Osoyoos

Canada's warmest welcome

WATER

Annual Report 2010

2010

Submitted by:

Osoyoos

Canada's warmest welcome

Town of Osoyoos
8707 Main Street
Box 3010
Osoyoos, BC V0H 1V0

Prepared by:

Ron Doucette
Director of Operational Services

February, 201

Town of Osoyoo
Water Annual Repor

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System Description

The Town of Osoyoos has a Class II Water Distribution System. The source of water comes from five different wells with three reservoirs. The water is untreated with one well equipped with a standby chlorinator if necessary. A cross connection program is in effect. Attached to the report is a copy of the up to date cross connection program that includes new services and existing facility survey status.

Operator Certification

The Town of Osoyoos has **five certified** operators:

Karl Fichter	Certificate #6840
Leigh Lougheed	Certificate #6846
David Stene	Certificate #6851
Mike Thomas	Certificate #3219
Frank Zandvliet	Certificate #5657

The Town of Osoyoos also has an Irrigation System with two lake inlets and one well that provide domestic water in the non-irrigation season; all irrigation water sources are treated. Chlorinator residual testing is done daily during the irrigation season and well testing during the non-irrigation season is done a minimum of twice a week.

Bacteriological Summary

The Town of Osoyoos collected 99 Coliform Samples for the Irrigation system. None of the samples tested positive for fecal coliforms.

The Town of Osoyoos collected 52 Coliform Samples for the Town System. None of the samples tested positive for fecal coliforms.

The Irrigation system also had Trihalomethane analysis done. Results are enclosed in the following reports from Caro. Attached for your perusal is various water reports taken for the Town of Osoyoos Water System.

Proposed Projects

The 2011 **proposed** Capital Projects for the Town of Osoyoos Water System include the following:

- Possibility of ongoing Water Meter expansion
- Possibility of 340 Reservoir Expansion
- Source to tap study/assessment
- Oasis-Vedette Drive (Onsite)
- Water Distribution main 74th to Curlew Court

Sampling Schedule

The following is the Sampling Schedule for the Town of Osoyoos Water System and the Town of Osoyoos System 8 & 9 Irrigation systems:

January 1 to Dec 31, 2011	Weekly Sampling for Bacterial Coliforms and E-Coli
January 18, 2011	Total Phosphorus, Ortho Phosphorus and Total Dissolved Phosphorus, Total Nitrogen, Ammonia Nitrogen, Nitrate Nitrogen
June 14, 2011	Nitrate/Nitrite/Hardness/Manganese
August 9, 2011	THM's System 8 & 9
September 13, 2011	Chemical and Bacterial Parameters (Water Comprehensive)
September 20, 2011	Nitrate/Nitrite/Hardness/Manganese
December 6, 2011	THM's System 8 & 9
December 13, 2011	Nitrate/Nitrite/Hardness/Manganese

Water Consumption Summary

Water Consumption - Town System

Well #	2010	2009	2008
1	199,300 m^3		74,724 m^3
3	961,295 m^3	399,375 m^3	154,958 m^3
4	79,312 m^3	613,735 m^3	224,424 m^3
5	311,375 m^3	666,174 m^3	1,128,591 m^3
6	118,968 m^3	140,065 m^3	144,496 m^3
8	436,625 m^3	601,205 m^3	516,769 m^3
Total	2,106,875 m^3	2,502,300 m^3	2,243,962 m^3

Water Consumption - Irrigation System

	2010	2009	2008
System 8	3,719,939m^3	4,356,220 m^3	3,914,030 m^3
System 9	4,253,358m^3	3,102,082 m^3	3,469,958 m^3
Well #6	253,193m^3	254,054 m^3	199,263 m^3
Total	7,238,419 m^3	7,712,356 m^3	7,583,251 m^3

Total Chlorine Used = 10810.6 kg

Well #6 - Water Consumption 2010

Month	Hrs Ran	In Min	x gpm	m^3
January	266	15,960	525	31,725
February	223	13,380	530	26,850
March	406	24,360	521	48,107
April	321	19,260	568	41,406
May	-	-	-	-
June	26	1,560	658	3,888
July	743	44,580	525	88,643
August	233	13,980	499	26,438
September	0	-		-
October	32	1,920	504	3,665
November	457	27,420	526	54,678
December	392	23,520	525	46,762
Total	3,099	185,940	5,381	372,162
To Town Water System July and August and September =				118,969 m^3
To Irrigation System All Other Months =				253,193 m^3

System 8
Water Consumption 2009

Month	m^3
January	2,170
February	2,155
March	1,663
April	180,129
May	492,557
June	877,996
July	925,470
August	918,492
September	686,655
October	265,008
November	2,398
December	1,527
Total	4,356,220m^3

System 9
Water Consumption 2009

Month	m^3
January	-
February	-
March	-
April	121,718
May	322,924
June	611,509
July	640,821
August	583,601
September	455,182
October	366,327
November	-
December	-
Total	3,102,082 m^3

Well Monthly Summary

Water Well #1 Consumption 2010

Month	m^3	Hrs Ran
January	1,967	28
February	2,256	27
March	4,983	77
April	10,257	154
May	2,161	31
June	9,888	142
July	49,627	707
August	51,282	738
September	42,532	606
October	19,954	283
November	3,223	46
December	1,170	16
Total	**199,300 m^3**	**2,855**

