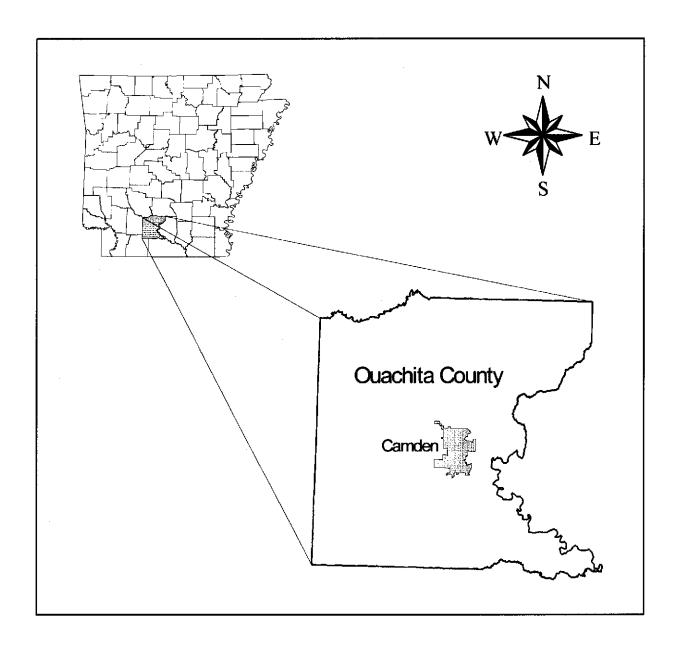
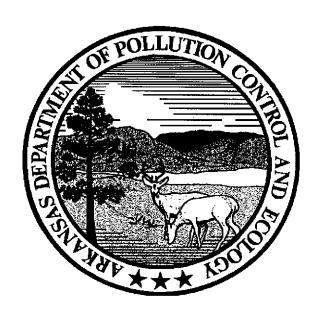
REPORT ON THE FOURTH SAMPLING OF THE OUACHITA MONITORING AREA (Sparta Aquifer)



ARKANSAS AMBIENT GROUND WATER MONITORING PROGRAM

Arkansas Department of Pollution Control & Ecology Water Quality Report WQ98-06-1 June 1998

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ARKANSAS AMBIENT GROUND WATER MONITORING PROGRAM

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Arkansas Department of Pollution Control & Ecology Water Quality Report WQ98-06-1 June 1998

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INTRODUCTION

The Arkansas Ambient Ground Water Monitoring Program was initiated by the Arkansas Department of Pollution Control and Ecology (ADPC&E) Water Division to obtain background data from various aquifers within Arkansas, with emphasis placed on those areas which are sensitive to ground-water contamination from anthropogenic impacts. Wells and/or springs within each of the monitoring areas are sampled on approximate three-year intervals to evaluate whether regional and/or local activities are impacting ground-water quality.

The Ouachita monitoring area is comprised of approximately 350 square miles located in Ouachita County, Arkansas (Figure 1), west of the Ouachita River. This area will be referred to as the study area in the remainder of this report. The study area is located in the Gulf Coastal Plain physiographic province. Area topography exhibits low to moderate relief with elevations ranging from approximately 400 feet above mean sea level (msl) in the northwestern portion of the study area to approximately 100 feet above msl in the southeastern portion of the study area along the Ouachita River. Surface water drainage is generally to the east towards the Ouachita River. The study area is underlain primarily by Tertiary-aged sedimentary deposits which dip to the southeast.

The study area was selected because it is within the recharge area of the Sparta aquifer, one of the most intensively-used aquifers in southern Arkansas. The aquifer is potentially threatened by pulp and paper mill activities in the vicinity of Camden and oil exploration activities in the southern part of the county. In addition, underground petroleum storage tanks, Resource Conservation and Recovery Act (RCRA) facilities, and landfills also potentially threaten ground water quality. Ground-water sampling was begun in January 1987, and has continued at approximately three-year intervals. Subsequent sampling events were conducted in October 1989 and October 1992. The most recent sampling event was conducted in June and July of 1996. Ground-water samples were obtained from a combination of public, domestic and industrial wells during all sampling events. Some of the earlier sampled wells have been closed or are currently unavailable for sampling; however, an attempt was made to find replacement wells within relatively close proximity to the original sampling locations.

STUDY OBJECTIVES

The study area is located in the recharge area of the Sparta aquifer. Several large municipalities and many smaller municipal cooperatives in southern and eastern Arkansas obtain drinking water from this aquifer. In addition, industrial use of this aquifer has increased dramatically in recent years. The Sparta aquifer was recently declared a critical ground-water use area in several counties by the Arkansas Soil and Water Conservation Commission. Aggressive protection of the recharge area is necessary to prevent degradation of ground-water quality in the aquifer and to protect the health of the population. As numerous potential contaminant sources exist in the study area, ground-water monitoring is critical for this area. This program was begun to monitor changes in ground-water chemistry over time, to detect significant impacts which may have occurred, and to describe the ambient ground-water quality in the Sparta aquifer.

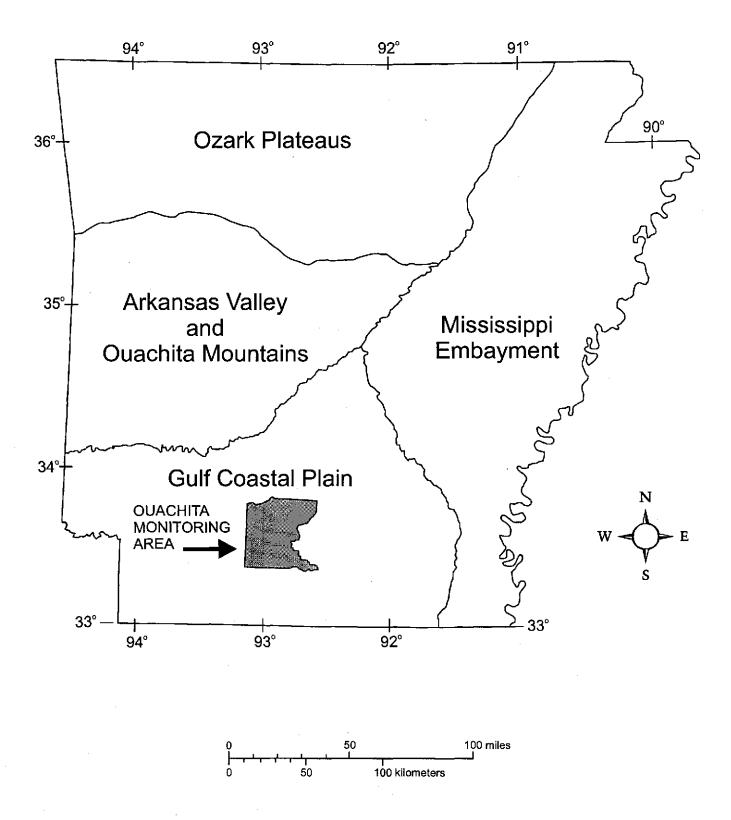


Figure 1 - Regional Physiographic Map and location of Ouachita Monitoring Area.

AREA GEOLOGY

The study area is located in the Gulf Coastal Plain physiographic province which extends west into Texas and south into Louisiana and is comprised of gently-dipping sedimentary deposits. The exposed rock units of the Gulf Coastal Plain in Arkansas range in age from the lower Cretaceous to recent. These deposits overlie Paleozoic-aged rocks which crop out to the northwest in the Ouachita Mountains physiographic province. The surface geology of the study area consists of Quaternary alluvium in river flood plains and Tertiary-aged deposits in uplands. Table 1 represents the generalized geology of southern Arkansas which includes the study area.

Several published sources, including Albin (1964), Haley et al. (1993), Hosman (1982) and Peterson et al. (1985) were used as references for the geology and hydrogeology of the study area. These references generally indicate the same geologic units; however, the mapped locations of these units varied significantly across Ouachita County. For this report, the authors have used Hosman's (1982) map of outcropping Tertiary units. His map and cross-section correlate well with Albin's (1964) maps, cross-sections and lithologic descriptions. The following sections detail the units exposed in the study area.

Table 1 - Generalized Stratigraphic Column of Southern Arkansas (modified from Fitzpatrick, et al., 1990)

Era 🕺	System	Series .	Group	Formation
		Holocene		Allevium
	Quaternary	Pleistocene		Terrace Deposits
			Jackson	Undifferentiated
				Cockfield Formation
Cenozoic				Cook Mountain Formation
	1	Eocene	Claiborne	Sparta Sand
	Tertiary			Cane River Formation
				Carrizo Sand
			Wilcox	Undifferentiated
		Paleocene	Midway	Undifferentiated
				Arkadelphia Marl
				Nacatoch Sand
	ļ			Saratoga Chalk
				Marlbrook Marl
		Upper Cretaceous		Annona Chalk
Mesozoic	Cretaceous			Ozan Formation
				Brownstown Marl
				Tokio Formation
				Woodbine Formation
<u> </u>		Lower Cretaceous		Undifferentiated

Tertiary System

The following sections detail the lithology of the outcropping Tertiary units in the study area. All of the units are of Eocene age and listed from oldest to youngest.

Wilcox Group

The oldest exposed unit in the study area is the lower Eocene-aged Wilcox Group which crops out in a narrow band in northwest Ouachita County. According to Albin (1964), this group consists of dark-gray to dark-brown swamp, or back-beach lignitic clay and lignite; light-gray to gray and brown, shallow marine sand and clay; and green, moderately deep-water glauconitic clay, which is indicative of a deltaic environment. Although the Wilcox Group is approximately 250 feet thick near its outcrop area, only a small area at the top of the group is exposed. A large area of the outcrop is covered by Quaternary alluvium to the north (Hosman, 1982). The Wilcox thickens towards the southeast, parallel to its dip direction.

Claiborne Group

The middle Eocene-aged Claiborne group unconformably overlies the Wilcox Group and consists of five formations. The formations are, from oldest to youngest, the Carrizo Sand, Cane River Formation, Sparta Sand, Cook Mountain Formation, and Cockfield Formation. The following sections detail the lithology of each formation.

The Carrizo Sand also outcrops in a narrow band which parallels and overlies the Wilcox outcrop in northwest Ouachita County. This unit averages 70 feet in thickness in the outcrop area and generally thickens towards the southeast (Hosman, 1982). This unit, a beach deposit, is typified by gray to brown very fine to medium sand, with some lignite and shallow-water clay (Albin, 1964).

The Cane River Formation overlies the Carrizo Sand and crops out in a wider band in northwestern Ouachita County (Hosman, 1982). This formation is characterized predominantly by shallow-water dark-gray to dark-brown silt and silty clay, but locally contains lignite and lignitic clay, clean sand and glauconite, indicating a fluctuating strand line (Albin, 1964).

The outcrop area of the Sparta Sand covers most of west and central Ouachita County. The Sparta Sand consists of gray, very fine to medium sand, and brown and gray sandy clay with interbeds of shallow-water clay, lignitic clay and lignite (Albin, 1964). Payne (1968) surmises that the Sparta Sand was deposited as a delta-fluvial plain complex. Although the Sparta Sand generally ranges in thickness from a thin veneer along the northwest edge of the outcrop area to approximately 500 feet in southeast Ouachita County, considerable variations in thickness and sand content occur throughout the unit. According to Payne (1968), predominantly sandy sections grade into predominantly shally sections within very short distances.

The Cook Mountain Formation crops out in southern Ouachita County. This formation consists of near-shore shallow-water dark-gray to dark-brown silty clay with some silt, sand and lignitic clay deposited in a back-beach environment (Albin, 1964). This formation averages approximately 150 feet in thickness.

A small area of the Cockfield Formation was mapped by Hosman (1982) in southeast Ouachita County. This area is exposed in a northeast-trending graben bounded by two normal faults. Albin (1964) also suspected some exposures of the Cockfield Formation in southern Ouachita County and indicated some similar faulting. According to Albin, this unit consists predominantly of gray and brown, very fine to fine sand and silt and dark-gray, dark-brown, and green lignitic silty clay. Based on Hosman's map, this unit is approximately 160 feet thick in Ouachita County.

Quaternary System

The Quaternary units in the study area consist of Pleistocene terrace deposits and Holocene alluvium. These units cover a large portion of northeast Ouachita County but are limited in the study area. The Pleistocene-aged terrace deposits are predominantly located in northeast Ouachita County; however, several deposits are located in southern Ouachita County. These deposits consist mainly of gravel, poorly sorted sand, and some clay and average 35 to 40 feet in thickness (Albin, 1964). The Holocene-aged (Recent) alluvial deposits are located in all major and most minor stream channels and associated flood plains. This material consists of sandy clay, poorly sorted sand, and gravel and also averages between 35 and 40 feet in thickness (Albin, 1964).

AREA HYDROGEOLOGY

The formations underlying the study area traditionally have been called either aquifers or confining beds based on their inherent properties of storage, hydraulic conductivity and transmissivity. In reality, the confining beds usually function as aquitards, which retard, but do not fully prevent the flow of water between units. Many of the confining beds contain zones of sand and silt which can function as small aquifer systems. Similarly, the aquifers contain local zones of clays and silts which can impede ground water flow in a zone of otherwise high hydraulic conductivity. As mentioned above, the units range in age from Paleozoic to recent; however, the only units that are described in this section are those that crop out in the study area. The following sections detail the hydrogeologic units.

Tertiary Units

The most widely-used aquifers are located in the Tertiary-aged deposits. These units, as described above, dip to the southeast and generally thicken in the dip direction.

Wilcox Group

The Wilcox Group crops out in a thin band in northwest Ouachita County. Although the lower Wilcox is used heavily as an aquifer in some parts of Arkansas (and other states), the Wilcox is generally considered the lower confining bed of the overlying Carizzo Sand. The upper Wilcox does contain several minor aquifers in southwestern Arkansas which consist of thin sand beds interbedded with clay (Hosman, et al., 1968). These aquifers are used locally for domestic purposes, but are generally of limited areal extent. Recharge of these minor aquifers occurs by precipitation on the outcrop or by leakage from overlying beds. No published values for aquifer yield were available for these minor aquifers. The water composition in these minor aquifers is generally a sodium

bicarbonate type when dissolved solids are low, and a sodium bicarbonate chloride type when dissolved solids are high (Hosman, et al., 1968).

Claiborne Group

The Claiborne Group consists of several important water-bearing units which are used in the study area and across southern and eastern Arkansas. The Claiborne, as discussed above, has been differentiated into five formations, each of which function primarily as either an aquifer or an aquitard.

The Carizzo Sand is the basal aquifer of the Claiborne Group. Recharge occurs from precipitation on the outcrop area and leakage from overlying beds. The Carizzo Sand is used for domestic purposes in the study area with yields ranging from 30 to 100 gpm (Hosman, et al., 1968). The water composition in the Carizzo Sand is generally a sodium bicarbonate type.

The Cane River Formation is considered the upper confining bed of the Carizzo Sand; however, substantial sand layers exist in this formation in the study area. Some domestic wells reportedly penetrate this formation which generally yield less than 500 gpm (Peterson, et al., 1985). In addition, although the Cane River Formation is generally considered the lower confining unit of the Sparta Sand, it is possible that several of the deeper wells in the study area have intercepted this formation. This assumption is based on altitude interpretation of wells from USGS 7.5 minute topographic maps and comparisons with Hosman's (1982) cross-section. The water composition in the Cane River Formation is generally a sodium bicarbonate type.

Most of the study area lies within the recharge zone of the Sparta aquifer. As previously mentioned, the Sparta aquifer is the most extensive and heavily-used aquifer in the Claiborne Group. Statewide, the Sparta aquifer is used by several large municipalities and industries. Within the study area, the Sparta aquifer is used for municipal, industrial and domestic purposes. Recharge of the aquifer is from vertical leakage and precipitation on the outcrop (Fitzpatrick et al., 1990). Wells penetrating the Sparta aguifer can yield up to 1000 gpm. According to Payne (1968), sand layers in the Sparta aquifer are highly variable. Additionally, although the Sparta is predominantly comprised of sand, zones of clay, silty clay and sandy clay are common, which locally affect hydraulic conductivity. Two separate Sparta aquifers, the Greensand and El Dorado, have been documented and are in use downdip of the study area (Union County, Arkansas). Broom et al. (1984) conducted a thorough investigation of salt-water intrusion into the lower Sparta (El Dorado) aquifer in Union County. Their cross-sections show a distinct confining bed separating the upper and lower Sparta aquifers. One of their cross-sections extends to the Union-Ouachita County border. It is likely therefore that the division of the Sparta aquifer into two distinct aquifers begins somewhere in Ouachita County. Although no divisions have been made of the Sparta aquifer in Ouachita County, well logs do indicate zones of lower hydraulic conductivity throughout the aquifer(Albin, 1964).

The geochemistry of the ground water in the Sparta aquifer is variable and has been divided by Payne (1968) into three chemical provinces: the bicarbonate water province, the chloride water province and the sulfate water province. The geochemistry of the ground water in the study area is considered to be in the bicarbonate province which is supported by geochemical data collected during this investigation. In Union County to the south/southeast, Broom et al. (1984) describes the upper

Sparta (Greensand) aquifer as a dilute sodium bicarbonate water type and the lower Sparta (El Dorado) aquifer as a dilute calcium sodium bicarbonate water type. Similarly, water types encountered during this investigation ranged from sodium to calcium bicarbonate with some mixed types observed.

The Cook Mountain Formation functions as the upper confining bed of the Sparta aquifer. This unit, being comprised mostly of clay, generally does not yield a significant volume of ground water. According to Fitzpatrick et al., (1990), this unit has a hydraulic conductivity of 9x10⁻⁶ feet per day.

As discussed previously, the Cockfield Formation has been determined to crop out in southern Ouachita County. This aquifer is the uppermost unit of the Claiborne Group. Use of this aquifer is minimal in the study area and is limited to domestic purposes. Some municipal and industrial use occurs in other areas. Yields of up to 400 gpm in areas to the east have been reported (Peterson et al., 1985). Recharge occurs in outcrop and subcrop areas.

Quaternary Units

Quaternary-aged flood plain and terrace deposits are located along the Ouachita River and its tributaries in the eastern and northern areas of the study area. These deposits form the Mississippi River Valley alluvial aquifer and yield 1000 to 3000 gpm (Peterson, et al., 1985). This aquifer is used for domestic and agricultural purposes in the study area.

METHODOLOGY

Ground-water samples analyzed for the investigation were obtained from a semi-random distribution of 26 domestic, public and industrial water-supply wells. Well logs were obtained from the Arkansas Geological Commission, where possible, to verify the depth of wells, water-bearing intervals, and well-construction information. However, the logs generally are not of sufficient detail to determine specific formations. Most of the wells penetrate the Sparta Sand; however, based on topographic and cross-sectional data, several of the deeper wells are likely penetrating the underlying Cane River Formation. The wells range in depth from 10 to 375 feet below the existing ground surface. The depth of two wells were undetermined. Figure 2 shows the location of wells sampled during the current sampling period. Refer to Van Schaik and Kresse (1994) for previous sampling locations. Table 2 lists the location and description of the current sampling sites. Wells in the study area generally are cased along their entire length with the exception of a screened interval located in the water-bearing formation.

All wells were sampled as near to the well head as possible through available faucets or other ports. In situations where a well had not been in operation prior to sampling, the well was allowed to run for a minimum of ten minutes prior to sampling. Conductance, temperature and pH were measured in the field until stabilized prior to obtaining all ground-water samples. A Beta Technology Incorporated Hydac conductivity-temperature-pH tester was used to measure the field parameters.

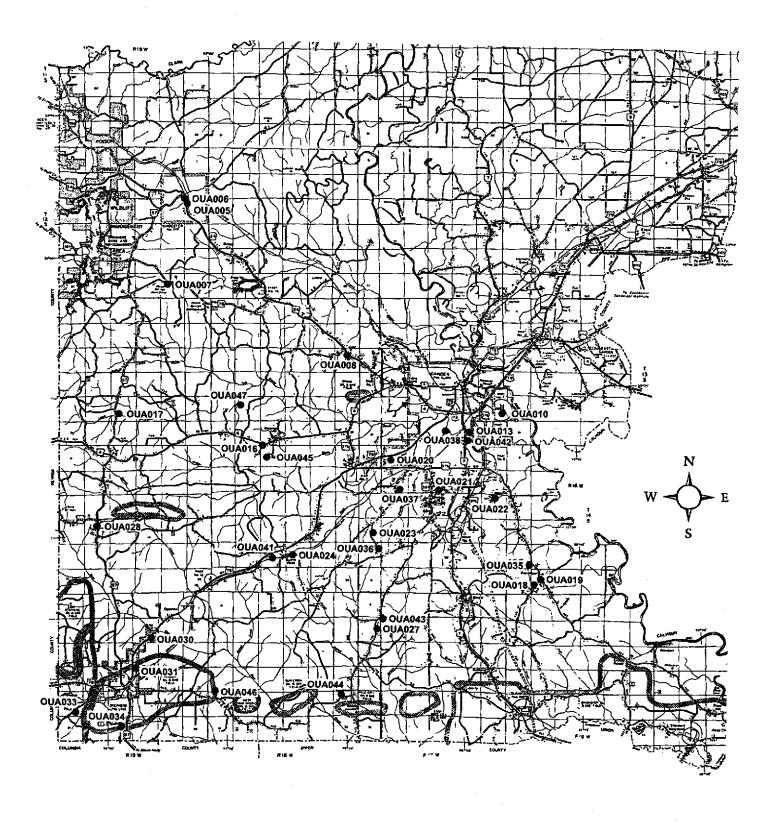


Figure 2 - Ouachita Monitoring Area sampling locations.

Table 2 - Summary of Current Sampling Sites

ifer are are tive	ct D	l'er U	1 200			Tcr P	Tor D	s D	ր	for I	lor I	s D	? D
m I C	Tcr		T				Ts/Tor	T8		Ts/Tcr		Ts	Ts
Poth Bottom (fc)	180		•	120			-105	248	-163	-94	091-	-135	•
ce Well Dep n (ft.) (ft.)	60	174	274	18	61	375		52	278	359	271	335	•
de Surface Dievation (ft.)	5.4" 240	360	3.70		.4" 322 4" 310		.4" 190 3" 2 F 4	300	.9. 115	.5" 265 2" 298	.2" 111 #F 2550	.8" 200 .5" 225	.4" 251
Longimude	93° 01' 06.4'	93° 01' 45.4'				A service of the serv	93° 04' 43.4"	92° 53' 35.5"		93° 03' 15.5"	92° 49' 26.2"	92° 55' 20.8"	93° 00' 33,4"
Latitude	33° 41' 42.4"	33° 39' 01.2"	33° 33' 14.2"	33° 31' 19.1"	33° 30′ 26.0″ 33° 26′ 18°0″	33° 24' 37.0"	33° 23' 25.4"	33° 29' 10.2"	33° 33′ 14.8″	33° 25' 11.7"	33° 33' 00.3"	33° 39' 57.0"	33° 24' 25.4"
Mark VR Execution	12S19W13BCB1	12S19W35BDD1	13S17W35DBDI 13S19W28BCD	14S17W10CDC1	14S19W20BAD1	15S19W22CCC1 15S19W3@BBD1	15S19W33BDB1 14S16W29@CD1	14S17W30ACD1	13S17W34DAC1 15S19W72BDD4	15S19W22ABC1	13S17W35DCC1	15S18W25BCD1 HS16W64BCD1	15S18W30BBA1
Sample Date	06-25-96	06-25-96	38400		07-10-96	06-27-96	06-25-96	06-26-96	06-26-96	07-09-96	06-26-96	07-10-96 07-10-96	07-10-96
Sampling-Site	OUA005 OUA006	OUA007	OUA013 OUA017	OUA021	OUA028 OUA030	OUA031	OUA034 OUA03S	OUA036	OUA038	OUA040	OUA042	OUA044	OUA046

The ground-water samples were collected in approved containers which were supplied by the ADPC&E laboratory. Ground-water samples obtained for metals analysis were filtered in the field with a $0.45~\mu m$ pore-size disposable filter. The metals results are thus reported as dissolved metals. The remaining samples were unfiltered. All samples, with the exception of the filtered metals samples, were placed on ice, and transported to the ADPC&E laboratory in Little Rock. All ground-water samples were analyzed in the laboratory for total alkalinity, major and trace inorganic constituents, metals, nutrients and total organic carbon. In addition, volatile organic compound (VOC) analysis was conducted on selected ground-water samples. The results of the current and some previous chemical analyses are listed in Tables 4 through 6 in Appendix A of this report.

Ground-water quality analyses from the current and previous sampling events, and complete site descriptions have been placed in the U. S. Environmental Protection Agency (EPA) Storage and Retrieval (STORET) database. This information is available to all interested parties with access to STORET. In addition, copies of the laboratory analyses have been provided to all interested well owners. For the purposes of GIS data collection, all sample sites have been surveyed with the Magellan NAV 5000 PRO; a hand-held GPS C/A-code and carrier phase code receiver. This instrument generally has a horizontal accuracy of approximately 12 meters.

GROUND WATER QUALITY

Water-quality analyses interpretation was conducted by evaluating general water quality, geochemistry, and detection of VOCs. Individual parameters were compared to Federal drinking water standards and/or health advisory limits to evaluate the ground-water quality for use as a potential drinking water source. The type of ground water ranges from sodium bicarbonate to calcium bicarbonate with several mixed water types also observed. Generally, the sodium bicarbonate correlated to the deeper waters and the calcium bicarbonate correlated to the shallow waters. Analyses to date demonstrate that water is soft and the water quality is very good with total dissolved solids (TDS) ranging from 31 to 313 mg/L.

Conductance and pH were measured during the initial sampling event but were not measured during the second and third sampling events (with the exception of OUA017 and OUA021). Although there were a few exceptions, pH and conductance generally increased between the first and current sampling events (see Table 4 in Appendix A); however, without the data from the other two sampling events for comparison, potential instrument malfunction could account for the difference. Ten ground water samples had measured pH which was below the recommended range of 6.5 to 8.5 (standard units) as per the United States Environmental Protection Agency (USEPA) secondary maximum contaminant levels (MCLs).

