GWDP
Q3 2019

PARAMETER	UNIT	Maximum Daily Limit for Downgradient Wells Only	QAL008A Aug 2019 08/06/19 (Downgradient)	Q	QAL009D Aug 2019 08/06/19 (Downgradient)	Q	QAL025D Aug 2019 08/06/19	Q	QAL026A Aug 2019 08/06/19	Q	QAL026D Aug 2019 08/06/19	Q	QAL029A Aug 2019 08/06/19	Q	QAL029D Aug 2019 08/06/19	Q	QAL050A Aug 2019 08/05/19 (Downgradient)	Q	QAL051A Aug 2019 08/05/19 (Downgradient)	Q	QAL051D Aug 2019 08/05/19 (Downgradient)	Q	QAL052A Aug 2019 08/05/19 (Downgradient)	Q	QAL053A Aug 2019 08/05/19	Q	QAL055A Aug 2019 08/06/19	Q	QAL056A Aug 2019 08/05/19	Q	QAL057A Aug 2019 08/06/19 (Downgradient)	Q	QAL057D Aug 2019 08/06/19 (Downgradient)	Q	QAL075A Aug 2019 08/06/19 (Downgradient)	Q	QAL075D Aug 2019 08/06/19 (Downgradient)	Q
Field																																					
D.O.	ppm	NA	7.3		5.5		4.5		9.6		9.9		9.4		6.7		8.4		8.8		4.8		3.0		3.0		7.6		7.8		10		6.7		10		0.5	
ORP	mV	NA	264		262		48		338		298		257		259		240		245		209		232		229		13		247		29		34		42		40	
pH	SU	6.5-9.7	9.1		8.6		8.6		6.2		8.9		7.1		6.7		8.7		8.7		8.6		8.3		8.5		8.3		9.0		8.9		8.3		8.8		8.3	
Specific Conductance	25°C	NA	83		112		103		52		67		933		599		157		97		108		117		118		738		72		134		292		91		128	
Temperature	°C	NA	16		11		8.1		10.2		7.6		8.9		9.4		11		11		9		NM		8.9		11		13		13		11		10		10	
Turbidity	NTU	NA	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
Water Elevation	ft MSL	NA	1395.55		1355.87		1415.29		1419.30		1411.89		<1414.1	BP	1408.65		1366.74		1368.83		1368.76		1354.84		1387.57		1368.55		1396.91		1365.81		1365.89		1349.95		1351.41	
Metals																																						
Aluminum	ug/L	150	<50.0		<50.0		<50.0		92.3		<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		<50.0	
Antimony	ug/L	5.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Arsenic	ug/L	6.0	<1.0		2.9		2.8		<1.0		<1.0		<1.0		<1.0		<1.0		1.3		5.0		1.4		7.4		<1.0		<1.0		<1.0		2.2		1.2		1.9	
Barium	ug/L	1000	<5.0		7.5		5.4		5.7		<5.0		237		23.3		8.4		5.4		13.4		5.2		8.1		40.8		<5.0		6.8		13.1		5.6		5.5	
Beryllium	ug/L	3.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Boron	ug/L	285	<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		35.5		<20.0		<20.0		<20.0		23.4		<20.0		22.4	
Cadmium	ug/L	3.0	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20	
Chromium	ug/L	52	<1.0		1.3		<1.0		<1.0		<1.0		1.1		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		4.4		<1.0		<1.0		<1.0		<1.0		1.7	
Cobalt	ug/L	23	<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0	
Copper	ug/L	10	<1.0	e	1.6	e	4.8	e	<1.0	e	<1.0	e	1.1	e,s	<1.0	e	<1.0	e	<1.0	e	1.8	e	1.1	e,s	<1.0	e	<1.0	e	<1.0	e	<1.0	e	<1.0	e	<1.0	e	<1.0	e
Iron	ug/L	NA	<50.0		<50.0		<50.0		89.8		<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		<50.0	
Lead	ug/L	3.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Lithium	ug/L	88	<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0	
Manganese	ug/L	50	<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0	