Water Well #3 Consumption 2010

Month	m^3	Hrs Ran
January	47,280	396
February	47,655	335
March	65,693	506
April	90,375	663
May	137,811	545
June	99,720	707
July	104,932	741
August	67,500	575
September	98,636	696
October	86,924	614
November	66,148	466
December	48,621	342
Total	**961,295 m^3**	**6,586**

Water Well #4 Consumption 2010

Month	m^3	Hrs Ran
January	-	-
February	-	-
March	-	-
April	-	-
May	62	-
June	62	-
July	4,093	23
August	68,620	366
September	6,438	35
October	32	-
November	-	-
December	5	-
Total	**79,312 m^3**	**424**

Water Well #5 Consumption 2010

Month	m^3	Hrs Ran
January	-	-
February	-	-
March	-	-
April	2,530	93
May	52,489	248
June	77,826	264
July	68,337	333
August	81,106	395
September	26,985	132
October	2,102	10
November	-	-
December	-	-
Total	**311,375 m^3**	**1,475**

Well #8 Water Consumption 2010

Month	m^3	Hrs Ran
January	761	10
February	-	-
March	140	1
April	20,648	129
May	86,250	543
June	75,011	474
July	91,053	586
August	95,405	626
September	51,739	340
October	14,587	93
November	15	0
December	1,015	6
Total	**436,625 m^3**	**2,808**

Monthly Chlorine Consumption

Station 8 Chlorine Consumption

Month	kg
January	-
February	-
March	-
April	350
May	854.5
June	900
July	-
August	1627.3
September	-
October	595.5
November	-
December	-
Total	**4327.3 kg**

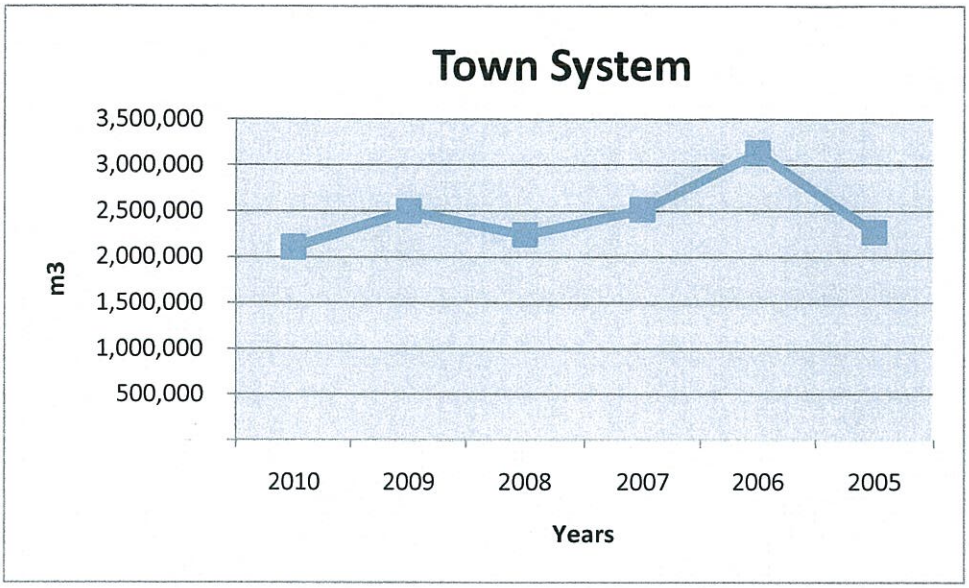
Station 9 Chlorine Consumption

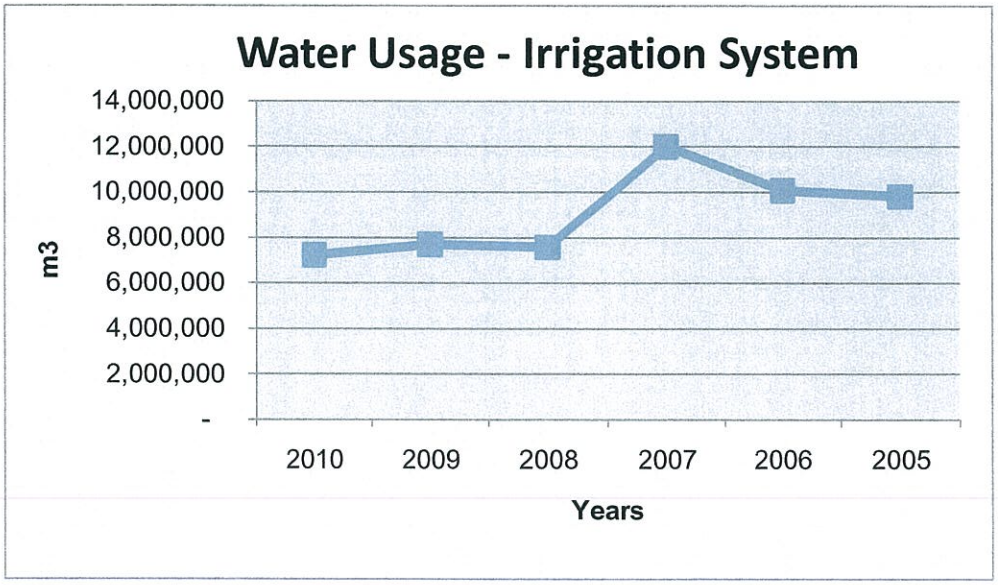
Month	kg
January	-
February	-
March	-
April	272.7
May	586.4
June	709.1
July	1786.4
August	1590.9
September	600
October	431.8
November	-
December	-
Total	**5977.3 kg**