Conventional parameters analyzed during the current sampling event included alkalinity, chloride, fluoride, ammonia, nitrate, ortho-phosphate, total phosphate, sulfate, total organic carbon (TOC), total suspended solids (TSS), total dissolved solids (TDS) and hardness. Several of these parameters were analyzed during the first sampling event but not during the second and third sampling events. In addition, several sampling sites have been added since previous sampling events. The parameters which have been consistently analyzed over time include chloride, nitrate-nitrogen, ammonianitrogen, ortho-phosphate and sulfate. Several of the sampling sites have shown concentration

increases over time, while several sampling points have shown decreases. None of these changes appear to be significant. One ground-water sample had a nitrate concentration of 12.3 milligrams per liter (mg/L) which exceeded the USEPA primary MCL of 10.0 mg/L. The results of conventional parameter analysis for each sampling location, along with the above referenced constituents, are listed in Table 4 (Appendix A) of this report.

Other major and minor inorganic ions and metals were also analyzed. These included aluminum, arsenic, boron, barium, beryllium, bicarbonate, cadmium, calcium, chromium, copper, iron, fluoride, potassium, magnesium, manganese, sodium, nickel, lead, selenium, silica, vanadium and zinc. One ground-water sample had a beryllium concentration of 13.1 micrograms per liter (μ g/L) which exceeded the primary MCL of 4 μ g/L. Two ground-water samples had lead concentrations of 16.4 and 18.4 μ g/L, respectively, which exceeded the primary MCL of 15 μ g/L. In addition, sixteen ground-water samples had iron concentrations which exceeded the secondary MCL of 0.3 mg/L and eight ground-water samples had manganese concentrations which exceeded the secondary MCL of 0.05 mg/L. The metals and ions are listed in Table 5 (Appendix A) of this report.

Ground-water samples collected from wells located within close proximity to industrial areas around Camden and oil and gas fields in southwestern Ouachita County were analyzed for VOC constituents. Acetone and methylene chloride, common laboratory chemicals, were detected in several of the samples at low concentrations. These detections are most likely due to laboratory contamination and probably do not reflect actual ground water conditions. No other VOC constituents were detected above their respective detection limits in any of the samples. Table 6 in Appendix A of this report lists the sample locations and the analyzed VOC constituents.

Minimums, maximums, arithmetic and geometric means, and arithmetic and geometric standard deviations were calculated for some selected parameters from the current sampling event data. Table 3 below lists the descriptive statistics for the selected parameters. These statistics compare reasonably well (within the same order of magnitude) with data collected by Albin (1964) and Hosman et al. (1968), indicating no major changes or trends.

GROUND WATER GEOCHEMISTRY

The ground-water samples obtained throughout the Ouachita Monitoring Area are highly variable in geochemical composition. Generally, the ground water in the area cannot be grouped into a specific water type. A Piper diagram (Figure 3) showing all sampling points was constructed to show this variability. The major cations, which include sodium + potassium, calcium and magnesium, are plotted in the lower left triangle. The major anions, which include chloride, bicarbonate + carbonate, and sulfate, are plotted in the lower right triangle. Each point is then projected into the upper parallelogram to determine the type water. Samples obtained from specific aquifers often will plot within a relatively tight grouping; ie, a definable water type. Figure 3 shows that the cations are nearly evenly distributed between the calcium end-member and the sodium + potassium end-member with lesser amounts of magnesium. Calcium comprised over 50% of the cations in 11 of the 26 samples; and the remaining 2 samples were a mixed sodium-calcium type. Bicarbonate comprised over 50% of the total anion concentration in 20 of the 26 samples.

Table 3 - Selected Descriptive Statistics for the Sparta Aquifer

Sample Location	HCO		2112	3:1	201	Cond.	52	<u>ج</u>	4	Fe	4	Į.	2	SiO,
	mg/L	mg/l,		mg/L	mg/L		I G	Tale .	mg/L	Lg/L	mg/L	mg/L	mg/L	met
OUA005	8.6	4.1	0.42	0.9	31	42	33.6	6.0	0.04	158	7.0	9.0	3.7	8.4
Of Aun6		33		1.4	33	3	16.5	90		246	8.0	20		# E
OUA007	18.3	3.2		338	49	130	25.2		0.04	\$1900	7 U	0.0	7.3	12.1
ANTIANDS	28	i en	\$100	10 6) in		0.88	0.5	0.04	ARAG	1.0	9.0		
OTIANT	170 1		0.10	iii.	250	450	1113	F 01	0.13	200		, ,	60.1	20.71
OCAULS	1/0.1	£.C+	OF.0	15.4	2.00	420	5./11		U.I.3	CU2	0.7	6.7	1.60	0,01
	787	7.	644	*	*	75		•	9079	200	200	0.4	4.1	
OUA021	133.0	2.9	0.25	54.2	207	295	106.9	37.6	0.12	681	2.5	5.0	13.6	18.7
OLA024	25.6	10.	0.17	۲. چ	98	149	25.6	691	923	72	80	# 1	3.9	e vi
OUA028	37.8	3,4	0.09	16.7	136	119	73.3	12.2	0.10	1370	1.2	0.0	0.0	9.09
01.4030	5. 5	9.9	0.10	16.3	QET .	561	190	17.4	0.10	4930	2.8	6 0	100	37.2
OUA031	128.1	6.1	0.09	13.4	147	251	152.6	14.0	90 0	2660	2.4	13	37.2	18.5
	42.7	24.7		4	94	103	91.7	18.0	200	96	1.1	2.0	! ! X	35.3
	148.8	G	5	-	155	263	1194	13.1	0.07	OOD	-	٠,	30.2	13.7
	2037		330	6.0		805	7 20 1	1.01	0.00	200	7. C	7.7	2.7.5	7.71
manus (Antilo) ()		Ì		8.2	S S	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	70.5	2.8	0.04	46	0.6		48.8800.0000.0000.0000	203
0014037				8.0	97		1853	8.2.8	50.0	2 8	0.0	9 6	£.3	104
OUA038	125.7	Î	6	岳	155	239	101.0	8.6	90.0	807	2.2	1.5	463	24.2
A KIND D	1025	5.6	1 010	2000	136		150.8	19		4800			745	74.3
OUA040	8.86	6.5	0.08	8	133	235	120.2	13.9	010	3910	2.3	0.0	12.3	17.4
OLAMI				3.5		9#	24.8	1.0	900	2	0.7	9.0	010	9 61
		58.8		;	263	490	292.4	30.2	0.07	929	3.6	5.8	88.0	23.4
OUA043	30.5		2.00	1.0	\$6	私	34.4	1.6	0.05		9.0		00	15.5
OUA044	30.5	12.6	0.45	7.1	223	393	186.8	9.61	0.10	959	1.6	2.7	51.8	13.0
OUAU45	6.ST	0.6	12.3	1.7	132	[69]	461.0	- E	0.02	77	20	36	00	P.2
	140.3	3.1		1	136	266	6.79	37.9	0.10	1710	6.0	0.3	0.0	8.8
01,4047	15.9	4.3	0.08	4.6	•	46		16	6.05	13.40	0.7	0.0	010	5
Minimum	6.1		0.07	1.0	31	42	24.8	6.0	0.04	44	0.2	0.0	0.0	5.0
Maximum	203.7	90.6	12.3	C IZ	36	66	0 19#	37.9	6.75	2000	9	80	0.88	909
Mean			0.87	12.2	125.8	200.4	113.5	12.8	0.11	3223	1.7	1.4	20.0	19.6
Sid, Dev.	62.15	19.3	2.4	977	77.3	149.7	6'96	102	10	10052		1.6	37.0	111
Geometric Mean	44.4	6.9		8.7	102.7	150.3	83.3	8.3	80.0	577	1.3	1.5	14.9	17.0
. C . C . L				100	The second secon	CONTRACTOR OF THE PROPERTY OF		- CONTROL OF THE PARTY OF THE P	07.00.00.00.00.00.00.00.00.00.00.00.00.0		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Company of Company of Company	The state of the s	100000000000000000000000000000000000000

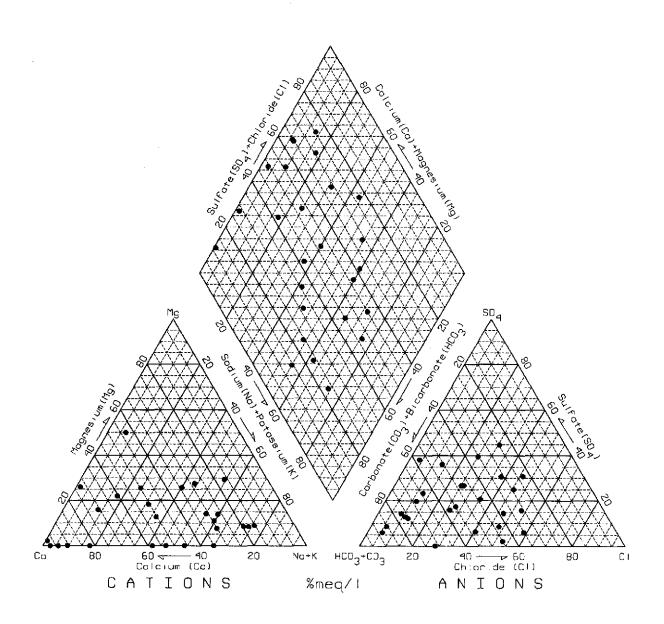


Figure 3 - Piper diagram showing all sampling locations. Each sample is plotted in the bottom triangles and is projected into the top parallelogram. Note the large variation and general scatter of points indicating the lack of definable water type.

Figure 4 illustrates stiff diagrams for each sample. The major cations are plotted on the left side of the diagram and the major anions are plotted on the right side of the diagram. A line is drawn connecting the points to form a six-sided polygon. The shapes are then compared to identify similarities or dissimilarities. For these stiff diagrams, the milliequivalent values were multiplied by a factor of five to increase clarity. Large variances in TDS create perceived differences in shapes, which do not necessarily correlate to chemical differences in ion percentages. Similarities are most evident in the strongly calcium-carbonate and sodium-carbonate water types.

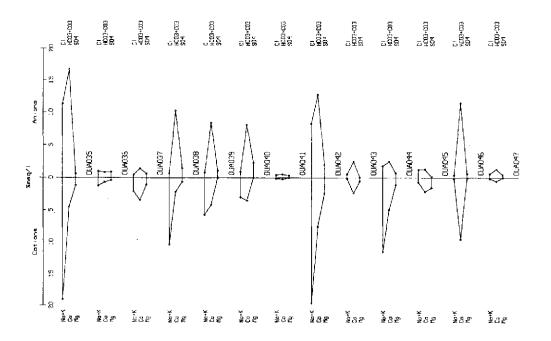
Quattro Pro version 6.0 was used to construct bivariate plots to evaluate ion-pair relationships and trends in the ground-water chemistry. Least squares linear regression analysis was conducted on several plots to evaluate the linearity between the two variables. This method tests the variance between a set of independent and dependent variables. The r^2 value represents the reliability of the regression with a value between zero and unity. The linear relationship of the data set is more reliable as the r^2 value approaches unity.

Figure 5 is a bivariate plot of total cations versus total anions for all sampling points. When properly measured, total cations are approximately equal to total anions (within 2-5 percent). Although a strong linear relationship exists, several of the samples had low total ions with a corresponding large percent difference between total cations and anions, as reflected in the low r² value. Hem (1989) states that larger percent differences can be tolerated in low (<5 meq/L) TDS waters. The percent difference discrepancies will be addressed in the Quality Control section of this report.

Figure 6 is a bivariate plot of calcium plus magnesium versus bicarbonate. The plot reveals a poor relationship between the ions. Assuming a source of limestone and/or dolostone for the calcium, magnesium and bicarbonate, a 1:1 relationship should exist between the ions and plot along the dashed line in Figure 6. Although some of the points lie on the dashed line, a large percentage are above the line suggesting a depletion in calcium and magnesium with respect to bicarbonate. The graph demonstrates that other mechanisms besides simple dissolution are occurring which control the calcium and/or bicarbonate concentrations. Similarly, the bivariate plot of sodium versus chloride (Figure 7) shows that a mechanism other than halite dissolution is controlling sodium and chloride concentrations and that there is an enrichment of sodium with respect to chloride.

Figure 8 is a plot of calcium and magnesium divided by bicarbonate versus sulfate. This relationship was plotted to evaluate the potential contribution of calcium from gypsum dissolution. If gypsum was a source of additional calcium, the ratio of calcium and magnesium divided by bicarbonate should increase to values greater than one with increases in sulfate. This clearly is not occurring as shown by the random distribution of points within the graph. Figure 9, which adds sulfate to the calcium/bicarbonate relationship, supports this conclusion as indicated by an r² value of 0.42, which did not substantially improve over the r² of 0.38 in Figure 6.

Because of the potential for ion exchange to impact both the calcium/bicarbonate and sodium/chloride ratios depicted in Figures 6 and 7, a bivariate plot was constructed of calcium and magnesium divided by bicarbonate versus sodium divided by chloride. In the absence of ion exchange and other chemical reactions, all samples should plot near the intersection of 1.0 on each axis. The plot (Figure 10) clearly shows a trend of increasing sodium/chloride ratios >1 as calcium/bicarbonate ratios decrease <1. This situation indicates sodium is being enriched at the



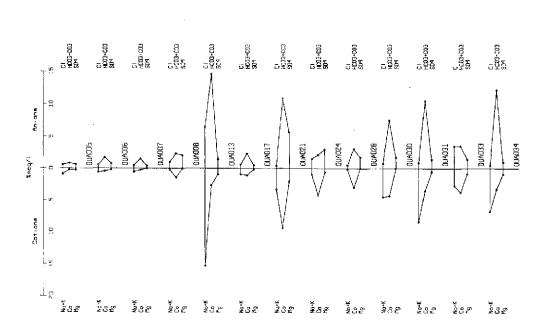


Figure 4 - Stiff diagrams for individual sampling points. Smaller shapes correlate with sampling sites having low TDS. Some sampling sites show shapes indicative of sodium-bicarbonate water or calcium-bicarbonate water. Ion values were multiplied by a factor of five to better show shape trends.

Cations vs. Anions Ouachita Monitoring Area Ouachita Monitoring Area Ouachita Monitoring Area The sequence of the sequence

Figure 5 - Bivariate plot of cations versus anions. Number next to marker identifies sample. The moderate r-squared value is attributed to the poor balance of cations to anions.

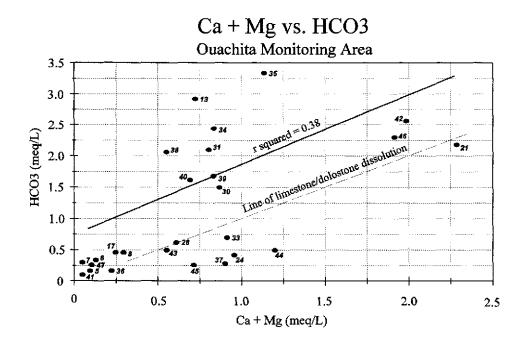


Figure 6 - Bivariate plot of calcium + magnesium versus bicarbonate. Number next to marker identifies sample.

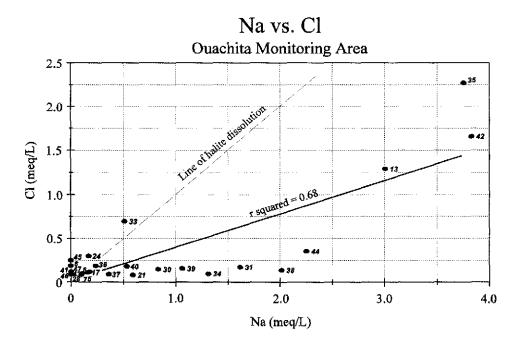


Figure 7 - Bivariate plot of sodium versus chloride. Number next to marker identifies sample.

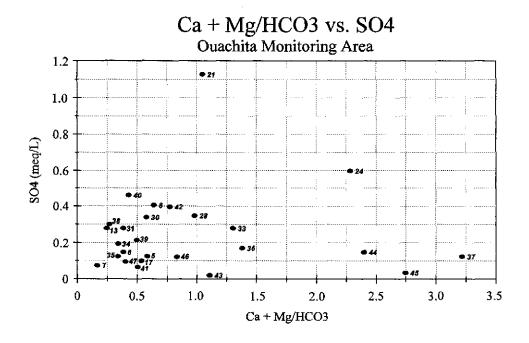


Figure 8 - Bivariate plot of the ratio calcium plus magnesium divided by bicarbonate versus sulfate. Number next to marker identifies sample.

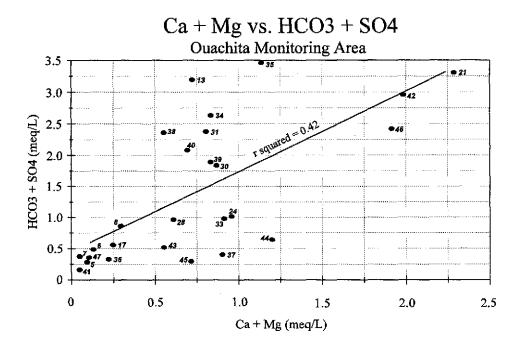


Figure 9 - Bivariate plot of calcium plus magnesium versus bicarbonate plus sulfate. Number next to marker identifies sample.

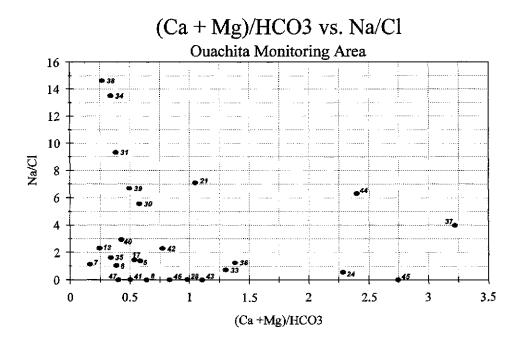


Figure 10 - Bivariate plot of the ratios calcium plus magnesium divided by bicarbonate versus sodium divided by chloride. Number next to marker identifies sample.

expense of calcium and provides strong evidence that cation exchange is occurring with calcium replacing sodium at the mineral site. Although leakage of sodium-bicarbonate ground water from a lower aquifer should be viewed as another possible explanation for the chemical variations, the fact that the ground water is from a recharge zone and generally contains low dissolved solids would tend to support ion exchange over mixing.

To further test the impact of ion exchange on calcium concentrations, a plot similar to Figure 9 was constructed by adding sodium and chloride to the calcium/bicarbonate ratio scheme. Figure 11 shows that the addition of sodium and chloride significantly improved the relationship, with a resulting r² value of 0.79 compared to 0.38 in Figure 6. In addition to showing an increased linear trend, the plotted points correlated closely to the line of limestone/halite dissolution.

Figure 12 is a bar plot showing total dissolved solids (TDS) versus well depth. The wells were arranged into eight groups based on depth. The average TDS was then calculated for each depth range. The most noticeable observation from this graph shows that for wells with a depth of less than 200 feet, the average TDS values range from 49 mg/L to 91 mg/L. The TDS increased substantially for wells greater than 250 feet, with average TDS values ranging from 137 mg/L to 223 mg/L. The higher TDS reflects more dissolution in concert with increased residence/travel time and also more opportunity for exchange processes and other chemical reactions. Figure 13 is a bivariate plot of TDS versus well depth. This graph supports Figure 12 by showing two distinct zones of TDS correlating with well depth. Although some TDS values in the upper left grouping are higher than those in the bottom grouping, a clear relationship between increased TDS and greater well depth is evident.

In view of the differences in TDS between shallow (<200 feet) and deep (>250 feet) wells, it was hypothesized that distinct aquifers might exist in the recharge area similar to the two aquifer systems described in section titled Area Hydrogeology. Because of the higher TDS and increased residence time associated with deeper ground water flow, calcium and sodium ratios were compared to well depths in order to investigate the potential for individual water types between the two systems. Figure 14 displays a bivariate plot of sodium divided by calcium versus well depth. Generally, shallow wells had ratios less than two, whereas deeper wells had ratios greater than two. An inspection of cation/anion percentages revealed that calcium comprised over 50% of the total cations in ten of the fourteen shallow wells; sodium comprised over 50% of the cations in three of the wells; and one well was a mixed calcium/sodium water. In the deep wells, calcium was over 50% of the total cations in only one well, whereas sodium comprised over 50% of the cations in eight of the ten deep wells with one well being a mixed water type. The shallow water in the Sparta recharge zone is viewed as dominantly a calcium carbonate water, and the deeper ground water clearly is a sodium bicarbonate water type. Although well logs from the surrounding recharge area did not consistently denote two separate sand units (sand units varied from one to several), the present data in conjunction with other sources (Broom et al., 1984) would seem to support at least two separate ground-water systems in the area. A less-permeable, clay-rich zone between the two systems would provide an excellent cation exchange membrane by which to account for the chemical variance within the two aquifer systems. It is possible that the less permeable zone (aquitard) correlates with the lack of occurrence of wells between 200 and 250 feet in depth (Figure 12).

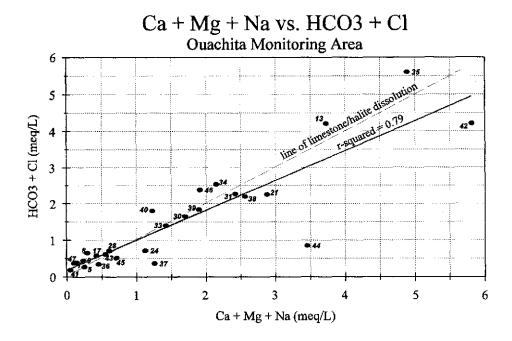


Figure 11 - Bivariate plot of calcium plus magnesium plus sodium versus bicarbonate plus chloride. Number next to marker identifies sample.

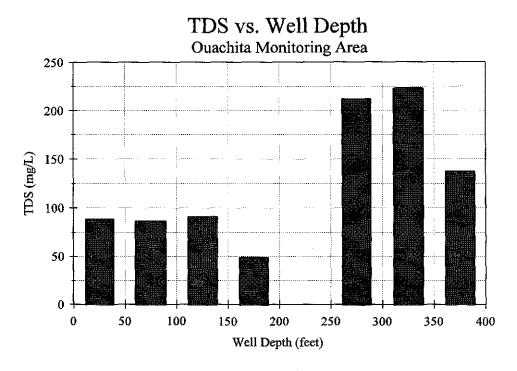


Figure 12 - Bar plot of total dissolved solids (TDS) versus well depth. Each bar indicates the average TDS for wells within the corresponding depth range. Average TDS increases substantially between the wells less than 200 feet and the wells greater than 250 feet. None of the sampled wells were between 200 and 250 feet in depth.

TDS vs. Well Depth Ouachita Monitoring Area 28 33 Well Depth (feet) TDS (mg/L)

Figure 13 - Bivariate plot of total dissolved solids versus well depth. Number next to marker identifies sample. Two sampling points were not plotted because accurate well depths were unknown. Two distinct zones of TDS concentrations, showing general increase of TDS with depth, are clearly visible in this diagram.

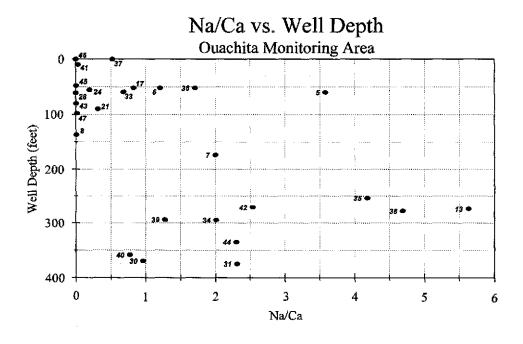


Figure 14 - Bivariate plot of the ratio of sodium to calcium to well depth. Number next to marker identifies sample. Although there is some overlap, the ratio of sodium to calcium generally increases with well depth.

QUALITY CONTROL

A procedure for checking correctness of analyses was used for data quality control, which was based on Section 1030 F of Standard Methods for the Examination of Water and Wastewater, 18th edition (Standard Methods). The procedure involves calculating the TDS, conductance and cation/anion balance for each sample. The calculated TDS and conductance were based on methods outlined in Standard Methods. Cations used for the calculations were Ca²⁺, Mg²⁺, K⁺ and Na⁺; anions used were Cl⁻, F⁻, HCO₃⁻, NO₃⁻ and SO₄²⁻. Ratios of measured TDS/calculated TDS, calculated conductance/measured conductance, calculated TDS/calculated conductance, measured TDS/ measured conductance, cations/conductance and anions/conductance were calculated for each sample. These ratios were then compared to recommended ranges of values (Standard Methods) to evaluate laboratory efficiency. The calculations for each sampling point are listed in Appendix B. Bivariate plots graphically-representing some of the ratios were also constructed to visually display the relationships.

The most useful indicator of laboratory efficiency likely is the percent difference between the cation and anion sums. Hem (1989) states that for waters of moderate concentration (250-1,000 mg/L TDS), the percent difference should be less than two percent. Hem additionally states that a somewhat larger percent difference can be tolerated if the total of anions and cations is less than 5.00 meq/L. All but six of the water samples had total cation-anion sums less than 5.00 meq/L. Hem does not provide a recommended percent difference for values under 5.00 meq/L. Conversely, Standard Methods states that the error can be raised to five percent if the cation-anion sum is greater than 10 meq/L; however, only two ground-water samples had a cation-anion sum which exceeded ten meq/L. Two of the ground-water samples had a calculated percent difference which was under the recommended two percent error. Eight of the ground water samples had a calculated percent difference between two and ten percent. The remaining samples had a calculated percent difference greater than ten percent.

Figure 15 is a bivariate plot of laboratory-determined TDS versus calculated TDS. The r-squared value of 0.86 is relatively low for a plot of this type. Normally, the two TDS values should be very close with a resulting r-squared value greater than 0.95 percent. Several points are plotted significantly away (outliers) from the best fit line which is a result of the poor cation-anion balance for several points. The calculated TDS is most likely in error where discrepancies occur because of the poor cation-anion balance. Figure 16 is a bivariate plot of measured TDS versus measured conductivity which shows a stronger linear relationship. Several of the outliers seen in Figure 15 have moved closer to the fit, supporting the supposition that the laboratory TDS is more accurate than the calculated TDS. Figures 17 and 18 are bivariate plots of the total cations versus conductance and total anions versus conductance, respectively. Although these plots exhibit strong linear relationships with r-squared values of 0.89 and 0.84, higher values are usually to be expected.