Mercury	ng/L	NA	<0.50		<0.50		<0.50		0.680		<0.50		0.600		1.13		<0.50		0.660		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50	
Molybdenum	ug/L	22	<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0	
Nickel	ug/L	57	<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		3.4		<2.0		<2.0		<2.0		<2.0		<2.0	
Selenium	ug/L	5.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Silver	ug/L	0.40	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20	
Strontium	ug/L	2300	12.0		41.0		33.3		23.5		11.8		274		38.0		36.1		19.7		77.8		46.7		77.1		139		10.2		22.0		115		18.2		52.9	
Thallium	ug/L	1.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Uranium	ug/L	NA	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Vanadium	ug/L	3.1	1.6		2.2		3.9		<1.0		<1.0		<1.0		<1.0		1.1		4.1		2.7		1.8		1.5		<1.0		1.2		<1.0		<1.0		2.9		1.5	
Zinc	ug/L	1200	<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0	
Major Anions																																						
Alkalinity, Bicarbonate	mg/L	NA	37.0		46.1		45.9		22.5		34.5		37.8		90.3		44.3		33.2		46.6		52.2		54.7		75.1		32.2		45.5		84.1		38.2		58.3	
Chloride	mg/L	NA	1.2		4.5		<1.0		<1.0		<1.0		248		120		15.9		2.0		1.7		1.4		<1.0		166		<1.0		11.6		34.0		<1.0		<1.0	
Fluoride	mg/L	1.0	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
Nitrogen, Ammonia	mg/L	10	<0.040		<0.040		<0.020		<0.020		<0.040		<0.040		<0.040		<0.020		<0.020		<0.020		<0.020		<0.020		<0.040		<0.020		<0.040		<0.020		<0.040		<0.040	
Nitrogen, Nitrate	mg/L	10	0.99		0.18		0.099		0.64		0.12		4.5		1.0		0.83		2.8		0.65		0.29		<0.050		0.58		0.83		0.90		0.43		1.1		0.054	
Nitrogen, Nitrite	mg/L	NA	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	
Nitrogen, Total Inorganic	mg/L	10	0.99		0.18		0.10		0.65		0.12		4.5		1.0		0.83		2.8		0.65		0.29		<0.050		0.59		0.83		0.90		0.44		1.1		0.060	
Phosphorus, Total	mg/L	NA	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	
Sulfate	mg/L	250	<1.0		4.1		5.3		2.0		1.9		7.6		8.7		3.8		1.5		3.2		4.5		6.2		7.7		<1.0		<1.0		4.0		1.4		6.3	
Major Cations																																						
Calcium	mg/L	NA	8.3		15.0		12.5		6.7		9.9		69.2		13.2		19.2		12.7		13.8		15.2		15.5		53.8		7.9		16.3		37.6		12.0		17.3	
Magnesium	mg/L	NA	1.2		3.3		2.9		1.3		1.5		13.4		5.3		3.9		2.4		3.1		3.6		4.0		13.5		1.3		3.1		8.0		2.4		4.0	
Potassium	mg/L	NA	0.90		0.92		0.67		1.1		0.51		3.7		1.7		0.96		0.63		1.1		1.0		1.3		2.3		0.87		0.87		1.6		0.65		1.1	
Sodium	mg/L	NA	6.2		1.3		3.4		1.0		<1.0		80.2		97.9		3.6		1.3		2.5		1.6		2.0		61.0		4.5		3.5		3.5		1.4		1.5	
General																																						
Hardness	mg/L	NA	26		51		43		22		31		228		55		64		42		47		53		55		190		25		53		127		40		60	

Notes:

e: estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.

nm: not measured. ns: not sampled.

*The 3.1 ug/L MDL for vanadium does not apply to monitoring wells QAL008A and QAL051A.

Value is outside of maximum daily limit as stipulated in Permit GW1810162 for compliance monitoring locations.