Water Well #6 Chlorine Consumption

Month	kg
January	50
February	45
March	85
April	68
May	-
June	2
July	55
August	20
September	-
October	3
November	87
December	91
Total	**506 kg**

Charts


Town System
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
m3
2010
2009
2008
2007
2006
2005
Years


Water Usage - Irrigation System
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
-
m3
2010
2009
2008
2007
2006
2005
Years

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0F0684
PROJECT	Drinking Water	**REPORTED**	Jun-22-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters								
Well #8 - Town System (K0F0684-01) Matrix: Water Sampled: Jun-15-10 08:00								
Hardness (as CaCO3)	**176**		0.41	mg/L	Jun-18-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**0.60**	MAC = 10	0.01	mg/L	Jun-18-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jun-18-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #8 - Town System (K0F0684-01) Matrix: Water Sampled: Jun-15-10 08:00								
Calcium	**47.5**		1.0	mg/L	Jun-18-10	EPA 6020A	RMD	
Magnesium	**14.0**		0.10	mg/L	Jun-18-10	EPA 6020A	RMD	
Manganese	**0.111**	AO ≤ 0.05	0.0020	mg/L	Jun-18-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0F0685
PROJECT	Drinking Water	**REPORTED**	Jun-22-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters								
Well #3 Town System (K0F0685-01) Matrix: Water Sampled: Jun-15-10 08:25								
Hardness (as CaCO3)	**374**		0.41	mg/L	Jun-18-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**3.02**	MAC = 10	0.01	mg/L	Jun-18-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jun-18-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #3 Town System (K0F0685-01) Matrix: Water Sampled: Jun-15-10 08:25								
Calcium	**102**		1.0	mg/L	Jun-18-10	EPA 6020A	RMD	
Magnesium	**28.8**		0.10	mg/L	Jun-18-10	EPA 6020A	RMD	
Manganese	<0.0020	AO ≤ 0.05	0.0020	mg/L	Jun-18-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0F0972
PROJECT	Drinking Water	**REPORTED**	Jun-24-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Microbiological Parameters								
Town System - Well #3 (K0F0972-01) Matrix: Water Sampled: Jun-22-10 08:50								
Coliforms, Total	<1	MAC < 1	1	CFU/100mL	Jun-23-10	APHA 9222	KEL	
E. coli	<1	MAC < 1	1	CFU/100mL	Jun-23-10	APHA 9223	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0H0407
PROJECT	THM Analysis	**REPORTED**	Aug-20-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Volatile Organic Compounds by PT-GCMS								
System #9 - 5001 107th St (K0H0407-01) Matrix: Water Sampled: Aug-10-10 08:55								
Bromodichloromethane	**0.002**		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Bromoform	<0.001		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Chloroform	**0.041**		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Dibromochloromethane	<0.001		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Trihalomethanes (total)	**0.043**	MAC = 0.1	0.004	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Surrogate: 4-Bromofluorobenzene	*96 %*		*80-120*		*Aug-18-10*			

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0H0411
PROJECT	THM Analysis	**REPORTED**	Aug-20-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Volatile Organic Compounds by PT-GCMS								
System #8 - Pumphouse 8A (K0H0411-01) Matrix: Water Sampled: Aug-10-10 08:05								
Bromodichloromethane	**0.002**		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Bromoform	<0.001		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Chloroform	**0.044**		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Dibromochloromethane	<0.001		0.001	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Trihalomethanes (total)	**0.046**	MAC = 0.1	0.004	mg/L	Aug-18-10	EPA 5030B/8260B	RMD	
Surrogate: 4-Bromofluorobenzene	*96 %*		*80-120*		*Aug-18-10*			

CLIENT	Interior Health Authority - Penticton	**WORK ORDER #**	K0G0476
PROJECT	Analysis for Robert Birtles	**REPORTED**	Jul-22-10

Total Recoverable Metals by ICPMS, Continued

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Osoyoos Well #3 (K0G0476-04) Matrix: Water Sampled: Jul-14-10 10:25, Continued								
Nickel	**0.0036**		0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Jul-21-10	EPA 6020A	RMD	
Potassium	**6.73**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Jul-21-10	EPA 6020A	RMD	
Silicon	**10.6**		2.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Sodium	**26.1**	AO ≤ 200	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Uranium	**0.0169**	MAC = 0.02	0.00020	mg/L	Jul-21-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Zinc	**0.031**	AO ≤ 5	0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
System 9 (K0G0476-05) Matrix: Water Sampled: Jul-14-10 11:00								
Aluminum	**0.102**	AO ≤ 0.1	0.050	mg/L	Jul-21-10	EPA 6020A	RMD	
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Arsenic	<0.0050	MAC = 0.01	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Barium	**0.0330**	MAC = 1	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Beryllium	<0.0010		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Boron	<0.040	MAC = 5	0.040	mg/L	Jul-21-10	EPA 6020A	RMD	
Cadmium	<0.00010	MAC = 0.005	0.00010	mg/L	Jul-21-10	EPA 6020A	RMD	
Calcium	**29.5**		1.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Cobalt	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Copper	**0.0398**	AO ≤ 1	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Iron	<0.10	AO ≤ 0.3	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Magnesium	**8.45**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Manganese	**0.0167**	AO ≤ 0.05	0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Molybdenum	**0.0031**		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Nickel	<0.0020		0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Jul-21-10	EPA 6020A	RMD	
Potassium	**2.18**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Jul-21-10	EPA 6020A	RMD	
Silicon	**2.7**		2.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Sodium	**10.1**	AO ≤ 200	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Uranium	**0.00227**	MAC = 0.02	0.00020	mg/L	Jul-21-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Zinc	<0.010	AO ≤ 5	0.010	mg/L	Jul-21-10	EPA 6020A	RMD	