Laboratory TDS vs. Calculated TDS Ouachita Monitoring Area 35 **●** 42 Calculated TDS (mg/L) Laboratory TDS (mg/L)

Figure 15 - Bivariate plot of laboratory weighed TDS versus mathematically calculated TDS (From cation-anion sums). Number next to marker identifies sample. Although generally considered a strong fit, the r-squared value of 0.86 is relatively low for this type of graph. The points should fall closer to the line. The marginal fit is attributed to the poor cation-anion balance.

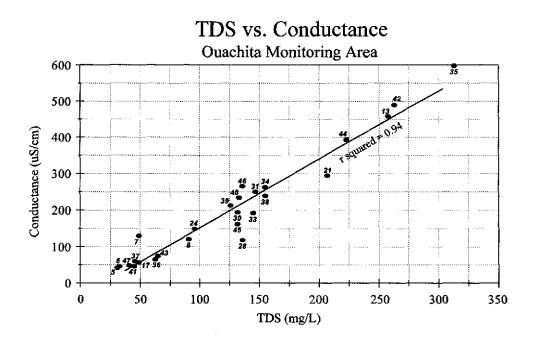


Figure 16 - Bivariate plot of total dissolved solids (TDS) versus conductance. Number next to marker identifies sample. The strong linear relationship is consistent with the expected increase of conductance with increased TDS.

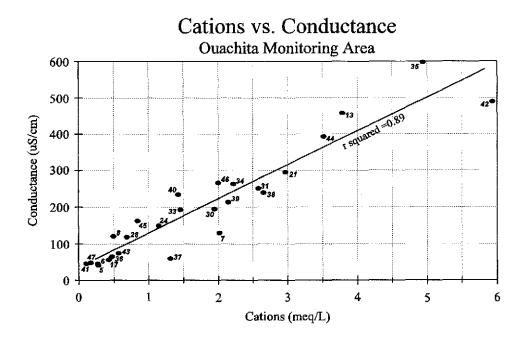


Figure 17 - Bivariate plot of cations versus conductance. Number next to marker indicates sample.

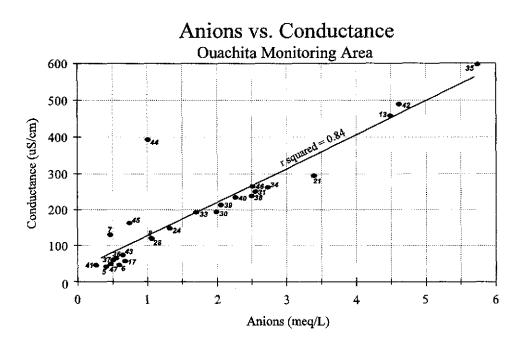


Figure 18 - Bivariate plot of anions versus conductance. Number next to marker identifies sample. The strong correlation between parameters is also expected.

SUMMARY AND CONCLUSIONS

The Ouachita Monitoring Area is located in the Gulf Coastal Plain physiographic province and is underlain predominantly by unconsolidated Tertiary sediments with some Quaternary alluvium and terrace deposits. The monitoring area is in the recharge area of the Sparta aquifer, which is the most heavily used aquifer in the state. Most of the wells in the monitoring area penetrate the Sparta aquifer; however, several wells appear to partially penetrate the underlying Cane River formation/aquifer. As it is the recharge area, the Sparta is unconfined in the monitoring area.

The ground-water quality is generally good in the monitoring area and ranges from a sodium bicarbonate type to a calcium bicarbonate type with several sites exhibiting a mix of ionic constituents. Water chemistry compared to well depth suggests that two separate aquifer systems are present; a shallow system, which is generally a calcium-bicarbonate water type, and a deep system, which is a sodium-bicarbonate water type. Evidence for cation exchange was observed through graphical methods and inspection of ion ratios. The low TDS values measured and calculated for the ground water samples are indicative of a relatively short residence time for the ground water which would be expected given that the monitoring area is in a recharge area.

Monitoring in Ouachita County will continue according to the three-year timetable. The next scheduled sampling event will take place during FY99. In addition to the currently analyzed parameters, semi-volatile organic compound analysis will be conducted on the collected samples.

REFERENCES

- Albin, D.R., 1964, Geology and Ground-Water Resources of Bradley, Calhoun, and Ouachita Counties, Arkansas. United States Geological Survey Water-Supply Paper 1779-G 32 p., 7 pl.
- Broom, M.E., Kraemer, T.F., and Bush, W.V., 1984, A Reconnaissance Study of Saltwater Contamination in the El Dorado Aquifer, Union County, Arkansas. United States Geological Survey Water-Resources Investigations Report 84-4012, 47 p., 13 pl.
- Cushing, E.M., Boswell, E.H., and Hosman, R.L., 1964, General Geology of the Mississippi Embayment, Water Resources of the Mississippi Embayment, United States Geological Survey Professional Paper 448-B, 25 p.
- Fitzpatrick, D.J., Fitzpatrick, J.M., and McWreath, H., 1990, Geohydrologic Characteristics and Simulated Response to Pumping Stresses in the Sparta Aquifer in East-Central Arkansas, United States Geological Survey Water-Resources Investigations Report 88-4201, 50 p., 16 pl.
- Haley, B.R., 1993, Geologic Map of Arkansas. United States Geological Survey
- Hem, J.D., 1989, Study and Interpretation of the Chemical Characteristics of Natural Water, Third Edition. United States Geological Survey Water-Supply Paper 2254, 263 p.
- Hosman, R.L., 1969, Geohydrology of the Coastal Plain Aquifers of Arkansas. United States Geological Survey Hydrologic Investigations Atlas HA-309, 1 p.
- Hosman, R.L., 1982, Outcropping Tertiary Units in Southern Arkansas. United States Geological Survey Map I-1405, 1 p.
- Hosman, R.L., Long, A.T., Lambert, T.W., and others, 1968, Tertiary Aquifers in the Mississippi Embayment, Water Resources of the Mississippi Embayment, United States Geological Survey Professional Paper 448-D, 29 p, 8 pl.
- Payne, J.N., 1968, Hydrologic Significance of the Lithofacies of the Sparta Sand in Arkansas, Louisiana, Mississippi and Texas, Geohydrology of the Claiborne Group. United States Geological Survey Professional Paper 569-A, 17 p., 10 pl.
- Petersen, J.C., Broom, M.E., and Bush, W.V., 1985, Geohydrologic Units of the Gulf Coastal Plain in Arkansas. United States Geological Survey Water-Resources Investigations Report 85-4116, 20 p., 9 pl.
- Van Schaik, E.J. and Kresse, T.M., 1994, Status Report Arkansas Prototype Monitoring Program, Arkansas Department of Pollution Control and Ecology Publication WQ 94-04-2, 59 p.

Appendix A - Summary of Analytical Data

Table 4 - Conventional Parameters

Sample Location	Sample Date	рН	Alkalinity mg/l	Cond. umhos	HCO3 mg/l	CI mg/l	NH3-N mg/l	NO3-N mg/l	O-Phos. mg/l	T-Phos. mg/l	\$04 mg/l	Total Coliform col/100ml	Fecal Coliform col/100ml	TOC mg/i	TSS mg/l	TDS mg/l	Hardness mg/l
OUA005	870106	4.30	15	*		4.0	0.06	0.05	0.01K	•	4.0	4K	4K	1.7	*	33	12
	891205	*	•	*		5.0	0.11	0.27	0.07	•	9.0	*	*	*	•	*	*
	920000		*	*	*	•	•	*		•	•	*	•	*	*	•	•
0114000	960625	6.22	B	42 *	9.8	4.1	0.05K	0.42	0.03K	0.03K	6.0	*		1.6	1K	31	5
OUA006	870106	4.00	5			4.0	0.02	0.54	0.01K		3.0	4K	4K	1.0		24	12K
	891205 920000		*		*	4.0	0.08	0.05	0.04		6.0		•	-			*
	950625	6.91	17	46	20.7	3.7	0.05K	0.18	0.03K	0.03K	7.1	*	•	1.2	416	33	6
OUA007	861216	5,50	13	30	20.1	3.0	0.08	0.16	0.03K	0.03K	2.0	8.0	4K	1.3	1K	39	10
COMMO	891031	*	*	*		3.0	0.00	0.02K	0.03K		4.0	4.0	*	1.7			*
	921101	*	+	*	*	3.0	0.05K	0.02K	0.05		1K	*	1K		*	*	*
	960625	6.20	15	130	18.3	3.1	0.06	0.10	0.03K	0.03K	3,6	*	*	1.2	54.5	49	6
OUA008	870106	5.00	20			5.0	0.12	0.01	0.04	•	29.0	4K	4K	2.2		12	30
	890000	•	*	*	*	•	•	•	•	*	•	*	•	-	*	-	-
	920000	•	*	•	*	*	*	*	*	•	*	-	*	*		•	*
	. 960711	6.13	23	121	28.1	6.8	0.10	0.07	0.03	0.07	19.5			1.8	4.0	91	9
OUA013	861215	•	118	430		40.0	0.74	0.01	0.28	*	10.0	4K	4K	3.6	*	270	35
	890000	•	*	•	•	•	*	*	*	•	*	*	*	•	*	•	•
	920000	•	•	•	*	•	•	•	•	•	•	*	•	•	*	•	•
0114047	960626	8.05	146	458	178.1	45.9	0.69	0.10	0.23	0.26	13.4	*	· · ·	1.3	1K	258	36
OUA017	861211	5.50	6	47		4.0	0.02	0.09	0.01K	•	11.0	•		2.1		35	12
	891024	5,57		*		4.0	0.05K	0.62	0.04		3.0		*			-	
	921101 960625	5.80	23	57		2.0	0.07	0.27	0,03		1K	-					
OUA021	861216	7.10	86	333	28.1	4.3 3.0	0.05K 0.02	0.14	0.03K 0.09	0.03K	4.8 49.0	12.0	4K	4.1	<u>-1K</u> -	49 206	12
CONCZI	891024	7.32	•	*		3.0	0.05K	0.08	0.10		56.0	12.0	*	*	*	200	124
	921012	*			•	4.0	0.05K	0.09	0.06	*	54.0		1K		*	*	
	960624	8.00	109	295	133	2.9	0.05K	0.25	0.09	0.18	54.2		*	1K	1.0	207	114
OUA024	861215	6.10	19	73		5.0	0.15	0.14	0.03	4	2.0	240.0	4K	3.2	*	91	26
	890000		•	٠	•		•	•	•		-	•	•	+	+	•	*
	920000	-		*			•	•	•	•		•	•	•	•	•	
	960625	8.94	21	149	25.6	10.7	0.05K	0.17	0.11	0.16	28.7	*	•	2.5	1K	96	48
OUA028	861211	6.30	17	78		1.0	0.03	0.01	0.01	+	15.0	4K	4K	0.5	•	53	30
	891017	*	*	*		11.0	0.11	0.02K	•	•	54.0	*	*	•	*	w	•
	921101	*	*	-		6.0	0.07	0.10	0.14	*	15.0	•	1K	•	*	*	*
	960710	6.14	31	119	37.8	3.4	0.05K	0.09	0,03K	0.03K	16.7			1.4	2.5	136	29
OUA030	861210	5.60	59	180		5.0	0.23	0.01K	0.13	*	16.0	4K	4K	0.6		103	48
	891205				-	10.0	0.05K	0.02K	0.03		14.0	÷		÷	·		-
	921026 960627	5.93	75	195	91,5	10.0	0.05K	0.04 0.10	0.04		14.0		1K			400	40
OUA031	861210	7.10	88	228	91,3	5.3 5.0	0.23	0.01K	0.10	D.26	16.3		4K	1K 3.7	3.0	132	43 40
00/001	891205	7.10	*	220		11.0	0.05	0.01K	0.03K	-	10.0	4K →	41	3.7		129	40
	921026	*			*	13,0	0.05K	0.021	0.038		11.0		1K		-		
	960827	7.67	105	251	128.1	6.1	0.34	0.09	0.05	0.21	13,4		*	1.0	1K	147	40
OUA033	861215	5.65	13	197		35.0	0.04	1.60	0.10	•	7.0	8.0	4K	3.5	•	153	32
	891017	•	•	•	•	26.0	0.11	1.64	•		20.0	•	*	•		*	-
	921025	•	*	*	*	30.0	0.05K	3.33	0,37		5.0	•	1K	•	•	*	
	960625	6.26	35	193	42.7	24.7	D.05K_	1.56	0.03K	0.03K	13.4			1.3	1K	145	46
DUA034	861215	7.40	102	253		4.0	0.39	0.03	0.14	*	7.0	4.0	4K	9.2		176	50
	891017	*	*	*	•	3.0	0.36	0.02K	•	*	10.0	*	•	*	•	•	*
	921026	•		*	*	4.0	0.19	0.05	0.12	•	10.0	•	1K	*		*	•
5 111	960625	7.62	122	263	148.8	3.4	0.37	0.09	0.07	0.13	9.3	*		1.5	1K	155	42
OUA035	960624	8.25	167	598	203.7	80.6	0.55	0.09	0.11	0.12	6.0	•	· ·	1.1	1K	313	57
OUA036	960525	5.21	8	65	9.8	6.7	0.05K	2.11	0.03	0.03K	8.2	_ : _		1K	1K	63	11
OUA037 OUA038	960626 960826	7.50	103	239	17.1	3.2 4.9	0.05K	0.88	0.03K	0.03K	6.0 14.4		<u> </u>	1.1	1K	155	45
OUA039	960627	7.66	84	213	102.5	5.6	0.71	0.09	0.26	0.28	10.3	-	•	1.3 1K	1K 1.5	155 126	28 42
OUA040	960709	6.97	81	235	98.8	6,5	0.23	0.10	0.14	0.14	22.2	*		1.1	4.0	133	35
OUA041	960710	5.49	5	46	6.1	3.2	0.05K	0.52	0.05	0.06	3.2	•	-	2.6	6.0	45	1
OUA042	960626	7.61	128	490	156.2	58.8	0.70	0.02	0.13	0.18	19,1	*	*	1K	1K	263	99
OUA043	960710	7.12	25	74	30.5	4.1	0.05K	2.09	0.03K	0.03K	1K			1.2	1K	65	28
OUA044	960710	7.90	168	393	30.5	12.6	0.05K	0.45	0.11	0.24	7.1	•		1.0	1,0	223	60
OUA045	960710	6.57	13	163	15,9	9.0	0.05K	12.30	0.03K	0.06	1.7	•		1.4	1K	132	36
OUA046	960710	7.32	115	266	140.3	3,1	0.05K	0.45	0.03K	0.05	5.9	•	•	2.0	8.5	136	96
OUA047	960711	5.74	13	49	15.86	4.3	0.05K	0.08	0.03K	0.03	4.6	*	*	1.3	2.0	41	4

Notes: * indicates no analyses conducted for the sample or no sample obtained on the given date "K" indicates actual value is less than the given value

Table 5 - Total Metals, Cations & Anions

Z	l/6n	27.6	40.0	1710.0	11.9	26.1	2210.0	67.5	64.1	49.5	58.3	40.0	271.0	295.0	101.0	37.2	75.7	18.5	13.5	340.0	29.3	28.5	118.0	619.0	68.7	3230.0	34.2
>	ng/J	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K	5.3K
SiO2	mg/l	8.4	7.4	12.1	22.9	16.6	16.4	18.7	5.0	9.09	37.2	18.5	25.3	12.7	10.3	20.3	39.3	24.2	24.3	17.4	19.6	23.4	15.5	13.0	17.2	8.8	14.5
Š	ng/l	10K	10K	10K	10K	10K	10K	₹	₹	Ę.	10K	10K	10K	10K	10K	10K	ž	10K	10K	10 2	왕	첫	10K	10K	10K	10K	10K
g	ı/8⊓	2K	2K	11.3	¥	×	3.4	×	×	2¥	2.7	2K	2K	2K	2K	16.4	7.3	2K	2K	X	2K	χ	4.3	8.7	X	18.4	ΣK
Z	ng/l	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.0K	6.7	8.0K	8.7	6.0K	6.0K
×	l/gm	3.7	2.5	2.3	0.038K	69.1	4.1	13.6	3.9	0.038K	19.2	37.2	11.8	30.2	86.3	5.5	8.3	46.3	24.5	12.3	0.0	88.0	0.038K	51.8	0.038K	0.038K	0.038K
Ž.	ng/I	8.3	62.7	293.0	47.4	20.0	10.6	15.7	2.0K	29.3	70.7	27.6	6.3	26.6	40.2	7.1	13.9	21.0	2.78	54.5	12.7	76.2	7.3	69.3	89.5	35.1	32.8
Mg	∥/gm	9.0	9.0	0.006K	0.006K	2.3	0.4	5.0	1.4	0.006K	0.006K	1.3	2.0	2.2	2.9	1.0	2.6	1.5	0.006K	D.006K	0.006K	5.8	1.2	2.7	3.6	0.3	0.006K
×	∥g/l	0.7	8.0	9.4	1.3	2.0	0.2	2.5	0.8	1.2	2.8	2.4	1.2	1.6	1.8	9.0	2.0	2.2	3.0	2.3	0.7	3.6	9.0	1.6	5.0	6.0	0.7
ш	mg/l	0.04	0.04	0.04	0.1K	0.13	0.06	0.12	0.75	0.1	0.1	60.0	60'0	20.0	60'0	0.04	0.05	90.0	0.11	0.1	0.1K	0.07	0.1K	0.1	0.2	0.1	0.1K
F	ng/I	158	446	51900	4640	203	130	681	64	1370	4930	2660	96	006	137	46	99	807	4800	3910	1130	929	47	929	44	1710	1340
3	∥gn	2.0K	2.0K	92.3	5.9	2.0K	153.0	2.1	16.7	48.6	29.1	2.0K	11.1	2.0K	2.0K	30.6	97.6	2.0K	2.0K	2.0K	2.0	5.4	215.0	21.1	10.2	90.1	3.9
ច់	ng/f	1.3	1.0	2.3	¥	1,	1K	1.1	1K	1K	1.5	1.2	¥	¥	1K	11	3.9	4.6	1.2	1.5	¥	3.9	14	1K	1K	1K	¥
ပိ	ng/l	3.0K	3.8	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	8.4	3.0K	3.2
3	l/6n	0.5K	0.5K	0.5K	0.5K	0.5K	0.63	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0,5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.5K	0.80	0.5K	0.5K	0.5K
Ca	l/g₪	6.0	1.8	1.0	5.9	10.7	4.3	37.6	16.9	12.2	17.4	14.0	15.0	13.1	18.0	2.8	13.8	8.6	16.7	13.9	1.0	30.2	9.1	19.6	8.4	37.9	2.1
Be	l/Bn	3.0K	3.0K	13.1	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K	3.0K
B	J/6n	33.6	36.5	25.2	88.9	117.3	31.2	106.9	25.6	73.3	137.0	152.6	91.7	119.4	178.5	70.5	185.3	101.0	159.8	120.2	24.8	292.4	34.4	186.8	461.0	67.9	28.6
m	пgЛ	7.8	11.4	3.4K	7.2	157.7	6.1	37.4	12.8	6.3	29.1	50.4	14.6	47.7	65.0	15.4	29.1	93.1	40.4	37.5	9.6	165.2	6.4	43.9	18.2	9.6	5.7
As	ng/l	5K	5K	5K	5K	5K	5K	5K	5K	5K	2K	5K	5K	5K	쏬	왌	5k	5k	5k	5k	5k	5k	5k	5k	5k	5k	쏤
₹	l/Bn	215.0	158.9	91.4	21.3	443.5	87.0	133.6	88.7	24.1	819.1	486.8	93.9	46.6	65.6	58.6	144.0	524.7	554.4	33.7	922.7	389.7	28.1	16K	358.3	578.2	150.1
Sample	Date	960625	960625	960625	960711	960626	960625	960624	960625	960710	960627	960627	960625	960625	960624	960626	960626	960626	960627	960709	960710	960626	960710	960710	960710	960710	960711
Sample	Location	OUA005	OUA006	OUA007	OUA008**	OUA013	OUA017	OUA021	OUA024	OUA028	OUAD30	OUA031	OUA033	OUA034	OUA035	OUA036	OUA037	OUA038	OUA039	OUA040	OUA041	OUAD42	OUAD43	OUA044	OUA045	OUA046	OUA047**

Notes: * indicates no analyses conducted for the sample or no sample obtained on the given date ** ICAP metals also run on these samples. Values given are total metals. "K" indicates actual value is less than the given value

Table 6 - Volatile Organic Compound Analyses

Parameter	D.L	Units	Sample Lo OUA013	OUA028	OUA030	OUA031	QUA033	OUAD34	OUA038	OUA039	OUA040	OUA044	OUA04
Acetone	2,00	ug/l	*	20.12	*	†	*	*	*	*	*	20.78	31.04
Benzene	2.00			20.12								20.78	31.04
Bromobenzene	2.00	ug/l	•							•			
Bromochioromethane	2.00	ug/l						*					
Bromodichioromethane	2.00	ug/i			•			*					
Bromoform	2.00	ug/l											
		ug/i			_						_		_
Bromomethane	2.00	ug/l						-	_	_		•	
Carbon Tetrachloride	2.00	ug/l		ì				•					
Chlorobenzene	2.00	ug/l		•	-					*			
Chloroethane	2.00	ug/l						-	•				
Chloroform	2.00	ug/i											
Chloromethane	2.00	ug/i		•		•	•	*	*	•	*	•	*
2-Chlorotoluene	2.00	ug/l		•	*	•	•	*	•	•	*	*	*
4-Chlorotoluene	2.00	ug/I		•	*	*	•	•	*	•	•	•	•
Dibromochloromethane	2,00	ug/I	*	•	•	*	•	*	*	*	*	*	*
1,2-Dibromo-3-chloropropane	2.00	ug/l	*	•	*	•	•	*	*	•	* .	•	*
1,2-Dibromoethane	2.00	ug/l	*	*	*	•	•	*	*	•	•	•	•
Dibromomethane	2.00	ug/l	*	*	*	*	•	*	*	•	*	•	•
1.2-Dichlorobenzene	2.00	ug/l	*	•	*	•	•	*	*	*	*	*	•
1,3-Dichlorobenzene	2.00	ug/l	*	*	*	*	*	*	*	*	*	*	*
1,4-Dichlorobenzene	2.00	ug/l	*	k	*	*	•	*	*	•	*		*
1,1-Dichloroethane	2.00	ug/l	*	*	*	*	*	*	*	*	•	*	*
1,2-Dichloroethane	2.00	ug/l	•	*	*	*	*	*	*		*	•	*
1,1-Dichlaroethene	2.00	ug/l	*	•	*	*	*	*	*	*	*	•	*
Dis-1,2-Dichloroethene	2.00	ug/l	*	•	•	*		*	*	*	+	•	*
Frans-1,2-Dichloroethene	2.00	ug/l	•	*	*	*		•	*		*	*	*
,2-Dichloropropane	2.00	ug/l	•		*	•		*	•	•	•		
1,3-Dichloropropane	2.00	ug/l	•		*	*	*		*		*		
2.2-Dichloropropane	2.00	ug/l		*	*	*		*	*		*	*	•
1.1-Dichloropropene	2.00	ug/l	•	*	*	*		*					
Cis-1,3-Dichloropropene	2.00	ug/l	•	•	*	*		*	*	*		*	
Trans-1,3-Dichloropropene	2.00	ug/l			*								
thylbenzene	2.00	ug/l	*	*			*	*	+		*		
Hexachlorobutadiene	2.00	ug/l	*	*	*			*	*	*	*	*	*
sopropylbenzene	2.00	ug/l		•	*	*			*				
Meta-xylene	2.00	ug/l			*								
Methyl ethyl ketone	2.00	ug/l				*					*		
Methylene Chloride	2.00	-		10.05		2.70					2.05	25.04	
•	2.00	ug/l		18.65		2.79		-			6.95	25.94	31.52
N-Butyl benzene		ug/l								-	-		
N-Propyl benzene	2.00	ug/l		-	_	•	•		•	•	*	•	•
Napthalene	2.00	ug/l		•	•	*	•	*	*	*	*	•	•
Orthoxylene	2.00	ug/I	*	•	•	*	*	*	*	*	*	•	*
^o -Isoprapyi toluene	2.00	ug/l	*	•	*	*	•	*	*	*	*	•	*
Para-xylene	2.00	ug/l	•	*	*	*	•	*	*	•	*	*	•
Sec-butyl benzene	2.00	ug/I	*	*	*	*	•	*	*	•	•	•	•
Styrene	2.00	ug/l	*	•	*	*	•	*	*	*	*	•	*
ert-butyl benzene	2.00	ug/l	•	*	*	*	•	*	•	*	*	*	*
,1,1,2-Tetrachlorethane	2.00	ug/l	*	•	*	*	•	*	•	•	*	•	*
,1,2,2-Tetrachloroethane	2.00	ug/i	•	*	*	•	•	*	*	*	*		*
etrachloroethene	2.00	ug/t	*	•	*	+	•	*	*	*	*	*	*
oluene	2.00	ug/l	*	*	*	*	•	*	*	*	*	•	•
,2,3-Trichlorobenzene	2.00	ug/l	*	•	*	*	•	•	*		•	•	*
2.4-Trichlarobenzene	2.00	ug/l	*	•		•		*	*	•	•		
,1,1-Trichloroethane	2.00	ug/l	*	•	*	*		•	•	*	*	*	•
,1,2-Trichloroethane	2.00	ug/l	*	*	•	•		*	*	•		•	
richloroethene	2.00	ug/l	•		*		•		*	*	*	•	
richloroflouromethane	2.00	ug/l	*		*	•	*		*	*	*	*	
1,2,3-Trichloropropane	2.00	ug/l	*	*	*	*	*	*	*	*		*	
1,2,4-Trimethylbenzene	2.00	ug/l	*			*			*	*	*		
1,3,5-Trimethylbenzene	2.00	ug/l			*	*			*		*	*	
		~9"											-

