0717 B J	0.0610 J	0.029 J	0.5 U
TPH - Extractable (DRO)	mg/L	---	---	---	---	---	---	---	---	---	---
TPH (non-polar)	mg/L	---	---	---	---	---	---	---	---	---	---
TPH (C21 - C28)	mg/L	---	---	---	---	---	---	---	---	---	---
Radiology											
Gross Alpha Analytes	pci/l	---	---	---	---	---	---	---	---	---	---
Gross Beta Analytes	pci/l	---	---	---	---	---	---	---	---	---	---
Field Parameters											
Specific conductivity, field	umhos/cm	1445	1098	896	923	1542	1826	1946	1941	1296	1627
Dissolved oxygen (DO), field	mg/L	8.52	8.44	11.1	13.75	8.57	7.25	9.21	9.24	13.73	7.24
Oxidation reduction potential (ORP), fielc	millivolts	341.3	306.8	343.6	234.7	257	185	129.3	150.5	21	222.6
pH, field	s.u.	8.25	6.51	6.25	6.57	6.16	8.31	7.22	6.43	--	8.35
Temperature, ambient	Deg C	16	24	---	---	15.6	15.6	---	---	60	16
Temperature, field	Deg C	10.39	8.9	4.62	1.7	6.4	7.9	8.56	10.1	6.93	10.71
Turbidity, field	NTU	2.89	1.48	---	4.51	1.42	0.87	0.98	0.19	1.21	2.67