CARO ANALYTICAL SERVICES

CLIENT	Interior Health Authority - Penticton	**WORK ORDER #**	K0G0476
PROJECT	Analysis for Robert Birtles	**REPORTED**	Jul-22-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Total Recoverable Metals by ICPMS, Continued								
Osoyoos Well #1 (K0G0476-03) Matrix: Water Sampled: Jul-14-10 09:59								
Aluminum	<0.050	AO ≤ 0.1	0.050	mg/L	Jul-21-10	EPA 6020A	RMD	
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Arsenic	**0.0057**	MAC = 0.01	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Barium	**0.0656**	MAC = 1	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Beryllium	<0.0010		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Boron	**0.042**	MAC = 5	0.040	mg/L	Jul-21-10	EPA 6020A	RMD	
Cadmium	<0.00010	MAC = 0.005	0.00010	mg/L	Jul-21-10	EPA 6020A	RMD	
Calcium	**96.8**		1.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Cobalt	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Copper	**0.0044**	AO ≤ 1	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Iron	<0.10	AO ≤ 0.3	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Magnesium	**23.0**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Manganese	<0.0020	AO ≤ 0.05	0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Molybdenum	**0.0106**		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Nickel	**0.0030**		0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Jul-21-10	EPA 6020A	RMD	
Potassium	**6.29**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Jul-21-10	EPA 6020A	RMD	
Silicon	**10.7**		2.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Sodium	**35.8**	AO ≤ 200	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Uranium	**0.0103**	MAC = 0.02	0.00020	mg/L	Jul-21-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Zinc	<0.010	AO ≤ 5	0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Osoyoos Well #3 (K0G0476-04) Matrix: Water Sampled: Jul-14-10 10:25								
Aluminum	<0.050	AO ≤ 0.1	0.050	mg/L	Jul-21-10	EPA 6020A	RMD	
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Arsenic	<0.0050	MAC = 0.01	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Barium	**0.113**	MAC = 1	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Beryllium	<0.0010		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Boron	**0.068**	MAC = 5	0.040	mg/L	Jul-21-10	EPA 6020A	RMD	
Cadmium	<0.00010	MAC = 0.005	0.00010	mg/L	Jul-21-10	EPA 6020A	RMD	
Calcium	**98.1**		1.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Cobalt	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Copper	**0.0035**	AO ≤ 1	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Iron	<0.10	AO ≤ 0.3	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Magnesium	**28.0**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Manganese	<0.0020	AO ≤ 0.05	0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Molybdenum	**0.0084**		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	

CARO ANALYTICAL SERVICES

CLIENT	Interior Health Authority - Penticton	**WORK ORDER #**	K0G0476
PROJECT	Analysis for Robert Birtles	**REPORTED**	Jul-22-10

Total Recoverable Metals by ICPMS, Continued

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Osoyoos Well #6 (K0G0476-01) Matrix: Water Sampled: Jul-14-10 11:20, Continued								
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Magnesium	**32.7**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Manganese	**0.105**	AO ≤ 0.05	0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Molybdenum	**0.0111**		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Nickel	**0.0023**		0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Jul-21-10	EPA 6020A	RMD	
Potassium	**5.71**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Jul-21-10	EPA 6020A	RMD	
Silicon	**6.9**		2.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Sodium	**31.4**	AO ≤ 200	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Uranium	**0.00564**	MAC = 0.02	0.00020	mg/L	Jul-21-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Zinc	**0.022**	AO ≤ 5	0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Osoyoos Well #8 (K0G0476-02) Matrix: Water Sampled: Jul-14-10 10:10								
Aluminum	<0.050	AO ≤ 0.1	0.050	mg/L	Jul-21-10	EPA 6020A	RMD	
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Arsenic	<0.0050	MAC = 0.01	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Barium	**0.0545**	MAC = 1	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Beryllium	<0.0010		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Boron	<0.040	MAC = 5	0.040	mg/L	Jul-21-10	EPA 6020A	RMD	
Cadmium	<0.00010	MAC = 0.005	0.00010	mg/L	Jul-21-10	EPA 6020A	RMD	
Calcium	**42.2**		1.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD	
Cobalt	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Copper	**0.0025**	AO ≤ 1	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Iron	<0.10	AO ≤ 0.3	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Magnesium	**13.1**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Manganese	**0.105**	AO ≤ 0.05	0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Molybdenum	**0.0066**		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD	
Nickel	<0.0020		0.0020	mg/L	Jul-21-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Jul-21-10	EPA 6020A	RMD	
Potassium	**3.44**		0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Jul-21-10	EPA 6020A	RMD	
Silicon	**3.7**		2.0	mg/L	Jul-21-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD	
Sodium	**18.0**	AO ≤ 200	0.10	mg/L	Jul-21-10	EPA 6020A	RMD	
Uranium	**0.00394**	MAC = 0.02	0.00020	mg/L	Jul-21-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Jul-21-10	EPA 6020A	RMD	
Zinc	**0.014**	AO ≤ 5	0.010	mg/L	Jul-21-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Interior Health Authority - Penticton	**WORK ORDER #**	K0G0476
PROJECT	Analysis for Robert Birtles	**REPORTED**	Jul-22-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes

General Parameters, Continued

Osoyoos Well #3 (K0G0476-04) Matrix: Water Sampled: Jul-14-10 10:25

Alkalinity, Total as CaCO3	**302**		1.0	mg/L	Jul-16-10	APHA 2320 B	KEL
Chloride	**19.5**	AO ≤ 250	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL
Colour, True	<5	AO ≤ 15	5	Color Unit	Jul-16-10	APHA 2120 B	KEL
Conductivity (EC)	**747**		2	uS/cm	Jul-16-10	APHA 2510 B	KEL
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Jul-21-10	APHA 4500-CN	KEL
Fluoride	**0.40**	MAC = 1.5	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL
Hardness, Total (Total as CaCO3)	**360**		2.91	mg/L	Jul-21-10	APHA 2340 B	RMD
Nitrogen, Nitrate as N	**2.78**	MAC = 10	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL
pH	**7.76**	AO = 6.5 - 8.5	0.10	pH Units	Jul-16-10	APHA 4500-H+	KEL
Solids, Total Dissolved	**454**	AO ≤ 500	5	mg/L	Jul-16-10	APHA 2540 C	KEL
Sulfate	**77.3**	AO ≤ 500	1.0	mg/L	Jul-15-10	APHA 4110 B	KEL
Turbidity	<0.1	Varies, See Guidelines	0.1	NTU	Jul-16-10	APHA 2130 B	KEL
UV Transmittance @ 254nm	**91.5**		0.1	%	Jul-19-10	APHA 5910B	KEL

System 9 (K0G0476-05) Matrix: Water Sampled: Jul-14-10 11:00

Alkalinity, Total as CaCO3	**99.9**		1.0	mg/L	Jul-16-10	APHA 2320 B	KEL
Chloride	**6.31**	AO ≤ 250	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL
Colour, True	**9**	AO ≤ 15	5	Color Unit	Jul-16-10	APHA 2120 B	KEL
Conductivity (EC)	**251**		2	uS/cm	Jul-16-10	APHA 2510 B	KEL
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Jul-21-10	APHA 4500-CN	KEL
Fluoride	**0.19**	MAC = 1.5	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL
Hardness, Total (Total as CaCO3)	**108**		2.91	mg/L	Jul-21-10	APHA 2340 B	RMD
Nitrogen, Nitrate as N	<0.01	MAC = 10	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL
pH	**7.92**	AO = 6.5 - 8.5	0.10	pH Units	Jul-16-10	APHA 4500-H+	KEL
Solids, Total Dissolved	**146**	AO ≤ 500	5	mg/L	Jul-16-10	APHA 2540 C	KEL
Sulfate	**24.4**	AO ≤ 500	1.0	mg/L	Jul-15-10	APHA 4110 B	KEL
Turbidity	**6.7**	Varies, See Guidelines	0.1	NTU	Jul-16-10	APHA 2130 B	KEL
UV Transmittance @ 254nm	**76.4**		0.1	%	Jul-19-10	APHA 5910B	KEL

Total Recoverable Metals by ICPMS

Osoyoos Well #6 (K0G0476-01) Matrix: Water Sampled: Jul-14-10 11:20

Aluminum	<0.050	AO ≤ 0.1	0.050	mg/L	Jul-21-10	EPA 6020A	RMD
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD
Arsenic	<0.0050	MAC = 0.01	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD
Barium	**0.0755**	MAC = 1	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD
Beryllium	<0.0010		0.0010	mg/L	Jul-21-10	EPA 6020A	RMD
Boron	**0.060**	MAC = 5	0.040	mg/L	Jul-21-10	EPA 6020A	RMD
Cadmium	**0.00053**	MAC = 0.005	0.00010	mg/L	Jul-21-10	EPA 6020A	RMD
Calcium	**64.5**		1.0	mg/L	Jul-21-10	EPA 6020A	RMD
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Jul-21-10	EPA 6020A	RMD
Cobalt	<0.00050		0.00050	mg/L	Jul-21-10	EPA 6020A	RMD
Copper	**0.0065**	AO ≤ 1	0.0010	mg/L	Jul-21-10	EPA 6020A	RMD
Iron	<0.10	AO ≤ 0.3	0.10	mg/L	Jul-21-10	EPA 6020A	RMD