Notes: * indicates constituent not detected for the sample

Appendix B - Correctness of Analysis Calculations

Sample Location:	OUA005	Sample I	Date:	960625						
Alkalinity (mg/l)	8									
SiO2 (mg/l)	8.4									
Measured conductivity (umho/cm)	41.6									
Infinite dilution conductivity (umho/cm)	41.47									
Ionic strength (M)	0.0005									
Monovalent ion activity coefficient	0.98									
Calculated conductivity (umho/cm) Measured TDS	39.53 31									
Calculated TDS	29.80									
Ratio: Meas TDS/Calc TDS		Should be bet	ween 0.9 an	d 1 1						
Ratio: Calc cond/Meas cond	0.95									
Ratio: Calc TDS/Calc cond	0.75	Should be bet	ween 0.55 a	nd 0.7						
Ratio: Meas TDS/Meas cond	0.75	Should be bet	ween 0.55 a	nd 0.7						
	Constituent:									
	Na	ĸ	Ca	Mg	Fe	CI	504	NQ3	F	HCQ3
Concentration (mg/L)	3.7	0.7	0.9	0.6	0.158	4.06	6.0	0.423	0.04	9.8
Concentration (meq/L)	0.1610		0.0449	0.0494	0.0057	0.1145	0.1249	0.0068	0.0021	0.1606
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96.0636	62,0049	18.9984	61.0171
Concentration (mM)	0.1610		0.0225	0.0247	0.0028	0.1145	0.0625	0.0068	0.0021	0,1606
Charge z (absolute value)	1	1	2	2	2	1 70.4	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	0.80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm) Ionic strength	8.06 8.05E-05		2.67 4.49E-05	2.52 4.94E-05	0.31 5.66E-06	8.75 5.73E-05	9.99 1.25E-04	0.49 3.41E-06	0.11 1.05E-06	7.15 8.03E-05
ione stanger	0.03L-03	0,500-00	4.480-00	4.842-03	3.002-00	3.732-03	1.256-04	3.412-00	1.000-00	0.032-03
Cation sum (meg/L)	0.28									
Anion sum (meg/L)	0.41									
% Difference	-18.93	Should be < 2	:%							
Ion Difference	-0.13									
Ratio: Cation sum*(100)/Measured conductivity	0.67	Should be bet	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	0.98	Should be bet	tween 0.9 an	d 1.1						
Sample Location:	OUA006	Sample I	Date:	960625						
	<u></u>		Date:	960625						
Sample Location: Alkalinity (mg/l) SiO2 (mg/l)	OUA006	<u> </u>	Date:	960625						
Alkalinity (mg/l)	17		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l)	17 7.4		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	17 7.4 46 50.46 0.0006		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) ionic strength (M) Monovalent ion activity coefficient	17 7.4 45 50.46 0.0006 0.97		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	17 7.4 46 50.46 0.0006 0.97 47.81		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	17 7.4 46 50.46 0.0006 0.97 47.81		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	17 7.4 46 50.46 0.0006 0.97 47.81 33									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	17. 7.4 46 50.46 0.0006 0.97 47.81 33 34.59	Should be be	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.66	Should be be	tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc TDS/Calc cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95	Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc TDS/Calc cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc TDS/Calc cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc TDS/Calc cond	17 7.4 46 50.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7	Fe 0.448	CI 3.652	504 7.1	NO3 0.176	F 0.04	HCQ3 20.7
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.96 1.04 0.72 0.72	Should be be Should be be Should be be Should be be K 0.8	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Catculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1067 22.9698	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a Useen 0.55 a Ca 1.8 0.0898 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.5 0.0411 24.3050	0,446 0,0160 55,8470	3.652	7.1	0.176	0.04	20.7 0.3393 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Catculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	17 7.4 46 50.466 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.8 0.0898	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.5 0.0411 24.3050 0.0206	0.446 0.0160	3,65 <u>2</u> 0,1030	7.1 0.1478	0.176 0.0028	0.04 0.0021	20.7 0.3393
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.96 1.04 0.72 0.72 Constituent: Na 2.5 0.1067 22.9898 0.1087	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983 0.0205	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.0898 40.0780 0.0449 2	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 2	0,446 0,0160 55,8470 0,0080 2	3.652 0.1030 35.4527 0.1030 1	7.1 0.1478 96.0636 0.0739 2	0.176 0.0028 62.0049 0.0028	0.04 0.0021 18.9984 0.0021	20.7 0.3393 61.0171 0.3393 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9888 0.1087	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983 0.0205 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0998 40,0780 0.0449 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 o.5 0.0411 24.3050 0.0206 2 53.1	0.446 0.0160 55.8470 0.0080 2 54	3,652 0,1030 35,4527 0,1030 1 76,4	7.1 0.1478 96.0636 0.0739 2 80	0.176 0.0028 62.0049 0.0028 1 71.4	0.04 0.0021 18.9984 0.0021 1 54.4	20.7 0.3393 61.0171 0.3393 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Catculated TDS Catculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc CDS/Meas cond Retio: Calc TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Concentration (mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.96 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 1 50.1	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0898 40.0780 0.0449 2 59.5 5.34	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 253.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9888 0.1087	Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0998 40,0780 0.0449 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 o.5 0.0411 24.3050 0.0206 2 53.1	0.446 0.0160 55.8470 0.0080 2 54	3,652 0,1030 35,4527 0,1030 1 76,4	7.1 0.1478 96.0636 0.0739 2 80	0.176 0.0028 62.0049 0.0028 1 71.4	0.04 0.0021 18.9984 0.0021 1 54.4	20.7 0.3393 61.0171 0.3393 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mm/m) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.96 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 5.44E-05	Should be be: Should be be: Should be be: Should be be: 0.8 0.0205 39.0983 0.0205 1.73.5 1.50	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0898 40.0780 0.0449 2 59.5 5.34	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 253.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	17 7.4 46 50.466 0.0006 0.97 47.81 33 34.599 0.96 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 5.44 5.44E-05	Should be be Should be be Should be be Should be be K 0.8 0.2005 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0898 40.0780 0.0449 2 59.5 5.34	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 253.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mm/m) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	177 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 50.1 5.446 5.44E-05	Should be be Should be be Should be be Should be be K 0.8 0.2005 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0998 40.0780 0.0449 2 59.5 5.34 8.98E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 253.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Retio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	177 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 50.1 5.446 5.44E-05	Should be be: Should be be: Should be be: Should be be: K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.8 0.0998 40.0780 0.0449 2 59.5 5.34 8.98E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.5 0.0411 24.3050 0.0206 253.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Catculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 1 50.1 5.44E-05 0.28 0.26 0.36.61	Should be be: Should be be: Should be be: Should be be: K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.8 40.0780 0.0449 2 59.5 5.34 8.98E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 	0.446 0.0160 55.8470 0.0080 2 54 0.86	3,652 0,1030 35,4527 0,1030 1 76,4 7,87	7.1 0.1478 96.0636 0.0739 2 80 11.83	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10

Sample Location:	OUA005	Sample I	Date:	960625				·····		
Alkalinity (mg/i)	8									
SiO2 (mg/l)	8.4									
Measured conductivity (umho/cm)	41.6									
Infinite dilution conductivity (umho/cm)	41.47									
Ionic strength (M)	0.0005									
Monovalent ion activity coefficient	0.98									
Calculated conductivity (umho/cm) Measured TDS	39.53 31									
Calculated TDS	29.80									
Retio: Meas TDS/Calc TDS		Should be bet	ween 0.9 and	11.1						
Ratio: Calc cond/Meas cond		Should be bet								
Ratio: Calc TDS/Calc cond		Should be bet								
Ratio: Meas TDS/Meas cond	0.75	Should be bet	ween 0.55 an	d 0.7						
	Constituent:									
	Na	к	Ça	MΩ	Fe	CI	\$04	NO3	F	HCO3
Concentration (mg/L)	3.7	0.7	0.9	0.6	0.158	4.06	6.0	0.423	0.04	9.8
Concentration (meq/L)	0.1610	0.0179	0.0449	0.0494	0.0057	0.1145	0.1249	0.0068	0.0021	0.1606
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35,4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.1610	0.0179	0.0225	0.0247	0.0028	0.1145	0.0625	0.0068	0.0021	0.1806
Charge z (absolute value)	1	1	2	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	8.06	1.32	2.67	2.62	0.31	8.75	9.99	0.49	0.11	7.15
lonic strength	8.05E-05	8.95E-06	4.49E-05	4.94E-05	5.56E-06	5.73E-05	1.25E-04	3.41E-06	1,05E-06	8.03E-05
Cation sum (meq/L)	0.28									
Anion sum (meq/L)	0.41									
% Difference	-18.93	Should be < 2	%							
lon Difference	-0.13									
Ratio: Cation sum*(100)/Measured conductivity		Should be bet								
Ratio: Anion sum*(100)/Measured conductivity	0.98	Should be bet	ween 0.9 and	l 1.1						
Sample Location:	OUA006	Sample I	Date:	960625		····				
Sample Location:	OUA006	Sample I	Date:	960625						
		Sample I	Date:	960625					· —	
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm)	17 7.4 45	Sample I	Date:	960625		•••••				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	17 7.4 45 50.46	Sample I	Date:	960625			_			<u> </u>
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	17 7.4 45 50.46 0.0006	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	17 7.4 45 50.46 0.0006 0.97	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite diution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	17 7.4 45 50.46 0.0006 0.97 47.81	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	17 7.4 45 50.46 0.0006 0.97 47.81	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	17 7.4 45 50.46 0.0006 0.97 47.81 33	•							-	- 44, g. 18. 11.
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.69	Should be bet	ween 0.9 and	11.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	17 7.4 45 50.46 0.0006 0.97 47.81 33 34.59	Should be bet	ween 0.9 and ween 0.9 and	J.1.1 J.1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	17 7.4 45 50.46 0.0006 0.97 47.81 33 34.69 0.95 1.04	Should be bet	ween 0.9 and ween 0.9 and ween 0.55 and	J 1.1 J 1.1 J 1.1 J 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/em) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/em) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	17 7.4 45 50.46 0.0006 0.97 47.81 33 34.69 0.95 1.04	Should be bet Should be bet Should be bet	ween 0.9 and ween 0.9 and ween 0.55 and	J 1.1 J 1.1 J 1.1 J 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/em) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/em) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.59 0.95 1.04 0.72	Should be bet Should be bet Should be bet	ween 0.9 and ween 0.9 and ween 0.55 and	J 1.1 J 1.1 J 1.1 J 0.7		CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.69 0.95 1.04 0.72 0.72 Constituent: Na 2.5	Should be bet Should be bet Should be bet Should be bet K 0.8	ween 0.9 and ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8	J 1.1 J 1.1 d 0.7 d 0.7	Fe 0.446	CI 3.652	SO4 7.1	0.176	F 0.04	HCO3 20.7
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Incommon to activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5	Should be bet Should be bet Should be bet Should be bet K 0.8 0.0205	ween 0.9 and ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0898	Mg 0.5 0.0411	0.446 0.0160	3.652 0.1030	7.1 0.1478	0.176 0.0028	0.04 0.0021	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898	Should be bet Should be bet Should be bet K 0.8 0.0205 39.0983	ween 0.9 and ween 0.55 and ween 0.55 and ween 0.55 and Ca 1.8 0.0998 40.0780	0.1.1 11.1 d 0.7 d 0.7 Mg 0.5 0.0411 24.3050	0.446 0.0160 55.8470	3.652 0.1030 35.4527	7.1 0.1478 96.0636	0.176 0.0028 62.0049	0.04 0.0021 18.9984	20.7 0.3393 61.0171
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	17 7.4 46 50.46 D.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087	Should be bet Should be bet Should be bet K 0.8 0.0205 39.0983 0.0205	ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0398 40.0780 0.0449	Mg 0.5 0.0411 24.3050 0.0206	0.446 0.0160 55.8470 0.0080	3.652 0.1030 35.4527 0.1030	7.1 0.1478 96.0636 0.0739	0.176 0.0028 62.0049 0.0028	0.04 0.0021 18.9984 0.0021	20.7 0.3393 61.0171 0.3393
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dition conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087	Should be bet Should be bet Should be bet Should be bet U.8 0.0205 39.0983 0.0205	ween 0.9 and ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0398 40.0780 0.0449 2	Mg 0.5 0.0411 24.3050 0.0206	0.446 0.0160 55.8470 0.0080 2	3.652 0.1030 35.4527 0.1030	7.1 0.1478 96.0636 0.0739 2	0.176 0.0028 62.0049 0.0028	0.04 0.0021 18.9984 0.0021	20.7 0.3393 61.0171 0.3393 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.69 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087	Should be bet Should be bet Should be bet K 0.8 0.0205 39.0983 0.0205 1 73.5	ween 0.9 and ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0898 40.0780 0.0449 2 59.5	Mg 0.5 0.0411 24.3050 0.206 2	0.446 0.0160 55.8470 0.0080 2 54	3.652 0.1030 35.4527 0.1030 1 76.4	7.1 0.1478 96.0636 0.0739 2 80	0.176 0.0028 62.0049 0.0028 1 71.4	0.04 0.0021 18.9984 0.0021 1	20.7 0.3393 61.0171 0.3393 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite diffusion conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value)	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087	Should be bet Should be bet Should be bet K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50	ween 0.9 and ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0398 40.0780 0.0449 2	Mg 0.5 0.0411 24.3050 0.0206	0.446 0.0160 55.8470 0.0080 2	3.652 0.1030 35.4527 0.1030	7.1 0.1478 96.0636 0.0739 2	0.176 0.0028 62.0049 0.0028	0.04 0.0021 18.9984 0.0021	20.7 0.3393 61.0171 0.3393 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/nM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	17 7.4 46 50.46 D.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 1 50.1 5.45 5.44E-05	Should be bet Should be bet Should be bet K 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0898 40.0780 0.0449 2 59.5 5.34	Mg 0.5 0.0411 24.3050 0.0206 2 53.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3.652 0.1030 35.4527 0.1030 1 76.4 7.87	7.1 0.1478 96.0636 0.0739 2 80 11.63	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cand Ratio: Calc Cond/Meas cand Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	17 7.4 45 50.46 0.0006 0.97 47.81 33 34.69 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 50.15 5.45 5.44E-05	Should be bet Should be bet Should be bet & 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0898 40.0780 0.0449 2 59.5 5.34	Mg 0.5 0.0411 24.3050 0.0206 2 53.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3.652 0.1030 35.4527 0.1030 1 76.4 7.87	7.1 0.1478 96.0636 0.0739 2 80 11.63	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Monovalent ion activity coefficient Calculated TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	17 7.4 45 50.46 D.0006 0.97 47.81 33 34.69 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 50.1 5.45 5.44E-05	Should be bet Should be bet Should be bet & 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	ween 0.9 and ween 0.9 and ween 0.55 an Ca 1.8 0.0398 40.0780 0.0449 2 59.5 5.34 8.98E-05	Mg 0.5 0.0411 24.3050 0.0206 2 53.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3.652 0.1030 35.4527 0.1030 1 76.4 7.87	7.1 0.1478 96.0636 0.0739 2 80 11.63	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Concent	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.69 0.05 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 1 50.1 5.45 5.44E-05	Should be bet Should be bet Should be bet & 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	ween 0.9 and ween 0.9 and ween 0.55 an Ca 1.8 0.0398 40.0780 0.0449 2 59.5 5.34 8.98E-05	Mg 0.5 0.0411 24.3050 0.0206 2 53.1 2.18	0.446 0.0160 55.8470 0.0080 2 54 0.86	3.652 0.1030 35.4527 0.1030 1 76.4 7.87	7.1 0.1478 96.0636 0.0739 2 80 11.63	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Infinite dilution conductivity (umho/am) Monovalent ion activity coefficient Calculated TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	17 7.4 46 50.46 0.0006 0.97 47.81 33 34.59 0.95 1.04 0.72 0.72 Constituent: Na 2.5 0.1087 22.9898 0.1087 1 50.1 5.45 5.44E-05 0.28 0.60 -38.61	Should be bet Should be bet Should be bet & 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	ween 0.9 and ween 0.55 an ween 0.55 an Ca 1.8 0.0998 40.0780 0.0449 2 59.5 5.34 8.98E-05	Mg 0.5 0.0411 24.3050 0.0206 2 53.1 2.18 4.11E-05	0.446 0.0160 55.8470 0.0080 2 54 0.86	3.652 0.1030 35.4527 0.1030 1 76.4 7.87	7.1 0.1478 96.0636 0.0739 2 80 11.63	0.176 0.0028 62.0049 0.0028 1 71.4 0.20	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	20.7 0.3393 61.0171 0.3393 1 44.5 15.10

Sample Location:	OUA007	Sample I	Date:	960625						
Alkalinity (mg/l)	15									
SiO2 (mg/l)	12.1									
Measured conductivity (umho/cm)	130									
Infinite dilution conductivity (umho/cm)	135.44									
lonic strength (M)	0.0022									
Monovalent ion activity coefficient	0.95									
Calculated conductivity (umho/cm)	122.26									
Measured TDS	49									
Calculated TDS	83.56									
Ratio: Meas TDS/Calc TDS	0.59	Should be bet	lween 0.9 an	11.1						
Ratio: Calc cond/Meas cond	0.94	Should be bet	tween 0.9 and	1.1						
Ratio: Calc TDS/Calc cond	0.68	Should be be	lween 0,55 a	nd 0.7						
Ratio: Meas TDS/Meas cond	0.38	Should be be	tween 0.55 a	nd 0.7						
	Constituent:									
	Na	ĸ	Ca	Mg	Fe	CI	504	NO3	F	HCQ3
Concentration (mg/L)	2.3	0.4	1.0	0.0	51.9	3.116	3.6	0.103	0.04	18.3
Concentration (meq/L)	0.1001	0.0102	0.0499	0.0005	1.8585	0.0879	0,0750	0.0017	0.0021	0.2999
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96,0636	62.0049	18.9984	61.0171
Concentration (mM)	0.1001	0.0102	0.0250	0.0002	0.9295	0.0879	0.0375	0.0017	0.0021	0.2999
Charge z (absolute value)	1	1	2	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	BO	71.4	54,4	44.5
Infinite dilution conductivity (umho/cm)	5.01	0.75	2.97	0.03	100.39	6.72	6.00	0.12	0.11	13.35
Ionic strength	5.00E-05	5.12E-06	4.99E-05	4.94E-07	1.86E-03	4.40E-05	7.50E-05	8.31E-07	1.05E-06	1.50E-04
Cation sum (meq/L)	2,02									
Anian sum (meq/L)	0.47									
% Difference	62,46	Should be < 2	!%							
Ion Difference	1.55									
Ratio: Cation sum*(100)/Measured conductivity	1,55	Should be be	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	0.36	Should be be	tween 0.9 an	d 1.1						
Sample Location:	800AUO	Sample I	Date:	960711						
	OUA008		Date:	960711						
Sample Location: Alkalinity (mg/l) SiO2 (mg/l)			Date:	960711						
Alkalinity (mg/l) SiO2 (mg/l)	23		Date:	960711			····			
Alkalinity (mg/l)	23 22.9		Oate:	960711						ma America (1967)
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	23 22.9 121		Oate:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	23 22.9 121 96.97		Date:	960711	<u>, , , , , , , , , , , , , , , , , , , </u>			<u> </u>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	23 22.9 121 96.97 0.0012		Oate:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	23 22.9 121 96.97 0.0012 0.96		Oate:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalient ion activity coefficient Calculated conductivity (umho/cm)	23 22.9 121 96.97 0.0012 0.96 89.81		Oate:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	23 22.9 121 96.97 0.0012 0.96 89.81									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	23 22.9 121 96.97 0.0012 0.96 89.81 91	Should be be	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04	Should be be	tween 0.9 an tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalient ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						The second secon
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalient ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7	Fe 4.64	CI 5.765	SO4 19.5	NO3 0.072	F 0.1	HC03 28.1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	23 22.9 121 95.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0	Should be be Should be be Should be be Should be be K 1.3 0.0333	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005			19.5 0.4060		0.1 0.0053	28.1 0.4606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0017	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24,3050	4.64 0.1662 55.6470	6.765 0.1908 35.4527	19.5 0.4060 96.0636	0.072 0.0012 62.0049	0.1 0.0053 18.9984	28.1 0.4606 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	23 22.9 121 95.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005	4.64 0.1662	6.765 0.1908	19.5 0.4060	0.072 0.0012	0.1 0.0053	28.1 0.4606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration [mg/L] Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	23 22.9 121 96.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9808 0.0017	Should be be Should be be Should be be Should be be K 1.3 0.0333 9.0963 0.0333	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 5.9 0.2944 40.0780 0.1472 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2	4.64 0.1662 55.6470 0.0831 2	6.765 0.1908 35.4527 0.1908 1	19.5 0.4060 96.0636 0.2030 2	0.072 0.0012 62.0049	0.1 0.0053 18.9984	28.1 0.4606 61.0171 0.4606 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	23 22.9 121 96.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9988 0.0017	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983 0.0333 1 73.5	tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1	4.64 0.1662 55.8470 0.0831 2 54	6.765 0.1908 35.4527 0.1908 1 76.4	19.5 0.4060 96.0636 0.2030 2 80	0.072 0.0012 62.0049 0.0012	0.1 0.0053 18.9984 0.0053 1 54.4	28.1 0.4606 61.0171 0.4606 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	23 22.9 121 95.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9988 0.0017 1 1 50.1	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983 0.0333 1.73.5 2.44	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5 17.52	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	23 22.9 121 96.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9988 0.0017	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983 0.0333 1.73.5 2.44	tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1	4.64 0.1662 55.8470 0.0831 2 54	6.765 0.1908 35.4527 0.1908 1 76.4	19.5 0.4060 96.0636 0.2030 2 80	0.072 0.0012 62.0049 0.0012 1 71.4	0.1 0.0053 18.9984 0.0053 1 54.4	28.1 0.4606 61.0171 0.4606 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	23 22.9 121 95.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9988 0.0017 1 1 50.1	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0963 0.0333 1 73.5 2.44 1.56E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5 17.52	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.26E-07	Should be be Should be be Should be be Should be be K 1.3 0.0333 9.0963 0.0333 1 73.5 2.44 1.66E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5 17.52	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 0.74 0.84 0.75 Constituent: Na 0.0017 22.9898 0.0017 1 50.1 0.08 8.26E-07	Should be be Should be be Should be be Should be be K 1.3 0.0333 9.0963 0.0333 1 73.5 2.44 1.66E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 5.9 0.2944 40.0780 0.1472 2 59.5 17.52 2.94E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/rM) Concentration (ml/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) % Olfference Ion Difference	23 22.9 121 96.97 0.0012 0.96 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.26E-07 0.50 1.06 -36.41 -0.57	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983 0.0333 1 73.5 2.44 1.56E-05	tween 0.9 an tween 0.55 a tween 0.55 a 5.9 0.2944 40.0780 0.1472 2 59.5 17.52 2.94E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 0.005 24.3050 0.0002 2 53.1 0.03 4.94E-07	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) 96 Difference	23 22.9 121 96.97 0.0012 0.98 89.81 91 75.04 1.21 0.74 0.84 0.75 Constituent: Na 0.0 0.0017 22.9808 0.0017 22.9808 8.26E-07 0.50 1.068 -36.41 -0.57	Should be be Should be be Should be be Should be be K 1.3 0.0333 39.0983 0.0333 1 73.5 2.44 1.66E-05	tween 0.9 an tween 0.55 a tween 0.55 a 5.9 0.2944 40.0780 0.1472 2 59.5 17.52 2.94E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1 0.03 4.94E-07	4.64 0.1662 55.8470 0.0831 2 54 8.98	6.765 0.1908 35.4527 0.1908 1 76.4 14.58	19.5 0.4060 96.0636 0.2030 2 80 32.48	0.072 0.0012 62.0049 0.0012 1 71.4 0.08	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	28.1 0.4606 61.0171 0.4606 1 44.5 20.49

Sample Location:	OUA013	Sample I	Date:	960626						
Alkalinity (mg/l)	146									
SiO2 (mg/l)	16.6									
Measured conductivity (umho/cm)	458									
Infinite dilution conductivity (umho/cm)	448.10									
Ionic strength (M)	0.0046									
Monovalent ion activity coefficient	0.93									
Calculated conductivity (umho/cm)	388,10									
Measured TDS	258									
Calculated TD\$	247.96									
Ratio: Meas TDS/Calc TDS		Should be bei								
Ratio: Calc cond/Meas cond	0.85									
Ratio: Calc TDS/Catc cond	0.64	-								
Ratio: Meas TDS/Meas cond	0.56	Should be bel	tween 0.55 a	nd 0.7						
	Constituent;	.,	_		_				_	
Cancentration (mall)	Na eo 1	К	Ca 10.7	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	89.1	2.0	10.7	2.3	0.203	45.857	13.4	0.096	0.13	178.1
Concentration (meg/L) Molecular weight (mg/mM)	3.0059 22.9898	0.0512 39.0983	0.5339	0,1893	0.0073	1,2936	0.2790	0.0015	0.0068	2.9191
Molecular weight (mg/mM) Concentration (mM)	3.0059	0.0512	40.0780 0.2670	24.3050 0.0946	55.8470 0.0036	35.4527 1,2936	96.0636 0.1395	62.0049 0.0015	18.9984 0.0068	61.0171 2.9191
Charge z (absolute value)	3.0033	1	0.2670	0.0346	2	1,2930	0.1383	1	0.0000	2.3131
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	150.59	3.76	31.77	10.05	0.39	98,83	22.32	0.11	0.37	129.90
Ionic strength	1.50E-03	2.56E-05	5.34E-04	1.89E-04	7.27E-06	6.47E-04	2.79E-04	7.74E-07	3.42E-06	1.46E-03
Cation sum (meg/L)	3.79									
Anion sum (meg/L)	4.50									
% Difference	-8.60	Should be < 2	2%							
Ion Difference	-0.71									
Ratio: Cation sum*(100)/Measured conductivity	0.83	Should be be	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	0.98	Should be be	tween 0.9 an	d 1.1						
Sample Location:	OUA017	Sample I	Date:	960625						
Sample Location: Alkalinity (mg/l)	OUA017		Date:	960625	 					
			Date:	960625						
Alkalinity (mg/l)	23		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l)	23 16.4		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	23 16.4 57		Date:	960625	· · · · · · · · · · · · · · · · · · ·					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	23 16.4 57 62.11		Date:	960625	· ·					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	23 16.4 57 62.11 0.0007		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	23 16.4 57 62.11 0.0007 0.97 58.47		Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) infinite dilution conductivity (umho/cm) ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	23 16.4 57 62.11 0.0007 0.97 58.47	<u> </u>								
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62	Should be be	tween 0,9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Incompared to activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01	Should be be	tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Incompared to activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03	Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent:	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent:	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.88 Constituent:	Should be be Should be be Should be be Should be be K 0.2	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4	0.13	4.274	4.8	0.139	0.06	28.1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1	Should be be Should be be Should be be Should be be K 0.2 0.0051	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329	0.13 0.0047	4.274 0.1206	4.8 0.0999	0.139 0.0022	0.06 0.0032	28.1 0.4606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1744 22.9898	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 D.2146 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050	0.13 0.0047 55.8470	4.274 0.1206 35.4527	4.8 0.0999 96,0636	0.139 0,0022 62.0049	0.06 0.0032 18.9984	28.1 0.4606 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22,9898 0.1784	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165	0.13 0.0047 55.8470 0.0023	4.274 0.1206 35.4527 0.1206	4,8 0,0999 96,0636 0,0500	0.139 0.0022 62.0049 0.0022	0.06 0.0032 18.9984 0.0032	28.1 0.4606 61.0171 0.4606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mf/L) Concentration (mg/M) Concentration (mf/L) Charge z (absolute value)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.88 Constituent: Na 4.1 0.1784 22.9898 0.1784	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 D.2146 40.0780 0.1073 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2	0.13 0.0047 55.8470 0.0023 2	4.274 0.1206 35.4527 0.1206	4.8 0.0999 96,0636 0.0500 2	0.139 0,0022 62,0049 0,0022	0.06 0.0032 18.9984 0.0032	28.1 0.4606 81.0171 0.4606 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22.9898 0.1784	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2 53.1	0.13 0.0047 55.8470 0.0023 2 54	4.274 0.1206 35.4527 0.1206 1 76.4	4.8 0.0999 96,0636 0.0500 2 80	0.139 0.0022 62.0049 0.0022 1 71.4	0.06 0.0032 18.9984 0.0032 1 54.4	28.1 0.4606 61.0171 0.4606 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mf/L) Concentration (mg/M) Concentration (mf/L) Charge z (absolute value)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.88 Constituent: Na 4.1 0.1784 22.9898 0.1784	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051 1 1 73.5 0.38	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 D.2146 40.0780 0.1073 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2	0.13 0.0047 55.8470 0.0023 2	4.274 0.1206 35.4527 0.1206	4.8 0.0999 96,0636 0.0500 2	0.139 0,0022 62,0049 0,0022	0.06 0.0032 18.9984 0.0032	28.1 0.4606 61.0171 0.4606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc tDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mm/) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1784 22.9898 0.1784 1	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051 1 73.5 0.38 2.58E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 2 59.5 12.77	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2 53.1 1.75	0.13 0.0047 55.8470 0.0023 2 54 0.25	4,274 0,1206 35,4527 0,1206 1 76,4 9,21	4.8 0.0999 96,0636 0.0500 2 80 7.99	0.139 0.0022 62.0049 0.0022 1 71.4 0.18	0.06 0.0032 18.9984 0.0032 1 54.4 0.17	28.1 0.4606 81.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22.9898 0.1784 1 50.1 8.92E-05	Should be be: Should be be: Should be be: Should be be: K: 0.2 0.0051 39.0983 0.0051 1 73.5 0.38 2.56E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 2 59.5 12.77	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2 53.1 1.75	0.13 0.0047 55.8470 0.0023 2 54 0.25	4,274 0,1206 35,4527 0,1206 1 76,4 9,21	4.8 0.0999 96,0636 0.0500 2 80 7.99	0.139 0.0022 62.0049 0.0022 1 71.4 0.18	0.06 0.0032 18.9984 0.0032 1 54.4 0.17	28.1 0.4606 81.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (imM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22.9898 0.1784 1 50.1 8.94 6.92E-05	Should be be: Should be be: Should be be: Should be be: K: 0.2 0.0051 39.0983 0.0051 1 73.5 0.38 2.56E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 59.5 12.77 2.15E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2 53.1 1.75	0.13 0.0047 55.8470 0.0023 2 54 0.25	4,274 0,1206 35,4527 0,1206 1 76,4 9,21	4.8 0.0999 96,0636 0.0500 2 80 7.99	0.139 0.0022 62.0049 0.0022 1 71.4 0.18	0.06 0.0032 18.9984 0.0032 1 54.4 0.17	28.1 0.4606 81.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (mho-cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22.9898 0.1784 1 50.1 8.94 6.92E-05	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051 1 1,73.5 0.38 2.58E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 59.5 12.77 2.15E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0165 2 53.1 1.75	0.13 0.0047 55.8470 0.0023 2 54 0.25	4,274 0,1206 35,4527 0,1206 1 76,4 9,21	4.8 0.0999 96,0636 0.0500 2 80 7.99	0.139 0.0022 62.0049 0.0022 1 71.4 0.18	0.06 0.0032 18.9984 0.0032 1 54.4 0.17	28.1 0.4606 81.0171 0.4606 1 44.5 20.49
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference	23 16.4 57 62.11 0.0007 0.97 58.47 49 48.62 1.01 1.03 0.83 0.86 Constituent: Na 4.1 0.1784 22.9898 0.1784 6.92E-05	Should be be Should be be Should be be Should be be K 0.2 0.0051 39.0983 0.0051 1 1,73.5 0.38 2.58E-06	tween 0.9 an tween 0.9 an tween 0.55 a Ca 4.3 0.2146 40.0780 0.1073 2 59.5 12.77 2.15E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.4 0.0329 24.3050 0.0185 2 53.1 1.75 3.29E-05	0.13 0.0047 55.8470 0.0023 2 54 0.25	4,274 0,1206 35,4527 0,1206 1 76,4 9,21	4.8 0.0999 96,0636 0.0500 2 80 7.99	0.139 0.0022 62.0049 0.0022 1 71.4 0.18	0.06 0.0032 18.9984 0.0032 1 54.4 0.17	28.1 0.4606 81.0171 0.4606 1 44.5 20.49

Sample Location:	OUA021	Sample I	Date:	960624		-				
Alkalinity (mg/l)	109									
SiO2 (mg/l)	18.7									
Measured conductivity (umho/cm)	295									
Infinite dilution conductivity (umho/cm)	363.41									
lonic strength (M)	0.0049									
Monovalent ion activity coefficient	0,93									
Calculated conductivity (umho/cm)	313.63									
Measured TDS	207									
Calculated TDS	201.00									
Ratio: Meas TDS/Calc TDS	1.03	Should be be	tween 0.9 ar	nd 1.1						
Ratio: Calc cond/Meas cond	1.06									
Ratio: Calc TDS/Calc cond	D.64									
Ratio: Meas TDS/Meas cond		Should be be								
Natio. Indea 12 Cities a Corta	0.10	Ollocid be be	Weell 0.55 a	ind 0.7						
	Constituent:					-			_	
Consentration (mail)	Na 13.6	K	Ca	Mg	Fe	CI	S04	NO3	F	HC
Concentration (mg/L)	13.6		37.6	5.0	0.681	2.948	54.2	0.254	0.12	1
Concentration (meq/L)	0.5916		1.8762	0.4115	0.0244	0.0832	1.1284	0.0041	0.0063	2.1
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96.0636	62.0049	18.9984	61.0
Concentration (mM)	0.5916	0.0640	0.9381	0.2057	0.0122	0.0832	0.5642	0.0041	0.0063	2.1
Charge z (absolute value)	1	1	2	2	2	1	2	1	1	
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71.4	54.4	4
Infinite dilution conductivity (umho/cm)	29,64		111.64	21.85	1.32	6.35	90.28	0.29	0.34	97
ionic strength	2.98E-04	3.20E-05	1.88E-03	4.11E-04	2.44E-05	4.16E-05	1.13E-03	2.05E-06	3.16E-06	1.09E
	2.002.07	0.202 00	1.002-00	4.112-04	1.441-00	4.102-03	1.156-05	2.030,403	J. 10C-00	1,090
Cation sum (meq/L)	2.97									
Anion sum (meg/L)	3.40									
% Difference	-6.87	Should be < 2	2%							
Ion Difference	-0.43									
IOTI DINGIONE	-0.40									
Dollar Cation are \$1400\/Management conductivity	4.04									
Ratio: Anion sum*(100)/Measured conductivity		Should be be Should be be Sample I	tween 0.9 ar				·			
Ratio: Cation sum*(100):Measured conductivity Ratio: Anion sum*(100):Measured conductivity Sample Location: Alkalinity (mg/l)	1.15 OUA024	Should be be	tween 0.9 ar	nd 1.1						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l)	1.15 OUA024	Should be be	tween 0.9 ar	nd 1.1			·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l)	1.15 OUA024 21 5	Should be be	tween 0.9 ar	nd 1.1			·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	1.15 OUA024 21 5 149	Should be be	tween 0.9 ar	nd 1.1			·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) \$102 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	1.15 OUA024 21 5 149 158.25	Should be be	tween 0.9 ar	nd 1.1			.			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) \$(02 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	1.15 OUA024 21 5 149 158.25 0.0020	Should be be	tween 0.9 ar	nd 1.1			· · · · · · · · · · · · · · · · · · ·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionio strength (M) Monovalent ion activity coefficient	1.15 OUA024 21 5 149 158.25 0.0020 0.95	Should be be	tween 0.9 ar	nd 1.1			·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) \$(02 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	1.15 OUA024 21 5 149 158.25 0.0020	Should be be	tween 0.9 ar	nd 1.1			•			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionio strength (M) Monovalent ion activity coefficient	1.15 OUA024 21 5 149 158.25 0.0020 0.95	Should be be	tween 0.9 ar	nd 1.1						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	21 5 149 158.25 0.0020 0.95	Should be be	tween 0.9 ar	nd 1.1						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.96	Sample I	tween 0.9 ar	960625			·			
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 9.6 80.95	Should be be Sample I	tween 0.9 ar	960625						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionio strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	1.15 OUA024 21 59 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96	Should be be Sample I Should be be Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar	960625						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56	Should be be Sample I Should be be Should be be Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 at	960625 ad 1.1 ad 1.1 and 0.7						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionio strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	1.15 OUA024 21 59 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96	Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 at	960625 ad 1.1 ad 1.1 and 0.7						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent:	Should be be Sample I	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a	960625 and 1.1 and 1.1 and 0.7 and 0.7						
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.96 0.96 0.66 Constituent: Na	Should be be Sample I Should be be Should be be Should be be Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 tween 0.55	960625 ad 1.1 ad 1.1 ad 0.7 and 0.7	Fe	CI	SO4	NO3	·	нс
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indicestrength (M) Monovatent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent:	Should be be Sample I Should be be Should be be Should be be Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a	960625 and 1.1 and 1.1 and 0.7 and 0.7	Fe 0.064	CI 10.674	SO4 28.7	NO3 0.174	F 0.75	
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indicestrength (M) Monovatent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.96 0.96 0.66 Constituent: Na	Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 tween 0.55	960625 ad 1.1 ad 1.1 ad 0.7 and 0.7						HC ;
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent: Na 3.9	Should be be	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a	960625 960625 and 1.1 and 1.1 and 0.7 and 0.7 Mg 1.4	0.064	10.674	28.7	0.174	0.75	0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	1.15 OUA024 21 5 149 158.25 0.0020 0.935 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent: Na 3.9 0.1897 22.9898	Should be be Sample I Should be be Should be be Should be be Should be be Should be be 30.0205 39.0983	tween 0.9 ar Date: Date: tween 0.9 ar tween 0.55 at tween 0.55 at Ca 16.9 0.8433 40,0780	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 4 0.1152 24,3050	0.064 0.0023 55.8470	10.674 0.3011 35.4527	28.7 0.5975 96.0636	0.174 0.0028 62.0049	0.75 0.0395 18.9984	0.4 61.0
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 9.58 80.96 0.56 0.64 Constituent: Na 3.99 0.1697 22.9898 0.1697	Should be be Sample I Should be be Should be be Should be be Should be be K 0.8 0.0205 39.0983 0.0205	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a 40.0780 0.4217	960625 and 1.1 and 1.1 and 0.7 and 0.7 Mg 1.4 0.1152 24,3050 0.0576	0.064 0.0023 55.8470 0.0011	10.674 0.3011 35.4527 0.3011	28.7 0.5975 96.0636 0.2988	0.174 0.0028 62.0049 0.0028	0.75 0.0395 18.9984 0.0395	0.4 61.0
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.96 0.96 0.96 Constituent: Na 3.99 0.1697 22.9898 0.16937	Should be be Sample I Should be be Should be be Should be be Should be be 0.8 0.0205 39.0983 0.0205	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 c tween 0.55 tween 0.55 0.8433 40.0780 0.4217 2	Mg 1.4 0.1152 24,3050 0.0576 2	0.064 0.0023 55.8470 0.0011 2	10.674 0.3011 35.4527 0.3011 1	28.7 0.5975 96.0636 0.2988 2	0.174 0.0028 62.0049 0.0028	0.75 0.0395 18.9984 0.0395	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured Tos Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mmg/L) Concentration (mm/L) Charge z (absolute value) Equivalent conductivity (mho-cm*2/equivalent)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.64 Constituent: Na 3.9 0.1697 22.9898 0.1697 1 50.1	Should be be Sample I Should be be Should be be Should be be Should be be 0.8 0.0205 39.0963 0.0205 1 73.5	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a 0.8433 40.0780 0.4217 59.5	960625 960625 add 1.1 add 1.1 add 1.1 and 0.7 and 0.7 and 0.7 24.3050 0.0576 2 53.1	0.064 0.0023 55.8470 0.0011 2 54	10.674 0.3011 35.4527 0.3011 1 76.4	28.7 0.5975 96.0636 0.2988 2 80	0.174 0.0028 62.0049 0.0028 1 71.4	0.75 0.0395 18.9984 0.0395 1 54.4	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mm) Concentration (mm) Concentration (mm) Concentration (mm) Equivalent conductivity (mho-cm*2/equivalent) Infinite dilution conductivity (umho/cm)	1.15 OUA024 21 51 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent: Na 3.9 0.1697 22.9998 0.1697 150.1 8.50	Should be be Sample I Should be be Should be be Should be be Should be be 0.0205 39.0983 0.0205 1 73.5 1.50	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 ar tween 0.55 ar Ca 16.9 0.8433 40.0780 0.4217 2 59.5 50.18	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 and 0.7 5.3.1 6.12	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Equivalent conductivity (mho-cm*2/equivalent) Infinite dilution conductivity (umho/cm)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.64 Constituent: Na 3.9 0.1697 22.9898 0.1697 1 50.1	Should be be Sample I Should be be Should be be Should be be Should be be 0.0205 39.0983 0.0205 1 73.5 1.50	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a 0.8433 40.0780 0.4217 59.5	960625 960625 add 1.1 add 1.1 add 1.1 and 0.7 and 0.7 and 0.7 24.3050 0.0576 2 53.1	0.064 0.0023 55.8470 0.0011 2 54	10.674 0.3011 35.4527 0.3011 1 76.4	28.7 0.5975 96.0636 0.2988 2 80	0.174 0.0028 62.0049 0.0028 1 71.4	0.75 0.0395 18.9984 0.0395 1 54.4	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm) Ionic strength Cation sum (meq/L)	1.15 OUA024 21 51 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.56 0.64 Constituent: Na 3.9 0.1697 22.9998 0.1697 150.1 8.50	Should be be Sample I Should be be Should be be Should be be Should be be 0.8 0.0205 39.0963 0.0205 1.50 1.50	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 ar tween 0.55 ar Ca 16.9 0.8433 40.0780 0.4217 2 59.5 50.18	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 and 0.7 5.3.1 6.12	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 9.05 8.0.96 0.56 0.64 Constituent: Na 3.99 0.1697 22.9938 0.1697 1 50.1 8.50 8.49E-05	Should be be Sample I Should be be Should be be Should be be Should be be 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 ar tween 0.55 ar Ca 16.9 0.8433 40.0780 0.4217 2 59.5 50.18	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 and 0.7 5.3.1 6.12	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mf/L) Concentration (mf/L) Charge z (absolute value) Equivalent conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.64 Constituent: Na 3.9 0.1697 22.9988 0.1697 1 50.1 8.50 8.48E-05	Should be be Sample I Should be be Should be be Should be be Should be be 1 1 73.5 1.50 1.02E-05	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a 16.9 0.8433 40.0780 0.4217 2 59.5 50.18 8.43£-04	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 and 0.7 5.3.1 6.12	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mmg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength Cation sum (meq/L) Anion sum (meq/L)	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 96 80.95 1.19 0.96 0.64 Constituent: Na 3.9 0.1697 22.9898 0.1697 1 50.1 8.50 8.48E-05	Should be be Sample I Should be be Should be be Should be be Should be be 0.8 0.0205 39.0983 0.0205 1 73.5 1.50 1.02E-05	tween 0.9 ar tween 0.9 ar tween 0.9 ar tween 0.55 a 16.9 0.8433 40.0780 0.4217 2 59.5 50.18 8.43£-04	960625 add 1.1 add 1.1 add 1.1 add 0.7 and 0.7 and 0.7 and 0.7 5.3.1 6.12	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	0.4 61.0 0.4
Ratio: Anion sum*(100)/Measured conductivity Sample Location: Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Concentration (mm/l) Concentratio	1.15 OUA024 21 5 149 158.25 0.0020 0.95 143.48 80.96 0.56 0.64 Constituent: Na 3.9 0.1897 22.9898 0.1697 1 50.1 1.50 1.15 1.36 8.48E-05	Should be be Sample I Should be be Should be be Should be be Should be be 1 1 73.5 1.50 1.02E-05	tween 0.9 ar tween 0.9 ar tween 0.55 a tween 0.55 a tween 0.55 a 0.4217 2 59.5 50.18 8.43E-04	960625 ad 1.1 960625 ad 1.1 dd 1.1 dd 1.1 and 0.7 and 0.7 Mg 1.4 0.1152 24.3050 0.0576 2 53.1 6.12 1.15E-04	0.064 0.0023 55.8470 0.0011 2 54 0.12	10.674 0.3011 35.4527 0.3011 1 76.4 23.01	28.7 0.5975 96.0636 0.2988 2 80 47.80	0.174 0.0028 62.0049 0.0028 1 71.4 0.20	0.75 0.0395 18.9984 0.0395 1 54.4 2.15	:

Sample Location:	OUA028	Sample I	Date:	960710						
Alkalinity (mg/l)	- 31									
SiO2 (mg/l)	60.6									
Measured conductivity (umho/cm)	119									
Infinite dilution conductivity (umho/cm)	104.24									
lonic strength (M)	0.0014									
Monovalent ion activity coefficient	0.96 96.07									
Calculated conductivity (umho/cm) Measured TDS	136									
Calculated TDS	114.25									
Ratio: Meas TDS/Calc TDS		Should be bei	ween 0.9 and	1.1						
Ratio: Calc coлd/Meas cond	0.81	Should be bei								
Ratio: Calc TDS/Calc cond	1.19	Should be bel	ween 0.55 a	nd 0.7						
Ratio: Meas TDS/Meas cond	1.14	Should be bet	tween 0.55 a	nd 0.7						
	Constituent:	-								
	Na	ĸ	Ca	Mg	Fe	CI	504	NO3	F	HCO3
Concentration (mg/L)	0.0	1.2	12.2	0.0	1.37	3.353	16.7	0.093	0.1	37.8
Concentration (meq/L)	0.0017	0.0307	0.6088	0.0005	0.0491	0.0946	0.3477	0.D015	0.0053	0.6195
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96,0636	62.0049	18.9984	61.0171
Concentration (mM)	0.0017	0.0307	0.3044	0.0002	0.0245	0.0946	0,1738	0.0015	0.0053	0.6195
Charge z (absolute value)	1 50 4	1 29 5	2 59.5	2	2	76.4	2 80	71.4	1 54.4	1 44.5
Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	50.1 0.08	73.5 2.26	36,22	53.1 0.03	54 2.65	76.4 7.23	27.82	71.4 0.11	0.29	27.57
lonic strength	8.26E-07	1.53E-05	6.09E-04	4.94E-07	4,91E-05	4.73E-05	3.48E-04	7.50E-07	2.63E-06	3.10E-04
Cation sum (meq/L)	0.59									
Anion sum (meg/L)	1.07									
% Difference	-21.48	Should be < 2	2%							
ion Difference	-0.38									
Ratio: Cation sum*(100)/Measured conductivity	0.58	Should be be	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	0.90	Should be be	tween 0.9 an	1.1						
Sample Location:	OUA030	Sample I	Date:	960627						
Sample Location: Alkalinity (mg/l)	OUA030		Date:	960627						
7-1	· · · · · · · · · · · · · · · · · · ·		Date:	960627	<u></u>					
Alkalinity (mg/l)	75		Date:	960627					The state of the s	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	75 37,2 195 214.06		Date:	960627						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	75 97.2 195 214.06 0.0027		Date:	960627		. ,				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	75 37.2 195 214.06 0.0027 0.95		Date:	960627					*****	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	75 37.2 195 214.06 0.0027 0.95 191.53		Date:	960627						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	75 37.2 195 214.06 0.0027 0.95 191.53		Date:	960627						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio. Meas TDS/Calc TDS	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89	Should be be	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) lonic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89	Should be be Should be be	tween 0.9 an tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio. Meas TDS/Calc TDS	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.88	Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.88	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7					******	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.98	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.96 0.77 0.88	Should be be Should be be Should be be Should be be K 2.8	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7	Fe 4.93	CI 5.309	SO4 16.3	NO3 0.099	F 0.1	HCO3 91.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc TDS Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	75 37.2 195 214.08 0.0027 0.95 191.53 132 148.33 0.89 0.98 0.777 0.88 Constituent:	Should be be Should be be Should be be Should be be K 2.8	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	75 37.2 195 214.06 0.0027 0.95 191.53 148.33 0.89 0.98 0.77 0.88 Constituent: Na 19.2 0.8352 22.9698	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8883 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0	4.93 0.1765 55.8470	5.309	16,3	0.099 0.0016 62.0049	0.1 0.0053 18.9984	91.5 1.4997 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	75 37.2 195 214.08 0.0027 0.95 191.53 132 148.33 0.89 0.77 0.88 Constituent: Na 19.2 0.8352 22.9698 0.8352	Should be be Should be be Should be be Should be be K 2.8 0.0716 38.0983 0.0716	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8683 40.0780 0.4341	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002	4.93 0.1765 55.8470 0.0883	5.309 0.1498 35.4527 0.1498	16.3 0.3394 96.0636 0.1697	0.099 0.0016 62.0049 0.0016	0.1 0.0053 18.9984 0.0053	91.5 1.4997 61.0171 1.4997
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Calc Cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mmg/L)	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.77 0.68 Constituent: Na 19.2 0.8352 22.9698 0.8352	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983 0.0716	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 17.4 0.8683 40.0780 0.4341 2	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2	4.93 0.1765 55.8470 0.0883 2	5.309 0.1498 35.4527 0.1498	16.3 0.3394 96.0636 0.1697 2	0.099 0.0016 62.0049 0.0016	0.1 0.0053 18.9984 0.0053	91.5 1.4997 61.0171 1.4997
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated Conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.77 0.88 Constituent: Na 19.2 0.8352 22.9698 0.8352 150.1	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0963 0.0716 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 2 17.4 0.8883 40.0780 0.4341 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1	4,93 0,1765 55,8470 0,0883 2 54	5,309 0,1498 35,4527 0,1498 1 76,4	16,3 0,3394 96,0636 0,1697 2 80	0.099 0.0016 62.0049 0.0016 1 71.4	0.1 0.0053 18.9984 0.0053 1 54.4	91.5 1.4997 61.0171 1.4997 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated CDS Ratio: Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc TDS Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	75 37.2 195 214.06 0.0027 0.95 191.53 132 148.33 0.89 0.77 0.68 Constituent: Na 19.2 0.8352 22.9698 0.8352	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983 0.0718 1 1 73.5 5.26	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 17.4 0.8683 40.0780 0.4341 2	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2	4.93 0.1765 55.8470 0.0883 2	5.309 0.1498 35.4527 0.1498	16.3 0.3394 96.0636 0.1697 2	0.099 0.0016 62.0049 0.0016	0.1 0.0053 18.9984 0.0053	91.5 1.4997 61.0171 1.4997
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/m/M) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	75 37.2 195 214.08 0.0027 0.95 191.53 132 148.33 0.89 0.98 0.777 0.88 Constituent: Na 19.2 0.8352 22.9898 0.8352 1 50.1 41.84 4.18E-04	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983 0.0716 1 73.5 5.26 3.58E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8683 40.0780 0.4341 2 2 59.5 51.86	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4,93 0,1765 55,8470 0,0883 2 54 9,54	5.309 0.1498 35.4527 0.1498 1 76.4 11.44	16,3 0,3394 96,0636 0,1697 2 80 27,15	0.099 0.0018 62.0049 0.0016 1 71.4 0.11	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	91.5 1.4997 61.0171 1.4997 1 44.5 66.74
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated CDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	75 37.2 195 214.08 0.0027 0.95 191.53 132 148.33 0.89 0.88 0.777 0.68 Constituent: Na 19.2 0.8352 22.9898 0.8352 1 50.1 41.84 4.18E-04	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983 0.0716 1 73.5 5.26 3.58E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8683 40.0780 0.4341 2 2 59.5 51.86	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4,93 0,1765 55,8470 0,0883 2 54 9,54	5.309 0.1498 35.4527 0.1498 1 76.4 11.44	16,3 0,3394 96,0636 0,1697 2 80 27,15	0.099 0.0018 62.0049 0.0016 1 71.4 0.11	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	91.5 1.4997 61.0171 1.4997 1 44.5 66.74
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/m/M) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	75 37.2 195 214.06 0.0027 0.95 191.53 148.33 0.89 0.98 0.77 0.68 Constituent: Na 19.2 2.9696 0.8352 2.9696 0.8352 4.18E-04	Should be be Should be be Should be be Should be be K 2.8 0.0716 39.0983 0.0716 1 73.5 5.26 3.58E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8683 40.0780 0.4341 2 59.5 51.86 8.68E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4,93 0,1765 55,8470 0,0883 2 54 9,54	5.309 0.1498 35.4527 0.1498 1 76.4 11.44	16,3 0,3394 96,0636 0,1697 2 80 27,15	0.099 0.0018 62.0049 0.0016 1 71.4 0.11	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	91.5 1.4997 61.0171 1.4997 1 44.5 66.74
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (md/l) Concentration (mM) Concentration (mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	75 37.2 195 214.06 0.0027 0.95 191.53 148.33 0.89 0.98 0.77 0.68 Constituent: Na 19.2 2.9696 0.8352 2.9696 0.8352 4.18E-04	Should be be 1.8 0.0716 38.0983 0.0718 1 73.5 5.26 3.58E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 17.4 0.8683 40.0780 0.4341 2 59.5 51.86 8.68E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4,93 0,1765 55,8470 0,0883 2 54 9,54	5.309 0.1498 35.4527 0.1498 1 76.4 11.44	16,3 0,3394 96,0636 0,1697 2 80 27,15	0.099 0.0018 62.0049 0.0016 1 71.4 0.11	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	91.5 1.4997 61.0171 1.4997 1 44.5 66.74
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	75 37.2 19.5 214.08 0.0027 0.95 191.53 132 148.33 0.89 0.98 0.777 0.68 Constituent: Na 19.2 0.8352 22.9898 0.8352 22.9898 4.18E-04 1.95 2.00 -1.10 -0.04	Should be be 1.8 0.0716 38.0983 0.0718 1 73.5 5.26 3.58E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 17.4 0.6683 40.0780 0.4341 2 59.5 51.86 8.68E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1 0.03 4.94E-07	4,93 0,1765 55,8470 0,0883 2 54 9,54	5.309 0.1498 35.4527 0.1498 1 76.4 11.44	16,3 0,3394 96,0636 0,1697 2 80 27,15	0.099 0.0018 62.0049 0.0016 1 71.4 0.11	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	91.5 1.4997 61.0171 1.4997 1 44.5 66.74