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Interior Health Authority - Penticton	**WORK ORDER #**	K0G0476
PROJECT	Analysis for Robert Birtles	**REPORTED**	Jul-22-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters								
Osoyoos Well #6 (K0G0476-01) Matrix: Water Sampled: Jul-14-10 11:20								
Alkalinity, Total as CaCO3	**301**		1.0	mg/L	Jul-16-10	APHA 2320 B	KEL	
Chloride	**11.0**	AO ≤ 250	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Colour, True	<5	AO ≤ 15	5	Color Unit	Jul-16-10	APHA 2120 B	KEL	
Conductivity (EC)	**666**		2	uS/cm	Jul-16-10	APHA 2510 B	KEL	
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Jul-21-10	APHA 4500-CN	KEL	
Fluoride	**0.42**	MAC = 1.5	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Hardness, Total (Total as CaCO3)	**296**		2.91	mg/L	Jul-21-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**1.51**	MAC = 10	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
pH	**7.81**	AO = 6.5 - 8.5	0.10	pH Units	Jul-16-10	APHA 4500-H+	KEL	
Solids, Total Dissolved	**390**	AO ≤ 500	5	mg/L	Jul-16-10	APHA 2540 C	KEL	
Sulfate	**58.5**	AO ≤ 500	1.0	mg/L	Jul-15-10	APHA 4110 B	KEL	
Turbidity	**0.2**	Varies, See Guidelines	0.1	NTU	Jul-16-10	APHA 2130 B	KEL	
UV Transmittance @ 254nm	**91.6**		0.1	%	Jul-19-10	APHA 5910B	KEL	
Osoyoos Well #8 (K0G0476-02) Matrix: Water Sampled: Jul-14-10 10:10								
Alkalinity, Total as CaCO3	**162**		1.0	mg/L	Jul-16-10	APHA 2320 B	KEL	
Chloride	**8.83**	AO ≤ 250	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Colour, True	<5	AO ≤ 15	5	Color Unit	Jul-16-10	APHA 2120 B	KEL	
Conductivity (EC)	**388**		2	uS/cm	Jul-16-10	APHA 2510 B	KEL	
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Jul-21-10	APHA 4500-CN	KEL	
Fluoride	**0.25**	MAC = 1.5	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Hardness, Total (Total as CaCO3)	**159**		2.91	mg/L	Jul-21-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**0.47**	MAC = 10	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
pH	**7.92**	AO = 6.5 - 8.5	0.10	pH Units	Jul-16-10	APHA 4500-H+	KEL	
Solids, Total Dissolved	**213**	AO ≤ 500	5	mg/L	Jul-16-10	APHA 2540 C	KEL	
Sulfate	**32.2**	AO ≤ 500	1.0	mg/L	Jul-15-10	APHA 4110 B	KEL	
Turbidity	<0.1	Varies, See Guidelines	0.1	NTU	Jul-16-10	APHA 2130 B	KEL	
UV Transmittance @ 254nm	**87.5**		0.1	%	Jul-19-10	APHA 5910B	KEL	
Osoyoos Well #1 (K0G0476-03) Matrix: Water Sampled: Jul-14-10 09:59								
Alkalinity, Total as CaCO3	**270**		1.0	mg/L	Jul-16-10	APHA 2320 B	KEL	
Chloride	**36.6**	AO ≤ 250	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Colour, True	<5	AO ≤ 15	5	Color Unit	Jul-16-10	APHA 2120 B	KEL	
Conductivity (EC)	**780**		2	uS/cm	Jul-16-10	APHA 2510 B	KEL	
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Jul-21-10	APHA 4500-CN	KEL	
Fluoride	**0.29**	MAC = 1.5	0.10	mg/L	Jul-15-10	APHA 4110 B	KEL	
Hardness, Total (Total as CaCO3)	**336**		2.91	mg/L	Jul-21-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**4.62**	MAC = 10	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 3.2	0.01	mg/L	Jul-15-10	APHA 4110 B	KEL	
pH	**7.77**	AO = 6.5 - 8.5	0.10	pH Units	Jul-16-10	APHA 4500-H+	KEL	
Solids, Total Dissolved	**473**	AO ≤ 500	5	mg/L	Jul-16-10	APHA 2540 C	KEL	
Sulfate	**72.1**	AO ≤ 500	1.0	mg/L	Jul-15-10	APHA 4110 B	KEL	
Turbidity	<0.1	Varies, See Guidelines	0.1	NTU	Jul-16-10	APHA 2130 B	KEL	
UV Transmittance @ 254nm	**90.4**		0.1	%	Jul-19-10	APHA 5910B	KEL	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0I0559
PROJECT	Comprehensive Analysis	**REPORTED**	Sep-22-10

General Parameters

Town System - Well #1 (K0I0559-01) Matrix: Water Sampled: Sep-14-10 09:15

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
Alkalinity, Total as CaCO3	**271**		1.0	mg/L	Sep-17-10	APHA 2320 B	KEL	
Chloride	**35.3**	AO ≤ 250	0.10	mg/L	Sep-15-10	APHA 4110 B	KEL	
Colour, True	<5	AO ≤ 15	5	Color Unit	Sep-15-10	APHA 2120 B	KEL	
Conductivity (EC)	**701**		2	uS/cm	Sep-17-10	APHA 2510 B	KEL	
Cyanide (total)	<0.01	MAC = 0.2	0.01	mg/L	Sep-20-10	APHA 4500-CN	KEL	
Fluoride	**0.39**	MAC = 1.5	0.10	mg/L	Sep-15-10	APHA 4110 B	KEL	
Hardness, Total (Total as CaCO3)	**280**		2.91	mg/L	Sep-20-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**4.70**	MAC = 10	0.01	mg/L	Sep-15-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Sep-15-10	APHA 4110 B	KEL	
pH	**7.70**	AO = 6.5 - 8.5	0.01	pH Units	Sep-17-10	APHA 4500-H+	KEL	
Solids, Total Dissolved	**457**	AO ≤ 500	5	mg/L	Sep-21-10	APHA 2540 C	KEL	
Sulfate	**72.0**	AO ≤ 500	1.0	mg/L	Sep-15-10	APHA 4110 B	KEL	
Turbidity	<0.1	Varies, See Guidelines	0.1	NTU	Sep-17-10	APHA 2130 B	KEL	
UV Transmittance @ 254nm	**89.7**		0.1	%	Sep-21-10	APHA 5910B	KEL	