Sample Location:	OUA031	Sample I	Date:	960627						
Alkalinity (mg/l)	105									
SiO2 (mg/l)	18.5				-					
Measured conductivity (umho/cm)	251									
Infinite dilution conductivity (umho/cm)	267.33									
Ionic strength (M)	0.0032									
Monovalent ion activity coefficient	0.94									
Calculated conductivity (umho/cm)	237.01									
Measured TDS	147									
Calculated TDS	158.77									
Ratio: Meas TDS/Calc TDS		Should be be								
Ratio: Calc cond/Meas cond	0.94									
Ratio: Calc TDS/Calc cond	0.67	Should be be								
Ratio: Meas TDS/Meas cond	0.59	Should be be	tween 0.55 a	nd 0.7						
	Constituent:									
	Na	ĸ	Ca	Mg	Fe	CI	504	NO3	F	HCO3
Concentration (mg/L)	37.2		14.0	1.3	2.66	6.144	13.4	0.088	0.09	128.1
Concentration (meg/L)	1.6182	0.0614	0.6986	0.1070	0.0953	0.1733	0.2790	0.0014	0.0047	2.0996
Molecular weight (mg/mM) Concentration (mM)	22.9898 1,6182	39.0983 0.0514	40.0780	24.3050	55.8470	35.4527	96.0636	62.0049	18.9984	61.0171
Charge z (absolute value)	1,0102	0.0614	0.3493 2	0.0535 2	0.0476 2	0.1733 1	0.1395 2	0.0014	0.0047 1	2.0996
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	1 71.4	54.4	1 44.5
Infinite dilution conductivity (umho/cm)	81.07	4.51	41.57	5.68	5.15	13.24	22.32	0.10	0.26	93.43
lonic strength	8.09E-04	3.07E-05	6.99E-D4	1.07E-04	9.53E-05	8.67E-05	2.79E-04	7.10E-07	2.37E-06	1.05E-03
Cation area (annual)	0.50									
Cation sum (meq/L) Anion sum (meq/L)	2.58 2.56									
% Difference		Should be < 2	200							
Ion Difference	0.02	Siloulu be < 2	70							
Ratio: Cation sum*(100)/Measured conductivity	1.03	Should be be	tween () 9 an	d 1 1						
Ratio: Anion sum*(100)/Measured conductivity		Should be be								
Sample Location:	OUA033	Sample I	Date:	960625						
		Sample I	Date:	960625						
Alkalinity (mg/l)	35	Sample I	Date:	960625						****
		Sample I	Date:	960625			Y			
Alkalinity (mg/l) SIO2 (mg/l)	35 25.3	Sample I	Date:	960625				<u> </u>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	35 25.3 193	Sample I	Date:	960625		and the second s	-			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	35 25.3 193 190.22	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	35 25.3 193 190.22 0.0022	Sample I	Date:	960625						
Alkatinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	35 25.3 193 190.22 0.0022 0.95 171.91	Sample I	Date:	960625						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	35 25.3 193 190.22 0.0022 0.95 171.91	Sample I	Date:	960625						
Alkatinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16	Should be bel	bween 0,9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89	Should be bei	tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89	Should be bel Should be bel Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a	of 1.1 of 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89	Should be bei	tween 0.9 an tween 0.9 an tween 0.55 a	of 1.1 of 1.1 nd 0.7						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.08 0.75	Should be be Should be be Should be be Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.68 0.75	Should be bel Should be bel Should be bel Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	of 1.1 of 1.1 nd 0.7 nd 0.7 Mg	Fe	CI	S04	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8	Should be bel Should be bel Should be bel Should be bel K 1.2	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 15.0	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0	0.096	24.715	13.4	1.564	0.09	42.7
Alkatinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.68 0.75 Constituent: Na 11.8	Should be bel Should be bel Should be bel K 1.2 0.0307	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 15.0 0.7485	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1646	0.096 0.0034	24.715 0.6972	13.4 0.2790	1.564 0.0252	0.09 0.0047	42.7 0.6999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8 0.5133 22.9898	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 15.0 0.7485 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1848 24.3050	0.096 0.0034 55.8470	24.715 0.6972 35.4527	13.4 0.2790 96.0636	1.564 0.0252 62.0049	0.09 0.0047 18.9984	42.7 0.6999 61.0171
Alkatinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.68 0.75 Constituent: Na 11.8	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307	tween 0,9 an tween 0.9 an tween 0.55 a tween 0.55 a 15.0 0.7485 40.0780 0.3743	of 1.1 of 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1646 24.3050 0.0823	0.096 0.0034 55.8470 0.0017	24.715 0.6972 35.4527 0.6972	13.4 0.2790 96.0636 0.1395	1.564 0.0252 62.0049 0.0252	0.09 0.0047 18.9984 0.0047	42.7 0.6999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	35 25.3 190 22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8 0.5133 22 9898 0.5133	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307 1	tween 0.9 an tween 0.95 a tween 0.55 a 15.0 0.7485 40.0780 0.3743 2	Mg 2.0 0.1848 24,3050 0.0823 2	0.096 0.0034 55.8470 0.0017 2	24.715 0.6972 35.4527 0.6972	13.4 0.2790 96.0636 0.1395 2	1.564 0.0252 62.0049 0.0252 1	0.09 0.0047 18.9984 0.0047	42.7 0.6999 61.0171 0.6999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307	tween 0,9 an tween 0.9 an tween 0.55 a tween 0.55 a 15.0 0.7485 40.0780 0.3743	of 1.1 of 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1646 24.3050 0.0823	0.096 0.0034 55.8470 0.0017 2 54	24.715 0.6972 35.4527 0.6972 1 76.4	13.4 0.2790 96.0636 0.1395 2 80	1.564 0.0252 62.0049 0.0252 1 71.4	0.09 0.0047 18.9984 0.0047 1 54.4	42.7 0.6999 61.0171 0.6999 1 44.5
Alkatinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Celc TDS Ratio: Celc cond/Meas cond Ratio: Celc TDS/Celc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mmg/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.68 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307 1 73.5	tween 0.9 an tween 0.55 a tween 0.55 a Ca 15.0 0.7485 40.0780 0.3743 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 0.1848 24.3050 0.0823 2 53.1	0.096 0.0034 55.8470 0.0017 2	24.715 0.6972 35.4527 0.6972	13.4 0.2790 96.0636 0.1395 2	1.564 0.0252 62.0049 0.0252 1	0.09 0.0047 18.9984 0.0047	42.7 0.6999 61.0171 0.6999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.68 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133 1 50.1 25.72 2.57E-04	Should be bell Known 1.2 0.0307 39.0983 0.0307 1 1.73.5 2.26	tween 0.9 an tween 0.9 an tween 0.55 a Ca 15.0 0.7485 40.0780 0.3743 2 59.5 44.54	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1648 24.3050 0.0823 2 53.1 8.74	0.096 0.0034 55.8470 0.0017 2 54 0.19	24.715 0.6972 35.4527 0.6972 1 76.4 53.27	13.4 0.2790 96.0636 0.1395 2 80 22.32	1.564 0.0252 62.0049 0.0252 1 71.4 1.80	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	42.7 0.6999 61.0171 0.6999 1 44.5 31.14
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.88 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133 1 50.1 25.72 2.57E-04	Should be bell Known 1.2 0.0307 39.0983 0.0307 1 1.73.5 2.26	tween 0.9 an tween 0.9 an tween 0.55 a Ca 15.0 0.7485 40.0780 0.3743 2 59.5 44.54	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1648 24.3050 0.0823 2 53.1 8.74	0.096 0.0034 55.8470 0.0017 2 54 0.19	24.715 0.6972 35.4527 0.6972 1 76.4 53.27	13.4 0.2790 96.0636 0.1395 2 80 22.32	1.564 0.0252 62.0049 0.0252 1 71.4 1.80	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	42.7 0.6999 61.0171 0.6999 1 44.5 31.14
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133 1 50.1 25.72 2.57E-04	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307 1 73.5 2.26 1.53E-05	tween 0.9 an tween 0.55 a tween 0.55 a Ca 15.0 0.7485 40.0780 0.3743 2 59.5 44.54 7.49E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1648 24.3050 0.0823 2 53.1 8.74	0.096 0.0034 55.8470 0.0017 2 54 0.19	24.715 0.6972 35.4527 0.6972 1 76.4 53.27	13.4 0.2790 96.0636 0.1395 2 80 22.32	1.564 0.0252 62.0049 0.0252 1 71.4 1.80	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	42.7 0.6999 61.0171 0.6999 1 44.5 31.14
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133 1 50.1 25.72 2.57E-04	Should be bell Known 1.2 0.0307 39.0983 0.0307 1 1.73.5 2.26	tween 0.9 an tween 0.55 a tween 0.55 a Ca 15.0 0.7485 40.0780 0.3743 2 59.5 44.54 7.49E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.0 0.1648 24.3050 0.0823 2 53.1 8.74	0.096 0.0034 55.8470 0.0017 2 54 0.19	24.715 0.6972 35.4527 0.6972 1 76.4 53.27	13.4 0.2790 96.0636 0.1395 2 80 22.32	1.564 0.0252 62.0049 0.0252 1 71.4 1.80	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	42.7 0.6999 61.0171 0.6999 1 44.5 31.14
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) Aligned Total Calculation (meq/L) Anion sum (meq/L) Aligned Total Calculation (med/L) Aligned	35 25.3 193 190.22 0.0022 0.95 171.91 145 118.16 1.25 0.89 0.88 0.75 Constituent: Na 11.8 0.5133 22.9898 0.5133 1 50.1 25.72 2.57E-04	Should be bei Should be bei Should be bei Should be bei K 1.2 0.0307 39.0983 0.0307 1 73.5 2.26 1.53E-05	tween 0,9 an tween 0.9 an tween 0.55 a tween 0.65 a 15.0 0.7485 40.0780 0.3743 2 59.5 44.54 7.49E-04	Mg 2.0 0.1.1 nd 0.7 nd 0.7 0.1646 24.3050 0.0823 2 53.1 8.74 1.65E-04	0.096 0.0034 55.8470 0.0017 2 54 0.19	24.715 0.6972 35.4527 0.6972 1 76.4 53.27	13.4 0.2790 96.0636 0.1395 2 80 22.32	1.564 0.0252 62.0049 0.0252 1 71.4 1.80	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	42.7 0.6999 61.0171 0.6999 1 44.5 31.14

Sample Location:	OUA034	Sample I	Date:	960625						
Alkalinity (mg/l)	122									
SiO2 (mg/l)	12.7									
Measured conductivity (umho/cm)	263									
Infinite dilution conductivity (umho/cm)	250.82									
Ionic strength (M)	0.0030									
Monovalent ion activity coefficient	0.94									
Calculated conductivity (umho/cm)	222.98									
Measured TDS	155									
Calculated TDS	146.77									
Ratio: Meas TDS/Calc TDS		Should be be								
Ratio: Calc cond/Meas cond		Should be be								
Ratio: Calc TDS/Calc cond	0.66									
Ratio: Meas TDS/Meas cond	0.59	Should be be	ween 0.55 a	nd 0.7						
	Constituent:									
	Na		Ca	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	30.2		13,1	2.2	0.9	3.443	9.3	0.093	0.07	148.8
Concentration (meq/L)	1.3137	0.0409	0.6537	0.1810	0.0322	0.0971	0.1936	0.0015	0.0037	2.4388
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	1.3137	0.0409	0.3268	0.0905	0.0161	0.0971	0.0968	0.0015	0.0037	2.4388
Charge z (absolute value)	1	1	2	2	2	1	2	, 1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	65.82		38.89	9.61	1.74	7.42	15.49	0.11	0.20	108.53
lonic strength	6.57E-04	2.05E-05	6.54E-04	1.81E-04	3.22E-05	4.86E-05	1.94E-04	7.50E-07	1.84E-06	1.22E-03
Cation sum (meq/L)	2.22									
Anion sum (meq/L)	2.73									
% Difference	-10.35	Should be < 2	%							
on Difference	-0.51									
Ratio: Cation sum*(100)/Measured conductivity	0.84	Should be be	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	1.04	Should be be	tween 0,9 an	d 1,1						
Sample Location:	OUA035	Sample I	Date:	960624						
		Sample I	Date:	960624			· · · · · · · · · · · · · · · · · · ·			
Alkalinity (mg/l)	167		Date:	960624		<u> </u>	· · · · · · · · · · · · · · · · · · ·			
Alkalinity (mg/l) SiO2 (mg/l)	167 10.3		Date:	960624						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	167 10.3 598		Date:	960624		<u> </u>			<u></u>	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	167 10.3 598 590.44		Date:	960624						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	167 10.3 598		Date:	960624		<u> </u>				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	167 10.3 598 590.44 0.0060		Date:	960624						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	167 10.3 598 590.44 0.0060 0.92		Date:	960624						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	167 10.3 598 590.44 0.0060 0.92 502.59		Date:	960624						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36	Should be be	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	167 10.3 598 590 44 0.0060 0.92 502.59 313 306.36	Should be be Should be be	tween 0.9 an tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 {mg/l} Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61	Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	167 10.3 598 590 44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	167 10.3 598 590 44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7	Fe 0.137	CI 80.579	504 6.0	NO3 0.093	F 0.09	HCO3 203.7
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent lon activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52	Should be be Should be be Should be be Should be be K 1.8	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovaient Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent:	Should be be Should be be Should be be Should be be K 1.8 0.0460	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 18.0	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9	0.137	80.579	6.0	0.093	0.09	203.7
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent: Na 86.3	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 18.0 0.8962	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386	0.137 0.0049	80.579 2.2731	6.0 0.1249	0.093 0.0015	0.09 0.0047	203.7 3.3386
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovaient ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/m) Charge z (absolute value)	167 10.3 598 590.44 0.0060 0.82 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent: Na 86.3 3.7540 22.9888	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 18.0 0.8982 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050	0.137 0.0049 55.8470	80.579 2.2731 35.4527	6.0 0.1249 96.0636	0.093 0.0015 62.0049	0.09 0.0047 18.9984	203.7 3.3386 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l)	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 50.1	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5	tween 0.9 an tween 0.55 a tween 0.55 a Ca 18.0 0.8962 40.0780 0.4491 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1	0.137 0.0049 55.8470 0.0025	80.579 2.2731 35.4527 2.2731 1 76.4	6.0 0.1249 96.0636 0.0625 2 80	0.093 0.0015 62.0049 0.0015	0.09 0.0047 18.9984 0.0047	203.7 3.3386 61.0171 3.3386
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	167 10.3 598 590.44 0.0060 0.82 502.59 313 306.36 1.02 0.94 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 188.08	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5 3.38	tween 0.9 an tween 0.55 a tween 0.55 a 18.0 0.8962 40.0760 0.4491 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731	6.0 0.1249 96.0636 0.0625	0.093 0.0015 62.0049 0.0015	0.09 0.0047 18.9984 0.0047	203.7 3.3386 61.0171 3.3386 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l)	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 50.1	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5 3.38	tween 0.9 an tween 0.55 a tween 0.55 a Ca 18.0 0.8962 40.0780 0.4491 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1	0.137 0.0049 55.8470 0.0025 2 54	80.579 2.2731 35.4527 2.2731 1 76.4	6.0 0.1249 96.0636 0.0625 2 80	0.093 0.0015 62.0049 0.0015 1 71.4	0.09 0.0047 18.5984 0.0047 1 54.4	203.7 3.3386 61.0171 3.3386 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	167 10.3 598 590.44 0.0060 0.82 502.59 313 306.36 1.02 0.94 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 188.08	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5 3.38 2.30E-05	Ca 18.0 0.9962 40.0760 0.4491 2 59.5 53.44	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1 12.67	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731 1 76.4 173.67	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.093 0.0015 62.0049 0.0015 1 71.4 0.11	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	203.7 3.3386 61.0171 3.3386 1 44.5 148.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated CDS Ratio: Calc CONT/Calc TDS Ratio: Calc CONT/Meas COND Ratio: Calc TDS/Calc COND Ratio: Meas TDS/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.36 1.02 0.84 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 50.1 188.08 1.88E-03	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5 3.38 2.30E-05	Ca 18.0 0.9962 40.0760 0.4491 2 59.5 53.44	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1 12.67	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731 1 76.4 173.67	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.093 0.0015 62.0049 0.0015 1 71.4 0.11	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	203.7 3.3386 61.0171 3.3386 1 44.5 148.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	167 10.3 598 590.44 0.0060 0.82 502.59 313 306.36 1.02 0.94 0.611 0.52 Constituent: Na 86.3 3.7540 22.9698 3.7540 1188.08 1.88E-03	Should be be Should be be Should be be Should be be K 1.8 0.0460 39.0983 0.0460 1 73.5 3.38 2.30E-05	Cancella (1994) Cancella (1994)	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1 12.67	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731 1 76.4 173.67	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.093 0.0015 62.0049 0.0015 1 71.4 0.11	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	203.7 3.3386 61.0171 3.3386 1 44.5 148.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm/2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meg/L) Anion sum (meg/L) Anion sum (meg/L)	167 10.3 598 590.44 0.0060 0.82 502.59 313 306.36 1.02 0.94 0.611 0.52 Constituent: Na 86.3 3.7540 22.9698 3.7540 1188.08 1.88E-03	Should be be Should be be Should be be Should be be 1.8 0.0460 39.0983 0.0460 1 73.5 3.38 2.30E-05	Cancella (1994) Cancella (1994)	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24.3050 0.1193 2 53.1 12.67	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731 1 76.4 173.67	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.093 0.0015 62.0049 0.0015 1 71.4 0.11	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	203.7 3.3386 61.0171 3.3386 1 44.5 148.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent Ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meg/L) Anion sum (meg/L) Pufference	167 10.3 598 590.44 0.0060 0.92 502.59 313 306.38 1.02 0.84 0.61 0.52 Constituent: Na 86.3 3.7540 22.9898 3.7540 1 50.1 188.08 1.88E-03	Should be be Should be be Should be be Should be be 1.8 0.0460 39.0983 0.0460 1 73.5 3.38 2.30E-05	tween 0.9 an tween 0.55 a tween 0.55 a 18.0 0.8962 40.0780 0.4491 2 59.5 53.44 8.98E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 2.9 0.2386 24,3050 0.1193 2 53.1 12.67 2.39E-04	0.137 0.0049 55.8470 0.0025 2 54 0.26	80.579 2.2731 35.4527 2.2731 1 76.4 173.67	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.093 0.0015 62.0049 0.0015 1 71.4 0.11	0.09 0.0047 18.9984 0.0047 1 54.4 0.26	203.7 3.3386 61.0171 3.3386 1 44.5 148.57

Sample Location: OUA036 Sample Da	te:	960626						
Alkalinity (mg/l) 8								
SiO2 (mg/l) 20.3								
Measured conductivity (umho/cm) 65								
Infinite dilution conductivity (umho/cm) 63.68								
lonic strength (M) 0.0007								
Monovalent ion activity coefficient 0.97 Calculated conductivity (umho/cm) 60.00								
Calculated conductivity (umho/cm) 60.00 Measured TDS 63								
Calculated TDS 52.11								
Ratio: Meas TDS/Calc TDS 1.21 Should be between	en D 9 and	111						
Ratio: Calc cond/Meas cond 0.92 Should be between								
Ratio: Calc TDS/Calc cond 0.87 Should be between	en 0.55 an	d 0.7						
Ratio: Meas TDS/Meas cond 0.97 Should be between	en 0.55 an	nd 0.7						
Constituent:								
Na K	Ca	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L) 5.5 D.6	2.8	1.0	0.046	6.702	8.2	2.106	0.04	9.8
Concentration (meg/L) 0.2393 0.0153	0.1397	0.0823	0.0016	0.1891	0.1707	0.0340	0.0021	0.1606
• • •	40.0780 0.0699	24.3050	55 8470	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM) 0.2393 0.0153 Charge z (absolute value) 1 1	0.0699	0.0411 2	0.0008 2	0.1891 1	0.0854 2	0.0340 1	0.0021 1	0.1606 1
Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm) 11.99 1.13	8.31	4.37	0.09	14.44	13.66	2.43	0.11	7.15
• • • • • • • • • • • • • • • • • • • •	1.40E-04	8.23E-05	1.65E-06	9.45E-05	1.71E-04	1.70E-05	1.05E-06	8.03E-05
Cation sum (meq/L) 0.48								
Anion sum (meg/L) 0.56								
% Difference -7.56 Should be < 2%								
lon Difference -0.08								
Ratio: Cation sum*(100)/Measured conductivity 0.74 Should be between	en 0.9 and	1.1						
Ratio: Anion sum*(100)/Measured conductivity 0.86 Should be between	0 0	444						
TABLE TO STATE OF THE STATE OF	en u.s and	1 1.1						
Sample Location: OUA037 Sample Da		960626				N.W.L.		
						8. 		
Sample Location: OUA037 Sample Da Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3						M. H. C.		
Sample Location: OUA037 Sample Date Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60			- 11 % - 11 					********
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60 Infinite dilution conductivity (umho/cm) 104.83						0. 0.1		
Sample Location: OUA037 Sample Da Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60 Infinite dilution conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014						N.W		
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96								
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60 Infinite dilution conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96 Calculated conductivity (umho/cm) 96.49								***************************************
Alkalinity (mg/l) Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS OUA037 Sample Da 14 500 104 800 104 801 901 901 901 901 901 901 901								
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60 Infinite dilution conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96 Calculated conductivity (umho/cm) 96.49 Measured TDS 46 Calculated TDS 84.61	ate:	960626						
Alkalinity (mg/l) Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS OUA037 Sample Da 14 500 104 800 104 801 901 901 901 901 901 901 901	ate:	960626						
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96 Calculated conductivity (umho/cm) 96.49 Measured TDS 48 Calculated TDS 84.61 Ratio: Meas TDS/Calc TDS 0.54 Should be between	een 0.9 and	960626	- 1100					
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96 Calculated conductivity (umho/cm) 96.49 Measured TDS 46 Calculated TDS 84.61 Ratio: Meas TDS/Calc TDS 0.54 Should be between Ratio: Calc cond/Meas cond 1.81 Should be between	een 0.9 anden 0.9 anden 0.55 an	960626						
Alkalinity (mg/l) Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Calc TDS/Calc cond Ratio: Calc TDS/Calc cond Ratio: Calc TDS/Calc cond	een 0.9 anden 0.9 anden 0.55 an	960626						
Alkalinity (mg/l) Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Ratio: Meas TDS/Meas cond Constituent: Na K	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar	960626 d 1.1 d 1.1 d 0.7 nd 0.7	Fe	CI	SO4	NO3	·	нсоз
Alkalinity (mg/l) Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS A6 Calculated TDS B4.61 Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Coefficient Constituent: Na K Concentration (mg/L) Ala Should be between Constituent: Na K Concentration (mg/L)	een 0.9 andeen 0.95 andeen 0.55 andeen 0.5	960626 d 1.1 d 1.1 d 0.7 nd 0.7	0.066	3.199	6.0	0.884	0.05	17.1
Alkalinity (mg/l) 14 SiO2 (mg/l) 39.3 Measured conductivity (umho/cm) 60 Infinite dilution conductivity (umho/cm) 104.83 Ionic strength (M) 0.0014 Monovalent ion activity coefficient 0.96 Calculated conductivity (umho/cm) 96.49 Measured TDS 46 Calculated TDS 84.61 Ratio: Meas TDS/Calc TDS 0.54 Should be between the conductivity (umho/cm) 1.61 Should be between 1.61	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar Ca 13.8 0.6886	960626 11.1 11.1 11.1 10.7 10.7 10.7 10.7 10.7	0. 066 0.0024	3.199 0.0902	6.0 0.1249	0.884 0.0143	0.05 0.0026	17.1 0.2803
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar Ca 13.8 0.6886 40.0780	960626 11.1 11.1 11.1 10.0 10.7 10.0 10.7 10.0 10.7 10.0	0.066 0.0024 55.8470	3.199 0.0902 35.4527	6.0 0.1249 96.0636	0.884 0.0143 62.0049	0.05 0.0026 18.9964	17.1 0.2803 61.0171
Sample Location: OUA037 Sample Date	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar Ca 13.8 0.6886 40.0780 0.3443	960626 d 1.1 d 1.1 d 0.7 nd 0.7 Mg 2.6 0.2140 24.3050 0.1070	0.066 0.0024 55.8470 0.0012	3.199 0.0902 35.4527 0.0902	6.0 0.1249 96.0636 0.0625	0.884 0.0143 62.0049 0.0143	0.05 0.0026 18.9964 0.0026	17.1 0.2803 61.0171 0.2803
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar Ca 13.8 0.6886 0.0780 0.3443 2	960626 d 1.1 d 1.1 d 0.7 nd 0.7 Mg 2.6 0.2140 24.3050 0.1070 2	0.066 0.0024 55.8470 0.0012 2	3.199 0.0902 35.4527 0.0902 1	6.0 0.1249 96.0636 0.0625 2	0.884 0.0143 62.0049 0.0143	0.05 0.0026 18.9964 0.0026	17.1 0.2803 61.0171 0.2803 1
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar Ca 13.8 0.6886 40.0780 0.3443 2 59.5	960626 11.1 11.1 10.7	0,066 0.0024 55.8470 0.0012 2 54	3.199 0.0902 35.4527 0.0902 1 76.4	6.0 0.1249 96.0636 0.0625 2 80	0.884 0.0143 62.0049 0.0143 1 71.4	0.05 0.0026 18.9964 0.0026 1 54.4	17.1 0.2803 61.0171 0.2803 1 44.5
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar Ca 13.8 0.6886 0.0780 0.3443 2	960626 d 1.1 d 1.1 d 0.7 nd 0.7 Mg 2.6 0.2140 24.3050 0.1070 2	0.066 0.0024 55.8470 0.0012 2	3.199 0.0902 35.4527 0.0902 1	6.0 0.1249 96.0636 0.0625 2	0.884 0.0143 62.0049 0.0143	0.05 0.0026 18.9964 0.0026	17.1 0.2803 61.0171 0.2803 1
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar 0.6886 40.0780 0.3443 2 59.5 40.97	960626 11.1 11.1 11.1 11.1 11.1 11.1 11.1	0,066 0.0024 55.8470 0.0012 2 54 0.13	3.199 0.0902 35.4527 0.0902 1 76.4 6.89	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.884 0.0143 62.0049 0.0143 1 71.4 1.02	0.05 0.0026 18.9964 0.0026 1 54.4 0.14	17.1 0.2803 61.0171 0.2803 1 44.5 12.47
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar 0.6886 40.0780 0.3443 2 59.5 40.97	960626 11.1 11.1 11.1 11.1 11.1 11.1 11.1	0,066 0.0024 55.8470 0.0012 2 54 0.13	3.199 0.0902 35.4527 0.0902 1 76.4 6.89	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.884 0.0143 62.0049 0.0143 1 71.4 1.02	0.05 0.0026 18.9964 0.0026 1 54.4 0.14	17.1 0.2803 61.0171 0.2803 1 44.5 12.47
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar 13.8 0.6886 40.0780 0.3443 2 59.5 40.97 8.89E-04	960626 11.1 11.1 11.1 11.1 11.1 11.1 11.1	0,066 0.0024 55.8470 0.0012 2 54 0.13	3.199 0.0902 35.4527 0.0902 1 76.4 6.89	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.884 0.0143 62.0049 0.0143 1 71.4 1.02	0.05 0.0026 18.9964 0.0026 1 54.4 0.14	17.1 0.2803 61.0171 0.2803 1 44.5 12.47
Alkalinity (mg/l)	een 0.9 and een 0.9 and een 0.55 ar een 0.55 ar 13.8 0.6886 40.0780 0.3443 2 59.5 40.97 8.89E-04	960626 11.1 11.1 11.1 11.1 11.1 11.1 11.1	0,066 0.0024 55.8470 0.0012 2 54 0.13	3.199 0.0902 35.4527 0.0902 1 76.4 6.89	6.0 0.1249 96.0636 0.0625 2 80 9.99	0.884 0.0143 62.0049 0.0143 1 71.4 1.02	0.05 0.0026 18.9964 0.0026 1 54.4 0.14	17.1 0.2803 61.0171 0.2803 1 44.5 12.47

Sample Location:	OUA038	Sample i	Date:	960626			** " * " " " " " " " " " " " " " " " "			
Alkalinity (mg/l)	103									
SiO2 (mg/l)	24.2									
Measured conductivity (umho/cm)	239									
Infinite dilution conductivity (umho/cm)	265.12									
ionic strength (M)	0.0030									
Monovalent ion activity coefficient	0.94									
Calculated conductivity (umho/cm)	235,66									
Measured TDS Calculated TDS	155									
Ratio: Meas TDS/Calc TDS	164.83	Should be be		411						
Ratio: Calc cond/Meas cond	0.99									
Ratio: Calc TDS/Calc cond	0.70									
Ratio: Meas TDS/Meas cond		Should be be								
	Constituent:									
	Na	к	Ca	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	46.3	2.2	8.6	1.5	0.807	4.87	14.4	0.087	0.06	125.7
Concentration (meq/L)	2.0141	0.0563	0.4291	0.1234	0.0289	0.1374	0.2998	0.0014	0.0032	2.0602
Molecular weight (mg/mM)	22.9898		40.0780	24.3050	55.8470	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	2.0141	0.0583	0.2146	0.0617	0.0145	0.1374	0.1499	0.0014	0.0032	2.0602
Charge z (absolute value)	1	1	2	2	2	1	2	1	1	1
Equivalent conductivity (mno-cm^2/equivalent)	50.1	73,5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	100.90		25.53	6.55	1.56	10.50	23.98	0.10	0.17	91.68
lonic strength	1.01E-03	2.81E-05	4.29E-04	1.23E-04	2.89E-05	6.87E-D5	3.00E-04	7.02E-07	1.58E-06	1.03E-03
Cation sum (meq/L)	2.65									
Anion sum (meq/L)	2.50									
% Difference		Should be < 2	2%							
Ion Difference	0.15									
Ratio: Cation sum*(100)/Measured conductivity Ratio: Anion sum*(100)/Measured conductivity	1.11 1.05									
Sample Location:	0118020	Camania I) ata	960627						
Sample Location.	OUA039	Sample I	Jake.	300047						
	···		Jale.	300021						
Alkalinity (mg/l) SiO2 (mg/l)	84 24.3		Jale.	500021						
Alkalinity (mg/l)	84		Jale.	300021					****	
Alkalinity (mg/l) SiO2 (mg/l)	84 24.3		Jale.	300027					••••	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	84 24.3 213	······································	Jale.	300027				• • • • • • • • • • • • • • • • • • • •		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	84 24.3 213 222.42		Jate.	300027						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	84 24.3 213 222.42 0.0027 0.95 198.83	<u>, 11, 11</u>	Jale.	300021						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	84 24.3 213 222.42 0.0027 0.95 198.83 126		Jale.	300027						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90	Should be be	tween 0.9 an	d 1,1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90	Should be be Should be be	tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 s	d 1,1 d 1,1 nd 0,7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Menovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 s	d 1,1 d 1,1 nd 0,7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Menovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 s	d 1,1 d 1,1 nd 0,7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Menovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7	Fe 4.8	CI 5.64	SO4 10.3	NO3 0.095	F 0.11	HCO3 102.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent:	Should be be Should be be Should be be Should be be K 3.0	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9698	Should be be Should be be Should be be Should be be K 3.0 0.0767 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 16.7 0.8333 40.0750	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050	4.8 0.1719 55,8470	5.64 0.1591 35.4527	10.3 0.2144 96.0636	0.095 0.0015 62.0049	0.11 0.0058 18.9984	102.5 1.6800 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9888 1.0658	Should be be Should be be Should be be Should be be K 3.0 0.0767 39.0983 0.0767	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 16.7 0.8333 40.0750 0.4167	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002	4.8 0.1719 55,8470 0.0860	5.64 0.1591 35.4527 0.1591	10.3 0.2144 96.0636 0.1072	0.095 0.0015 62.0049 0.0015	0.11 0.0058 18.9984 0.0058	1 02.5 1.6800
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/l) Concentration (mM) Charge z (absolute value)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9698	Should be be Should be be Should be be Should be be K 3.0 0.0767 39.0963 0.0767	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0750 0.4167 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2	4.8 0.1719 55,8470 0.0860 2	5.64 0.1591 35.4527 0.1591	10.3 0.2144 96.0636 0.1072 2	0.095 0.0015 62.0049 0.0015	0.11 0.0058 18.9984 0.0058	102.5 1.6800 61.0171 1.6800
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated Conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9988 1.0658	Should be be Should be be Should be be Should be be 3.0 0.0767 39.0963 0.0767 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 2 a 40.0750 0.4167 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1	4.8 0.1719 55,8470 0.0860 2 54	5.64 0.1591 35.4527 0.1591 1 76.4	10.3 0.2144 96.0636 0.1072 2 80	0.095 0.0015 62.0049 0.0015 1 71.4	0.11 0.0058 18.9984 0.0058 1 54.4	102.5 1.6800 61.0171 1.6800 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/l) Concentration (mM) Charge z (absolute value)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9698	Should be be Should be be Should be be Should be be K 3.0 0.0767 39.0963 0.0767 1 1 73.5 5.64	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0750 0.4167 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2	4.8 0.1719 55,8470 0.0860 2	5.64 0.1591 35.4527 0.1591	10.3 0.2144 96.0636 0.1072 2	0.095 0.0015 62.0049 0.0015	0.11 0.0058 18.9984 0.0058	102.5 1.6800 61.0171 1.6800
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/l) Concentration (mm/l) Concentration (mM/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9898 1.0658 1.50.33 5.33E-04	Should be be Should be be Should be be Should be be % 3.0 0.0767 39.0983 0.0767 1 73.5 5.64 3.84E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0750 0.4167 2 59.5 49.58	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.8 0.1719 55,8470 0.0860 2 54 9.28	5.64 0.1591 35.4527 0.1591 1 76.4 12.16	10.3 0.2144 96.0636 0.1072 2 80 17.16	0.095 0.0015 62.0049 0.0015 1 71.4 0.11	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	102.5 1.6800 61.0171 1.6800 1 44.5 74.76
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9698 1.0658 1.53.39 5.33E-04	Should be be Should be be Should be be Should be be 3.0 0.0767 39.0963 0.0767 1 73.5 5.64 3.84E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0750 0.4167 2 59.5 49.58	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.8 0.1719 55,8470 0.0860 2 54 9.28	5.64 0.1591 35.4527 0.1591 1 76.4 12.16	10.3 0.2144 96.0636 0.1072 2 80 17.16	0.095 0.0015 62.0049 0.0015 1 71.4 0.11	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	102.5 1.6800 61.0171 1.6800 1 44.5 74.76
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9998 1.0658 1 50.1 53.39 5.33E-04	Should be be Should be be Should be be Should be be K 3.0 0.0767 39 0983 0.0767 1 73.5 5.64 3.84E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0780 0.4167 2 59.5 49.58 8.33E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.8 0.1719 55,8470 0.0860 2 54 9.28	5.64 0.1591 35.4527 0.1591 1 76.4 12.16	10.3 0.2144 96.0636 0.1072 2 80 17.16	0.095 0.0015 62.0049 0.0015 1 71.4 0.11	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	102.5 1.6800 61.0171 1.6800 1 44.5 74.76
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0858 22.9998 1.0658 1 53.39 5.33E-04	Should be be Should be be Should be be Should be be 3.0 0.0767 39.0983 0.0767 1 73.5 5.64 3.84E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 16.7 0.8333 40.0780 0.4167 2 59.5 49.58 8.33E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 nd 0.7 0.0005 24.3050 0.0002 2 53.1 0.03	4.8 0.1719 55,8470 0.0860 2 54 9.28	5.64 0.1591 35.4527 0.1591 1 76.4 12.16	10.3 0.2144 96.0636 0.1072 2 80 17.16	0.095 0.0015 62.0049 0.0015 1 71.4 0.11	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	102.5 1.6800 61.0171 1.6800 1 44.5 74.76
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc Cand/Meas cond Ratio: Calc TDS/Calc Cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) % Difference	84 24.3 213 222.42 0.0027 0.95 198.83 126 139.85 0.90 0.93 0.70 0.59 Constituent: Na 24.5 1.0658 22.9898 1.0658 1 50.1 53.39 5.33E-04 2.15 2.06	Should be be Should be be Should be be Should be be 3.0 0.0767 39.0983 0.0767 1 73.5 5.64 3.84E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.4167 2 59.5 49.58 8 33E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1 0.03 4.94E-07	4.8 0.1719 55,8470 0.0860 2 54 9.28	5.64 0.1591 35.4527 0.1591 1 76.4 12.16	10.3 0.2144 96.0636 0.1072 2 80 17.16	0.095 0.0015 62.0049 0.0015 1 71.4 0.11	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	102.5 1.6800 61.0171 1.6800 1 44.5 74.76

Sample Location:	OUA040	Sample I	Date:	960709						
Alkalinity (mg/l)	81									
SiO2 (mg/l)	17.4									
Measured conductivity (umho/cm)	235									
Infinite dilution conductivity (umho/cm)	203.32									
Ionic strength (M)	0.0025									
Monovalent ion activity coefficient	0.95									
Calculated conductivity (umho/cm)	182.53									
Measured TD\$	133									
Calculated TDS	127.23	Objected to a base								
Ratio: Meas TDS/Calc TDS		Should be bet								
Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	0.78									
Ratio: Meas TDS/Meas cond	0.70	Should be bet Should be bet								
realid. Nieda (Dornieda Colid		Silvaid be bet	Ween u.oo a	IG 0.7						
	Constituent: Na	к	Са	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	12.3	2.3	13.9	0.0	3.91	6.458	22.2	0.077	0.1	98.8
Concentration (meg/L)	0.5351	0.0588	0.6936	0.0005	0.1400	0.1822	0.4622	0.0012	0.0053	1.6193
Molecular weight (mg/mM)	22.9898		40.0780	24.3050	55.8470	35.4527	96,0636	62.0049	18,9984	61.0171
Concentration (mM)	0.6351	0.0588	0.3468	0.0002	0.0700	0.1822	0,2311	0.0012	0.0053	1.6193
Charge z (absolute value)	1	1	2	2	2	1	2	1	1	1.51.50
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71. 4	54.4	44.5
Infinite dilution conductivity (umho/cm)	26.81	4.32	41.27	0.03	7.58	13.92	36.98	0.09	0.29	72.06
Ionic strength	2.68E-04		6.94E-04	4.94E-07	1,40E-04	9.11E-05	4.62E-04	6.21E-07	2.63E-06	B.10E-04
Cation sum (meg/L)	1,43									
Anion sum (meg/L)	2.27									
% Difference	-22.77	Should be < 2	1%							
Ion Difference	-0.84									
Ratio: Cation sum*(100)/Measured conductivity	0.61	Should be bet	tween 0.9 an	d 1.1						
Ratio: Anion sum*(100)/Measured conductivity	0.97	Should be bet	tween 0.9 an	d 1.1						
Sample Location:	OUA041	Sample I	Date:	960710						
Sample Location: Alkalinity (mg/l)	OUA041		Date:	960710	<u></u>		·	=		
Alkalinity (mg/l)			Date:	960710	<u></u>					
	5		Date:	960710	<u></u>					
Alkalinity (mg/l) SIO2 (mg/l)	5 19.6		Date:	960710						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm)	5 19.6 46		Date:	960710				· · · · · ·		
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	5 19.6 46 24.10		Date:	960710						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	5 19.6 46 24.10 0.0003		Date:	960710	# 1900 <u>-</u>					
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	5 19.6 46 24.10 0.0003 0.98 23.22		Date:	960710	# 1 W 1 W 1					
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47									
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47	Should be bel	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39	Should be bel	tween 0.9 an tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SID2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50	Should be bel Should be bel Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50	Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SID2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98	Should be bel Should be bel Should be bel Should be bel	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7						
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Inicistrength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98	Should be bel Should be bel Should be bet Should be bet	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.56 a Ca	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg	Fe	GI	S04	NO3	F	нсоз
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent:	Should be bel Should be bel Should be bel Should be bel K 0.7	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.56 a Ca 1.0	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0	1.13	3.181	3.2	0.516	0.1	6.1
Alkalinity (mg/l) SID2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.56 a 1.0 0.0499	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005	1.13 0.0405	3.18 1 0.0897	3.2 0.0666	0.516 0.0083	0.1 0.0053	6.1 0.1000
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0017 22.9898	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a Ca 1.0 0.0499 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24,3050	1.13 0.0405 55.8470	3.18 1 0.0897 35.4527	3.2 0.0666 96.0636	0.516 0.0083 62.0049	0.1 0.0053 18.9984	6.1 0.1000 61.0171
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0017 22.9898 0.0017	Should be bet Should be bet Should be bet Should be bet 0.7 0.0179 39.0983 0.0179	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 1.0 0.049e 40.0780 0.0250	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002	1.13 0.0405 55.8470 0.0202	3.181 0.0897 35.4527 0.0897	3.2 0.0666 96.0636 0.0333	0.516 0.0083 62.0049 0.0083	0.1 0.0053 18.9984 0.0053	6.1 0.1000 61.0171 0.1000
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.0 0.049e 40.0780 0.0250 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2	1.13 0.0405 55.8470 0.0202 2	3.181 0.0897 35.4527 0.0897	3.2 0.0666 96.0636 0.0333 2	0.516 0.0083 62.0049 0.0083	0.1 0.0053 18.9984 0.0053	6.1 0.1000 61.0171 0.1000 1
Alkalinity (mg/l) SID2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated TOS Calculated TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9888 0.0017 1 50.1	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.0 0.0499 40.0780 0.0250 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1	1.13 0.0405 55.8470 0.0202 2 54	3.181 0.0897 35.4527 0.0897 1 76.4	3.2 0.0666 96.0636 0.0333 2 80	0.516 0.0083 62.0049 0.0083 1 71.4	0.1 0.0053 18.9984 0.0053 1 54.4	6.1 0.1000 61.0171 0.1000 1 44.5
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be bell Should be bell Should be bell Should be bell K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.0 0.049e 40.0780 0.0250 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2	1.13 0.0405 55.8470 0.0202 2	3.181 0.0897 35.4527 0.0897	3.2 0.0666 96.0636 0.0333 2	0.516 0.0083 62.0049 0.0083	0.1 0.0053 18.9984 0.0053	6.1 0.1000 61.0171 0.1000 1
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.28E-07	Should be bei Should be bei Should be bei Should be bei K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.049e 40.0780 0.0250 2 59.5 2.97	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1 0.03	1.13 0.0405 55.8470 0.0202 2 54 2.19	3.181 0.0897 35.4527 0.0897 1 76.4 6.86	3.2 0.0666 96.0636 0.0333 2 80 5.33	0.516 0.0083 62.0049 0.0083 1 71.4 0.59	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	6.1 0.1000 61.0171 0.1000 1 44.5 4.45
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9898 0.0017 22.9898 0.0017 1.50.1 0.06 8.26E-07 0.11	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.049e 40.0780 0.0250 2 59.5 2.97	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1 0.03	1.13 0.0405 55.8470 0.0202 2 54 2.19	3.181 0.0897 35.4527 0.0897 1 76.4 6.86	3.2 0.0666 96.0636 0.0333 2 80 5.33	0.516 0.0083 62.0049 0.0083 1 71.4 0.59	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	6.1 0.1000 61.0171 0.1000 1 44.5 4.45
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Innic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9698 0.0017 1 50.1 0.06 8.26E-07 0.11 0.27	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.0499 40.0780 0.0250 2 59.5 2.97 4.99E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1 0.03	1.13 0.0405 55.8470 0.0202 2 54 2.19	3.181 0.0897 35.4527 0.0897 1 76.4 6.86	3.2 0.0666 96.0636 0.0333 2 80 5.33	0.516 0.0083 62.0049 0.0083 1 71.4 0.59	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	6.1 0.1000 61.0171 0.1000 1 44.5 4.45
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9698 0.0017 1 50.1 0.06 8.26E-07 0.11 0.27	Should be bet Should be bet Should be bet Should be bet 0.7 0.0179 39 0983 0.0179 1 73.5 1.32 8.95E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 0.0499 40.0780 0.0250 2 59.5 2.97 4.99E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 0.0 0.0005 24.3050 0.0002 2 53.1 0.03	1.13 0.0405 55.8470 0.0202 2 54 2.19	3.181 0.0897 35.4527 0.0897 1 76.4 6.86	3.2 0.0666 96.0636 0.0333 2 80 5.33	0.516 0.0083 62.0049 0.0083 1 71.4 0.59	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	6.1 0.1000 61.0171 0.1000 1 44.5 4.45
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Catculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc CDS/Calc Cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Molference	5 19.6 46 24.10 0.0003 0.98 23.22 45 32.47 1.39 0.50 1.40 0.98 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1. 0.08 8.26E-07 0.11 0.27 -41.94 -0.16	Should be bet Should be bet Should be bet Should be bet 0.7 0.0179 39 0983 0.0179 1 73.5 1.32 8.95E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 1.0 0.049e 40.0780 0.0250 2.97 4.99E-05	d 1.1 d 1.1 nd 0.7 nd 0.7 .0.0005 24,3050 0.0002 2 53.1 0.03 4.94E-07	1.13 0.0405 55.8470 0.0202 2 54 2.19	3.181 0.0897 35.4527 0.0897 1 76.4 6.86	3.2 0.0666 96.0636 0.0333 2 80 5.33	0.516 0.0083 62.0049 0.0083 1 71.4 0.59	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	6.1 0.1000 61.0171 0.1000 1 44.5 4.45