Total Recoverable Metals by ICPMS

Town System - Well #1 (K0I0559-01) Matrix: Water Sampled: Sep-14-10 09:15

Aluminum	<0.050	AO ≤ 0.1	0.050	mg/L	Sep-20-10	EPA 6020A	RMD	
Antimony	<0.0010	MAC = 0.006	0.0010	mg/L	Sep-20-10	EPA 6020A	RMD	
Arsenic	**0.0056**	MAC = 0.01	0.0050	mg/L	Sep-20-10	EPA 6020A	RMD	
Barium	**0.0478**	MAC = 1	0.0050	mg/L	Sep-20-10	EPA 6020A	RMD	
Beryllium	<0.0010		0.0010	mg/L	Sep-20-10	EPA 6020A	RMD	
Boron	**0.065**	MAC = 5	0.040	mg/L	Sep-20-10	EPA 6020A	RMD	
Cadmium	<0.00010	MAC = 0.005	0.00010	mg/L	Sep-20-10	EPA 6020A	RMD	
Calcium	**84.8**		1.0	mg/L	Sep-20-10	EPA 6020A	RMD	
Chromium	<0.0050	MAC = 0.05	0.0050	mg/L	Sep-20-10	EPA 6020A	RMD	
Cobalt	<0.00050		0.00050	mg/L	Sep-20-10	EPA 6020A	RMD	
Copper	**0.0049**	AO ≤ 1	0.0010	mg/L	Sep-20-10	EPA 6020A	RMD	
Iron	**0.11**	AO ≤ 0.3	0.10	mg/L	Sep-20-10	EPA 6020A	RMD	
Lead	<0.0010	MAC = 0.01	0.0010	mg/L	Sep-20-10	EPA 6020A	RMD	
Magnesium	**16.5**		0.10	mg/L	Sep-20-10	EPA 6020A	RMD	
Manganese	<0.0020	AO ≤ 0.05	0.0020	mg/L	Sep-20-10	EPA 6020A	RMD	
Mercury	<0.00050	MAC = 0.001	0.00050	mg/L	Sep-20-10	EPA 6020A	RMD	
Molybdenum	**0.0132**		0.0010	mg/L	Sep-20-10	EPA 6020A	RMD	
Nickel	**0.0030**		0.0020	mg/L	Sep-20-10	EPA 6020A	RMD	
Phosphorus	<0.20		0.20	mg/L	Sep-20-10	EPA 6020A	RMD	
Potassium	**5.76**		0.10	mg/L	Sep-20-10	EPA 6020A	RMD	
Selenium	<0.0030	MAC = 0.01	0.0030	mg/L	Sep-20-10	EPA 6020A	RMD	
Silicon	**21.3**		2.0	mg/L	Sep-20-10	EPA 6020A	RMD	
Silver	<0.00050		0.00050	mg/L	Sep-20-10	EPA 6020A	RMD	
Sodium	**27.6**	AO ≤ 200	0.10	mg/L	Sep-20-10	EPA 6020A	RMD	
Uranium	**0.00748**	MAC = 0.02	0.00020	mg/L	Sep-20-10	EPA 6020A	RMD	
Vanadium	<0.010		0.010	mg/L	Sep-20-10	EPA 6020A	RMD	
Zinc	<0.010	AO ≤ 5	0.010	mg/L	Sep-20-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0I0825
PROJECT	Drinking Water	**REPORTED**	Sep-29-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters								
Well #3 Town System (K0I0825-01) Matrix: Water Sampled: Sep-21-10 08:25								
Hardness (as CaCO3)	**339**		0.41	mg/L	Sep-24-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**3.13**	MAC = 10	0.01	mg/L	Sep-23-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Sep-23-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #3 Town System (K0I0825-01) Matrix: Water Sampled: Sep-21-10 08:25								
Calcium	**90.0**		1.0	mg/L	Sep-24-10	EPA 6020A	RMD	
Magnesium	**27.7**		0.10	mg/L	Sep-24-10	EPA 6020A	RMD	
Manganese	**0.0024**	AO ≤ 0.05	0.0020	mg/L	Sep-24-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0I0827
PROJECT	Drinking Water	**REPORTED**	Sep-29-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method	Lab	Notes
General Parameters								
Well #1 - Town System (K0I0827-01) Matrix: Water Sampled: Sep-21-10 07:55								
Hardness (as CaCO3)	**289**		0.41	mg/L	Sep-24-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**4.45**	MAC = 10	0.01	mg/L	Sep-23-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Sep-23-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #1 - Town System (K0I0827-01) Matrix: Water Sampled: Sep-21-10 07:55								
Calcium	**84.5**		1.0	mg/L	Sep-24-10	EPA 6020A	RMD	
Magnesium	**19.0**		0.10	mg/L	Sep-24-10	EPA 6020A	RMD	
Manganese	<0.0020	AO ≤ 0.05	0.0020	mg/L	Sep-24-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0L0278
PROJECT	THM Analysis	**REPORTED**	Dec-13-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method (mod. from)	Lab	Notes
Volatile Organic Compounds by PT-GCMS								
System #9 - 5001 - 107 St (K0L0278-01) Matrix: Water Sampled: Dec-07-10 08:15								
Bromodichloromethane	**0.005**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Bromoform	<0.001		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Chloroform	**0.013**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Dibromochloromethane	**0.002**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Trihalomethanes (total)	**0.020**	MAC = 0.1	0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Surrogate: 4-Bromofluorobenzene	*107 %*		*80-120*		*Dec-09-10*			