Sample Location:	OUA042	Sample I	Date:	960626		•••				
Alkalinity (mg/l)	128				•					
\$iO2 (mg/l)	23,4									
Measured conductivity (umho/cm)	490									
Infinite dilution conductivity (umho/cm)	588.12									
Ionic strength (M)	0.0065									
Monovalent ion activity coefficient	0.92									
Calculated conductivity (umho/cm)	497.59									
Measured TD5	263									
Calculated TDS	306.80									
Ratio: Meas TDS/Calc TDS		Should be bet								
Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	1.02	•								
Ratio: Meas TDS/Meas cond		Should be bet								
Rato: Meas 105/Meas cono	U.54	Should be bet	ween u.ss ar	10 0.7						
	Constituent:				_				_	
	Na	K	Ca	Mg	Fe	Cl	S04	NO3	F	HCO3
Concentration (mg/L)	88.0	3.6	30.2	5,8	0.929	58.793	19.1	0,101	0.07	156.2
Concentration (meg/L)	3.8280	0.0921	1,5070	0.4773	0.0333	1.6586	0,3977	0.0016	0.0037	2.5601
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96.0636	62.0049 0.0016	18.9984	61.0171 2.5601
Concentration (mM)	3.8280 1	0.0921 1	0.7535 2	0.2386 2	0.0166 2	1.6586	0.1988 2	0.0018	0,0037 1	2.5001
Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53,1	2 54	1 76.4	80	1 71.4	54.4	1 44.5
Infinite dilution conductivity (umho/cm)	191.78	6.77	89.67	25.34	1.80	126.71	31.81	0.12	0.20	113.93
Ionic strength	1.91E-03	4.60E-05	1.51E-03	4.77E-04	3,33E-05	8.29E-04	3.98E-04	8.15E-07	1.84E-06	1.28E-03
-										
Cation sum (meq/L)	5.94									
Anion sum (meq/L)	4.62									
% Difference		Should be < 2	2%							
Ion Difference	1.32									
Ratio: Cation sum*(100)/Measured conductivity	1.21									
Ratio: Anion sum*(100)/Measured conductivity	0.94	Should be be	Meen u.s and	g 1.1						
Sample Location:	OUA043	Sample I	Date:	960710			-			
Sample Location: Alkalinity (mg/l)	OUA043	•	Date:	960710			<u> </u>		 	
		<u></u>	Date:	960710					 	
Alkalinity (mg/I)	25	•	Date:	960710			<u>,</u>			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	25 15.5 74 69.00		Date:	960710				<u> </u>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	25 15.5 74 69.00 0.0009		Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	25 15.5 74 69.00 0.0009 0.97		Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	25 15.5 74 69.00 0.0009 0.97 64.54		Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	25 15.5 74 69.00 0.0009 0.97 54.54		Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	25 15.5 74 69.00 0.0009 0.97 64.54 65									
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Caic TDS	25 15.5 74 69.00 0.0009 0.97 64.54 65 48.77 1.33	Should be be	tween 0.9 an	d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	25 15.5 74 69.00 0.909 0.97 64.54 65 48.77 1.33	Should be be Should be be	tween 0.9 an	d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	25 15.5 74 69.00 0.0009 0.97 64.54 85 48.77 1.33 0.87	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	25 15.5 74 69.00 0.0009 0.97 64.54 85 48.77 1.33 0.87	Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	25 15.5 74 69.00 0.0000 0.97 54.54 55 48.77 1.33 0.87 0.76 0.88	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7			504			11000
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	25 15.5 74 69.00 0.909 0.97 64.54 55 48.77 1.33 0.87 0.76 0.88	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg	Fe	CI	SO4	NO3	F	HCO3
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	25 15.5 74 69.00 0.9009 0.97 64.54 85 48.77 1.33 0.87 0.76 0.88 Constituent:	Should be be Should be be Should be be Should be be K 0.6	tween 0.9 antween 0.55 attween	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 1.2	0.047	4.099	1.0	2.085	0.1	30.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	25 15.5 74 69.00 0.0009 0.97 64.54 55 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0017	Should be be Should be be Should be be Should be be K 0.6 0.0153	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 9.1 0.4541	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 1.2 0.0987	0.047 0.0017	4.099 0.1158	1.0 0.0208	2,085 0.0336	0.1 0.0053	30.5 0.4999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	25 15.5 74 69.00 0.0000 0.97 54.54 55 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0017 22.9898	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 9.1 0.4541 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 1.2 0.0987 24.3050	0.047 0.0017 55.8470	4.099 0.1156 35.4527	1.0 0.0208 96.0636	2,085 0.0336 62.0049	0.1 0.0053 16.9984	30.5 0.4999 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	25 15.5 74 69.00 0.0009 0.97 64.54 55 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0017	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 9.1 0.4541	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 1.2 0.0987	0.047 0.0017	4.099 0.1158	1.0 0.0208	2,085 0.0336	0.1 0.0053	30.5 0.4999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	25 15.5 74 69.00 0.0009 0.97 54.54 55 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983 0.0153	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 9.1 0.4541 40.0780 0.2270	d 1.1 d 1.1 nd 0.7 nd 0.7 1.2 0.0987 24.3050 0.0494	0.047 0.0017 55.8470 0.0008	4.099 0.1158 35.4527 0.1156	1.0 0,0208 96,0636 0,0104	2.085 0.0336 62.0049 0.0336	0.1 0.0053 18.9984 0.0053	30.5 0.4999 61.0171 0.4999
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Caiculated TDS Ratio: Meas TDS/Caic TDS Ratio: Caic cond/Meas cond Ratio: Caic TDS/Caic cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/L)	25 15.5 74 69.00 0.9009 0.97 64.54 85 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be be Should be be Should be be Should be be 6.6 0.0153 39.0983 0.0153 1 73.5	tween 0.9 and tween 0.55 and tween 0.55 and tween 0.55 and Ca 9.1 0.4541 40.0780 0.2270 2	d 1.1 d 1.1 nd 0.7 nd 0.7 1.2 0.0987 24.3050 0.0494 2	0.047 0.0017 55.8470 0.0008 2	4.099 0.1156 35.4527 0.1156 1	1.0 0,0208 98,0636 0,0104 2	2,085 0.0336 62,0049 0.0336 1	0.1 0.0053 18.9984 0.0053	30.5 0.4999 61.0171 0.4999 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	25 15.5 74 69.00 0.907 64.54 85 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983 0.0153 1 1 73.5 1.13	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 9.1 0.4541 40.0780 0.2270 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 2.0,0987 24,3050 0.0494 2 53.1	0.047 0.0017 55.8470 0.0008 2 54	4.099 0.1158 35.4527 0.1156 1 76.4	1.0 0.0208 96,0636 0.0104 2 80	2,085 0,0336 62,0049 0,0336 1 71,4	0.1 0.0053 18.9984 0.0053 1 54.4	30.5 0.4999 61.0171 0.4999 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/IL) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	25 15.5 74 69.00 0.0009 0.97 64.54 65 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017 50.1 50.1 0.08	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983 0.0153 1 73.6 1.13 7.87E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 9.1 0.4541 40.0780 0.2270 2 59.5 27.02	d 1.1 d 1.1 nd 0.7 nd 0.7 2.0.0987 24.3050 0.0494 2.3.1 5.24	0.047 0.0017 55.8470 0.0008 2 54 0.09	4,099 0.1156 35,4527 0.1156 1 76,4 8,83	1.0 0.0208 98.0636 0.0104 2 80 1.67	2,085 0.0336 62,0049 0.0336 1 71.4 2.40	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	30.5 0.4999 61.0171 0.4999 1 44.5 22.25
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc CDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	25 15.5 74 69.00 0.0008 0.97 54.54 55 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0017 22.9898 0.0017 1 50.1	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983 0.0153 1 73.5 1.13 7.67E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 9.1 0.4541 40.0780 0.2270 2 59.5 27.02	d 1.1 d 1.1 nd 0.7 nd 0.7 2.0.0987 24.3050 0.0494 2.3.1 5.24	0.047 0.0017 55.8470 0.0008 2 54 0.09	4,099 0.1156 35,4527 0.1156 1 76,4 8,83	1.0 0.0208 98.0636 0.0104 2 80 1.67	2,085 0.0336 62,0049 0.0336 1 71.4 2.40	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	30.5 0.4999 61.0171 0.4999 1 44.5 22.25
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Caiculated TDS Ratio: Meas TDS/Caic TDS Ratio: Caic cond/Meas cond Ratio: Caic TDS/Caic cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/L)	25 15.5 74 69.00 0.0009 0.97 64.54 85 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.28E-07	Should be be Should be be Should be be Should be be K 0.6 0.0153 39.0983 0.0153 1 73.5 1.13 7.67E-06	tween 0.9 and tween 0.55 at tween 0.55 at tween 0.55 at tween 0.55 at 40.0780 0.2270 2 59.5 27.02 4.54E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 2.0.0987 24.3050 0.0494 2.3.1 5.24	0.047 0.0017 55.8470 0.0008 2 54 0.09	4,099 0.1156 35,4527 0.1156 1 76,4 8,83	1.0 0.0208 98.0636 0.0104 2 80 1.67	2,085 0.0336 62,0049 0.0336 1 71.4 2.40	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	30.5 0.4999 61.0171 0.4999 1 44.5 22.25
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge 2 (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L)	25 15.5 74 69.00 0.0009 0.97 64.54 85 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.28E-07	Should be be Should be be Should be be Should be be 0.6 0.6 0.0153 39.0983 0.0153 1 73.5 1.13 7.67E-06	tween 0.9 and tween 0.55 at tween 0.55 at tween 0.55 at tween 0.55 at 40.0780 0.2270 2 59.5 27.02 4.54E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 2.0.0987 24.3050 0.0494 2.3.1 5.24	0.047 0.0017 55.8470 0.0008 2 54 0.09	4,099 0.1156 35,4527 0.1156 1 76,4 8,83	1.0 0.0208 98.0636 0.0104 2 80 1.67	2,085 0.0336 62,0049 0.0336 1 71.4 2.40	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	30.5 0.4999 61.0171 0.4999 1 44.5 22.25
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm*2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) % Difference	25 15.5 74 69.00 0.0009 0.97 64.54 65 48.77 1.33 0.87 0.76 0.88 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08 8.28E-07 0.68 -8.32 -0.10	Should be be Should be be Should be be Should be be 0.6 0.6 0.0153 39.0983 0.0153 1 73.5 1.13 7.67E-06	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 9.1 0.4541 40.0780 0.2270 2 59.5 27.02 4.54E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 24.3050 0.0494 2 53.1 5.24 9.87E-05	0.047 0.0017 55.8470 0.0008 2 54 0.09	4,099 0.1156 35,4527 0.1156 1 76,4 8,83	1.0 0.0208 98.0636 0.0104 2 80 1.67	2,085 0.0336 62,0049 0.0336 1 71.4 2.40	0.1 0.0053 18.9984 0.0053 1 54.4 0.29	30.5 0.4999 61.0171 0.4999 1 44.5 22.25

Sample Location:	OUA044	Sample [Date:	960710						
Alkalinity (mg/i)	168									
SiO2 (mg/l)	13									
Measured conductivity (umho/cm)	393									
Infinite dilution conductivity (umho/cm)	249.27									
Ionic strength (M)	0.0030									
Monovalent ion activity coefficient	0,94									
Calculated conductivity (umho/cm) Measured TDS	221,82 223									
Calculated TDS	124.64									
Retio: Meas TDS/Calc TDS		Should be bet	ween 0 0 an	d 1 1						
Ratio: Calc cond/Meas cond	0.56									
Ratio: Calc TDS/Calc cond	0,56									
Ratio: Meas TDS/Meas cond	0.57	Should be bel	ween 0.55 a	nd 0,7						
	Constituent:									
	Na	K	Ca	Mg	Fe	CI	504	NO3	F	HCO3
Concentration (mg/L)	51.8	1.6	19.6	2.7	0.656	12.634	7.1	D.453	0,1	30.5
Concentration (meq/L)	2.2533	0.0409	0.9780	0.2222	0.0235	0.3564	0.1478	0.0073	0.0053	0.4999
Molecular weight (mg/mM)	22.9898 2.2533	39.0983	40.0780 0.4890	24.3050 0.1111	55.8470	35.4527 0.3564	96,0636 0,0739	62.0049 0.0073	18,9984 0,0053	61.0171 0.4999
Concentration (mM) Charge z (absolute value)	2.2000	0.0409	0.4680 2	0.1111	0.0117 2	0.3364	0.0738	0.0073	0.0055	0.4888
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	112,89	3.01	58.19	11.80	1.27	27.23	11.83	0.52	0.29	22.25
Ionic strength	1.13E-03		9.78E-04	2.22E-04	2.35E-05	1.78E-04	1.48E-04	3.65E-06	2.63E-06	2.50E-04
Cation sum (meq/b)	3.52									
Anion sum (meq/L)	1.02									
% Difference		Should be < 2	. %							
on Difference	2.50									
Ratio: Cation sum*(100)/Measured conductivity	0.90									
Ratio: Anion sum*(100)/Measured conductivity	0.26	Should be bet	ween 0.9 an	d 1.1						
Sample Location:	OUA045	Sample I	Date:	960710				· · · · · · · · · · · · · · · · · · ·		
Sample Location:	OUA045		Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l)	13 17.2		Date:	960710		, .				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	13 17.2 163	· ·	Date:	960710		, .		13 14 25 15		. <u>.</u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	13 17.2 163 98.72	· ·	Date:	960710	<u> </u>	, .				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	13 17.2 163 98.72 0.0012	•	Date:	960710		, .				<u></u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	13 17.2 163 98.72 0.0012 0.96	· ·	Date:	960710						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	13 17.2 163 98.72 0.0012 0.96 91.53	· ·	Date:	960710		, <u>, </u>				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinits dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	13 17.2 163 98.72 0.0012 0.96 91.53	<u> </u>	Date:	960710		,				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	13 17.2 163 98.72 0.0012 0.96 91.53 132 65.26	•				***				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinits dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	13 17.2 163 98.72 0.0012 0.96 91.53	Should be be	tween 0.9 an	d 1,1		7-1				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	13 17.2 163 98.72 0.0012 0.96 91.53 132 65.26	Should be be Should be be	tween 0.9 an	d 1.1 d 1.1		,				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	13 17.2 163 98.72 0.0012 0.96 91.53 132 65.26 2.02	Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a	d 1.1 d 1.1 nd 0.7				1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a	d 1.1 d 1.1 nd 0.7 nd 0.7				4-4-16		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	13 17.2 163 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.56 0.71 0.81	Should be be Should be be Should be be Should be be	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg	Fe	CI	504	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81	Should be be Should be be Should be be Should be be K 5.0	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 8.4	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6	0.044	8.964	1.7	12.3	0.2	15.9
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Indinite dilution conductivity (umho/cm) Indinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	13 17.2 163 98.72 0.0012 0.966 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0	Should be be Should be be Should be be Should be be K 5.0 0.1279	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ga 8.4 0.4192	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962	0.044 0.0016	8.964 0.2529	1.7 0.0354	12.3 0.1984	0.2 0.0105	1 5.9 0.2606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0017 22.9898	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 8.4 0.4192 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962 24.3050	0.044 0.0016 55.6470	8.964 0.2529 35.4527	1.7 0.0354 96.0636	12.3 0.1984 62.0049	0.2 0.0105 18.9984	15.9 0.2606 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.56 0.71 0.81 Constituent: Na 0.0 0.0017 22.9898	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0963 0.1279	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 8.4 0.4192 40.0780 0.2098	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.8 0.2962 24.3050 0.1481	0.044 0.0016 55.8470 0.0008	8.964 0.2529 35.4527 0.2529	1.7 0.0354 96.0636 0.0177	12.3 0.1984 62.0049 0.1984	0.2 0.0105 18.9984 0.0105	15.9 0.2608 61.0171 0.2606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0017 22.9898	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983 0.1279	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 8.4 0.4192 40.0780	d 1.1 d 1.1 nd 0.7 nd 0.7 3.8 0.2962 24.3050 0.1481 2	0.044 0.0016 55.6470	8.964 0.2529 35.4527 0.2529	1.7 0.0354 96.0636	12.3 0.1984 62.0049 0.1984	0.2 0.0105 18.9984	15.9 0.2606 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	13 17.2 163 98.772 0.0012 0.96 91.53 132 65.26 2.02 0.56 0.71 0.81 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be be Should be be Should be be Should be be 5.0 0.1279 39.0983 0.1279 1 73.5	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 6.4 0.4192 40.0780 0.2098 2	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.8 0.2962 24.3050 0.1481	0.044 0.0016 55.8470 0.0008 2	8.964 0.2529 35.4527 0.2529	1.7 0.0354 96.0636 0.0177 2	12.3 0.1984 62.0049 0.1984	0.2 0.0105 18.9984 0.0105	15.9 0.2608 61.0171 0.2606
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983 0.1279 1 1 73.5 9.40	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a Ca 8.4 0.4192 40.0760 0.2098 2 59.5	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962 24.3050 0.1481 2 53.1	0.044 0.0016 55.8470 0.0008 2 54	8.964 0.2529 35.4527 0.2529 1 76.4	1.7 0.0354 96.0636 0.0177 2 80	12.3 0.1984 62.0049 0.1984 1 71.4	0.2 0.0105 18.9984 0.0105 1 54.4	15.9 0.2608 61.0171 0.2606 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm)	13 17.2 163 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.56 0.71 0.81 Constituent: Na 0.0017 22.9898 0.0017 1 50.1	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983 0.1279 1 73.5 9.40 6.40E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 8.4 4 0.4192 40.0760 0.2098 2 59.5 24.94	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962 24.3050 0.1481 2 53.1 15.73	0.044 0.0016 55.8470 0.0008 2 54 0.09	8.964 0.2529 35.4527 0.2529 1 76.4 19.32	1.7 0.0354 96.0636 0.0177 2 80 2.83	12.3 0.1984 62.0049 0.1984 1 71.4 14.17	0.2 0.0105 18.9984 0.0105 1 54.4 0.57	15.9 0.2608 61.0171 0.2606 1 44.5 11.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.56 0.71 0.81 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.08	Should be be Should be be Should be be Should be be 5.0 0.1279 39.0983 0.1279 1 73.5 9.40 6.40E-05	tween 0.9 an tween 0.9 an tween 0.55 a Ca 8.4 4 0.4192 40.0760 0.2098 2 59.5 24.94	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962 24.3050 0.1481 2 53.1 15.73	0.044 0.0016 55.8470 0.0008 2 54 0.09	8.964 0.2529 35.4527 0.2529 1 76.4 19.32	1.7 0.0354 96.0636 0.0177 2 80 2.83	12.3 0.1984 62.0049 0.1984 1 71.4 14.17	0.2 0.0105 18.9984 0.0105 1 54.4 0.57	15.9 0.2608 61.0171 0.2606 1 44.5 11.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc Cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0017 22.9898 0.0017 1 50.1 0.08 8.26E-07	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983 0.1279 1 73.5 9.40 6.40E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 4.4 0.4192 40.0760 0.2098 2 59.5 24.94 4.19E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 Mg 3.6 0.2962 24.3050 0.1481 2 53.1 15.73	0.044 0.0016 55.8470 0.0008 2 54 0.09	8.964 0.2529 35.4527 0.2529 1 76.4 19.32	1.7 0.0354 96.0636 0.0177 2 80 2.83	12.3 0.1984 62.0049 0.1984 1 71.4 14.17	0.2 0.0105 18.9984 0.0105 1 54.4 0.57	15.9 0.2608 61.0171 0.2606 1 44.5 11.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	13 17.2 183 98.72 0.0012 0.96 91.53 132 65.26 2.02 0.58 0.71 0.81 Constituent: Na 0.0 0.0017 22.9898 0.0017 1 50.1 0.088 8.26E-07	Should be be Should be be Should be be Should be be K 5.0 0.1279 39.0983 0.1279 1 73.5 9.40 6.40E-05	tween 0.9 an tween 0.9 an tween 0.55 a tween 0.55 a 4.4 0.4192 40.0780 0.2098 2 59.5 24.94 4.19E-04	d 1.1 d 1.1 nd 0.7 nd 0.7 3.6 0.2962 24.3050 0.1481 2 53.1 15.73 2.96E-04	0.044 0.0016 55.8470 0.0008 2 54 0.09	8.964 0.2529 35.4527 0.2529 1 76.4 19.32	1.7 0.0354 96.0636 0.0177 2 80 2.83	12.3 0.1984 62.0049 0.1984 1 71.4 14.17	0.2 0.0105 18.9984 0.0105 1 54.4 0.57	15.9 0.2608 61.0171 0.2606 1 44.5 11.60

Sample Location:	OUA046	Sample I	Date:	960710						
Alkalinity (mg/l)	115									
SiO2 (mg/l)	8.8									
Measured conductivity (umho/cm)	266									
Infinite dilution conductivity (umho/cm)	238.46									
Ionic strength (M)	0.0033									
Monovalent ion activity coefficient Calculated conductivity (umho/cm)	0.94 210.8 6									
Measured TDS	136									
Calculated TDS	128.14									
Ratio: Meas TDS/Calc TDS	1.06	Should be bet	ween 0.9 and	d 1.1						
Ratio: Calc cond/Meas cond	0.79	Should be bet	ween 0.9 and	₫ 1.1						
Ratio: Calc TDS/Calc cond	0.61	Should be bet								
Ratio: Meas TDS/Meas cond	0.51	Should be bet	ween 0.55 a	nd 0.7						
	Constituent:									
	Na	ĸ	Ca	Mg	Fe	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	0.0	0.9	37.9	0.3	1.71	3.054	5.9	0.448	0.1	140.3
Concentration (meq/L)	0.0017	0.0230	1.8912	0.0247	0.0612	0.0862	0.1228	0.0072	0.0053	2.2995
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	55.8470	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.0017 1	0.0230 1	0.9456 2	0.0123 2	0.0306 2	0.0862 1	0,0614 2	0.0072 1	0.0053 1	2.2995 1
Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	54	76.4	80	71. 4	54.4	44.5
Infinite dilution conductivity (umho/cm)	0.08	1.69	112.53	1.31	3.31	6.58	9.83	0.52	0.29	102.33
lonic strength	8.26E-07	1.15E-05	1.89E-03	2.47E-05	6.13E-05	4.31E-05	1.23E-04	3.61E-06	2.63E-06	1.15E-03
Cation sum (meg/L)	2.00									
Anian sum (meg/L)	2.52									
% Difference		Should be < 2	%							
Ion Difference	-0.52									
Ratio: Cation sum*(100)/Measured conductivity		Should be bet								
Ratio: Anion sum*(100)/Measured conductivity	0.95	Should be bet	ween 0.9 an	d 1.1						
Sample Location:	OUA047	Sample [960711						····
Sample Location:	OUA047	Sample I			<u>, </u>		<u>,</u>		<u> </u>	····
		Sample [<u></u>		<u>_</u>	
Alkalinity (mg/l)	13	Sample [
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	13 14.5 49 39.10	Sample [<u></u>		<u></u>	<u></u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	13 14.5 49 39.10 0.0005	Sample [
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	13 14.5 49 39.10 0.0005 0.98	Sample I			<u>-</u>					· · · · · · · · · · · · · · · · · · ·
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	13 14.5 49 39.10 0.0005 0.98 37.28	Sample I			-					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	13 14.5 49 39.10 0.0005 0.98 37.28	Sample I			,		····			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	13 14.5 49 39.10 0,0005 0,98 37.28 41	•	Date:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	13 14.5 49 39.10 0.0005 0.98 37.28	Should be bel	Date:	960711						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	13. 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15	Should be bel	ween 0.9 an	960711 d 1.1 d 1.1						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calculated CDS Ratio: Calculated CDS	13. 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15	Should be bel Should be bel Should be bel	ween 0.9 an ween 0.9 an ween 0.55 a	960711 d 1.1 d 1.1 nd 0.7						····
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc Cond/Meas cond Ratio: Calc TDS/Calc cond	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76	Should be bel Should be bel Should be bel	ween 0.9 an ween 0.9 an ween 0.55 a	960711 d 1.1 d 1.1 nd 0.7						
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc Cond/Meas cond Ratio: Calc TDS/Calc cond	13 14.5 49 39.10 0.0005 D.98 37.28 41 35.55 1.15 0.76 0.95	Should be bel Should be bel Should be bel	ween 0.9 an ween 0.9 an ween 0.55 a	960711 d 1.1 d 1.1 nd 0.7	Fe	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc Cond/Meas cond Ratio: Calc TDS/Meas cond Concentration (mg/L)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent:	Should be bei Should be bei Should be bei Should be bei K 0.7	ween 0.9 an ween 0.9 an ween 0.55 a Ca 2.1	960711 d 1.1 d 1.1 nd 0.7 nd 0.7	1.34	4.289	4.6	0.077	0.1	15.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Monovalent inn activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0	Should be bell Should be bell Should be bell Should be bell K 0.7 0.0179	ween 0.9 an ween 0.9 an ween 0.55 a ween 0.55 a 2.1 0.1048	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 0.0	1.34 0.0480	4.289 0.1210	4.6 0.0958	0.077 0.0012	0.1 0.0053	1 5.86 0.2599
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Mensured TDS Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0017 22.9898	Should be bell Should be bell Should be bell Should be bell K. 0.7 0.0179 39.0983	ween 0.9 an ween 0.9 an ween 0.55 a Ca 2.1 0.1048 40.0780	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050	1.34 0.0480 55.8470	4.289 0.1210 35.4627	4.6 0.0958 96.0636	0.077 0.0012 62.0049	0,1 0,0053 18,9984	1 5.86 0.2599 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9698	Should be bell Should be bell Should be bell Should be bell K K 0.7 D.0179 39.0983 D.0179	ween 0.9 an ween 0.9 an ween 0.55 a ween 0.55 a Ca 2.1 0.1048 40.0780 0.0524	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 .0.00 24.3050 0.0002	1.34 0.0480 55.8470 0.0240	4.289 0.1210 35.4627 0.1210	4.6 0,0958 96,0636 0,0479	0.077 0.0012 62.0049 0.0012	0,1 0,0053 18,9984 0,0053	15.86 0.2599 61.0171 0.2599
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be bell Should be bell Should be bell Should be bell K 0.7 0.0179 39.0983 0.0179 1	Ca 2.1 0.1048 40.0780 0.0524 2	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 .0.0 0.0005 24.3050 0.0002 2	1.34 0.0480 55.8470 0.0240 2	4.289 0.1210 35.4527 0.1210	4.6 0,0958 96,0636 0,0479 2	0.077 0.0012 52.0049 0.0012	0.1 0.0053 18.9984 0.0053	15.86 0.2599 61.0171 0.2599 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be bei Should be bei Should be bei Should be bei K 0.7 0.0179 39.0983 0.0179 1 73.5	Ca 2.1 0.1048 40.0780 0.055 2 59.5	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 0.0 0.0005 24.3050 0.0002 2 53.1	1.34 0.0480 55.8470 0.0240 2 54	4.289 0.1210 35.4627 0.1210 1 76.4	4.6 0,0958 96,0636 0,0479 2 80	0.077 0.0012 52.0049 0.0012 1 71.4	0,1 0,0053 18,9984 0,0053 1 54,4	15.86 0.2599 61.0171 0.2599 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9898 0.0017	Should be bell K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32	Ca 2.1 0.1048 40.0780 0.0524 2	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 .0.0 0.0005 24.3050 0.0002 2	1.34 0.0480 55.8470 0.0240 2	4.289 0.1210 35.4527 0.1210	4.6 0,0958 96,0636 0,0479 2	0.077 0.0012 52.0049 0.0012	0.1 0.0053 18.9984 0.0053	15.86 0.2599 61.0171 0.2599 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9898 0.0017 150.1 0.08 8.26E-07	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	Ca 2.1 0.1048 40.0780 0.0524 2.5 5.5 6.24	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 24.3050 0.0002 253.1 0.03	1.34 0.0480 55.8470 0.0240 2 54 2.59	4.289 0.1210 35.4527 0.1210 1 76.4 9.24	4.6 0,0958 96,0636 0,0479 2 80 7,66	0.077 0.0012 52.0049 0.0012 1 71.4 0.09	0,1 0,0053 18,9984 0,0053 1 54,4 0,29	15.86 0.2599 81.0171 0.2599 1 44.5 11.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc Cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0017 22.9898 0.0017 1 50.1	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	Ca 2.1 0.1048 40.0780 0.0524 2.5 5.5 6.24	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 24.3050 0.0002 253.1 0.03	1.34 0.0480 55.8470 0.0240 2 54 2.59	4.289 0.1210 35.4527 0.1210 1 76.4 9.24	4.6 0,0958 96,0636 0,0479 2 80 7,66	0.077 0.0012 52.0049 0.0012 1 71.4 0.09	0,1 0,0053 18,9984 0,0053 1 54,4 0,29	15.86 0.2599 81.0171 0.2599 1 44.5 11.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9698 0.0017 1 50.1 0.06 8.26E-07	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	Ca 2.1 0.1048 40.0780 0.0524 2.5 6.24 1.05E-04	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 24.3050 0.0002 253.1 0.03	1.34 0.0480 55.8470 0.0240 2 54 2.59	4.289 0.1210 35.4527 0.1210 1 76.4 9.24	4.6 0,0958 96,0636 0,0479 2 80 7,66	0.077 0.0012 52.0049 0.0012 1 71.4 0.09	0,1 0,0053 18,9984 0,0053 1 54,4 0,29	15.86 0.2599 81.0171 0.2599 1 44.5 11.57
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Measured TDS Calculated TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meg/L) Anion sum (meg/L)	13 14.5 49 39.10 0.0005 0.98 37.28 41 35.55 1.15 0.76 0.95 0.84 Constituent: Na 0.0 0.0017 22.9698 0.0017 1 50.1 0.06 8.26E-07	Should be bel Should be bel Should be bel Should be bel K 0.7 0.0179 39.0983 0.0179 1 73.5 1.32 8.95E-06	Ca 2.1 0.1048 40.0780 0.0524 2.5 6.24 1.05E-04	960711 d 1.1 d 1.1 nd 0.7 nd 0.7 24.3050 0.0002 253.1 0.03	1.34 0.0480 55.8470 0.0240 2 54 2.59	4.289 0.1210 35.4527 0.1210 1 76.4 9.24	4.6 0,0958 96,0636 0,0479 2 80 7,66	0.077 0.0012 52.0049 0.0012 1 71.4 0.09	0,1 0,0053 18,9984 0,0053 1 54,4 0,29	15.86 0.2599 81.0171 0.2599 1 44.5 11.57