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0L0280
PROJECT	THM Analysis	**REPORTED**	Dec-13-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method (mod. from)	Lab	Notes
Volatile Organic Compounds by PT-GCMS								
System #8 - 9103 - 100th Ave (K0L0280-01) Matrix: Water Sampled: Dec-07-10 08:50								
Bromodichloromethane	**0.006**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Bromoform	<0.001		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Chloroform	**0.014**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Dibromochloromethane	**0.002**		0.001	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Trihalomethanes (total)	**0.022**	MAC = 0.1	0.004	mg/L	Dec-09-10	EPA 5030B/8260B	RMD	
Surrogate: 4-Bromofluorobenzene	*108 %*		*80-120*		*Dec-09-10*			

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0L0553
PROJECT	Monitoring Wells 2010	**REPORTED**	Dec-21-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method (mod. from)	Lab	Notes
General Parameters								
Well #3 (K0L0553-01) Matrix: Water Sampled: Dec-14-10 08:50								
Hardness, Total (Total as CaCO3)	**326**		2.91	mg/L	Dec-20-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**2.72**	MAC = 10	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #3 (K0L0553-01) Matrix: Water Sampled: Dec-14-10 08:50								
Calcium	**89.1**		1.0	mg/L	Dec-20-10	EPA 6020A	RMD	
Magnesium	**25.1**		0.10	mg/L	Dec-20-10	EPA 6020A	RMD	
Manganese	**0.0023**	AO ≤ 0.05	0.0020	mg/L	Dec-20-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0L0549
PROJECT	Monitoring Wells 2010	**REPORTED**	Dec-21-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method (mod. from)	Lab	Notes
General Parameters								
Well #8 (K0L0549-01) Matrix: Water Sampled: Dec-14-10 08:30								
Hardness, Total (Total as CaCO3)	**315**		2.91	mg/L	Dec-20-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**2.76**	MAC = 10	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #8 (K0L0549-01) Matrix: Water Sampled: Dec-14-10 08:30								
Calcium	**85.8**		1.0	mg/L	Dec-20-10	EPA 6020A	RMD	
Magnesium	**24.5**		0.10	mg/L	Dec-20-10	EPA 6020A	RMD	
Manganese	**0.0037**	AO ≤ 0.05	0.0020	mg/L	Dec-20-10	EPA 6020A	RMD	

SAMPLE DATA

CARO ANALYTICAL SERVICES

CLIENT	Osoyoos, Town of	**WORK ORDER #**	K0L0545
PROJECT	Monitoring Wells 2010	**REPORTED**	Dec-21-10

Analyte	Result	Canadian DW Guidelines (May 08)	RDL	Units	Analyzed	Method (mod. from)	Lab	Notes
General Parameters								
Well #6 (K0L0545-01) Matrix: Water Sampled: Dec-14-10 08:15								
Hardness, Total (Total as CaCO3)	**289**		2.91	mg/L	Dec-20-10	APHA 2340 B	RMD	
Nitrogen, Nitrate as N	**2.54**	MAC = 10	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Nitrogen, Nitrite as N	<0.01	MAC = 1	0.01	mg/L	Dec-17-10	APHA 4110 B	KEL	
Total Recoverable Metals by ICPMS								
Well #6 (K0L0545-01) Matrix: Water Sampled: Dec-14-10 08:15								
Calcium	**65.3**		1.0	mg/L	Dec-20-10	EPA 6020A	RMD	
Magnesium	**30.6**		0.10	mg/L	Dec-20-10	EPA 6020A	RMD	
Manganese	**0.103**	AO ≤ 0.05	0.0020	mg/L	Dec-20-10	EPA 6020A	RMD	

ENVIRONMENTAL OPERATORS CERTIFICATION PROGRAM

Certificate of Qualification

This is to certify that

Karl Fichter

by examination has qualified as a

Water Distribution System Operator

Multi Utility - II

Dated at Burnaby, BC on March 18, 2011

Certification No. 6840

Secretary - Certification Board

President - Certification Board

eocp

Member of the Association of Boards of Certification

This certificate must hold the EOCP embossed seal and shall be in full force when affixed with a current renewal seal

A society incorporated under the Society Act, S.B.C. S-28724

ENVIRONMENTAL OPERATORS CERTIFICATION PROGRAM

Certificate of Qualification

This is to certify that

David J. Stene

by examination has qualified as a

Water Distribution System Operator

Multi Utility - II

Dated at Burnaby, BC on March 18, 2011

Certification No. 6851

Secretary - Certification Board

President - Certification Board

eocp

Member of the Association of Boards of Certification

This certificate must hold the EOCP embossed seal and shall be in full force when affixed with a current renewal seal

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ENVIRONMENTAL OPERATORS CERTIFICATION PROGRAM

Certificate of Qualification

This is to certify that

Leigh A. Lougheed

by examination has qualified as a

Water Distribution System Operator

Multi Utility - II

Dated at Burnaby, BC on March 18, 2011

Certification No. 6846

Secretary - Certification Board

President - Certification Board

eocp

Member of the Association of Boards of Certification

This certificate must hold the EOCP embossed seal and shall be in full force when affixed with a current renewal seal

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CERTIFICATE OF COMPLETION

Issued to

LEIGH LOUGHEED

In recognition of completion of BC Water & Waste Association's

Water Distribution II Course

March 14-18, 2011
Penticton, BC

Daisy Foster

DAISY FOSTER
CHIEF EXECUTIVE OFFICER

2.4 CEUs will be awarded for this course

BCWWA
BRITISH COLUMBIA WATER & WASTE ASSOCIATION

Safeguarding public health and the environment through the sharing of skills, knowledge, education and experience, and providing a voice for the water and waste community.

CERTIFICATE OF COMPLETION

Issued to

DAVIE STENE

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